Institute for Public Policy and Business Research
University of Kansas

FINAL REPORT
SUPERCONDUCTING SUPER-COLLIDER PROJECT
ITEMS 2.7.1 THROUGH 2.7.10

Principal Investigator: Dr. Mohamed El Hodiri
Professor of Economics
Director of Economic Research

prepared by

Michael Eglinski
Research Assistant

and

Joe Constantino
Research Assistant

prepared for

THE KANSAS DEPARTMENT OF COMMERCE

Anthony L. Redwood
Professor of Business and Executive Director

January, 1988

Report No. 136

Acknowledgments

This study was funded by the Kansas Department of Commerce. All views expressed are those of the authors.

Dr. Mohamed El Hodiri provided the primary direction for this project. Additional advice was provided by Bob Glass and Pat Oslund. Technical assistance was provided by Joe Constantino.

Executive Summary

This report presents the portion of the State of Kansas's proposal for the Superconducting Super-Collider (SSC) that was prepared at the Institute for Public Policy and Business Research at the University of Kansas. The proposal was made to the U.S. Department of Energy. The proposed SSC would be the world's largest particle accelerator. It would be used as a basic research tool in the field of high energy physics. Kansas's proposed site was approximately twelve miles south of Topeka. The area of site influence is considered the four county region of Douglas, Franklin, Osage, and Shawnee counties.

The data presented in this report may be used to characterize the economic structure and the adequacy and capacity of public services in the area of influence of the proposed site. The objective of this report is to present the data requested by the U.S. Department of Energy. The U.S. Department of Energy would then analyze the data and draw conclusions.

Data presented in the report cover the four county region and include; employment and unemployment, labor force characteristics, revenue and expenditure characteristics for local governmental units and school districts, public service characteristics, housing characteristics, identification of planning agencies, and characteristics of recreational and cultural facilities.

In late December, 1987, the U.S. Department of Energy announced a list of "best-qualified" site proposals based on initial bids. Kansas's initial bid was not considered one of the

best qualified. This report was to have been part of Kansas's detailed proposal had the site been considered one of the best qualified.

Table of Contents

List of Tables

Introduction

This is the final report for the portion of the State of Kansas' proposal to the federal government for the Superconducting Super-Collider (SSC) project which was prepared at the Institute for Public Policy and Business Research at the University of Kansas. The report was prepared for the Kansas Department of Commerce.

The first ten sections of the final report present the information compiled in response to ten items of the state's proposal. These ten items are listed at the end of the introduction. The ten sections include tables, figures, descriptive narratives, and discussions of capacity and adequacy where appropriate.

The report contains four appendices. The appendices discuss the possible use of the datasets presented in the report for a firm's location decision, the process involved in compiling the datasets, estimates of the time required to compile similar datasets, and a discussion of the economic concept of capacity. The final section of the report is a bibliography.

At the end of December, 1987 it was announced that Kansas had not been selected as one of the best qualified sites for the SSC. This report was to have been part of the states proposal had it made the best qualified site list. The announcement that Kansas would no longer be considered changed the nature of this report in two major ways. First, collection of the datasets became significantly more difficult. The cooperation of city and

county clerks, which was necessary for compilation of much of the data, was diminished. Second, the purpose of the report changed. It is intended that this report will provide useful information and data concerning the four county region of Douglas, Franklin, Osage, and Shawnee counties. Also, the report can function as a guide for someone preparing a similar report. With this in mind sources of data are provided with each table, and appendices describing the data compilation processes are included.

The ten items discussed in this report are:

2.7.1--Summary of historical employment trends by standard industrial classification for each of the counties within the area of site influence.

2.7.2--Summary of historical unemployment rates (annual average) for the counties within the area of site influence.

2.7.3--Summary of historical labor force distribution (by age, sex, etc.) for the counties within the area of site influence.

2.7.4--Summary of county revenue, expenditures, and trends within the area of site influence, including bonded indebtedness and bond limits. (summary, ten-year period).

2.7.5--Summary of revenue, expenditures, and trends for school districts and other special taxing districts within the area of site influence, including bonded indebtedness and bond limits. (summary, ten-year period).

2.7.6--Summary of municipal revenue, expenditures, and trends within the area of site influence, including bonded

indebtedness and bond limits. (summary, ten-year period).

2.7.7--Table of public services, square footage of facilities, number of personnel (full and part-time), funding level, and determination of adequacy and capacity (this includes, but is not limited to, schools, social services, fire departments, police).

2.7.8--Table of housing availability by municipality and for unincorporated areas of the county, including housing type, percent ownership, percent vacancy, and total numbers of housing units.

2.7.9--Identification of planning agencies with jurisdiction within the area of site influence and past experience with population growth/economic development.

2.7.10--Description of recreational and cultural facilities in the area (e.g., universities, parks, libraries, museums, and theatres).

Throughout this report: the area of site influence is considered the four county region including Douglas, Franklin, Osage, and Shawnee counties, municipalities are considered the 12 municipalities within the four county region with greater than 1,000 population. The municipalities are Baldwin City, Burlingame, Carbondale, Lyndon, Osage City, Ottawa, Rossville, Wellsville, Silver Lake, Lawrence, Topeka, and Eudora. When possible summary data for the ten-year period of 1977 through 1986 is given.

2.7.1 Summary of historical employment trends by standard industrial classification for each of the counties within the area of site influence.

Table 2.7.1.1 Full-time and Part-time Employees by Major Industry, 1976-1985 (see also figures on pages 10 through 13).

Shawnee County Employment by Industry

SIC class	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Ag Services	216	231	242	253	265	305	393	442	553	595
Farm	1251	1245	1310	1360	1407	1355	1382	1357	1325	1334
Mining	193	203	249	237	254	280	327	348	425	434
Contract Const.	3863	4208	4624	4635	4422	3958	3835	3934	4414	4483
Manufacturing	9566	10486	10725	10797	10155	9932	9285	9021	9863	9900
Transportation	6661	7136	7654	7778	7862	7890	7658	7532	7769	7907
Wholesale Trade	4445	4855	5059	5209	5450	5062	4842	4785	5083	5163
Retail Trade	13720	13909	14480	14315	14387	14612	14210	14333	15078	15248
Finance	7288	7181	7229	7889	8119	8139	8167	8224	8253	8356
Services	19069	19846	21008	21143	21637	22285	22727	23483	24285	24887
Government	19120	19465	20127	20078	20700	20736	20509	20108	21082	21332
Total	85392	88765	92707	93694	94658	94554	93335	93567	98130	98305

Douglas County Employment by Industry

SIC class	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Ag Services	114	104	85	85	102	109	115	123	133	138
Farm	1157	1151	1082	1089	1104	1095	1095	1086	1065	1071
Mining	44	44	56	49	55	65	79	89	94	100
Contract Const.	1931	2557	2299	2194	1631	1294	1211	1344	1486	1430
Manufacturing	3715	3671	4062	4847	4883	4714	4500	4441	4510	4609
Transportation	1101	1173	1332	1366	1334	1312	1223	1176	1187	1198
Wholesale Trade	798	878	908	721	743	799	764	735	800	800
Retail Trade	5213	5457	5866	5981	5924	5830	5999	6190	6499	6660
Finance	1253	1441	1538	1600	1633	1678	1706	1709	1767	1831
Services	5342	5740	6235	6597	6764	6964	7089	7265	7867	8184
Government	9132	9455	9908	9676	9738	9395	9634	9663	9713	9786
Total	29800	31671	33371	34205	33911	33255	33415	33821	35121	35807

Franklin County Employment by Industry

SIC class	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Ag Services	59	65	65	61	61	59	42	44	48	47
Farm	1436	1425	1305	1309	1325	1317	1314	1304	1281	1262
Mining	95	105	119	143	204	250	265	304	362	395
Contract Const.	507	469	517	522	484	401	395	476	453	426
Manufacturing	1382	1644	1872	2051	1879	1957	1739	1603	1585	1610
Transportation	338	352	371	386	373	351	368	373	392	399
Wholesale Trade	358	565	648	615	620	590	628	688	324	325
Retail Trade	1517	1687	1633	1604	1508	1493	1394	1362	1364	1302
Finance	378	394	416	434	444	462	428	449	479	492
Services	1586	1510	1586	1638	1673	1602	1584	1642	1758	1779
Government	1311	1343	1403	1441	1488	1511	1554	1440	1479	1500
Total	8967	9559	9935	10204	10059	9993	9711	9685	9525	9537

Osage County Employment by Industry

SIC class	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Ag Services	D	D	D	D	49	58	66	7	76	83
Farm	1209	1203	1153	1155	1165	1162	1157	1149	1129	1120
Mining	D	D	D	D	D	D	D	26	18	22
Contract Const.	227	250	239	245	224	193	177	221	235	243
Manufacturing	386	584	588	362	357	377	338	318	245	340
Transportation	281	242	347	373	385	375	283	216	221	213
Wholesale Trade	158	159	175	D	D	D	D	173	174	178
Retail Trade	770	772	796	821	783	761	821	836	842	855
Finance	207	196	193	217	238	246	249	253	257	263
Services	727	801	840	876	829	877	845	879	897	912
Government	839	843	855	906	956	975	967	956	992	1011
Total	4874	5214	5248	5221	5220	5248	5108	5097	5186	5240

D means that the data has been withheld to avoid disclosure of information about a particular firm.

Source:

U.S. Department of Commerce-Bureau of Economic Analysis. Regional Economic Information System.
Table 25. Full-time and Part-time Employees by Major Industry.

Compilation by Kenneth R. Brooks
Landscape Architecture Dept.
College of Architecture and Design
Manhattan, KS 66502

Employment by Industry

Service sector employment accounted for 25 % of the total employment in Shawnee County in 1985. The service sector employed 24,887 people. The service and government sectors accounted for 47 % of the county's total employment. The mining sector accounted for just 0.4 % of Shawnee County's total employment in 1985. Between 1976 and 1985 employment in the service sector increased 30 %. This was the biggest growth by any sector.

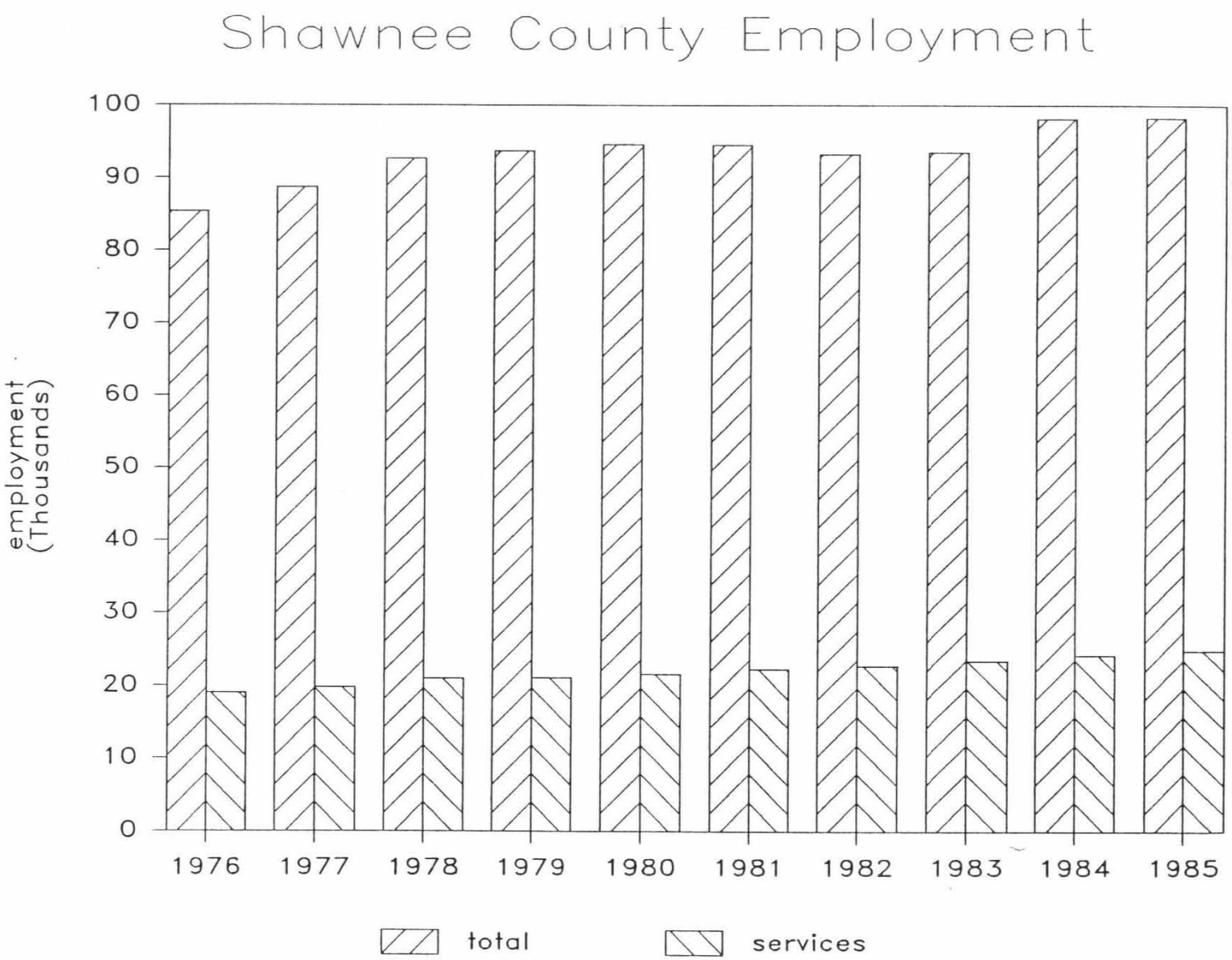
Douglas County's government sector made up 27 % of the county's total employment in 1985. It had 9,786 employees. The government sector includes employees of the state, including those working at the University of Kansas. The government and service sectors accounted for half of the total employment. Mining accounted for the fewest employees of any of the major industrial sectors of Douglas County. Only 0.3 % of Douglas County's total employment was in the mining sector in 1985. Between 1976 and 1985 the service sector grew by 53 % from 5,342 employees to 8,184 employees. This made the sector the fastest growing of Douglas County's economy. During the same time period, farm employment decreased by 7 %.

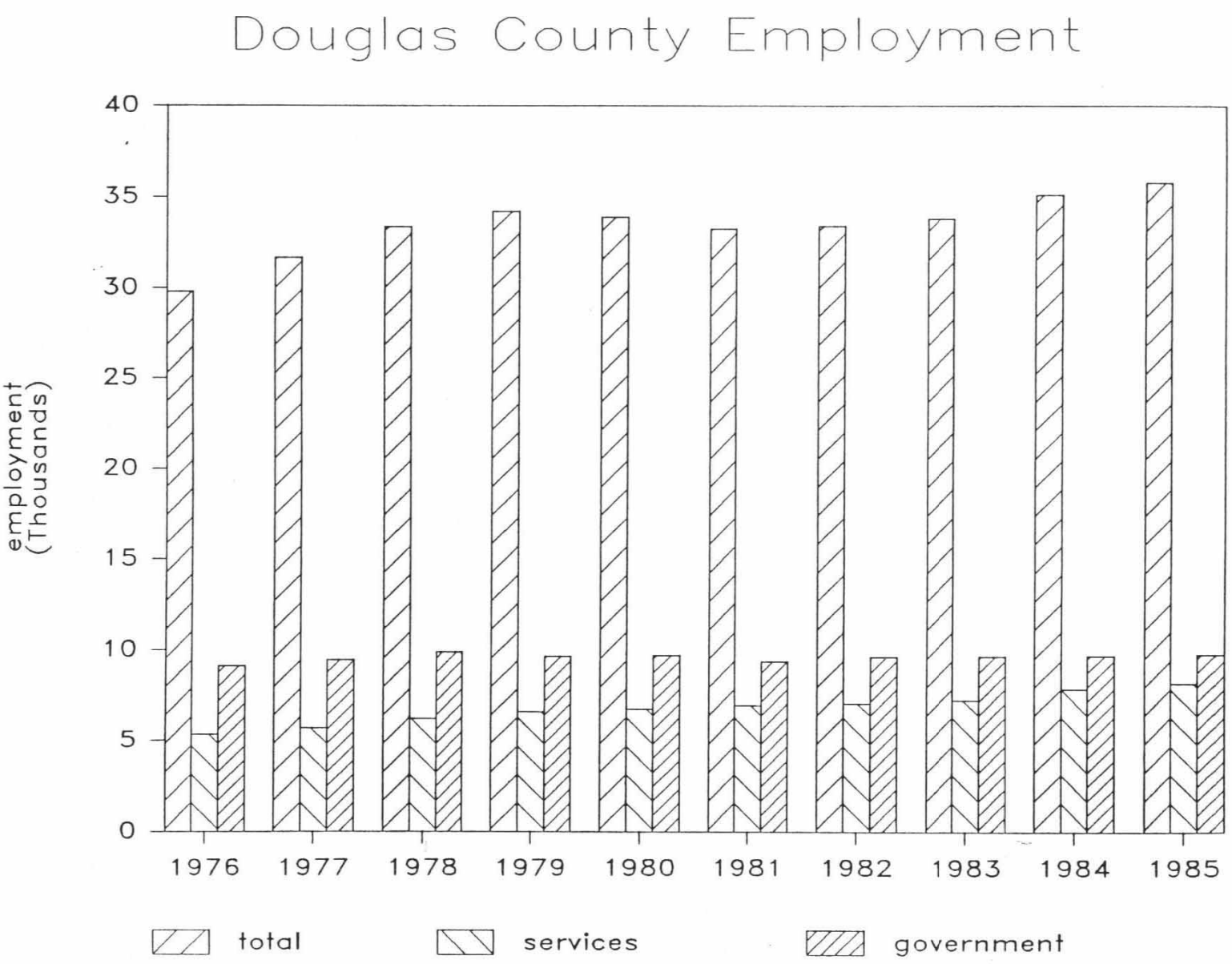
Franklin County's service sector was the largest sector of the economy in 1985. The sector employed 1,779 people representing 19 % of the county's total employment. Agricultural services accounted for only 0.5 % of the county's total employment. It was the smallest sector in terms of employment.

