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# Retail Trade Analysis Report, Fiscal Year 2015: Boone County

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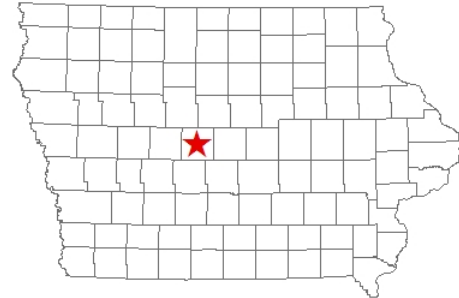
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# Retail Trade Analysis Report

## Fiscal Year 2015

**Boone County**



Iowa State University  
Department of Economics

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### Overview

This report examines local retail sales and related economic trends in Boone 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 2015 dollar equivalents. The 2015 fiscal year began on July 1, 2014, and ended on June 30, 2015.

### About Boone County:

- Boone County recorded a total population of 26,306 residents in the 2010 Census, including 768 residents in group quarters such as skilled nursing facilities and group homes.
- Boone County is part of the Boone, IA Micropolitan Statistical Area.

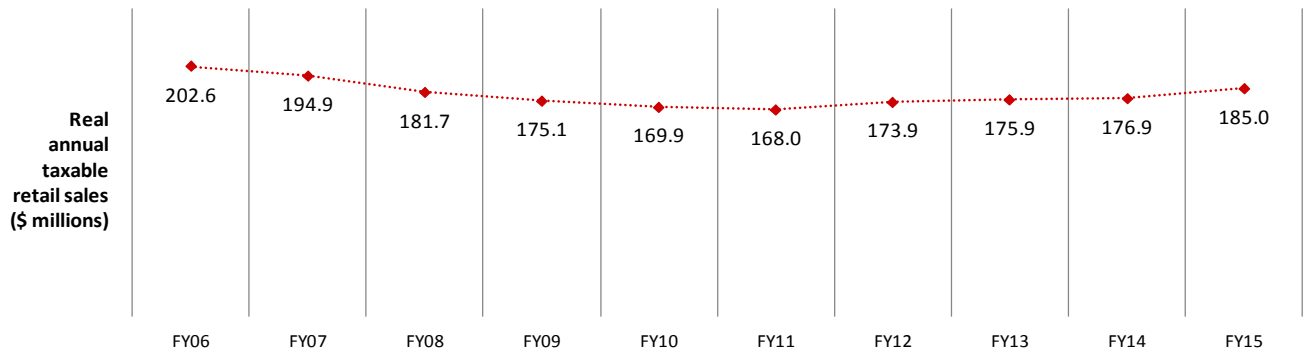
### Key Retail Indicators for Boone County

Boone	FY2014	FY2015	% Change
Real total taxable sales (\$)	176,930,348	185,000,312	4.6% ▲
Number of reporting firms (annualized)	685	696	1.6% ▲
Population	26,392	26,532	0.5% ▲
Average sales per capita (\$)	6,704	6,973	4.0% ▲
Average sales per firm (\$)	258,292	265,901	2.9% ▲

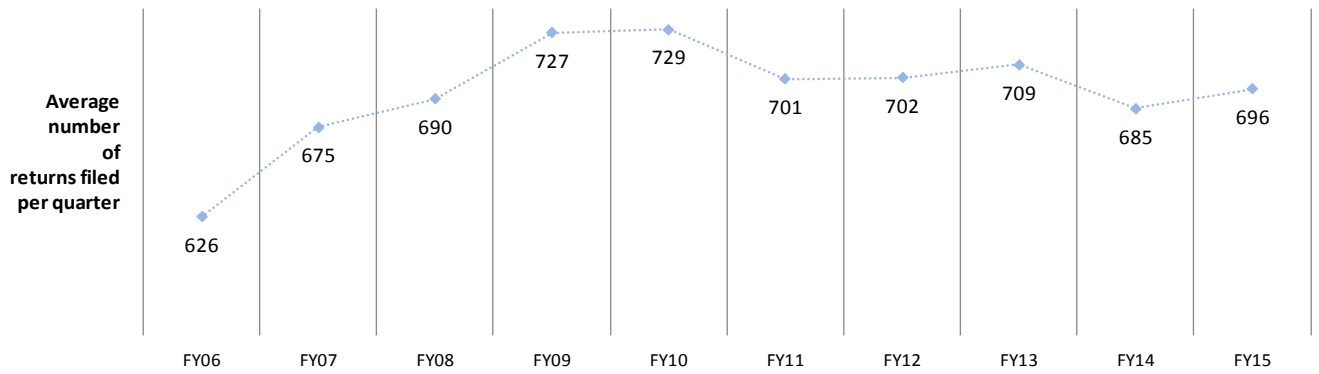
*No distinctions are made between households and group quarters residents in the calculation of per capita sales and related indicators.*

# 10-Year Summary Retail Sales Tax Statistics

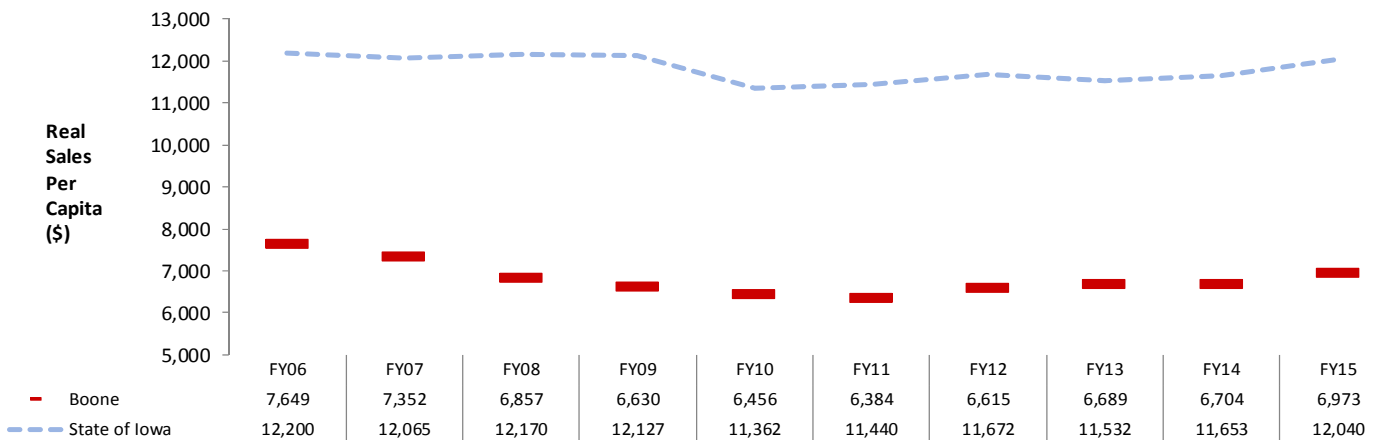
## Real Total Taxable Sales in Boone County



