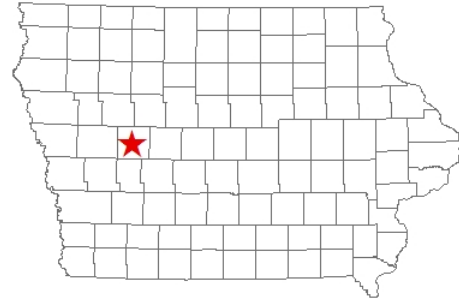


# Retail Trade Analysis Report

## Fiscal Year 2016

Carroll County



Iowa State University  
Department of Economics

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### Overview

This report examines local retail sales and related economic trends in Carroll County, Iowa, using a variety of comparative performance measures.

The retail analysis is based on state-reported sales of goods and services that are subject to Iowa's statewide sales tax. Please refer to the Data Notes section for detailed information about the types of retail activity included in taxable sales. The data notes also include definitions and guidelines for interpreting retail measures and other indicators in this report.

Except where otherwise noted, retail sales data for preceding years have been adjusted for inflation and are stated in Fiscal Year 2016 dollar equivalents. The 2016 fiscal year began on July 1, 2015, and ended on June 30, 2016.

### About Carroll County:

- Carroll County recorded a total population of 20,816 residents in the 2010 Census, including 467 residents in group quarters such as skilled nursing facilities and group homes.
- Carroll County is part of the Carroll, IA Micropolitan Statistical Area.

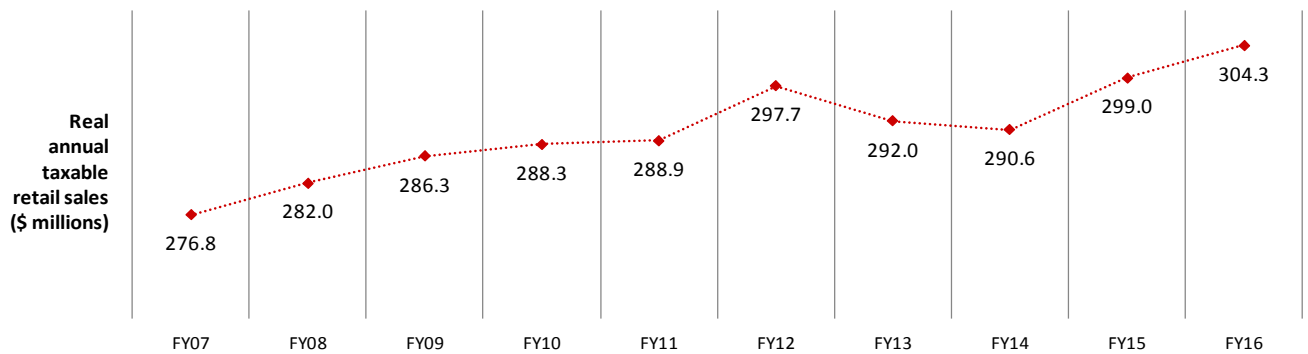
### Key Retail Indicators for Carroll County

Carroll	FY2015	FY2016	% Change
Real total taxable sales (\$)	299,011,307	304,291,417	1.8% ▲
Number of reporting firms (annualized)	862	867	0.6% ▲
Population	20,535	20,472	-0.3% ▼
Average sales per capita (\$)	14,561	14,864	2.1% ▲
Average sales per firm (\$)	347,082	350,869	1.1% ▲

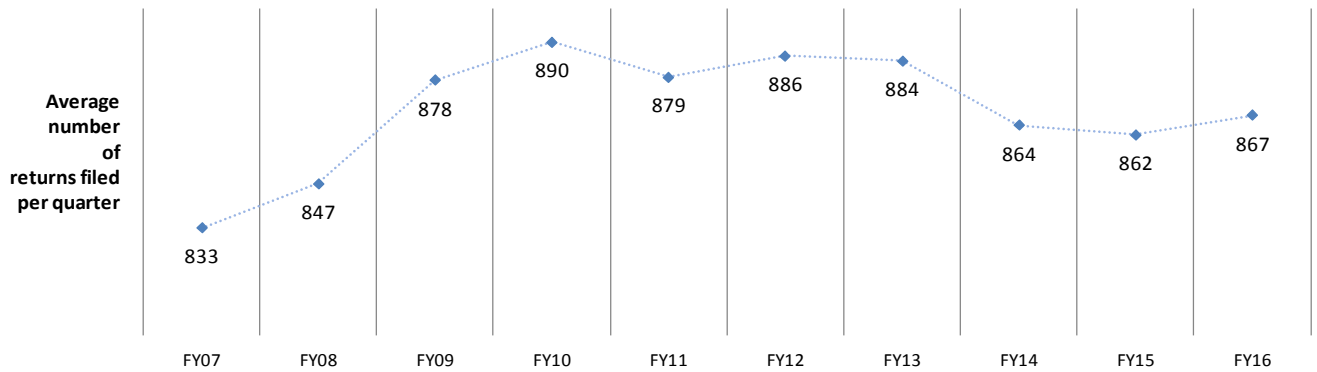
*No distinctions are made between households and group quarters residents in the calculation of per capita sales and related indicators.*

# 10-Year Summary Retail Sales Tax Statistics

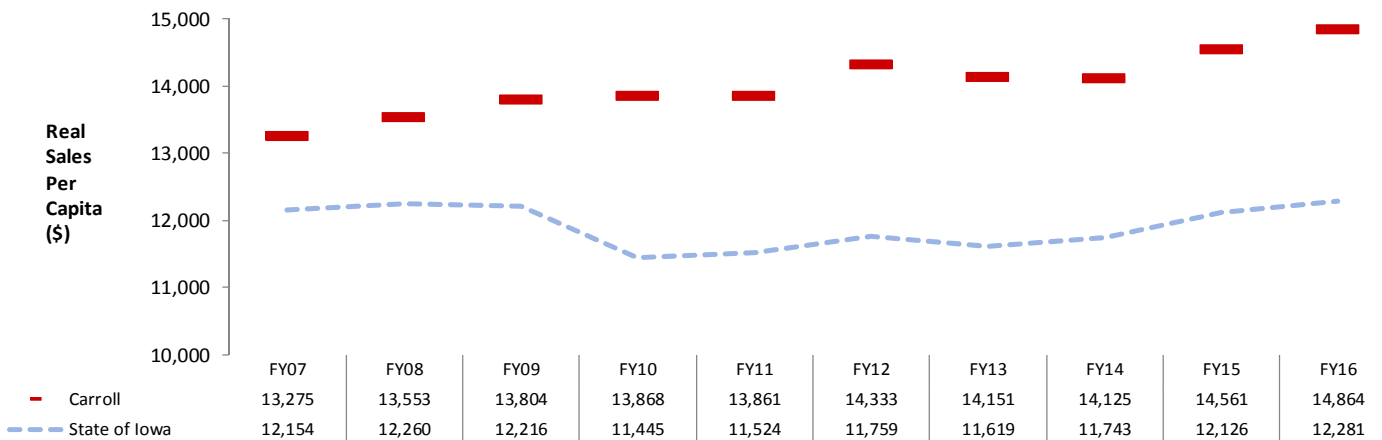
## Real Total Taxable Sales in Carroll County



## Annualized Number of Reporting Firms in Carroll County



## Taxable Retail Sales Per Capita



# Local Economic Trends

## Population

Population change is a key factor influencing local retail sales performance. From one year to the next, area population gains or losses alter the number of potential shoppers in the region. In the longer term, population trends reflect the general economic climate of the region. Population growth suggests a more favorable retail environment, while population decline may be an indication of area economic stress.

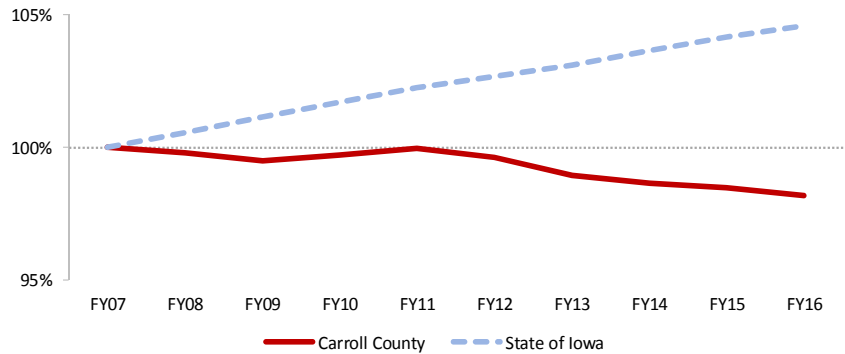
The top chart at right shows annual population estimates for Carroll County and the state indexed to baseline values from ten years ago. The population in any given year is expressed in percentage terms compared to the base year population.