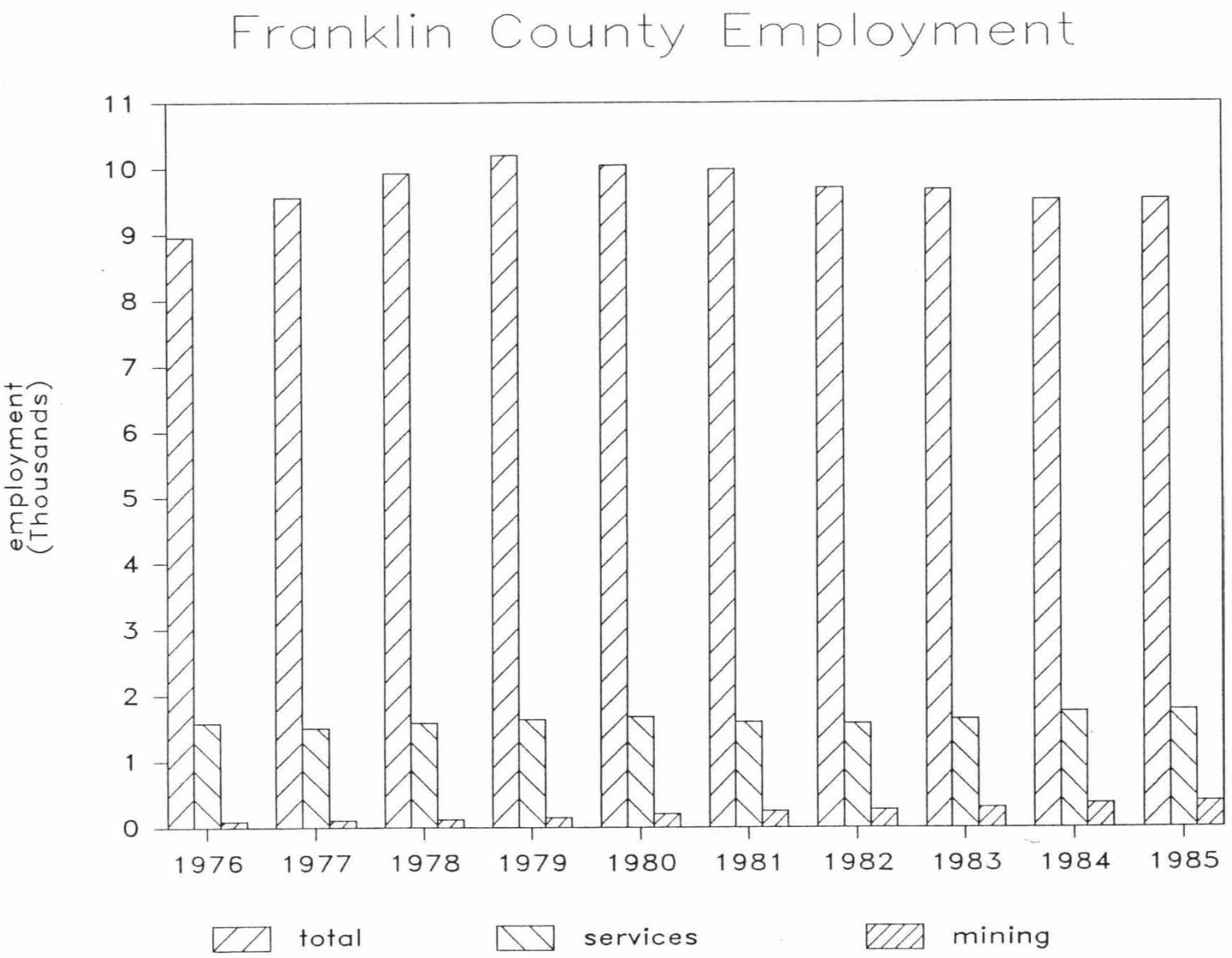
Franklin County's mining sector grew by 316 % between 1976 and 1985. However, by 1985 it employed only 395 people.

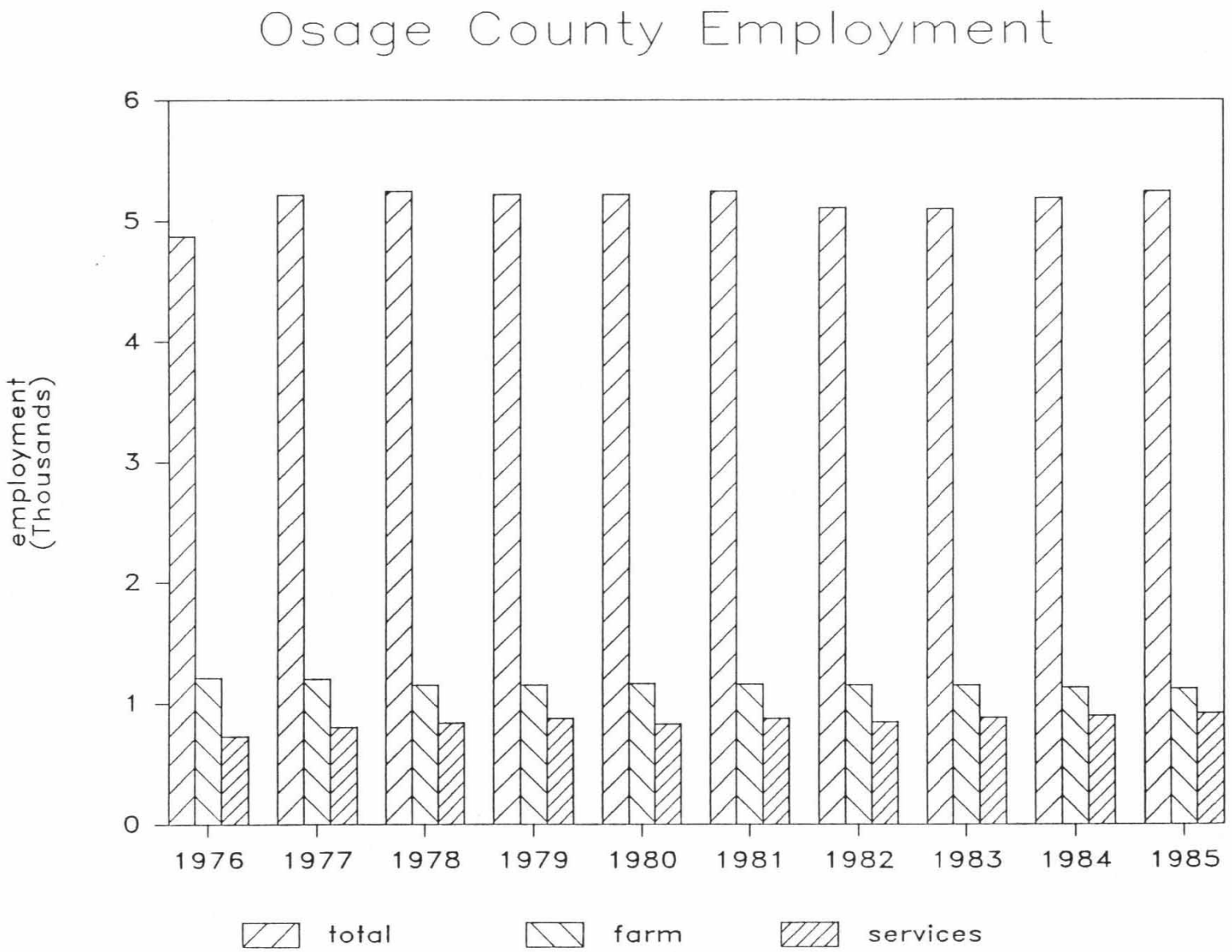
Farm employment accounted for 21 % of the employment in Osage County in 1985. The farm sector was the county's largest employment sector with 1,120 employees. The mining sector was the county's smallest employer, representing 0.4 % of the total employment. While farming represented the largest single sector it was also the sector which lost the most employment between 1976 and 1985. Farm employment fell 7.7 % in that period. The fastest growing sector in Osage County was the service sector. Employment in the service sector grew by 25 %, from 727 employees in 1976 to 912 employees in 1985.

Employment by industry information suggests basic characteristics of the counties. Douglas County is built around the University of Kansas. Franklin County is not dominated by any single sector. It is experiencing the movement toward a more service oriented economy that the entire nation is experiencing. Osage County is a rural farm-based economy. Shawnee County is dominated by the government and service sectors. This is consistent with the relative urban nature of the county and the fact that the state government is centered in the county.


Shawnee County Employment
employment (Thousands)
100
90
80
70
60
50
40
30
20
10
0
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
total
services


Douglas County Employment
employment
(Thousands)
40
35
30
25
20
15
10
5
0
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
total
services
government


Franklin County Employment
employment (Thousands)
11
10
9
8
7
6
5
4
3
2
1
0
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
total
services
mining


Osage County Employment
employment
(Thousands)
6
5
4
3
2
1
0
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
total
farm
services

2.7.2 Summary of historical unemployment rates for the counties within the area of site influence.

Table 2.7.2.1 Unemployment rate by county, 1977-1986 (see also figures on pages 16 and 17).

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Shawnee	4.3	3.7	4.1	5.6	5.4	6.8	6.3	5.6	5.1	5.1
Douglas	3.9	3.3	3.2	4.1	4.0	4.7	4.9	4.5	3.9	3.8
Franklin	5.2	3.4	4.0	6.6	5.8	8.6	8.3	7.5	7.2	7.0
Osage	4.3	3.2	3.7	5.0	5.4	6.8	9.6	7.2	7.0	6.6

Source:

Compiled by Kenneth Brooks
Landscape Architecture Dept.
College of Architecture and Design
Manhattan, KS 66502

Unemployment rates by county

For the period of 1977-1986, Douglas County had the lowest average unemployment rate with in the four county region, and Franklin County had the highest. The average unemployment rates for 1977-1986 were, 4.1 % in Douglas, 5.1 % in Shawnee, 5.9 % in Osage, and 6.3 % in Franklin. Douglas County's unemployment rate may be characterized as relatively low and stable. Osage County experienced the greatest change in unemployment rate when the rate went from 3.2 % in 1978 to 9.6 % in 1983. Osage County had the four county region's highest annual unemployment rate, 9.6 % in 1983. Osage and Douglas counties had the region's lowest annual unemployment rates, 3.2 % in 1978 and 1979 respectively. The highest unemployment rate for each of the counties and for the nation occurred in the period of 1983 and 1983. The lowest unemployment rates for the counties and the nation occurred in 1978 and 1979.

In comparison to the nation, the four counties have had lower unemployment. Even Osage County's rate of 9.6 % in 1983 was lower than the national unemployment rate in 1983 of 9.7 %. The nation's average unemployment rate for 1977-1986 was 7.5 %.

Unemployment rates in Kansas are not necessarily a good measure of economic health. Kansas has a relatively "mobile" labor force. That is, it is relatively easy for Kansas' population to enter and/or leave the labor force. The mobility of the Kansas labor force make comparisons between Kansas and the nation difficult.


Unemployment Rates
unemployment rate
10
9
8
7
6
5
4
3
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
Douglas
Franklin
U.S.


Unemployment Rates
unemployment rate
10
9
8
7
6
5
4
3
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
Osage
Shawnee
U.S.

2.7.3 Summary of historical labor force distribution for the counties within the area of site influene.

Table 2.7.3.1 Labor Force Characteristics for Counties: 1980 (see also figures on pages 23 through 24).

Douglas County

	Male		Female		Totals		
age group	employment	unemployment	employment	unemployment	employment	unemployment	labor force
16-19	1513	180	1579	86	3092	266	3358
20-24	43394	393	4052	241	47446	634	48080
25-54	10123	438	7391	282	17514	720	18234
55-64	1660	18	930	11	2590	29	2619
65+	503	5	319	11	822	16	
838							
totals	57193	1034	14271	631	71464	1665	73129

Franklin County

16-19	371	85	437	12	742	97	839
20-24	789	88	644	32	1578	120	1698
25-54	3298	172	2437	63	6596	235	6831
55-64	732	45	463	4	1464	49	1513
65+	298	11	142	3	596	14	610
totals	5488	401	4123	114	10976	515	11491

Osage County

age group	Male employment	unemployment	Female employment	unemployment	Totals employment	unemployment	labor force
16-19	298	25	263	6	561	31	592
20-24	434	67	357	24	791	91	882
25-54	2423	96	1679	34	4102	130	4232
55-64	495	13	334	0	829	13	842
65+	181	14	110	4	291	18	309
totals	3831	215	2743	68	6574	283	6857

Shawnee County

16-19	2918	408	3125	252	6043	660	6703
20-24	5401	632	5860	189	11261	821	12082
25-54	26039	1153	21257	526	47296	1679	48975
55-64	5125	189	3858	68	8983	257	9240
65+	1386	29	1002	23	2388	52	2440
totals	40869	2411	35102	1058	75971	3469	79440

Source:

U.S. Department of Commerce-Bureau of the Census. Census of Population, 1980, General Social and Economic Characteristics, Kansas.

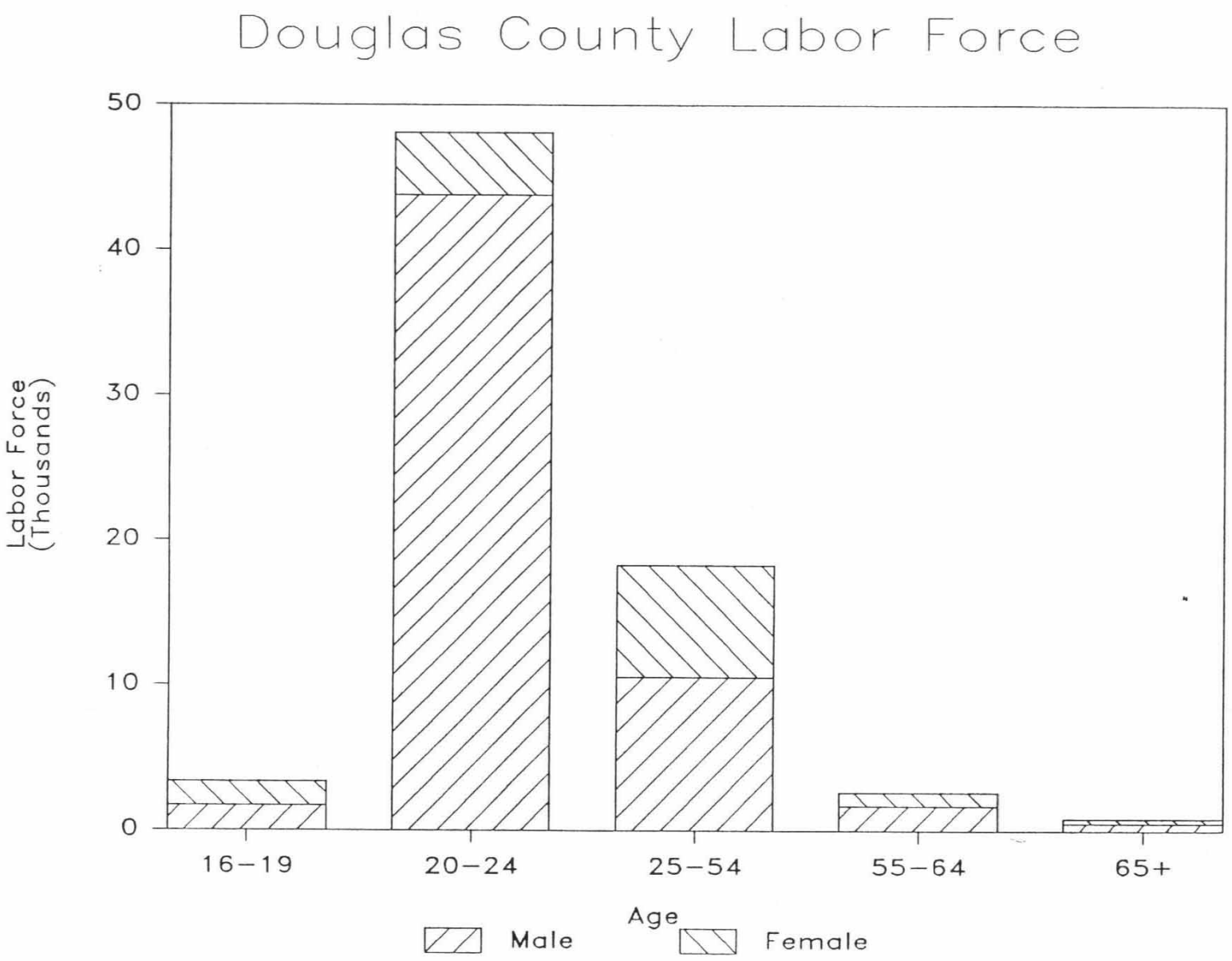
Labor Force

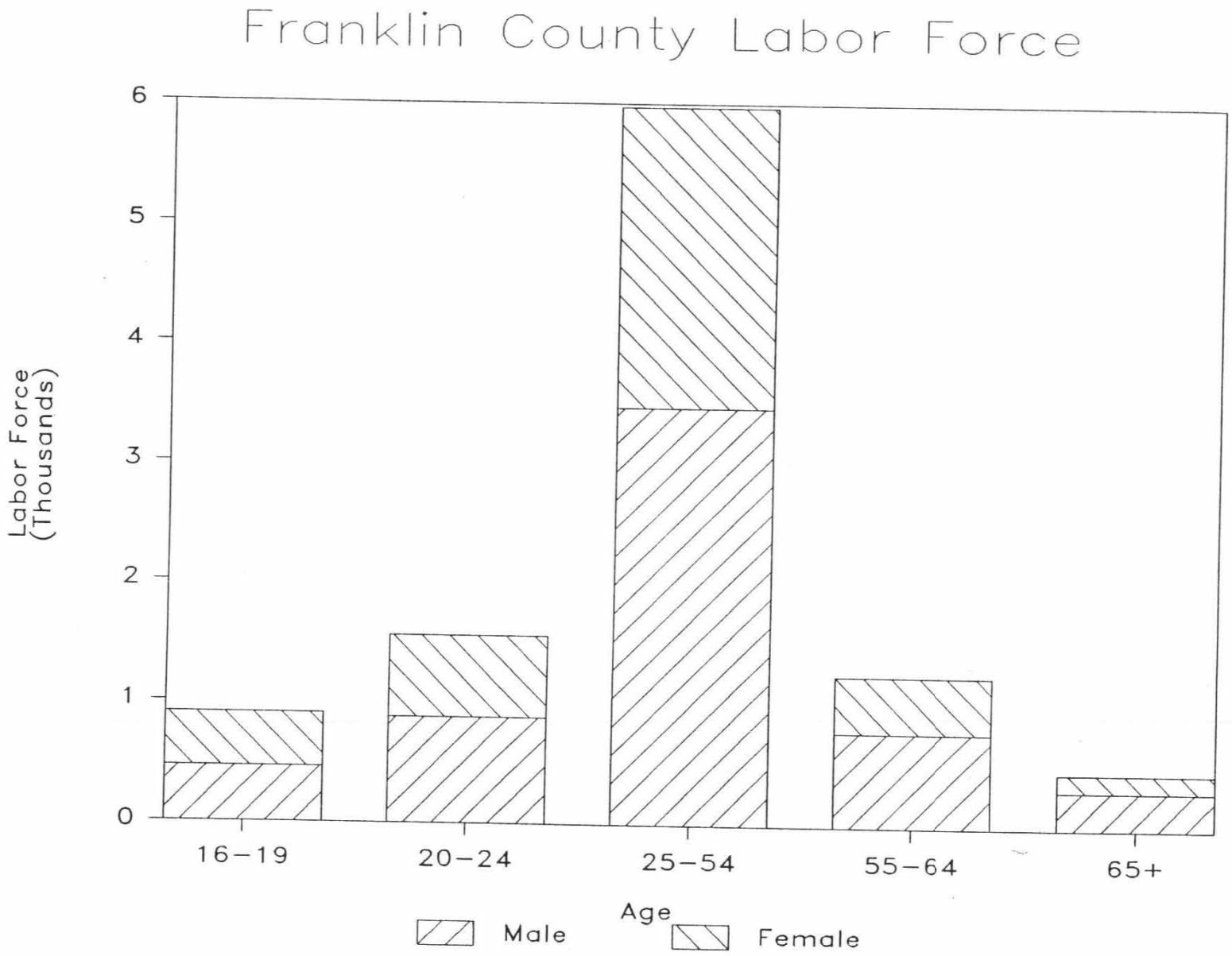
The labor force in Douglas County was dominated by the 20-24 age group in 1980. This age group included 48,080 people. This is consistent with the domination of the county's economy by the University of Kansas. Ninety-one percent of the 20-24 labor force age group were males. Sixty-six percent of the county's total labor force was male.