## Annualized Number of Reporting Firms in Boone 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.

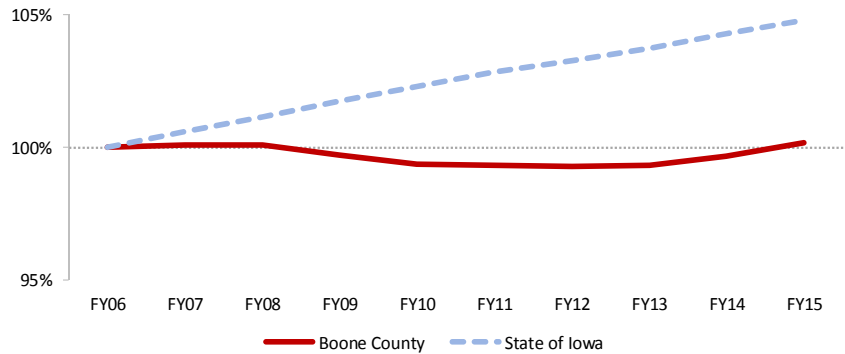
The top chart at right shows annual population estimates for Boone County and the state indexed to baseline values from ten years ago. The population in any given year is expressed in percentage terms compared to the base year population.

The middle chart at right compares population change in Boone 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 Boone County.

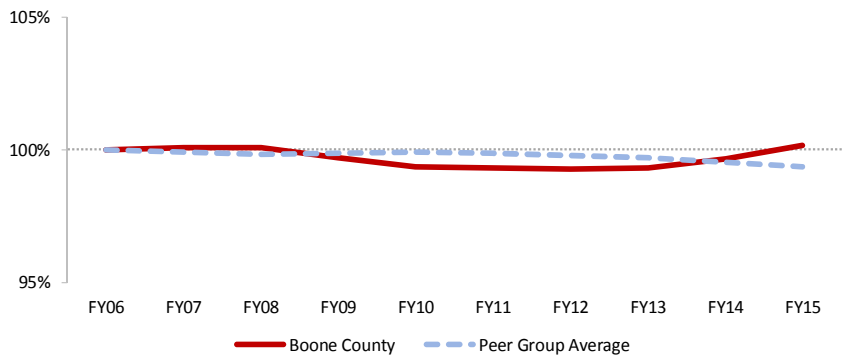
## Personal Income

The local demand for retail goods and services also depends on the income level of area residents. Per capita nonfarm personal income provides a useful gauge of the average income in the region. Nonfarm income includes wage and salary earnings of residents, self-employment income, investment income, and government transfer payments. The chart at right illustrates recent, inflation-adjusted average nonfarm income levels in Boone County and the state.

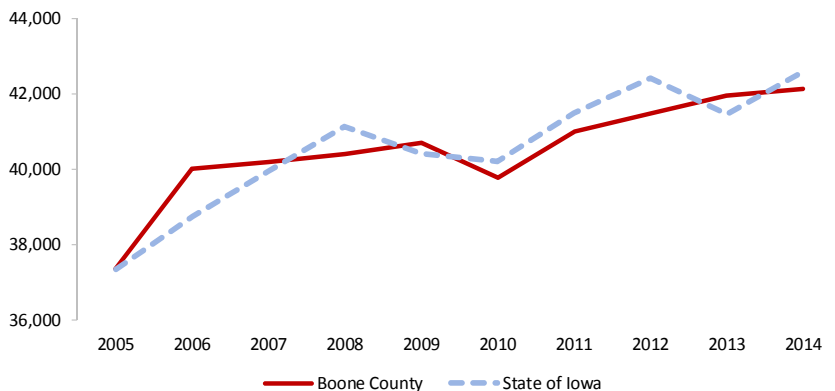
**Population Trends**  
(Annual estimates as a percentage of 2005 population)



**Population Trend for Peer Counties**  
(Annual estimates as a percentage of 2005 population)



**Real Nonfarm Income Per Capita (\$)**



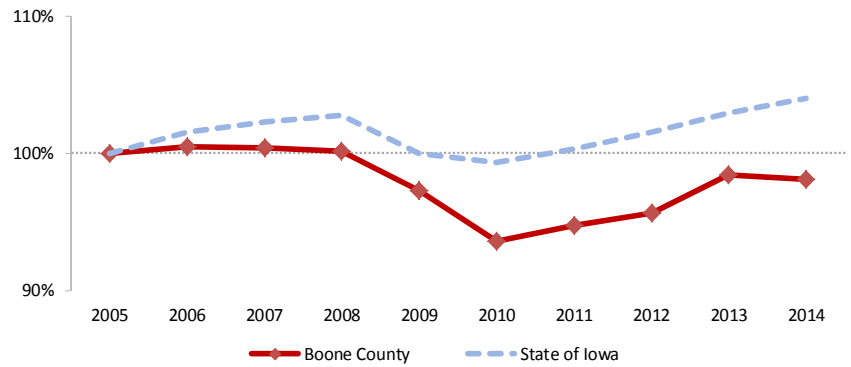
## Employment

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.

