# Retail Trade Analysis Fiscal Year 2019 

## Iowa State University Department of Economics

## Overview

This report examines local retail sales and related economic trends using a variety of historical and peer-based performance measures.

The retail measures are based on sales of goods and services that are subject to lowa's statewide sales tax, as reported in the lowa Department of Revenue Annual Sales and Use Tax Report.

Retail sales data have been adjusted for inflation and are stated in Fiscal Year 2019 dollar equivalents, unless otherwise noted. The 2019 fiscal year began July 1, 2018, and ended June 30, 2019.

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## Table 1. Carroll County Key Retail Indicators

|  | FY2018 | FY2019 | \% Change |
| :--- | :---: | :---: | :---: |
| Real total taxable sales (\$) | $320,280,034$ | $318,894,260$ | $-0.4 \%$ |
| Number of reporting firms (annualized) | 863 | 889 | $3.0 \%$ |
| Population | 20,214 |  |  |
| Average sales per capita (\$) | 15,844 | 15,819 | $-0.2 \%$ |
| Average sales per firm (\$) | 371,017 | 358,610 | $-3.3 \%$ |

No distinctions are made among residents of households, educational institutions, nursing homes, or other group quarters in the calculation of per capita sales and related indicators.

## 10-Year Summary of Taxable Retail Sales Statistics

Figure 1 shows the average number of business establishments filing sales tax returns during the year, serving as a rough estimate for the number of local retail
establishments.

Figure 2 shows the total real, or inflationadjusted, value of taxable retail sales reported by local businesses.

Figure 1. Number of Reporting Establishments
 Figure 2. Real Total Taxable Sales


Figure 3. Real Per Capita Taxable Sales


Historical Trends in Taxable Retail Sales

Table 2. Historical Statistics for Carroll County:

| Fiscal Year | Reporting Firms | Total Taxable Sales (\$) |  | Real Average Sales (\$) |  | Statewide Real Average (\$) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Nominal | Real | Per Firm | Per Capita | Per Firm | Per Capita |
| 1976 | 734 | 74,773,970 | 278,131,711 | 379,184 | 12,075 | 389,965 | 11,069 |
| 1977 | 746 | 83,143,225 | 292,395,231 | 392,082 | 12,714 | 402,043 | 11,721 |
| 1978 | 785 | 89,757,729 | 296,013,479 | 376,967 | 12,855 | 396,235 | 11,985 |
| 1979 | 814 | 106,168,284 | 324,974,970 | 399,110 | 14,148 | 401,923 | 12,523 |
| 1980 | 824 | 117,778,917 | 326,938,145 | 396,890 | 14,269 | 394,146 | 12,485 |
| 1981 | 826 | 112,462,181 | 283,237,291 | 342,799 | 12,334 | 350,472 | 11,327 |
| 1982 | 825 | 115,488,340 | 271,854,498 | 329,421 | 11,916 | 336,721 | 10,893 |
| 1983 | 847 | 124,305,364 | 279,063,200 | 329,375 | 12,320 | 327,385 | 10,769 |
| 1984 | 852 | 124,464,734 | 268,601,820 | 315,260 | 11,864 | 320,763 | 10,683 |
| 1985 | 835 | 117,965,101 | 245,943,102 | 294,543 | 10,912 | 317,278 | 10,660 |
| 1986 | 856 | 115,493,317 | 233,733,575 | 273,133 | 10,498 | 311,144 | 10,648 |
| 1987 | 824 | 127,041,463 | 251,664,899 | 305,419 | 11,473 | 329,120 | 11,110 |
| 1988 | 838 | 131,613,527 | 251,530,294 | 300,066 | 11,564 | 330,896 | 11,178 |
| 1989 | 840 | 135,274,480 | 247,590,628 | 294,663 | 11,455 | 336,241 | 11,275 |
| 1990 | 844 | 139,350,059 | 245,161,387 | 290,648 | 11,425 | 340,333 | 11,379 |
| 1991 | 843 | 144,045,172 | 242,904,918 | 288,143 | 11,339 | 341,663 | 11,308 |
| 1992 | 841 | 149,277,000 | 245,046,652 | 291,375 | 11,421 | 342,012 | 11,402 |
| 1993 | 863 | 158,987,061 | 254,263,131 | 294,712 | 11,794 | 342,314 | 11,543 |
| 1994 | 859 | 171,105,269 | 267,808,469 | 311,768 | 12,410 | 349,574 | 11,793 |
| 1995 | 870 | 172,486,572 | 264,105,416 | 303,569 | 12,234 | 356,788 | 12,029 |
| 1996 | 875 | 179,338,619 | 269,220,551 | 307,593 | 12,435 | 357,708 | 12,294 |
| 1997 | 879 | 191,005,567 | 280,763,442 | 319,594 | 12,952 | 376,016 | 12,495 |
| 1998 | 877 | 200,538,615 | 291,477,114 | 332,547 | 13,430 | 378,426 | 12,710 |
| 1999 | 856 | 205,609,316 | 295,909,612 | 345,588 | 13,657 | 404,875 | 13,239 |
| 2000 | 859 | 208,106,046 | 293,269,259 | 341,408 | 13,636 | 412,564 | 13,298 |
| 2001 | 846 | 210,559,097 | 289,726,790 | 342,568 | 13,600 | 413,506 | 13,339 |
| 2002 | 831 | 211,866,155 | 288,005,172 | 346,472 | 13,590 | 415,051 | 13,184 |
| 2003 | 802 | 211,860,495 | 282,669,942 | 352,346 | 13,402 | 433,650 | 13,035 |
| 2004 | 787 | 218,230,954 | 285,320,842 | 362,773 | 13,600 | 441,149 | 12,906 |
| 2005 | 782 | 224,154,947 | 285,508,178 | 365,217 | 13,625 | 439,335 | 12,830 |
| 2006 | 785 | 226,432,058 | 279,751,823 | 356,258 | 13,383 | 450,918 | 12,925 |
| 2007 | 833 | 240,974,841 | 290,909,916 | 349,232 | 13,952 | 442,237 | 12,773 |
| 2008 | 847 | 253,009,004 | 296,389,306 | 350,135 | 14,245 | 442,954 | 12,887 |
| 2009 | 878 | 260,053,807 | 301,199,189 | 343,051 | 14,521 | 434,644 | 12,850 |
| 2010 | 890 | 264,483,760 | 302,921,186 | 340,457 | 14,575 | 417,088 | 12,028 |
| 2011 | 879 | 269,747,733 | 303,560,633 | 345,348 | 14,565 | 432,600 | 12,107 |
| 2012 | 886 | 284,745,265 | 312,651,939 | 353,080 | 15,062 | 441,036 | 12,348 |
| 2013 | 884 | 283,551,571 | 306,679,498 | 346,923 | 14,889 | 435,402 | 12,202 |
| 2014 | 864 | 286,159,446 | 305,093,244 | 353,015 | 14,868 | 452,587 | 12,324 |
| 2015 | 862 | 297,061,629 | 314,288,094 | 364,815 | 15,360 | 471,222 | 12,745 |
| 2016 | 867 | 304,291,417 | 320,309,503 | 369,339 | 15,697 | 478,872 | 12,937 |
| 2017 | 870 | 304,691,542 | 315,919,975 | 363,231 | 15,539 | 478,871 | 12,878 |
| 2018 | 863 | 314,815,915 | 320,280,034 | 371,017 | 15,844 | 475,534 | 12,722 |
| 2019 | 889 | 318,894,260 | 318,894,260 | 358,610 | 15,819 | 468,399 | 12,731 |