The middle chart at right compares population change in Carroll County to the trend for similarly-sized counties in Iowa. See Pages 20-21 for a list of counties included in the peer group for Carroll County.

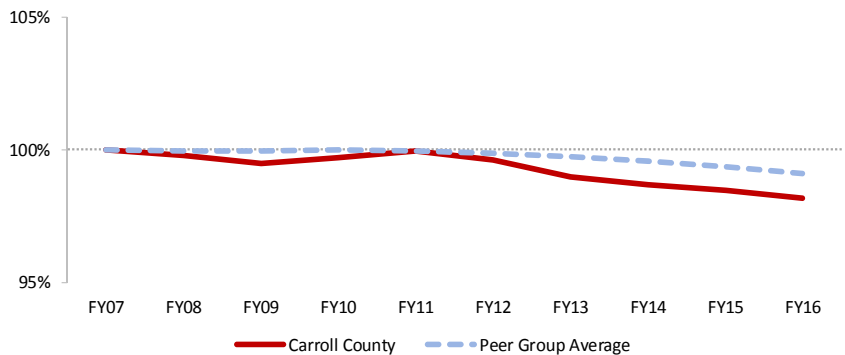
## Average Wages

The local demand for retail goods and services also depends on the income level of area residents. Major sources of personal income include wages and salaries, returns to proprietors, investment income, and government transfer payments. Wages and salaries comprise the majority of personal income and provide the most stable indicator of local conditions. The chart at right illustrates recent, inflation-adjusted average earnings per wage and salary job in Carroll County and the state.

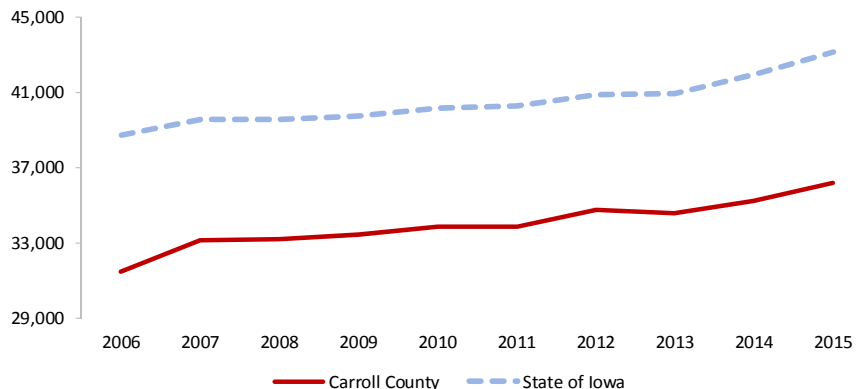
**Population Trends**  
(Annual estimates as a percentage of 2007 population)



**Population Trend for Peer Counties**  
(Annual estimates as a percentage of 2007 population)



**Real Wages and Salaries Per Job (\$)**



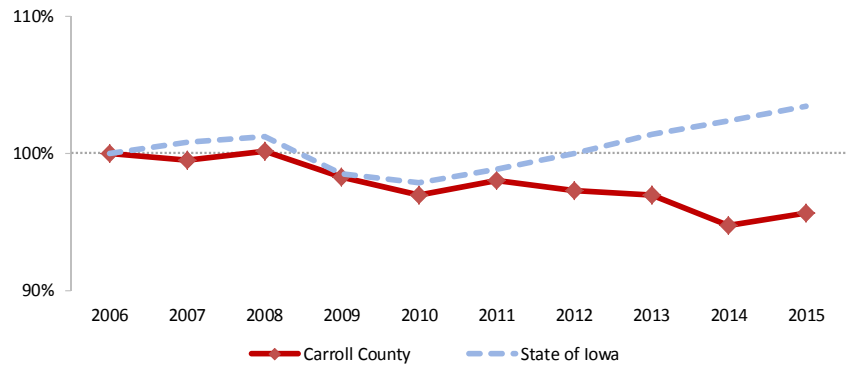
## Employment

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.

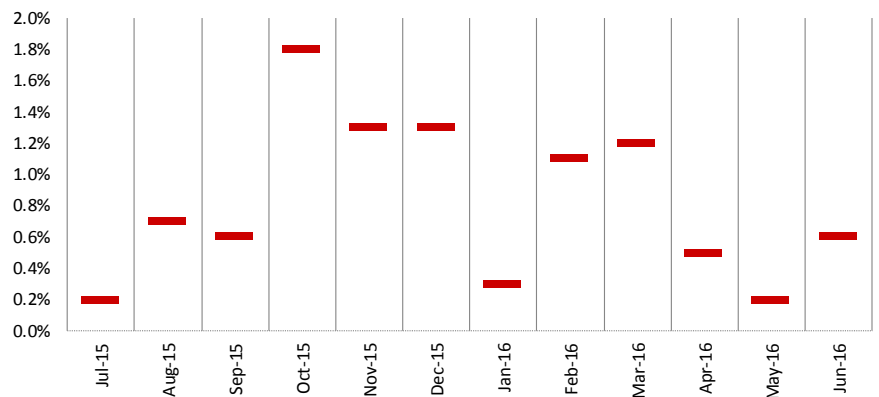
The chart at top right shows the 10-year trend in wage and salary employment in Carroll County. Each year's employment, which counts full-time and part-time jobs equally, is expressed as a percentage of baseline year employment. The statewide trend is included for comparison.

The middle chart shows more recent job gains and losses in Carroll County. The chart illustrates the percentage gain or loss in jobs during Fiscal Year 2016 on a month-by-month basis, with each month's employment compared to the same month in the prior fiscal year.

**Employment Trends**  
(Annual employment as a percentage of 2006 employment)



**Recent Job Gains or Losses: Carroll County**

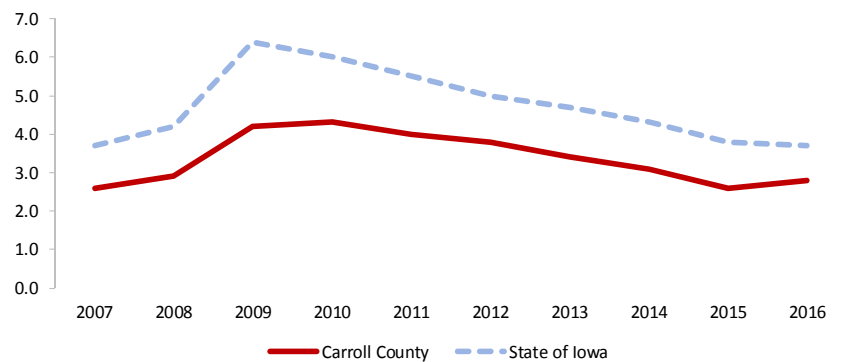


## Unemployment

Rising or persistently high levels of unemployment may contribute to household economic stress within the region and may ultimately reduce aggregate household spending levels.

The chart at right shows recent Carroll County and statewide unemployment rate trends. The unemployment rate is defined as the percentage of the labor force that is unemployed but actively seeking work.

**Unemployment Rate**  
(Unemployed percentage of the labor force)



# Peer Group Analysis

Iowa's 99 counties vary in the level and types of retail activity they can support. A given county's retail prospects depend not only on its own population size, but also on the urbanization patterns and competitive characteristics of the surrounding area. With no two of Iowa's counties exactly alike in these respects, how might a particular county benchmark its own retail performance? Peer group analysis, which involves comparisons among a group of counties sharing similar characteristics, can provide a reasonable basis for evaluating local retail performance.

In general, a county's retail sector size and diversity tend to increase with the size and density of its population. Metropolitan counties, for example, have access to a large pool of potential customers living within a geographically concentrated area, allowing them to offer a wider range of retail goods and services than most smaller counties can support. The diversity of their retail offerings tends to attract non-resident shoppers from a broad geographic area, often at the expense of smaller counties in outlying areas. In contrast, small counties in rural areas tend to have retail sectors that serve primarily local markets.

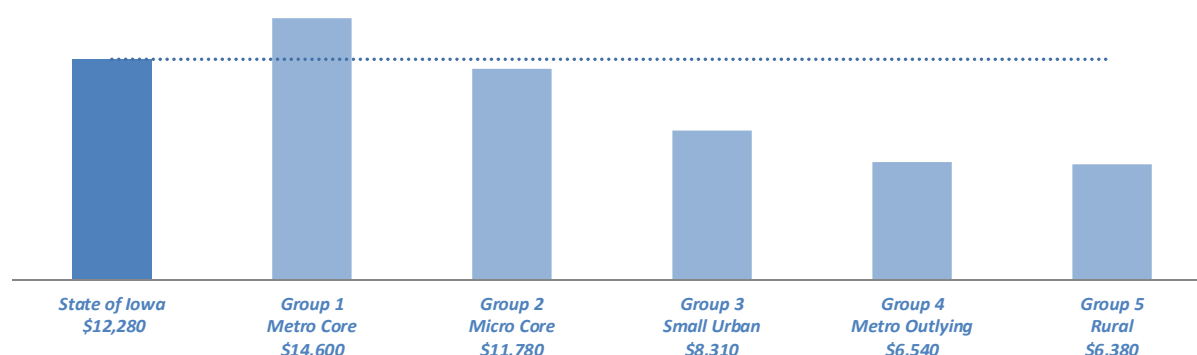
This retail analysis report assigns all counties in Iowa to peer groups based on their metropolitan or micropolitan status and other population characteristics. Metropolitan statistical areas (MSAs) are defined around a core city or cities that have 50,000 or more residents. Iowa has nine MSAs defined around ten core cities. These MSAs contain 21 of the state's 99 counties. Micropolitan statistical areas represent the next level down in the urban hierarchy. Micropolitan areas are defined around core cities with 10,000 to 49,999 residents. Iowa has 17 micropolitan statistical areas.