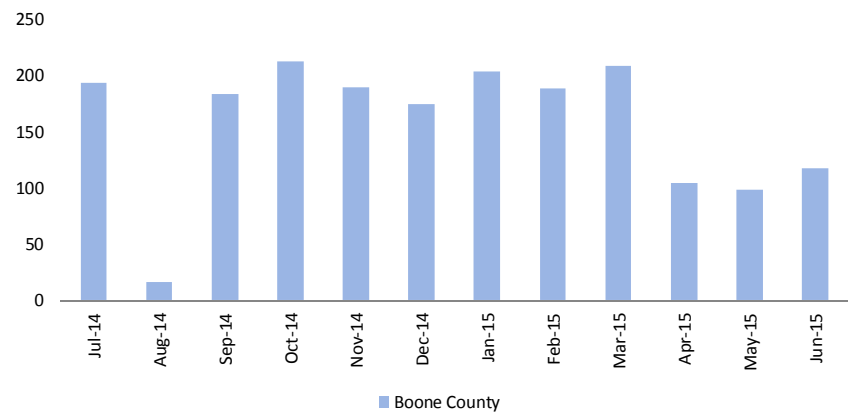
The chart at top right shows the 10-year trend in wage and salary employment in Boone County compared to the state. The number of jobs in each year is expressed in percentage terms compared to the number of jobs in the beginning year.

The middle chart shows more recent job gains and losses in Boone County. The chart illustrates the numeric gain or loss in jobs during Fiscal Year 2015 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 2005 employment)



**Recent Job Gains or Losses**  
(Change in jobs from same month in prior year)

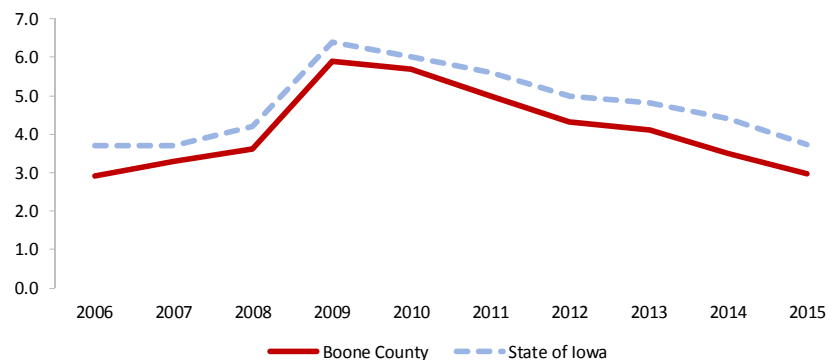


## Unemployment

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 Boone 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.

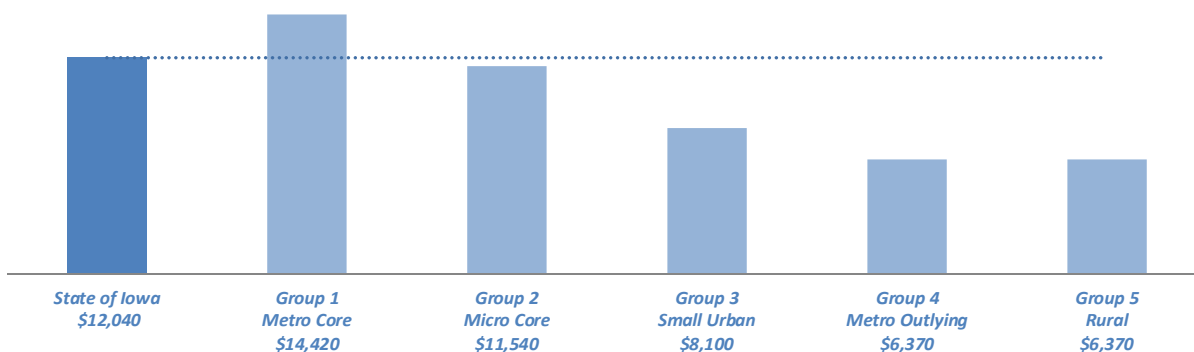
This retail analysis report assigns all counties in Iowa to peer groups based on their metropolitan or micropolitan status and other population characteristics. Metropolitan statistical areas (MSAs) are defined around a core city or cities that have 50,000 or more residents. Iowa has nine MSAs defined 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 15 micropolitan statistical areas.

The county peer groups are defined in the following table, with the relevant peer group for Boone 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 2015.

## 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	64.5%
<b>Group 2</b>	<b>Core county of a micropolitan statistical area</b>	<b>15</b>	<b>14.6%</b>
Group 3	Non-metro county whose largest city is between 2,500 to 9,999 in population	43	14.0%
Group 4	Outlying (non-core) county in a metropolitan statistical area	11	4.0%
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 2015



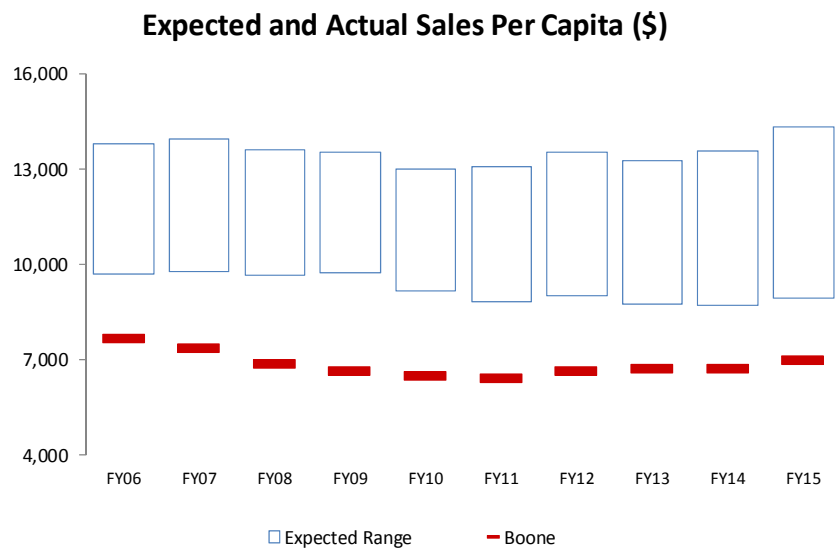
## Expected Range for Local Sales Per Capita

The chart at right compares sales levels in Boone 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 Boone County.

In Fiscal Year 2015, per capita sales in Boone were below the expected range, ranking within the bottom quartile of the peer group.