Local Economic Trends

## Population

Population change is a key factor influencing local retail sales performance. Population gains or losses from year to year directly impact the number of potential shoppers in the region.

In the longer term, population trends also reflect the region's general economic climate. Population growth or stability suggest a more favorable retail environment than population decline, which may signify erosion in the region's economic vitality.

Figure 4 shows
annual population estimates for the county and state, expressed as percentages of baseline values from ten years ago.

Figure 5 compares the local population trend to the average experience for similarly-sized counties in lowa. See Pages 23-24 for a listing of lowa counties by peer group.

Figure 4. Population Trends
(Annual estimates as a percentage of 2008 population)


Figure 5. Population Trend for Peer Counties
(Annual estimates as a percentage of 2008 population)


Local Economic Trends (continued)

## Employment

Area job growth creates earnings opportunities for current residents and also helps to attract new residents to the region. Conversely, lagging employment growth rates may indicate a decline in the region's competitive strength. Figure 6 shows recent county and state employment trends

Rising or persistently high levels of unemployment may contribute to household economic stress within the region and may ultimately reduce aggregate household spending levels. Figure 7 illustrates recent unemployment rates for the county and state.

Figure 6 shows the 10-year trend in county wage and salary employment on a place of work basis. Each year's employment, which counts full-time and part-time jobs equally, is expressed as a percentage of baseline year employment.

Figure 7 shows recent county and statewide unemployment rate trends. The unemployment rate is defined as the percentage of the resident labor force that is unemployed but actively seeking work.

Figure 6. Employment Trends
(Annual employment as a percentage of 2009 employment)


Figure 7. Unemployment Rate (Unemployed percentage of the labor force)


Local Economic Trends (continued)

## Personal Income

Local income levels influence the amounts and types of retail goods and services that area residents demand. Wages and salaries typically comprise the largest portion of local personal income. Other major sources include proprietors' income, investment income, and transfer payments from governments.

Social Security, food assistance, and other government transfers help to stabilize local income levels. A comparatively high dependence on transfer payments, however, suggests that households with low or fixed incomes comprise a larger than average share of the local customer base.

Figure 8 compares
recent average earnings per wage and salary job in the county and the state. The dollar values have been adjusted for inflation.

Figure 9 shows
average transfer payment receipts by county and state residents. These payments include Social Security, Medicare, Medicaid, unemployment insurance, food assistance, and other income supports.

Figure 8. Real Wages and Salaries Per Job (\$)


Figure 9. Real Transfer Payments Per Capita (\$)


Local Economic Trends (continued)

## Income and Age Distributions

Consumer spending behaviors tend to vary by age, income, and other personal characteristics. If the distribution of local residents by income or age deviate strongly from statewide averages, one might expect local spending patterns to differ from the typical spending patterns of lowa residents.

Table 3 shows the county's median household income level and estimated poverty rate compared to the state. In counties with a lower median income level, a higher poverty rate, or both, lower-than-average household spending levels may be anticipated locally.

Table 4 illustrates the percentage distribution of the county's population by age group, relative to the comparable statewide percentages. Strong differences in the regional age distribution likely affect both the mix and levels of retail goods and services demanded by area residents.

Table 3. Carroll County Income and Poverty

| Median Household Income (\$) | Carroll | State of lowa |  |
| :--- | ---: | ---: | ---: |
| Estimate | 60,531 | $>$ | 60,071 |
| $90 \%$ Confidence Interval | $54,510-66,550$ |  | $59,230-60,920$ |


| Poverty Rate (\%) | Carroll | State of lowa |  |
| :--- | ---: | ---: | ---: |
| Estimate | 8.0 | $<$ | 11.2 |
| $90 \%$ Confidence Interval | $6.3-9.7$ | $10.9-11.5$ |  |

Table 4. Carroll County Age Distribution

| Population (\% of total) | Carroll | State of lowa |  |
| :--- | ---: | :--- | ---: |
| Under 5 years | $6.6 \%$ | $>$ | $6.3 \%$ |
| Age 5 to 17 | $17.9 \%$ | $>$ | $16.9 \%$ |
| Age 18 to 24 | $7.5 \%$ | $<$ | $10.1 \%$ |
| Age 65 years and over | $20.3 \%$ | $>$ | $17.1 \%$ |
| Median age | 41.6 | $>$ | 0.0 |

> Higher than state
< Lower than state

## Retail Performance Measures

## Peer Group Comparisons

lowa's 99 counties and their trade centers vary in the level and types of retail activity they can support. In general, retail sector size and diversity tend to increase with community size. Other determining factors include the proximity and size of competing trade centers in neighboring counties and the overall population density in the region. Counties that are similar across these dimensions serve as useful benchmarks for gauging local retail performance.

This report assigns all counties in lowa to peer groups based on their population size and urbanization characteristics. Table $\mathbf{5}$ contains peer group definitions. The relevant peer group for the county is highlighted in blue (see Pages 23-24 for a complete list of counties by peer group). Figure $\mathbf{1 0}$ compares the average sales performance of all county peer groups during the most recent fiscal year.