The county peer groups are defined in the following table, with the relevant peer group for Carroll County highlighted in blue (see Pages 20-21 for a complete list of member counties by peer group). The chart at the bottom of this page illustrates the comparative sales performance for all of the county peer groups during Fiscal Year 2016.

## Peer Group Definitions

Peer Group	Metropolitan or Micropolitan Status	Number of Counties	% of State Taxable Sales
Group 1	Core county of a metropolitan statistical area	10	64.7%
<b>Group 2</b>	<b>Core county of a micropolitan statistical area</b>	<b>17</b>	<b>14.5%</b>
Group 3	Non-metro county whose largest city is between 2,500 to 9,999 in population	41	13.9%
Group 4	Outlying (non-core) county in a metropolitan statistical area	11	4.1%
Group 5	Non-metro county whose largest city is less than 2,500 in population	20	2.8%

## Average Sales Per Capita by County Peer Group, FY 2016



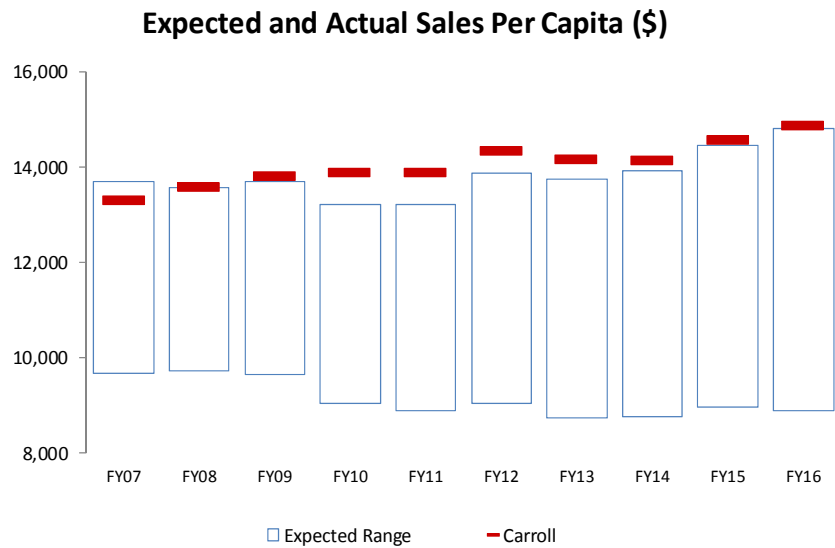
## Expected Range for Local Sales Per Capita

The chart at right compares sales levels in Carroll County to a range of “expected,” or typical, values for counties in its peer group.

The blue rectangles illustrate the range of expected values, defined as any value between the 25th to the 75th percentile values for the peer group in each year.

The red dashes show the actual per capita sales performance by Carroll County.

In Fiscal Year 2016, per capita sales in Carroll were above the expected range, ranking within the top quartile of the peer group.

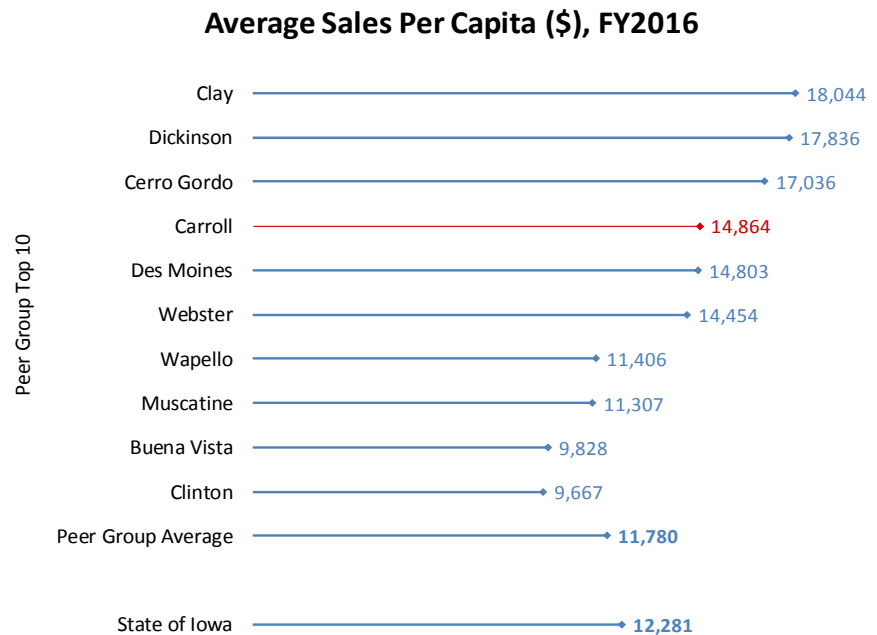


## Top 10 Peer Group Counties

Among the 17 counties in its peer group, Carroll ranked number 4 in per capita sales.

The peer group’s top performers, measured by their average sales per capita in Fiscal Year 2016, are listed in the table at right.

Also included for comparison are the average value for all counties in the peer group and the overall statewide average per capita sales.



See Pages 20-21 for a complete listing of counties by peer group.

# Pull Factor Analysis

This section introduces three related measures for assessing retail sales performance: trade surplus or leakage, trade area capture, and the pull factor ratio. All three measures are based on a hypothetical “self-sufficiency” level of sales at which the county’s retail sector satisfies all of the retail needs of its own residents. This hypothetical sales value might also be viewed as “break-even” level where any sales lost from non-local spending by residents are exactly offset by sales to non-residents.

## Trade Surplus or Leakage

Trade surplus or leakage measures the dollar difference between the county’s actual sales and the total sales it could generate if residents satisfied all their retail needs locally, i.e. its self-sufficiency or breakeven sales level. Sales above the breakeven level imply a net surplus arising from sales to non-residents. Leakage, or sales below the breakeven level, suggests that local residents’ spending outside the county exceeds local firms’ sales to non-residents.

Below are trade surplus or leakage estimates for Carroll County. To estimate the breakeven level of sales, 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. The breakeven sales target represents an estimate of Carroll County residents’ total spending on taxable goods and services that are purchased anywhere within Iowa.

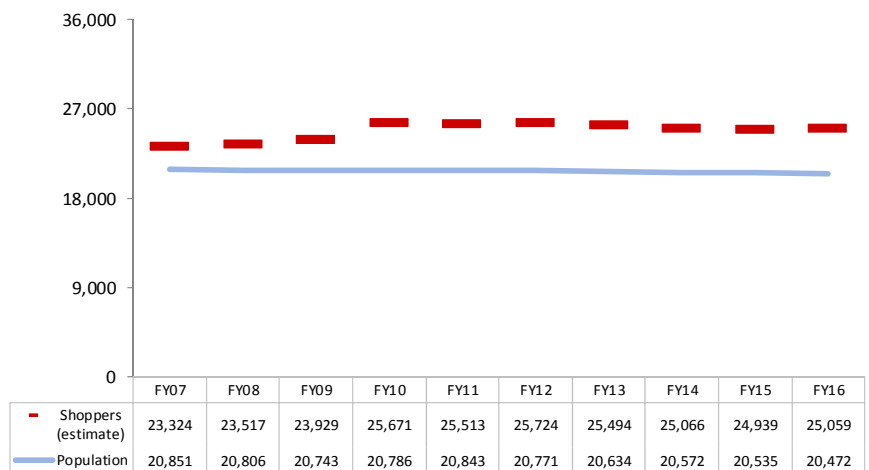
<b>Carroll Breakeven Analysis</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>
Statewide average per capita spending (\$)	12,154	12,260	12,216	11,445	11,524	11,759	11,619	11,743	12,126	12,281
<i>x Local income adjustment</i>	0.98	0.98	0.98	0.98	0.98	0.98	0.99	0.99	0.99	0.99
= Average spending (anywhere) by residents (\$)	11,867	11,990	11,966	11,229	11,324	11,573	11,453	11,593	11,990	12,143
<i>x County population estimate</i>	20,851	20,806	20,743	20,786	20,843	20,771	20,634	20,572	20,535	20,472
= Breakeven sales target (\$000s)	247,449	249,472	248,217	233,399	236,024	240,382	236,323	238,482	246,209	248,594
County actual sales (\$000s)	276,801	281,982	286,339	288,253	288,907	297,707	291,984	290,582	299,011	304,291
Surplus estimate (\$000s)	29,352	32,510	38,122	54,854	52,883	57,326	55,662	52,100	52,802	55,698
Leakage estimate (\$000s)	-	-	-	-	-	-	-	-	-	-

## Trade Area Capture

The extent of a county’s geographic “trade area” can be approximated by estimating the number of customers whose annual retail needs it satisfies. If that number exceeds the resident population, the county’s trade area likely extends beyond its borders. If below, the county’s trade area likely overlaps or is subsumed by that of a nearby county.

