

CREATE BRIDGES Extended Publications 23-3

Kentucky Retail Trade Analysis

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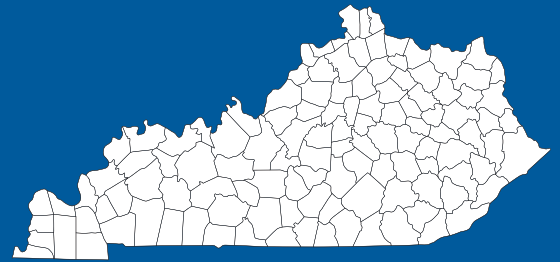
Retail Pull Factors

Retail trade is the sale and distribution of merchandise to consumers through either a store location or non-store location such as the internet, phone, catalog, or advertising.

Retail trade is one of the key economic indicators of regional economies. The retail strength of a county is a function of the customer base served, the buying power of the customer base, and the quality of the retail environment. Retail pull factors measure retail sales captured by counties across Kentucky in the nine sectors listed to the right.

In 2018, according to the National Retail Federation (2020), 429,250 employees worked in the retail sector at 56,100 establishments across Kentucky. Employees in the retail sector earned an average wage of \$27,254 accounting for \$11.7 billion in direct labor income.

Figure 1 illustrates the percentage of retail sales by industry, in 2021. The greatest amount of retail sales was in the auto dealers and gasoline services sector (30%), followed by general merchandise (19%), food (13%), eating and drinking (12%), building materials (9%), and health and personal care (7%). Miscellaneous retail (5%), apparel and accessories (3%), and home furniture (2%) accounted for the remaining retail sales in Kentucky.



Program Overview

CREATE BRIDGES (Celebrating REtail, Accommodations, Tourism, and Entertainment by Building Rural Innovations and Developing Growth Economies) is a pilot project designed for multi-county regions to raise the awareness of the role retail, accommodations, tourism, and entertainment businesses play in the local economy; determine challenges, barriers, and opportunities related to those businesses; and develop and implement strategies to strengthen the retail, accommodations, tourism, and entertainment sectors within a region. CREATE BRIDGES is a collaborative partnership between the Southern Rural Development Center, the University of Arkansas, The University of Illinois, the University of Kentucky, New Mexico State University, North Carolina State University and Oklahoma State University. It is currently active in eight regions throughout the six partner states.

