

**A STUDY OF RETAIL TRADE IN FIRST CLASS CITIES ACROSS  
KANSAS:**

**AN ANNUAL REPORT OF TRADE  
PULL FACTORS AND TRADE  
AREA CAPTURES**

**C.D. STUDY REPORT # 223**

**BY**

**SREEDHAR UPENDRAM**

**AND**

**DAVID L. DARLING, Ph.D.**

**K-STATE RESEARCH AND EXTENSION  
DEPARTMENT OF AGRICULTURAL ECONOMICS**

**MARCH 2004**

## **INTRODUCTION**

This is the fourteenth annual report documenting city retail activity in Kansas' communities. This report covers all first-class cities.

The analysis covers the state fiscal year 2003 that begins on July 1, 2002 and ends the following June. The report includes market information on 25 cities. The populations for the cities are based on the July 1<sup>st</sup>, 2002 estimates by the Census Bureau. There are adjusted downward based on the number of people in institutions counted by the Census on April 1<sup>st</sup>, 2000. Example institutions are federal and state prisons, county jails, nursing homes, and veterans' hospitals. The Office of Policy Research and Kansas Department of Revenue provide the city sales tax collection data. The Department's website is [www.ksrevenue.org](http://www.ksrevenue.org).

The City Pull Factors (PF) and other information reported in this study is provided as a service to community and business leaders throughout Kansas. If there are any questions, please write or call us in Manhattan at (785)-532-1512 during normal business hours or send an inquiry to [ddarling@ksu.edu](mailto:ddarling@ksu.edu).

## **MEASURES OF RETAIL TRADE**

A City Trade Pull Factor is a measure of the relative strength of a city's retail community. The Pull Factor is a ratio of city over state per capita sales tax collections. The measure is not adjusted by a buying power index such as a ratio of local median family income over the State's median family income.

A PF measures how well retail businesses in a city are holding on to and attracting taxable retail trade. A PF value above 1.00 indicates that the community is attracting more business than it is losing. A PF value below 1.00 indicates that the community is losing more business than it is capturing. Therefore, PFs are useful indicators for community leaders who are interested in evaluating the strength and weakness of their retail base. Since retail businesses collect the majority of sales tax revenues, most people use PFs to gain insight into the relative strength of the retail community in their hometowns. See Table 1 on page 6.

The trade area capture (TAC) numbers measure the customer base being served by each business community. The TAC is calculated by multiplying the PF by the adjusted city population.

The third measure, Percent of County Trade, is a concentration factor that shows the percent capture of retail trade by a city within its host county.

## **DISCUSSION AND ANALYSIS**

There are 25 cities that are classified as first-class cities in Kansas. These are historical designations, used to identify the larger, more dominant cities in their respective counties. The data in Table 1 show the first class cities, their PF, TAC and concentration factor. The city with the highest PF in FY 2003 out of the first class cities is Lenexa with a PF of 2.05. Lenexa's population in 2002 was 40,574. This indicates that Lenexa's business community serves more than twice their city's population. This performance is possible because of Johnson County's dense population and above average purchasing power. See Table 1.

The city with the highest TAC is Wichita. Its business community serves an estimated 449,646 customers. Wichita's TAC far surpasses Overland Park's TAC, estimated to be 272,091 customers.

Emporia is an example of a city that dominates its county. Emporia's concentration factor is 95.9 percent. This is even higher than Liberal's concentration factor at 95.8 per cent market share of retail business in Seward County.

Figures 1 and 2 highlight the relationship between the Pull Factors, city populations and TAC numbers. Figure 1 compares city populations to city Pull Factors. The graph shows that the average Pull Factors are greater than one in four out of five population categories. The authors find an interesting relationship between the ranges 7,000 to 25,000 compared to 25,000 to 50,000. Pull factors go from less than one to greater than one. This suggests that a critical mass is being met in the higher population category.