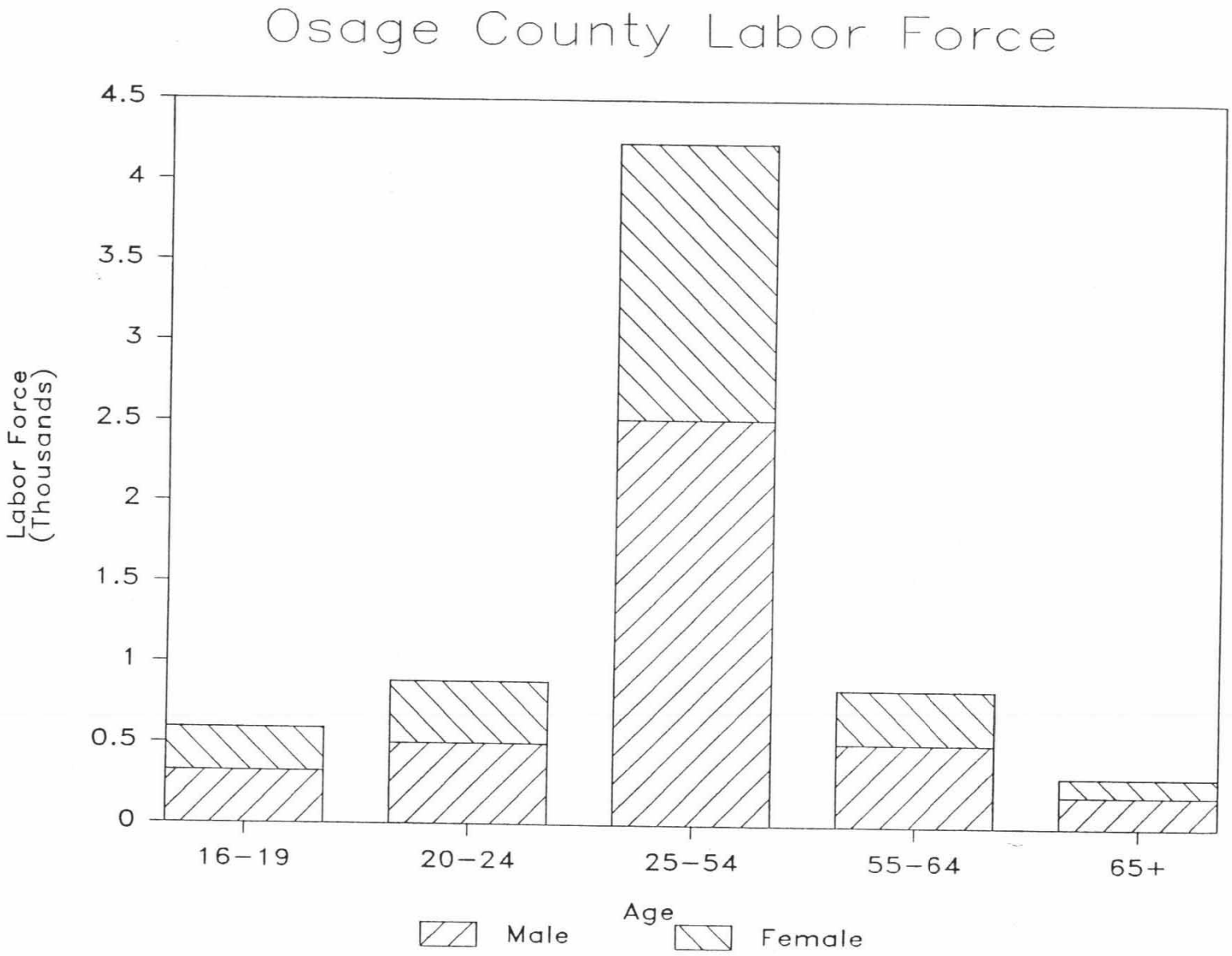
Franklin County's labor force was dominated by the 25-54 age group in 1980. The total county labor force was 58 % male and 42 % female.

Osage County's labor force was primarily in the 25-54 age group in 1980. Males within the county accounted for 59 % of the total labor force. Females accounted for 41 % of the total labor force. The total labor force of Osage County was only 6,857 people in 1980.

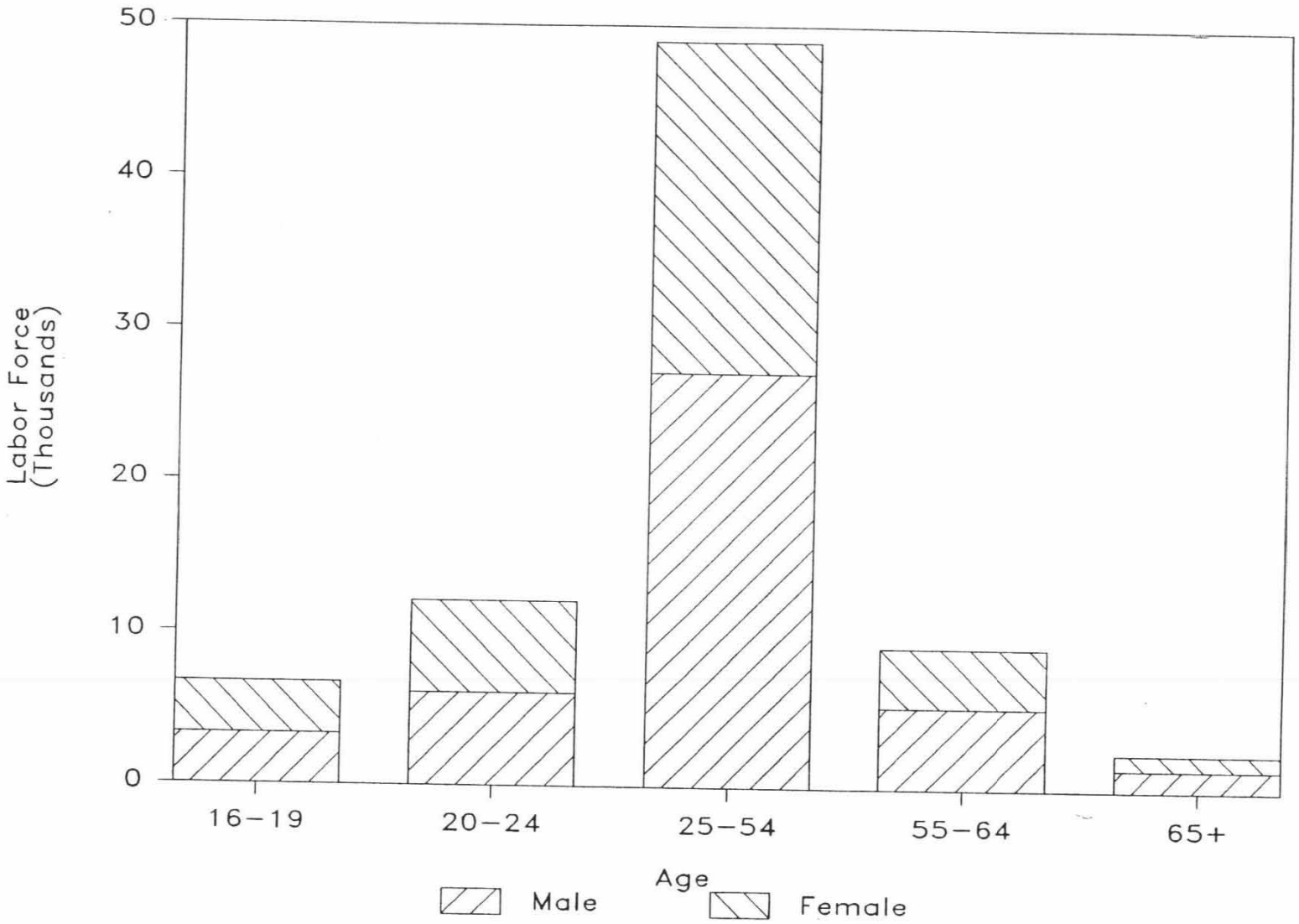
Shawnee County's labor force was dominated by the 25-54 age group in 1980. Sixty-two percent of the total labor force was in this age group. There were 48,975 people in the 25-54 labor force age group. Females accounted for 46 % of the labor force of Shawnee County. Males accounted for 54 % of the county's labor force.


Douglas County Labor Force
Labor Force (Thousands)
50
40
30
20
10
0
16–19
20–24
25–54
55–64
65+
Age
Male
Female


Franklin County Labor Force
Labor Force (Thousands)
6
5
4
3
2
1
0
16–19
20–24
25–54
55–64
65+
Age
Male
Female


Osage County Labor Force
Labor Force (Thousands)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
16–19
20–24
25–54
55–64
65+
Age
Male
Female

Shawnee County Labor Force



2.7.4 County Revenue, Expenditures, and Bonded Indebtedness

Table 2.7.4.1 County revenue, expenditure, and bonded indebtedness, 1977 through 1986 (see also figure on page 27 for Osage County).

Douglas County	revenue	expenditure	indebtedness
1977	7850655	17452667	10286000
1978	9785129	11853174	10577000
1979	7945863	9816656	9946000
1980	11242103	10166200	11825000
1981	10125509	8796909	11779000
1982	9779596	9018676	11003000
1983	12216545	11709163	10227000
1984	12988878	11829905	9451000
1985	18195275	14134792	12595000
1986	16757815	16917487	13590000

Osage County	revenue	expenditure	indebtedness
1977	1740522	1719878	1260000
1978	1888371	1634644	1170000
1979	1969657	1892652	1105000
1980	1884877	2092899	1070000
1981	2004553	2037813	1060000
1982	2245588	2048323	965000
1983	2367076	2293620	790000
1984	3220096	2576076	750000
1985	2753991	3231635	1200000
1986	3155512	3103555	1010000

Franklin County

	revenue	expenditure	indebtedness
1977	3089881	2976884	2449535
1978	NA	NA	2212553
1979	3234893	2861131	1675000
1980	3286758	3078683	1244544
1981	3959293	3540254	1215000
1982	NA	NA	1000000
1983	NA	NA	880226
1984	NA	NA	706634
1985	NA	NA	16641783
1986	NA	NA	NA

Shawnee County

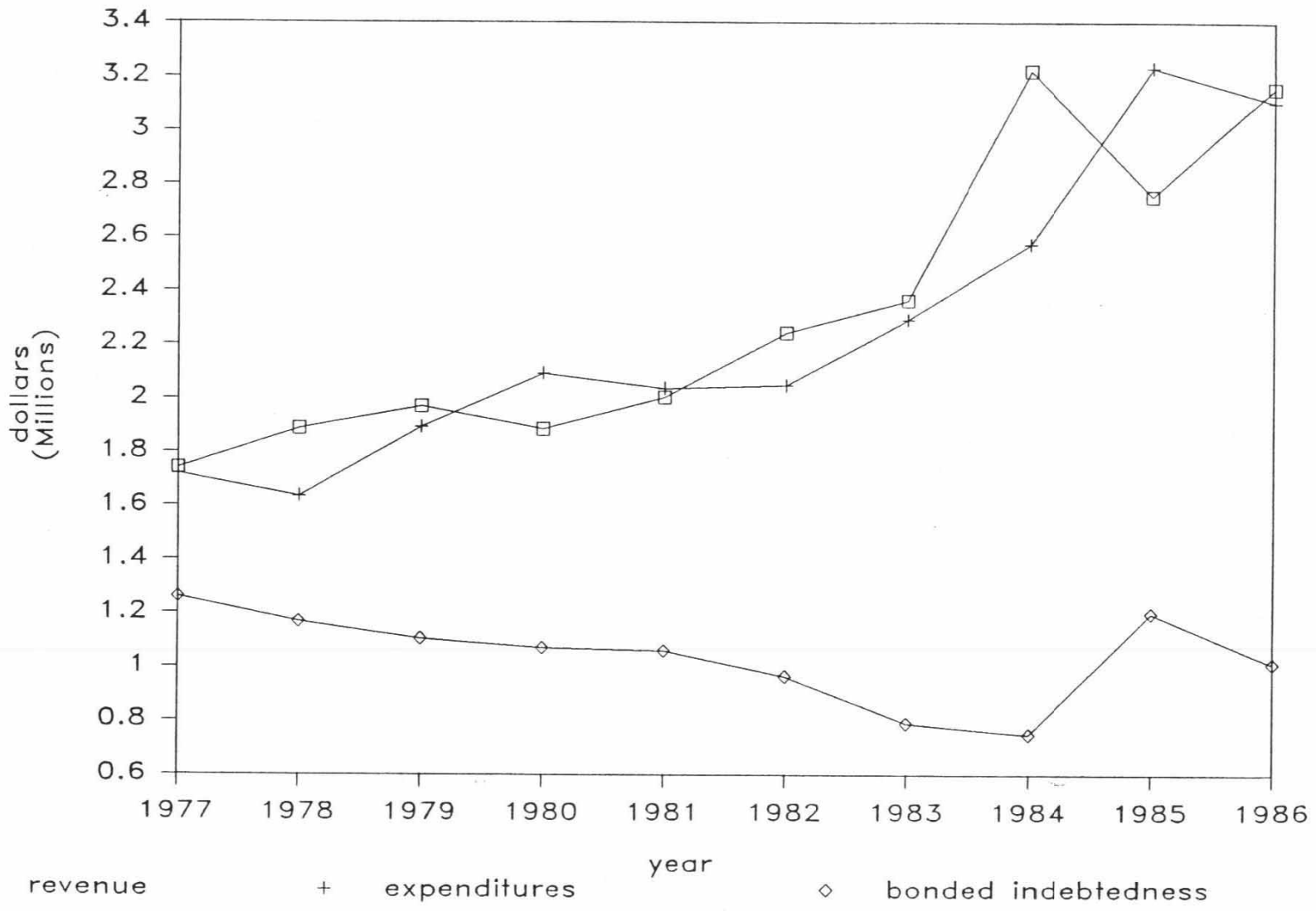
	revenue	expenditure	indebtedness
1977	24196875	23891436	4122796
1978	30885353	30516917	7653051
1979	18457877	19066962	9848598
1980	21099120	19184588	9656646
1981	23694811	23268157	9440935
1982	23006973	25553175	14042796
1983	26551756	28350226	35227866
1984	31627324	35645930	36943621
1985	32879321	101612375	32877408
1986	34051538	61701947	59570722

Sources;

County clerks in Douglas, Franklin, Osage, and Shawnee counties.

"Kansas Tax Rate and Fiscal Data Book." Kansas Government Journal. January 1986. The League of Kansas Municipalities.

Osage County 1977–1986



2.7.5 Summary of revenue, expenditures, and trends for school districts and other special taxing districts within the area of site influence, including bonded indebtedness and bond limits.

Table 2.7.5.1 School district revenue, expenditures, and bonded indebtedness, 1977 through 1986.

Baldwin City USD 348 (Douglas County)

year	revenue	expenditure	bonded indebtedness
1977	NA	1697440	800000
1978	NA	1908171	740000
1979	NA	2011256	670000
1980	NA	2360330	600000
1981	NA	2711536	530000
1982	NA	2746077	460000
1983	NA	3039406	390000
1984	NA	3523669	320000
1985	NA	3607539	250000
1986	3830258	4028145	180000

Eudora USD 491 (Douglas County)

1977	NA	1592559	701000
1978	NA	1680545	664000
1979	NA	1693023	615000
1980	NA	1782949	590000
1981	NA	2197875	565000
1982	NA	2109657	535000
1983	NA	2532825	505000
1984	NA	2743079	440000
1985	NA	3070345	440000
1986	3392650	3044994	370000

year	revenue	expenditure	indebtedness
Lawrence USD 497 (Douglas County)			
1977	NA	13253539	2888000
1978	NA	15383069	3675000
1979	NA	17133727	2880000
1980	NA	17378231	2345000
1981	NA	18305910	1835000
1982	NA	19101324	1345000
1983	NA	22219529	855000
1984	NA	23431304	665000
1985	NA	27261607	475000
1986	27442083	28411681	8885000
West Franklin USD 287 (Franklin County)			
1977	NA	1499249	NA
1978	NA	1669635	0
1979	NA	1845077	0
1980	NA	2025210	0
1981	NA	2243689	0
1982	NA	2297601	0
1983	NA	2420207	0
1984	NA	3074267	0
1985	NA	3066431	0
1986	3438116	3140176	0
Central Heights USD 288 (Franklin County)			
1977	NA	1165839	NA
1978	NA	1503039	680000
1979	NA	1484885	620000
1980	NA	1617286	560000
1981	NA	1742088	0
1982	NA	1836816	435000
1983	NA	1850687	370000
1984	NA	2007061	300000
1985	NA	2260384	230000
1986	2362779	2255068	155000

year	revenue	expenditure	indebtedness
Wellsville USD 389 (Franklin County)			
1977	NA	1460207	505000
1978	NA	1775727	395000
1979	NA	1731652	290000
1980	NA	2150084	180000
1981	NA	2069370	60000
1982	NA	2083072	0
1983	NA	2235062	0
1984	NA	2419829	0
1985	NA	2818432	0
1986	2841051	2836187	0
Ottawa USD 290 (Franklin County)			
1977	NA	4075958	450000
1978	NA	4543980	980000
1979	NA	4819042	895000
1980	NA	5319778	785000
1981	NA	5464056	650000
1982	NA	5855281	420000
1983	NA	6281194	495000
1984	NA	7084413	360000
1985	NA	7135671	255000
1986	7273634	7554362	805000

year	revenue	expenditure	indebtedness
Osage City USD 420 (Osage County)			
1977	NA	1215027	155000
1978	NA	1376404	1119000
1979	NA	1660499	1089000
1980	NA	1714843	1030000
1981	NA	1754968	970000
1982	NA	1897088	905000
1983	NA	2256870	870000
1984	NA	2338443	835000
1985	NA	2448420	795000
1986	2590423	2532135	755000
Lyndon USD 421 (Osage County)			
1977	NA	733754	235000
1978	NA	902981	215000
1979	NA	940641	195000
1980	NA	1231919	175000
1981	NA	1197148	155000
1982	NA	1288458	130000
1983	NA	1592097	105000
1984	NA	1495467	80000
1985	NA	1645546	55000
1986	1743097	1694527	30000

year	revenue	expenditure	indebtedness
Santa Fe Trail USD 434 (Osage County)			
1977	NA	1839078	NA
1978	NA	2863620	815000
1979	NA	3312805	745000
1980	NA	4020517	675000
1981	NA	4387814	595000
1982	NA	6226426	515000
1983	NA	5602594	430000
1984	NA	5764955	340000
1985	NA	6237508	250000
1986	5049263	6897423	150000
Burlingame USD 454 (Osage County)			
1977	NA	771714	0
1978	NA	872580	0
1979	NA	1017577	0
1980	NA	1082928	0
1981	NA	1292081	0
1982	NA	1297154	0
1983	NA	1429908	0
1984	NA	1532471	0
1985	NA	1639498	0
1986	NA	1660452	0
Marais des Cygnes USD 456 (Osage County)			
1977	NA	651124	NA
1978	NA	765814	0
1979	NA	865605	0
1980	NA	1076383	0
1981	NA	1121093	0
1982	NA	1211581	0
1983	NA	1280271	0
1984	NA	1556420	0
1985	NA	1549310	0
1986	1584113	1527459	0

year	revenue	expenditure	indebtedness
Seaman USD 345 (Shawnee County)			
1977	NA	6232155	2370000
1978	NA	7214244	2210000
1979	NA	7617429	2020000
1980	NA	8800128	1760000
1981	NA	8894201	1480000
1982	NA	9909633	1200000
1983	NA	10751004	600000
1984	NA	11629124	600000
1985	NA	12496115	300000
1986	12385096	12614128	0
Silver Lake USD 372 (Shawnee County)			
1977	NA	1083882	0
1978	NA	1351733	1535000
1979	NA	1621310	1450000
1980	NA	1827058	1360000
1981	NA	1912085	1250000
1982	NA	1994018	1125000
1983	NA	2279321	995000
1984	NA	2412675	860000
1985	NA	2579082	725000
1986	2532640	2555898	650000
Auburn Washburn USD 437 (Shawnee County)			
1977	NA	5019374	2000
1978	NA	5873814	0
1979	NA	5974683	0
1980	NA	7220653	0
1981	NA	6871139	0
1982	NA	7694825	0
1983	NA	8756059	0
1984	NA	8409360	0
1985	NA	10511497	4960000
1986	11334238	11744973	4960000

year	revenue	expenditure	indebtedness
Shawnee Heights USD 450 (Shawnee County)			
1977	NA	5786425	2900000
1978	NA	7731973	7230000
1979	NA	8087821	6780000
1980	NA	9330008	6320000
1981	NA	9683992	5860000
1982	NA	10048766	5400000
1983	NA	10576573	4940000
1984	NA	11625291	4480000
1985	NA	11671933	3870000
1986	12053436	12009778	5220000
Topeka USD 501 (Shawnee County)			
1977	NA	35531723	1606000
1978	NA	37472165	1070000
1979	NA	44046916	4550000
1980	NA	49749891	4245000
1981	NA	50042774	3040000
1982	NA	50047768	2185000
1983	NA	52711942	1055000
1984	NA	56953626	0
1985	NA	59578845	0
1986	58061311	61483555	0

sources:

Kansas Department of Education. (Note, for 1977 through 1985, the revenue by school district was "estimated" as being exactly equal to expenditures. This estimation was not considered appropriate. Therefore, revenues are not given in the above table for years 1977 through 1985.)