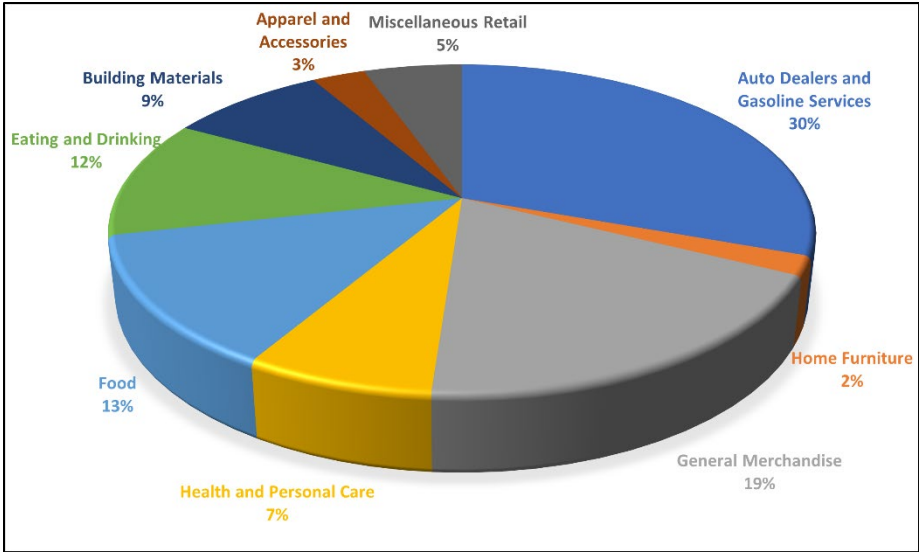


Figure 1. Retail Sales Breakdown in Kentucky by Detailed Industry, 2021

Source: Woods and Poole Economics, Inc., 2022

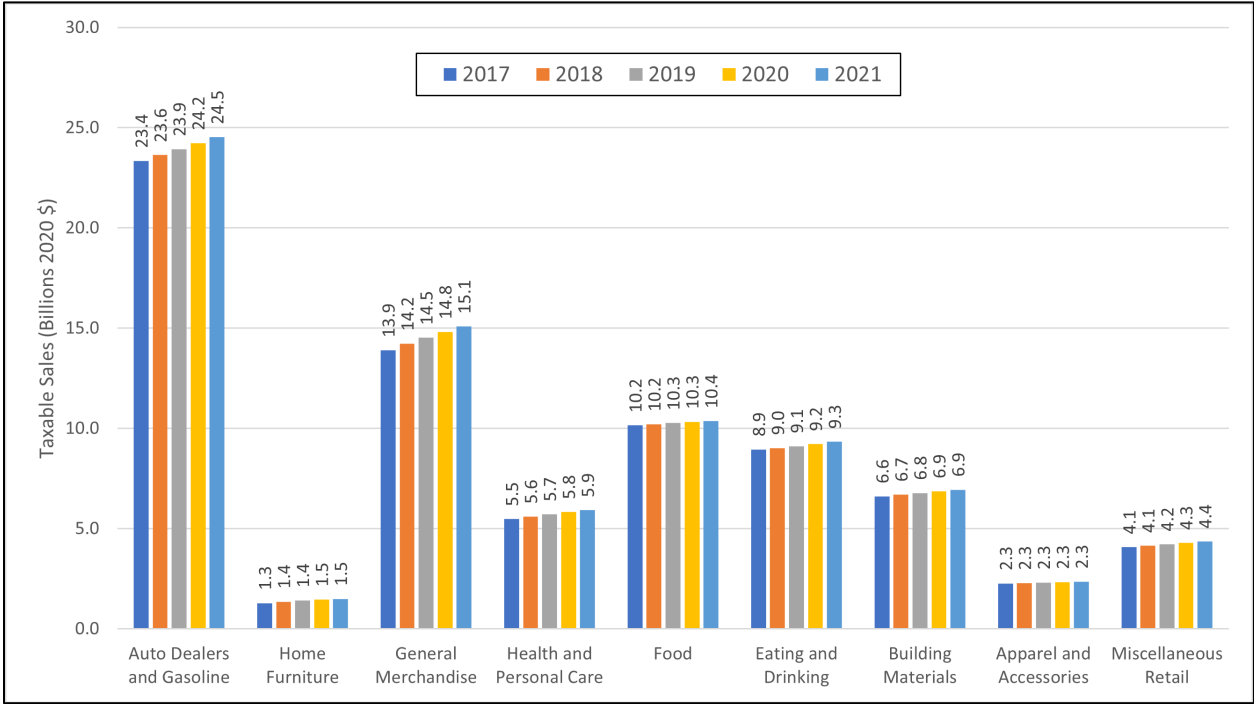


Figure 2. Comparison of Taxable Sales by Detailed Industry in Kentucky, 2017-2021

Source: Woods and Poole Economics, Inc., 2022

When considering the retail sales trends over the last four years (Figure 2), retail customers in Kentucky spent the highest share of the money (over \$23 billion) at auto dealers/gasoline services followed by general merchandise goods (over \$13 billion). Expenditures on food (over \$10 billion) and eating and drinking places (almost \$9 billion)

also experienced a small growth over the past five years. During the same time frame, retail expenditure ranged from \$6.6 to \$6.9 billion for building materials, \$5.5 to \$5.9 billion for health and personal care, and \$4.1 to \$4.4 billion for miscellaneous retail sectors. Apparel and accessories expenditures remained unchanged at \$2.3 billion. Retail expenditure on home furnishings was the least among all sectors in the range of \$1.3 to \$1.5 billion. All of the retail sales were adjusted for inflation and presented in 2020 dollars. Appendix B provides a detail of the retail trade classifications and the sectors or industries included in each category.

CREATE BRIDGES in Kentucky

In Kentucky, Celebrating REtail, Accommodations, Tourism, and Entertainment by Building Rural Innovations and Developing Growth Economies (CREATE BRIDGES) counties are found in the southeastern region of the state or the Eastern Kentucky Concentrated Employment Program FOCUS/Big Sandy region (Bell, Clay, Harlan, Jackson, Johnson, Knox, Lee, Leslie, Letcher, Magoffin, Owsley, Perry, Pike, Whitley, and Wolfe counties) as presented in Figure 3.

