

Institute for Public Policy and  
Business Research  
University of Kansas  
Lawrence, Kansas

ECONOMIC PROFILE OF LAWRENCE/DOUGLAS COUNTY

PART I:

Sectoral Mix of Industries Compared  
to the State, the Nation and  
Similarly Sized College Towns

by

Helga Upmeier  
Research Economist

The study was funded by an ongoing grant provided by the City of Lawrence, Douglas County, and the Lawrence Chamber of Commerce to support research on economic development issues in Douglas County.

Anthony L. Redwood  
Professor of Business and  
Executive Director

Charles E. Krider  
Professor of Business and  
Director of Business Research

February 1988

No. 139

TABLE OF CONTENTS

PART I:

SECTORAL MIX OF INDUSTRIES COMPARED  
TO THE STATE, THE NATION AND  
SIMILARLY SIZED COLLEGE TOWNS

	Page
LIST OF TABLES.....	i
LIST OF FIGURES.....	ii
EXECUTIVE SUMMARY.....	1
INTRODUCTION.....	3
THE MAJOR SECTORS OF THE ECONOMY.....	4
The Public Sector Leads in Jobs and Income.....	4
Retailing Employs 6000 but Ranks Lowest in Income per Employee....	10
The Growth in Service Sector Employment is Following National Trends.....	11
Manufacturing is the Second Most Important Income Source.....	13
Economic Sectors Ranked by Personal Income.....	15
ASSESSING THE INDUSTRIAL MIX: LAWRENCE/DOUGLAS COUNTY versus OTHER COLLEGE TOWNS.....	24
Local Manufacturing Outperforms Most Other College Towns and Varies Most Widely in Employment Shares.....	24
Service-Type Employment is Comparatively Weak Although Bright Spots Exist.....	30
Industries With Potential for Growth in College Towns.....	31
Strategies for Promoting Economic Growth.....	31
SUMMARY AND RESULTS.....	33
APPENDIX	
PART II: ECONOMIC BASE AND BASE MULTIPLIER (Report No. 140)	

LIST OF TABLES

	Page
Table 1 -- Composition of Government Employment in Douglas County, 1985.....	7
Table 2A -- Employment by Major Industry, Douglas County 1970-85.....	8
Table 2B -- Employment Shares by Major Industry, Douglas County 1970-85.....	8
Table 3 -- Employment Change by Major Industry, Douglas County 1970-85.....	9
Table 4 -- Employment Shares of Service Activities in Douglas County Compared to State and National Average, 1985.....	12
Table 5 -- Employment Change by Industry, 1978-85.....	20
Table 6 -- Employment Change by Industry, 1984-85.....	21
Table 7 -- Personal Income by Major Industry, Douglas County.....	22
Table 8 -- Earned Income by Industrial Category and Employee.....	23
Table 9 -- Employment Shares by Industries for Selected Counties With College Towns, 1985, Group I.....	25
Table 10 -- Employment Shares by Industries for Selected Counties With College Towns, 1985, Group II.....	26
Table 11 -- Shares of Private Sector Employment in Douglas County Above Average of Comparison Group I.....	28
Table 12 -- Shares of Private Sector Employment in Douglas County Above Average of Comparison Group II.....	29

LIST OF FIGURES

	Page
Figure 1 -- Employment Shares by Industry Sector, 1985.....	5
Figure 2 -- Earned Income by Industry Sector.....	6
Figure 3 -- Employment and Earnings by Industry.....	6
Figure 4 -- Mix of Manufacturing Employment, Douglas County, 1985....	14
Figure 5 -- Employment Growth in Douglas County, 1975-85.....	18
Figure 6 -- Employment Growth by Major Industries, 1975-85.....	19

## EXECUTIVE SUMMARY

This report investigates the structure and condition of the Lawrence/Douglas County economy relative to the state, the nation and to a group of similarly sized counties with college towns in the Midwest. The sectoral mix of industries is analyzed first to obtain a detailed picture of the major components of the local economy. A comparison of the local economy to that of other midwestern college towns reveals interesting facts about the strength of the local goods-producing sector but at the same time shows a weakness in some service-producing segments of the economy.

The basic findings of the study are summarized below:

- The public sector generates more jobs and income than any single sector of the private economy. (See Figure 1 and 2.)
- Job growth in the private sector was faster than in the public sector as a whole. (See Figure 5.)
- Employment in manufacturing declined between 1980 and 1984 while the service sector employment grew.
- Long-term service sector growth (1978-85) in Douglas County was faster than in the state as a whole, but it lagged behind national standards. Short-term growth (1984-85), however, surpassed the national average by 5.3 percentage points. (See Tables 5 and 6.)
- Manufacturing is the second most important income source in the community after the government sector, generating \$107 million or 23 percent of total personal income in 1984. However, wages and salaries from the University of Kansas, totaling \$95 million, nearly matched manufacturing earnings.
- The service sector has become a valuable income source for the community, ranking third and having increased its share of total earnings from 12 percent in 1970 to 16 percent in 1984. (See Table 7.)
- Industries having a below-average share of employment locally compared to other college towns are: business services, legal services, health services, tourism business, finance and insurance, wholesale trade and certain retail activities (general merchandise and food stores, dining establishments and automotive dealers).

Strategies to promote industries with a below-average share of employment relative to the nation and to other college towns include: offering financial assistance for start-up firms, providing incubator space (where university researchers and entrepreneurs can work together on joint ventures), improving access to university resources, working to retain established businesses in the local area, and more fully utilizing the well educated work force, as well as building the community's reputation for a supportive local government and a good quality of life.

## INTRODUCTION

This is the first part of a study that is designed to analyze the economic structure of Lawrence/Douglas County and to provide an understanding of how the major components of the local economy interact in terms of mutual stimulation for growth.

In this part, the makeup of the local economy is examined first to get a sufficiently detailed picture of the sectoral mix of industries and the major income sources within the community. A wide array of data from the latest available sources are used to highlight not only the major industry groupings but all industry categories of the two-digit SIC code. Thus, the importance of particular manufacturing, service and retail industries can be recognized and their performance can be compared with the state and the nation.

In order to assess the sectorial mix of industries and to identify strengths and weaknesses of the local economy, Lawrence/Douglas County is compared to a group of similarly sized college towns in the Midwest. The comparison will allow us to highlight industries that are above or below the comparison group average and give an indication of which industries are performing better in other college towns and may have a potential for growth in the local area. The study ends by indicating some strategies for promoting economic growth and creating new employment opportunities.

## THE MAJOR SECTORS OF THE ECONOMY

In an economy with considerable wage differentials among its employees and a significant portion of part-time workers, two measures should be used to analyze the sectoral mix of industries: employment by number of workers and personal income by industry sector. While the employment measure provides a general indication of the predominant economic activity and the mix of labor skills within the community, the income measure gives an idea of the main income sources and the makeup of the buying power. Furthermore, the income measure is not sensitive to part-time employment, which accounts for a substantial amount of retail, service-type and university employment. Figures 1 and 2 show the sectoral mix of industries according to the employment and income measure. Figure 2 reflects the individual sectors' various importance to local wealth. A relative comparison of employment and earnings is shown in Figure 3. Major industries are listed in order of their contribution to Douglas County employment.

### The Public Sector Leads in Jobs and Income

Due to the presence of a major state university, the sectoral mix of Lawrence/Douglas County is skewed in favor of government employment, whether the employment or income measure is used. (See Figure 3.) About 37 percent of total nonfarm wage and salary employment or a total of 10,402 workers were engaged in the public sector in 1985.<sup>1</sup> The state was the largest single employer in the county (25% of total employment or 7,038 employees). Not surprisingly, the public sector's share of employment in the county was 16 percent above the statewide average and about 20 percent above the

---

<sup>1</sup> This is the place of work, not by place of residence, i.e., not including workers having government jobs in Topeka or Kansas City.



# EMPLOYMENT SHARES BY INDUSTRY SECTOR

Douglas County, 1985 (CBP data)

Figure 1

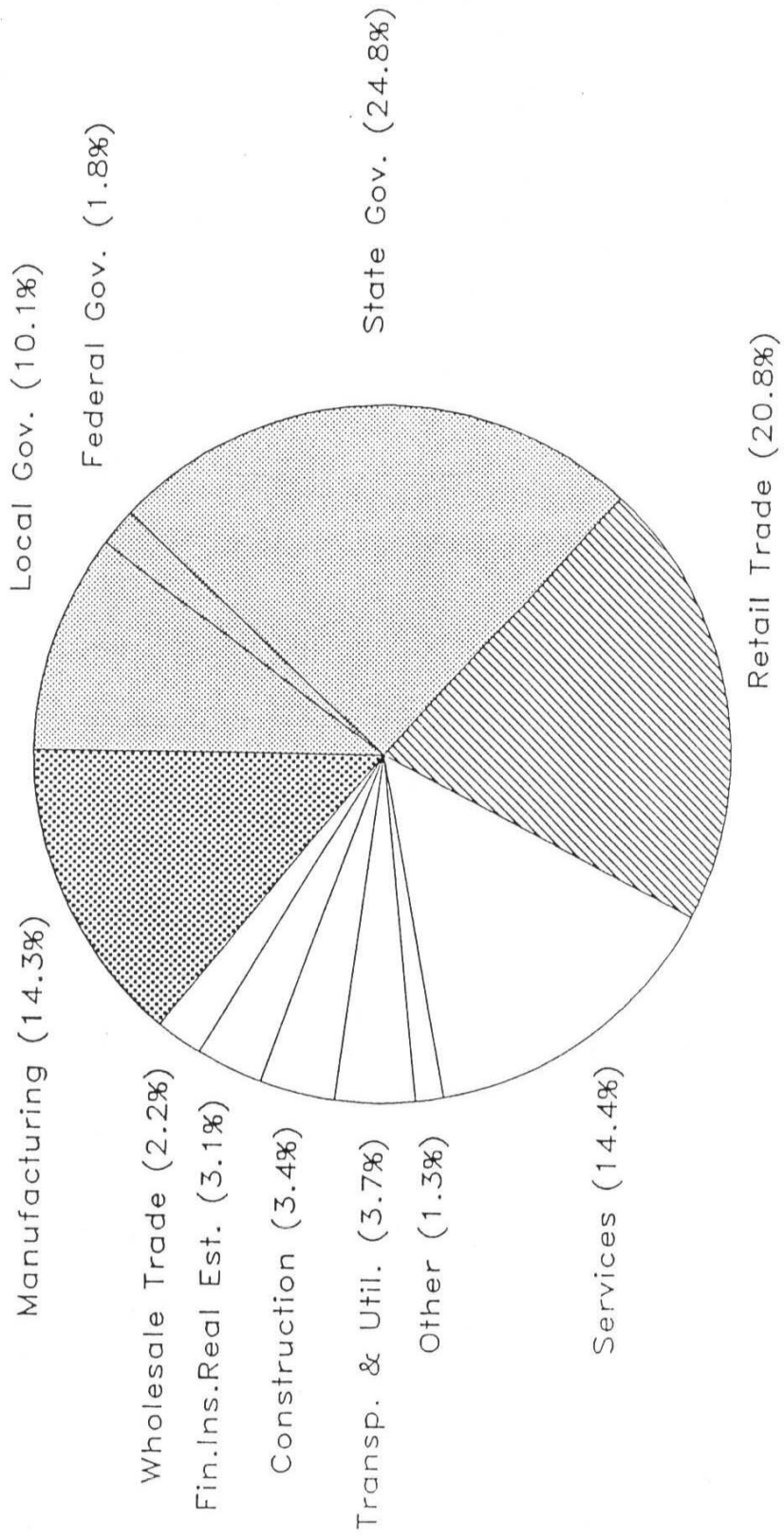


Figure 2

# EARNED INCOME BY INDUSTRY SECTOR

Douglas County, 1984 (BEA data)