"Kansas Tax Rate and Fiscal Data Book." Kansas Government Journal. January 1986. The League of Kansas Municipalities.

Table 2.7.5.2 Special taxing districts indebtedness by county, 1977 through 1986.

Douglas County

year	drainage	sewer	other
1977	0	466000	0
1978	0	437000	0
1979	0	373000	0
1980	0	332000	0
1981	0	291000	0
1982	0	835000	0
1983	0	764000	0
1984	0	693000	0
1985	0	622000	0
1986	0	0	0

Franklin County

year	drainage	fire	other
1977	0	0	0
1978	0	0	0
1979	0	0	0
1980	0	0	0
1981	0	0	0
1982	0	0	0
1983	0	0	0
1984	0	0	0
1985	0	0	0
1986	0	0	0

Osage County

year	sewer	fire	other
1977	160000	0	0
1978	150000	0	0
1979	140000	0	0
1980	149023	68000	0
1981	115000	65000	0
1982	100000	170000	0
1983	85000	155000	0
1984	70000	220000	0
1985	55000	200000	0
1986	40000	180000	0

Shawnee County

year	drainage	sewer	fire	other
1977	0	0	0	477000
1978	0	1967371	0	405000
1979	0	2750386	0	333000
1980	0	4609775	0	261000
1981	0	4964239	0	879114
1982	0	5085988	0	115000
1983	0	3579500	140000	6043000
1984	0	0	196000	9113000
1985	0	0	114000	9790000
1986	0	0	92000	5040000

Source:

"Kansas Tax Rate and Fiscal Data Book." Kansas Government Journal. January 1986. The League of Kansas Municipalities.

Table 2.7.5.3 Douglas County drainage district revenues and expenditures.

year	revenue	expenditure
1977	NA	NA
1978	60764	92224
1979	57511	60912
1980	58588	61177
1981	57384	65961
1982	56223	72515
1983	56613	46124
1984	59812	40039
1985	59762	62205
1986	63092	50865

note-Drainage districts in Douglas County began 1978 with a balance of $ 109379.

Over the period 1977 through 1986 Douglas County sewer districts have had revenues equal to the amount needed to re-pay a particular year's bond debt. Expenditures have only been to publish a budget listing the amount in a pool of money to be used for future mainenance. This maintenance pool has not yet been used.

Source:

Douglas County Budget Office-Darlene Hill.

Bond limits for school districts and special taxing districts.

The state has established the following bond limits for school districts and special taxing districts. Outstanding school district bonds may not exceed 14 % of assessed valuation of tangible taxable property in the district. Bonds of less than $ 20,000 may be issued with the approval of the state's board of education. These bonds will be excluded from the limit (K.S.A. 72-6761). Outstanding bonds for hospital districts may not exceed 15 % of the assessed valuation of the district (K.S.A. 80-2513). Outstanding bonds for drainage districts may not exceed 20 % of the assessed valuation of the district (K.S.A. 24-418). Outstanding bonds for fire districts may not exceed 5 % of the assessed valuation of the district (K.S.A. 80-1512). Outstanding bonds for water supply districts may not exceed 30 % of the assessed valuation of the district (K.S.A. 80-1608). Outstanding bonds for cemetery districts may not exceed 2 % of the assessed valuation of the district (K.S.A. 80-902).

2.7.6 Summary of municipal revenue, expenditures, and trends within the area of site influence, including bonded indebtedness and bond limits.

Table 2.7.6.1 Municipal revenue, expenditures and bonded indebtedness, 1977 through 1986 (see also figures on pages 46 and 47 for Burlingame, Carbondale, Lyndon, and Osage City).

Baldwin City

year	revenue	expenditure	bonded indebtedness
1977	3602777	3840682	1578000
1978	2386667	2978849	1509000
1979	1410880	1216004	1441000
1980	1601056	1399509	1489000
1981	1766567	1649234	1408635
1982	2025364	1669356	1412000
1983	2108096	1888772	1218000
1984	2201852	2025265	1045000
1985	2186941	2151649	1012000
1986	2268224	2231448	1050000

Burlingame

1977	651306	636705	446000
1978	770206	696105	438000
1979	924247	835326	416000
1980	937189	878857	602000
1981	994787	988774	573000
1982	1279562	1195721	643000
1983	1501715	1347032	619000
1984	1282289	1097221	566600
1985	1198854	1063790	556200
1986	1124525	997835	514000

Note-Burlingame revenue and expenditures are estimated, see note at the end of this section.

year	revenue	expenditure	indebtedness
Carbondale			
1977	246566	207903	413764
1978	574807	591451	652400
1979	649532	668339	648276
1980	733971	755223	790570
1981	697273	717462	640541
1982	941318	968573	638000
1983	894252	920144	878000
1984	1216183	1251396	824000
1985	1143212	1176312	822000
1986	1063187	1093970	734000

Note-Revenue and expenditures for Carbondale for 1979 through 1986 are estimated.

Lyndon			
1977	233891	222627	466500
1978	246070	214606	444500
1979	354017	362416	414250
1980	285676	274441	389000
1981	265407	264546	369000
1982	304058	286093	324000
1983	334455	281949	319000
1984	340077	295297	287000
1985	331014	312251	230000
1986	347098	344830	230000

year	revenue	expenditure	indebtedness
Osage City			
1977	2496283	2284523	0
1978	2743168	2510465	1828000
1979	2462737	2398514	1740300
1980	2572900	2699790	1647300
1981	2979089	2728997	1710014
1982	4509630	3261459	1257000
1983	3621907	4341400	2164000
1984	3843182	3666324	1012000
1985	5650546	3994067	1787000
1986	4107611	4285570	2353000

Note-Revenue and expenditures for Osage City for 1977 are estimated.

Ottawa			
1977	7525795	6889323	3620661
1978	13144673	11541792	7642996
1979	15587756	11793494	8424000
1980	11902367	8863167	14268147
1981	12883956	9593153	14459590
1982	13686107	10271359	14574841
1983	14936299	14737281	14754910
1984	13710847	11193693	13934000
1985	16440943	13427140	15069000
1986	16740101	13903648	13007089

year	revenue	expenditure	indebtedness
Rossville			
1977	257899	149730	0
1978	231361	167813	0
1979	197253	174345	0
1980	348752	236905	0
1981	246316	248142	0
1982	210061	195322	0
1983	218243	263512	0
1984	394250	305992	0
1985	230337	177783	0
1986	246134	224780	0
Wellsville			
1977	320761	266556	0
1978	356401	296174	867000
1979	388477	322830	677000
1980	349047	326695	972530
1981	353342	395722	908588
1982	410257	426236	824593
1983	433629	420081	752545
1984	470936	436240	491000
1985	539747	535888	831511
1986	545427	551458	932127

Note-Revenue and expenditures for Wellsville for 1977 and 1979 are estimated.

	year	revenue	expenditure	indebtedness
Silver Lake				
	1977	564663	537974	0
	1978	347505	372126	0
	1979	193181	342907	494500
	1980	233080	202750	466554
	1981	257345	198036	429000
	1982	259659	226641	391000
	1983	278549	252819	352000
	1984	278732	244253	317000
	1985	281570	315549	282000
	1986	293987	263375	246000
Lawrence				
	1977	24555396	23137892	32088000
	1978	25784932	24547634	33267500
	1979	26088261	25661617	30473535
	1980	27427731	24447970	31765373
	1981	29884082	28433053	30473736
	1982	29118996	28106606	28230000
	1983	29065045	27984416	25373510
	1984	32466914	29712171	26483533
	1985	32209047	30469286	23724145
	1986	37204655	34295563	22749074
Topeka				
	1977	24317931	23315839	26029239
	1978	27743090	26922307	23241823
	1979	31748925	28153450	28838119
	1980	32005648	32600117	35497830
	1981	43985572	34327704	38725631
	1982	37973306	38682450	38942037
	1983	42015317	40002860	45228451
	1984	46155896	43603254	44384424
	1985	47619629	47367663	50326940
	1986	47911297	48671669	57154053

year	revenue	expenditure	indebtedness
Eudora			
1977	1355501	1259405	1003000
1978	1174038	1113263	930000
1979	1244480	1180058	1151000
1980	1306704	1239061	1110000
1981	1097632	1040811	1068000
1982	1141537	1082443	1008000
1983	1198613	1136565	961000
1984	1282515	1216124	886000
1985	1333816	1264769	845000
1986	1413845	1340655	1105000

Note-Revenue and expenditures for Eudora for 1979 through 1986 are estimated.

Sources:

City clerks offices.

"Kansas Tax Rate and Fiscal Data Book." Kansas Government Journal. January 1986. The League of Kansas Municipalities.

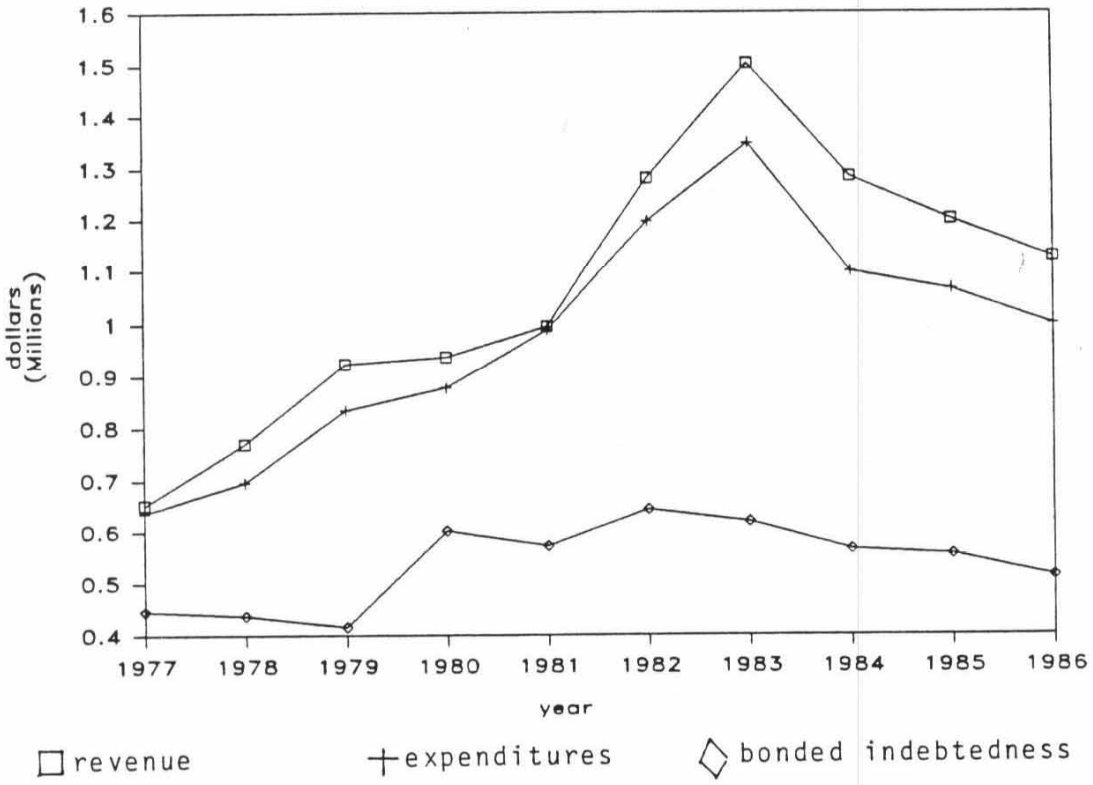
Bond limits for municipalities.

The state has established the following bond limits for municipalities. Outstanding "city" bonds (Topeka is classified as a "city") may not exceed 17 % of the assessed valuation within the city. Outstanding bonds for first-class cities (Lawrence) may not exceed 30 % of the assessed valuation within the city. Outstanding bonds for second-class cities (Osage City and Ottawa) may not exceed 25 % of the assessed valuation within the city. Outstanding bonds for third-class cities (Baldwin City, Carbondale, Eudora, Lyndon, Rossville, Silver Lake, Burlingame, and Wellsville) may not exceed 25 % of the assessed waluation within the city.

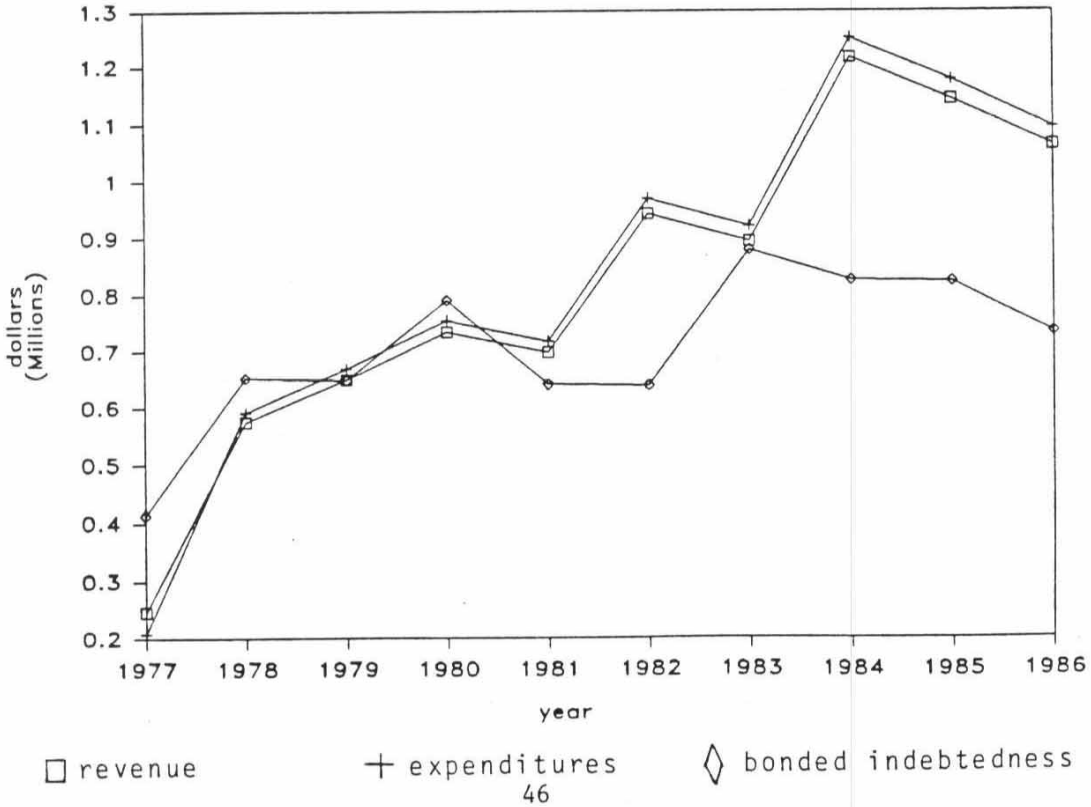
Note on estimation of revenue and expenditures.

In several cases revenue and expenditure data provided by city clerks were not complete. In such cases, revenue and expenditures were estimated. These cases are noted as they occur in table 2.7.6.1. Revenue and expenditures were estimated by assuming that the growth rates of total revenue and expenditures for a given municipality were equal to the growth rate of the city's property tax revenue. Growth rates of city property tax revenue were applied to the data provided by city clerks where it was necessary to fill-in missing values. City property tax revenue was based on assessed valuation and city property tax rates published in each January issue of "Kansas Tax Rate and Fiscal Data Book." Kansas Government Journal. The League of Kansas Municipalities.

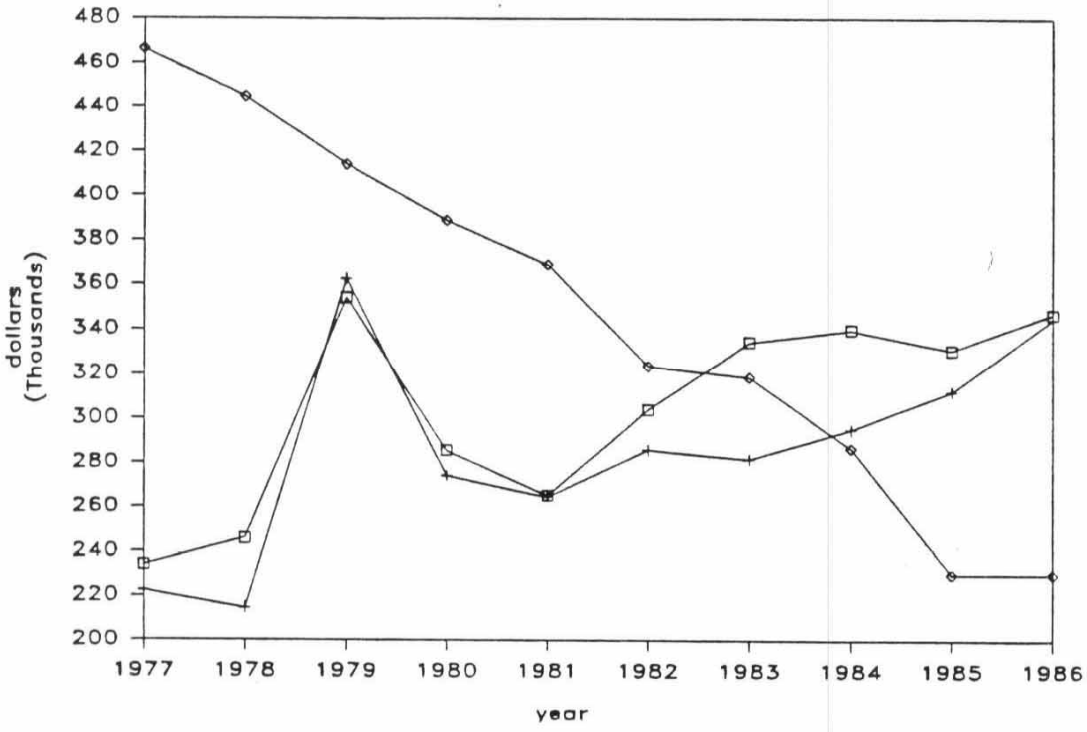
City of Burlingame 1977–1986



City of Carbondale 1977–1986

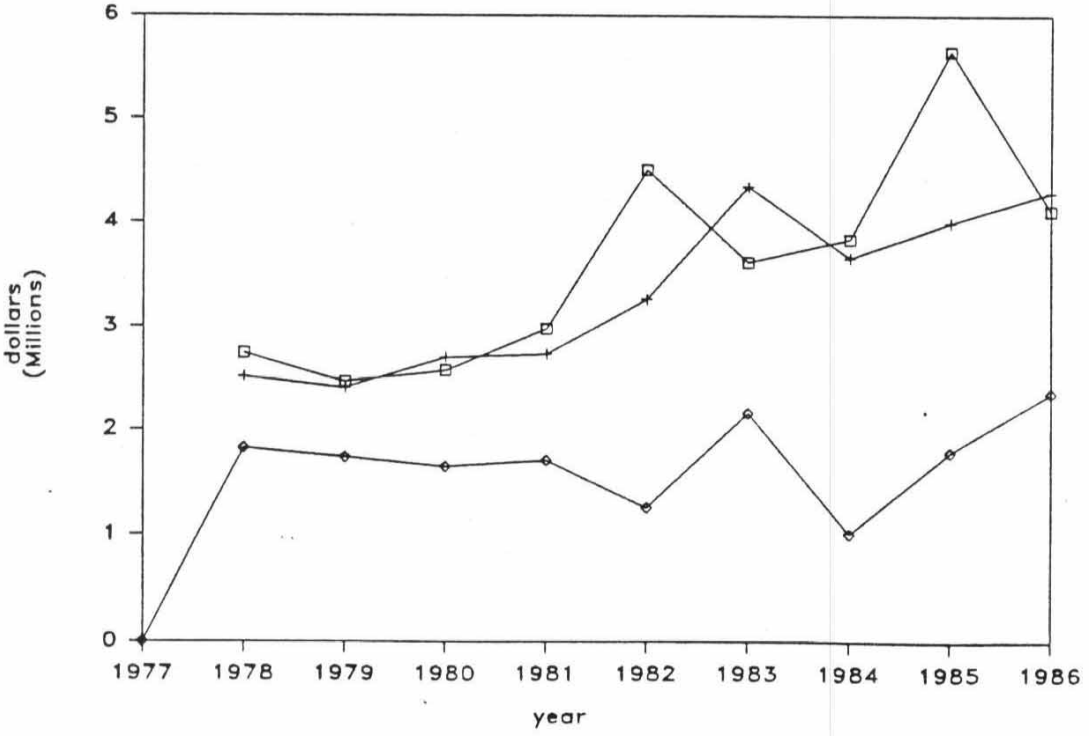


City of Lyndon 1977–1986



□ revenue + expenditures ◇ bonded indebtedness

City of Osage City 1977–1986



□ revenue + expenditures ◇ bonded indebtedness

2.7.7 Table of public services, square footage of facilities, number of personnel, funding level, and determination of adequacy and capacity.