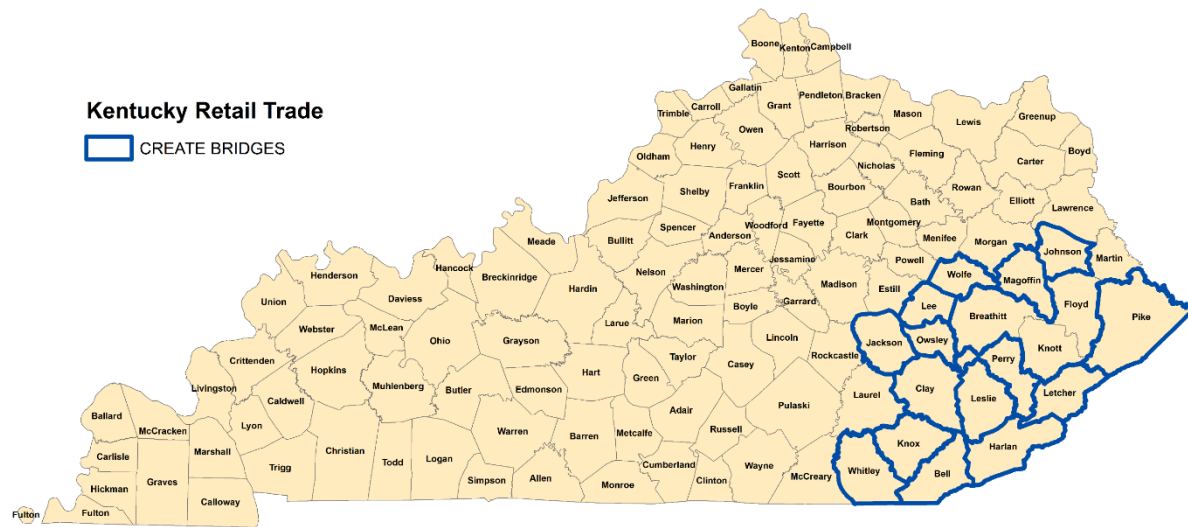


Figure 3. CREATE BRIDGES counties in Kentucky

In Table 1, total retail sales are summarized for Kentucky CREATE BRIDGES counties from 2017 to 2021.

	2017	2018	2019	2020	2021
Bell	467.68	471.00	474.16	477.10	479.74
Clay	183.83	185.96	188.04	190.04	191.94
Harlan	268.44	269.87	271.19	272.40	273.42
Jackson	58.71	59.47	60.20	60.92	61.61
Johnson	497.95	503.87	509.63	515.23	520.54

Knox	462.46	469.45	476.37	483.15	489.68
Lee	71.40	72.17	72.93	73.65	74.34
Leslie	67.96	68.68	69.38	70.06	70.69
Letcher	193.62	195.28	196.89	198.40	199.80
Magoffin	80.92	81.88	82.81	83.71	84.57
Owsley	19.59	19.81	20.03	20.24	20.44
Perry	663.38	669.52	675.48	681.14	686.39
Pike	1187.27	1198.28	1208.91	1219.04	1228.41
Whitley	611.57	620.62	629.59	638.35	646.79
Wolfe	75.77	76.70	77.61	78.49	79.33

Table 1. Summary of total retail sales in CREATE BRIDGES counties in Kentucky (millions 2020\$)

