SOME ECONOMIC VARIABLES AND THE EXPANSION OF RETAIL FACILITIES

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

February 1987

No. 118

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EXECUTIVE SUMMARY

This report examines a few of the economic variables that should be considered when assessing the advantages and disadvantages of a major retail mall opening. No attempt is made to assess the economic impact of such a mall in Lawrence, but rather the attempt is to provide information so that better decisions may be made.

The report contains three parts. The first section examines what happened to retail employment after a mall opening. Retail employment in 28 cities was examined over a period of eleven years. The average growth compared to the state was computed before and after a mall began operations. On the average it was found that after a mall opened a town's retail employment did grow somewhat faster than that of the state. The second section deals with retail sales in college towns. Here we found that sales of shopper goods in Lawrence rank very low in comparison to other college towns. The last section reviews academic and applied literature. Trends in shopping center development were examined. It was found that developers will be concentrating more on small and medium markets or revitalization of existing shopping areas. Another part of the literature review deals with estimating economic impacts and retail sales. A main conclusion of this literature is that it is a mistake to focus solely on economic impact: environmental and social impact should be considered equally as important.

Finally , it should be noted that this report derives no conclusions regarding Lawrence. It simply describes some effects of mall development in similar communities and examines some variables that may be important in retail expansion.

RETAIL EMPLOYMENT IN SMALL CITIES WITH MALLS

This section examines what has happened to retail employment in small cities when a major regional shopping mall has opened.

The reasons for looking at retail employment are directness and measurability. Among possible indicators, retail employment adjusts most rapidly to the phenomenon of an opening of a mall. We may also want to know more specifically what happens to personal income or property values in a city, but is much more complex task to find a mall's effect on those variables. These indicators would also be affected by events such as the opening or closing of a new manufacturing facility or by demographic patterns. Over time, the same kinds of events would also affect retail employment, but a major event such as an establishment of a mall directly affects retail employment. We assume that all other events that affect retail employment indirectly in an area could happen in other locations.

Several scenarios for what happens to retail employment might be imagined. First, we assume that when a mall opens more retail employees would have to be hired. If we believe that the mall simply redistributes sales in an area, then retail employment will drop to previous levels after an initial shake-out where businesses that are no longer profitable close. A second scenario is that a mall captures increased total retail sales so that existing businesses and all the new businesses would continue at the high levels of employment that started when a mall began operations.

A period of five years is probably long enough to measure whether either of these scenarios or some point on this continuum has occurred. In general, in most areas, retail employment is increasing over time. The question, therefore, is whether or not retail employment grew at a faster

rate than would ordinarily be expected (as measured by growth in the state at the same time) after a mall has opened. Because malls have opened in communities at differing times, some in times of rapid employment growth and rapid expansion, others in times of slow growth, we examined local retail employment as a percent of retail employment in the state. If we simply look at retail employment in a local area over a period of five years before the mall and a period of five years after the mall, we cannot compare what happened in 1974 to what happened in 1979 because of differing economic conditions. But if we look at the performance relative to the rest of the state we can say whether a city is performing better or worse than the state over a period of time.

The estimator that we will use to look at this is:

$$M = RE_A - RE_B$$

where RE_A is average county retail employment as a percent of the state after mall is built and RE_B is average county retail employment as a percent of the state before a mall is built. In essence M is simply the difference in a county's retail employment as a percent of the state before and after a mall is built. A positive number indicates that an area grew relatively faster than the rest of the state after a mall was built. We looked at a time period from five years before the mall was built until five years after, a total of eleven years.

Data

The Bureau of Economic Analysis has published county-level data on retail employment since 1967 for all counties in the United States. The most current year available is 1984. Therefore, to be considered in our study the

TABLE 1
Cities Contacted for Study

CITY	COUNTY	STATE	MALL	YR. OF MALL	COMMENTS
Fayetteville	Washington	AR	yes	1972	
Fort Smith		AR	yes	1969	
Hot Springs		AR	yes		
Pine Bluff		AR	yes	1986	
Texarkana		AR	yes		
Boulder		CO	yes	1963	
Fort Collins	Larimer	CO	yes	1973	
Longmont		CO	yes	1985	
Ames		IA	yes	1971	
Bettendorf		IA	yes	1985	Enclosed in 1985.
Burlington	Des Moines	IA	yes	1977	
Cedar Falls		IA	yes	1970	
Clinton		IA	no		
Dubuque		IA	yes	1970	
Fort Dodge	Webster	IA	yes	1979	Built '67.Enclosed'79
Iowa City		IA	yes	1983	
Marshalltown	Marshall	IA	yes	1972	
Mason City		IA	yes	1984	
Muscatine	Muscatine	IA	yes	1971	
Ottumwa		IA	no		
Sioux City		IA	yes	1980	
Waterloo		IA	yes	1969	
Champaign	Champaign	IL	yes	1976	
Danville	Vermilion	IL	yes	1975	
Decatur	Macon	IL	yes	1978	
Galesburg	Knox	IL	yes	1975	
LaSalle	LaSalle	IL	yes	1974	
Pekin	Tazewell	IL	yes	1974	
Quincy	Adams	IL	yes	1978	
Bedford	Lawrence	IN	yes	1979	
Columbus	Bartholomew	IN	yes	1974	
Coffeyville	Montgomery	KS	no		
Dodge City	Ford	KS	yes	1971	
Emporia	Lyon	KS	yes	1972	
Garden City	Finney	KS	yes	1984	
Great Bend	Barton	KS	no		
Hays	Ellis	KS	yes	1972	
Hutchinson	Reno	KS	yes	1985	
Junction City	Geary	KS	no		
Lawrence	Douglas	KS	no		
Leavenworth	Leavenworth	KS	yes	1967	
Manhattan	Riley	KS	yes	1987	
Newton	Harvey	KS	no		
Olathe	Johnson	KS	no		
Pittsburg	Crawford	KS	yes	1969	
Salina	Saline	KS	yes	1987	

CITY	COUNTY	STATE	MALL	YR. OF MALL	COMMENTS
Morgan City	St. Mary	LA	yes	1976	--
Arnold		MO	no		
Cape Girardeau		MO	yes	1982	
Columbia		MO	yes	1986	Two other small malls.
Ferguson-Berkley		MO	no		
Jefferson City	Cole	MO	yes	1978	
Joplin	Jasper	MO	yes	1972	
St. Joseph		MO	yes	1965	
Sedalia		MO	no		
Bloomington		MN	no		
Burnsville	Dakota	MN	yes	1976	
Mankato	Nicollet	MN	yes	1978/1968	Two malls.
Moorhead	Clay	MN	yes	1965/1973	Two malls.
Rochester		MN	yes	1969/1985	Four malls.
St. Cloud		MN	yes	1966/1984	Two malls.
Fremont		NE	yes	1967	
Grand Island		NE	yes	1973	
Hastings		NE	yes	1969	
Kearney		NE	yes	1984	
North Platte	Lincoln	NE	yes	1972	
Scotts Bluff		NE	yes	1986	
Bismarck		ND	yes	1970	
Fargo	Cass	ND	yes	1973	
Grand Forks	Grand Forks	ND	yes	1978	
Minot		ND	yes	1980	
Bartlesville		OK	yes	1984	
Edmond		OK	no		
Norman		OK	yes	1976	
Ponca City		OK	no		
Stillwater		OK	no		
Aberdeen		SD	yes	1961	
Rapid City	Pennington	SD	yes	1978	
Cookeville	Putnam	TN	yes	1977	
Texarkana	Bowie	TX	yes	1979	
Charleston		WV	yes	1983	
Wausau		WI	yes	1983	

mall had to be built in the time period from 1973 until 1980. Cities in the midwestern region with population from approximately 30,000 to 90,000 were identified. The list of cities identified is included in Table 1. The city was contacted by telephone to determine whether it contained a major regional enclosed mall and the date that the mall began operations. From those contacted, twenty-eight fit the criteria. Table 2 presents M for all counties with the standard error of the estimate and a confidence interval form at 90 percent level. The average increase for all counties was .17 percent. Chart 1 presents the same information graphically. Chart 2 shows the number of observations which grew substantially faster, slower, or at the same rate as the state after a mall was built. From Chart 2 we see that one county grew significantly slower that the state after a mall was built. Twelve counties grew at approximately the same rate as the state, and the remaining fifteen grew faster than the state in retail employment after a mall was built.

Example

To interpret the results we can use the average estimate from Table 2 of M = .165 percent. We must know or estimate average retail employment in a state over a specified period of five years.

Let S denote the average state retail employment. Then M times S will tell us the additional amount of a state's retail employment over a five year period that a county gained after a mall was built.