Trade area capture is estimated by dividing the county’s actual total sales by the expected average, annual retail requirements of its residents. The chart at right illustrates the county’s trade area capture in relation to its population size.

**Estimated Trade Area Capture**  
(annualized number of shoppers)



## The Pull Factor Ratio

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

A pull factor ratio equal to 1.0 suggests that the county's merchants are just satisfying the retail 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 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.

Pull factor ratios may vary widely from one county to the next, even among those in the same peer group. For any particular county, a comparison with the peer group's median pull factor value provides a reasonable performance benchmark.

The chart below shows recent trends in pull factor ratios for Carroll County and its peer group. The county's pull factor values are indicated with red circles.

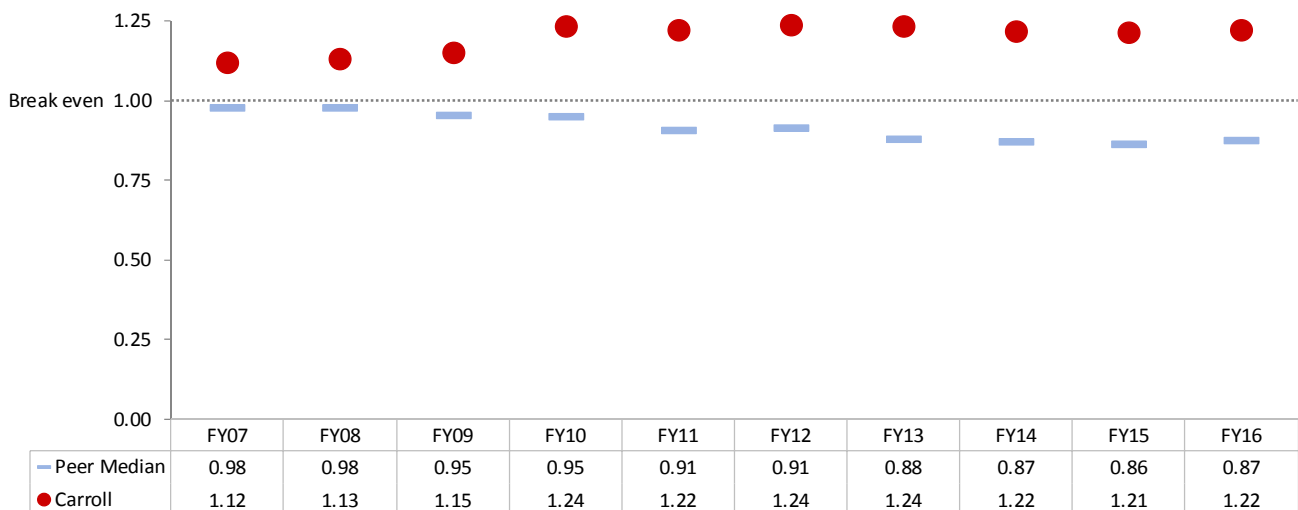
The blue dashes indicate the median pull factor for the peer group in each year. If the county's pull factor exceeds the group median, it ranks among the top half of its peer group. If its pull factor is below the median value, then it ranks among the bottom half of counties in its peer group.

Caution is urged in the interpretation of pull factors, especially for smaller counties.

For example, a high pull factor doesn't necessarily indicate retail self-sufficiency across all categories of retail sales. A county's pull factor could be inflated by the presence of one or more retail establishments that serve as a regional draw in a particular sales category, even if the county is experiencing substantial leakage of sales in other retail categories.

Similarly, a low pull factor does not necessarily suggest untapped sales potential in the local retail sector. Most small counties should expect to lose a at least a fraction of their residents' spending to nearby metropolitan and other large trade center counties.

**Pull Factor Comparison With Peer Group**







## Commuting Patterns

### Carroll County Commuting Summary, 2014

Regional commuting flows represent possible sources of sales surplus or leakage for the local retail sector. Worker inflows from neighboring counties help to expand the potential customer base. When residents commute elsewhere for work, the likelihood that they will shop locally, especially during traditional business hours, decreases.

The county's overall rate of out-commuting is compared to the average for similar counties below. The rates express the percentage of working residents who commute somewhere outside the county for work.

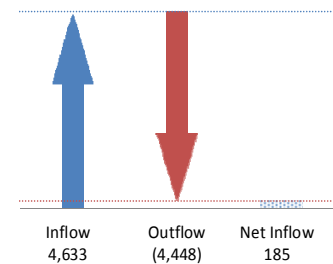
#### Worker Out-Commuting Rates

Carroll County	39.8%
Peer Counties	45.7%

Residence	Workplace		Local = Jobholders
	Carroll	+ Elsewhere	
Carroll	6,720	4,448	11,168
+ Elsewhere	4,633		
= Local Jobs	11,353		

The table above describes local employment, workforce size, and area employment flows by residence and workplace locations for wage and salary workers in the region.

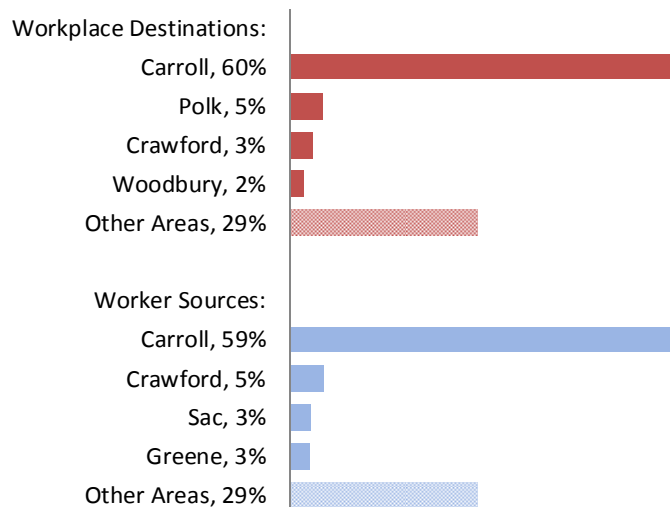
The figure at right compares the relative magnitude of worker flows to and from Carroll County and its estimated net commuting flow in 2014.



### Key Commuting Relationships for Carroll County: Top 3 Sources and Destinations of Workers

Worker commuting patterns also reveal broader regional relationships that influence local economic conditions.

The chart at right identifies the top three workplace destinations for Carroll County residents and the top three counties supplying the greatest number of Carroll County workers in 2014. The chart measures these flows as percentages of the county's total workforce size and total employment, respectively.



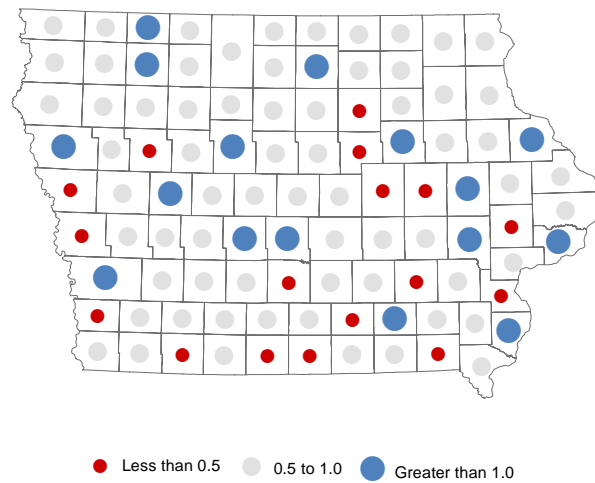
Note: The commuting charts on this page are based on 2014 worker commuting flow data published by the U.S. Census Bureau. In cases of small place-to-place commuting flows, the Census Bureau masks the data in order to protect the confidentiality of individual workers and/or business firms. Therefore, the actual size and destinations of the county's commuting flows may differ slightly from those shown here.

## Regional Trade Patterns

Regional shopping patterns may be inferred from relative trade levels in surrounding counties. The graphics on this page illustrate which counties in the region serve as regional magnets for retail trade activity.