Source: Woods and Poole Economics, Inc., 2022

Kentucky County Retail Pull Factors

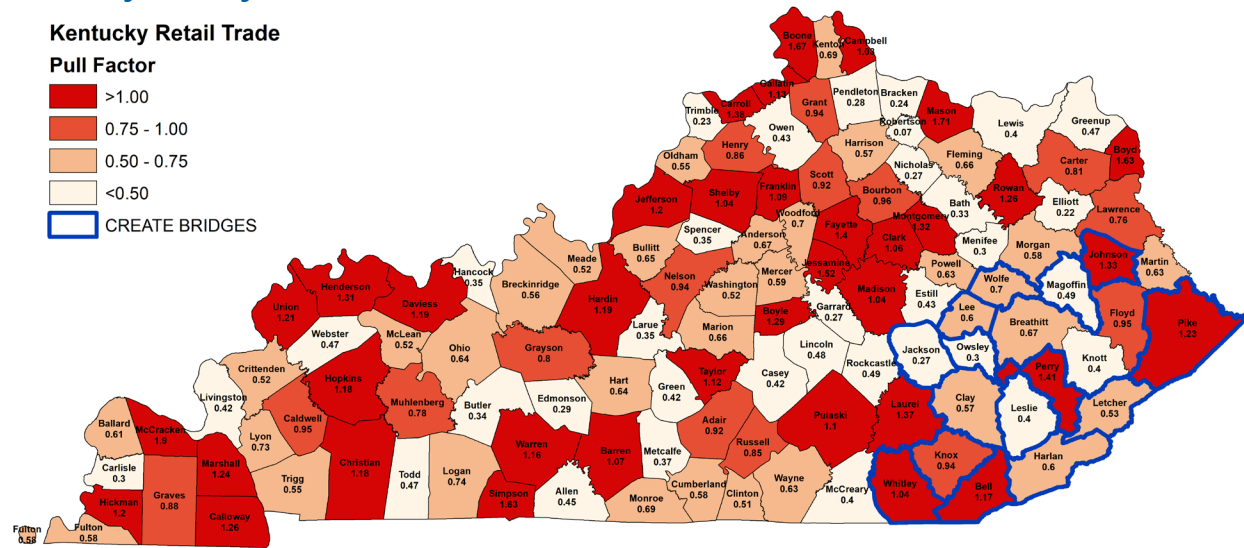


Figure 4. Kentucky County Retail Trade Pull Factors

Sources: Woods and Poole Economics, Inc., 2022; U.S. Census Bureau, 2022a; U.S. Census Bureau, 2022c

The equation to compute retail trade pull factor is as follows:

$$Pull\ Factor_{sector} = \frac{Retail\ sales_{county}}{Adjusted\ population_{county}} \div \frac{Retail\ sales_{state}}{Adjusted\ population_{state}}$$

In 2021, 37 counties in Kentucky had a retail trade pull factor greater than 1 indicating either a gain in customers from other counties or residents spent more than the state average on retail purchases (Figure 4). On the other hand, 83 counties had a pull factor below 1 indicating residents either spent less than other counties or purchased more goods outside their county of residence. For example, McCracken, Mason, and Boone

County residents spent more than the state average while Robertson, Elliott, and Trimble County residents spent less than the state average on retail goods and services (Figure 4).

Market share is the percentage of retail trade area captured by a county with respect to the state. In other words, market share is the percent of the total customer base in Kentucky captured by the county's retail trade. Trade area capture is computed by multiplying the adjusted population by the pull factor for a region. Trade area capture is a measure of the size of the customer base. The equation to compute market share is as follows:

$$\text{Market share}_{\text{sector}} = \frac{\text{Trade area capture}_{\text{county}}}{\text{Trade area capture}_{\text{state}}} = \frac{\text{Adjusted population}_{\text{county}} * PF_{\text{sector}}}{\text{Adjusted population}_{\text{state}} * PF_{\text{sector}}}$$

In computing the retail trade measures, it was assumed that per capita income is homogenous across the state and the retail expenditure by resident population is assumed to be equal. It was also assumed that there are no leakages of retail consumers/sales outside the state of Kentucky.