If S = 175,000, then M times S = 298. This means that county retail employment would increase by 298 after a mall is built in addition to the increase in retail employment due to other events such as growth.

Table 3 shows the expected change in jobs for the cities in the survey

in column 2. Column 4 shows the difference between the actual and the expected change is equivalent to multiplying M times S in the example.

Conclusion

The results from Table 2 are mixed. Without examining underlying economies in each area it would not be possible to predict the exact effect of a mall because other factors also play a major role in retail employment. On the average, however, local retail employment after the opening of a mall has generally grown faster than retail employment in the state with some communities doing quite a bit better. This result should not be interpreted to mean that a mall causes an increase in local retail employment relative to the state. An alternative explanation could be that mall developers are good at identifying counties that have growing retail employment.

Chart One

CONFIDENCE INTERVAL OF ESTIMATES

t(.90;10)=1.812

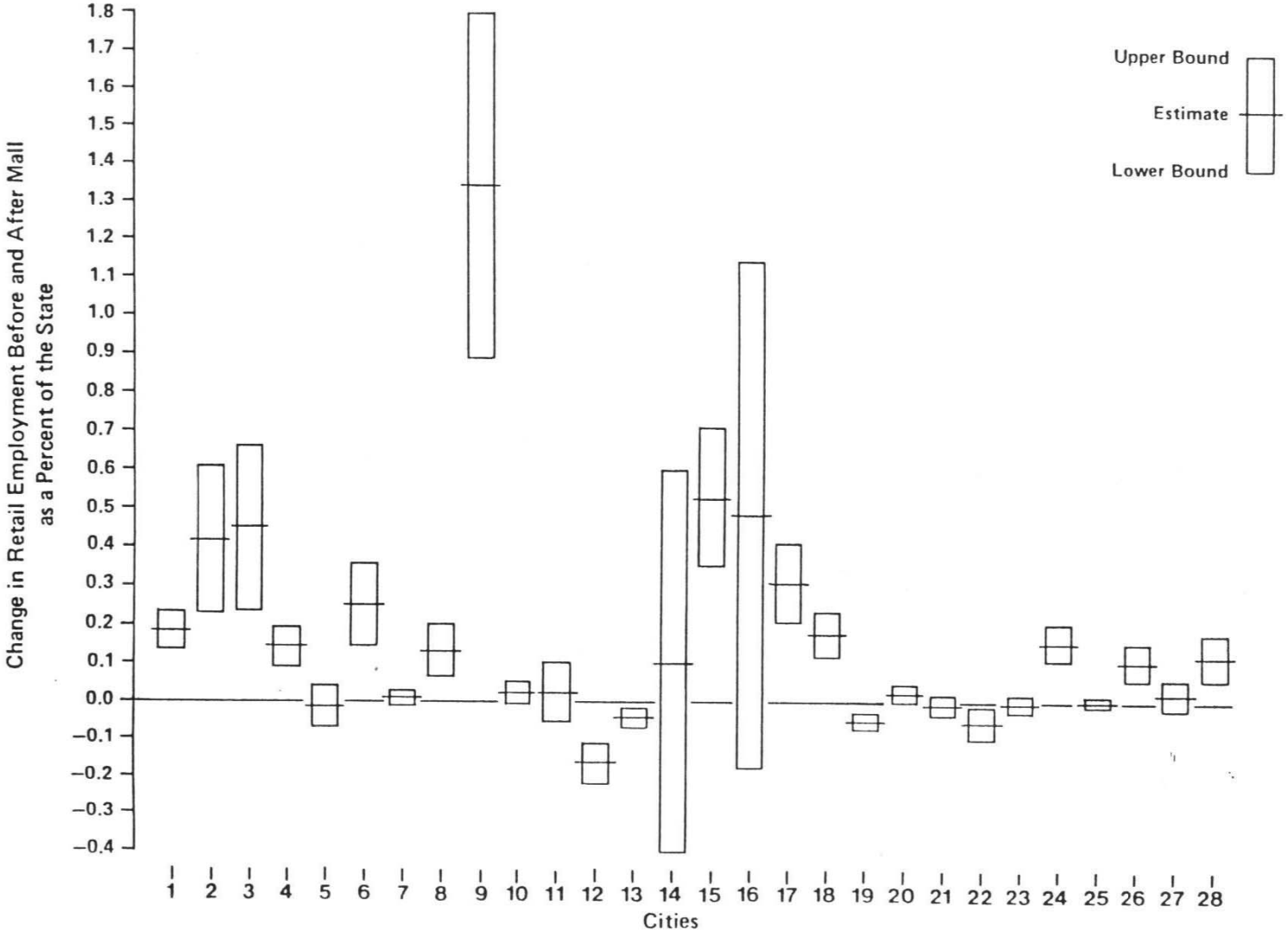

Chart Two

FREQUENCY DISTRIBUTION OF GROWTH IN RETAIL EMPLOYMENT
BEFORE AND AFTER MALL

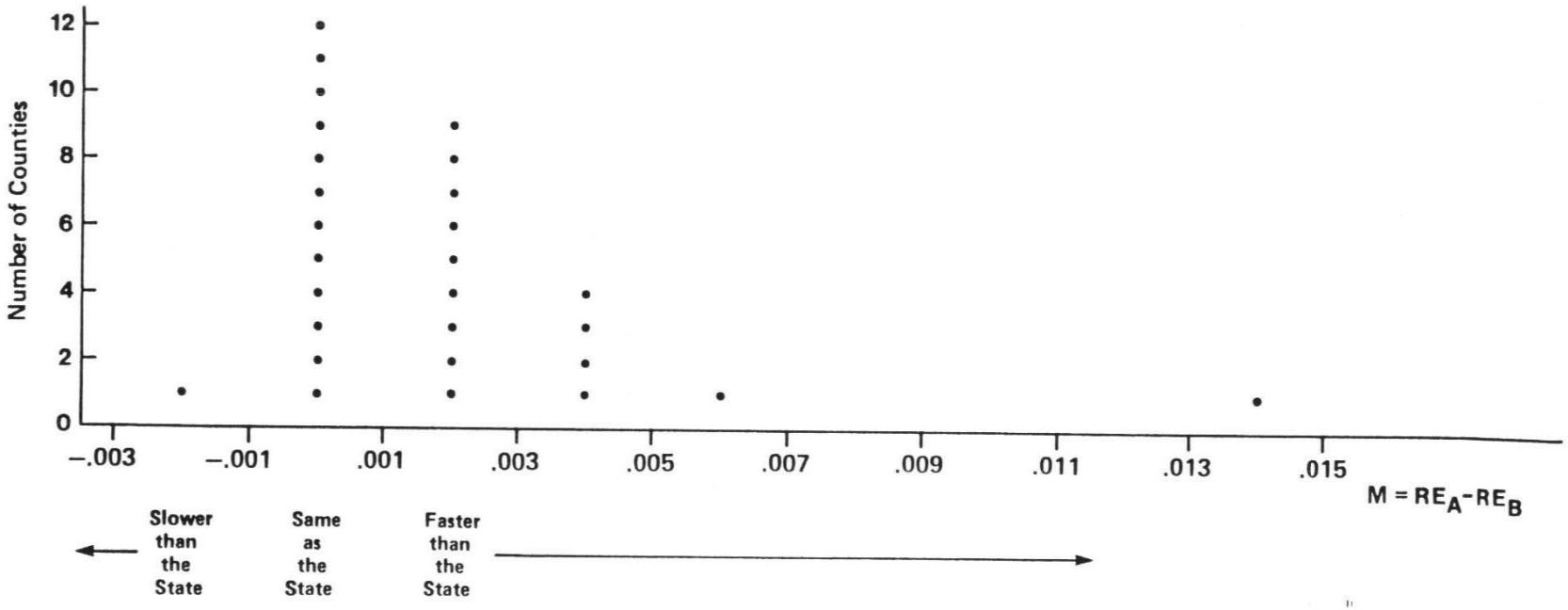

TABLE 2

Interval Estimate of Change in Retail Employment After a Mall Was Built Measured as a Percent of the State