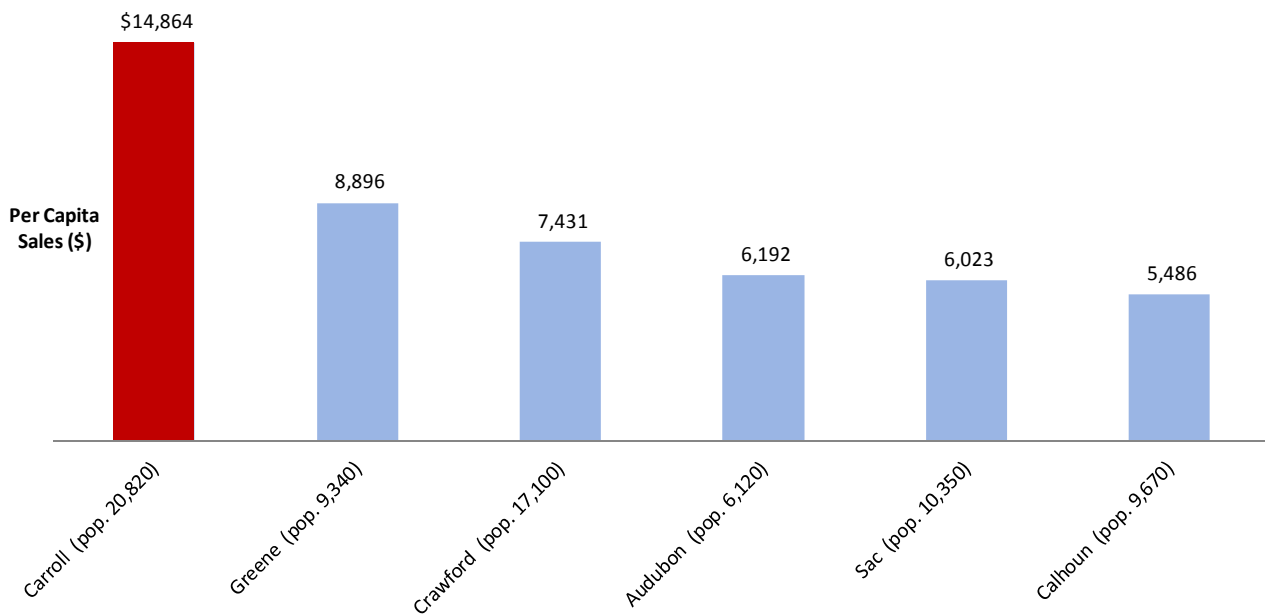
The map at right illustrates county retail pull factors for Fiscal Year 2016 (see Page 8 for a definition of pull factors). The counties with a pull factor exceeding 1.0, identified in the map with large blue dots, are likely exerting a strong retail influence on trade centers in neighboring counties. 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.

### County Pull Factors, Fiscal Year 2016



The bar graph below compares Fiscal Year 2016 per capita sales in Carroll County to average sales in neighboring counties. The comparison group includes the five counties nearest to Carroll County, with distance measured “as the crow flies” between county midpoints. The counties are listed from left to right in descending order by their average per capita sales. Population sizes for each county, as of the 2010 Census, are also indicated.

### Neighboring County Comparison of Per Capita Retail Sales



# Historical Trends in Taxable Sales

Historical retail sales statistics for Carroll County and the State of Iowa are presented below. Real total taxable sales and real average sales per firm and per capita have been adjusted for inflation and are shown in Fiscal Year 2016-equivalent dollars.

\*\*NOTE: Values for Fiscal Year 2009 and later measure retail activity during a July 1-June 30 fiscal year period. Values for Fiscal Years 2008 and earlier were compiled on an April 1-March 31 fiscal year basis.

## Historical Statistics for Carroll:

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	263,827,458	359,683	11,454	369,909	10,500
1977	746	83,143,225	277,366,318	371,929	12,061	381,378	11,119
1978	785	89,757,729	280,709,978	357,478	12,190	375,750	11,365
1979	814	106,168,284	308,125,406	378,416	13,415	381,083	11,873
1980	824	117,778,917	310,069,244	376,412	13,532	373,810	11,841
1981	826	112,462,181	268,844,012	325,379	11,707	332,662	10,752
1982	825	115,488,340	258,251,255	312,937	11,319	319,872	10,348
1983	847	124,305,364	265,050,050	312,836	11,701	310,945	10,228
1984	852	124,464,734	255,033,027	299,335	11,265	304,559	10,143
1985	835	117,965,101	233,459,590	279,592	10,358	301,174	10,119
1986	856	115,493,317	221,788,689	259,175	9,961	295,243	10,104
1987	824	127,041,463	238,735,504	289,728	10,884	312,211	10,539
1988	838	131,613,527	238,482,434	284,500	10,964	313,731	10,598
1989	840	135,274,480	234,816,199	279,460	10,864	318,893	10,693
1990	844	139,350,059	232,670,872	275,840	10,843	322,994	10,799
1991	843	144,045,172	230,670,582	273,631	10,768	324,455	10,738
1992	841	149,277,000	232,801,395	276,815	10,850	324,921	10,832
1993	863	158,987,061	241,566,331	279,996	11,205	325,220	10,967
1994	859	171,105,269	254,432,409	296,196	11,790	332,114	11,204
1995	870	172,486,572	250,956,112	288,455	11,625	339,024	11,430
1996	875	179,338,619	255,880,117	292,351	11,818	339,983	11,685
1997	879	191,005,567	266,872,298	303,782	12,311	357,412	11,877
1998	877	200,538,615	277,117,428	316,164	12,768	359,783	12,084
1999	856	205,609,316	281,406,014	328,649	12,988	385,030	12,590
2000	859	208,106,046	278,923,773	324,708	12,969	392,384	12,648
2001	846	210,559,097	275,531,418	325,784	12,933	393,246	12,685
2002	831	211,866,155	273,836,385	329,427	12,922	394,632	12,535
2003	802	211,860,495	268,672,531	334,899	12,738	412,176	12,390
2004	787	218,230,954	271,275,481	344,915	12,930	419,433	12,271
2005	782	224,154,947	271,489,664	347,285	12,956	417,764	12,200
2006	785	226,432,058	266,007,145	338,755	12,726	428,763	12,290
2007	833	240,974,841	276,800,941	332,294	13,275	420,788	12,154
2008	847	253,009,004	281,981,995	333,115	13,553	421,423	12,260
2009**	878	260,053,807	286,338,855	326,126	13,804	413,200	12,216
2010	890	264,483,760	288,252,923	323,971	13,868	396,892	11,445
2011	879	269,747,733	288,907,314	328,677	13,861	411,718	11,524
2012	886	284,745,265	297,707,170	336,202	14,333	419,954	11,759
2013	884	283,551,571	291,984,272	330,299	14,151	414,539	11,619
2014	864	286,159,446	290,581,989	336,224	14,125	431,060	11,743
2015	862	297,061,629	299,011,307	347,082	14,561	448,317	12,126
2016	867	304,291,417	304,291,417	350,869	14,864	454,924	12,281

## Sales by Business Group

Areas of strength or weakness in the local retail sector may be revealed through a comparative analysis of sales by specific types of businesses. The following table presents taxable sales statistics by business group for Carroll County.

The top section shows the annualized number of reporting firms (average returns filed per quarter), taxable sales, and average sales per firm in 12 types of retail businesses. The bottom section shows sales by business group on a per capita basis. Real averages for the prior 3-year period are provided to identify areas of recent growth or decline. Median values for similar counties and statewide averages for the current fiscal year are also provided for benchmarking purposes. County data are suppressed for business groups that did not meet a minimum threshold for number of reporting firms.

Sales by business group should not be confused with sales by merchandise category. The business group sales data reflect the broad business classification of the firms making the sales, not the specific goods and services that were sold. See Page 15 for a more detailed list of the types of firms included within each business group.