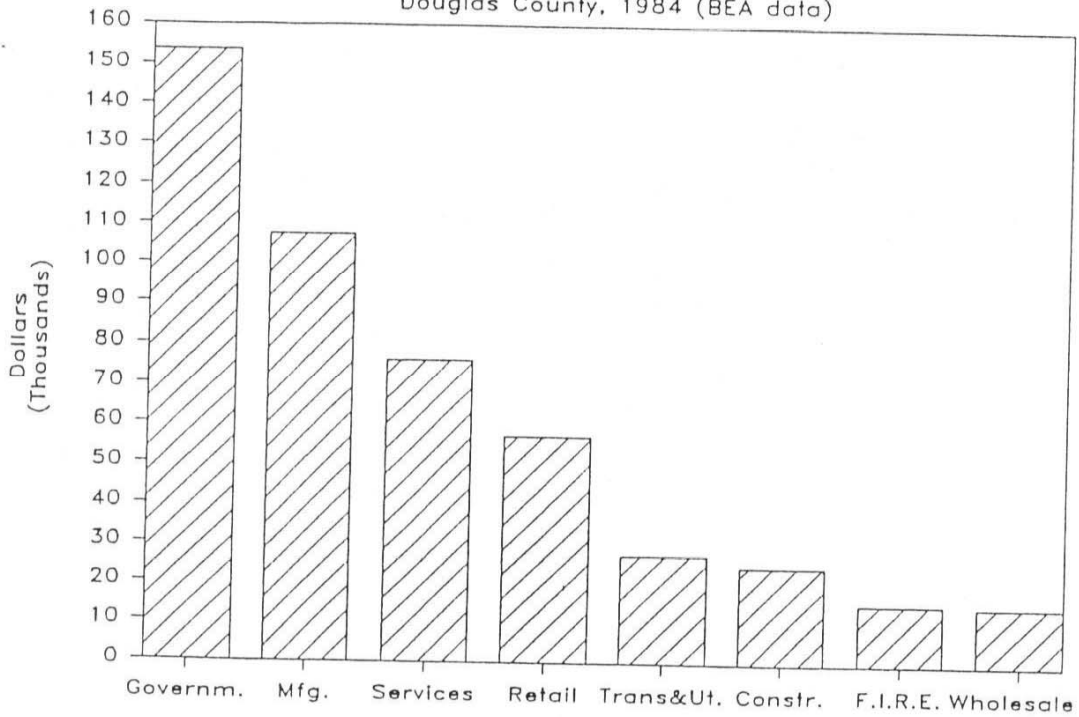


Figure 3

# EMPLOYMENT AND EARNINGS BY INDUSTRY

Douglas County, 1984 (BEA and CBP data)

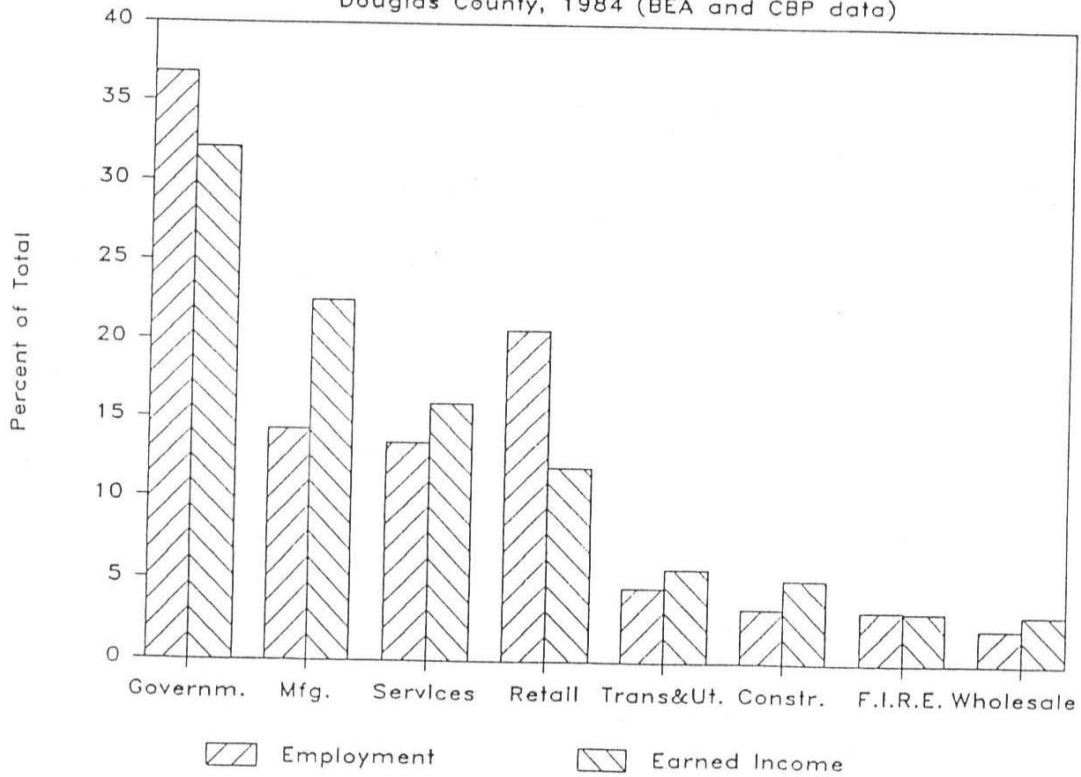


TABLE 1

## Composition of Government Employment in Douglas County, 1985

Public Sector Total*.....	10,402	100.0%
STATE Subtotal.....	7,038	67.7%
KU Unclassified Staff.....	2,025	19.5%
(faculty and professionals)		
KU Classified Staff.....	1,639	15.7%
KU Student Workers.....	1,650	15.9%
(paid monthly)		
Other State Employment**.....	1,724	16.6%
LOCAL Subtotal.....	2,862	27.5%
USD 497 (Lawrence).....	900	8.6%
USD 348 (Baldwin City).....	140	1.3%
USD 491 (Eudora).....	80	0.8%
Douglas County.....	270	2.6%
City of Lawrence.....	420	4.0%
Lawrence Memorial Hospital....	490	4.7%
Other Local Employment.....	562	5.4%
FEDERAL Subtotal.....	502	4.8%
Haskell Indian Junior College.	185	1.8%
Haskell Health Center.....	30	0.3%
Other Federal Employment.....	287	2.7%
(Postal Services, Social Security Administration)		

\* All FICA covered part-time jobs included.

\*\*Including 2,233 KU students working on an hourly basis.

TABLE 2A: Employment by Major Industry, Douglas County 1970-85

	1970	1975	1980	1985
Nonfarm Wage and Salary	18,301	21,032	27,949	28,334
Government Total	8,122	8,827	10,736	10,402
Private Sector Total	10,179	12,205	17,213	17,932
Contract Construction	713	747	956	968
Manufacturing	2,757	3,322	4,536	4,047
Trans & public utilities	718	773	1,187	1,062
Wholesale Trade	471	424	605	621
Retail Trade	2,955	3,875	5,424	5,894
Fin, Ins & Real estate	588	600	866	876
Services	1,929	2,216	3,364	4,089
Nonclassifiable		103	180	288

Source: Summarized from Tab. A in Appendix.

Table 2B: Employment Shares by Major Industry, Douglas County 1970-85

	1970	1975	1980	1985
Nonfarm Wage and Salary	100.0%	100.0%	100.0%	100.0%
Government Total	44.4%	42.0%	38.4%	36.7%
Private Sector Total	55.6%	58.0%	61.6%	63.3%
Contract Construction	3.9%	3.6%	3.4%	3.4%
Manufacturing	15.1%	15.8%	16.2%	14.3%
Trans & public utilities	3.9%	3.7%	4.2%	3.7%
Wholesale Trade	2.6%	2.0%	2.2%	2.2%
Retail Trade	16.1%	18.4%	19.4%	20.8%
Fin, Ins & Real estate	3.2%	2.9%	3.1%	3.1%
Services	10.5%	10.5%	12.0%	14.4%
Nonclassifiable	0.0%	0.5%	0.6%	1.0%

Source: Summarized from Tab B in Appendix.

Table 3: Employment Change by Major Industry, Douglas County 1970-1985

	1970-75	1975-80	1980-85	1970-85
Nonfarm Wage and Salary	14.9%	32.9%	1.4%	54.8%
Government Total	8.7%	21.6%	-3.1%	28.1%
Private Sector Total	19.9%	41.0%	4.2%	76.2%
Contract Construction	4.8%	28.0%	1.3%	35.8%
Manufacturing	20.5%	36.5%	-10.8%	46.8%
Trans & public utilities	7.7%	53.6%	-10.5%	47.9%
Wholesale Trade	-10.0%	42.7%	2.6%	31.8%
Retail Trade	31.1%	40.0%	8.7%	99.5%
Fin, Ins & Real estate	2.0%	44.3%	1.2%	49.0%
Services	14.9%	51.8%	21.6%	112.0%
Nonclassifiable		74.8%	60.0%	

Source: Summarized from Tab B in Appendix.

national average, reflecting the sector's great importance to the community in terms of providing stable employment. As can be seen from Table 1, the University of Kansas's faculty and staff, not including any student workers, accounted for 35.2 percent of total public sector employment. In other words the 3,650 non-student university employees in FY 1985 made up 13 percent of total nonfarm wage and salary employment, almost reaching the number of manufacturing workers (4,050) in the county. However, the 4,175 full-time university staff members of University of Kansas (including student workers) clearly outnumbered manufacturing workers.