City & State	Mall Variable	Confidence Interval at 90% t(.90;10)=1.812 Lower	Upper
Joplin, MO	0.178	0.130	0.226
Grand Island, NE	0.422	0.231	0.612
Ames, IA	0.449	0.231	0.667
Sioux City, IA	0.140	0.088	0.192
Moorhead, MN	-0.016	-0.073	0.036
North Platte, NE	0.255	0.144	0.372
Muscatine, IA	0.005	-0.015	0.024
Marshalltown, IA	0.130	0.065	0.196
Burnsville, MN	1.338	0.882	1.795
Mankato, MN	0.016	-0.012	0.044
Burlington, IA	-0.023	-0.059	0.061
Fort Dodge, IA	-0.172	-0.224	-0.120
Texarkana, TX	-0.042	-0.066	-0.017
Grand Forks, ND	0.104	-0.395	0.603
Fayetteville, AR	0.528	0.353	0.704
Rapid City, SD	0.481	-0.185	1.146
Jefferson City, MO	0.313	0.211	0.415
Champaign, IL	0.177	0.118	0.237
Danville, IL	-0.051	-0.070	-0.031
LaSalle, IL	0.022	.000	0.044
Quincy, IL	-0.010	-0.028	0.007
Decatur, IL	-0.061	-0.102	-0.020
Galesburg, IL	-0.006	-0.022	0.009
Pekin, IL	0.164	0.106	0.222
Bedford, IN	0.004	-0.004	0.011
Colombus, IN	0.106	0.057	0.155
Cookeville, TN	0.016	-0.024	0.056
Morgan City, LA	0.120	0.059	0.180
AVERAGE	0.165	0.050	0.281

TABLE 3

Change in Retail Employment Over a 5-Year Period
After a Mall was Built

(1) City & State	(2) Expected Change in Jobs at State Growth Rate	(3) Actual Change in Jobs Relative to State After a Mall	(4) Difference Between Actual & Expected	(5) Difference as a Percent of County's Employment
Joplin, MO	685	958	273	3.89
Grand Island, NE	268	470	202	4.42
Ames, IA	814	1541	727	13.24
Sioux City, IA	-81	1	82	3.63
Moorhead, MN	549	736	187	5.29
North Platte, NE	213	481	268	9.38
Muscatine, IA	313	160	-153	(6.34)
Marshalltown, IA	460	378	- 82	(2.56)
Burnsville, MN	3569	7369	3800	21.74
Mankato, MN	258	301	43	2.97
Burlington, IA	730	424	-306	(6.98)
Fort Dodge, IA	-122	-251	-129	(3.00)
Texarkana, TX	1157	608	-549	(7.52)
Grand Forks, ND	1462	1088	-374	(5.51)
Fayetteville, AR	1030	1474	444	5.72
Rapid City, SD	1686	1030	-656	(7.98)
Jefferson City, MO	779	1384	605	10.56
Champaign, IL	-164	1418	1582	10.32
Danville, IL	308	- 53	-361	(5.51)
LaSalle, IL	777	1035	258	2.58
Quincy, IL	-329	57	386	6.37
Decatur, IL	-232	-1408	-1176	(12.18)
Galesburg, IL	362	100	- 262	(5.65)
Pekin, IL	-302	1707	2009	22.73
Bedford, IN	-211	- 13	198	7.91
Colombus, IN	-275	1152	1427	25.22
Cookeville, TN	601	584	- 17	0.48
Morgan City, LA	410	1095	685	13.14
AVERAGE	526	851	325	3.80

RETAIL SALES AND EMPLOYMENT IN COLLEGE TOWNS

In Section One we examined midwestern cities before and after malls. In this section Lawrence is compared to other college towns in several different retail areas: (1) number of retail establishments, (2) number of retail employees, (3) retail payroll, and (4) shopper goods sales. Rather than comparing Lawrence to the United States in general or even to Kansas, some additional insight may be drawn by examining only college towns, whose retail economies may be different from the general economy.

Shopper goods sales are defined as sales in the following types of stores: general merchandise (SIC 53), apparel and accessory stores (SIC 56), furniture, home furnishings, and equipment stores (SIC 57), and miscellaneous shopping goods stores (SIC 594). Included in the miscellaneous category are jewelry, gift, novelty, souvenir, sewing, needlework, sporting goods, book, toy, camera, and luggage shops.

Table 4 lists the college towns for which data was collected. Enrollment data is for academic year 1981-82. University towns were chosen primarily to reflect similar proportions of students to the area's population as in Lawrence. Generally 20 to 50 percent of an areas population are students.

Shopper Goods Sales

Table 5 presents information about shopper goods sales and per capita income for the selected areas. Lawrence has the lowest amount of shopper goods sales of any area by a large margin. Appendix C shows details of this information by SIC code for the four shopper goods categories. Along with this, Lawrence grew more slowly from 1972 to 1982 and particularly from 1977

TABLE 4

UNIVERSITY TOWNS INCLUDED IN SECTION THREE: SELECTED INFORMATION

TOWN	STATE	1980 SMSA POPULATION	MALL	YEAR OF MALL	1981-82 UNIVERSITY ENROLLMENT % OF CITY	% OF SMSA/COUNTY
Bloomington *added 20-30 stores, now total of 100+	IN	98,785	College Mall	1965 (1981)*	62.85	33.11
Champaign	IL	168,392	Lincoln Square Marketplace Shopping Ctr.† County Fair Shopping Ctr.	1964 1976 1978	37.10	20.73
College Station	TX	93,588	Manor East Mall Post Oak Mall†	1965, 1966 1982	96.93	38.60
Columbia	MO	100,376	Biscayne Mall Columbia Mall† Parkay Plaza	1972 1985 1964	39.90	24.67
Denton**	TX	48,063	Gold Triangle Mall	1980	39.08	13.12
Iowa City	IA	81,717	Sycamore Mall Old Capitol Mall†	1969 1981	57.31	35.42
Lawrence	KS	67,640	Southern Hills	1981	46.27	36.07
Manhattan**	KS	32,644	(Manhattan Town Center on the way)		59.73	59.73
Norman**	OK	68,020	Sooner Fashion Mall	1976	32.05	16.37
Raleigh***	NC	150,255	Southhills Outlet Mall Crab Tree Valley Mall† Tower Shopping Center Northhills Mall & Plaza Cary Village Mall Marketplace	1972 1972 1977 1977 1979 1982	41.33	15.09

**County Population
***City Population
†Largest

to 1982 than any of the towns or their respective states. From 1977 to 1982 sales of shopper goods in Lawrence grew by 20 percemt. Other towns, growth rates ranged from 37 percent in Iowa City, Iowa to 158 percent in Norman, Oklahoma.

Sometimes low shopper goods sales in an area reflect low per capita income. Lawrence does have low per capita income compared to the U.S. average, but other college towns with even lower per capita income have substantially more shopper goods sales. One might conclude that Lawrence consumers do not buy as much of these goods as other consumers or that they are buying these items elsewhere.

TABLE 5

1982 Shopper Goods Sales and 1983 Per Capita Income
for Selected College Towns

County or SMSA	Shopper Goods Sales Per Capita	State	Shopper Goods Sales Per Capita	Index to State
Denton County	$3,024	TX	$2,878	1.05
Riley County	$2,245	KS	$1,072	2.09
Cleveland County	$2,210	OK	$1,321	1.67
College Station	$1,753	TX	$2,878	0.61
Raleigh	$1,286	NC	$ 950	1.35
Champaign	$1,252	IL	$1,120	1.12
Columbia	$1,230	MO	$1,137	1.08
Iowa City	$1,204	IA	$ 937	1.28
Bloomington	$1,183	IN	$ 934	1.27
Lawrence	$ 868	KS	$1,072	0.81
Average	$1,626		$1,430	

TABLE 5 (continued)

1982 Shopper Goods Sales and 1983 Per Capita Income
for Selected College Towns

County or SMSA	Income Per Capita	State	Income Per Capita	Index to State
Denton County	$11,003	TX	$9,443	1.17
Riley County	$ 7,590	KS	$9,460	0.80
Cleveland County	$10,092	OK	$9,092	1.11
College Station	$ 7,994	TX	$9,443	0.85
Raleigh	$ 8,967	NC	$8,189	1.09
Champaign	$ 9,536	IL	$10,299	.93
Columbia	$ 9,163	MO	$9,009	1.02
Iowa City	$10,249	IA	$9,068	1.13
Bloomington	$ 8,372	IN	$9,076	.92
Lawrence	$ 8,313	KS	$9,460	.88
Average	$ 9,128		$9,254	

Sources: 1982 Census of Retail Trade and Current Population Report. Local Population Estimates Series. 1984 Population and 1983 Per Capita Income. P. 26, U.S. Bureau of the Census.

Central Business District Sales

The Census of Retail Trade also reports shopper goods sales by location. CBD and MRC are abbreviations for Central Business District and Major Retail Center respectively. An MRC is defined by the Census Bureau as

> a concentration of at least 25 retail stores....outside a CDB. At least one of the 25 stores must be a general merchandise store with a minimum of 100,000 square feet....MRC's include planned...shopping centers as well as unplanned, such as older "string streets"....and combinations of planned and unplanned centers.