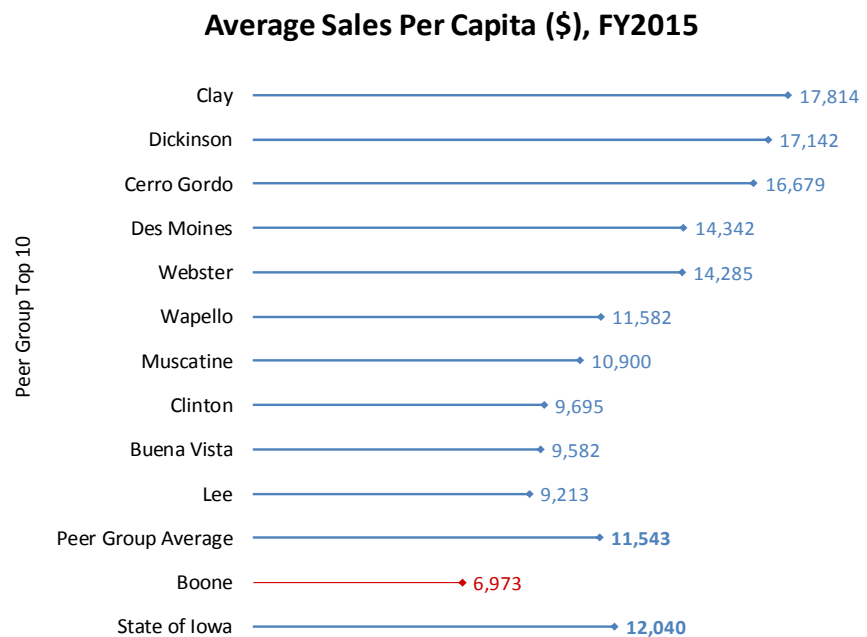
## Top 10 Peer Group Counties

Among the 15 counties in its peer group, Boone ranked number 15 in per capita sales.

The peer group’s top performers, measured by their average sales per capita in Fiscal Year 2015, 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 from sales to non-residents. A deficit suggests net leakage from local residents’ spending in other counties.

Below are trade surplus or leakage estimates for Boone 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 Boone County residents’ total spending on taxable goods and services that are purchased anywhere within Iowa.

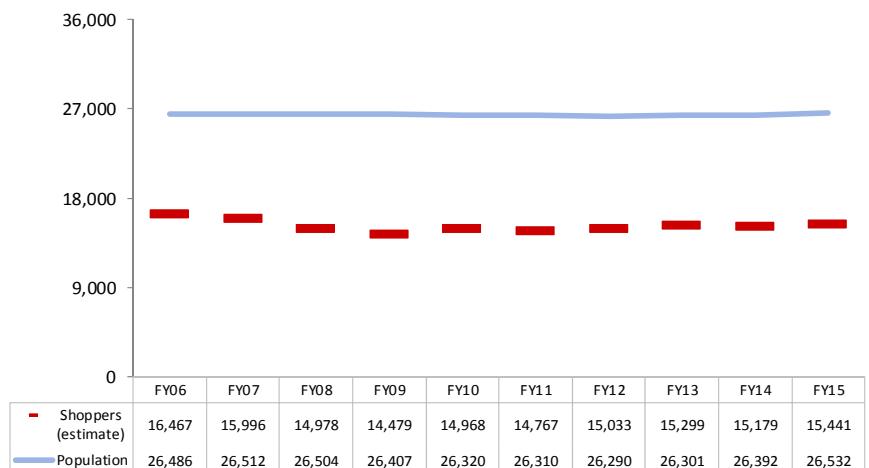
Boone Breakeven Analysis	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
Statewide average per capita spending (\$)	12,200	12,065	12,170	12,127	11,362	11,440	11,672	11,532	11,653	12,040
<i>x Local income adjustment</i>	1.01	1.01	1.00	1.00	1.00	0.99	0.99	1.00	1.00	1.00
= Average spending (anywhere) by residents (\$)	12,304	12,185	12,133	12,092	11,352	11,375	11,569	11,499	11,656	11,981
<i>x County population estimate</i>	26,486	26,512	26,504	26,407	26,320	26,310	26,290	26,301	26,392	26,532
= Breakeven sales target (\$000s)	325,883	323,062	321,576	319,324	298,792	299,281	304,146	302,442	307,634	317,892
Actual sales (\$000s)	202,604	194,918	181,735	175,090	169,919	167,976	173,913	175,930	176,930	185,000
Surplus estimate (\$000s)	-	-	-	-	-	-	-	-	-	-
Leakage estimate (\$000s)	(123,279)	(128,144)	(139,840)	(144,235)	(128,873)	(131,305)	(130,233)	(126,512)	(130,704)	(132,891)

## 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 Boone County and its peer group. The county's pull factor values are indicated with red circles.

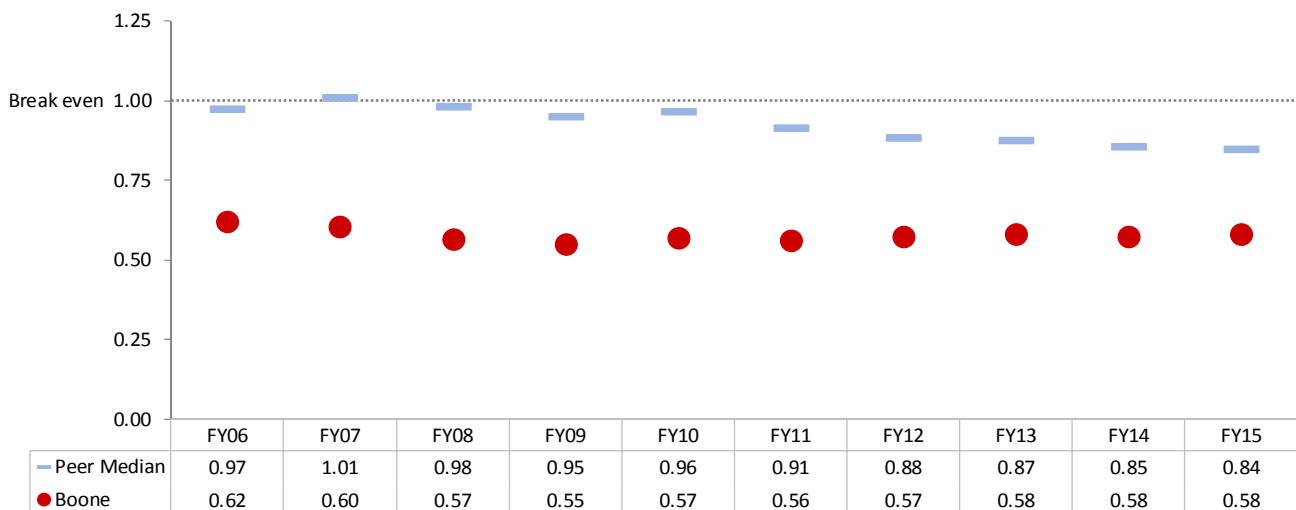
The blue dashes indicate the median pull factor for the peer group in each year. If the county's pull factor exceeds the group median, it ranks among the top half of its peer group. If its pull factor is below the median value, then it ranks among the bottom half of counties in its peer group.