### Carroll County Taxable Sales Summary by Business Group

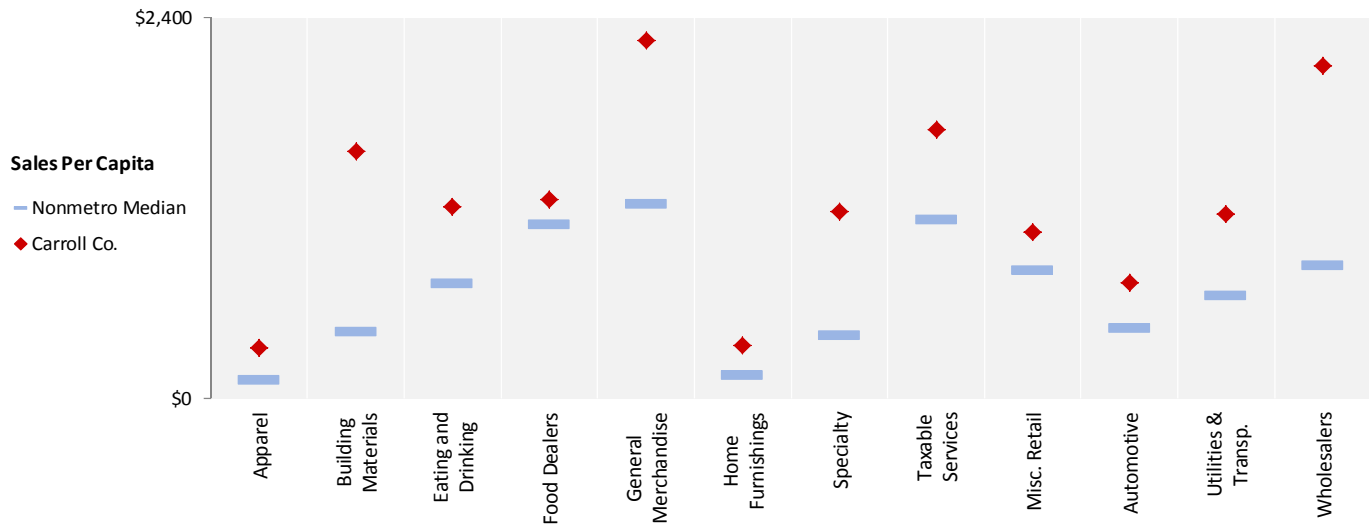
Total Sales and Average Sales Per Firm	Carroll County FY16 Totals		Average Sales Per Firm (\$)	
	Total Sales (\$)	Reporting Firms	Carroll County	State of Iowa
Apparel Stores	6,605,593	17	388,564	685,784
Building Materials Stores	31,918,670	17	1,850,358	1,859,909
Eating and Drinking Establishments	24,813,592	54	461,648	557,036
Food Stores (excluding non-taxable food items)	25,659,677	25	1,036,755	1,093,430
General Merchandise Stores	46,206,453	12	3,932,464	6,143,479
Home Furnishings Stores	6,927,502	13	543,333	835,356
Specialty Retail Stores	24,159,596	124	195,624	217,690
Service Establishments	34,722,882	332	104,745	167,836
Miscellaneous Retail Firms	21,527,980	135	159,467	247,806
Automotive and Related Stores	14,976,237	29	516,422	796,628
Utilities and Transportation Services	23,818,739	44	538,277	1,038,577
Retail Sales by Wholesale Firms	42,954,496	67	643,513	907,981

Real Sales Per Capita (\$)	Carroll County Trends		FY16 Benchmark Values	
	prior 3-year average FY13 - FY15	FY16	Non-Metro Median	State of Iowa
Apparel Stores	345	323	122	341
Building Materials Stores	1,323	1,559	424	883
Eating and Drinking Establishments	1,144	1,212	732	1,352
Food Stores (excluding non-taxable food items)	NA	1,253	1,105	1,112
General Merchandise Stores	2,330	2,257	1,234	1,509
Home Furnishings Stores	381	338	152	395
Specialty Retail Stores	1,161	1,180	404	976
Service Establishments	1,615	1,696	1,131	1,702
Miscellaneous Retail Firms	1,062	1,052	818	985
Automotive and Related Stores	NA	732	451	595
Utilities and Transportation Services	1,003	1,163	658	1,173
Retail Sales by Wholesale Firms	2,123	2,098	841	1,259

## Per Capita Sales by Business Group

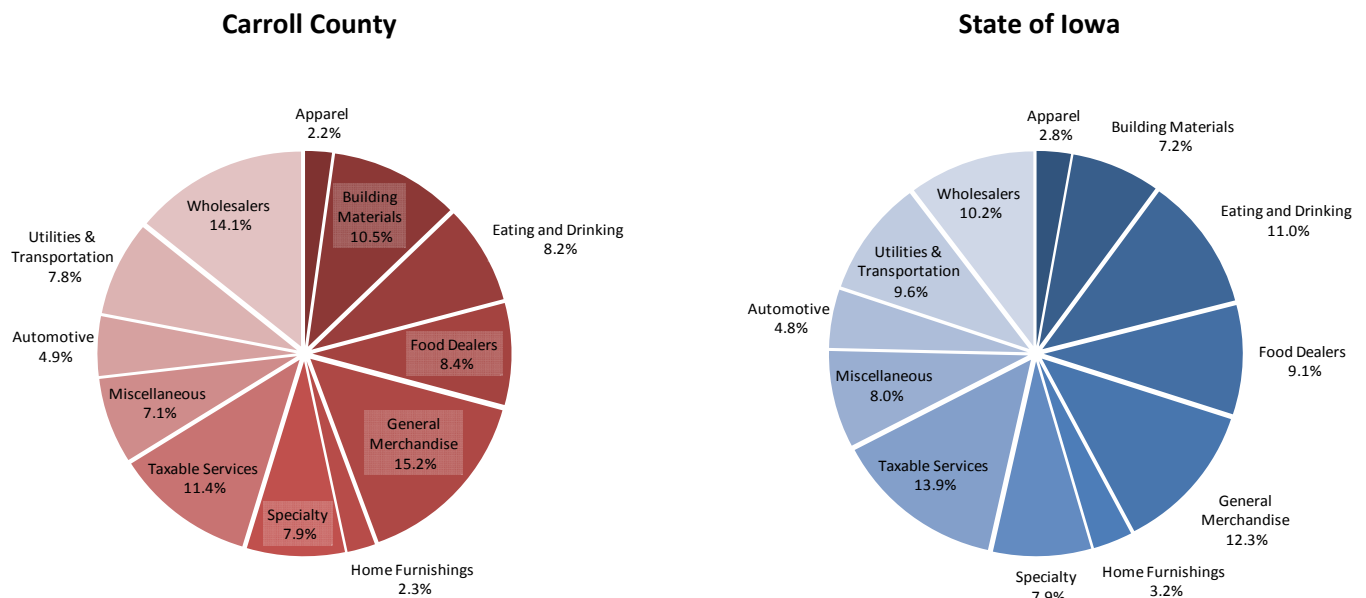
The chart below compares per capita sales by business group in Carroll County with the median value for all 78 non-metropolitan counties in Iowa (see table on previous page for underlying data). Carroll County per capita values are shown with red dots. The non-metropolitan median values appear as blue dashes. County data are suppressed for any business groups that did not meet a minimum threshold for number of reporting firms.

*Note: Sales values for the Wholesalers group reflect only the retail portion of sales by wholesale firms.*



## Distribution of Taxable Sales by Business Group

The following chart illustrates the percentage distribution of Carroll County and statewide total taxable sales across the major retail business groups. County data are suppressed for any business groups that did not meet a minimum threshold for number of reporting firms. Sales in suppressed categories are aggregated into a single percentage value and labeled with an asterisk (\*).



## Statewide Average Per Capita Sales by Detailed Business Type, FY 2016

Business Type and Per Capita Sales (\$)			
<b>Apparel Group</b>	<b>\$341</b>	<b>Services Group</b>	<b>\$1,702</b>
Clothing and Clothing Accessories Stores	291	Auto Repair	347
Shoe Stores	50	Hotels and All Other Lodging Places	305
		Other Business Services	222
<b>Automotive and Related Firms</b>	<b>\$595</b>	Arts and Entertainment	193
New and Used Car Dealers	293	Beauty/Barber Shops	129
Automotive Parts and Accessories	218	Miscellaneous Repairs	94
Recreational and All Other Motorized Vehicles	83	Other Personal Services	79
		Auto Rental and Storage	59
<b>Building Materials Group</b>	<b>\$883</b>	Motion Picture and Video Industries	52
Building Material Dealers	638	Laundry and Floor Cleaning	41
Hardware Stores	131	Finance, Insurance, Real Estate and Leasing	40
Garden Supply Stores	80	Electronic and Precision Equipment Repair & Maintenance	37
Paint and Glass Stores	33	Other Services	29
Mobile Home Dealers	2	Funeral Service and Crematories	23
		Education and Athletic Events	19
<b>Eating and Drinking Places Group</b>	<b>\$1,352</b>	Photographic Studios	14
Restaurants, Taverns, and Bars	1,352	Employment Services	14
		Upholstery and Furniture Repair	2
<b>Food Dealers Group</b>	<b>\$1,112</b>	Watch, Clock, Jewelry Repair	0
Grocery Stores and Convenience Stores	559	Footwear and Leather Repair	0
Gas Stations/Convenience Stores With Gas	536		
Specialized Groceries	16	<b>Miscellaneous Group</b>	<b>\$985</b>
		Plumbing and Heating Contractors	151
<b>General Merchandise Group</b>	<b>\$1,509</b>	General Contractors	143
Department Stores	966	Agricultural Production and Services	134
Miscellaneous Merchandise Stores	537	Other Special Trade Contractors	114
Variety Stores	6	Industrial Equipment Manufacturers	84
		Miscellaneous Manufacturers	60
<b>Home Furnishings And Appliances Group</b>	<b>\$395</b>	Food Manufacturers	54
Appliances and Entertainment Equipment	152	Electrical Contractors	51
Furniture Stores	147	Non-Metallic Product Manufacturers	47
Home Furnishing Stores	97	Furniture, Wood and Paper Manufacturers	39
		Publishers Of Books & Newspapers and Commercial Printers	33
<b>Specialty Retail Stores Group</b>	<b>\$976</b>	Carpentry Contractors	25
Other Specialty	281	Unclassified	25
Sporting Goods	183	Mining	13
Beauty and Health (Includes Pharmacies & Drug Stores)	166	Painting Contractors	11
Direct Sellers	74	Apparel and Textile Manufacturers	2
Hobby and Toy	62		
Jewelry	60	<b>Wholesale Goods Group</b>	<b>\$1,259</b>
Book and Stationery Stores	41	(retail sales by wholesale firms)	1,259
Used Merchandise Stores	25		
Stationery, Gift, Novelty	25	<b>Utilities and Transportation Group</b>	<b>\$1,173</b>
Vending Machine Operators	23	Electric and Gas	454
Liquor Stores	18	Communications	447
Florists	15	Water and Sanitation	193
Fuel and Ice Dealers	1	Transportation and Warehousing	79
Electronic Shopping and Mail Order Houses	1		
		<b>All Business Groups</b>	<b>\$12,281</b>