While still leading in employment, the government sector's share of employment decreased from 44 percent in 1970 to 37 percent in 1985 although most other sectors have increased their shares. (See Tables 2A and 2B.) Indeed, employment growth in the public sector, especially in the state government subsector, was slower than in any other major employment category over the past 15 years. As can be seen from Table 3, employment growth in the government sector averaged 28.1 percent for the period from 1970 to 1985, whereas the private sector had a 76.2 percent increase. Figure 5 illustrates this fact in full detail. Although the University of Kansas has always provided stable employment, the negative growth rate for the five-year period from 1980 to 1985 (-4.8%) shows the vulnerability of the public sector by state and federal budget cuts following a recession.

#### Retailing Employs 6000 but Ranks Lowest in Income per Employee

Retailing ranks second in the county in terms of employment, but generates the lowest income per employee of all sectors (Table 7). Including a high proportion of part-time workers, retail trade's share of total nonfarm wage and salary employment reached 20.8 percent in 1985, exceeding the statewide average by 2 percent but lying below the average

share of midwestern college towns. (See Chapter 2.) Due to a high student population, 38 percent of all retail employment is in the eating and drinking establishment category, about 6 percent more than the state and 6.5 percent more than the nationwide average.

Following the demand of an expanding work force and increasing student population, retail trade's share of employment rose from 16 percent in 1970 to nearly 21 percent in 1985. (See Table 2.) As Table 3 reveals, job growth in retailing was fast in the decade from 1970 (about 3.5% annually) to 1980 but slowed down drastically to about 1.7 percent annually between 1980 and 1985 due to the 1981/82 recession, which brought job losses in manufacturing (Figure 6) and a decline of the total work force. However, retail job growth resumed to previous levels since 1984.

#### The Growth in Service Sector Employment is Following National Trends

Lagging about two years behind the national trend, the local service sector has outperformed manufacturing in employment in the mid-1980's.<sup>2</sup> However, service sector jobs in 1985 (not including transportation, finance and real estate) claimed only 14.4 percent of total nonfarm wage and salary employment compared to 18.9 percent for the state and an average of about 22 percent for the United States. As Table 4 reveals, health and business services capture the biggest shares of service employment in the county, but these shares are well below statewide and national standards and also below that of most other college towns. (See Chapter 2.) However, private educational services (mostly Baker University) and private social services (child day care, nursery and preschools, senior citizens associations,

---

<sup>2</sup> According to County Business Patterns data by March 1985.

TABLE 4

Employment Shares of Service Activities in Douglas County  
 Compared to State and National Average, 1985

	<u>Douglas County</u>	<u>Kansas</u>	<u>U.S.</u>
Total Nonfarm Wage and Salary Employment..... (government sector included)	100.00%	100.0%	100.0%
Total Services.....	14.4%	18.9%	22.0%

Douglas County Ranking Below Statewide Average:

Health Service.....	2.9%	7.0%	6.5%
Business Service.....	2.4%	2.7%	4.4%
Membership Organizations.	1.3%	1.8%	1.6%
Personal Services.....	1.0%	1.1%	1.1%
Auto Repair.....	0.5%	0.7%	0.7%
Amusement and Recreation.	0.5%	0.6%	0.8%
Legal Services.....	0.3%	0.5%	0.7%

Douglas County Ranking Above Statewide Average:

Social Services.....	1.8%	1.2%	1.3%
Hotels.....	1.0%	0.9%	1.3%
Educational Services.....	1.4%	0.9%	1.5%

Source: Compiled from Tables B and C in the Appendix.



retirement homes, etc.) have significantly higher employment shares than the state, reflecting the county's strengths in these service categories.

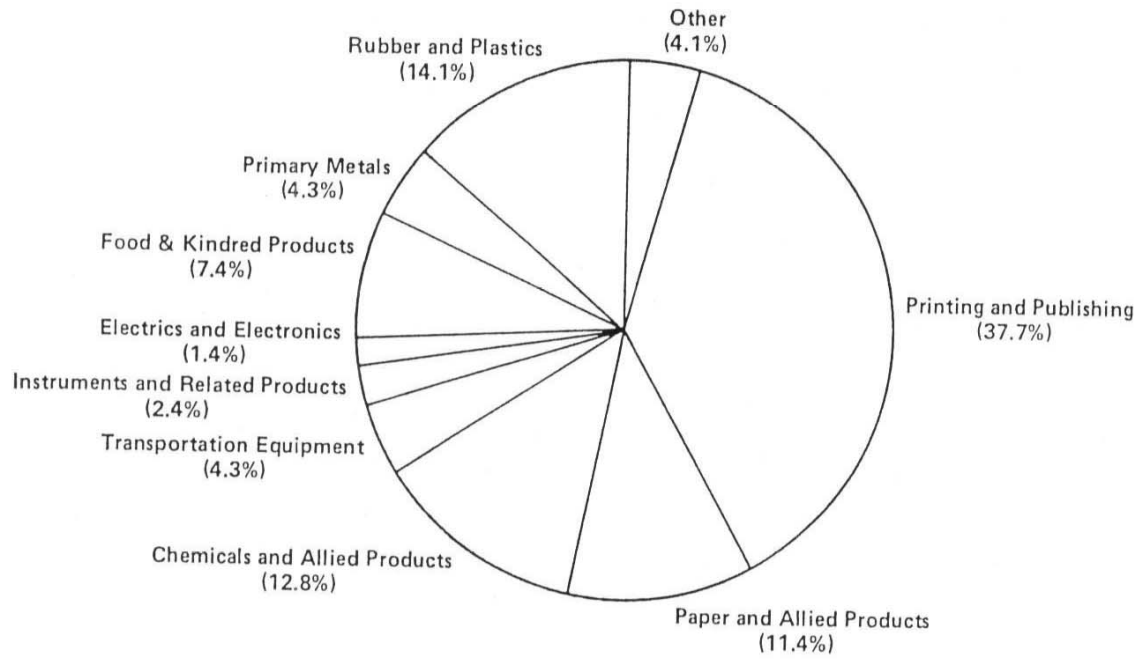
As Tables 5 and 6 show, the service economy, although expanding rapidly in the nation, was characterized by sluggish growth in Douglas County in the past but followed national trends in recent years. For example, growth in service employment from 1978 to 1985 was 34.4 percent for the county and 38.3 percent for the nation. From 1984 to 1985 the corresponding growth rates were 11.1 percent and 5.8 percent, reflecting the county's faster service-sector growth in the recent past relative to the United States.

#### Manufacturing is the Second Most Import Income Source

Steady growth over the past 15 years has increased the county's manufacturing employment from about 2,700 to 4,000. (See Table 2A.) But the relative share of manufacturing employment dipped from 15.1 percent in 1970 to 14.3 percent in 1985 due to the growth of the service and retail sectors. (See Table 2B.) As expected, the 14.3 percent share in 1985 was about 5 percent below the statewide average, but lay above the average for midwestern college towns.

Although manufacturing ranked fourth in employment, surpassed by the service sector since 1985, it was the second most important income source for the community after the government sector. As can be seen from Figure 4, printing and publishing made up nearly 38 percent of total manufacturing employment in 1985, reflecting the communities dependence on this subsector of about 1,500 workers. Next comes the plastics-producing industry with 14 percent. The local chemical and paper industry account for about 12 percent

Figure 4  
MIX OF MANUFACTURING EMPLOYMENT  
Douglas County, 1985



of total manufacturing employment or about 500 workers each.<sup>3</sup> A relatively small proportion of manufacturing employment is engaged in the high-tech sector. The instruments category, for example, captured only 2.4 percent of manufacturing employment whereas the national average is 3.2 percent. A similar gap can be observed for transportation equipment which comprises some high-tech segments and has a 4.3 percent share of manufacturing employment locally and a 9.1 percent share nationally. According to the 1985 data analyzed, the business segments that are stimulating rebuilding of the manufacturing sector nationally appear to be inadequately represented in the county. Recent research has shown that scientific instruments, computer and office machines, electronic components, communications and electric wiring equipment, miscellaneous plastic products and pharmaceutical products are some of the most innovative and fastest growing manufacturing segments in the nation. Douglas County has to focus on these highly innovative manufacturing businesses in order to maintain a sound manufacturing base for the future.

#### Economic Sectors Ranked by Personal Income

In ranking economic sectors by personal income (all income received by households), we get a clear picture of the main income sources within the community. In general, the bulk of total personal income in a community consists of earnings from employee compensation. In Douglas County, local earnings from employee compensation accounted for about 68 percent of total personal income in 1984. The rest was made up of dividends, interest, business and government transfer payments (pensions, welfare benefits,

---

<sup>3</sup> Exact figures are withheld in the County Business Patterns statistics to avoid disclosure of confidential information.

etc.), proprietary income and earnings of local residents who worked outside the community.

Figure 2 shows the major sources of personal income by industry sector in Douglas County according to the latest data available from the Bureau of Economic Analysis. Obviously, the public sector is the biggest income source for the community, generating 32 percent of the total. As can be seen from Table 7, it was also the most stable income source for the community: its percentage share of total personal income remained almost unchanged between 1970 and 1984, varying between 30.7 and 32.1 percent. As has already been pointed out, manufacturing is the second most important income source in the community generating \$107.6 million in 1984 or 22 percent of total earnings. However, the \$95.3 million budgeted expenditures for wages and salaries at the University of Kansas for FY 1985 (not including fringe benefits), nearly matched manufacturing earnings for the time period examined, indicating the importance of the university as one of the primary income sources in the community. As Table 2 and Table 7 further show, the service sector ranks third in income and has increased its share of total earnings from 12 percent in 1970 to 16 percent in 1984.

In contrast, retailing, finance, construction, and wholesale trade all have experienced a decrease of their shares of total local earnings. The implication is evident: the service sector has become an increasingly important income source for the community and is expected to continue its growth trend in the future. Due to a relatively high proportion of professionals working in the service sector (lawyers, accountants, doctors, consultants), the latter has generated 1.4 times more income than retailing. Luring more professional services into town by emphasizing the presence of a

well-educated work force can therefore provide a promising source of future income.