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**





## Area Commuting Patterns

Worker commuting flows reveal important regional economic relationships that may influence the county's retail performance. In particular, the propensity of residents to out-commute to other counties for work may represent sources of potential sales leakage.

The top chart at right displays worker commuting flows into and out of Boone County. The commuting flows are determined from the locations of residence and employment for wage and salary workers in the region.

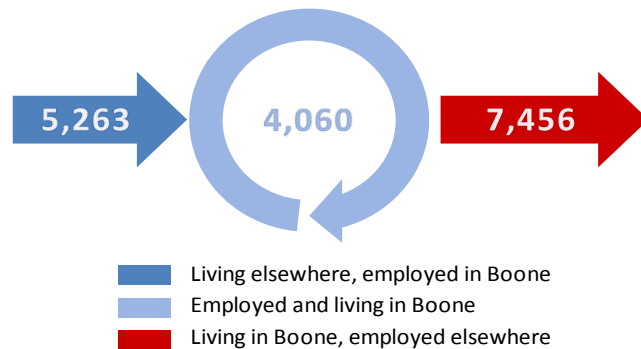
When residents commute elsewhere for work, the likelihood that they will shop locally, especially during traditional business hours, decreases. The county's overall rate of out-commuting is compared to the average for similarly-sized counties below. The rates express the percentage of working residents who commute to some other county for work.

### Worker Out-Commuting Rates

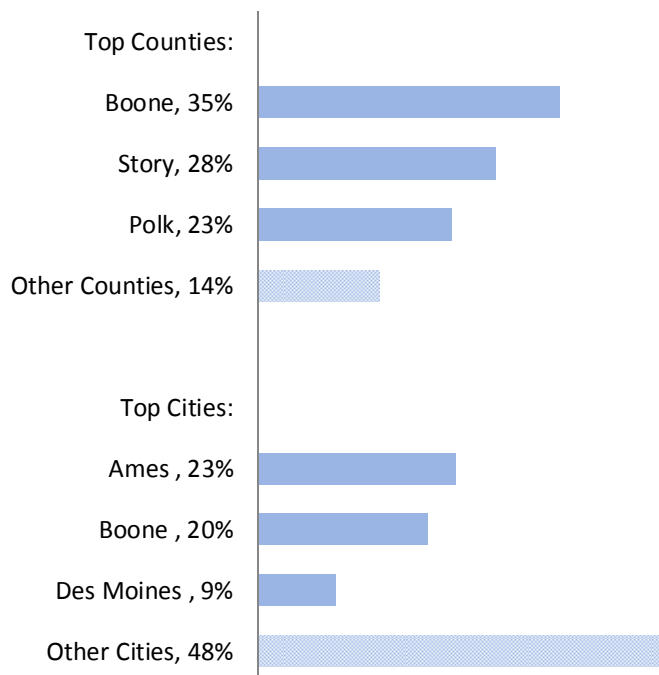
Boone County	64.7%
Peer Counties	44.9%

The bottom chart at right identifies the top three counties and cities attracting the greatest number of Boone County workers in 2013. The chart measures the percentage of employed Boone County residents who commute to the given destination for work.

**Worker Inflows and Outflows, 2013**



**Where Boone County Residents Work:  
Percentage of Residents by Their Workplace Destination**



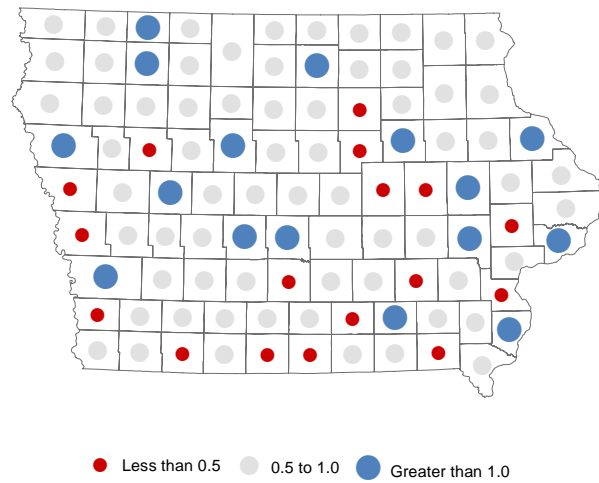
*Note: The commuting charts on this page are based on 2013 worker commuting flow data published by the U.S. Census Bureau. In cases of small place-to-place commuting flows, the Census Bureau masks the data in order to protect the confidentiality of individual workers and/or business firms. Therefore, the actual size and destinations of the county's commuting outflows may differ slightly from the values shown here.*

## Regional Trade Patterns

Regional shopping patterns may be inferred from the 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.