Table 2.7.7.1 Square footage of facilities, full-time equivalent enrollment, and building capacity by school.

School	square footage of buildings	enrollment (FTE)	building capacity (in students)
Douglas County			
U.S.D. #348-Baldwin City			
Baldwin H.S.	84500	285	315
Baldwin Up. Elem.	48500	123	170
Baldwin Elem.	30500	345	425
Vinland Elem.	11000	81	100
Marion Springs Elem.	13746	53	100
Total U.S.D. #348	188246	887	1110
Total H.S./Jr. High	133000	408	485
Total Elementary	55246	479	625
U.S.D. #491-Eudora			
Nottingham Elem.	33000	407	440
Eudora Jr.-Sr. High	51950	360	410
Total	84950	767	850
U.S.D. #497-Lawrence			
Lawrence H.S.	278991	1795	1700
Central Jr. High	105762	529	600
South Jr. High	92474	542	625
West Jr. High	91095	593	625

	square footage	enrollment	building capacity
(U.S.D. 497 continued)			
Broken Arrow Elem.	29342	289	350
Centennial Elem.	29980	294	350
Cordley Elem.	44100	316	350
Deerfield Elem.	60100	371	550
East Heights Elem.	26310	197	300
Grant Elem.	13260	65	100
Hillcrest Elem.	34000	335	350
India Elem.	8606	80	100
Kaw Valley Elem.	11430	107	100
Kennedy Elem.	25352	296	350
New York Elem.	24712	142	225
Pickney Elem.	29046	297	375
Riverside Elem.	13376	153	175
Schwegler Elem.	30232	379	400
Sunset Elem.	28670	352	350
Wakarusa Elem.	16264	59	175
Woodlawn Elem.	30242	145	325
Total U.S.D. #497	1023344	7336	8475
Total H.S./Jr. High	568322	3459	3550
Total Elementary	455022	3877	4925
Total county H.S.	753272	4227	4445
Total county Elem.	543268	4763	5990
Franklin County			
U.S.D. #287-West Franklin			
Appanoose Grd. Sch.	17394	157	160
Pomona Grd. Sch.	15400	196	190
Pomona H.S.	51355	136	200
Williamsburg Grd.	11934	158	180
Williamsburg H.S.	34692	79	130

	square footage	enrollment	building capacity
Total U.S.D. #287	130775	726	860
Total H.S./Jr. High	86047	215	330
Total Elementary	44728	511	530
U.S.D. #288-Central Heights			
Central Heights	20000	230	300
Central Heights	40000	142	200
Central Heights	40000	135	300
Total U.S.D. #288	100000	507	800
Total H.S./Jr. High	80000	277	500
Total Elementary	20000	230	300
U.S.D. #389-Wellsville			
Wellsville Elem.	26000	366	425
Wellsville Jr.-Sr.	67000	331	400
Total U.S.D. #389	93000	697	825
U.S.D. #290-Ottawa			
Ottawa Middle Sch.	96701	460	1000
Lincoln Elem.	28599	289	325
Hawthorne Elem.	21832	165	275
Garfield Elem.	24214	261	395
Eisenhower Elem.	15062	158	175
Eugene Field Elem.	27360	262	350
East Central Voc.	24000	135	190

	square footage	enrollment	building capacity
Total U.S.D. #290	237768	1730	2710
Total H.S./Jr. High	96701	460	1000
Total Elementary	117067	1135	1520
Total county H.S.	329748	1283	2230
Total county Elem.	207795	1283	2230

Osage County

U.S.D. #421-Lyndon

Lyndon Elem.	25000	258	275
Lyndon H.S.	33000	120	189
Total U.S.D. #421	58000	378	464

U.S.D. #456-Marais des Cygnes

Marais des Cygnes Elem. (Quenemo)	6294	72	90
Marais des Cygnes Jr. (Quenemo)	1200	57	60
Marais des Cygnes Elem. (Melvern)	3912	101	155
Marais des Cygnes H.S. (Melvern)	13615	99	125
Total U.S.D. #456	25021	329	430
Total H.S./Jr. High	14815	156	185
Total Elementary	10206	173	245

	square footage	enrollment	building capactiy
U.S.D. #434-Santa Fe Trail			
Santa Fe Trail High	76042	358	600
Carbondale Elem.	50846	400	500
Overbrook Elem.	21150	152	200
Overbrook Elem.	25184	123	175
Scranton Elem.	27927	137	200
Total U.S.D. #434	201149	1170	1675
Total H.S./Jr. High	76042	358	600
Total Elementary	125107	812	1075
U.S.D. #420-Osage City			
Osage City Elem.	64000	422	460
Osage City H.S.	41000	208	260
Total U.S.D. #420	105000	630	720
U.S.D. #454-Burlingame			
Burlingame H.S.	19000	122	375
Lincoln Elem.	18000	96	220
Schuyler Elem.	12000	141	210
Total U.S.D. #454	49000	359	805
Total H.S./Jr. High	19000	122	375
Total Elementary	30000	237	430
Total county H.S	183857	964	1609
Total county Elem.	254313	1902	2485

	square footage	enrollment	building capacity
Shawnee County			
U.S.D. #501-Topeka			
Highland Park H.S.	175296	1207	1588
Topeka H.S.	259793	1688	1688
Topeka West H.S.	194870	1419	1436
Chase Middle Sch.	86162	318	528
Eisenhower Middle	77029	459	576
French Middle Sch.	71900	467	456
Jardine Middle Sch.	77029	331	552
Robinson Middle	71998	453	528
Avondale East Elem.	34782	263	236
Avondale West Elem.	26577	245	288
Belvoir Elem.	35435	201	264
Bishop Elem.	29943	318	336
Crestview Elem.	35889	350	384
Gage Elem.	24545	267	240
Highland Pk. Ct.	34137	365	504
Highland Pk. N.E.	27486	318	264
Highland Pk. S.E.	39575	342	432
Hudson Elem.	22912	201	168
Lafayette Elem.	30500	380	360
Linn Elem.	25221	168	240
Lowman Hill Elem.	24225	357	240
Lundgren Elem.	32411	224	288
McCarter Elem.	35031	368	336
McClure Elem.	33073	328	336
McEachron Elem.	25511	258	288
Potwin Elem.	20609	230	192
Quincy Elem.	31126	285	336
Quinton Heights	23786	234	192
Randolph Elem.	28136	432	336
Shaner Elem.	24664	278	336
State Street Elem.	28886	263	264
Stout Elem.	23245	344	240
Sumner Elem.	31306	239	192
Whitson Elem.	49529	370	408

	square footage	enrollment	building capacity
Adventure Center	26795		
Kaw Area Voc-Tec	121530		
Sheldon Child Dev.	20327		
Topeka Educ. Cnt.	51669		
Holland Student	29325		
Total U.S.D. #501	2042263	13970	15052
Total H.S./Jr. High	1014077	6342	7352
Total Elementary	778540	7628	7700
U.S.D. #345-Seaman			
Logan Jr. High	84580	382	625
Northern Hills Jr.	63326	448	600
Seaman H.S.	138600	916	1000
East Indianola Elem.	26001	231	375
Elmont Elem.	17888	155	200
Indian Creek Elem.	24900	172	300
Lyman Elem.	19665	165	225
N. Fairview Elem.	26456	168	300
Pleasant Hill Elem.	23490	226	300
Rochester Elem.	27201	273	360
W. Indianola Elem.	27634	259	350
Total U.S.D. #345	479741	3395	4635
Total H.S./Jr. High	286506	1746	2225
Total Elementary	193235	1649	2410
U.S.D. #372-Silver Lake			
Silver Lake H.S.	54060	212	250
Silver Lake Elem.	25460	373	566
Total U.S.D. #372	79520	585	816

	square footage	enrollment	building capacity
U.S.D. #437-Auburn-Washburn			
Washburn Rural H.S.	177877	763	1250
Jay Shideler Jr.	47936	481	500
Auburn Midd. Sch.	32137	171	250
Pauline South Midd.	46214	460	500
Auburn Elem.	26786	215	220
Pauline Cent. Elem.	43306	478	500
Wanamaker Elem.	42767	409	400
Total U.S.D. #437	417023	2977	3620
Total H.S./Jr. High	304164	1875	2500
Total Elementary	112859	1102	1120
U.S.D. #450-Shawnee Heights			
Shawnee Heights	138071	487	750
Shawnee Heights	110910	544	750
Shawmee Heights	133358	516	750
Berryton Elem.	56053	509	525
Shawnee Heights	50375	412	500
Tecumseh North Elem.	42620	371	400
Tecumseh South Elem.	55279	377	500
Total U.S.D. #450	586666	3216	4175
Total H.S./Jr. High	382339	1547	2250
Total Elementary	204327	1669	1925
Total county H.S	2041146	11722	14577
Total county Elem.	1314421	12421	13721

Source:

Kansas State Department of Education.

Table 2.7.7.2 Expenditure per pupil by county in 1982 dollars.

County	1979-80	1984-85	% change (1979-80 to 1984-85)
Douglas	2985	3195	1.07
Franklin	2884	3389	1.17
Osage	3221	4226	1.31
Shawnee	3187	3521	1.11

Source:

Kansas State Department of Education.

Table 2.7.7.3 Expenditure per pupil by state in 1982 dollars.

State	1979-80	1984-85	% change
Colorado	2947	3378	1.15
Iowa	2831	3142	1.11
Kansas	2645	3253	1.23
Missouri	2357	2703	1.15
Nebraska	2617	3171	1.21
Oklahoma	2344	2604	1.11
U.S.	2766	3151	1.14

Sources:

Kansas Department of Education

U.S. Department of Education-Center for Education Statistics. Digest of Education Statistics, 1987.

Adequacy and capacity of schools

Adequacy and capacity of education in the four county region will be discussed in terms of national test scores, average attendance, graduation requirements, graduation and drop-out rates, growth rates of expenditures, pupil to teacher ratios, and facility capacities. Data on test scores and attendance rates are provided only at the state level. Whenever possible, comparisons between the four counties and the state and nation will be made. In this section of the report, "school system" will refer to the aggregate collection of Unified School Districts within a geographic region.

Kansas student's scores on the Scholastic Aptitude Test (SAT) are well above the national averages. However, only 5 % of Kansas graduates in 1982 took the SAT. There were only nine other states with an equal or lower percentage of graduates taking the SAT. Most of the Kansas graduates taking the SAT are probably those students who are applying to out-of-state universities. It is likely that these students are among the better students in the state. It is more meaningful to compare Kansas SAT scores to SAT scores of other states with 5 % or less of their 1982 graduates who took the SAT.

Table 2.7.7.4 Scholastic Aptitude Test (SAT) scores and the percentage of 1982 graduates taking the SAT by state.

state	1982-83 SAT scores verbal	math	1985-86 SAT scores verbal	math	percent of 1982 grads. taking SAT
Kansas	498	540	482	544	5
Arkansas	482	518	482	519	4
Iowa	520	573	519	576	3
Louisiana	469	502	474	507	5
Miss.	474	507	485	516	3
N. Dakota	505	560	508	556	3
Oklahoma	489	521	487	521	5
S. Dakota	517	560	531	567	3
Utah	508	545	506	541	4
Wyoming	492	530	484	534	5

Source:

U.S. Department of Education. Digest of Education Statistics, 1987. Center for Education Statistics. 1987.

SAT test scores from Kansas were better than those from the three other states with 5 % of 1982 graduates taking the SAT. This suggests that at the state level, Kansas' education is adequate for those students taking the SAT.

While few Kansas graduates take the SAT, many take the American College Testing exam (ACT). In 1986, Kansas ranked fifth in the U.S. in percent of graduates taking the ACT.

Table 2.7.7.5 American College Testing exam (ACT) scores and the percent of graduates taking the ACT by state in 1986.

state	ACT score	percent of grads. taking ACT
Kansas	19.2	60.6
Colorado	19.9	59.9
Missouri	19.2	47.9
Nebraska	20.0	61.8
Oklahoma	17.8	48.1

Source:

U.S. Department of Education. The Condition of Education, 1987 Edition. Joyce Stern, editor. Center for Education Statistics. 1987.

ACT scores suggest that education in Kansas is adequate in relation to education in neighboring states.

Kansas high school graduation requirements are in-line with those of other states. The state's requirements were recently revised. The new requirements will first apply to those students who will graduate in 1989.

Table 2.7.7.6 Graduation requirements for Kansas in Carnegie units required by subject of study. (Note--Carnegie units are a measure of hours of study.)

subject of study	Carnegie units required for graduation
English	4
Social studies	3
Mathematics	2
Science	3
Electives	8
Physical education	1
Local board determined	1
total	21

source:

U.S. Department of Education. Digest of Education Statistics, 1987. Center for Education Statistics. 1987.

A measure of the adequacy of a school system is the average daily attendance rate. A more adequate system can be expected to have a higher average daily attendance rate.

Table 2.7.7.7 Average daily attendance rate by region for the 1984-85 school year.

region	average daily attendance rate
Kansas	94.5 %
Colorado	96.1 %
Missouri	NA
Nebraska	95.6 %
Oklahoma	94.6 %
United States	94.2 %

source:

U.S. Department of Education. Digest of Education Statistics, 1987. Center for Education Statistics. 1987.

The average daily attendance data suggest, like other measures so far examined, that Kansas' education is adequate.

A goal of a school system is to graduate students. To graduate a student must meet the established requirements and must remain in school. Two measures of the effectiveness of a school system at meeting this goal will be discussed.

Table 2.7.7.8 Ratio of graduates to seniors by region for the 1985-86 school year.

region	ratio of graduates to seniors
Douglas County	0.974
Franklin County	0.945
Osage County	0.963
Shawnee County	0.980
four county region	0.974
Kansas	0.940

sources:

Kansas State Department of Education. High School Graduates, 1985.

Kansas State Department of Education. Headcount Enrollment, Kansas Public Schools, 1985-86.

The ratio of graduates to seniors in each of the four counties is above the state average.

Table 2.7.7.9 Ratio of seniors who drop-out to graduates by region for the 1985-86 school year.

region	ratio of senior drop-outs to graduates
Douglas County	0.055
Franklin County	0.036
Osage County	0.049
Shawnee County	0.067
four county region	0.060
Kansas	0.050

sources:

Kansas State Department of Education. Secondary School Drop-Outs, 1985-86.

Kansas State Department of Education. Headcount Enrollment, Kansas Public Schools, 1985-86.

The ratios of senior drop-outs to graduates in Franklin and Osage counties is better than the state average. However, there are relatively more senior drop-outs in both Douglas and Shawnee counties. The four county region as a whole is better than average at graduating those seniors who remain in school. But, the region is worse than average at keeping seniors from dropping-out of school.

The real growth rate of per pupil expenditures in the four counties will be compared to the real growth rate of per pupil expenditures for Kansas and the nation. It will be assumed that the average national real growth rate is the preferred rate. A real growth rate lower than the preferred rate will be considered as implying a school system of above average in its quality (or above the adequate level). A real growth rate higher than the national average will be considered as implying a school system that is less than adequate. Education will be considered a public good for which a particular level of adequacy is considered necessary. An inadequate school system will have an incentive to improve its quality such that it reaches that particular level of quality that is considered adequate. The incentive will come from the demands of the population served by the school system. The effort by the system to improve may be manifested by a higher than average real growth rate of expenditures per pupil.

As an example of the above described scenario consider Douglas County's school system. Douglas County's school system's real growth rate of expenditures per pupil is well below the national average. This may be interpreted as suggesting that the county's school system is above the level considered adequate. The population of Douglas County is willing to let the school system expand its expenditures at a slower than average rate as long as the system is more adequate than the national level.

Table 2.7.7.10 Real growth rates of expenditure per pupil between the 1979-80 school year and the 1984-85 school year by region. (Note--Real per pupil expenditures were calculated using the implicit price deflator for gross national product published by the U.S. Department of Commerce--Bureau of Economic Analysis in Business Conditions Digest.)

region	real per pupil expenditure growth rate
Douglas County	7 %
Franklin County	17 %
Osage County	31 %
Shawnee County	11 %
Kansas	23 %
United States	14 %

Sources:

U.S. Department of Education. Digest of Education Statistics, 1987. Center for Education Statistics. 1987.

Kansas State Department of Education. (Data provided for this report).

The real growth rates of per pupil expenditures suggest that the school systems in the state of Kansas are inadequate. That is, Kansas' expenditures are growing faster than the national average in an effort to improve the quality of education in the state so that it meets the average level of adequacy. The school systems in Douglas and Shawnee counties are more adequate than the national average. The school systems in Franklin and Osage counties are less than adequate. Both Franklin and Osage counties ,by the assumptions outlined above, are increasing their per pupil expenditures in order to improve the quality of their school systems. The real growth rate of per pupil expenditure data suggests that within the four county region, only Osage County has a school system that is less adequate in comparison to the school systems of the state of Kansas as a whole.

Pupil to teacher ratios will be compared as a measure of a school system's capacity. The national average ratio will be considered the preferred level. Lower than the national average pupil to teacher ratios imply excess teacher capacity. Higher than average ratios imply a school system that is operating with out any excess teacher capacity.

Table 2.7.7.11 Pupil to teacher ratios by region. (Note--Kansas data are for the 1986-87 school year. National data are based on the 1985-86 school year.)

region	pupil to teacher ratio
Douglas County	18.7
Franklin County	15.5
Osage County	14.0
Shawnee County	18.7
four county region	17.9
Kansas	15.4
United States	17.9

sources:

Kansas State Department of Education. (Data provided for this report).

U.S. Department of Education. Digest of Education Statistics, 1987. Center for Education Statistics. 1987.

Douglas and Shawnee counties have pupil to teacher ratios above the preferred level. That suggests that neither system has excess teacher capacity. Osage and Franklin counties have lower than the preferred pupil to teacher ratios. Both Osage and Franklin counties have excess capacity in teachers. They could be expected to absorb some population growth without expanding their numbers of teachers.

The low pupil to teacher ratios in Osage and Franklin counties probably is a reflection of the rural nature of the counties. Because of the costs and time involved in transporting children to school, a region with a low population density can be expected to have relatively low pupil to teacher ratios. To

illustrate this idea, consider a system of "one-room" schools (i.e. assume that each school has one teacher). These schools will serve, for example, all of the students within five miles of the school building. The schools would be geographically spaced such that no student would be farther than five miles from a school. Clearly, a school in an area of relatively low population density will have a low pupil to teacher ratio.

Teacher capacity of school systems was discussed in terms of pupil to teacher ratios. In addition, the physical capacity of school system facilities will be discussed. There is some maximum number of students which can be served by the existing buildings in a school system. Excess capacity will be considered the maximum number of students which can physically be served by a systems school facilities less the full-time equivalent enrollment in the 1986-87 school year.