These patterns show up again in Figure 2. Again four population categories have averages greater than one. In Figure 2 Kansas City is the only one in the TAC category 100,000 to 150,000. Kansas City has a PF of 0.73. Figures 1 and 2 show slightly different averages for each category. Also, there are differences in which category is highest and higher than the adjacent ones.

### **CITY INTERTEMPORAL ANALYSIS**

The city of Wichita maintained the same city PF of 1.28 for both the years. Wichita has the highest trade area capture, which increased from 437,745 to 449,646. The percent of county trade increased from 80.9% to 81.95%.

The city of Overland Park's PF increased from 1.78 to 1.85. The Trade Area Capture increased from 271,861 to 272,091 and the percent of county trade increased from 35.45% to 37.90%.

The city of Topeka maintained the same city PF of 1.57 for both the years. The TAC increased from 186,048 to 186,256 but the percent of county trade decreased from 93.49% to 92.61%.

The city of Olathe's city Pull Factor increased from 1.60 to 1.69. The Trade Area Capture increased from 153,073 to 155,913. The percent of county trade increased from 19.96% to 21.70%.

The city of Kansas City's PF increased from 0.70 to 0.73. The TAC increased from 101,909 to 106,696. The percent of county trade decreased from 89.19% to 87.80%.

The city of Lawrence's PF decreased from 1.10 to 1.08. The TAC increased from 87,101 to 87,660. The percent of county trade decreased from 93.17% to 92.48%.

The city of Lenexa maintained the highest PF in the state of Kansas at 2.05 for both the years. The TAC decreased from 82,253 to 80,896. The percent of county trade increased from 10.72% to 11.30%.

The city of Salina's PF increased from 1.52 to 1.53. The TAC increased from 68,259 to 69,060. The percent of county trade increased from 94.33% to 94.88%.

The city of Shawnee's PF increased from 1.18 to 1.29. The TAC decreased from 59,809 to 59,488. The percent of county trade increased from 7.80% to 8.30%.

The city of Hutchinson's PF increased from 1.45 to 1.46. The TAC also increased from 54,492 to 55,486. The percent of county trade increased from 84.03% to 84.07%.

The city of Manhattan's PF decreased from 1.18 to 1.15. The TAC increased from 50,035 to 51,512. The percent of county trade decreased from 89.42% to 86.50%.

Garden City's PF decreased from 1.24 to 1.22. The TAC decreased from 34,312 to 33,472. The percent of county trade increased from 83.06% to 84.38%.

The city of Leawood's PF decreased from 1.12 to 1.11. The TAC decreased from 31,450 to 31,023. The percent of county trade increased from 4.10% to 4.30%.

Dodge City's PF decreased from 1.22 to 1.16. The TAC decreased from 30,106 to 29,204. The percent of county trade increased from 93.26% to 93.28%.

Junction City's PF increased from 1.02 to 1.04. The TAC increased from 18,162 to 18,177. The percent of county trade increased from 91.63% to 91.84%.

The city of Newton's PF decreased from 1.05 to 1.02. The TAC increased from 17,502 to 17,739. The percent of county trade increased from 65.83% to 67.94%.

Prairie Village's PF decreased from 0.67 to 0.65. The TAC decreased from 14,497 to 14,192. The percent of county trade increased from 1.90% to 2%.

The city of Parson's PF decreased from 1.00 to 0.95. The TAC decreased from 11,115 to 10,426. The percent of county trade decreased from 79.31% to 77.72%.

The city of Emporia's Pull Factor decreased from 1.14 to 1.13. The City's Trade Area Capture decreased from 29,854 to 29,727. Emporia has the highest percent of county trade, which increased from 95.63% to 95.90%.

The city of Leavenworth's PF increased from 0.80 to 0.82. The TAC increased from 25,673 to 26,404. The percent of county trade decreased from 71.84% to 70.82%.

The city of Liberal's PF decreased from 1.29 to 1.23. The TAC decreased from 25,033 to 24,343. The percent of county trade increased from 95.12% to 95.80%.

The city of Pittsburg's PF increased from 1.09 to 1.10. The TAC increased from 20,373 to 20,623. The percent of county trade increased from 69.71% to 71.68%.