Table 6 summarizes the information about CBD's and MRC's. Unfortunately some information is withheld, and sales information for most MRC's is not available. Lawrence has the highest percentage of Central Business District shopper goods compared to the other college towns.

TABLE 6
Shopper Goods Sales by Location

SMSA or County	Area	Shopper Goods Sales	Percent of Sales of SMSA	CBD% of Sales of City
Champaign, IL	Total SMSA	210,858		
	Champaign	135,001	64.02%	
	CBD	20,964	9.94%	15.53%
	Urbana	29,789	14.13%	
	CBD	13,451	6.38%	45.15%
	4 MRC's	D		
Bloomington, IN	Total SMSA	116,896		
	Bloomington	D		
	CBD	16,010	13.70%	
	2 MRC's	D		
Iowa City, IA	Total SMSA	98,388		
	Iowa City	83,055	84.42%	
	CBD	31,721	32.24%	38.19%
	1 MRC	21,868	22.23%	26.33%
Columbia, MO	Total SMSA	122,469		
	Columbia	120,529	98.42%	
	CBD	33,951	27.72%	28.17%
	No MRC			
Raleigh, NC	Total SMSA	980,053		
	Raleigh	339,928	34.68%	
	CBD	25,589	2.61%	7.53%
	Durham	D		
	CBD	11,064	1.13%	
	8 MRC's	D		
Bryan, TX	Total SMSA	164,104		
	Bryan	D		
	CBD	9,117	5.56%	
	No MRC			
Lawrence, KS	Total SMSA	58,704		
	Lawrence	58,502	99.66%	
	CBD	23,689	40.35%	40.49%
	No MRC			
Topeka, KS	Total SMSA	203,885		
	Topeka	D		
	CBD	45,888	22.51%	
	2 MCR's	D		
Wichita, KS	Total SMSA	611,325		
	Wichita	569,097	93.09%	
	CBD	37,972	6.21%	6.67%
	5 MRC's	261,942	42.85%	46.03%

D - Information withheld due to confidentiality.

Source: 1982 Census of Retail Trade

Retail Business Patterns

Tables 7 and 8 summarize information about retail establishments, employees, and payrolls included in Appendix E. Table 7 shows that 29 percent of all business establishments employ approximately 33 percent of the private sector workforce and pay about 21 percent of the private sector payroll.

TABLE 7

Retail Sector as a Percent of All Sectors

Retail Percent of Total	Range for College Towns	Lawrence	Range for States
Establishments	25% to 32%	29%	25-28%
Employees	27 to 38	33	19-23
Payroll	16 to 26	21	10-13

Source: Calculated from 1984 County Business Patterns.

Table 8 presents growth rates in the retail area for 1979 to 1984.

TABLE 8
Percentage Growth in Retail from 1979 to 1984

Growth Rate in Retail	Range for College Towns	Lawrence	Range for States
Establishments	5-52%	20%	6-22%
Employees	(-12)-66	0	(-7)-19
Payroll	15-155	39	18-68

Source: Calculated from County Business Patterns 1979-1984.

Lawrence grew by 20 percent in the number of establishments. It did not gain employment, but its payroll increased in nominal terms by 39 percent. Again, Lawrence is in the middle of the growth range for other college towns. However, those that grew the fastest were in Oklahoma and Texas during prosperous times. Midwestern college towns in general did not experience rapid growth. In fact, retail employment declined in Champaign, Illinois from 1979 to 1984. Individual city and state data are found in Appendix E.

LITERATURE REVIEW

In the area of applied geography many articles and books have focused on shopping center development. There are models for predicting sales and/or market regions for shopping areas, and in general some of this literature discusses the process of retail development. Another relevant area of the literature deals with the economic impacts of new retail development upon the existing local economy. In this last area, many economists, developers, and planners have attempted to assess economic impact a priori. Here we will examine some projected impact estimates and case studies of actual outcomes.

Trends in Shopping Center Development

In Dawson and Lord (1985) the historical perspective for U.S. shopping centers is examined. Since 1950, malls have become the dominant component of American retailing. They further observe:

> [Malls] also tend to display a striking sameness across the country in design and tenant composition, thus creating a condition not unlike what some observers of the landscape have referred to as the McDonaldization of America. This sameness is due largely to the dominance of the industry by a small number of developers and national chain stores.

Dawson and Lord have computed shopping center floorspace per capita presented in Table 8. Floorspace per capita can be considered as a measure of the importance of shopping centers in the retail structure. Also on Table 8, they hold several variables to try to explain shopping center square footage both in 1972 and 1980. In 1972 only population growth had a strong correlation. In 1980, this was not as marked. There was no tendency for floorspace per capita to increase with the income level of the state.

TABLE 9

Planned Shopping Centre Square Footage Per Capita: 1972, 1980 and 1982

	Square Ft. Per Capita				Square Ft. Per Capita		
State	1972	1980	1982	State	1972	1980	1982
Alabama	7.26	10.95	12.31	Montana	5.78	10.05	10.57
Alaska	4.66	9.23	9.08	Nebraska	5.67	11.02	12.00
Arizona	13.23	21.32	21.98	Nevada	15.77	24.20	24.78
Arkansas	7.29	11.23	12.41	N. Hampshire	6.16	10.96	13.33
Calif.	10.24	14.29	14.49	New Jersey	7.71	10.38	11.04
Colorado	10.00	15.71	16.78	New Mexico	7.15	13.99	16.25
Conn.	9.83	15.50	17.59	New York	5.42	9.71	9.65
Delaware	14.50	20.43	21.76	N. Carolina	8.10	13.60	14.29
Florida	12.73	19.93	19.36	N. Dakota	5.09	10.17	12.23
Georgia	8.41	14.54	15.32	Ohio	9.29	13.45	14.79
Hawaii	6.33	11.56	13.24	Oklahoma	8.61	13.95	14.33
Idaho	5.45	11.06	13.40	Oregon	7.60	11.05	12.31
Illinois	5.64	10.75	11.57	Penn.	6.54	12.54	13.86
Indiana	8.40	12.57	13.96	Rhode Island	7.88	11.42	12.04
Iowa	5.14	10.92	11.62	S. Carolina	6.81	12.75	13.49
Kansas	7.92	12.16	14.07	S. Dakota	2.48	7.75	8.91
Kentucky	6.83	10.51	12.29	Tennessee	8.02	13.35	14.52
Louisiana	6.18	13.04	14.17	Texas	10.68	17.75	18.22
Maine	7.45	11.35	13.47	Utah	7.76	11.71	14.47
Maryland	9.28	15.39	17.60	Vermont	5.60	11.55	12.73
Mass.	8.73	13.30	14.06	Virginia	9.80	14.35	15.14
Michigan	4.65	9.53	10.21	Washington	8.19	12.05	12.85
Minnesota	5.51	9.54	10.43	W. Virginia	2.89	9.54	9.23
Miss.	6.58	10.59	11.45	Wisconsin	7.07	9.52	10.40
Missouri	7.68	17.57	18.76	Wyoming	3.43	11.34	11.65
				United States	7.90	13.09	13.99

Source: Shopping Center World, 1973, 1981, and 1983

Correlates of Shopping Centre Square Footage Per Capita 1972 and 1980[a]

Variables	Simple Correlation[b]	Partial Correlation[c]
1972:		
Per capita disposable income, 1970	+.2934	-.2503
Percent of population in metropolitan areas in 1970	+.5580	+.4856
Percent change in metropolitan population, 1960-1970	+.7477	+.3269
Ratio of 1970 to 1950 population	+.6858	+.3949
1980:		
Per capita disposable income, 1980	+.0980	-.2699
Percent of population in metropolitan areas in 1980	+.4168	+.2735
Percent change in metropolitan population, 1970-1980	+.4141	-.0949
Ratio of 1980 to 1950 population	+.6911	+.4679