# Consumer Characteristics

## National Spending Patterns by Income and Age

Consumer spending patterns vary with the age, income level, and other characteristics of the consumer. The chart at right illustrates differences in U.S. consumer spending on a selected bundle of goods and services that are taxable in Iowa. The retail bundle includes food away from home, telecommunications services, household supplies and furnishings, apparel, entertainment, automobile repair and maintenance, and personal services.

In the chart, average annual spending levels of consumers within each group are expressed as percentages of the all-consumer average. Differences are most apparent by income level, with persons in the highest household income quintile spending more than twice the average of persons in the lowest income quintile. Per person spending also tends to increase with householder age, but drops slightly among residents of elderly households.

**U.S. Consumer Spending on Selected Goods and Services That are Taxable in Iowa, by Type of Consumer**



## Local Income and Age Distributions

Recent county-level statistics may be used to profile the income and age distributions of area residents. If the county deviates strongly from statewide averages on these measures, one might expect some differences in local residents' spending compared to the average spending levels by all Iowa residents.

The table at right shows the county's median household income level and estimated poverty rate compared to the state. A lower median income level, a higher poverty rate, or both suggest that the percentage of county residents in low income brackets exceeds the statewide average. In these cases, comparatively lower retail spending levels may be anticipated locally.

The bottom half of the table illustrates the percentage distribution of the county's population by age group in years, 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.

### Carroll County Profile

Median Household Income (\$)	Carroll	State of Iowa
Estimate	58,575 <span style="color: blue;">▶</span>	54,843
90% Confidence Interval	56,190 - 60,960	54,080 - 55,610

Poverty Rate (%)	Carroll	State of Iowa
Estimate	8.7 <span style="color: red;">◀</span>	12.1
90% Confidence Interval	6.9 - 10.5	11.8 - 12.4

Population (% of total)	Carroll	State of Iowa
Under 5 years	6.5% <span style="color: blue;">▶</span>	6.3%
Age 5 to 17	17.6% <span style="color: blue;">▶</span>	17.0%
Age 18 to 24	7.7% <span style="color: red;">◀</span>	10.3%
Age 25 to 44	21.0% <span style="color: red;">◀</span>	24.3%
Age 45 to 64	27.8% <span style="color: blue;">▶</span>	26.0%
Age 65 years and over	19.5% <span style="color: blue;">▶</span>	16.1%
Median age	42.3 <span style="color: blue;">▶</span>	38.1

▶ Higher than state  
◀ Lower than state



# Other Factors Influencing Retail Sales

## Inflation

The rate of inflation measures changes over time in the purchasing power of the dollar. When price levels rise faster than earnings and other income, consumers may have to reduce or reallocate their spending.

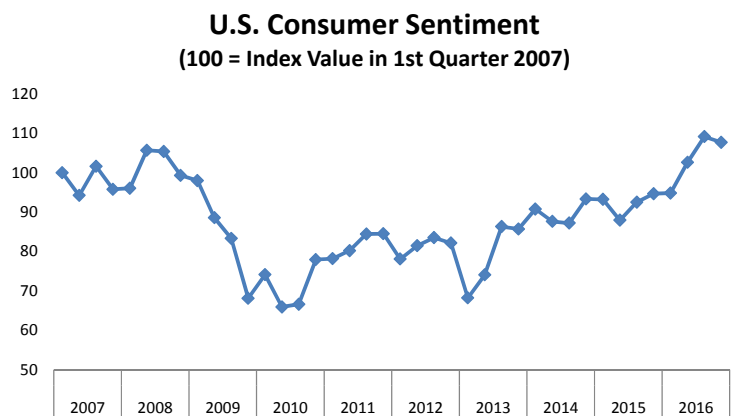
The pace of U.S. inflation during the last 10 years is illustrated at right. This chart shows quarterly changes in the Midwest Consumer Price Index for All Urban Consumers, using first quarter of 2007 as the benchmark period.



## Consumer Confidence

Consumer confidence refers to how favorably consumers view prospects for the economy and their own financial situation. Pessimism about the economy can have a dampening effect on household discretionary purchases, while optimism can boost the likelihood of purchases.

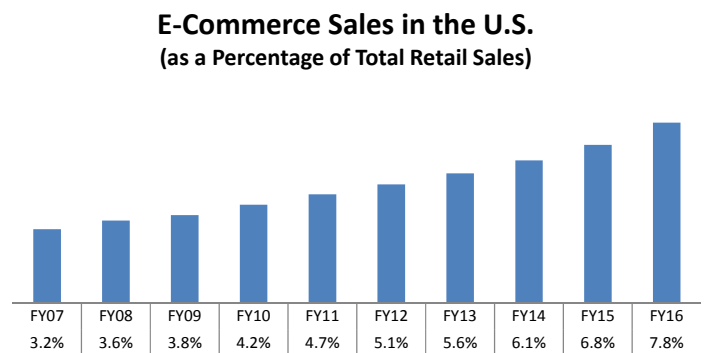
The chart at right illustrates a quarterly index of consumer confidence benchmarked to the first quarter of 2007. Source data were obtained from the Index of Consumer Sentiment, University of Michigan Surveys of Consumers, via the Federal Reserve Bank of St. Louis.



## Internet and Catalog Sales

E-commerce represents a rapidly-growing share of retail activity in the United States. While presenting a potential sales growth channel for many retailers, e-commerce also poses a threat as yet another source of sales leakage from Iowa's communities.

The chart at right shows the growing share of total U.S. retail sales that are transacted through e-commerce. E-commerce, which includes internet and catalog sales, describes transactions in which an order is placed and/or price and terms of sale are negotiated over an internet or other online system.



## Iowa's Retail Sales Tax Reporting

The state of Iowa imposes a tax on the gross receipts from sales of taxable tangible personal property and taxable services. In general, merchandise goods are taxable unless specifically exempted and services are taxable if specifically enumerated by the state.

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.

Iowa's sales tax reporting process may lead to occasional anomalies in retail sales data reported at the local level. The state compiles these data primarily for fiscal management purposes, and only secondarily for analytical purposes.

Certain accounting and other administrative constraints may result in the under-reporting or no reporting of sales activity for individual communities.

**Confidentiality.** In order to protect the confidentiality of individual filers, the Iowa Department of Revenue only reports data from localities with a minimum of 10 tax returns filed for a quarter or 40 returns per year. Sales data for localities not meeting this threshold level are reported for the county in which they are located.

Recent changes in the administration of Iowa's sales tax include the following:

- July 1, 2004. Iowa revised its sales tax laws to meet Streamlined Sales Tax Project (SSTP) requirements. SSTP improves uniformity in sales tax laws across states, thereby encouraging businesses to collect and remit sales tax in every state in which they make taxable sales.

- January 1, 2006. The tax on certain types of energy was reduced to 0% after a 4-year phased decline.
- July 1, 2008. Iowa's sales tax rate increased from 5% to 6%.
- July 1, 2008. The Iowa Department of Revenue adopted a new fiscal year reporting period to align with the state fiscal year that runs from July 1 through June 30 of each year.
- July 1, 2013. The Iowa Department of Revenue changed the business class assignment for approximately 12 percent of Iowa's retailers.
- July 1, 2013. Taxable sales in the Convenience Stores and Gas Stations business class were reclassified from the Automotive and Related Group to the Food Dealers Group.