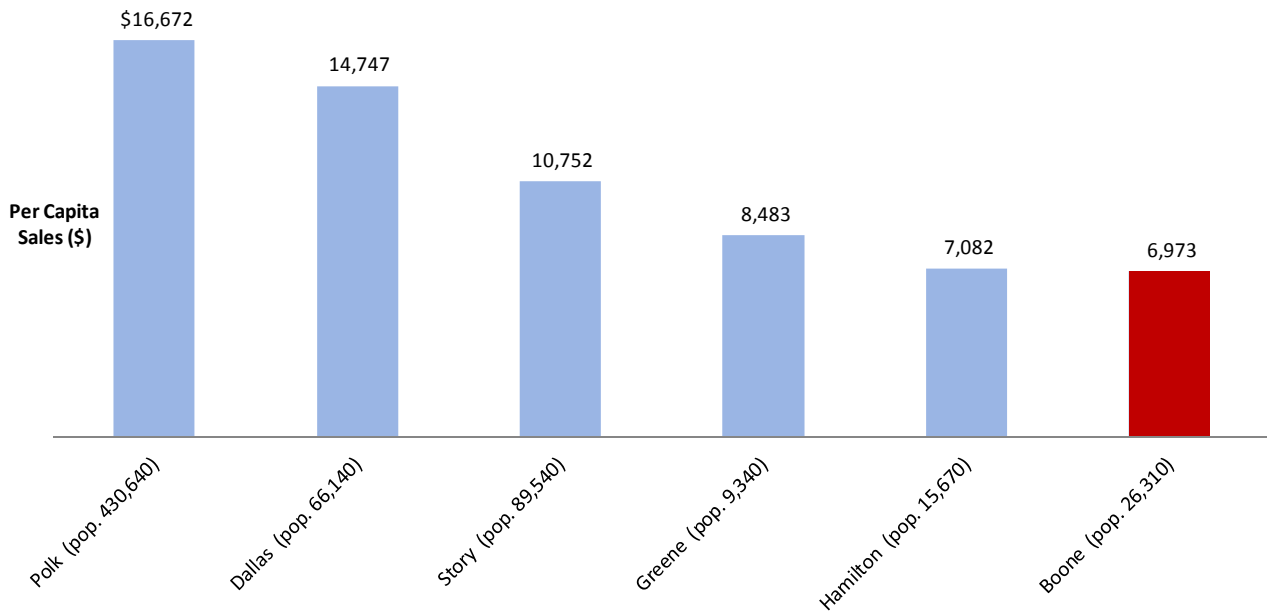
The map at right illustrates county retail pull factors for Fiscal Year 2015 (see Page 8 for a definition of pull factors). The counties with a pull factor exceeding 1.0, identified in the map with large blue dots, are likely exerting a strong retail influence on trade centers in neighboring counties. 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 2015



The bar graph below compares Fiscal Year 2015 per capita sales in Boone County to average sales in neighboring counties. The comparison group includes the five counties nearest to Boone County, with distance measured “as the crow flies” between county midpoints. The counties are listed from left to right in descending order by their 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 Boone County and the State of Iowa are presented in the table below. All dollar values, with the exception of nominal total sales, have been adjusted for inflation and are shown in Fiscal Year 2015-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 Boone:

Fiscal Year	Reporting Firms	Total Taxable Sales (\$)		Real Average Sales (\$)		Statewide Real Average (\$)	
		Nominal	Real	Per Firm	Per Capita	Per Firm	Per Capita
1976	664	62,296,932	218,196,316	328,857	8,326	367,203	10,423
1977	676	69,652,930	230,662,740	341,091	8,753	378,588	11,037
1978	717	70,673,371	219,408,275	305,902	8,309	373,002	11,282
1979	729	79,869,747	230,105,088	315,537	8,732	378,296	11,786
1980	757	86,328,723	225,609,640	297,933	8,585	371,075	11,754
1981	772	83,574,410	198,325,422	256,981	7,557	330,228	10,673
1982	783	81,073,848	179,968,414	229,845	6,878	317,532	10,272
1983	783	87,836,068	185,918,287	237,595	7,157	308,671	10,153
1984	804	92,436,669	188,020,671	234,002	7,287	302,331	10,069
1985	784	92,101,633	180,940,884	230,792	7,066	298,971	10,045
1986	778	91,999,145	175,378,977	225,350	6,901	293,083	10,030
1987	782	92,472,620	172,502,697	220,662	6,836	309,927	10,462
1988	763	97,664,559	175,672,614	230,390	6,981	311,436	10,520
1989	746	102,067,587	175,877,884	235,761	6,995	316,560	10,615
1990	745	110,434,350	183,041,785	245,611	7,277	320,631	10,720
1991	730	115,471,414	183,560,482	251,539	7,265	322,081	10,660
1992	729	118,701,913	183,764,492	252,077	7,264	322,544	10,753
1993	737	122,393,458	184,605,242	250,482	7,327	322,841	10,887
1994	734	126,541,966	186,790,518	254,656	7,428	329,684	11,122
1995	735	129,498,482	187,033,054	254,380	7,390	336,544	11,347
1996	736	134,060,389	189,877,890	258,074	7,417	337,495	11,599
1997	732	139,580,863	193,595,185	264,474	7,480	354,797	11,790
1998	734	143,762,871	197,207,655	268,675	7,592	357,151	11,995
1999	715	150,417,697	204,362,273	285,921	7,846	382,214	12,498
2000	697	151,484,662	201,549,023	289,270	7,690	389,513	12,555
2001	706	161,822,526	210,207,059	297,955	8,008	390,369	12,592
2002	681	151,437,974	194,301,235	285,213	7,425	391,745	12,443
2003	629	158,277,668	199,252,660	316,903	7,617	409,161	12,299
2004	630	169,459,299	209,108,072	331,786	7,950	416,365	12,181
2005	621	171,740,267	206,484,905	332,370	7,811	414,708	12,110
2006	626	173,733,030	202,604,452	323,908	7,649	425,627	12,200
2007	675	170,940,561	194,918,108	288,875	7,352	417,710	12,065
2008	690	164,264,173	181,735,368	263,385	6,857	418,340	12,170
2009**	727	160,188,870	175,089,704	240,922	6,630	410,177	12,127
2010	729	157,056,354	169,918,797	233,245	6,456	393,988	11,362
2011	701	157,992,144	167,976,074	239,538	6,384	408,706	11,440
2012	702	167,566,998	173,913,171	247,828	6,615	416,882	11,672
2013	709	172,122,527	175,929,523	248,138	6,689	411,471	11,532
2014	685	175,532,110	176,930,348	258,292	6,704	427,881	11,653
2015	696	185,000,312	185,000,312	265,901	6,973	445,394	12,040