[a] Data units are states

[b] Zero order correlation coefficient

[c] Correlation controlling for other variables

Source: Dawson and Lord, Shopping Center Development

TABLE 10

Percentage Net Shifts in Shopping Centre Floorspace, 1972-80

Negative Percentage Net Shift States		Positive Percentage Net Shift States	
California	19.93	Texas	15.44
Ohio	17.94	Missouri	10.94
New Jersey	13.49	Florida	8.44
New York	13.41	Michigan	7.23
Massachusetts	7.80	Louisiana	6.98
Wisconsin	6.72	Arizona	5.91
Indiana	5.47	Illinois	4.65
Virginia	3.78	Pennsylvania	4.55
Alabama	1.99	Georgia	4.39
Kansas	1.90	West Virginia	3.96
Connecticut	1.73	South Carolina	3.62
Rhode Island	1.54	Iowa	2.56
Delaware	1.44	New Mexico	2.28
Kentucky	1.16	North Carolina	2.26
Maine	0.52	Nevada	2.22
Oregon	0.42	Wyoming	1.69
Arkansas	0.37	Idaho	1.60
Washington	0.29	Colorado	1.49
		Tennessee	1.36
		South Dakota	1.22
		Hawaii	0.98
		Nebraska	0.90
		Minnesota	0.88
		New Hampshire	0.74
		Utah	0.72
		Vermont	0.70
		Oklahoma	0.59
		Maryland	0.58
		North Dakota	0.44
		Alaska	0.30
		Montana	0.24
		Mississippi	0.10

Source: Dawson and Lord, Shopping Center Development

Percentage Net Shifts in Population by State, 1972-80

Negative Percentage Net Shift States		Positive Percentage Net Shift States	
New York	26.14	Florida	19.46
Pennsylvania	12.23	Texas	17.77
Ohio	9.78	California	16.17
Illinois	9.19	Arizona	6.49
New Jersey	7.11	Washington	4.57
Massachusetts	6.40	Colorado	3.52
Michigan	6.19	Georgia	3.48
Maryland	3.03	Oregon	2.83
Indiana	2.95	Utah	2.61
Missouri	2.80	Nevada	2.44
Connecticut	2.74	South Carolina	2.15
Iowa	2.53	North Carolina	2.12
Wisconsin	2.48	Virginia	1.77
Minnesota	1.60	Oklahoma	1.77
Rhode Island	1.20	Tennessee	1.76
Kansas	1.18	Louisiana	1.50
Nebraska	1.04	New Mexico	1.43
South Dakota	0.56	Idaho	1.36
North Dakota	0.41	Arkansas	1.11
Delaware	0.29	Wyoming	1.05
West Virginia	0.05	New Hampshire	0.87
		Hawaii	0.85
		Mississippi	0.72
		Kentucky	0.69
		Alabama	0.63
		Alaska	0.52
		Vermont	0.11
		Maine	0.08
		Montana	0.08

Source: Dawson and Lord, Shopping Center Development

In Table 9, percentage net shifts in population and floorspace per capita were computed. Kansas declined in both categories from 1972-80.

But Dawson and Lord point out that the problems and trends of the 1980s may be different because of several phenomena. Because of demographic factors from a declining populations growth rate, lack of increase in real income, and increasing costs of non-retail items, demand for retail goods, especially department store-type merchandise, has been adversely affected. On the supply side development costs have risen faster than the increase in price changes for general merchandise and apparel. Dawson and Lord say:

> ...it should be noted that new retail development in many locales is creating a situation somewhat analogous to a zero sum game. In a slow growth or no growth environment in terms of the demand for retail goods, efforts at increasing the supply of retail facilities via new shopping centres is likely to generate considerable conflict. While the size of the retail demand pie remains stable, new facilities increase the number of parties competing for a shore of that pie. If new centres succeed in this environment, they do so at the expense of existing facilities, thus leading to a zero sum game situation.

Slow population growth and the location of existing suburban centers will push developers to look to other locations such as middle markets, the CBD (central business district), and in fill areas. Dawson and Lord continue:

> The CBD is receiving increased attention for shopping centre developers. The development of new retail facilities will encounter several problems, not the least of which will be the high cost of land and problems with the assemblage of sufficient land area. Because of the problems, downtown retail development can be aided considerably by cooperation between public and private sectors. Public sector support can be provided through low interest loans, grants, and bond referenda. The availability of this public sector support in conjunction with opposition to mall development in the suburbs has convinced developers on occasion to opt for downtown projects.

Jack Gould, president of HSG/World Associates, examined emerging markets in *Shopping Centers: U.S.A.*(1981). He felt that the current focus of the shopping center industry would be on small and medium-sized markets with major downtown developments becoming increasingly important. Peter D. Leibowitz, president of Cadillac Fairview Shopping Centers, Ltd. also pointed out in *Shopping Centers: U.S.A.* that a common thread that appears to be significant in all successful downtown projects has been on providing "an important food and entertainment complex with an architecturally unique environment."

Estimating Economic Impact and Retail Sales

With this background on problems and trends it will be useful to examine the theoretical framework for impact statements and then look at actual studies. Bennison and Davies (1980) examined 172 cases of central city shopping mall schemes in Great Britian. Table 10 presents their comprehensive approach to assessing economic, environmental, and social impacts. But as the authors point out:

> It is far more difficult to identify and quantify the specific effects of town-centre shopping schemes than is the case with outlying developments. The evidence that has so far been accumulated suggests their effects have been smaller than anticipated, but their effects are inter-mingled with a series of other on-going changes and have not been fully accounted for. Most studies to-date have focussed on the economic repercussions of new schemes and particularly their trading effects. However, it may be that, in the longer term, it is the environmental and social consequences that will be most significant, particularly given the rapid technological changes in retailing that are likely to take place during the next decade.

Other variables can also be added to aid the decision-making process. Martin (1985) in *Estimating Retail Sales Potential for a Proposed Regional*

TABLE 11

Major forms of impact of town-centre shopping schemes

Economic		Environmental		Social	
Positive	Negative	Positive	Negative	Positive	Negative
Add new stock	Reduces old stock	Modernises outworn areas	Changes traditional character	Allows for efficient shopping	May favour car-borne shoppers
Accommodates larger modern stores	Discriminates against small independents	Reduces land use conflicts	Creates new points of congestion	Provides new shopping opportunities	May limit choice to stereotypes
Increases rates and revenues	Increases monopoly powers	Scope for new design standards	Intrusive effects on older townscapes	Provides more safety	Creates new stress factors from crowds
Creates new employment	Changes structure of employment	Provides weather protection	Creates artificial atmosphere	Provides more comfort and amenities	Attracts delinquents and vandals
Improves trade on adjacent streets	Reduces trade on peripheral streets	Leads to upgrading of some streets	Causes blight on other streets	Concentrates shopping in one area	Breaks up old shopping linkages
Enhances status of central area	Effects status of surrounding centres	Integrates new transport	Causes pressure on existing infra-structures	Potentially greater social interaction	Becomes dead area at night

Source: Bennison and Davies, p. 38.

Shopping Center gives an outline of the steps necessary to begin an economic analysis.

1. Define primary and secondary trade areas.

2. Estimate market share based on the proposed center's drawing power, given existing and future competition, and given the area's shopping habits.

An analysis of a center's estimated market share is partly subjective, but Martin points out three principles: convenience, Reilly's law, and image. Many centers offer similar quality and selection of goods; therefore convenience, accessibility and availability of merchandise largely determines drawing power. Reilly's Law of Retail Gravitation determines the "breaking-point" between two market areas as a function of the miles between the two and the relative attractiveness. Huff (1963) used Reilly's law to formulate a model based on any number of competing centers. Huff found that:

1. The proportion of consumers patronizing a given shopping area (cluster) varies with distance from the shopping area.

2. The proportion of consumers patronizing various shopping areas (clusters) varies with the breadth and depth of merchandise offered by each shopping area.

3. The distance that consumers travel to various shopping areas (clusters) varies for different types of products purchased.

4. The "pull" of any given shopping area (clusters) is influenced by the proximity of competing shopping areas.

Lewison and Showalter (1977) used Huff's model to project market shares for retail centers in the area before and after a mall in Columbia, South Carolina. They found that substantial differences would occur between product categories and shopping clusters. The existing clusters were projected to decrease substantially after the opening of the mall.

Other studies in the Duluth and Hermantown, Minnesota area and in Clarksburg, West Virginia point out the losses that cities will experience

if malls locate outside the city limits. In Clarksburg, it was found that "to have no impact on existing business, 98 percent of the proposed mall's sales would have to represent 'new sales'" (DSC,1985). But the most likely scenario was thought to be only a 13 percent reduction in the city's retail sales level and an 8 percent decline in employment. The authors further point out, "however, because of insufficient retail availability if no mall is built in the region (the city) will have difficulty generating revenues." In the case of Clarksburg a large proportion of retail sales were flowing out of the area.

A study of an expansion of a mall in Beaver Creek, Pennsylvania provides another perspective. The Beaver Mall was contracted in 1970. In 1980, a study was conducted to determine the impact of an expansion of that mall. During the time from 1970 to 1980 significant declines in manufacturing in the area's steel industry occurred. No income or population growth was experienced. The study found that the smaller towns surrounding the mall suffered a loss in retail sales. This loss was "almost evenly offset by gain experienced by towns surrounding the mall." In this instance no additional retail sales were captured, but the area simply redistributed sales in a time of generally bad economic conditions.