## Notable Exemptions and Exclusions from Iowa's Retail Sales Tax

Many retail transactions, because they are exempt or otherwise excluded from the state's sales tax, are not included in the taxable sales values reported in this report. Following are some notable exemptions from Iowa's sales tax. More detailed documentation is available from the Iowa Department of Revenue.

**Exempt or Excluded Goods.** Goods that are exempt from the sales tax include certain foods used for home consumption, prescription drugs, and medical devices. Sales of gasoline, subject to a separate fuel tax, are excluded from taxable retail sales. Taxable retail sales also exclude the sale or lease of new or used vehicles that are subject to registration. Vehicle purchases are taxed separately under the state's one-time registration fee.

**Exempt Services.** Unlike tangible goods, services are exempt from tax unless specifically enumerated. Professional

services such as medical and legal services are not subject to the sales tax.

**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. Specific exemptions may also apply to certain businesses and industries.

**Sales to Agriculture, Manufacturing, and Other Industries.** The state exempts sales of many goods and services that are used as inputs to agriculture and other industrial processes.

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

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 Department of Revenue Web site for more detailed information about exempt sales to industry and business.

**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 fund-raising activities are exempt from sales tax if the proceeds are used for educational, religious, or charitable purposes.

## Cautions for Interpreting Reported Sales Data

**Non-Taxable Goods & Services.** The sales information presented in this report provides only a partial picture of retail and service sector activity in Iowa's communities, due in part to the data reporting practices and sales tax exemptions listed on the previous page.

**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.** Reported sales values in some areas may appear inflated if they are home to the business office or headquarters of a firm with a broad, geographically-defined service territory such as a rural telecommunications or cable television provider.

## Definitions of Retail Measures

**Retail Sales.** This term refers to the reported sales of goods and services that are subject to Iowa's retail sales tax.

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

**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.

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

**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, including group quarters residents.

**Expected Per Capita Spending.** An expected value for residents' average spending on taxable retail goods and services is used in the calculation of trade surplus and leakage, trade area capture, and pull factor values. This measure is sensitive to local income levels. For more information on the derivation of this measure, please contact the author.

**Sales by Business Group.** Sales tabulations by business group describe the types of firms where retail transactions occurred. They do *not* describe the type of merchandise that was sold.

## Other Data Notes

**City-to-County Assignments:** The incorporated territory of many Iowa 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 2014. Self-employed individuals such as sole proprietors and partners are excluded from these data.

**Consumer Spending Patterns:** Consumer Expenditure Survey, U.S. Bureau of Labor Statistics.

**Consumer Sentiment:** Surveys of Consumers, University of Michigan, University of Michigan: Consumer Sentiment®, retrieved from FRED, Federal Reserve Bank of St. Louis <https://research.stlouisfed.org/fred2/series/UMCSENT>, 04/12/17.

**E-commerce Sales:** US. Bureau of the Census, E-Commerce Retail Sales as a Percent of Total Sales, retrieved from FRED, Federal Reserve Bank of St. Louis <https://research.stlouisfed.org/fred2/series/ECOMPCTSA>, 04/12/17.

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

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

**Inflation Rate:** Midwest Region Consumer Price Index for All Urban Consumers, All Items, U.S. Bureau of Labor Statistics.

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

**Population:** Iowa State University estimates, based on data released through the Population Estimates Program, U.S. Census Bureau. With each annual data release, the U.S. Census Bureau may revise its estimates from prior years. This report incorporates the most recently available estimates and revisions. 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.

**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.

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

# County Peer Group Definitions

	<b>County Name</b>	<b>2010 Population</b>	<b>Metropolitan or Micropolitan Statistical Area Name</b>
<b>1</b>	Black Hawk.....	131,090	Waterloo-Cedar Falls, IA Metropolitan Statistical Area
	Dallas.....	66,135	Des Moines-West Des Moines, IA Metropolitan Statistical Area
	Dubuque.....	93,653	Dubuque, IA Metropolitan Statistical Area
	Johnson.....	130,882	Iowa City, IA Metropolitan Statistical Area
	Linn.....	211,226	Cedar Rapids, IA Metropolitan Statistical Area
	Polk.....	430,640	Des Moines-West Des Moines, IA Metropolitan Statistical Area
	Pottawattamie.....	93,158	Omaha-Council Bluffs, NE-IA Metropolitan Statistical Area
	Scott.....	165,224	Davenport-Moline-Rock Island, IA-IL Metropolitan Statistical Area
	Story.....	89,542	Ames, IA Metropolitan Statistical Area
	Woodbury.....	102,172	Sioux City, IA-NE-SD Metropolitan Statistical Area
<b>2</b>	Boone.....	26,306	Boone, IA Micropolitan Statistical Area
	Buena Vista.....	20,260	Storm Lake, IA Micropolitan Statistical Area
	Carroll.....	20,816	Carroll, IA Micropolitan Statistical Area
	Cerro Gordo.....	44,151	Mason City, IA Micropolitan Statistical Area
	Clay.....	16,667	Spencer, IA Micropolitan Statistical Area
	Clinton.....	49,116	Clinton, IA Micropolitan Statistical Area
	Des Moines.....	40,325	Burlington, IA-IL Micropolitan Statistical Area
	Dickinson.....	16,667	Spirit Lake, IA Micropolitan Statistical Area
	Jasper.....	36,842	Newton, IA Micropolitan Statistical Area
	Jefferson.....	16,843	Fairfield, IA Micropolitan Statistical Area
	Lee.....	35,862	Fort Madison-Keokuk, IA-IL-MO Micropolitan Statistical Area
	Mahaska.....	22,381	Oskaloosa, IA Micropolitan Statistical Area
	Marion.....	33,309	Pella, IA Micropolitan Statistical Area
	Marshall.....	40,648	Marshalltown, IA Micropolitan Statistical Area
	Muscatine.....	42,745	Muscatine, IA Micropolitan Statistical Area
	Wapello.....	35,625	Ottumwa, IA Micropolitan Statistical Area
	Webster.....	38,013	Fort Dodge, IA Micropolitan Statistical Area
<b>3</b>  (continues next page)	Allamakee.....	14,330	None (not part of a metropolitan or micropolitan area)
	Appanoose.....	12,887	None
	Buchanan.....	20,958	None
	Cass.....	13,956	None
	Cedar.....	18,499	None
	Cherokee.....	12,072	None
	Chickasaw.....	12,439	None
	Clarke.....	9,286	None
	Crawford.....	17,096	None
	Delaware.....	17,764	None
	Emmet.....	10,302	None
	Fayette.....	20,880	None
	Floyd.....	16,303	None
	Franklin.....	10,680	None
	Greene.....	9,336	None
	Hamilton.....	15,673	None
	Hancock.....	11,341	None
	Hardin.....	17,534	None
	Henry.....	20,145	None
	Howard.....	9,566	None
Humboldt.....	9,815	None	

## County Peer Group Definitions

<p>(continued from previous page)</p> <p><b>3</b></p>	<b>County Name</b>	<b>2010 Population</b>	<b>Metropolitan or Micropolitan Statistical Area Name</b>
	Iowa.....	16,355	None (not part of a metropolitan or micropolitan area)
	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	

<p><b>4</b></p>	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

<p><b>5</b></p>	Adair.....	7,682	None (not part of a metropolitan or micropolitan area)
	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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[www.icip.iastate.edu](http://www.icip.iastate.edu)



## Frequently-Asked Questions

Following are some of the most frequently-asked questions about the content of this report:

**What happened to the detailed business group sales data for cities?** Long-time users of the Iowa State University (ISU) Retail Trade Analysis reports may notice the absence of city-level sales data by type of business. Beginning in Fiscal Year 2009, the Iowa Department of Revenue ceased publication of detailed business group data at the individual city level in its Annual Retail Sales and Use Tax Report. As a consequence, the ISU Retail Trade Analysis reports now provide analysis of business group sales at the county and state levels only. Subject to strict disclosure limitations, the Iowa Department of Revenue may provide detailed categorical sales data for individual cities upon request.

**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?** Users should note that retail statistics in this report describe only taxable, not total, retail sales. Changes to Iowa's sales tax laws have redefined the mix of goods and services included within taxable sales transactions over time. Changes in sales tax reporting practices may also complicate analysis of historical trends at the local or statewide level. Notable recent changes include the following:

- Iowa Department of Revenue reassigned more than 10 percent of Iowa's retailers to different business class codes that better reflect their business focus (FY 2014).
- Iowa Department of Revenue reclassified gasoline stations with convenience stores from the automotive and related group to the food dealers group (FY 2014).

These reclassifications should be noted 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.

## Acknowledgements

For more than three decades, Iowa State University has provided analysis and outreach services to describe retail trade patterns in Iowa's cities and counties. In producing this report, we acknowledge the pioneering work of Kenneth E. Stone, now Professor Emeritus, in applied community retail trade analysis.

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