## 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 Boone 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.

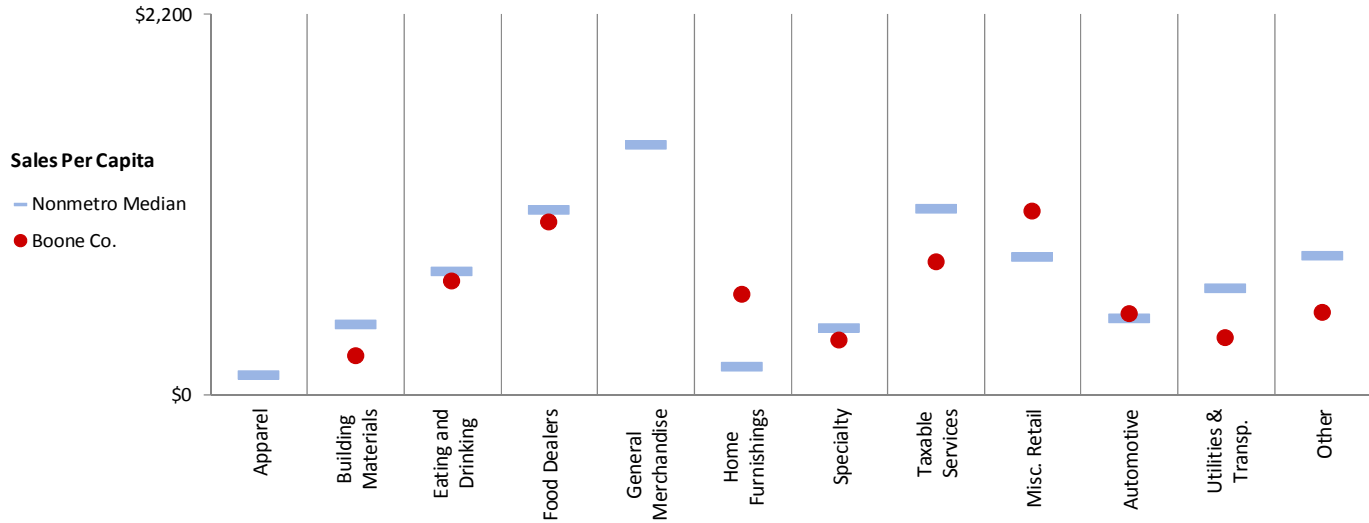
### Boone County Taxable Sales Summary by Business Group

Type of Firm	Boone County FY15 Totals		Average Sales Per Firm (\$)	
	Total Sales (\$)	Reporting Firms	Boone County	State of Iowa
Apparel Stores				683,697
Building Materials Stores	5,956,456	15	410,790	1,769,707
Eating and Drinking Establishments	17,212,857	45	384,645	542,812
Food Stores (excluding non-taxable food items)	26,294,317	23	1,155,794	1,031,121
General Merchandise Stores				6,092,479
Home Furnishings Stores	15,321,341	10	1,612,773	789,058
Specialty Retail Stores	8,297,913	141	58,850	208,769
Service Establishments	20,200,694	240	84,082	164,397
Miscellaneous Retail Firms	27,913,411	126	221,096	245,425
Automotive and Related Stores	12,395,126	17	740,008	760,959
Utilities and Transportation Services	8,737,330	37	239,379	1,011,924
Other	12,568,431	30	418,948	888,105

Type of Firm	Boone County Trends		Benchmark Values for FY15	
	Real per capita averages (\$)		Non-Metro	State of Iowa
	FY12 - FY14	FY15	Median	
Apparel Stores	90		120	341
Building Materials Stores	303	226	409	868
Eating and Drinking Establishments	640	653	721	1,301
Food Stores (excluding non-taxable food items)	NA	998	1,075	1,058
General Merchandise Stores			1,451	1,512
Home Furnishings Stores		581	165	390
Specialty Retail Stores	324	315	394	934
Service Establishments	798	766	1,080	1,665
Miscellaneous Retail Firms	916	1,059	803	969
Automotive and Related Stores	NA	470	447	575
Utilities and Transportation Services	322	331	621	1,165
Other	353	477	812	1,261

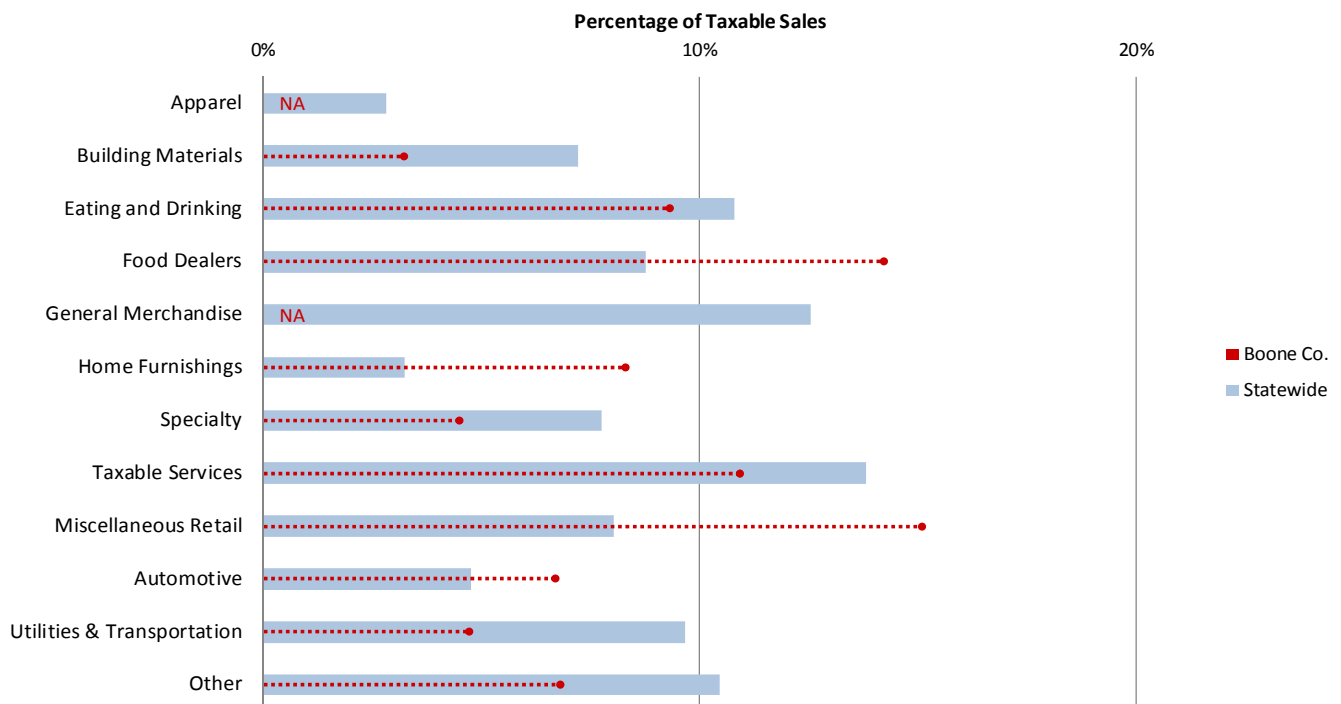
## Per Capita Sales by Business Group

The chart below compares actual per capita sales by business group in Boone County with the median value for all 78 non-metropolitan counties in Iowa (see table on previous page for underlying data). Boone 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.