Table 2.7.7.12 Excess capacity of school buildings in full-time equivalent enrollment by county and level of school for the 1986-87 school year.

county	excess capacity elementary schools	excess capacity junior high/high schools
Douglas	1227	218
Franklin	533	947
Osage	583	645
Shawnee	1300	2855

source:

Kansas State Department of Education. (Data provided for this report.)

At the county level excess capacity exists for every county at both the elementary and high school/junior high levels. At the city level, however, there are two major schools operating at or above the physical capacity of their buildings. Topeka High School's full-time equivalent enrollment is 1,688. That is equal to the building's capacity. Lawrence High School's full-time equivalent enrollment is 1,795. The building's capacity is considered 1,700 students.

Analysis of the above measures of educational adequacy and capacity suggest the following conclusions. The school systems within the four counties and the state of Kansas appear to be adequate or nearly so. Douglas and Shawnee counties' school systems appear to be relatively more adequate than those of Franklin and Osage counties. But, the systems in Douglas and Shawnee counties are operating above the preferred levels of teacher capacity. The school systems of Franklin and Osage counties have excess teacher and building capacities. However, they appear to have relatively lower levels of adequacy. In particular, Osage county is less adequate in comparison to the rest of the four county region. The real growth rate of per pupil expenditures in Osage County's school system suggests the level of adequacy is improving.

Table 2.7.7.13 Fire department personnel, population covered, and type by department.

department	personnel	population	department type
Douglas County			
Lawrence	70	53000	professional
Baldwin	20	3000	all volunteer
Eudora	20	3300	part professional
Clinton	NA	NA	NA
DG-Kanwaka	NA	NA	NA
Lecompton	12	3000	all volunteer
Eudora Twp.	22	1000	all volunteer
Wakarusa	18	2640	part professional
Willow Springs	24	1500	all volunteer
Palmyra	25	NA	all volunteer
Douglas County total (excluding Palmyra, Clinton, DG-Kanwaka)	186	67440	
Franklin County			
Ottawa	21	12000	professional
Lane	NA	300	all volunteer
Pamona	15	2500	all volunteer
Ohio	10	400	all volunteer
Richmond	9	1200	all volunteer
Wellsville	18	1200	all volunteer
Williamsburg	20	350	all volunteer
Cutler	25	800	all volunteer
Pottawatomie	20	600	all volunteer
W'burg/Homewood	10	1200	all volunteer
Ottawa-Twp	NA	1000	all volunteer
Franklin County (excludes Lane and Ottawa-Twp)	148	20250	

department	personnel	population	department type
Osage County			
Osage City	21	3800	all volunteer
Burlingame	NA	NA	NA
Osage Co. #1	30	4000	all volunteer
Overbrook	18	2000	all volunteer
Quenemo	15	450	all volunteer
Scranton	15	900	all volunteer
Agency	12	80	all volunteer
Osage Co. #3	35	1100	all volunteer
Lyndon	30	2500	all volunteer
Osage County total (excludes Burlingame)	176	14830	
Franklin County			
Topeka	232	150000	professional
Auburn	13	NA	all volunteer
Soldier	22	11000	part professional
Mission	23	5000	part professional
Shawnee Co. #3	20	2742	all volunteer
Shawnee Co. #1	30	2500	all volunteer
Shawnee Co. #4	30	2500	all volunteer
Forbes Field	17	150	professional
KS Air Nat'l Guard	NA	NA	professional
Topeka-Tecumseh	27	NA	part professional
Shawnee County total (excludes Auburn, Kansas Air National Guard, and Topeka-Tecumseh)	374	173892	

Source:

Kansas Uniform Fire Incedent Reporting System by County. Kansas State Fire Marshal Department. 1987.

Adequacy and Capacity of Fire Departments

Fire department adequacy and capacity will be discussed through comparisons and definitions. Definitions will refer to the type of department (based on type of employment) and the insurance rating of the department. The levels of personnel and values of property lost in relation to population and value of property will be compared.

Departments may be classified by type of employment. There are three distinct department types, full professional, part professional and part volunteer, and all volunteer. It will be assumed that a full professional department is the most adequate. An all volunteer department will be considered least adequate. Of course, this is an over-simplification. There are many factors which affect the adequacy of a fire department. These factors may include population, population density, department training, and department equipment. The above assumption, however, seems reasonable as long as the simplification is remembered.

Table 2.7.7.14 Percentages of population covered by full professional, part professional, and all volunteer fire departments by county in 1987 (see also figures on pages 79 and 80).

County	Percent of population covered by: full pro.	part pro.	all volunteer
Douglas	79	5	16
Franklin	56	0	44
Osage	0	0	100
Shawnee	86	9	5

Source:

Kansas Uniform Fire Incident Reporting System by County. Kansas State Fire Marshal Department. (Unpublished computer file hardcopy). 1987.

Most of the population of Shawnee and Douglas counties are protected by full professional fire departments. Slightly over half of the population of Franklin County is protected by full professional departments. All of Osage County is protected by all volunteer fire departments.

The average fire department full-time personnel per 1000 population for U.S. cities will be considered the preferred level of employment. These national averages will be compared to the employment level of the four county region's full professional departments to suggest capacity of those departments. To make this comparison, it is necessary to assume that the employment figure reported by the departments to the Kansas State Fire Marshal Department are full-time equivalent figures. Lawrence's fire protection will be compared to the U.S. average for cities of 50,000 to 99,999 population. Ottawa will be compared to the

average for U.S. cities of 10,000 to 24,999 population. Topeka will be compared to the average for U.S. cities of 100,000 to 249,999 population.

Table 2.7.7.15 Fire department personnel per 1000 population by region. Note--Kansas department data is for 1987, U.S. averages are for 1985.

region	fire department personnel per 1000
Lawrence	1.32
Ottawa	1.75
Topeka	1.55
U.S. cities (50,000-99,999)	1.64
U.S. cities (10,000-24,999)	1.48
U.S. cities (100,000-249,999)	1.70

Sources:

Kansas Uniform Fire Incident Reporting System by County. Kansas State Fire Marshal Department. 1987.

Jackson, Gregg B. "Police, Fire, and Refuse Collection and Disposal Departments: Personnel, Compensation, and Expenditures." The Municipal Yearbook, 1986. International City Management Association. pp. 131-182. 1986.

Lawrence's fire department employment per 1000 population is less than the preferred level for a city of its size. Lawrence could expand its fire department capacity by increasing its level of employment to the desired level. Ottawa's fire department employment level is above the preferred level. This suggests that Ottawa has excess fire protection capacity. Fire department employment in Topeka is lower than the preferred level. Expanding employment to the preferred level would increase Topeka's fire protection capacity.

The personnel per 1000 population data suggests that neither Topeka nor Lawrence is operating with excess capacity. However, both are operating below the preferred levels of employment. Both Topeka and Lawrence might have excess capacity if they increased employment to the preferred levels. Ottawa does have excess capacity based on the personnel level. Ottawa could be expected to absorb some population growth without increasing its fire department employment.

Insurance companies use an insurance rating for fire protection to help set insurance rates. The ratings are based on a variety of factors which affect the adequacy of a regions fire protection. A proprietary formula is used to calculate the ratings. The ratings are on a scale of 1 to 10, with 1 being best and 10 being worst. (This information was provided by Pat Clifford of Insurance Services).

Table 2.7.7.16 Fire insurance ratings by city and areas outside of cities.

city	rating in the city	rating out of the city
Baldwin City	8	10
Burlingame	8	10
Carbondale	8	10
Eudora	8	10
Lawrence	2	9
Lyndon	8	10
Osage City	6	9/10
Ottawa	6	10
Rossville	7	10
Topeka	3	8/9
Silver Lake	8	10
Wellsville	7	9/10

source:

Kansas Department of Economic Development. Kansas-Community Profile. 1985 and 1987. (See bibliography for date of the profile for each city).

There are no fire departments in Kansas with a rating of one. Lawrence's fire department is the only department in the state with a rating of two.

The fire insurance ratings suggest that fire protection within the municipalities is better than fire protection outside of the municipalities. The cities of Lawrence and Topeka both have relatively good insurance ratings.

Table 2.7.7.17 Average annual value of fire loss in 1982 dollars per $ 10,000 of 1986 assessed valuation by geographic region. (Note--Annual average value of fire loss is based on data for 1982 through 1986.)

---

region	fire loss per $ 10,000 of assessed valuation
Douglas County	$ 39.46
Franklin County	$ 67.25
Osage County	$ 89.53
Shawnee County	$ 43.63
Kansas	$ 35.26

Source:

Institute for Public Policy and Business Research. Kansas Statistical Abstract. Institute for Public Policy and Business Research-The University of Kansas. Annual:1982-1986.

It will be assumed that the preferred level of annual fire loss per $ 10,000 of assessed valuation is the average for the state. The state average is $ 35.26. All four counties exceeded that level. Douglas and Shawnee counties suffered fire losses

that were relatively close to the preferred level. The main population centers of Douglas and Shawnee counties employ less than the preferred level of personnel. Perhaps by employing the preferred level of personnel fire losses in Douglas and Shawnee counties could be reduced.

Fire losses in Osage County are much higher than the preferred level. Fire protection in Osage County is entirely volunteer. It is not surprising that all volunteer departments allow greater fire losses than the more professional departments of Douglas, Franklin, and Shawnee counties.

Franklin County's fire losses exceed the preferred level. The extent to which the preferred level is exceeded is surprising. After all, the city of Ottawa employs more than the preferred level of personnel, and while the insurance ratings for the region are not particularly good they are not worse than the other counties. Further, more than half of the population of Franklin County is protected by full professional departments. Franklin County's fire losses are much better if 1986's losses are not included in calculating the average. Excluding 1986, the average annual fire loss per $ 10,000 of assessed valuation in Franklin County is $ 31.13. That is below the preferred level.

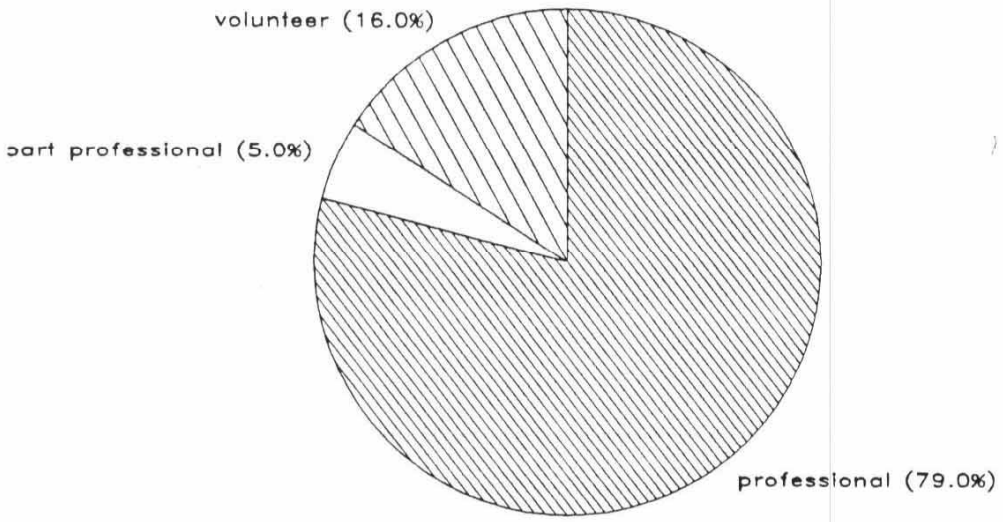
In 1986 there was a single fire which accounted for approximately $ 1,000,000 of property loss. That fire occurred in Richmond. Richmond is a town of approximately 500 people in south-central Franklin County. The Richmond Fire Department is an all volunteer department with 9 personnel. The fire occurred at

the Rigid Forms, Inc. factory which manufactured tops for pick-up trucks. Including this fire in the value of fire loss in Franklin County may make the county's fire protection look relatively worse than it is. However, excluding it will ignore the potential toll of a major fire in a area covered by all volunteer fire protection.

The data presented in this report suggest that the four county region's fire protection is at best adequate in Shawnee and Douglas county. Both Shawnee and Douglas counties do not appear to have excess fire protection capacity. Protection in Franklin County and especially in Osage County appears to be inadequate for the existing population. Fire protection in the cities of Topeka, Lawrence, and Ottawa appears to be adequate. But, there does not appear to be excess fire protection capacity in the cities.

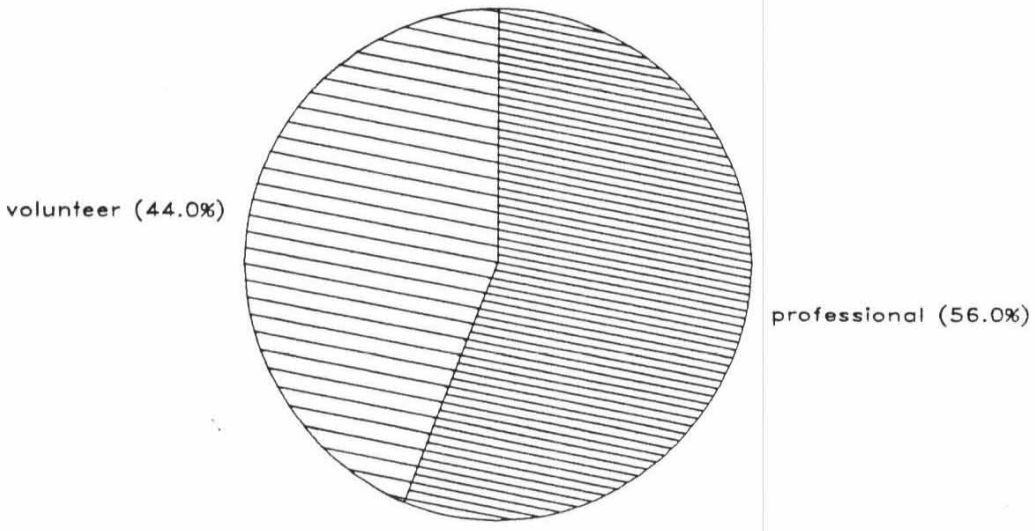
Douglas County Fire Protection

population served by department type



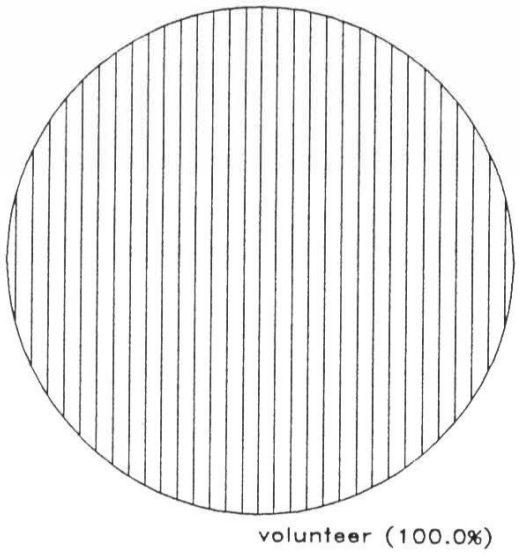
Franklin County Fire Protection

population served by department type



Osage County Fire Protection

population served by department type



Shawnee County Fire Protection

population served by department type

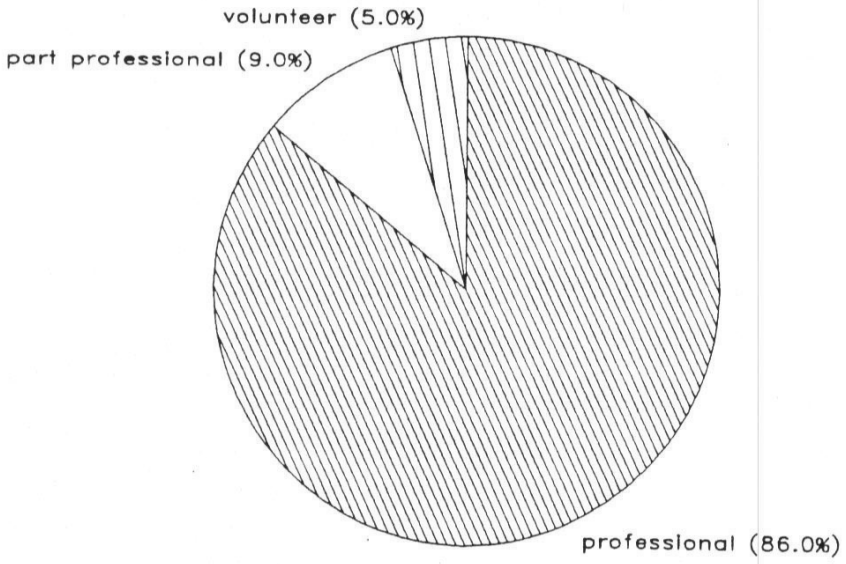


Table 2.7.7.18 Expenditures for police protection and total criminal justice expenditures by city and county in 1985. Total criminal justice includes the following functions: police protection, judicial, legal, public defense, corrections, diversion, community corrections, victim/witness, and other.

	Police protection	total criminal justice
Douglas County		
Lawrence	2822875	2981917
Baldwin City	78362	81902
Eudora	75521	78416
Total	2976758	3142235
Franklin County		
Ottawa	1249304	1306810
Wellsville	80124	83824
Total	1329428	1390634
Osage County		
Osage City	124341	128783
Burlingame	25844	27164
Carbondale	34740	38403
Lyndon	37110	39333
Overbrook	35179	39483
Total	257214	273166

	police protection	total criminal justice
Shawnee County		
Topeka	11054470	11725517
Silver Lake	55222	60592
Auburn	13873	15733
Total	11123565	11801842

Source:

Kansas Bureau of Investigation. Expenditure and Employment, 1985.

Table 2.7.7.19 Full time employment for police protection, total criminal justice employment, population, and full-time police employment per 1000 population in 1985.

county	police protection emp.	total criminal justice emp.	population	employment per 1000
Douglas	127	177	70149	1.81
Franklin	64	73	22412	2.85
Osage	21	28	16181	1.3
Shawnee	420	590	159796	2.63
4 County total	632	868	268538	8.59
Lawrence	93	99	55114	1.69
Topeka	306	323	119540	2.56
Kansas	5271		2444910	2.16

Source:

Kansas Bureau of Investigation. Expenditure and Employment, 1985.

Table 2.7.7.20 Part time police protection and total criminal justice employment by county in 1985.

County	police protection employment	criminal justice employment
Douglas	17	28
Franklin	4	7
Osage	10	21
Shawnee	4	25
4 County total	35	81
Lawrence	13	13
Topeka	1	16

Source:

Kansas Bureau of Investigation. Expenditure and Employment, 1985.

Adequacy and capacity of police protection

Adequacy and capacity of regional police protection will be examined in a comparative manner. The following variables for each of the four counties and for Kansas will be compared; per capita police protection expenditure, police protection full-time employment per 1000 population, crime index offenses per 1000 population, and the ratio of the value of property recovered to the value of property stolen. The state averages for these variables will be considered the "preferred" (or "acceptable") level. It will be assumed that increasing police protection expenditures and/or employment would improve the adequacy of police protection.

Crime index offenses per 1000 population may be considered a measure of the level of crime in a region. Crime index offenses

include; murder and non-negligent manslaughter, rape, robbery, aggravated assault, burglary, larceny/theft, and motor vehicle theft. The level of crime in a region is influenced by many factors. Among the factors are population, population density, and adequacy of police protection. A region's level of crime will have a relationship to the adequacy and capacity of its police protection. Inadequate police protection may be manifested in a high level of crime. A low level of crime may suggest adequate police protection.

Table 2.7.7.21 Crime index offenses per 1000 population by geographic region.

region	crime index offenses per 1000
Douglas County	62.1
Franklin County	21.8
Osage County	18.2
Shawnee County	62.2
Four county total	56.2
Kansas	43.8
United States	50.3

Source:

Kansas Bureau of Investigation--Statistical Analysis Center. Crime in Kansas, 1985. July, 1986.