Table 5. Peer Group Definitions

| Group | Metropolitan or Micropolitan Status | Number of <br> Counties | \% of State <br> Taxable Sales |
| :--- | :--- | :---: | :--- |
| Group 1 | Core county of a metropolitan statistical area | 10 | $64.8 \%$ |
| Group 2 | Core county of a micropolitan statistical area | 17 | $13.7 \%$ |
| Group 3 | Non-metro county whose largest city is between 2,500 to 9,999 in population | 41 | $14.5 \%$ |
| Group 4 | Outlying (non-core) county in a metropolitan statistical area | 11 | $4.3 \%$ |
| Group 5 | Non-metro county whose largest city is less than 2,500 in population | 20 | $2.8 \%$ |

Figure 10. Average Sales Per Capita by County Peer Group, FY2019


## Retail Performance Measures (continued)

This section illustrates how the county's recent per capita sales levels compare to typical and top values among counties in its peer group.

## Expected Range for Local Sales Per Capita

Figure 11 compares county sales levels to a range of "expected," or typical, values for peer group counties. The blue rectangles illustrate the range of expected values, defined as any value between the 25th to the 75th percentile for the peer group in each year. The red dashes show the actual local per capita sales performance.

## Peer Group Rankings

Table 6 identifies the top performers in the county's peer group, as measured by sales per capita. Statewide and peer group averages are also provided, along with the county's ranking among its peers.
See pages 23-24 for a listing of all counties in the peer group.

Figure 11. Expected and Actual Sales Per Capita (\$)


Table 6. Per Capita Sales Comparisons

| Area Name | FY2019 |
| :--- | ---: |
| State of Iowa | $\$ 12,731$ |
| Peer group average | 11,882 |
| Carroll ( \#4/17 in peer group) | 15,819 |

Peer Group Top 10

| Clay | 19,246 |
| :--- | :--- |
| Dickinson | 18,806 |
| Cerro Gordo | 16,459 |
| Carroll | 15,819 |
| Webster | 14,782 |
| Des Moines | 14,734 |
| Muscatine | 10,699 |
| Buena Vista | 10,224 |
| Marshall | 10,170 |
| Marion | 10,162 |

## Retail Performance Measures (continued)

This section introduces three related retail performance measures that are based on a hypothetical "self-sufficiency," or "break-even" level of sales at which the county satisfies all of the retail needs of its own residents (see definition on Page 17). At the break-even level, any sales lost from residents' shopping elsewhere are exactly offset by local sales to non-residents.

## Trade Surplus or Leakage

Trade surplus or leakage measures the dollar difference between the county's actual sales and its breakeven sales target. Table 7 shows inflation-adjusted estimates of sales surplus or leakage in \$ millions.

Table 7. Breakeven Analysis

| Carroll County | FY2010 | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| FY2019 |  |  |  |  |  |  |  |  |  |
| Statewide average spending per person (\$) | 12,028 | 12,107 | 12,348 | 12,202 | 12,324 | 12,745 | 12,937 | 12,878 | 12,722 |
| x local income adjustment | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 |
| = Annual retail needs of local residents (\$) | 12,044 | 12,132 | 12,382 | 12,245 | 12,376 | 12,807 | 13,009 | 12,959 | 12,811 |
| x County population estimate | 20,784 | 20,842 | 20,757 | 20,598 | 20,520 | 20,461 | 20,406 | 20,331 | 20,214 |
| Breakeven sales target (\$ millions) | 250.3 | 252.9 | 257.0 | 252.2 | 253.9 | 262.0 | 265.5 | 263.5 | 259.0 |
| County actual sales (\$ millions) | 302.9 | 303.6 | 312.7 | 306.7 | 305.1 | 314.3 | 320.3 | 315.9 | 320.3 |
| Estimated surplus (+) or leakage (-) | +52.6 | +50.7 | +55.6 | +54.5 | +51.1 | +52.2 | +54.9 | +52.4 | +61.3 |

## Trade Area Capture

The extent of a county's "trade area" can be approximated by converting its sales from dollars into annual customer equivalents. If the customer metric exceeds the resident population, the county's geographic trade area likely extends beyond its borders. If below, the trade area likely overlaps or is subsumed by that of a nearby county. Figure 12 illustrates the county's estimated trade area capture (TAC) relative to its population size (POP).

Figure 12. Estimated Trade Area Capture for Carroll County


## The Pull Factor Ratio

A pull factor ratio describes the size of a city's retail customer base in relation to its own population size. The ratio is derived by dividing the estimated trade area capture value by the number of county residents.

Pull factors can vary widely from one county to the next, but they should be somewhat comparable among peer counties. Figure $\mathbf{1 3}$ shows recent trends in pull factor ratios for the county and its peer group. The county's pull factor values are indicated with red circles. The blue dashes indicate the median pull factor for the peer group in each year.

Figure 13. Pull Factor Comparison With Peer Group


## Interpreting Pull Factors

A pull factor ratio equal to 1.0 suggests that the county's merchants are just satisfying the retail
$=1.0$ demands of local residents. This is equivalent to the "break even" sales level where the county is experiencing neither a surplus or leakage of sales.

A pull factor ratio greater than 1.0 suggests that the county's merchants are attracting shoppers from outside the county. For example, a county whose retail customer base is 25 percent larger than its population would have a pull factor of 1.25 .

A high pull factor may send a false signal of retail strength. Pull factors may be inflated by the presence of one or more businesses that serve as a regional draw in a particular sales category, even if substantial sales leakage is occurring in other local retail segments.

A pull factor ratio less than 1.0 indicates that the county's retail sector cannot satisfy all of the retail needs of its own residents.
<1.0 A low pull factor does not necessarily indicate untapped sales potential in the local retail sector. Most smaller counties should expect to lose at least some fraction of their residents' spending to larger regional and metropolitan trade centers.

## Retail Performance Measures (continued)

## Sales Performance by Business Group

Areas of strength or weakness in the local retail sector may be evident from the sales levels in specific types of businesses. This section examines county-level sales across 12 broad categories of retail firms (see Table 11 on Pages 21-22 for business group definitions).

To avoid misinterpreting the data, readers should note the following:

- The tabulations by business group reflect the type of firm where a retail transaction occurred, but do not necessarily identify the specific type of merchandise that was sold.
- Sales for the Food Dealers group exclude most foods purchased for home consumption. Firms in this group include grocery stores, specialty grocers, and convenience stores. Gasoline stations with convenience stores are also included; however, their gasoline sales are excluded.
- The Automotive group includes auto parts stores, recreational and other motorized vehicle dealers, and new and used car dealers. Sales data for this group exclude automobile sales, which are taxed separately via registration fees.
- The Wholesale group includes wholesale firms that also engage in retail sales. Sales data for this group describe only their retail transactions.