Figure 3 gives a relative comparison of employment and income. As can be seen, there are five economic sectors that have a higher share of income than their employment share would suggest: manufacturing, services, transportation and public utilities, construction, and wholesale trade. Obviously, these are the sectors with a higher overall wage level, and they include less part-time employment than the government and retail sectors. Manufacturing, for instance, includes personal income earned by factory owners and managers, and services reflect high income by professionals. Table 8 provides an industry-specific ranking of average annual personal income per employee. Manufacturing ranks first with an average of \$27,563 per employee in 1984, whereas the public sector and retailing ranked at the bottom. Although employment in the public sector was 2.6 times larger than in manufacturing, earnings from the local public sector were only 1.4 times more. This reflects the public sector's low average wage level, which averaged \$15,265 per employee in 1984. Due to low wages, retailing averaged only \$10,121 per employee in 1984, half as much as services. According to these 1984 figures, an expansion of the service economy generates more income and a greater economic return for the community than an expansion of the retail sector, although good retailing facilities are crucial to prosperity and economic development in the city.

Figure 5  
 Employment Growth in Douglas County  
 1975-1985

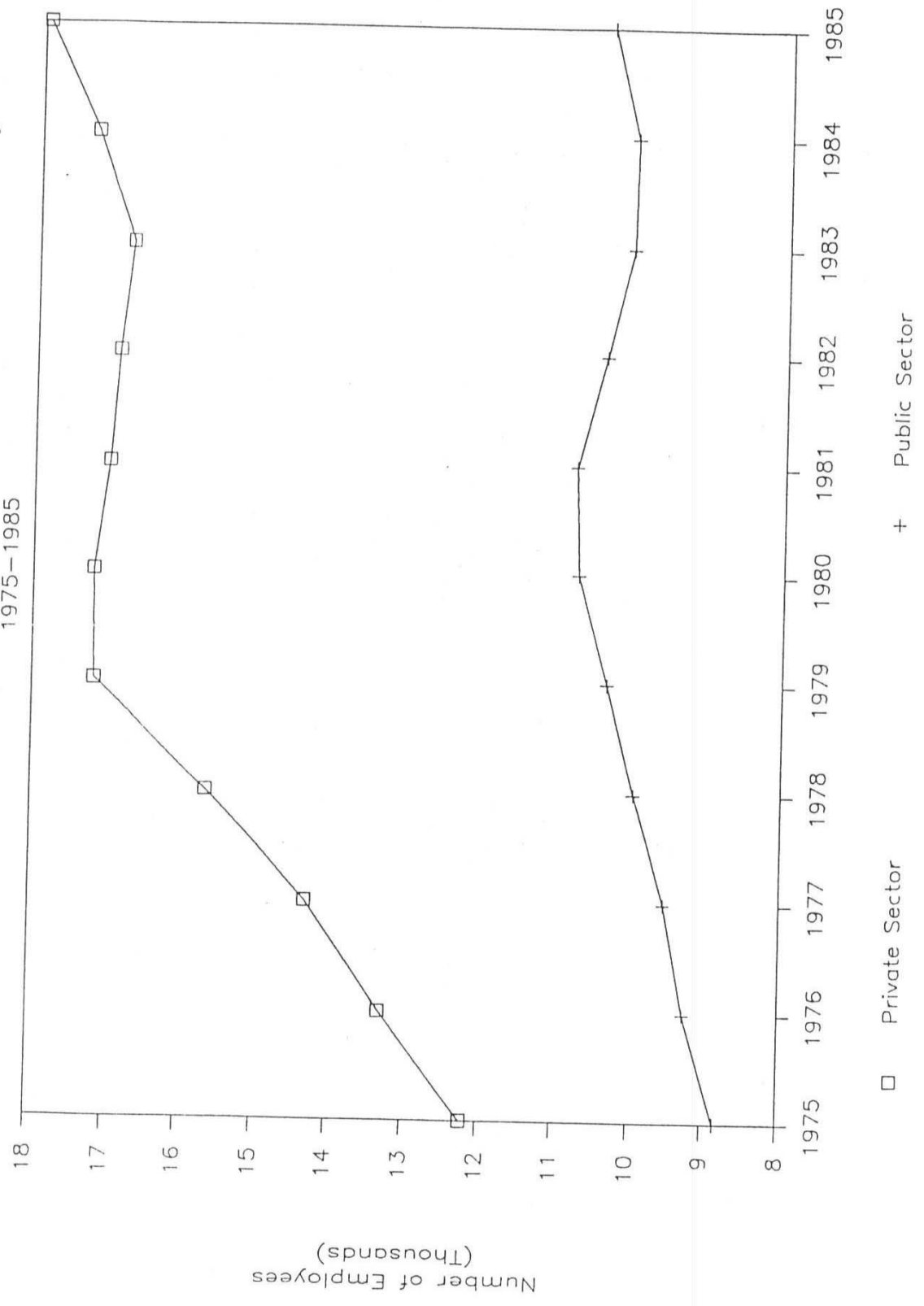


Figure 6  
 Douglas County, 1975-1985  
 Employment Growth in Major Industries

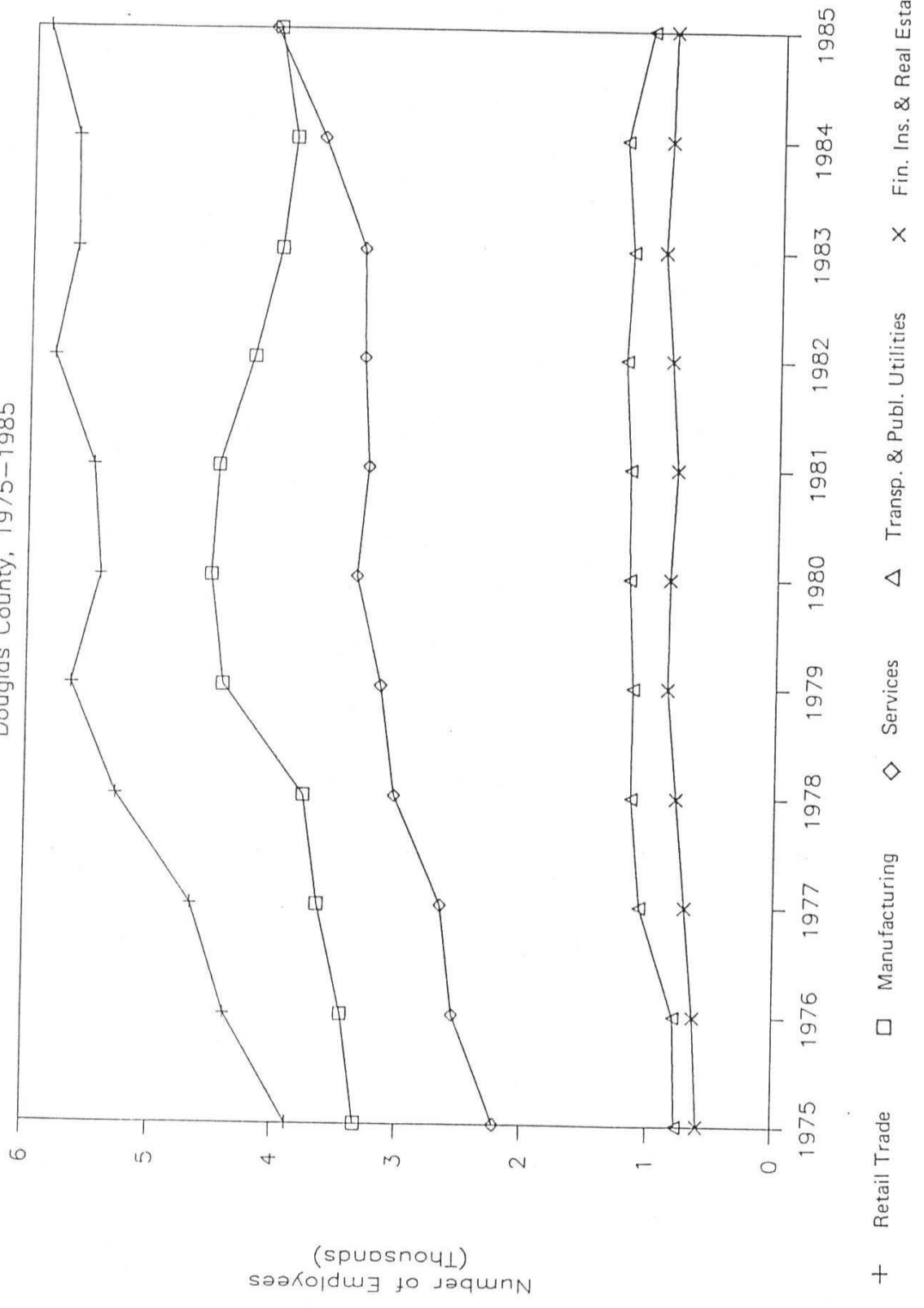


Table 5: Employment Change by Industry, 1978-85

	DC	KS	US	Growth in Dgl.Co. faster than in Kansas	Growth in Dgl.Co. faster than in the U.S.
County Bus.Pattern Total	14.5%	10.7%	15.3%	*	
Agricultural services	71.8%	37.7%	43.5%	*	*
Mining	-58.3%	44.7%	13.9%		
Contract Construction	-0.2%	-13.2%	8.5%	*	
Manufacturing	7.3%	0.2%	-5.8%	*	*
20 Food	NA	10.6%	-7.8%		
27 Printing & Publishing	0.9%	18.8%	18.6%		
38 Instruments & Rel.Pro	18.1%	-11.2%	2.3%	*	*
Trans & public utilities	-7.6%	11.0%	10.7%		
Wholesale Trade	13.9%	6.6%	16.1%	*	
Retail Trade	11.6%	7.9%	16.3%	*	
Fin,Ins & Real estate	10.1%	18.6%	23.2%		
60 Banking	-10.1%	9.9%	17.0%		
61 Credit	-6.5%	26.7%	39.5%		
64 Insurance	-35.4%	49.6%	33.9%		
65 Real Estate	70.3%	23.1%	20.8%	*	*
Services	34.4%	26.4%	38.3%	*	
70 Hotels,etc	-8.6%	4.2%	26.0%		
72 Personal Services	-0.7%	9.7%	12.9%		
73 Bus Services	68.6%	81.4%	64.5%		*
75 Auto Repair	40.4%	43.1%	28.6%		*
79 Amusement & Rec	12.6%	6.1%	17.0%	*	
80 Health Services	43.3%	18.9%	33.8%	*	*
81 Legal Services	27.7%	39.6%	56.7%		
82 Educa Services	NA	33.6%	31.3%		
83 Social Services	172.1%	33.7%	44.6%	*	*
86 Membership Org	21.6%	15.9%	26.2%	*	
89 Miscellaneous	47.4%	43.1%	68.3%	*	
Nonclassifiable	396.6%	184.6%	194.9%	*	*

Source: U.S. Bureau of the Census, County Business Patterns, 1970-85.