Commuting Patterns of Retail Customers

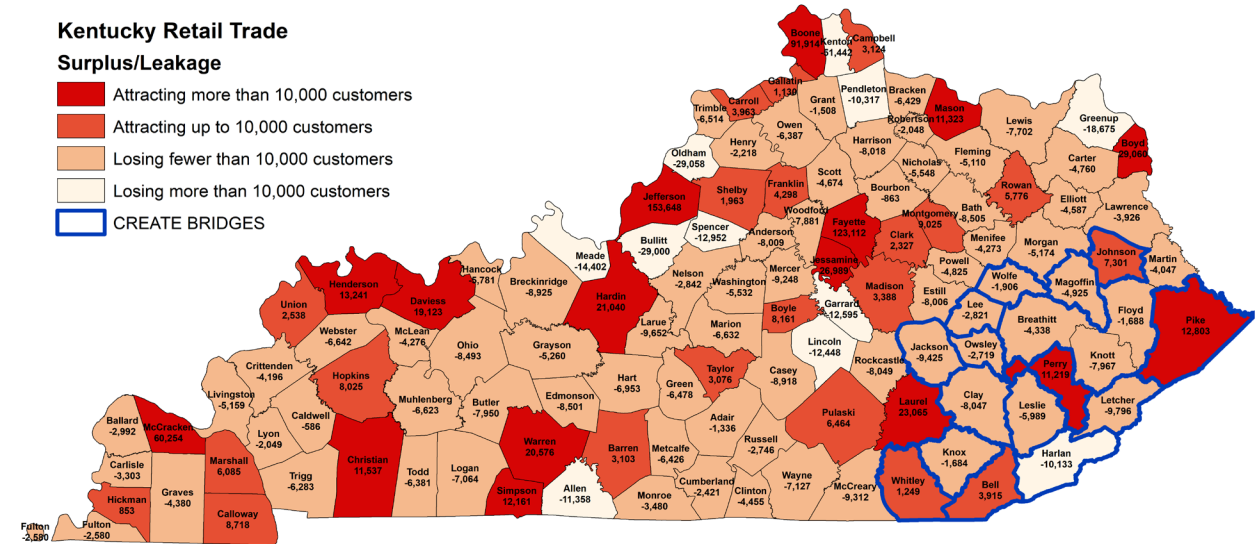


Figure 5. Estimated Retail Trade Customer Surplus/Leakage in Kentucky

Sources: Woods and Poole Economics, Inc., 2022; U.S. Census Bureau, 2022a; U.S. Census Bureau, 2022c

Retail customers travel across county borders to purchase goods and services. The map above (Figure 5) illustrates the number of retail customers either coming into a county or leaving a county for retail purchases in 2021. While 37 counties in Kentucky displayed a net in-commuting pattern, all the other counties (83 counties) displayed a net out-commuting pattern.

Jefferson, Fayette, Boone, and McCracken counties gained the most retail customers while Kenton, Oldham and Bullitt counties lost the most retail customers. It is evident that the metropolitan areas of Louisville, Lexington-Frankfort, Paducah, and the suburbs of Cincinnati (Ohio) attracted the most retail customers. The counties adjacent to the metropolitan areas lost the most retail customers.

Another trend is the loss of retail customers in counties that are neighboring the states of Tennessee, Ohio, Missouri, Indiana, Illinois, Virginia, and West Virginia.

The estimated retail customer surplus or leakage is calculated as follows:

$$\text{Estimated Customers}_{\text{county}} = \text{Trade Area Capture}_{\text{county}} * \text{Adjusted Population}_{\text{county}}$$

Buying Power Index

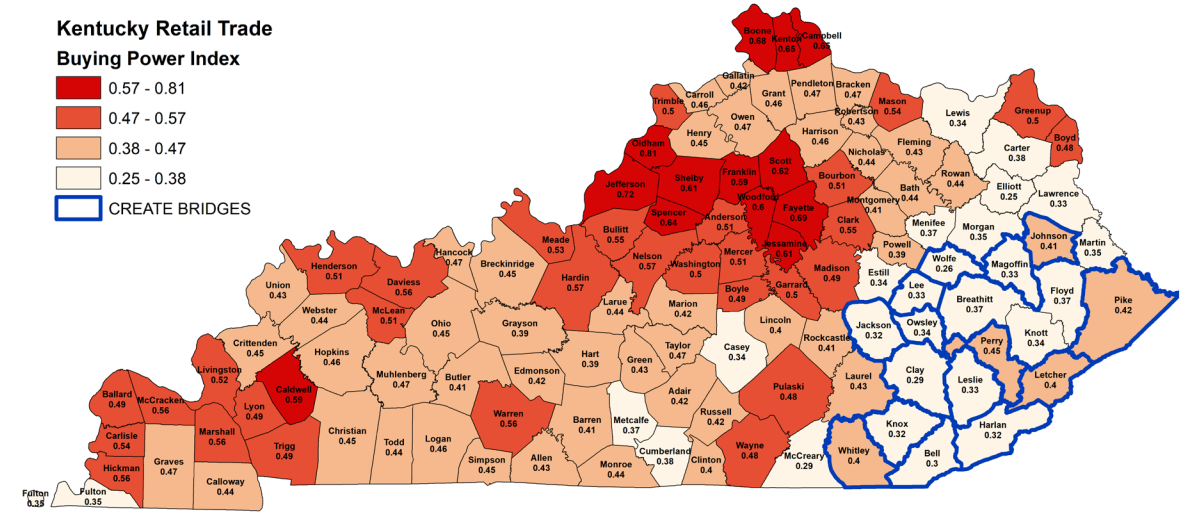


Figure 6. 2021 Buying power index of retail customers in Kentucky

Sources: Woods and Poole Economics, Inc., 2022; U.S. Census Bureau, 2022b; U.S. Census Bureau, 2022c

The buying power index is a measure of the capability of the retail customers living in that county to buy retail goods in 2021. The higher the index, the greater the ability to buy retail goods and support retail activity in the region. The buying power of retail customers (Figure 6) in Jefferson, Fayette, and Boone are relatively higher than other counties. Retail customers in Elliott, Wolfe, and Clay counties had the lowest buying power among all other residents in Kentucky. Many communities in the eastern and Appalachian region of Kentucky have a relatively low buying power compared to other counties.