U.S. Deaprtrment of Justice--Federal Bureau of Investigation. Crime in the United States. July, 1986.

It will be assumed that 43.8 crime index offenses per 1000 population (the rate for the state of Kansas) is the preferred level of crime. Preferred level of crime may be a somewhat unusual sounding concept. Obviously, any society would like to

have no crime. However, because of the costs associated with controlling crime there is likely to be some positive level of crime which is preferred (or accepted). By assuming that the government making the decision regarding police protection is able to perfectly express the society's preferences, it can be assumed that the level of crime which exists is the preferred level. In this report, it is assumed that the average level of crime in Kansas reflects the preferred level of crime for the state.

The crime index offenses per 1000 population data suggest that Osage and Franklin counties can absorb increases in the level of crime without exceeding the preferred level. Douglas and Shawnee counties are experiencing more crime than is preferred.

Table 2.7.7.22 Per capita police protection expenditures by geographic region, 1985.

region	per capita police protection expend.
Douglas County	$ 56.58
Franklin County	$ 72.75
Osage County	$ 34.50
Shawnee County	$ 88.57
Kansas	$ 65.48

Source:

Kansas Bureau of Investigation--Statistical Analysis Center. Expenditure and Employment, 1985. November, 1986.

Police protection expenditures per capita in Franklin and Shawnee counties exceed the preferred level of $ 65.48 (the Kansas average level). Crime index offense data suggest that Shawnee County has more than average crime. Shawnee County's level of expenditure is perhaps in reaction to the county's excess level of crime. Franklin County's level crime index offenses is well below the average level. Franklin County's level of per capita police protection expenditures suggests the county has excess police protection capacity.

Douglas and Osage counties have lower than the preferred level of per capita police protection expenditures. Osage County also has much lower than average levels of crime. It may be supposed that Osage county is operating with the potential to expand its police protection by increasing police protection expenditures to the preferred level. Douglas County, on the other hand, has a higher than average level of crime. Douglas County appears to be operating such that there is no excess capacity. Although, the county has the potential to expand its police protection capacity by increasing expenditures to the preferred level.

Douglas County has lower than the preferred level of police protection employment per 1000 population (see table 2.7.7.6) and higher than the preferred level of crime. Douglas County is operating without excess capacity in terms of police protection employment. However, it has the potential to expand its capacity by increasing employment to the preferred level. Franklin County

has higher than preferred level of police protection employment and lower than preferred (or acceptable) levels of crime. Franklin County has excess capacity in its police protection employment. Osage County has lower than preferred levels of employment. This is perhaps in reaction to the relatively low level of crime in the county. Osage County could expand its police protection capacity by increasing its level of police protection employment. Shawnee County has higher than the preferred level of employment and higher than the preferred level of crime. The county is operating without excess capacity.

Table 2.7.7.23 Ratio of the value of stolen property which is recovered to the value of property stolen by geographic region, 1985.

region	ratio of recovered to stolen property
Douglas County	0.26
Franklin County	0.44
Osage County	0.18
Shawnee County	0.23
Kansas	0.31

Source:

Kansas Bureau of Investigation--Statistical Analysis Center. Crime in Kansas, 1985. July, 1986.

Among the four counties only Franklin County police protection's ratio of recovery of stolen property is at or above the preferred rate. Douglas, Osage, and Shawnee counties all have less than the preferred rate of recovery of stolen property.

The police protection data presented above suggests the following conclusions. Franklin County's police protection is adequate and

is operating with excess capacity. It can be expected that Franklin County could experience some population growth without expanding its level of police protection. Douglas County's police protection is less than adequate (i.e. not at the preferred levels of the variables measured above). The county's levels of expenditures and employment are below the state averages. This suggests the county has the possibility to expand by increasing its expenditures and employment. Such increases may lead to improved adequacy of Douglas County's police protection. Shawnee County's police protection is expending more than the preferred level and is employing more than the preferred level. However, the levels of crime and recovery of stolen property are not at the preferred levels. The county's police protection is less than adequate although there is not the possibility of expanding capacity without moving further from the preferred levels of expenditure and employment. Osage County expends relatively little and employs relatively few in its police protection. However, the county also faces low levels of crime. This is probably due to its low population and population density. Osage County could expand its capacity by increasing its police protection expenditures and employment to be nearer the preferred levels.

Table 2.7.7.24 Capacity (number of beds) for Kansas Department of Social and Rehabilitation Services (SRS) licensed adult social service facilities by county in 1987.

County	Number of beds, adult family homes and resident care facilities	Number of beds, non-medical community based programs
Douglas	39	303
Franklin	17	130
Osage	4	62
Shawnee	322	328

Note--Adult family homes, resident care facilities, and non-medical community based programs in the four county region provide services to mentally retarded, multiply handicapped, elderly, and disabled clients. The programs offered are independent living, group living, work activity, semi-independent living, and alternate care services.

Sources:

Kansas Department of Health and Environment. List of Providers by Type. Nov. 1, 1987.

Munzer, Kent. Annual Directory of Licensed Programs. Memorandum-Kansas Department of Social and Rehabilitation Services. April 7, 1987.

Munzer, Kent. SRS Registered and Licensed Homes, H and E Licensed Homes. Memorandum-Kansas Department of Social and Rehabilitation Services. Oct . 8, 1987.

Table 2.7.7.25 List of social services. This list suggests social services which may exist in the four county region and which may be important. The services are not listed in order of importance.

Abuse and neglect investigation--child
Child day care
Adult day programs and community living programs
Family service
Homemaker service
Residential services--child
Mental health programs
Physically handicapped
Drug and alcohol abuse
Consumer protection
Poverty
Tenant rights

Sources:

International Citay Management Association. Small Cities and Counties: A Guide to Managing Services.

Munzer, Kent. Social Service Block Grant, Preliminary Plan for FY 1988. Memorandum-Kansas Department of Social and Rehabilitation Services. 1987.

Table 2.7.7.26 Estimated expenditures for social service block grants for July 1, 1987 through June 30, 1988. Figures include funding from the State and Federal governments.

Service	Estimated expenditures
Youth Services	
Abuse/neglect	2,543,527
Adoption	785,850
Child in need of care inquiry	664,542
Custody supervision	3,524,089
Day care	4,897,654
Divorce custody assessment	154,613
Evaluation	124,937
Family services	1,882,597
Family support	538,449
Interstate compact	334,776
Residential	3,871,612
Adult Services	
Abuse/neglect	378,263
Alternate care	288,627
Day and community living	11,155,916
Guardianship/conservator	135,038
Homemaker	6,948,794
Job prep programs	562,997
Specialized social adjustment	208,491

Source:

Munzer, Kent. Social Services Block Grant, Preliminary Plan for FY 1988. Kansas Department of Social and Rehabilitation Services. 1987.

Table 2.7.7.27 Social services (SIC code 83) employment in 1982. (excludes government employees and self-employed).

Region	Employment	Employment per 1000 population
Douglas County	291	4.3
Franklin County	172	7.8
Osage County	0	0
Shawnee County	869	5.6
4 county region	1332	5.1
Kansas	9879	4.2
Colorado	11203	3.9
Missouri	28734	5.8
Nebraska	6505	4.1
Oklahoma	13115	4.3

Source:

U.S. Department of Commerce-Bureau of the Census. County Business Pattern, Kansas, 1982.

The four county region's social service employment per 1000 population is relatively high. This might suggest that the region has a relatively adequate level of social services, and that the region is operating below its capacity. However, such a conclusion could be very misleading. The social service employment figure are aggregated such that an under supply of a particular type of social service may be hidden by an over supply of another type of social service. In fact, whether any of the above regions have adequate social services may be questioned. Because the notion of preferred capacity for a social service is not clear. Preferred capacity may be some measure of the average level of service (as in the above table), or it may be the level

for which almost everyone seeking the service is satisfied, or it may be some other level. Certainly, not everyone seeking social services in Kansas is able to be satisfied. For example, state wide approximately 1000 people are on waiting lists to be placed in adult community living programs.

The above table suggests that the four county region has adequate social service employment when compared to the state of Kansas as a whole, and other neighboring states. However, this conclusion is based on an assumption that the employment in a given region is servicing only that region's population. This seems an unreasonable assumption. Shawnee and Franklin counties are likely serving many clients from outside of their regions. Similarly, clients from within Osage county are probably seeking social services from outside of the county (perhaps in Shawnee and Franklin counties).

Federal funding represents approximately 2/3 of the total expenditures for social service block grants (SSBG) in Kansas. Federal SSBR funds are allocated to the state according to the state's population. For fiscal year 1988, the state will recieve $ 28,259,683 in SSBG from the Federal government. In fiscal year 1989, the state will recieve $ 27,413,978 (Source: The Federal Register).

2.7.8 Table of housing availability by municipality and for unincorporated areas of the county, including housing type, percent ownership, percent vacancy, and total numbers of housing units.

Table 2.7.8.1 Housing Characteristics in 1980, including number of year-round units, owner occupied units, renter occupied units, total occupied units, and rates of occupation and vacancy.

Douglas County

	year-round units	owner occ. units	owner occ. rate	renter occ. units	renter occ. rate	occupied units	vacancy rate
County total	25479	12980	0.51	10837	0.43	23817	0.07
Baldwin City	941	579	0.62	299	0.32	878	0.07
Eudora	1040	713	0.69	273	0.26	986	0.05
Lawrence	20171	9056	0.45	9717	0.48	18773	0.07
Other areas	3327	2632	0.79	548	0.16	3180	0.04

Franklin County

	year-round units	owner occ. units	owner occ. rate	renter occ. units	renter occ. rate	occupied units	vacancy rate
County total	8723	6258	0.72	1890	0.22	8148	0.07
Ottawa	4569	2971	0.65	1288	0.28	4259	0.07
Wellsville	598	468	0.78	99	0.17	567	0.05
Other areas	3556	2819	0.79	503	0.14	3322	0.07

Osage County

	year-round units	owner occ. units	owner occ. rate	renter occ. units	renter occ. rate	occupied units	vacancy rate
County total	5997	4591	0.77	1009	0.17	5600	0.07
Burlingame	511	367	0.72	112	0.22	479	0.06
Carbondale	537	444	0.83	68	0.13	512	0.05
Lyndon	446	338	0.76	84	0.19	422	0.05
Osage City	1148	801	0.70	254	0.22	1055	0.08
Other areas	3355	2641	0.79	491	0.15	3132	0.07

Shawnee County

	year-round units	owner occ. units	owner occ. rate	renter occ. units	renter occ. rate	occupied units	vacancy rate
County total	64393	39753	0.62	19079	0.30	58832	0.09
Rossville	366	280	0.77	69	0.19	349	0.05
Silver Lake	460	338	0.73	100	0.22	438	0.05
Topeka	50326	28788	0.57	17468	0.35	46256	0.08
Other areas	13241	10347	0.78	1442	0.11	11789	0.11

Source:

U.S. Department of Commerce-Bureau of the Census. 1980 Census of Housing, General Housing Characteristics, Kansas.

Housing Availability

Douglas County had 23,817 occupied year-round housing units in 1980. Seventy-nine percent of these were in Lawrence. Lawrence had a relatively high portion of renter occupied units. Forty-eight percent of Lawrence's year round housing units are renter occupied. This reflects the domination of the county's economy by the University of Kansas. Students demand relatively more renter units than do other segments of the population.

Most of the occupied housing units in Franklin County were in the municipality of Ottawa in 1980. Fifty-two percent of the county's total occupied units were in Ottawa. Within Ottawa, 28 % of the year-round housing units were occupied by renters. Seventy-nine percent of the year-round units in non-municipal areas of the county were owner occupied.

Most of Osage County's occupied units were outside of the municipalities in 1980. There were 3,132 occupied units in non-municipal areas compared to 2,468 occupied units in municipalities. Two cities had a relatively high proportion of units that were renter occupied. Twenty-two percent of the year-round units in Osage City and Burlingame were renter occupied.

Shawnee County was similar to Douglas County in that one city dominated housing in the county in 1980. Topeka had 46,256 occupied units. Seventy-nine percent of the total occupied units in the county are located in Topeka.

Vacancy rates for Douglas, Franklin and Osage counties was 7 % in 1980. The vacancy rate for Shawnee county was 9 %. Non-

municipal areas of Douglas County had the lowest vacancy rate within the four county region in 1980. Four percent of non-municipal year-round housing in Douglas County was vacant. Non-municipal Shawnee County had the highest vacancy rate within the four county region in 1980 with an 11 percent vacancy rate.

2.7.9 Identification of planning agencies with jurisdiction within the area of site influence and past experience with population growth/economic development.

The following planning agencies can be considered to have past experience with economic and/or population growth.

Lawrence-Douglas County Planning
6th and Massachusetts
Lawrence, KS 66044
(913) 841-7722

Topeka-Shawnee County Metropolitan Planning Commission
820 SE Quincy
Topeka, KS 66603
(913) 234-2103

Osage County Planning Board
(913) 828-4812

Franklin City-County Planning Board
(913) 242-2979

The following cities have planning agencies.

Baldwin City (913) 594-6427

Carbondale (913) 564-7108

Eudora (913) 542-2095

Lyndon (913) 828-2296

Osage City (913) 528-3417

Silver Lake (913) 582-4280

Wellsville (913) 883-2296

The municipal planning agencies listed above may or may not have experience with economic and population growth. It will depend largely on the definition of "experience." A phone survey would be needed to decide whether the municipal agencies fit the chosen definition of experience.

There are no regional planning commissions within the four

county region.

The function of a planning agency is defined by the laws of the state. The planning commission creates a comprehensive plan for the development of the region for which it has jurisdiction. In the preparation of the plan, the commission will be concerned with past and present land use, population and building intensity, public facilities, transportation facilities, economic conditions, natural resources, and other features considered important to the comprehensive plan.

Sources:

The League of Kansas Municipalities, Directory of Kansas Public Officials, 1987-1988.

Kansas Department of Administration. K.S.A.

County clerks offices in Douglas, Franklin, Osage, and Shawnee counties.

2.7.10 Description of recreational and cultural facilities in the area.

Note--Sources for Tables 2.7.10.1 through 2.7.10.4 are listed after 2.7.10.4.

Table 2.7.10.1 Universities in the four county region.

The University of Kansas, Lawrence.
Baker University, Baldwin City.
Ottawa University, Ottawa.
Haskell Indian Junior College, Lawrence.
Washburn University, Topeka.

Table 2.7.10.2 Museums and historical sites in the four county region.

Dyche Museum of Natural History--The University of Kansas.
Spencer Museum of Art--The University of Kansas.
Snow Entomological Museum--The University of Kansas.
Kansas University Herbarium--The University of Kansas.
Spooner Anthropology Museum--The University of Kansas.
Topeka Zoo--Topeka.
State Capitol--Topeka.
Combat Air Museum--Forbes Field, Topeka.
Kansas Museum of History--Topeka.
Kansas Grass-Roots Art Museum--Vinland, Douglas County.
Santa Fe Railway Museum--Burlingame.
Old Jail and Courthouse Displays--Lyndon.
Mulvane Art Center--Washburn University.
Menninger Foundation Museum--Topeka. The history of mental health treatment.
Topeka Indian Center--Indian arts center.
Cedar Crest Governor's Mansion--Topeka.
Ward-Meade Historical Park and Botanical Gradens--Topeka.
Potwin Place--Topeka. Neighborhood of Victorian homes.
Pulliam Collection--Baldwin City. Memorobilia of publisher Eugene Pulliam.
Quayle Bible Collection--Baker University, Baldwin City.
Old Castle Museum--Baker University, Baldwin City. Historical museum.
Baldwin-Midland Tourist Railroad--Baldwin City.
Watkins Community Museum--Lawrence. Historical museum.
Eldridge Hotel--Lawrence. Historical building.

Old West Lawrence Historical District--Historic neighborhood.
Old Depot Museum--Ottawa. Historical museum.
Lecompton--Lecompton, Douglas County. Historical site.
Santa Fe Trail--A 52 mile interpretive trail following existing roadways along the old Santa Fe trail.
Downtown Ottawa--Historical buildings.

Table 2.7.10.3 Theatre, dance, and music resources in the four county region.

Topeka Civic Theatre	Showcase Dinner Theatre
Helen Hocker Theatre	Washburn Players
Vassar Playhouse Theatre	K.U. University Theatre
Lawrence Arts Center	Lawrence Community Theatre
K.U. Theatre for Young People	K.U. New Directions Series
K.U. Inge Theatre Series	Washburn Dancers-Institute for Performing Arts
Ballet Midwest	Topeka Ballet, Inc.
K.U. Concert Series	K.U. Dance Company
Tosca Opera Club	Topeka Symphony
Topeka Jazz Workshop	Lawrence Symphony
K.U. Concert and Chamber Music Series	K.U. Visiting Artist Series
K.U. Symphony Orchestra	Lawrence Chamber Players
K.U. Faculty Recital Series	K.U. Collegium Musicum
Lawrence Civic Choir	

Table 2.7.10.4 Outdoor recreation resources in the four county region.

Reinisch Rose Graden--Topeka.
Melvern State Park--Osage County. 1785 acres, 72852 visitors in 1986.
Pomona State Park--Osage County. 490 acres, 137435 visitors in 1986.
Clinton State Park--Douglas County. 1425 acres, 338223 visitors in 1986.
Shawnee State Fishing Lake
Osage State Fishing Lake
Douglas State Fishing Lake
Clinton Lake Federal Reservoir--Douglas County. Surface area of 7000 acres and 5 public access areas.
Pomona Lake Federal Reservoir--Osage County. Surface area of 4000 acres and 9 public access areas.
Melvern Lake Federal Reservoir--Osage County. Surface area of 6930 acres and 6 public access areas.
Lake Shawnee--400 acres of surface area.
Lone Star Lake--Douglas County.

Sources for tables 2.7.10.1 through 2.7.10.4:

Greater Ottawa Chamber of Commerce. Ottawa, Kansas, Franklin County, a Community With Pride. 1987.

Kansas Department of Economic Development-Travel and Tourism Division. Kansas Group Tour Guide to the "Land of Ah's". Editor, Ivan Baker. 1984.

Kansas Fish and Game Commission. Kansas Fishing Regulations, 1987.

Rand McNally Road Atlas: U.S., Canada, Mexico. 1986.

Santa Fe Trail Hitorical Society. Baldwin City, Kansas.

Topeka Convention and Visitors Bureau. Visitor's Guide to Topeka, Capital of Kansas.

Table 2.7.10.5 Total volumes held by public libraries by municipality.

city	volumes
Douglas County	
Baldwin City	9010
Eudora	7034
Lawrence	167613
County total	183657
Franklin County	
Ottawa	36913
Wellsville	8441
County total	45354
Osage County	
Burlingame	6296
Lyndon	5874
Osage City	15670
County total	27840

city	volumes
Shawnee County	
Silver Lake	5142
Topeka	301341
County total	306483
4 county total	563334

Source:

Kansas State Library. Kansas Public Library Statistics. 1986.

The four county region offers numerous and varied cultural and recreational activities. The presence, within the region, of the University of Kansas, the state government, and three Federal reservoirs provide the majority of the opportunities. With the university come fine arts and spectator sports. The presence of the state government provides museums and libraries devoted particularly to the region's history. The Federal reservoirs offer opportunities for camping, hiking, fishing, boating, and many other outdoor activities. These major cultural and recreational resources are not alone. There are many small museums and historical site, reflecting the regions diverse history. The cities provide parks and recreation opportunities such as public golf courses, swimming pools, and tennis courts. In addition to the University of Kansas, there are three universities and the Haskell Indian Junior College. These facilities provide recreation and cultural opportunities similar to those offered by the University of Kansas.

Many more cultural and recreational resources exist outside of the four county region but still near the proposed SSC site. Kansas State University in Manhattan is the second largest university in the state (the University of Kansas is the largest) with approximately 15000 students. Kansas City provides the cultural and recreational resources of a large city. Kansas City has history and art museums, performing arts, spectator sports, numerous outdoor recreation activities, and is home to the University of Missouri-Kansas City.