Figure 14 compares per capita sales in the county to a group median value for all of lowa's metropolitan or non-metropolitan counties, whichever applies. The county's data are suppressed for any business groups that did not meet a minimum threshold for number of reporting firms.

Figure 14. Business Group Sales Per Capita


## Retail Performance Measures (continued)

## Business Group Summary

Table 8 provides multiple measures of county sales by business group, including total taxable sales, the annualized number of reporting firms, and annual averages for sales per firm and sales per person.
Benchmark values for the state and peer counties are also provided.
County data are suppressed for any business groups that did not meet a minimum threshold for number of reporting firms.

Table 8. Carroll County Taxable Sales Summary by Business Group

| Business Group Totals and Averages | Carroll County FY19 Totals |  | Average Sales Per Firm (\$) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Total Taxable Sales (\$) | Reporting Firms | Carroll <br> County | State of lowa |
| Apparel Stores | 4,790,315 | 18 | 262,483 | 602,183 |
| Building Materials Stores | 37,144,761 | 15 | 2,476,317 | 2,140,463 |
| Eating and Drinking Establishments | 25,312,227 | 55 | 464,445 | 580,536 |
| Food Stores (excluding non-taxable food items) | 28,141,547 | 28 | 1,023,329 | 1,181,511 |
| General Merchandise Stores | 61,038,479 | 12 | 5,086,540 | 5,845,838 |
| Home Furnishings Stores | 6,159,754 | 12 | 513,313 | 880,390 |
| Specialty Retail Stores | 24,769,920 | 128 | 193,894 | 218,700 |
| Service Establishments | 33,924,823 | 349 | 97,136 | 179,277 |
| Miscellaneous Retail Firms | 27,016,395 | 134 | 201,992 | 269,736 |
| Automotive and Related Stores | 14,899,949 | 28 | 536,935 | 899,706 |
| Utilities and Transportation Services | 25,569,185 | 50 | 513,953 | 996,708 |
| Retail Sales by Wholesale Firms | 30,126,905 | 62 | 487,885 | 942,326 |


| Per Capita Comparisons | Carroll County Averages (\$) |  | FY19 Benchmark Values (\$) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | real average |  | Non-Metro | State of |
| Type of Firm | FY16-FY18 | FY19 | Median | lowa |
| Apparel Stores | 300 | 238 | 85 | 313 |
| Building Materials Stores | 1,726 | 1,843 | 443 | 930 |
| Eating and Drinking Establishments | 1,291 | 1,256 | 757 | 1,436 |
| Food Stores (excluding non-taxable food items) | 1,354 | 1,396 | 1,140 | 1,154 |
| General Merchandise Stores | 2,531 | 3,028 | 1,510 | 1,464 |
| Home Furnishings Stores | 333 | 306 | 152 | 374 |
| Specialty Retail Stores | 1,248 | 1,229 | 466 | 979 |
| Service Establishments | 1,729 | 1,683 | 1,136 | 1,850 |
| Miscellaneous Retail Firms | 1,169 | 1,340 | 860 | 1,078 |
| Automotive and Related Stores | 740 | 739 | 454 | 649 |
| Utilities and Transportation Services | 1,263 | 1,268 | 737 | 1,261 |
| Retail Sales by Wholesale Firms | 2,009 | 1,494 | 751 | 1,242 |

Note: Table 11 on Pages 21-22 lists the specific types of firms in each business group and provides the statewide distribution of tax returns, total sales, and per capita sales by detailed business type.

## Regional Competition

This section explores some of the competitive forces at work within the region. First described is the county's role as a trade center within the state. Next, broader regional trade patterns are illustrated using comparative sales measures in nearby counties. Finally, commuting data help to identify sources and destinations of local workers.

## County Shares

Figure 15 illustrates the county's contributions as a trade, population, and employment center within the state. The county's percentage share of statewide taxable sales is contrasted with its shares of population and jobs.

Table 9 lists cities within the county that reported taxable sales activity during the most recent fiscal year.

Values for unincorporated areas and for cities with 10 or fewer sales tax permitholders are suppressed; however, sales data for those localities are included within the county totals.

Values for any cities marked with an asterisk (*) include neighboring county residents and retailers who fall within the city limits; consequently, the sum of values for all cities listed in Table 7 may exceed reported totals for the county.

Figure 15. Carroll County Shares of State Totals


Table 9. Reporting Jurisdictions in Carroll County

| Area Name | Population | Average <br> \# Filers | Sales <br> \$millions |
| :--- | ---: | ---: | ---: |
| Carroll Total | 20,159 | 889 | 318.9 |
| Arcadia | 511 | 29 | 5.4 |
| Breda | 476 | 36 | 10.6 |
| Carroll | 9,834 | 525 | 254.1 |
| Coon Rapids | 1,235 | 68 | 11.8 |
| Dedham | 258 | 19 | 0.9 |
| Glidden | 1,105 | 53 | 7.9 |
| Halbur | 254 | 18 | 1.9 |
| Manning | 1,424 | 82 | 15.1 |
| Templeton | 335 | 32 | 5.9 |

## Regional Competition (continued)

## Neighboring Area Sales

Regional shopping patterns may be inferred from relative trade levels in surrounding counties.

Figure 16 compares county per capita sales to averages in neighboring counties.

The comparison group includes the five nearest counties as measured from their geographic midpoints. The counties are listed in descending order by their average per capita sales. Population sizes for each county, as of the 2010 Census, are also indicated.

Figure 16. Per Capita Retail Sales (\$)


Figure 17 illustrates county retail pull factors (see Page 11 for a definition of pull factors). The counties with a pull factor exceeding 1.0, identified in the map with large blue dots, are likely exerting a strong retail influence on trade centers in neighboring counties. Counties with pull factors below 1.0 are leaking sales on a county-wide basis, but might still contain one or more strong local trade centers.

Figure 17. County Pull Factors


## Commuting Patterns

The daily exchange of workers with surrounding areas add or subtracts to the county's potential retail customer base. The sources and destinations of commuting flows can reveal regional economic dependencies that influence local retail conditions.

Figure 18 summarizes the estimated daily worker flows to and from the county.

All commuting estimates on this page describe flows of workers in wage and salary positions only. Self-employed workers are excluded.