The city of Coffeyville's PF decreased from 1.05 to 1.04. The TAC decreased from 10,969 to 10,796. The percent of county trade increased from 36.74% to 36.82%.

The city of Fort Scott's PF decreased from 1.10 to 1.07. The TAC decreased from 8,858 to 8,494. The percent of county trade increased from 89.47% to 90.58%.

The city of Atchison's PF increased from 0.87 to 0.95. The TAC capture increased from 8,527 to 9,234. The percent of county trade increased from 89.10% to 89.83%.

## THE CHALLENGES

Each city has its own special set of challenges in sustaining and improving the retail business environment. Also, many benefit from growth in retail trade. In addition to the business community, customers and local governments have a stake in the success of the retail sector.

For example Leavenworth, Junction City, and Manhattan are located next to military bases that host large retailers who compete for business, creating additional challenges for city businesses. The military based businesses collect no state and local sales tax. In another situation, malls and big box retailers in Johnson County surround Prairie Village, historically designed as a planned residential community. Its PF is well below 1.00 for this reason.

## DATA SOURCES:

**Population:** The July 2002 estimated populations minus the institutional populations for the year 2000 are used in calculating the city populations. Both come from the US Census Bureau and can be found at [www.census.gov](http://www.census.gov).

**Sales tax data:** Kansas Department of Revenue website is [www.ksrevenue.org](http://www.ksrevenue.org).

All property tax payers receive benefits from a steady and large stream of sales tax revenues. This point is supported by the relative low city Ad Valorem tax on real estate in 2002 for Overland Park.

## SUMMARY

This analysis of first-class cities shows that the Pull Factors tend to rise with city populations. This results in a significant rise in city trade area capture numbers.

Finally, there are many stakeholders who benefit from a successful and expanding retail base. Thus, the authors recommend that a committee of local stakeholders organize and work on building a healthy, sustainable retail community. K-State Research and Extension staff is available to help.

Office of Policy Research website is [www.ku.edu/pri](http://www.ku.edu/pri).

For More Information

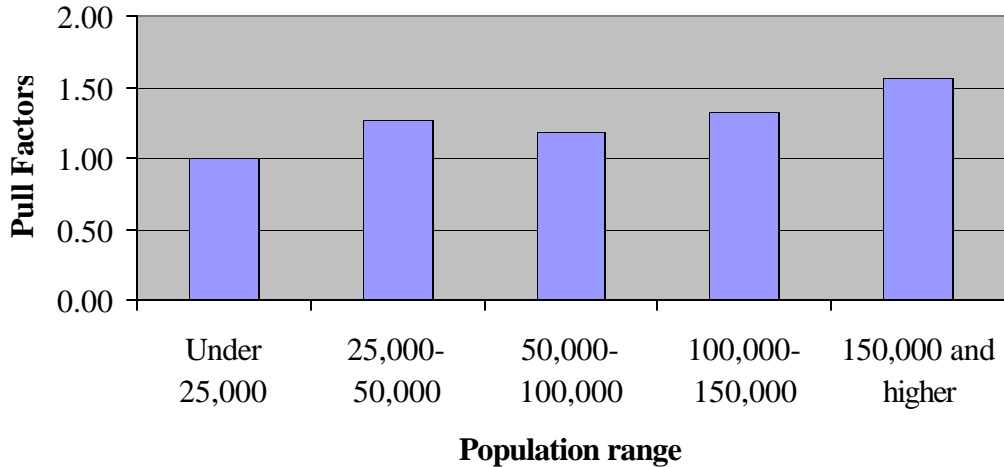
Dr. David Darling's website:

[www.agecon.ksu.edu/ddarling](http://www.agecon.ksu.edu/ddarling)

CD Study Reports and Extension bulletins are found in the section with the same names. For further assistance contact your County Extension Office.