CONCLUSIONS

From Section One we see that retail employment in small midwestern cities with malls grew generally faster than expected using the state's growth as the expected rate. This result does not imply that the opening of a mall will cause retail employment to increase. Some cities grew at the same rate as the state, and one grew more slowly. However, on balance more cities in the sample grew faster with some doing very much better. Another explanation of this fact could be that mall developers are good at identifying areas that are expanding retail markets.

The main conclusion to be drawn from Section Two is that Lawrence's per capita spending on shopper goods is very low compared to other college towns, and this low spending rate does not seem to be related to a low per capita income. Other factors must be involved. If we assume that Lawrence residents consume in approximately the same manner as residents in other college towns, then we can say that there are probably sales being lost to surrounding areas. An expansion of retail facilities would probably capture some of these sales, but without knowledge of how, what, and why consumers buy out of the area, it is not possible to estimate any lost sales.

Section Three shows that positive effects of retail development for one person may be negative for another and that some of the important effects are not only economic, but social and environmental as well. We can also conclude from Section Three that when an area is expanding in population retail sales facilities must also expand or those sales will be lost to other areas. Along with those lost sales will come lost employment opportunities and lost sales tax revenues.

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APPENDICES

APPENDIX A

CITY AND COUNTY POPULATION IN 1984
For the Towns Used in This Study

CITY	COUNTY	STATE	CITY POPULATION	COUNTY POPULATION
Joplin	Jasper	MO	37,240	89,329
Grand Island	Hall	NE	39,836	49,852
Ames	Story	IA	45,156	72,914
Sioux City	Woodbury	IA	81,767	101,030
Moorhead	Clay	MN	29,466	49,203
North Platte	Lincoln	NE	23,112	34,676
Muscatine	Muscatine	IA	24,142	41,935
Marshalltown	Marshall	IA	26,868	41,580
Burnsville	Dakota	MN	38,987	213,573
Mankato	Nicollet	MN	9,683	27,374
Burlington	Des Moines	IA	28,529	45,223
Fort Dodge	Webster	IA	27,758	43,795
Texarkana	Bowie	TX	32,912	79,199
Grand Forks	Grand Forks	ND	44,233	68,712
Fayetteville	Washington	AR	35,709	104,037
Rapid City	Pennington	SD	49,146	74,716
Jefferson City	Cole	MO	34,990	60,693
Champaign	Champaign	IL	60,357	170,264
Danville	Vermilion	IL	37,707	93,172
LaSalle	LaSalle	IL	9,923	109,203
Quincy	Adams	IL	41,449	70,774
Decatur	Macon	IL	91,851	128,597
Galesburg	Knox	IL	33,456	58,703
Pekin	Tazewell	IL	32,829	129,538
Bedford	Lawrence	IN	13,482	41,362
Colombus	Bartholomew	IN	30,798	64,406
Cookeville	Putnam	TN	21,781	49,992
Morgan City	St. Mary (Parish)	LA	15,329	65,200

STATE POPULATION IN 1984

AR	2,349,159	NE	1,605,934
CO	3,178,598	ND	689,422
IO	2,909,583	OK	3,297,952
IL	11,512,061	SD	705,795
IN	5,497,929	TN	4,716,752
KS	2,438,074	TX	15,988,538
LA	4,462,489	WV	1,952,318
MO	5,007,679	WI	4,766,072
MN	4,161,635		

APPENDIX B

Computation of Estimates for Section 1

Computation of estimator M:

$$M = \frac{1}{T} \sum_{t=0}^{r} \frac{CRE_{A,t}}{SRE_{A,t}} - \frac{1}{U} \sum_{u=-s}^{-1} \frac{CRE_{B,u}}{SRE_{B,u}}$$

where $CRE_{A,t}$ = county retail employment in year t after mall was built.

$SRE_{A,t}$ = state retail employment in year t.

r = number of years after the mall was built.

$CRE_{B,u}$ = county retail employment in year u before mall was built.

$SRE_{B,u}$ = state retail employment in year u.

s = number of years before mall was built.

U = s

T = r + 1

	Riley County SHOPPER GOODS SALES			GROWTH RATE FROM:		
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	SALES PER CAPITA IN 1982
53	31,357	24,748	15,104	107.61%	26.71%	$961
56	10,084	6,409	4,042	149.48%	57.35%	$309
57	10,536	6,144	3,875	171.90%	71.49%	$323
594	21,299	11,885	7,755	174.65%	79.21%	$652
Total	73,276	49,186	30,776	138.09%	48.98%	$2,245

	STATE OF KANSAS SHOPPER GOODS SALES			GROWTH RATE FROM:		
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	SALES PER CAPITA IN 1982
53	1,280,192	987,063	637,004	100.97%	29.70%	$542
56	533,265	360,594	222,056	140.15%	47.89%	$226
57	446,364	344,460	207,387	115.23%	29.58%	$189
594	274,868	162,308	97,675	181.41%	69.35%	$116
Total	2,534,689	1,854,425	1,164,122	117.73%	36.68%	$1,072

SOURCE:Census of Retail Trade

APPENDIX C:Shopper Goods Sales by SIC Code, City,and State

	LAWRENCE SMSA SHOPPER GOODS SALES			GROWTH RATE FROM:		
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	SALES PER CAPITA IN 1982
53	20,446	21,433	11,559	76.88%	-4.61%	$302
56	14,180	9,434	6,120	131.70%	50.31%	$210
57	11,129	9,271	8,006	39.01%	20.04%	$165
594	12,949	8,910	5,870	120.60%	45.33%	$191
Total	58,704	49,048	31,555	86.04%	19.69%	$868

	STATE OF KANSAS SHOPPER GOODS SALES			GROWTH RATE FROM:		
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	SALES PER CAPITA IN 1982
53	1,280,192	987,063	637,004	100.97%	29.70%	$542
56	533,265	360,594	222,056	140.15%	47.89%	$226
57	446,364	344,460	207,387	115.23%	29.58%	$189
594	274,868	162,308	97,675	181.41%	69.35%	$116
Total	2,534,689	1,854,425	1,164,122	117.73%	36.68%	$1,072

SOURCE:Census of Retail Trade

Year SIC	Bloomington SMSA SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SALES PER CAPITA IN 1982
53	54,762	40,174	26,746	104.75%	36.31%	$554
56	27,207	19,370	10,436	160.70%	40.46%	$275
57	17,275	14,297	7,339	135.39%	20.83%	$175
594	17,652	9,318	6,384	176.50%	89.44%	$179
Total	116,896	83,159	50,905	129.64%	40.57%	$1,183

Year SIC	STATE OF INDIANA SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SALES PER CAPITA IN 1982
53	2,666,113	2,385,479	1,688,520	57.90%	11.76%	$486
56	1,059,040	725,510	476,089	122.45%	45.97%	$193
57	864,460	746,999	516,001	67.53%	15.72%	$157
594	540,564	347,333	195,897	175.94%	55.63%	$98
Total	5,130,177	4,205,321	2,876,507	78.35%	21.99%	$934

SOURCE:Census of Retail Trade

Year SIC	Denton SMSA SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
53	84,158	32,171	17,310	386.18%	161.60%	$1,751
56	25,421	13,761	10,120	151.20%	84.73%	$529
57	16,048	12,655	5,627	185.20%	26.81%	$334
594	19,734	9,436	5,361	268.10%	109.14%	$411
Total	145,361	68,023	38,418	278.37%	113.69%	$3,024

Year SIC	STATE OF TEXAS SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
53	9,108,541	5,867,280	3,604,590	152.69%	55.24%	$1,301
56	4,793,350	2,400,211	1,449,893	230.60%	99.71%	$685
57	3,584,513	1,950,564	1,145,495	212.92%	83.77%	$512
594	2,656,919	1,240,318	660,171	302.46%	114.21%	$380
Total	20,143,323	11,458,373	6,860,149	193.63%	75.80%	$2,878

SOURCE:Census of Retail Trade

College Station SMSA SHOPPER GOODS SALES				GROWTH RATE FROM:		SHOPPER GOODS SALES
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	PER CAPITA IN 1982
53	82,239	32,403	17,280	375.92%	153.80%	$879
56	36,799	14,744	7,940	363.46%	149.59%	$393
57	20,020	8,895	4,989	301.28%	125.07%	$214
594	25,046	8,898	4,258	488.21%	181.48%	$268
Total	164,104	64,940	34,467	376.12%	152.70%	$1,753