Table 10. Carroll County Commuting Probabilities

|  | Number | \% of total | Peer <br> average |
| :--- | ---: | ---: | ---: |
| Workplaces of Carroll County residents: |  |  |  |
| Working within the county | 6,879 | $61.2 \%$ | $55.0 \%$ |
| Working elsewhere: | 4,362 | $38.8 \%$ | $45.0 \%$ |
| in Polk Co. | 521 | $4.6 \%$ |  |
| in all other areas | 3,841 | $34.2 \%$ |  |

Sources for Carroll County workers:

| Living within the county | 6,879 | $60.7 \%$ | $56.0 \%$ |
| :---: | ---: | ---: | ---: |
| Commuting from elsewhere: | 4,458 | $39.3 \%$ | $44.0 \%$ |
| from Crawford Co. | 484 | $4.3 \%$ |  |
| from all other areas | 3,974 | $35.1 \%$ |  | are included for comparison.

## Data Notes

## Iowa's Retail Sales Tax Reporting

The state of lowa imposes a six percent tax on the gross receipts from sales of taxable tangible personal property and taxable services.

Retailers file sales tax returns to the Iowa Department of Revenue on a semi-monthly, monthly, quarterly, or annual basis depending on their amount of sales.

The Department of Revenue compiles the data from sales tax returns and publishes quarterly and annual retail sales tax reports that provide the primary source of data for this report.

The state's reporting does not include retail transactions that are exempt from the statewide sales tax. Consequently, this report describes only taxable, not total, retail sales. Several types of exempt activity are listed on the following page.

Occasional anomalies may arise in retail sales data reported at the local level. For example, the locations of specific firms may not precisely align with the administrative jurisdictions used for tax reporting purposes. Such discrepancies may result in under-statement or overstatement of actual local retail sales activity.

When analyzing trends, users should note that changes in lowa's retail sales tax laws or changes in administrative or accounting practices may affect the comparability of taxable sales data over time.

Other cautions for using taxable sales data to analyze local retail performance are listed at right. Users seeking more detailed information are encouraged to consult the lowa Department of Revenue's website at https://tax.iowa.gov/.

## Cautions and Limitations for Interpreting

 Reported Sales Data- Non-Taxable Goods \& Services. Because certain goods and services are exempt from the statewide sales tax, the sales information presented in this report provides only a partial picture of retail and service sector activity in lowa's communities.
- E-commerce Sales. Neither the volume of e-commerce purchases by lowa residents nor e-commerce sales by lowa retailers are currently measurable.
- Large Public Institutions. The presence of large public institutions such as correctional facilities or universities may distort local sales measures, as their institutional purchases are excluded from taxable sales but their residents are included in local population estimates.
- Sales or Service Territories. Sales levels in some cities may be inflated by the administrative presence of firms serving a much larger geographic service territory, such as rural telecommunications and other cable or internet service providers.
- Non-Disclosure Rules. To avoid disclosing information traceable to specific firms, the lowa Department of Revenue only reports data from localities with 10 or more tax returns filed per quarter or 40 returns per year. Sales data for areas below this threshold are grouped into a "remainder of county" value.


## Notable Exclusions from Iowa's Retail Sales Tax

The retail data analyzed for this report only capture transactions that are subject to lowa's statewide sales tax. In general, merchandise goods are taxable unless specifically exempted, whereas services are exempted from the tax unless specifically enumerated by the state.

Following are several types of sales activity that are not covered by this report.

Exempt or Excluded Goods. Some of the goods not subject to the sales tax include:

- Certain foods for home consumption
- Prescription drugs and medical devices
- New or used cars and other vehicles, as they are taxed separately under the state's one-time registration fee.
- Gasoline, which is subject to a separate fuel tax

Exempt Services. Unlike tangible goods, services are exempt from tax unless specifically enumerated. Many professional services such as medical and legal services are exempt from the sales tax.

Sales to Tax-Exempt Organizations. Local and state government entities are exempt from the sales tax. Sales to private nonprofit educational institutions for educational purposes are also exempt. Sales from fundraising activities are exempt from sales tax if the proceeds are used for educational, religious, or charitable purposes.

Internet/Catalog Sales. Prior to 2019, many out-of-state purchases by lowa residents were untaxed. lowa implemented regulatory changes on July 1, 2019, to require collection of sales taxes on residents' purchases from firms without a physical presence in lowa but who generate $\$ 100,000$ or more in gross revenues from lowa sales.

Sales to Agriculture. Sales tax exemptions for agriculture apply to the purchase of feed, seed, fertilizer, farm machinery and equipment, fuels and utilities, and some services.

Utilities. The state has phased out taxes on sales of metered gas, electricity, and fuel used as energy in residential dwellings, apartment units and condominiums. This phase-out was completed by 2006. Specific exemptions for utilities may also apply to certain businesses and industries.

Sales to Manufacturing and Other Industries. The state exempts sales of many goods and services that are used as inputs to industrial processes. Exemptions to manufacturing include purchases of tangible inputs that become an integral part of manufactured goods ultimately sold at retail; fuels, chemicals, and other inputs that are consumed during production processes; industrial machinery, equipment, and some computer equipment; and many services.

The state has created additional exemptions targeted toward specific industries such as wind energy and information technology. See the lowa Department of Revenue Web site for more detailed information.

More detailed information about Iowa's sales tax is available from the Iowa Department of Revenue at https://tax.iowa.gov/iowa-sales-and-use-tax-guide

## Definitions of Retail Measures

Retail Sales. This term refers to the reported sales of goods and services that are subject to lowa's retail sales tax. lowa's current sales tax rate is 6 percent.

Fiscal Year. Iowa's annual sales tax reports reflect a July 1 - June 30 fiscal year period.

Reporting Firms. This value reflects the average number of tax returns filed each quarter during the year, and it serves as a proxy for the number of local retail firms.

Nominal Sales. Nominal sales are the dollar amounts as reported in the year the transactions actually took place. These values have not been adjusted for inflation.

Real Sales. "Real" dollar values have been standardized to reflect the purchasing power of a dollar in the current fiscal year, thus removing the effects of price inflation.

Business Group Sales. The state reports countylevel taxable sales data for 12 business groups. The data reflect the business classification of the firms making the sales, not the specific goods and services that they sold.

Sales Per Firm. Per firm sales are calculated by dividing the annual dollar value of sales by the average number of reporting firms in that year.

Sales Per Capita. Per capita (or "per person") sales are calculated by dividing the dollar value of sales by the estimated population for the subject place. No distinctions are made among residents of households, educational institutions, nursing homes, or other group quarters in the calculation of per capita sales and related indicators.