The proposed SSC site provides a wide variety and excellent access to cultural and recreational activities.

Appendix: Items 2.7.1 though 2.7.10 and firm locational decisions.

There are many factors influencing a firm's locational decision (or the locational decision of a major project such as the SSC).Such locational decisions are normally influenced by the structure of the regional economy and labor force as well as the existing and potential cpacity of local governments. This appendix will discuss the information that might be revealed to a firm through the data presented in items 2.7.1 through 2.7.10. The final section of the appendix will suggest references which deal with factors of firm locational decisions.

Items 2.7.1 through 2.7.3 deal with the structure of the regional economy and labor force. Items 2.7.4 through 2.7.10 deal with the existing capacity of the local governments and region, and with the ability of the local governments to expand their capacity. It would be most useful for a firm to have the information in items 2.7.1 through 2.7.10 presented such that comparisons between the region under consideration and other regions (e.g., state, national, and/or other regions) could be easily made. That would involve either presenting the comparisons or using data sources which are readily available (e.g. census data) to the firm under consideration.

The data presented in item 2.7.1 could suggest to a firm the existence of regional markets for their product, the existence of regional suppliers of inputs to production, the labor skills of the existing labor force, the general economic structure and size of the region, and how the industrial mix of the region has

developed.

The data presented in items 2.7.2 and 2.7.3 could suggest to a firm the supply and availability of labor in the region. Item 2.7.2 provides information on the region's general economic condition. However, employment, rather than unemployment, is probably a better measure of the economic condition of Kansas. Because Kansas has a "mobile" labor force, low unemployment rates do not necessarily imply scarce labor. Item 2.7.3 provides specific information on the type of labor available.

Items 2.7.4 through 2.7.6 suggest the capacities of the public sector, the ability of the public sector to expand, the susceptibility of the public sector to economic downturns, and the structure and size of the public sector. The levels of expenditures suggest the total public services provided. Expenditures, revenue, bonded indebtedness, and bond limits suggest the ability of the public sector to expand. The relative size and trends of bonded indebtedness suggest the susceptibility of the public sector to economic downturns. Comparisons between revenue, expenditures, and bonded indebtedness between different levels of local government suggest the relative importance of these different branches.

Item 2.7.7 provides details of the existing public services in a region. A firm may be interested in the type, quality, and capacity of all of a regions public services. In particular a firm may be interested in the services that reflect the regional "quality of life." Such services include education, recreation

and cultural resources, and police and fire protection.

The data presented in item 2.7.8 suggest to a firm the ability of a region to house the firm's employees. It also provides information on the type of housing available.

Item 2.7.9 provides a firm with information on the rules and regulations regarding location and expansion in a given region. Planning agencies may, through the region's comprehensive plan, have a great effect on a firm's plans.

Item 2.7.10 deals with the quality of life of a region in detail.

References: Firm Location Decision

Ali, Abbas, Robet Camp, and Douglas Kern. "Managers' Evaluation of the Western Kansas Business Climate." Kansas Business Review. Vol. 10, No. 3, Spring, 1987. pp. 11-14.

Bartik, Timothy. "Business Location Decisions in the United States: Estimates of the Effect of Unionization, Taxes, and Other Characteristics of States." Journal of Business and Economic Statistics. Vol. 3, January 1985. pp. 14-22.

Ellenis, Manny. "Six Major Trends Affecting Site Selection Decisions to the Year 2000." Dun's Business Month Focus. November, 1983. pp. 116-130.

Hack, George. "The Plant Location Decision Making Process." Industrial Development. September/October, 1984. pp. 31-33.

Institute for Public Policy and Business Research. Costs and Benefits of Business Tax Incentives in Kansas. Lawrence, KS: Institute for Public Policy and Business Research. Report No. 117. 1987.

Institute for Public Policy and Business Research. Kansas Economic Development Study Target Industry Analysis. Lawrence, KS: Institute for Public Policy and Business Research. 1986.

Kieschnick, Michael. Taxes and Growth: Business Incentives and Economic Development. Washington, DC: Council of State Planning Agencies. 1987.

Oslund, Pat. "Using Federal Tax Policy to Influence Firm Locations: Two Examples of the Impact on Kansas Communities." Kansas Business Review. Vol. 11, No. 1, Fall, 1987. pp. 2-16.

Plaut, Thomas and Joseph Pluta. "Business Climate, Taxes and Expenditures, and State Industrial Growth in the United States." Southern Economic Journal. 1983. pp. 99-119.

Schmenner, Roger W. Making Business Location Decisions. Engelwood Cliffs, NJ: Prentice-Hall, Inc. 1982.

Wasylenko, Michael. "The Location of Firms: The Role of Taxes and Fiscal Incentives." pp. 155-190 in Roy Bahl, ed., Urban Government Finance. Beverly Hills, CA: Sage Publications. 1981.

Two bibliographies of literature on firm location are;

Fisher, James, Dean Hanink, and James Wheeler. Industrial Location Analysis: A Bibliography, 1966-1979. Athens, GA: University of Georgia, Department of Geography. 1979.

Stevens, Benjamin and Carolyn Brakett. Industrial Location: A Review and Annotated Bibliography of Theoretical, Empirical, and Case Studies. Philadelphia, PA: Regional Science Research Institute. 1967.

Appendix: The concept of capacity.

This appendix will discuss the concept of capacity. In this report capacity has been dealt with in item 2.7.7. This appendix will include a brief discussion of capacity as a theoretical economic concept. It will also discuss the concepts of capacity used in this report.

In economic literature there are two concepts of capacity which are most frequently recognized. A "technical" or "engineering" capacity is the level of output achievable under full employment of all factors of production. Technical capacity ignores cost considerations. The "economic" concept of capacity includes cost considerations. Economic capacity is associated with the minimum point along an average total cost curve. Economic capacity occurs at a level which can be exceeded. But, because of cost considerations the producer prefers not to exceed the capacity level.

Within this report there were two distinct concepts of capacity which were applied. Building capacities of school buildings may be considered a technical capacity. The building capacities represent a measure of the maximum number of students that could be served by a school building. It ignores cost considerations. Capacity discussions of public services relied on an economic capacity. It was assumed that the average (either national or state) of a measure of the adequacy of a public service was a preferred level. The preferred level was then considered "capacity." This concept includes cost considerations.

References: capacity

The following references discuss theoretical definitions of capacity as well as practical measurement of capacity.

Klein, Lawrence. "Some Theoretical Issues in the Measurement of Capacity." Econometrica. Vol. 28, No. 2, April, 1960. pp. 272-286.

Klein, Lawrence and Virginia Long. "Capacity Utilization: Concepts, Measurement, and Recent Estimates." Brookings Papers on Economic Activity. No. 3, 1973. pp. 743-756.

Phan-Thuy, N. "Concepts and Measures of Capacity and Utilization: A Survey." Industrial Capacity and Employment Promotion. N. Phan-Thuy, R.R. Betancourt, G.C. Winston, and M. Kabaj. Gower. 1981.

U.S. Department of Commerce--Bureau of the Census. Current Industrial Reports, Survey of Plant Capactiy.

Appendix: The compilation of this report.

The documentation provided within the body of the report should be sufficient to identify the sources of each dataset. This appendix will not specifically deal with data sources. Rather, the procedures used to compile the datasets presented in the report are discussed. The procedure outlined is based on what was actually done and what, in hind-sight, might have been a more efficient method.

The initial problem faced by the compilers of this, or a similar, report is that of definition. The questions that are to be answered and the datasets to be collected may be specified in vague terms. It is necessary to define the terms to eliminate this vagueness. It is important to be as consistent as possible with definitions.

When the Institute for Public Policy and Business Research (IPPBR) began compilation of the datasets for items 2.7.1 through 2.7.10 some of the data had already been collected. The data which had been collected served to help define many of the questions asked by items 2.7.1 through 2.7.10. For example, data collected for ten-year time periods generally covered 1977 through 1986. So, whenever possible the years 1977 through 1986 where considered most appropriate for answering any items specifying a ten-year summary. The data which had already been collected covered the counties of Douglas, Franklin, Osage, and Shawnee and municipalities of greater than 1,000 people within these four counties. So, the four-county region was considered the "area of

site influence," and the cities of more than 1,000 people where considered "municipalities."

Some of the initial definitions where changed early into the project. This was done because appropriate data was lacking. For example, the historical labor force distribution was originally to have involved a ten-year period. However, appropriate data was available only for the 1980 census year. So, the definition of "historical" was revised to reflect the data availability. Housing availability data was to have originally involved an up-date of the 1980 census data. However, the information needed for such an up-date was considered un-reliable. So, housing availability was dealt with based solely on 1980 census information.

In general, the definitions of questions is determined by the availability of data sources. It may not be possible to adequately define all of the concepts in the questions until some data collection has occurred. However, it is still important to have established preliminary definitions as soon as possible. Although the preliminary definitions may need revision.

The initial compilation of the datasets for this report involved a check of two sources which cover a wide range of topics. Specifically, the Government Documents Library at the University of Kansas and the Kansas Statistical Abstract (published by IPPBR). From these two sources it was possible to find datasets, discover which datasets might be most difficult to collect, and find references to more specific published sources of

data.

The Kansas Statistical Abstract lead to several of the most important data sources used in compiling this report. The Kansas Government Journal was identified as a source of bonded indebtedness figures for cities, counties, school districts, and special taxing districts. The abstract also served as a starting point for contacting the Kansas State Fire Marshal Department.

After the initial search for published data sources, several state and local government departments were contacted with requests for specific information. The most successful approach to government departments was to request a specific dataset (even if it turned out that such a dataset was not available) and explain the question asked by the report's guidelines. Often, when the government departments had been made aware of the specific question being asked, they were able to suggest specific datasets and data sources. Throughout the compilation of this report cooperation from state and local government was very good. Much of this cooperation may have been due to the publicity about the SSC project and Kansas' bid for it.

After the initial searches for datasets and data sources, estimates were made as to how much time would be needed to compile the remaining datasets. Once these estimates had been made the final compilation of datasets began.

During the final compilation of data, attempts were made to follow the following guidelines:

1. Use secondary (published or unpublished) data sources as much

as possible. In particular rely on census information.

2. When requesting data from non-published sources (usually state or local government) give as much specific guidance as possible. This might involve writing a letter explaining exactly what data was requested and/or offering help in compilation of the data.

3. Avoid modelling. Properly done modelling involves time consuming research, model building, testing, re-specification of the model, and application. This process was considered too time consuming for the tasks involved in this report.

4. Carefully document all sources and transformations of data.

The process which has been discussed in this appendix can be described by the following steps. First, define the questions. Second, conduct an initial investigation of the data sources. Third, re-evaluate the questions and plan how much time will be needed for data compilation. Fourth, compile the final datasets. A final step is the presentation of the data. Presentation can involve interpretation of data as well as decisions about how to display the data. Presentation will not be discussed in this appendix.

Appendix: Estimations of the time to compile datasets presented in this report.

This appendix provides subjective estimates of the time required to compile the datasets presented in this report. Each item addressed in the report (items 2.7.1 through 2.7.10) is discussed below. The estimates make several important assumptions. It is assumed that the source of the data is known or easily and quickly found. It is assumed that one person is involved in the compilation (although they may be helped by librarians, government officials, etc.). It is assumed that there is cooperation by and access to libraries, librarians, and government officials. The estimates do not include time involved in the interpretation of the data or in the determination of adequacy and capacity. The estimates do include the "down-time" that elapses between a request for data from a source and the arrival of the data.

2.7.1 It may be possible to compile employment by industry data in one day.

2.7.2 It may be possible to compile unemployment rate data in one day.

2.7.3 It may be possible to compile labor force data in one day.

2.7.4 Bonded indebtedness data may be compiled in one day. Revenue and expenditures data must be collected from county clerks. Because clerks were contacted before IPPBR began work on this report it is not known how long it took them to reply.

Revenue and expenditures data were provided in a disaggregated format. Approximately 2 days may be involved in the aggregation of the data for four counties once complete data is in-hand.

2.7.5 School district data were provided by the Kansas Department of Education in the format required by the report. Approximately one week elapsed between request for and receipt of the information. However, some of the requested data was inappropriate. Specifically, estimates of revenue were not considered appropriate. School district revenues for a ten-year period are not included in this report because of the lack of data. The Kansas Department of Education said that revenue data is possible to compile but is time and resource consuming. With the announcement that the state had not made the best qualified list, it was decided not to compile revenue data.

Special taxing district revenue and expenditures can be expected to take at least one month to compile. The data is not kept in an aggregated form. Collection involves going through the budgets for each special district. Shawnee County keeps these records on computer and could produce the requested datasets in approximately one week. However, the other counties can be expected to take much more time to compile revenue and expenditures for special taxing districts.

Bonded indebtedness figures for school districts and special taxing districts may take one day to compile.

2.7.6 Compilation of these datasets may be considered comparable to compilation of county level revenue, expenditures,

and bonded indebtedness. However, the larger number of municipalities may extend the amount of time involved in compilation.

2.7.7 The Kansas Department of Education provided data on square-footage and capacity of facilities before IPPBR began work on this report. It is not known how long their compilation took. Datasets used to determine capacity and adequacy may be collected in less than two days. Interpretation of the adequacy and capacity data will not be discussed in this appendix.

Datasets for police departments, with the exception of square-footage of facilities, may be compiled in less than two days. Collection of square-footage of facility data may require a survey.

Datasets for fire departments may be compiled in approximately one week. The data used is not published but is readily available from the Kansas State Fire Marshal Department. Collection of square-footage of facility data may require a survey.

Collection of much of the data on social services may require a survey. The data presented in this report may involve approximately one week to collect.

2.7.8 It may be possible to compile housing availability data in one day.

2.7.9 It may be possible to compile planning agency data in one day.

2.7.10 Compilation of data may take two days. There is no

single source which provides sufficient information. A more detailed description of the resources may involve much more time.

While compiling this report there were two major variables which affected the time taken to compile a given dataset. Both of these variables are not under the control of the compiler of the data. Data requests from non-published sources were answered as quickly as two days and as slowly as more than one month. Data requested from non-published sources was often incomplete or inappropriate. The estimates throughout this appendix have assumed quick responses to such requests.

Bibliography

Federal Register. Vol. 52, No. 238. pg. 47,057. Dec. 11, 1987.

Greater Ottawa Chamber of Commerce. Ottawa, Kansas, Franklin County, A Community With Pride and Potential. 1987.

Institute for Public Policy and Business Research. Kansas Statistical Abstract. Institute for Public Policy and Business Research--The University of Kansas. (annual: 1976 through 1987).

International City Management Association. Small Cities and Counties: A Guide to Managing Services. Ed. James Banovertz. 1984.

Jackson, Gregg B. "Police, Fire, and Refuse Collection and Disposal Departments: Personnel, Compensation, and Expenditures." The Municipal Yearbook, 1986. International City Management Association. 1986.

Kansas Bureau of Investigation--Statistical Analysis Center. Crime in Kansas, 1985. July, 1986.

Kansas Bureau of Investigation--Statistical Analysis Center. Expenditure and Employment, 1985. November, 1986.

Kansas Department of Administration. K.S.A. Volume 1, 10-1113, 12-704, 10-308, 10-309. 1982.

Kansas Department of Administration. K.S.A. Volume 1a, 14-101, 15-101. 1982.

Kansas Department of Administration. K.S.A. Cumulative Supplement. Volume 1, 10-308. 1986.

Kansas Department of Economic Development. Kansas-Community Profile. 1987. (Topeka, Ottawa, Lawrence).
Kansas Department of Economic Development. Kansas-Community Profile. 1985. (Baldwin City, Burlingame, Carbondale, Eudora, Lyndon, Osage City, Rossville, Silver Lake, Wellsville).

Kansas Department of Economic Development--Travel and Tourism Division. Kansas Group Tour Guide to the "Land of Ah's". Editor Ivan Baker. 1984.

Kansas Department of Health and Environment. List of Providers by Type. November 1, 1987.

Kansas Fish and Game Commission. Kansas Fishing Regulations 1987.

"Kansas Tax Rate and Fiscal Data Book." Kansas Government Journal. January 1986. The League of Kansas Municipalities.

Kansas State Department of Education. Headcount Enrollment Kansas Public Schools, 1985-86.

Kansas State Department of Education. High School Graduates, 1986.

Kansas State Department of Education. Secondary School Drop Outs, 1985-86.

Kansas State Library. Kansas Public Library Statistics. 1986.

Kansas Uniform Fire Incident Reporting System by County. Kansas State Fire Marshal Department. (unpublished computer file hard-copy) 1987.

The League of Kansas Municipalities. Directory of Kansas Public Official, 1987-88. 1987.

McDowell, Lena. Estimates of Local Public School System Finances, 1980-81. National Center for Education Statistics.
Munzer, Kent. Annual Directory of Licensed Programs. Memorandum--Kansas Department of Social and Rehabilitation Services. April 7, 1982.

Munzer, Kent. Social Service Block Grant, Preliminary Plan for FY 1988. Memorandum--Kansas Department of Social and Rehabilitation Services. 1987.

Munzer, Kent. SRS Registered and Licensed Homes, H and E Licensed Homes. Memorandum--Kansas Department of Social and Rehabilitation Services. Oct. 8, 1987.

Newcomer, Kathryn, Deborah Trent, and Natalie Flares-Kelley. "Municipal Debt and the Impact of Sound Fiscal Decision Making." The Municipal Yearbook, 1983. International City Management Association. pp. 218-228. 1983.

Oslund, Pat. "Using Federal Tax Policy to Influence Firm Locations: Two Examples of the Impact on Kansas Communities." Kansas Business Review. Vol. 11, No. 1. (Fall 1987). pp. 2-16.

Rand McNally Road Atlas: U.S., Canada, Mexico. 1986.

Santa Fe Trail Historical Society. Baldwin City, Kansas.

Topeka Convention and Visitors Bureau. Visitors Guide to Topeka, Capital of Kansas.

U.S. Department of Commerce--Bureau of the Census. 1980 Census of Housing, General Housing Characteristics, Kansas.

U.S. Department of Commerce--Bureau of the Census. 1982 Census of Governments, Compendium of Public Employment, Government Employment. Vol. 3, No. 2. Issued Nov. 1984.

U.S. Department of Commerce--Bureau of the Census. Census of Population, 1980, General Social and Economic Characteristics, Kansas.
U.S. Department of Commerce--Bureau of the Census. County Business Pattern, Kansas, 1982.

U.S. Department of Commerce--Bureau of Economic Analysis. Business Conditions Digest.

U.S. Department of Education. The Condition of Education, 1987 Edition. Editor Joyce D. Stern. Center for Education Statistics. 1987.

U.S. Department of Education. Digest of Education Statistics, 1987. Center for Education Statistics. 1987.

U.S. Department of Education. Public Elementary and Secondary Education in the United States 1982-83: A Statistical Compendium. Center for Education Statistics. 1987.

U.S. Department of Justice--Bureau of Justice Statistics. Justice Expenditure and Employment Extracts: 1980 and 1981. March, 1985.

U.S. Department of Justice--Federal Bureau of Investigation. Crime in the United States. July, 1986.

COUNTY CLERKS OFFICES CONTACTED (and clerk)

Douglas County	Patty Jaines
DG Budget Office	Darlene Hill
Franklin County	Laura Sutton
Osage County	Virginia Kersten
Shawnee County	Patsy McDonald

CITY CLERKS OFFICES CONTACTED (and person contacted)

Baldwin City	Judith Chilton
Carbondale	Mary Buchholz
Eudora	Marjorie Granniger
Lawrence	Julia Karr
Lyndon	city of Lyndon
Osage City	Nina Gragg
Ottawa	Orlin Smith
Rossville	Peggy Baird
Silver Lake	Darlene Stradler
Topeka	Donna Mathew
Burlingame	Kenneth Rhoads
Wellsville	Donna Reed

OTHERS CONTACTED

Pat Clifford	Insurance Services Office, Topeka. (913) 273-5742
Karl McNorton	Kansas State Fire Marshal Department