STATE OF TEXAS SHOPPER GOODS SALES				GROWTH RATE FROM:		SHOPPER GOODS SALES
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	PER CAPITA IN 1982
53	9,108,541	5,867,280	3,604,590	152.69%	55.24%	$1,301
56	4,793,350	2,400,211	1,449,893	230.60%	99.71%	$685
57	3,584,513	1,950,564	1,145,495	212.92%	83.77%	$512
594	2,656,919	1,240,318	660,171	302.46%	114.21%	$380
Total	20,143,323	11,458,373	6,860,149	193.63%	75.80%	$2,878

SOURCE:Census of Retail Trade

Champaign SMSA SHOPPER GOODS SALES				GROWTH RATE FROM:		SHOPPER GOODS SALES
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	PER CAPITA IN 1982
53	110,513	75,574	61,709	79.09%	46.23%	$656
56	39,882	27,036	13,989	185.10%	47.51%	$237
57	31,856	27,673	18,883	68.70%	15.12%	$189
594	28,607	16,504	10,710	167.11%	73.34%	$170
Total	210,858	146,787	105,291	100.26%	43.65%	$1,252

STATE OF ILLINOIS SHOPPER GOODS SALES				GROWTH RATE FROM:		SHOPPER GOODS SALES
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	PER CAPITA IN 1982
53	5,898,809	5,100,698	3,665,835	60.91%	15.65%	$516
56	3,252,095	2,152,691	1,531,072	112.41%	51.07%	$285
57	2,129,613	1,738,535	1,218,026	74.84%	22.49%	$186
594	1,518,046	971,175	560,864	170.66%	56.31%	$133
Total	12,798,563	9,963,099	6,975,797	83.47%	28.46%	$1,120

SOURCE:Census of Retail Trade

Year SIC	Iowa City SMSA SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
53	42,364	29,683	21,585	96.27%	42.72%	$518
56	20,385	15,301	8,392	142.91%	33.23%	$249
57	18,187	15,126	8,119	124.01%	20.24%	$223
594	17,452	11,678	6,495	168.70%	49.44%	$214
Total	98,388	71,788	44,591	120.65%	37.05%	$1,204

Year SIC	STATE OF IOWA SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
53	1,361,896	1,157,108	744,812	82.85%	17.70%	$467
56	606,336	397,463	264,477	129.26%	52.55%	$208
57	462,873	422,580	252,139	83.58%	9.53%	$159
594	300,451	209,034	103,909	189.15%	43.73%	$103
Total	2,731,556	2,186,185	1,365,337	100.06%	24.95%	$937

SOURCE:Census of Retail Trade

	Cleveland County SHOPPER GOODS SALES			GROWTH RATE FROM: 1972 TO 1982	GROWTH RATE FROM: 1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
Year SIC	1982	1977	1972			
53	50,919	20,354	12,752	299.30%	150.17%	$749
56	56,244	18,262	12,044	366.99%	207.98%	$827
57	24,049	12,852	7,116	237.96%	87.12%	$354
594	19,140	6,768	4,725	305.08%	182.80%	$281
Total	150,352	58,236	36,637	310.38%	158.18%	$2,210

	STATE OF OKLAHOMA SHOPPER GOODS SALES			GROWTH RATE FROM: 1972 TO 1982	GROWTH RATE FROM: 1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
Year SIC	1982	1977	1972			
53	1,800,168	1,087,817	678,406	165.35%	65.48%	$595
56	938,370	536,416	333,206	181.62%	74.93%	$310
57	692,975	396,490	244,748	183.14%	74.78%	$229
594	417,243	204,234	112,186	271.92%	104.30%	$138
Total	3,848,756	2,224,957	1,368,546	181.23%	72.98%	$1,272

SOURCE:Census of Retail Trade

Raleigh SMSA SHOPPER GOODS SALES				GROWTH RATE FROM:		SHOPPER GOODS SALES
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	PER CAPITA IN 1982
53	339,053	261,241	161,147	110.40%	29.79%	$604
56	155,722	88,127	58,782	164.91%	76.70%	$277
57	135,409	73,855	53,005	155.46%	83.34%	$241
594	91,593	47,905	27,123	237.69%	91.20%	$163
Total	721,777	471,128	300,057	140.55%	53.20%	$1,286

STATE OF North Carolina SHOPPER GOODS SALES				GROWTH RATE FROM:		SHOPPER GOODS SALES
Year SIC	1982	1977	1972	1972 TO 1982	1977 TO 1982	PER CAPITA IN 1982
53	2,486,220	1,969,987	1,285,014	93.48%	26.20%	$423
56	1,356,312	785,296	563,916	140.52%	72.71%	$231
57	1,156,256	787,940	536,821	115.39%	46.74%	$197
594	589,873	317,939	203,105	190.43%	85.53%	$100
Total	5,588,661	3,861,162	2,588,856	115.87%	44.74%	$950

SOURCE:Census of Retail Trade

Year SIC	Columbia SMSA SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
53	59,088	42,988	24,923	137.08%	37.45%	$589
56	29,502	18,175	11,625	153.78%	62.32%	$294
57	17,353	12,569	8,965	93.56%	38.06%	$173
594	17,526	11,024	7,051	148.56%	58.99%	$175
Total	123,469	84,755	52,564	134.89%	45.68%	$1,230

Year SIC	STATE OF Missouri SHOPPER GOODS SALES 1982	1977	1972	GROWTH RATE FROM: 1972 TO 1982	1977 TO 1982	SHOPPER GOODS SALES PER CAPITA IN 1982
53	2,486,220	1,969,987	1,285,014	93.48%	26.20%	$506
56	1,356,312	785,296	563,916	140.52%	72.71%	$276
57	1,156,256	787,940	536,821	115.39%	46.74%	$235
594	589,873	317,939	203,105	190.43%	85.53%	$120
Total	5,588,661	3,861,162	2,588,856	115.87%	44.74%	$1,137

SOURCE:Census of Retail Trade

APPENDIX D:RETAIL ESTABLISHMENTS, EMPLOYEES AND PAYROLL FOR COLLEGE TOWNS

COUNTY WAKE, NC

				PERCENT OF TOTAL			PERCENT CHANGE:		
	EST	EMP	PAYROLL ($1000)	EST	EMP	PAYROLL	EST	EMP	PAYROLL
1974	1,565	21,386	124,310	27%	23%	17%			
1979	1,756	25,997	202,214	25%	23%	16%	12%	22%	63%
1984	2,191	31,426	314,538	22%	21%	13%	25%	21%	56%

COUNTY CLEVELAND, OK

				PERCENT OF TOTAL			PERCENT CHANGE:		
	EST	EMP	PAYROLL ($1000)	EST	EMP	PAYROLL	EST	EMP	PAYROLL
1974	521	5,777	25,951	33%	38%	27%			
1979	573	7,484	47,961	29%	39%	27%	10%	30%	85%
1984	822	10,355	94,099	26%	38%	26%	43%	38%	96%

COUNTY RILEY, KS

				PERCENT OF TOTAL			PERCENT CHANGE:		
	EST	EMP	PAYROLL ($1000)	EST	EMP	PAYROLL	EST	EMP	PAYROLL
1974	305	2,926	12,161	37%	40%	29%			
1979	330	4,440	23,552	34%	40%	26%	8%	52%	94%
1984	367	4,715	32,819	32%	38%	24%	11%	6%	39%

COUNTY DOUGLAS, KS

				PERCENT OF TOTAL			PERCENT CHANGE:		
	EST	EMP	PAYROLL ($1000)	EST	EMP	PAYROLL	EST	EMP	PAYROLL
1974	363	3,915	19,321	33%	30%	21%			
1979	380	5,647	35,359	30%	33%	21%	5%	44%	83%
1984	457	5,657	49,003	29%	33%	21%	20%	0%	39%

COUNTY MONROE,IN

				PERCENT OF TOTAL			PERCENT CHANGE:		
	EST	EMP	PAYROLL ($1000)	EST	EMP	PAYROLL	EST	EMP	PAYROLL
1974	479	6,072	28,758	33%	23%	15%			
1979	505	7,081	43,959	31%	27%	16%	5%	17%	53%
1984	633	7,981	67,266	30%	72%	16%	25%	13%	53%

SOURCE: County Business Patterns

STATE: NORTH CAROLINA

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	30,297	278,260	1,555,075	30%	16%	12%			
1979	32,567	347,269	2,534,811	29%	18%	12%	7%	25%	63%
1984	37,857	394,518	3,868,723	28%	19%	12%	16%	14%	53%

STATE: OKLAHOMA

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	17,182	154,070	783,736	30%	23%	15%			
1979	17,633	192,535	1,430,607	28%	22%	14%	3%	25%	83%
1984	20,570	214,351	2,086,486	26%	23%	13%	17%	11%	46%