Expected Per Capita Spending. An expected value for residents' average spending on taxable retail goods and services provides the basis for breakeven sales, trade surplus and leakage, trade area capture, and pull factor values. This measure is sensitive to local income levels. For more information about its derivation, please contact the author.

## Self-Sufficiency (or Breakeven) Level of Sales.

This hypothetical value describes the amount of sales that would be generated if the county's retailers (1) served only local residents and (2) satisfied all of those residents' retail needs. It is equivalent to the total estimated spending by residents on taxable goods and services purchased anywhere within lowa. To derive this value, the dollar amount of statewide average per capita spending on taxable goods and services is adjusted up or down by a factor that reflects local income characteristics, and is then multiplied by the county's population size.

Trade Surplus or Leakage. Trade surplus or leakage measures the dollar difference between the county's actual sales and its breakeven sales level.

Trade Area Capture. Trade area capture translates local retail sales from dollars to annual customer equivalents. It is estimated by dividing the county's actual total sales by the expected per capita average spending of residents.

Pull Factor Ratio. A county's pull factor ratio is calculated by dividing its trade area capture measure by its resident population.

## Other Data Sources and Notes

Population: Population values in this report describe the estimated, average number of residents during a given fiscal year. The estimates are based on data released annually through the Population Estimates Program, U.S. Census Bureau. The Census Bureau's published estimates, which reflect the population on July $1^{\text {st }}$ of each year, may differ from the average values appearing in this report.

With each of its annual data releases, the U.S. Census Bureau may revise its estimates from prior years. This report incorporates the most recently available estimates and revisions. As a consequence, population-based statistics published in this report may not reconcile with those appearing in earlier retail trade analysis reports. In most cases, the discrepancies are minor.

City-to-County Assignments: The incorporated territory of many lowa cities crosses the boundaries of two or more counties. For this report, all cities are assigned to the county that contained the greatest percentage of its population in the 2010 Census.

Commuting Flows: Local Employment Dynamics Program, U.S. Census Bureau. These commuting flows describe the place of work and place of residence of wage and salary workers in. Self-employed individuals such as sole proprietors and partners are excluded from these data.

Employment: U.S. Bureau of Economic Analysis (annual) and U.S. Bureau of Labor Statistics (monthly). Employment includes fulltime and part-time wage and salary jobs, with all jobs counted equally.

Unemployment: Local Area Unemployment Statistics, U.S. Bureau of Labor Statistics.

Average Wages and Salaries per Job: U.S. Bureau of Economic Analysis.

Transfer Payments per Capita: U.S. Bureau of Economic Analysis.

## Median Household Income and Poverty:

Small Area Income and Poverty Estimates, U.S. Census Bureau.

Price Deflators: Except where otherwise noted in this report, the dollar values for all retail sales and personal income data have been adjusted for inflation using the Implicit Price Deflator for Personal Consumption Expenditures published by the U.S. Bureau of Economic Analysis.

## Table 11. Business Group Definitions (page 1 of 2)

| Business Group | Number of Returns | Percent of Returns | Taxable Sales | Per Capita Sales |
| :---: | :---: | :---: | :---: | :---: |
| Apparel Group |  |  |  |  |
| Clothing and Clothing Accessories Stores | 5,699 | 1.7 | \$832,931,221 | \$264 |
| Shoe Stores | 853 | 0.3 | \$153,445,151 | \$49 |
| Group Totals | 6,552 | 1.9 | \$986,376,372 | \$313 |
| Building Materials Group |  |  |  |  |
| Building Material Dealers | 1,610 | 0.5 | \$2,123,851,271 | \$674 |
| Garden Supply Stores | 1,998 | 0.6 | \$413,652,008 | \$131 |
| Hardware Stores | 1,167 | 0.3 | \$275,998,598 | \$88 |
| Mobile Home Dealers | 167 | 0.1 | \$6,185,666 | \$2 |
| Paint and Glass Stores | 535 | 0.2 | \$111,141,666 | \$35 |
| Group Totals | 5,477 | 1.6 | \$2,930,829,209 | \$930 |
| Eating and Drinking Group |  |  |  |  |
| Restaurants, Taverns, and Bars | 31,196 | 9.1 | \$4,527,601,584 | \$1,436 |
| Group Totals | 31,196 | 8.8 | \$4,527,601,584 | \$1,436 |
| Food Dealers Group |  |  |  |  |
| Gas Stations/Convenience Stores Selling Gas | 6,784 | 2.0 | \$1,752,135,115 | \$556 |
| Grocery Stores and Convenience Stores | 3,943 | 1.2 | \$1,828,509,396 | \$580 |
| Specialized Groceries | 1,590 | 0.5 | \$57,522,673 | \$18 |
| Group Totals | 12,317 | 3.6 | \$3,638,167,184 | \$1,154 |
| General Merchandise Group |  |  |  |  |
| Department Stores | 648 | 0.2 | \$2,899,566,505 | \$920 |
| Miscellaneous Merchandise Stores | 2,280 | 0.7 | \$1,701,209,150 | \$540 |
| Variety Stores | 229 | 0.1 | \$13,051,913 | \$4 |
| Group Totals | 3,157 | 0.9 | \$4,613,827,568 | \$1,464 |
| Home Furnishings And Appliances Group |  |  |  |  |
| Appliances and Entertainment Equipment | 2,099 | 0.6 | \$457,528,710 | \$145 |
| Furniture Stores | 1,523 | 0.4 | \$427,743,342 | \$136 |
| Home Furnishing Stores | 1,738 | 0.5 | \$294,450,210 | \$93 |
| Group Totals | 5,360 | 1.6 | \$1,179,722,262 | \$374 |
| Miscellaneous Group |  |  |  |  |
| Agricultural Production and Services | 14,350 | 4.2 | \$498,975,057 | \$158 |
| Apparel and Textile Manufacturers | 90 | 0.0 | \$4,682,672 | \$1 |
| Carpentry Contractors | 1,452 | 0.4 | \$48,745,963 | \$15 |
| Electrical Contractors | 3,399 | 1.0 | \$170,662,243 | \$54 |
| Food Manufacturers | 1,001 | 0.3 | \$110,801,520 | \$35 |
| Furniture, Wood and Paper Manufacturers | 1,167 | 0.3 | \$161,209,518 | \$51 |
| General Contractors | 5,355 | 1.6 | \$210,022,341 | \$67 |
| Industrial Equipment Manufacturers | 1,624 | 0.5 | \$398,292,759 | \$126 |
| Mining | 1,286 | 0.4 | \$197,678,682 | \$63 |
| Miscellaneous Manufacturers | 2,456 | 0.7 | \$143,299,551 | \$45 |
| Non-Metallic Product Manufacturers | 1,859 | 0.5 | \$427,390,054 | \$136 |
| Other Special Trade Contractors | 4,590 | 1.3 | \$325,574,195 | \$103 |
| Painting Contractors | 2,468 | 0.7 | \$35,623,371 | \$11 |
| Plumbing and Heating Contractors | 5,150 | 1.5 | \$475,089,413 | \$151 |
| Publishers Of Books and Newspapers and Commercial Printers | 1,224 | 0.4 | \$76,845,599 | \$24 |
| Unclassified | 2,936 | 0.9 | \$114,255,295 | \$36 |
| Group Totals | 50,407 | 14.7 | \$3,399,148,233 | \$1,078 |
| Motor Vehicle Group |  |  |  |  |
| Automotive Parts and Accessories | 4,810 | 1.4 | \$726,778,297 | \$231 |
| New and Used Car Dealers | 2,934 | 0.9 | \$1,050,213,464 | \$333 |
| Recreational and All Other Motorized Vehicles | 1,345 | 0.4 | \$267,365,159 | \$85 |
| Group Totals | 9,089 | 2.7 | \$2,044,356,920 | \$649 |