Tab 6: Employment Change by Industry, 1984-85

	DC	KS	U.S.	Growth in Dgl.Co. faster than in Kansas	Growth in Dgl.Co. faster th in the U.
County Bus.Pattern Total	3.8%	2.3%	4.0%	*	
Agricultural services	0.0%	8.1%	6.9%		
Mining	17.6%	-0.9%	-1.9%	*	*
Contract Construction	5.7%	3.8%	7.2%	*	
Manufacturing	3.7%	0.8%	0.6%	*	*
20 Food	NA	3.1%	0.1%		
27 Printing & Publishing	6.1%	3.6%	4.4%	*	*
38 Instruments & Rel.Pro	NA	-8.4%	-0.3%	*	
Trans & public utilities	-15.4%	0.9%	3.0%		
Wholesale Trade	1.6%	1.2%	4.4%	*	
Retail Trade	4.3%	3.7%	4.8%	*	
Fin,Ins & Real estate	-2.4%	0.8%	3.8%		
60 Banking	-3.0%	1.0%	1.2%		
61 Credit	3.6%	4.8%	6.2%		
64 Insurance	8.8%	8.2%	5.7%	*	*
65 Real Estate	-8.5%	5.0%	8.9%		
Services	11.1%	2.9%	5.8%	*	*
70 Hotels,etc	14.8%	7.2%	5.0%	*	*
72 Personal Services	-6.3%	3.8%	3.9%		
73 Bus Services	61.1%	6.8%	11.1%	*	*
75 Auto Repair	33.7%	8.9%	7.9%	*	*
79 Amusement & Rec	24.1%	-2.8%	4.4%	*	*
80 Health Services	18.6%	-1.7%	2.2%	*	*
81 Legal Services	0.0%	3.5%	6.2%		
82 Educa Services	NA	5.7%	2.8%		
83 Social Services	13.6%	5.9%	7.4%	*	*
86 Membership Org	17.0%	3.5%	3.0%	*	*
89 Miscellaneous	-55.3%	12.1%	14.7%		
Nonclassifiable	6.7%	17.9%	16.9%		

Source: U.S. Bureau of the Census, County Business Patterns, 1970-85.

Table 7: Personal Income by Major Industry, Douglas County

Major Industry	Income (in thousands of dollars)			
	1970	1975	1980	1984
Nonfarm Total	127,010	208,120	371,599	478,102
Construction	13,173	21,929	27,552	24,610
Manufacturing	25,581	37,742	86,730	107,605
Transp.&Public Utilities	6,491	11,627	23,427	27,352
Wholesale Trade	4,308	9,928	11,342	14,724
Retail Trade	17,183	26,084	42,568	57,193
Fin.,Ins.,&Real Estate	5,222	6,378	12,656	15,156
Services	15,043	26,985	52,042	76,234
Government	39,501	66,593	114,206	153,581
Other	508	854	1,076	1,647

	Share of Douglas County Nonfarm Total Income			
	1970	1975	1980	1984
Nonfarm Total	100.0%	100.0%	100.0%	100.0%
Construction	10.4%	10.5%	7.4%	5.1%
Manufacturing	20.1%	18.1%	23.3%	22.5%
Transp.&Public Utilities	5.1%	5.6%	6.3%	5.7%
Wholesale Trade	3.4%	4.8%	3.1%	3.1%
Retail Trade	13.5%	12.5%	11.5%	12.0%
Fin.,Ins.&Real Estate	4.1%	3.1%	3.4%	3.2%
Services	11.8%	13.0%	14.0%	15.9%
Government	31.1%	32.0%	30.7%	32.1%
Other	0.4%	0.4%	0.3%	0.3%

Source: BEA, Personal Income by Major Source (microfiche, April 1984).

Table 8: Personal Income by Industrial Category and Per Employee, 1984

Major Industry	Earnings (Thous. \$)	Number of Employees	Earnings Per Employee (\$)	Industries Ranked by Earnings Per Employee
Nonfarm Total	478,102	27,330	17,494	
Construction	24,610	916	26,867	2
Manufacturing	107,605	3,904	27,563	1
Transp.&Public Utilities	27,352	1,255	21,794	4
Wholesale Trade	14,724	611	24,098	3
Retail Trade	57,193	5,651	10,121	8
Fin.,Ins.&Real Estate	15,156	898	16,878	6
Services	76,234	3,680	20,716	5
Government	153,581	10,061	15,265	7

Source: BEA, Personal Income by Major Source (microfiche, April 1984).

ASSESSING THE INDUSTRIAL MIX: LAWRENCE/DOUGLAS COUNTY versus  
OTHER COLLEGE TOWNS

Since college towns have a characteristic industrial mix due to the presence of students and the university, the local private-sector economy can best be assessed by comparing Lawrence/Douglas County to similarly sized counties with college towns in the Midwest. A first comparison group is selected by population size and the percentage of students to total county and city population. (See Table 9.) For a wider perspective a second comparison group is chosen including larger counties and college towns. (See Table 10.)

By determining the average share of each industry's employment, we can identify industries in Lawrence/Douglas County that are above or below the group's average. This provides some indication of which components of the local economy are stronger or weaker relative to the comparison groups. In order to identify industries with highly variable employment shares from county to county, standard deviations are calculated to measure the variability around the mean. Tables 11 and 12 summarize the comparison of Lawrence/Douglas County to the first group of five similar-sized counties with college towns. Most strikingly, Lawrence/Douglas County has only four industries that outperform the first comparison group in employment. Two of these industries, social services and the real estate business, even outperform the statewide and national average, reflecting their strength within the community.

Local Manufacturing Outperforms Most Other  
College Towns and Varies Most Widely in Employment Shares

As expected, the local manufacturing sector is comparatively strong for a medium-sized college town, having a 6 percent higher share of employment

Tab 9 : EMPLOYMENT SHARES BY INDUSTRIES FOR SELECTED COUNTIES WITH COLLEGE TOWNS, GROUP I, 1985

Group I : Students accounting for 30-40% of County Population  
Total County Population 60,000-100,000

	LAWRENCE	MANHATTAN	AMES	STILLWATER	IOWACITY	BLOOMINGTON	Comparison Group I	
	Douglas KS	Riley KS	Story IO	Payne OK	Johnson IO	Monroe IN	Mean	Standard Deviation
1980 Town Population	52,738	32,644	45,755	38,268	50,508	52,044	43,844	
Student in % of Town Pop.	46.3%	59.7%	55.4%	61.0%	57.3%	62.8%	59.24%	
1980 County Population	67,640	63,505	72,326	62,435	81,717	98,785	75,754	
Student in % of County Pop	36.1%	30.7%	35.0%	37.4%	35.4%	33.1%	34.32%	
Total Employees	17,932	12,431	17,617	14,124	22,439	29,680	19,258	
Agricultural services	.37%	.42%	NA	.40%	NA	.38%		
Mining	.11%	.04%	NA	.40%	NA	.49%		
Contract Construction	5.40%	6.81%	5.79%	6.43%	4.59%	5.56%	5.84%	.86%
Manufacturing	22.57%	8.19%	15.01%	16.97%	17.06%	25.63%	16.57%	6.23%
Trans & public utilities	5.92%	3.15%	2.59%	5.18%	3.54%	5.17%	3.93%	1.19%
Wholesale Trade	3.46%	4.28%	5.08%	4.72%	3.91%	3.76%	4.35%	.55%
Retail Trade	32.87%	38.44%	37.36%	34.28%	33.34%	29.16%	34.52%	3.66%
53 General Merchandise	3.22%	3.45%	3.54%	3.33%	4.06%	3.60%	3.59%	.28%
54 Food Stores	4.18%	3.59%	5.69%	7.36%	4.72%	4.22%	5.12%	1.47%
55 Auto dealers & Service	2.89%	4.23%	3.70%	2.98%	3.03%	2.18%	3.23%	.78%
58 Eating & Drinking	12.47%	15.05%	16.19%	11.97%	12.82%	11.49%	13.50%	2.03%
Fin, Ins & Real estate	4.89%	8.84%	6.73%	5.58%	5.70%	4.49%	6.27%	1.64%
60 Banking	1.65%	2.29%	1.77%	2.62%	2.39%	1.23%	2.06%	.56%
61 Credit	.48%	.44%	.81%	.78%	.39%	.63%	.61%	.19%
64 Insurance	.35%	.64%	.49%	.66%	.94%	.37%	.62%	.21%
65 Real Estate	1.57%	1.13%	2.60%	1.41%	1.11%	1.03%	1.46%	.65%
Services	22.80%	28.93%	25.06%	20.38%	29.83%	23.44%	25.53%	3.91%
70 Hotels, etc.	1.60%	1.86%	3.26%	2.32%	2.69%	1.82%	2.39%	.60%
72 Personal Services	1.66%	1.70%	1.43%	2.05%	1.94%	1.46%	1.71%	.28%
73 Business Services	3.84%	2.74%	4.26%	1.88%	8.20%	2.77%	3.97%	2.51%
80 Health Services	4.51%	9.09%	5.79%	4.77%	7.30%	8.88%	7.17%	1.89%
81 Legal Services	.46%	NA	.40%	.57%	.60%	.60%	.43%	.11%
83 Social Services	2.88%	2.47%	2.68%	1.61%	3.12%	2.12%	2.40%	.57%
86 Membership Org	2.07%	3.47%	3.87%	2.72%	1.38%	2.45%	2.78%	.97%
89 Miscellaneous	.78%	1.97%	1.18%	1.59%	1.72%	.66%	1.42%	.51%
Nonclassifiable	1.61%	.90%	1.67%	2.91%	1.38%	1.92%	1.76%	.75%

Source: County Business Patterns, 1985 .