STATE: KANSAS

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	15,658	137,403	680,677	31%	23%	15%			
1979	15,475	168,424	1,137,634	28%	22%	13%	-1%	23%	67%
1984	16,968	169,071	1,598,724	26%	22%	13%	10%	0%	41%

STATE: INDIANA

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	29,674	322,640	1,733,183	31%	19%	11%			
1979	29,831	375,580	2,669,660	29%	20%	11%	1%	16%	54%
1984	32,128	366,636	3,399,002	28%	21%	11%	8%	-2%	27%

COUNTY:CHAMPAIGN,IL

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	791	11,114	55,646	28%	31%	20%			
1979	913	15,757	95,699	29%	35%	21%	15%	42%	72%
1984	957	13,871	110,247	27%	31%	17%	5%	-12%	15%

COUNTY:JOHNSON,IA

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	414	5,361	25,258	32%	35%	23%			
1979	450	6,391	43,274	30%	32%	22%	9%	19%	71%
1984	564	7,340	59,025	29%	33%	20%	25%	15%	36%

COUNTY:BOONE,MO

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	502	5,732	27,650	29%	28%	19%			
1979	563	8,253	52,645	29%	28%	18%	12%	44%	90%
1984	598	8,221	68,830	25%	27%	16%	6%	-0%	31%

COUNTY:BRAZOS,TX

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	428	3,711	19,692	34%	30%	26%			
1979	456	5,863	38,362	28%	30%	21%	7%	58%	95%
1984	695	9,536	81,250	27%	32%	21%	52%	63%	112%

COUNTY:DENTON,TX

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	EMP	PAYROLL	PERCENT CHANGE: EST	EMP	PAYROLL
1974	570	4,671	24,871	35%	29%	22%			
1979	631	6,892	47,298	31%	29%	21%	11%	48%	90%
1984	917	11,447	120,801	26%	28%	18%	45%	66%	155%

SOURCE: County Business Patterns 1974,1979 and 1984

STATE: ILLINOIS

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	PERCENT OF TOTAL EMP	PERCENT OF TOTAL PAYROLL	PERCENT CHANGE: EST	PERCENT CHANGE: EMP	PERCENT CHANGE: PAYROLL
1974	57,031	711,456	4,400,059	27%	18%	11%			
1979	56,680	838,843	6,479,740	26%	20%	11%	-1%	18%	47%
1984	60,777	777,824	8,194,330	25%	19%	10%	7%	-7%	26%

STATE: IOWA

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	PERCENT OF TOTAL EMP	PERCENT OF TOTAL PAYROLL	PERCENT CHANGE: EST	PERCENT CHANGE: EMP	PERCENT CHANGE: PAYROLL
1974	19,508	172,062	838,841	31%	22%	13%			
1979	19,618	208,561	1,381,879	29%	23%	13%	1%	21%	65%
1984	20,857	195,397	1,628,380	28%	23%	13%	6%	-6%	18%

STATE: MISSOURI

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	PERCENT OF TOTAL EMP	PERCENT OF TOTAL PAYROLL	PERCENT CHANGE: EST	PERCENT CHANGE: EMP	PERCENT CHANGE: PAYROLL
1974	28,382	289,739	1,615,369	30%	20%	13%			
1979	27,966	336,514	2,520,256	28%	20%	12%	-1%	16%	56%
1984	30,490	338,770	3,386,466	26%	20%	11%	9%	1%	34%

STATE: TEXAS

	EST	EMP	PAYROLL ($1000)	PERCENT OF TOTAL EST	PERCENT OF TOTAL EMP	PERCENT OF TOTAL PAYROLL	PERCENT CHANGE: EST	PERCENT CHANGE: EMP	PERCENT CHANGE: PAYROLL
1974	75,225	773,872	4,156,603	30%	22%	14%			
1979	80,992	988,066	7,599,899	28%	21%	13%	8%	28%	83%
1984	98,710	1,175,380	12,755,563	25%	22%	13%	22%	19%	68%

APPENDIX E

Summary of Lawrence Economic Impact Reports

by

Pat Oslund

For many years Lawrence area planners have been trying to direct the development of retail establishments. The location, size, and nature of such construction will pattern the growth of the Lawrence region for the upcoming decades. Local government must be prepared to provide direct support services such as streets and utilities to retail developers. Equally as important, local government must deal with the side effects of retail expansion as population and business activity shift toward new retail centers. An economic impact study can alert community planners to the direct and indirect benefits and costs of alternative types of retail development.

Several studies have addressed the issue of retail development in Lawrence. Reports of these studies contain information of potential use to decision makers. However, the contents of these reports are inadequate to form the core of a study of the economic effects of retail expansion in Lawrence. A summary of several documents concerning this issue follows. The "comments" sections point out the merits and the shortcomings of each study.

1. An Analysis of Lawrence Retailing
   Authors: Daicoff, Galloway
   Date: 1979
   Dates of Important Data: 1972, 1979
   Major Issue: Suburban mall.

Comments: This study considers the impact of a large shopping mall to be located in the south suburban area. A major premise of the report is that Lawrence and Douglas County export only a small percentage of sales to outside retailers. It follows that a large development would draw most of its sales from existing firms in the area. Further work is necessary to quantify the extent of retail exports from the Lawrence area. Due to improved transportation to retail areas in Johnson county, the Daicoff and Galloway results should probably be qualified.

2. Downtown Redevelopment Study Work Session Reports
   Authors: Teska and Associates, Melaniphy and Associates
   Date: 1980
   Dates of Important Data: 1980, 1977, 1972
   Major Issue: Proposed alternatives for retail development.

Comments: This workshop report discusses strategies for retail development in Lawrence. In contrast to the Daicoff and Galloway report, these authors indicate that Lawrence has a large potential to increase retail sales. Again this issue warrants further study. The authors' conclusions that the Touche Ross report over states the net benefits of the downtown development proposed by Jacobs, Visconti, and Jacobs is probably correct.

3. Economic Impact Analysis: Lawrence, Kansas
Authors: Touche Ross and Company
Date: 1980
Dates of Important Data: 1980
Major Issue: Economic impact of Jacobs, Visconti, and Jacobs downtown plan.

Comments: This is a highly optimistic study of a proposed development. The study fails to fully consider the costs of the development. Direct costs to the city for support services are deemphasized and indirect costs such as loss of tax revenue from displaced businesses are never calculated. The study raises the issue of whether retail development has a multiplier effect. if so, jobs created by retail expansion generate additional jobs as income is respent in the community. The authors assume that the overall effect on income is twice its initial effect, that is the multiplier is 2. This multiplier is probably over-stated. Furthermore, the multiplier is calculated assuming that the alternative to the proposed development is no expansion in retail space. In particular, they assume that no suburban mall will be developed in the absence of a downtown mall. This "no growth" alternative is not reasonable.

4. Downtown Retail Complex
Authors: Town Center Development Corporation
Date: 1983
Dates of Important Data: 1983
Major Issue: Detailed plans for a downtown project.

Comments: The plan outlines the direct costs of a specific project, both to the developers and to the City. Updated data of this type is essential to calculating the economic impacts of a project. Unfortunately the report makes no attempt to quantify the indirect costs and benefits of development.

In summary, the existing information on Lawrence retail development is insufficient to compose an economic impact statement. Each of the following issues deserves thorough consideration.

1. **Retail Export.** To what extent do consumer expenditures from Lawrence and Douglas County flow out to surrounding areas? Information on this issue is essential to determine the degree to which retail development will increase the total volume of retail sales.

2. **Development Alternatives.** To assess the impact of any specific proposal it is necessary to have a clear idea of the alternative with which the proposal is being compared. Most of the studies assume that the alternative to the proposal under consideration is no large scale development A reasonable alternative to downtown development is suburban development, and that the costs and benefits of the two should be compared with each other and without a large development.

3. **Multiplier Effects.** To what extent will a retail development expand income within the community? Does this effect differ between downtown and suburban development?

4. **Taxes.** What net tax revenues can the City expect from various types of development?

5. **Direct Costs.** How much must the City spend on streets, sewers, and other services to retail area? Can these improvements be financed through the tax revenues generated by development?

6. **Indirect Costs.** The character of retail development can profoundly alter living conditions within the City. For example, suburban expansion may increase the danger of urban blight. On the other hand, a downtown mall could have negative side effects due to increased auto traffic and loss of residential areas. A thorough discussion of alternative developments should make some attempt to quantify these quality of life considerations.

The indirect effects of development are as important as the direct effects. An economic impact statement should weigh both of these carefully.