## Table 11. Business Group Definitions (page 2 of 2)

Business Group $\quad$ Services Group
Arts and Entertainment
Auto Rental and Storage
Auto Repair
Beauty/Barber Shops
Education and Athletic Events
Electronic and Precision Equipment Repair and Maintenance
Employment Services
Finance, Insurance, Real Estate and Leasing
Footwear and Leather Repair
Funeral Service and Crematories
Hotels and All Other Lodging Places
Laundry and Floor Cleaning
Miscellaneous Repairs
Motion Picture and Video Industries
Other Business Services
Other Personal Services
Other Services
Photographic Studios
Upholstery and Furniture Repair
Watch, Clock, Jewelry Repair
Group Totals

| Number of <br> Returns | Percent of <br> Returns | Taxable Sales | Per Capita <br> Sales |
| ---: | ---: | ---: | ---: |
|  |  |  |  |
| 9,287 | 2.7 | $\$ 588,013,185$ | $\$ 187$ |
| 4,588 | 1.3 | $\$ 363,910,933$ | $\$ 115$ |
| 16,924 | 4.9 | $\$ 1,188,977,539$ | $\$ 377$ |
| 26,597 | 7.8 | $\$ 431,857,871$ | $\$ 137$ |
| 1,595 | 0.5 | $\$ 93,381,121$ | $\$ 30$ |
| 1,726 | 0.5 | $\$ 68,393,437$ | $\$ 22$ |
| 516 | 0.2 | $\$ 31,618,871$ | $\$ 10$ |
| 4,756 | 1.4 | $\$ 129,630,650$ | $\$ 41$ |
| 119 | 0.0 | $\$ 2,583,168$ | $\$ 1$ |
| 1,308 | 0.4 | $\$ 60,651,730$ | $\$ 19$ |
| 8,394 | 2.4 | $\$ 1,091,324,582$ | $\$ 346$ |
| 2,222 | 0.6 | $\$ 111,191,763$ | $\$ 35$ |
| 7,700 | 2.2 | $\$ 208,564,402$ | $\$ 66$ |
| 3,168 | 0.9 | $\$ 222,194,199$ | $\$ 70$ |
| 16,221 | 4.7 | $\$ 803,048,154$ | $\$ 255$ |
| 10,630 | 3.1 | $\$ 280,797,275$ | $\$ 89$ |
| 8,334 | 2.4 | $\$ 100,880,643$ | $\$ 32$ |
| 5,125 | 1.5 | $\$ 46,223,501$ | $\$ 15$ |
| 760 | 0.2 | $\$ 5,715,996$ | $\$ 2$ |
| 119 | 0.0 | $\$ 1,532,411$ | $\$ 0$ |
| 130,089 | 38.0 | $\$ 5,830,491,431$ | $\$ 1,850$ |


| Beauty and Health (Includes Pharmacies and Drug Stores) | 3,341 | 1.0 | $\$ 507,631,493$ | $\$ 161$ |
| :--- | ---: | ---: | ---: | ---: |
| Book and Stationery Stores | 1,345 | 0.4 | $\$ 143,675,957$ | $\$ 46$ |
| Direct Sellers | 3,921 | 1.1 | $\$ 125,320,447$ | $\$ 40$ |
| Electronic Shopping and Mail Order Houses | 950 | 0.3 | $\$ 8,747,952$ | $\$ 3$ |
| Florists | 1,410 | 0.4 | $\$ 43,340,942$ | $\$ 14$ |
| Fuel and Ice Dealers | 97 | 0.0 | $\$ 7,088,601$ | $\$ 2$ |
| Hobby and Toy | 6,767 | 2.0 | $\$ 192,624,816$ | $\$ 61$ |
| Jewelry | 1,850 | 0.5 | $\$ 179,477,462$ | $\$ 57$ |
| Liquor Stores | 876 | 0.3 | $\$ 81,893,997$ | $\$ 26$ |
| Other Specialty | 24,028 | 7.0 | $\$ 1,080,529,487$ | $\$ 343$ |
| Sporting Goods | 4,715 | 1.4 | $\$ 519,996,903$ | $\$ 165$ |
| Stationery, Gift, Novelty | 2,097 | 0.6 | $\$ 58,036,931$ | $\$ 18$ |
| Used Merchandise Stores | 4,086 | 1.2 | $\$ 77,614,478$ | $\$ 25$ |
| Vending Machine Operators | 979 | 0.3 | $\$ 61,079,745$ | $\$ 19$ |
| Group Totals | 56,462 | 16.5 | $\$ 3,087,059,211$ | $\$ 979$ |

## Utilities and Transportation Group

Communications

| 3,999 | 1.2 | $\$ 1,389,786,930$ | $\$ 441$ |
| ---: | ---: | ---: | ---: |
| 1,483 | 0.4 | $\$ 1,554,356,922$ | $\$ 493$ |
| 3,698 | 1.1 | $\$ 219,506,021$ | $\$ 70$ |
| 6,774 | 2.0 | $\$ 811,721,475$ | $\$ 258$ |
| 15,954 | 4.7 | $\$ 3,975,371,348$ | $\$ 1,261$ |