Tab 10: EMPLOYMENT SHARES BY INDUSTRIES FOR SELECTED COUNTIES WITH COLLEGE TOWNS, GROUP II, 1985

Group II : Students accounting for 10-25% of County Population  
Total County Population over 100,000

	LAWRENCE	COLUMBIA	NORMAN	DENTON	BOULDER	CHAMP. URBANA	Comparison Group II	
	Douglas KS	Boone MO	Cleveland OK	Denton TX	Boulder CO	Champaign IL	Mean	Standard Deviation
1980 Town Population	52,738	62,081	68,020	48,063	76,685	94,111	69,792	
Student in % of Town Pop.	46.3%	39.9%	32.1%	39.1%	29.0%	37.1%	35.44%	
1980 County Population	67,640	100,376	133,173	143,126	189,625	168,392	146,938	
Student in % of County Pop	36.1%	24.7%	16.3%	13.1%	11.7%	20.7%	17.30%	
Total Employees	17,932	32,425	28,305	46,407	88,146	46,633	48,383	
Agricultural services	.37%	NA	1.60%	.86%	.41%	.26%		
Mining	.11%	NA	2.01%	.30%	.43%	.06%		
Contract Construction	5.40%	5.86%	8.50%	8.89%	5.47%	3.91%	6.53%	2.12%
Manufacturing	22.57%	11.66%	11.38%	26.64%	36.83%	16.87%	20.68%	10.94%
Trans & public utilities	5.92%	4.41%	2.65%	4.29%	2.42%	4.93%	3.74%	1.13%
Wholesale Trade	3.46%	6.03%	4.96%	5.24%	4.02%	7.46%	5.54%	1.29%
Retail Trade	32.87%	28.06%	37.51%	27.63%	21.52%	30.54%	29.05%	5.78%
53 General Merchandise	3.22%	2.92%	4.35%	4.18%	1.48%	4.22%	3.43%	1.23%
54 Food Stores	4.18%	3.55%	4.74%	6.50%	3.13%	3.88%	4.36%	1.33%
55 Auto dealers & Service	2.89%	3.09%	4.45%	3.02%	2.41%	2.58%	3.11%	.80%
58 Eating & Drinking	12.47%	11.01%	12.80%	7.68%	8.88%	11.98%	10.47%	2.14%
Fin, Ins & Real estate	4.89%	14.33%	6.51%	4.02%	4.67%	6.21%	7.15%	4.15%
60 Banking	1.65%	NA	2.75%	1.52%	1.27%	2.52%	1.61%	1.10%
61 Credit	.48%	.41%	.55%	.46%	.47%	.71%	.52%	.12%
64 Insurance	.35%	1.59%	.44%	.36%	.33%	.59%	.66%	.53%
65 Real Estate	1.57%	.96%	2.08%	1.17%	1.33%	1.30%	1.37%	.42%
Services	22.80%	27.59%	22.75%	19.86%	22.93%	27.77%	24.18%	3.42%
70 Hotels, etc.	1.60%	2.14%	1.47%	1.23%	.70%	2.48%	1.60%	.71%
72 Personal Services	1.66%	1.78%	1.63%	1.13%	1.36%	1.74%	1.53%	.28%
73 Business Services	3.84%	3.16%	2.36%	3.27%	5.91%	3.00%	3.54%	1.37%
80 Health Services	4.51%	7.83%	6.08%	6.74%	5.90%	11.37%	7.58%	2.25%
81 Legal Services	.46%	.45%	.64%	.31%	.72%	.87%	.60%	.22%
83 Social Services	2.88%	3.36%	2.35%	1.33%	1.30%	1.67%	2.00%	.87%
86 Membership Org	2.07%	2.03%	2.90%	2.03%	1.40%	2.66%	2.20%	.59%
89 Miscellaneous	.78%	1.38%	2.08%	.87%	1.80%	1.37%	1.50%	.46%
Nonclassifiable	1.61%	1.47%	2.14%	2.26%	1.31%	1.98%	1.83%	.42%

Source: County Business Patterns, 1985.

than the average for the first comparison group. It also outperformed the second group's average by 2 percent. Only Bloomington/Monroe County in Indiana, which clearly has the largest county population of the first group (Table 9), proves to have a stronger manufacturing base. Two other places in the second comparison group with substantially higher county population, Denton, Texas, and Boulder, Colorado, also surpass Lawrence in their proportion of manufacturing employment. These two college towns benefit from a location on the periphery of large metropolitan centers (Dallas-Ft. Worth and Denver) and from good transportation links to the metropolitan area. We can conclude that a college town's location and transportation links are the key factors for a thriving manufacturing economy, as are a skilled work force and the presence of research institutions. Given Lawrence's location, within an hour's drive of the Kansas City metropolitan area and an international airport, the local manufacturing sector has good potential for future growth if the educated work force and the presence of the university is intensively used.

Manufacturing also proved to be the sector with the highest variability in employment shares with respect to both groups. This can be seen from the standard deviation, i.e., the variability around the mean, which is highest for manufacturing for both comparison groups. (See Tables 9 and 10.) Apparently, employment shares for manufacturing are highly unpredictable for small- and medium-sized college towns; they vary considerably. The shares for retail and service employment, for instance, vary much less from county to county, reflected by lower values for the standard deviation. Evidently, comparing the standard deviation makes sense only for sectors of about the same size.

TABLE 11

Shares of Private Sector Employment in Douglas County  
Above Average of Comparison Group I

	<u>Douglas County</u>	<u>Comparison Average</u>	<u>Group I Range</u>	<u>Kansas Average</u>	<u>U.S. Average</u>
Manufacturing.....	22.6%	16.6%	8.2-25.6%	23.8%	24.0%
Transportation and Public Utilities.....	5.9%	3.9%	2.6- 5.2%	6.4%	5.9%
Social Services.....	2.9%	2.4%	1.6- 3.1%	1.5%	1.6%
Real Estate.....	1.6%	1.5%	1.0- 2.6%	1.1%	1.4%

Group I includes Manhattan, Kansas; Ames, Iowa; Stillwater, Oklahoma; Iowa City, Iowa; and Bloomington, Indiana.

Source: Calculated from County Business Patterns, 1985.



TABLE 12

Shares of Private Sector Employment in Douglas County  
Above Average of Comparison Group II

	<u>Douglas County</u>	<u>Comparison Average</u>	<u>Group II Range</u>	<u>Kansas Average</u>	<u>U.S. Average</u>
Manufacturing.....	22.6%	20.7%	11.4-36.8%	23.8%	24.9%
Transportation and Public Utilities.....	5.9%	3.7%	2.4- 4.9%	6.4%	5.9%
Social Services.....	2.9%	2.0%	1.3- 3.4%	1.5%	1.6%
Real Estate.....	1.6%	1.4%	1.0- 2.1%	1.1%	1.4%
Personnel Services.....	1.7%	1.5%	1.1- 1.8%	1.4%	1.3%
Business Services.....	3.8%	3.5%	2.4- 5.9%	3.4%	5.3%
Total Retailing.....	32.9%	29.1%	21.5-37.5%	22.5%	20.8%
Eating and Drinking.....	12.5%	10.5%	7.7-12.8%	7.2%	6.5%

Group II includes Columbia, Missouri; Norman, Oklahoma; Denton, Texas; Boulder, Colorado; and Champaign, Illinois.

Source: Calculated from County Business Patterns, 1985.

Service-Type Employment is Comparatively Weak  
Although Bright Spots Exist

As can be seen from Tables 11 and 12, Lawrence has only a few service-type activities that are above average for both groups. The transportation and public utilities sector is about 2 percent above average, due to a well-developed motor freight transportation and telecommunication business locally. Most remarkably, social services and real estate employment not only ranked above average towns but also outperformed the statewide and national average. The strength of private social services locally is based on numerous child day care centers and preschools and on the developing retirement industry. The broad spectrum of private social services offered in the county is certainly an aspect of quality of life. In line with an expanding housing market, especially in Lawrence, real estate employment also proves to have an above-average percentage share and is expected to grow further.

A comparison of Lawrence/Douglas County to the larger group of college towns reveals that three additional service-type activities have above-average employment shares. These are personal and business services and eating and drinking establishments. However, business services, capturing only 3.8 percent of private sector employment, do not appear to be adequately represented in the county, as a look at the national average and at the shares of some other college towns reveals (Iowa City, 8.2%; Ames, 4.3%; and Boulder, 5.9%). Local eating and drinking businesses, clearly outperformed in the first group of smaller college towns, do not lag behind the second comparison group. However, there is definitely demand for more distinguished dining establishments that could prevent leakage to the Kansas City area.

### Industries With Potential for Growth in College Towns

Despite the county's strong manufacturing base relative to both groups of college towns, most service-type activities such as finance, wholesale trade, certain services and retailing subcategories, rank below average in Lawrence/Douglas County in terms of employment shares. (See Tables 9 and 10.) This indicates that there is a need for expanding these industries within the community. Taking industries into account that have already been earmarked as ranking below the statewide and national average in the first chapter and that are considered national growth industries, the following business categories are identified as having a potential for growth in the local area:

1. business services including traditional computer programming and software, data processing, telemarketing, research and development laboratories and such new segments as image processing and artificial intelligence software;
2. legal services;
3. health services including physicians' offices and medical and dental laboratories;
4. hotel and tourism business;
5. banking;
6. credit and insurance, especially personal and business credit institutions;
7. wholesale trade;
8. general merchandise and food stores;
9. eating and drinking establishments; and
10. automotive dealers.

### Strategies for Promoting Economic Growth

Promoting the industries highlighted in the previous section can give

the local economy a boost over the next five to ten years. Strategies in promoting these industries involve

- assisting start-up firms with seed and venture capital and providing local financing opportunities;
- providing incubator space for start-up firms by creating a center for potential entrepreneurs and for joint ventures of university researchers and entrepreneurs;
- retaining established firms in the area rather than concentrating on luring new companies into town;
- keeping established firms from planning expansion outside the community by helping these firms find new buildings, building sites and office space and by granting tax incentives;
- making the business community aware of the availability of local labor skills and of the untapped reservoir of educated part-time workers in the community such as graduate students of the University of Kansas, faculty spouses and residents commuting to out-of-town workplaces;
- promoting the travel and tourism business by attracting visitors to conventions, cultural and athletic events;
- attracting high-quality retail and dining establishments to the community to prevent leakage to the surrounding metropolitan areas;
- building the reputation of a supportive local government for business and economic growth; and
- improving the quality of life by enhancing cultural and recreational activities.