The buying power index is calculated by the following equation:

$$\text{BPI} = \frac{(2 * \text{Population \%}) + (3 * \text{Retail Sales \%}) + (5 * \text{Per capita income \%})}{10 \text{ (sum of the weights)}}$$

Where "Population %" is the percentage of county population to that of the state of Kentucky, "Retail Sales %" is the percentage of retail sales in the county to that of the state of Kentucky, and "Per capita income %" is the percentage of per capita income in the county to that of the state of Kentucky.

Appendix A provides details on county trade pull factors, trade area capture, market shares, estimated retail customer surplus/leakage and buying power index for all counties in Kentucky.

Summary and Conclusions

Retail trade is an important sector for Kentucky's economy supporting 429,250 employees working in 56,100 establishments across the State. The retail sector has exhibited some growth over the years particularly in 2021 demonstrating economic recovery from the COVID-19 pandemic. Retail expenditures on automobiles and parts and general merchandise have been particularly noteworthy while other sectors remained stable over the last five years.

Retail customers spent more than the state average in metropolitan areas of Louisville, Lexington-Frankfort, Paducah, and the suburbs of Cincinnati. Counties surrounding metropolitan areas have lost retail customers across the state. Retail goods and services for residents along the eastern and Appalachian region of Kentucky could be better served.

One of the limitations of this study in calculating the retail measures is that the economy of the state is considered closed to any out-of-state customers buying retail goods and services. It is also assumed that none of the retail customers within the state shop for retail goods and services outside the state. Of course, there is free movement of retail customers across the borders which is beyond the scope of this study.

Serving rural retail customers and retaining their business is a particular challenge for the retail sector as illustrated through various retail measures. Addressing the needs of low-income consumers and hard to reach areas in specific regions of Kentucky can provide growth opportunities for the retail industry Kentucky.

Retail trade activity in the CREATE BRIDGES region can be improved. The region borders West Virginia, Virginia, and Tennessee indicating a potential to attract retail customers from these states. The retail pull factors for counties in the region are relatively high indicating the presence of anchor retail establishments that cater to the needs of retail customers in the area which also attract retail customers to this region and prevent the loss of retail customers to other regions. The buying power of retail customers in this

region is relatively low indicating a demographic of low-income customers in this region. Lack of direct access to interstate highways is a big disadvantage for these communities which affects storage and distribution of retail goods across the region. An in-depth analysis of willingness to pay for retail goods and understanding the preferences of local retail customers will help in recruiting and retaining the appropriate retail outlets in this region.

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Appendix A

Retail Trade Pull Factor, Trade Area Capture, Market Share, Estimated Retail Customer Surplus or Leakage and Buying Power Index for Counties in Kentucky

County	County Trade Pull Factor	Trade Area Capture	Market Share	Retail Customers Surplus/Leakage	Buying Power Index
Adair	0.92	16,212	0.37%	-1,336	0.42
Allen	0.45	9,217	0.21%	-11,358	0.43
Anderson	0.67	15,924	0.36%	-8,009	0.51
Ballard	0.61	4,586	0.10%	-2,992	0.49
Barren	1.07	46,901	1.07%	3,103	0.41
Bath	0.33	4,207	0.10%	-8,505	0.44
Bell	1.17	26,920	0.61%	3,915	0.30
Boone	1.67	228,309	5.22%	91,914	0.68
Bourbon	0.96	19,128	0.44%	-863	0.51
Boyd	1.63	75,189	1.72%	29,060	0.48
Boyle	1.29	35,846	0.82%	8,161	0.49
Bracken	0.24	1,979	0.05%	-6,429	0.47
Breathitt	0.67	8,850	0.20%	-4,338	0.37
Breckinridge	0.56	11,420	0.26%	-8,925	0.45
Bullitt	0.65	53,551	1.22%	-29,000	0.55
Butler	0.34	4,132	0.09%	-7,950	0.41
Caldwell	0.95	11,881	0.27%	-586	0.59
Calloway	1.26	42,545	0.97%	8,718	0.44
Campbell	1.03	92,618	2.12%	3,124	0.65
Carlisle	0.30	1,430	0.03%	-3,303	0.54
Carroll	1.38	14,522	0.33%	3,963	0.46
Carter	0.81	20,937	0.48%	-4,760	0.38
Casey	0.42	6,490	0.15%	-8,918	0.34
Christian	1.18	77,024	1.76%	11,537	0.45
Clark	1.06	38,754	0.89%	2,327	0.55
Clay	0.57	10,770	0.25%	-8,047	0.29
Clinton	0.51	4,644	0.11%	-4,455	0.40
Crittenden	0.52	4,514	0.10%	-4,196	0.45
Cumberland	0.58	3,368	0.08%	-2,421	0.38
Daviess	1.19	118,907	2.72%	19,123	0.56
Edmonson	0.29	3,442	0.08%	-8,501	0.42
Elliott	0.22	1,284	0.03%	-4,587	0.25
Estill	0.43	5,961	0.14%	-8,006	0.34
Fayette	1.40	432,225	9.87%	123,112	0.69
Fleming	0.66	10,082	0.23%	-5,110	0.43
Floyd	0.95	32,689	0.75%	-1,688	0.37