Water and Sanitation
Group Totals

## Wholesale Goods Group

Apparel, Piece Goods

| 59 | 0.0 | $\$ 765,837$ | $\$ 0$ |
| ---: | ---: | ---: | ---: |
| 3,380 | 1.0 | $\$ 1,720,950,477$ | $\$ 546$ |
| 5,297 | 1.5 | $\$ 1,323,204,283$ | $\$ 420$ |
| 176 | 0.1 | $\$ 83,117,679$ | $\$ 26$ |
| 601 | 0.2 | $\$ 74,268,333$ | $\$ 24$ |
| 676 | 0.2 | $\$ 78,105,117$ | $\$ 25$ |
| 5,921 | 1.7 | $\$ 564,903,295$ | $\$ 179$ |
| 505 | 0.1 | $\$ 68,870,161$ | $\$ 22$ |
| 16,615 | 4.8 | $\$ 3,914,185,182$ | $\$ 1,242$ |
| 342,675 | 100.0 | $\$ 40,127,136,504$ | $\$ 12,731$ |

## Table 12. Peer County Groupings and 2010 Population Sizes (page 1 of 2)



# Table 12. Peer City Groupings and 2010 Population Sizes (page 2 of 2) 

| 2010 Population |  |  | Metropolitan or Micropolitan Area |
| :---: | :---: | :---: | :---: |
| (continued from previous page) | Jackson................. | 19,848 | None |
|  | Kossuth.................. | 15,543 | None |
|  | Lucas..................... | 8,898 | None |
|  | Mitchell................ | 10,776 | None |
|  | Monona................. | 9,243 | None |
|  | Monroe................. | 7,970 | None |
|  | Montgomery......... | 10,740 | None |
|  | O'Brien.................. | 14,398 | None |
|  | Osceola................. | 6,462 | None |
|  | Page..................... | 15,932 | None |
|  | Palo Alto................ | 9,421 | None |
|  | Poweshiek............. | 18,914 | None |
|  | Shelby................... | 12,167 | None |
|  | Sioux..................... | 33,704 | None |
|  | Tama..................... | 17,767 | None |
|  | Union.................... | 12,534 | None |
|  | Winnebago............ | 10,866 | None |
|  | Winneshiek............ | 21,056 | None |
|  | Wright................... | 13,229 | None |
| $4$ | Benton.................. | 26,076 | Cedar Rapids, IA Metropolitan Statistical Area |
|  | Bremer.................. | 24,276 | Waterloo-Cedar Falls, IA Metropolitan Statistical Area |
|  | Grundy.................. | 12,453 | Waterloo-Cedar Falls, IA Metropolitan Statistical Area |
|  | Guthrie.................. | 10,954 | Des Moines-West Des Moines, IA Metropolitan Statistical Area |
|  | Harrison................ | 14,928 | Omaha-Council Bluffs, NE-IA Metropolitan Statistical Area |
|  | Jones..................... | 20,638 | Cedar Rapids, IA Metropolitan Statistical Area |
|  | Madison................ | 15,679 | Des Moines-West Des Moines, IA Metropolitan Statistical Area |
|  | Mills...................... | 15,059 | Omaha-Council Bluffs, NE-IA Metropolitan Statistical Area |
|  | Plymouth............... | 24,986 | Sioux City, IA-NE-SD Metropolitan Statistical Area |
|  | Warren................. | 46,225 | Des Moines-West Des Moines, IA Metropolitan Statistical Area |
|  | Washington........... | 21,704 | Iowa City, IA Metropolitan Statistical Area |
| $5$ | Adair..................... | 7,682 | None |
|  | Adams................ | 4,029 | None |
|  | Audubon............... | 6,119 | None |
|  | Butler.................... | 14,867 | None |
|  | Calhoun................ | 9,670 | None |
|  | Clayton................. | 18,129 | None |
|  | Davis.................... | 8,753 | Ottumwa, IA Micropolitan Statistical Area |
|  | Decatur................. | 8,457 | None |
|  | Fremont................ | 7,441 | None |
|  | Ida......................... | 7,089 | None |
|  | Keokuk.................. | 10,511 | None |
|  | Louisa.................... | 11,387 | None |
|  | Lyon..................... | 11,581 | None |
|  | Pocahontas............ | 7,310 | None |
|  | Ringgold................ | 5,131 | None |
|  | Sac....................... | 10,350 | None |
|  | Taylor.................... | 6,317 | None |
|  | Van Buren.............. | 7,570 | None |
|  | Wayne................... | 6,403 | None |
|  | Worth................... | 7,598 | Mason City, IA Micropolitan Statistical Area |

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## Frequently Asked Questions

Are business group sales data available at the city level? Subject to disclosure limitations to protect the confidentiality of local firms, city-level data for up to 12 business groups may be available upon request from the lowa Department of Revenue.

Why do historical data in this report differ from previously-published ISU retail reports? The underlying population and income data used in this report are subject to backward revision by the U.S. Census Bureau and sister agencies, meaning that historical data are revised as new information becomes available. Any revisions to population and income estimates may result in re-statement of per capita retail sales, pull factors, and related measures for prior years. This report incorporates the most recently-revised statistics, and no effort is made to reconcile the historical data with prior versions of the ISU Retail Trade Analysis reports.

Are the retail sales statistics fully comparable over time? No. Changes to lowa's statewide sales tax laws have redefined the mix of goods and services comprising taxable sales transactions over time.

At the local level, changes in the geographic or business group assignments of specific firms may also complicate trend analysis. Notably, the lowa Department of Revenue in FY2014 reassigned more than 10 percent of lowa's retailers to different business class codes that better reflect their business focus. A significant change was the reclassification of gasoline stations with convenience stores from the automotive and related group to the food dealers group. These reclassifications should be considered when comparing sales by business group before and after FY 2014.

Are the pull factors and other retail measures adjusted for differences in local income? Yes. In calculating local pull factor ratios and estimating trade surplus/leakage values, this report incorporates small area income data available from the American Community Survey (ACS), U.S. Census Bureau. Contact the author for more detailed information about the methodology used for income adjustments.

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In producing this report, we acknowledge the pioneering work of Kenneth E. Stone, now Professor Emeritus, in applied analysis of retail trade patterns in lowa's cities and counties.

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