Implementation of such strategies can further improve the local business climate and strengthen the community's economic sectors. Most importantly, a university community must build on high-tech companies and research, development operations that are attracted to town by the university and its Center of Excellence program, and improve access to university resources.

## SUMMARY AND RESULTS

Lawrence/Douglas County has a relatively healthy mix of industries, although the public sector is the most important in employment and in income, due to the presence of the state's premier educational institution. Most importantly, the University of Kansas payroll almost equals earnings in manufacturing, reflecting the university's great importance as an income source during within the community. A substantial source of growth during the past ten years was the service sector where employment and personal income grew significantly. Although employment growth in the service sector has lagged national growth in the past, it clearly outperformed the nation during 1985. Prospects are good for a continuation of this trend.

A comparison of the local mix of industries with other college towns in the Midwest revealed that Lawrence/Douglas County had a stronger manufacturing sector than the other towns. Some service-type activities such as finance, business and legal services, certain retail activities, and the travel and tourism business proved to be comparatively weak. The future growth of these business groups depends on the implementation of economic strategies such as assisting start-up firms in their needs for incubator space and offering special financing, keeping established firms in town by providing a favorable business climate for local expansion, and making the business community aware of the available, skilled, and well-educated work force. Improving the quality of local retailing and enhancing cultural and recreational activities are additional issues.

A P P E N D I X

Table A: Nonfarm Employment by Industry in Douglas County, 1970-1985

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Nonfarm Wage and Salary (government included)	18,301	21,032	22,576	23,851	25,634	27,537	27,949	27,810	27,339	26,850	27,330	28,33
County Bus. Pattern Total	10,179	12,205	13,321	14,308	15,657	17,191	17,213	17,030	16,923	16,762	17,269	17,93
Agricultural services	24		29	29	39				39	53	67	6
Mining					48				48	49	17	2
Contract Construction	713	747	874	934	970	1,134	956	897	726	830	916	96
15 Gen Constrac	223	232	228		237	259	250	234	185	179	228	19
16 Heavy Const					72	139		116	123	69	104	15
17 Spec Trades	443	497	634	616	661	736	548	547	418	582	584	61
Manufacturing	2,757	3,322	3,445	3,649	3,773	4,433	4,536	4,489	4,214	4,009	3,904	4,04
20 Food	206	299	266		402	394	583	432	429			
27 Printing & Publishing	1,382	1,424	1,409	1,463	1,511	1,820	1,973	1,844	1,741	1,634	1,438	1,52
32 stone, clay & glass			82	62	31	64				55	58	6
38 Instruments & Rel. Prod			68	82	83				70	72		9
39 Miscellaneous					13				101	81	81	7
Trans & public utilities	718	773	796	1,076	1,149	1,145	1,187	1,193	1,237	1,194	1,255	1,06
42 Trucking & Warehouse	106	105	113	153	160	138	143	172	176	168	129	141
Wholesale Trade	471	424	450	522	545	620	605	608	580	607	611	621
50 Durable goods		299	312	348	363	399	402	413	393	383	390	405
51 Nondurables		125	138	174	182	221	203	195	187			
Retail Trade	2,955	3,875	4,389	4,667	5,282	5,647	5,424	5,491	5,810	5,642	5,651	5,894
52 Bldg Mat & garden	151	145	177	204	189	202	195	191	157	207	190	182
53 General Merchandise	476	466	485	486	524	523	536	533	412	469	475	578
54 Food Stores	396	540	543	561	569	608	575	670	683	807	416	750
55 Auto dealers & Servis	482	404	493	507	619	577	525	495	514	546	583	518
56 Apparel	181		241		351			268	351			
57 Furniture	152	141		160		191	174				166	182
58 Eating & Drinking	764	976	1,225	1,411	1,685	2,004	1,782	1,832	2,073	1,964	2,116	2,237
59 Miscellaneous	353	610	679	734	841	878	940	895	1,012	743	770	806
Fin, Ins & Real estate	588	600	642	718	796	873	866	818	872	938	898	876
60 Banking	204	270	270	308	328	321	342	349	330	315	304	295
61 Credit	204	68	74	76	92	111	120	117	104	91	83	86
64 Insurance	42			74	96	72	56	55	82	59	57	62
65 Real Estate	138	113	132	135	165	237	220	171	217	336	307	281
Services	1,929	2,216	2,553	2,658	3,042	3,163	3,364	3,283	3,329	3,339	3,680	4,089
70 Hotels, etc	505	231	279	231	314	195	279	259	306	244	250	287
72 Personal Services	260	261	238	250	299	299	294	293	338	306	317	297
73 Bus Services	88	175	217	300	408	338	309	232	180	367	427	688
75 Auto Repair	106	88	90	77	99	87	87	66	108	113	104	139
79 Amusement & Rec	156	129	134	144	119	123	145	109	114	110	108	134
80 Health Services	158	396	574	454	564	645	751	668	694	650	681	808
81 Legal Services	30	59	50	53	65	70	75	93	95	91	83	83
82 Educa Services	255		469			500						
83 Social Services		88	92	241	190	159	198	191	291	321	455	517
86 Membership Org	200	191	203	252	305	306	277	306	245	241	317	371
89 Miscellaneous		62	70	94	95	289	289	371	322	304	313	140
Nonclassifiable		103			58	99	180	178	68	101	270	288
Government	8,122	8,827	9,255	9,543	9,977	10,346	10,736	10,780	10,416	10,088	10,061	10,402
Federal	372	489	523	543	542	504	509	506	493	476	483	502
State	5,919	6,103	6,424	6,557	6,826	7,032	7,395	7,407	7,122	6,762	6,763	7,038
Local	1,830	2,235	2,308	2,443	2,609	2,810	2,832	2,867	2,801	2,850	2,815	2,862

Source: U.S. Bureau of the Census, County Business Patterns, 1970-85.

Unpublished Data provided by Ks. Dept. of Human Resources for government employment.

Some industries are not listed because data is withheld to avoid disclosure of individual establishments in the CBP-statistics.

Table B: Employment by Industry as a Percentage of Total in Douglas County, 1970-1985

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Nonfarm Wage and Salary (government included)												
County Bus. Pattern Total												
Agricultural services	.1%		.1%	.1%	.2%				.1%	.2%	.2%	.2%
Mining					.2%				.2%	.2%	.1%	.1%
Contract Construction	3.9%	3.6%	3.9%	3.9%	3.0%	4.1%	3.4%	3.2%	2.7%	3.1%	3.4%	3.4%
15 Gen Contrac	1.2%	1.1%	1.0%		.9%	.9%	.9%	.8%	.7%	.7%	.8%	.7%
16 Heavy Const					.3%	.5%		.4%	.4%	.3%	.4%	.6%
17 Spec Trades	2.4%	2.4%	2.8%	2.6%	2.6%	2.7%	2.0%	2.0%	1.5%	2.2%	2.1%	2.2%
Manufacturing	15.1%	15.8%	15.3%	15.3%	14.7%	16.1%	16.2%	16.1%	15.4%	14.9%	14.3%	14.3%
20 Food	1.1%	1.4%	1.2%		1.6%	1.4%	2.1%	1.6%	1.6%			
27 Printing & Publishing	7.6%	6.8%	6.2%	6.1%	5.9%	6.6%	7.1%	6.6%	6.4%	6.1%	5.3%	5.4%
32 stone, clay & glass			.4%	.3%	.1%	.2%				.2%	.2%	.2%
38 Instruments & Rel. Prod			.3%	.3%	.3%				.3%	.3%		.3%
39 Miscellaneous					.1%				.4%	.3%	.3%	.3%
Trans & public utilities	3.9%	3.7%	3.5%	4.5%	4.5%	4.2%	4.2%	4.3%	4.5%	4.4%	4.6%	3.7%
42 Trucking & Warehouse	.6%	.5%	.5%	.6%	.6%	.5%	.5%	.6%	.6%	.6%	.5%	.5%
Wholesale Trade	2.6%	2.0%	2.0%	2.2%	2.1%	2.3%	2.2%	2.2%	2.1%	2.3%	2.2%	2.2%
50 Durable goods		1.4%	1.4%	1.5%	1.4%	1.4%	1.4%	1.5%	1.4%	1.4%	1.4%	1.4%
51 Nondurables		.6%	.6%	.7%	.7%	.8%	.7%	.7%	.7%			
Retail Trade	16.1%	18.4%	19.4%	19.6%	20.6%	20.5%	19.4%	19.7%	21.3%	21.0%	20.7%	20.8%
52 Bldg Mat & garden	.8%	.7%	.8%	.9%	.7%	.7%	.7%	.7%	.6%	.8%	.7%	.6%
53 General Merchandise	2.6%	2.2%	2.1%	2.0%	2.0%	1.9%	1.9%	1.9%	1.5%	1.7%	1.7%	2.0%
54 Food Stores	2.2%	2.6%	2.4%	2.4%	2.2%	2.2%	2.1%	2.4%	2.5%	3.0%	1.5%	2.6%
55 Auto dealers & Servic	2.6%	1.9%	2.2%	2.1%	2.4%	2.1%	1.9%	1.8%	1.9%	2.0%	2.1%	1.8%
56 Apparel	1.0%		1.1%		1.4%			1.0%	1.3%	1.2%		
57 Furniture	.8%	.7%		.7%		.7%	.6%				.6%	.6%
58 Eating & Drinking	4.2%	4.6%	5.4%	5.9%	6.6%	7.3%	6.4%	6.6%	7.6%	7.3%	7.7%	7.9%
59 Miscellaneous	1.9%	2.9%	3.0%	3.1%	3.3%	3.2%	3.4%	3.2%	3.7%	2.8%	2.8%	2.8%
Fin, Ins & Real estate	3.2%	2.9%	2.8%	3.0%	3.1%	3.2%	3.1%	2.9%	3.2%	3.5%	3.3%	3.1%
60 Banking	1.1%	1.3%	1.2%	1.3%	1.3%	1.2%	1.2%	1.3%	1.2%	1.2%	1.1%	1.0%
61 Credit	1.1%	.3%	.3%	.3%	.4%	.4%	.4%	.4%	.4%	.3%	.3%	.3%
64 Insurance	.2%			.3%	.4%	.3%	.2%	.2%	.3%	.2%	.2%	.2%
65 Real Estate	.8%	.5%	.6%	.6%	.6%	.9%	.8%	.6%	.8%	1.3%	1.1%	1.0%
Services	10.5%	10.5%	11.3%	11.1%	11.9%	11.5%	12.0%	11.8%	12.2%	12.4%	13.5%	14.4%
70 Hotels, etc	2.8%	1.1%	1.2%	1.0%	1.2%	.7%	1.0%	.9%	1.1%	.9%	.9%	1.0%
72 Personal Services	1.4%	1.2%	1.1%	1.0%	1.2%	1.1%	1.1%	1.1%	1.2%	1.1%	1.2%	1.0%
73 Bus Services	.5%	.8%	1.0%	1.3%	1.6%	1.2%	1.1%	.8%	.7%	1.4%	1.6%	2.4%
75 Auto Repair	.6%	.4%	.4%	.3%	.4%	.3%	.3%	.2%	.4%	.4%	.4%	.5%
79 Amusement & Rec	.9%	.6%	.6%	.6%	.5%	.4%	.5%	.4%	.4%	.4%	.4%	.5%
80 Health Services	.9%	1.9%	2.5%	1.9%	2.2%	2.3%	2.7%	2.4%	2.5%	2.4%	2.5%	2.9%
81 Legal Services	.2%	.3%	.2%	.2%	.3%	.3%	.3%	.3%	.3%	.3%	.3%	.3%
82 Educa Services	1.4%		2.1%			1.8%						
83 Social Services		.4%	.4%	1.0%	.7%	.6%	.7%	.7%	1.1%	1.2%	1.7%	1.8%
86 Membership Org	1.1%	.9%	.9%	1.1%	1.2%	1.1%	1.0%	1.1%	.9%	.9%	1.2%	1.3%
89 Miscellaneous		.3%	.3%	.4%	.4%	1.0%	1.0%	1.3%	1.2%	1.1%	1.1%	.5%
Nonclassifiable		.5%			.2%	.4%	.6%	.6%	.2%	.4%	1.0%	1.0%
Government	44.4%	42.0%	41.0%	40.0%	38.9%	37.6%	38.4%	38.8%	38.1%	37.6%	36.8%	36.7%
Federal	2.0%	2.3%	2.3%	2.3%	2.1%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
State	32.3%	29.0%	28.5%	27.5%	26.6%	25.5%	26.5%	26.6%	26.1%	25.2%	24.7%	24.8%
Local	10.0%	10.6%	10.2%	10.2%	10.2%	10.2%	10.1%	10.3%	10.2%	10.6%	10.3%	10.1%