County	County Trade Pull Factor	Trade Area Capture	Market Share	Retail Customers Surplus/Leakage	Buying Power Index
Franklin	1.09	54,055	1.23%	4,298	0.59
Fulton	0.58	3,505	0.08%	-2,580	0.35
Gallatin	1.13	9,774	0.22%	1,130	0.42
Garrard	0.27	4,633	0.11%	-12,595	0.50
Grant	0.94	23,363	0.53%	-1,508	0.46
Graves	0.88	31,596	0.72%	-4,380	0.47
Grayson	0.80	20,975	0.48%	-5,260	0.39
Green	0.42	4,675	0.11%	-6,478	0.43
Greenup	0.47	16,552	0.38%	-18,675	0.50
Hancock	0.35	3,174	0.07%	-5,781	0.47
Hardin	1.19	129,927	2.97%	21,040	0.57
Harlan	0.60	15,343	0.35%	-10,133	0.32
Harrison	0.57	10,552	0.24%	-8,018	0.46
Hart	0.64	12,241	0.28%	-6,953	0.39
Henderson	1.31	56,130	1.28%	13,241	0.51
Henry	0.86	13,357	0.31%	-2,218	0.45
Hickman	1.20	5,144	0.12%	853	0.56
Hopkins	1.18	52,177	1.19%	8,025	0.46
Jackson	0.27	3,457	0.08%	-9,425	0.32
Jefferson	1.20	915,294	20.91%	153,648	0.72
Jessamine	1.52	78,819	1.80%	26,989	0.61
Johnson	1.33	29,210	0.67%	7,301	0.41
Kenton	0.69	115,637	2.64%	-51,442	0.65
Knott	0.40	5,379	0.12%	-7,967	0.34
Knox	0.94	27,478	0.63%	-1,684	0.32
Larue	0.35	5,087	0.12%	-9,652	0.44
Laurel	1.37	84,668	1.93%	23,065	0.43
Lawrence	0.76	12,262	0.28%	-3,926	0.33
Lee	0.60	4,171	0.10%	-2,821	0.33
Leslie	0.40	3,967	0.09%	-5,989	0.33
Letcher	0.53	11,212	0.26%	-9,796	0.40
Lewis	0.40	5,145	0.12%	-7,702	0.34
Lincoln	0.48	11,521	0.26%	-12,448	0.40
Livingston	0.42	3,743	0.09%	-5,159	0.52
Logan	0.74	20,329	0.46%	-7,064	0.46
Lyon	0.73	5,471	0.12%	-2,049	0.49
McCracken	1.90	127,086	2.90%	60,254	0.56
McCreary	0.40	6,335	0.14%	-9,312	0.29
McLean	0.52	4,543	0.10%	-4,276	0.51
Madison	1.04	96,652	2.21%	3,388	0.49