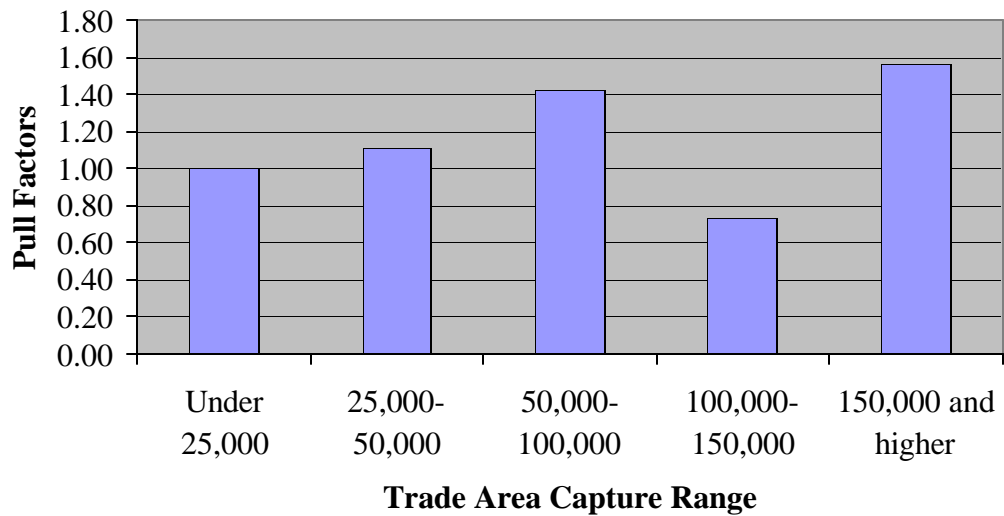
It is the policy of KSU Ag Experiment Station and Coop. Extension Service that all persons shall have equal opportunity and access to its educational programs, services, activity and materials without regard to race, religion, national origin, sex, age, or disability. KSU is an equal opportunity organization. These materials may be available in alternative forms.

**Figure 1. Average First Class Cities Pull Factors Vs Population**



City Pull Factors Source: K-State Research and Extension, March 2004

**Figure 2. Average First Class Cities Pull Factors Vs Trade Area Capture**



City Pull Factors Source: K-State Research and Extension, March 2004

Table 1. FY 2003 First Class Cities – City pull factors, Trade are capture and percent of county trade.

City Name	City Pull Factors	Adjusted Population	Trade Area Captures	Percent of County Trade
1Wichita	1.28	351,940	449,646	81.95%
2Overland Park	1.85	157,000	272,091	37.90%
3Topeka	1.57	118,753	186,256	92.61%
4Olathe	1.69	100,647	155,913	21.70%
5Kansas City	0.73	146,092	106,696	87.80%
6Lawrence	1.08	81,214	87,660	92.48%
7Lenexa	2.05	40,574	80,896	11.30%
8Salina	1.53	45,257	69,060	94.88%
9Shawnee	1.29	52,263	59,488	8.30%
10Hutchinson	1.46	38059	55,486	84.07%
11Manhattan	1.15	44,740	51,512	86.50%
12Garden City	1.22	27,429	33,472	84.38%
13Leawood	1.11	28,228	31,023	4.30%
14Dodge City	1.16	25,076	29,204	93.28%
15Emporia	1.13	26,415	29,727	95.90%
16Leavenworth	0.82	32,013	26,404	70.82%
17Liberal	1.23	19,847	24,343	95.80%
18Pittsburg	1.1	18,798	20,623	71.68%
19Junction city	1.04	17,519	18,177	91.84%
20Newton	1.02	17,398	17,739	67.94%
21Prairie Village	0.65	21,328	14,192	2.00%
22Parsons	0.95	10,997	10,426	77.72%
23Coffeyville	1.04	10,343	10,796	36.82%
24Fort Scott	1.07	7,906	8,494	90.58%
25Atchison	0.95	9,757	9,234	89.83%

Source of data: US Census and the Kansas Department of Revenue

Provided by K-State Research and Extension,

David Darling and Sreedhar Upendram, March 2004