Source: U.S. Bureau of the Census, County Business Patterns, 1970-85.  
 Unpublished Data provided by Ks. Dept. of Human Resources for government employment.

Some industries are not listed because data is withheld to avoid disclosure of individual establishments in the CBP-statistics.



Table C: Employment by Industry as a Percentage of Total in Kansas, 1970-1985

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Nonfarm Wage and Salary (government included)												
County Bus. Pattern Total												
Agricultural services	.4%	.2%	.2%	.2%	.3%	.2%	.2%	.3%	.3%	.3%	.3%	.3%
Mining	1.5%	1.5%	1.5%	1.5%	1.5%	1.6%	1.8%	2.3%	2.4%	2.2%	2.1%	2.0%
Contract Construction	4.7%	4.5%	5.2%	5.6%	5.3%	5.3%	5.1%	4.9%	4.1%	4.1%	4.1%	4.2%
15 Gen Contrac	1.5%		1.5%			1.5%	1.4%	1.3%				1.1%
16 Heavy Const	1.1%	1.0%		1.4%	1.2%	1.3%	1.2%	1.2%	1.0%	.8%	.8%	.9%
17 Spec Trades	2.1%	2.2%	2.5%	2.6%	2.6%	2.6%	2.4%	2.3%	2.1%	2.2%	2.1%	.0%
Manufacturing	21.0%	21.4%	20.9%	20.7%	20.9%	21.8%	21.8%	20.4%	19.6%	18.1%	19.4%	19.2%
20 Food	2.7%	2.8%	2.7%	2.7%	2.5%	2.4%	2.3%	2.3%	2.4%	2.5%	2.5%	2.5%
27 Printing & Publishing	1.8%	1.9%	1.8%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.9%	1.9%	1.9%
32 stone, clay & glass	1.0%	.8%	.9%	.9%	.9%	.9%	.8%	.7%	.6%	.7%	.7%	.7%
38 Instruments & Rel. Prod	.2%	.4%	.3%	.4%	.4%	.4%	.3%	.4%	.3%	.3%	.3%	.3%
39 Miscellaneous	.2%	.2%	.3%	.2%	.2%	.2%	.2%	.2%	.2%	.0%	.1%	.1%
Trans & public utilities	5.2%	4.6%	4.9%	4.9%	5.1%	5.4%	5.2%	5.1%	5.2%	5.4%	5.2%	5.1%
42 Trucking & Warehouse	1.6%	1.6%	1.8%	1.9%	2.0%	2.1%	2.0%	1.9%	1.8%	1.9%	1.8%	1.8%
Wholesale Trade	5.9%	6.8%	6.6%	6.6%	6.4%	6.3%	6.3%	6.4%	6.6%	6.6%	6.3%	6.2%
50 Durable goods		3.4%	3.3%	3.3%	3.2%	3.3%	3.4%	3.4%	3.5%	3.4%	3.3%	3.3%
51 Nondurables		3.0%	2.9%	2.9%	2.7%	2.6%	2.6%	2.7%	2.8%	2.8%	2.7%	2.6%
Retail Trade	18.1%	17.7%	18.5%	18.1%	18.4%	18.0%	17.4%	17.5%	17.9%	18.1%	17.8%	18.1%
52 Bldg Mat & garden	1.2%	.8%	.8%	.8%	.8%	.8%	.7%	.7%	.7%	.7%	.7%	.7%
53 General Merchandise	2.7%	2.6%	2.6%	2.4%	2.4%	2.2%	2.1%	2.2%	2.1%	2.0%	2.0%	2.0%
54 Food Stores	2.6%	2.5%	2.5%	2.4%	2.3%	2.3%	2.3%	2.3%	2.4%	2.5%	2.5%	2.5%
55 Auto dealers & Servic	3.4%	2.8%	2.8%	2.8%	2.8%	2.6%	2.3%	2.1%	2.2%	2.2%	2.2%	2.1%
56 Apparel	1.1%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.2%	1.2%	1.1%	1.1%
57 Furniture	.7%	.7%	.7%	.7%	.7%	.7%	.7%	.6%	.6%	.7%	.7%	.7%
58 Eating & Drinking	4.0%	4.6%	5.2%	5.2%	5.4%	5.4%	5.3%	5.5%	5.5%	5.7%	5.6%	5.8%
59 Miscellaneous	2.1%	2.1%	2.1%	2.1%	2.3%	2.2%	2.2%	2.2%	2.4%	2.3%	2.3%	2.3%
Fin, Ins & Real estate	4.5%	5.1%	4.9%	5.1%	5.2%	5.1%	5.2%	5.4%	5.4%	5.7%	5.7%	5.6%
60 Banking	1.5%	1.7%	1.6%	1.7%	1.7%	1.6%	1.6%	1.7%	1.7%	1.8%	1.7%	1.7%
61 Credit	.6%	.6%	.6%	.6%	.6%	.6%	.6%	.6%	.6%	.7%	.7%	.7%
64 Insurance	.4%	.4%	.4%	.4%	.4%	.4%	.5%	.5%	.6%	.6%	.6%	.6%
65 Real Estate	.6%	.8%	.7%	.8%	.8%	.9%	.8%	.8%	.7%	.7%	.9%	.9%
Services	13.9%	15.4%	15.8%	15.9%	16.3%	16.2%	16.5%	17.3%	18.4%	18.7%	18.7%	18.9%
70 Hotels, etc	1.4%	1.0%	1.0%	.9%	.9%	.8%	.8%	.8%	.9%	.9%	.8%	.9%
72 Personal Services	1.5%	1.2%	1.1%	1.2%	1.1%	1.1%	1.0%	1.1%	1.2%	1.2%	1.1%	1.1%
73 Bus Services	1.1%	1.5%	1.7%	1.7%	1.6%	1.7%	1.8%	2.0%	2.2%	2.3%	2.6%	2.7%
75 Auto Repair	.5%	.6%	.6%	.5%	.5%	.6%	.5%	.6%	.6%	.6%	.6%	.7%
79 Amusement & Rec	.6%	.6%	.6%	.6%	.6%	.6%	.6%	.6%	.7%	.7%	.6%	.6%
80 Health Services	5.1%	6.0%	6.2%	6.3%	6.4%	6.6%	6.8%	7.2%	7.5%	7.7%	7.3%	7.0%
81 Legal Services	.3%	.4%	.4%	.4%	.4%	.4%	.4%	.5%	.5%	.5%	.5%	.5%
82 Educa Services	.8%	.8%	.8%	.7%	.8%	.7%	.7%	.8%	.8%	.8%	.9%	.9%
83 Social Services		.8%	.9%	.9%	1.0%	.9%	.9%	1.0%	1.1%	1.0%	1.2%	1.2%
86 Membership Org	1.6%	1.4%	1.4%	1.5%	1.7%	1.5%	1.5%	1.4%	1.5%	1.6%	1.7%	1.8%
89 Miscellaneous	.6%	.6%	.6%	.6%	.7%	.7%	.8%	.8%	.9%	.8%	.8%	.9%
Nonclassifiable	.6%	.7%	.1%	.1%	.4%	.5%	.7%	.7%	.1%	.5%	.8%	1.0%
Government	24.2%	22.1%	21.4%	21.2%	20.3%	19.5%	19.8%	19.8%	19.9%	20.4%	19.6%	19.5%
Federal	3.9%	3.4%	3.2%	3.0%	2.9%	2.8%	2.8%	2.7%	2.7%	2.8%	2.8%	2.8%
State	5.7%	5.7%	5.5%	5.5%	5.3%	5.3%	5.4%	5.4%	5.3%	5.3%	5.0%	5.1%
Local	14.6%	13.0%	12.7%	12.7%	12.1%	11.4%	11.5%	11.7%	11.8%	12.2%	11.8%	11.6%

Source: U.S. Bureau of the Census, County Business Patterns, 1970-85.  
Unpublished Data provided by Ks. Dept. of Human Resources for government employment.

Some industries are not listed because data is withheld to avoid disclosure of individual establishments in the CBP-statistics.