County	County Trade Pull Factor	Trade Area Capture	Market Share	Retail Customers Surplus/Leakage	Buying Power Index
Magoffin	0.49	4,746	0.11%	-4,925	0.33
Marion	0.66	13,001	0.30%	-6,632	0.42
Marshall	1.24	31,391	0.72%	6,085	0.56
Martin	0.63	6,965	0.16%	-4,047	0.35
Mason	1.71	27,239	0.62%	11,323	0.54
Meade	0.52	15,476	0.35%	-14,402	0.53
Menifee	0.30	1,815	0.04%	-4,273	0.37
Mercer	0.59	13,453	0.31%	-9,248	0.51
Metcalfe	0.37	3,794	0.09%	-6,426	0.37
Monroe	0.69	7,596	0.17%	-3,480	0.44
Montgomery	1.32	36,849	0.84%	9,025	0.41
Morgan	0.58	7,051	0.16%	-5,174	0.35
Muhlenberg	0.78	23,233	0.53%	-6,623	0.47
Nelson	0.94	43,726	1.00%	-2,842	0.57
Nicholas	0.27	2,058	0.05%	-5,548	0.44
Ohio	0.64	14,890	0.34%	-8,493	0.45
Oldham	0.55	35,957	0.82%	-29,058	0.81
Owen	0.43	4,804	0.11%	-6,387	0.47
Owsley	0.30	1,147	0.03%	-2,719	0.34
Pendleton	0.28	4,003	0.09%	-10,317	0.47
Perry	1.41	38,517	0.88%	11,219	0.45
Pike	1.23	68,932	1.57%	12,803	0.42
Powell	0.63	8,053	0.18%	-4,825	0.39
Pulaski	1.10	71,016	1.62%	6,464	0.48
Robertson	0.07	145	0.00%	-2,048	0.43
Rockcastle	0.49	7,715	0.18%	-8,049	0.41
Rowan	1.26	27,787	0.63%	5,776	0.44
Russell	0.85	15,143	0.35%	-2,746	0.42
Scott	0.92	52,265	1.19%	-4,674	0.62
Shelby	1.04	48,921	1.12%	1,963	0.61
Simpson	1.63	31,498	0.72%	12,161	0.45
Spencer	0.35	6,843	0.16%	-12,952	0.64
Taylor	1.12	28,126	0.64%	3,076	0.47
Todd	0.47	5,719	0.13%	-6,381	0.44
Trigg	0.55	7,818	0.18%	-6,283	0.49
Trimble	0.23	1,960	0.04%	-6,514	0.50
Union	1.21	14,546	0.33%	2,538	0.43
Warren	1.16	150,586	3.44%	20,576	0.56
Washington	0.52	6,054	0.14%	-5,532	0.50
Wayne	0.63	12,108	0.28%	-7,127	0.48

County	County Trade Pull Factor	Trade Area Capture	Market Share	Retail Customers Surplus/Leakage	Buying Power Index
Webster	0.47	5,775	0.13%	-6,642	0.44
Whitley	1.04	36,294	0.83%	1,249	0.40
Wolfe	0.70	4,451	0.10%	-1,906	0.26
Woodford	0.70	18,825	0.43%	-7,881	0.60

Appendix B

Retail Trade Classifications and Sectors Included

Apparel retail trade includes retail businesses that sell clothes, accessories, jewelry, luggage, leather, and other personal goods for men, women, and children.

Automotive retail trade includes new and used car, recreational vehicle, motorcycle, boat, and other motor vehicle dealers as well as stores selling automotive parts, tires, and accessories. Automobile service stations, gasoline stations combined with convenience stores and car washes are included in this sector.

Building material retail trade includes building material supplies dealers, home centers, stores selling paint, wallpaper, lawn, garden equipment, and outdoor power equipment. Nursery, garden center, and farm supply stores are also included in this sector.

Eating and Drinking retail trade includes restaurants, fast food places, refreshment stands, and drinking places such as bars, pubs, and taverns. The sector includes food courts in malls, hotel owned restaurants as well as bars and restaurants owned by civic, social, and fraternal associations.

Food retail trade includes grocery stores, supermarkets, convenience stores, specialty food stores including meat, fish, seafood, fruit, and vegetable markets. This sector includes bakery goods stores, confectionery and nut stores, and all other specialty food stores. Beer, wine, and liquor stores are also included in this sector.

Furniture retail trade includes stores that sell furniture, upholstery, appliances, and floor covering. Window treatment stores and all other home furnishings are included in this

sector. This sector also includes consumer electronics, music, computer software, and musical instrument stores.

Miscellaneous retail trade includes florists, office supplies, stationery, gift, novelty, and souvenir stores. Merchandise, pet supplies, art dealers are also included in this sector. This sector also includes manufactured home dealers, tobacco stores, and other retail stores.

General merchandise retail includes department stores, discount stores, and supercenters. These stores sell dry goods, apparel and accessories, furniture and home furnishings, food, and hardware. Big box retail stores are included in this sector.