## Distribution of Taxable Sales by Business Group

The following chart illustrates the percentage distribution of Boone County's total taxable sales across the major retail business groups. Boone County values are shown with red dotted lines. Statewide averages are shown with blue bars. County data are suppressed for any business groups that did not meet a minimum threshold for number of reporting firms.



## Statewide Average Per Capita Sales by Detailed Business Type, FY 2015

Business Type and Per Capita Sales (\$)			
<b>Apparel Group</b>	<b>\$341</b>	<b>Services Group</b>	<b>1,665</b>
Clothing and Clothing Accessories Stores	291	Auto Repair	339
Shoe Stores	50	Hotels and All Other Lodging Places	293
		Other Business Services	223
<b>Automotive and Related Firms</b>	<b>575</b>	Arts and Entertainment	185
New and Used Car Dealers	281	Beauty/Barber Shops	123
Automotive Parts and Accessories	216	Miscellaneous Repairs	85
Recreational and All Other Motorized Vehicles	78	Other Personal Services	74
		Auto Rental and Storage	54
<b>Building Materials Group</b>	<b>868</b>	Motion Picture and Video Industries	54
Building Material Dealers	626	Laundry and Floor Cleaning	47
Hardware Stores	129	Finance, Insurance, Real Estate and Leasing	41
Garden Supply Stores	80	Electronic and Precision Equipment Repair & Maintenance	37
Paint and Glass Stores	31	Other Services	30
Mobile Home Dealers	2	Funeral Service and Crematories	23
		Education and Athletic Events	20
<b>Eating and Drinking Places Group</b>	<b>1,301</b>	Photographic Studios	16
Restaurants, Taverns, and Bars	1,301	Employment Services	15
		Upholstery and Furniture Repair	2
<b>Food Dealers Group</b>	<b>1,058</b>	Watch, Clock, Jewelry Repair	0
Grocery Stores and Convenience Stores	522	Footwear and Leather Repair	0
Gas Stations/Convenience Stores With Gas	519		
Specialized Groceries	17	<b>Miscellaneous Group</b>	<b>969</b>
		Plumbing and Heating Contractors	143
<b>General Merchandise Group</b>	<b>1,512</b>	General Contractors	133
Department Stores	963	Agricultural Production and Services	130
Miscellaneous Merchandise Stores	543	Other Special Trade Contractors	121
Variety Stores	6	Industrial Equipment Manufacturers	87
		Miscellaneous Manufacturers	58
<b>Home Furnishings And Appliances Group</b>	<b>390</b>	Food Manufacturers	55
Appliances and Entertainment Equipment	154	Electrical Contractors	48
Furniture Stores	142	Non-Metallic Product Manufacturers	43
Home Furnishing Stores	94	Furniture, Wood and Paper Manufacturers	39
		Publishers Of Books & Newspapers and Commercial Printers	37
<b>Specialty Retail Stores Group</b>	<b>934</b>	Carpentry Contractors	26
Other Specialty	241	Unclassified	23
Sporting Goods	177	Mining	13
Beauty and Health (Includes Pharmacies & Drug Stores)	163	Painting Contractors	11
Direct Sellers	74	Apparel and Textile Manufacturers	1
Hobby and Toy	64		
Jewelry	62	<b>Wholesale Goods Group</b>	<b>1,261</b>
Book and Stationery Stores	43	(retail sales by wholesale firms)	1,261
Used Merchandise Stores	26		
Stationery, Gift, Novelty	24	<b>Utilities and Transportation Group</b>	<b>1,165</b>
Vending Machine Operators	24	Electric and Gas	465
Liquor Stores	17	Communications	444
Florists	15	Water and Sanitation	184
Fuel and Ice Dealers	2	Transportation and Warehousing	72
Electronic Shopping and Mail Order Houses	1		
		<b>All Business Groups</b>	<b>12,040</b>



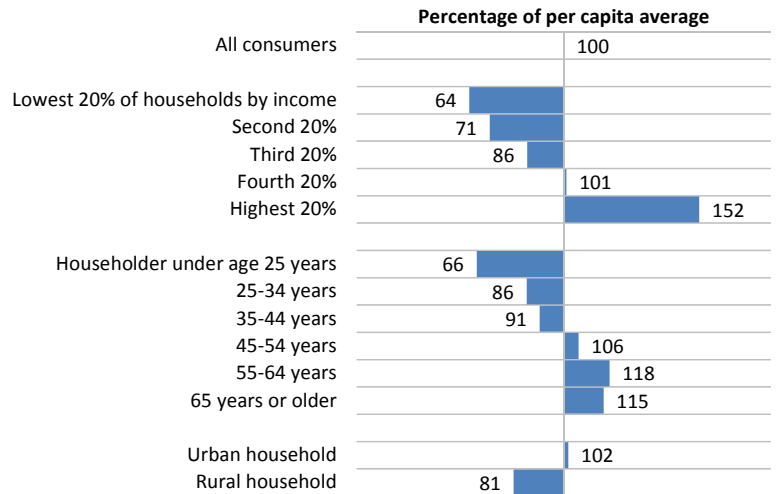
# Consumer Characteristics

## 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.

### Boone County Profile

Median Household Income (\$)	Boone	State of Iowa
Estimate	54,186	53,816
90% Confidence Interval	49,830 - 58,540	53,090 - 54,550

Poverty Rate (%)	Boone	State of Iowa
Estimate	10.4	12.3
90% Confidence Interval	8.5 - 12.3	12.0 - 12.6

Population (% of total)	Boone	State of Iowa
Under 5 years	5.6%	6.3%
Age 5 to 17	17.1%	17.1%
Age 18 to 24	7.7%	10.3%
Age 25 to 44	23.9%	24.3%
Age 45 to 64	28.7%	26.2%
Age 65 years and over	17.0%	15.8%
Median age	41.4	38.1

▶ Higher than state  
◀ Lower than state

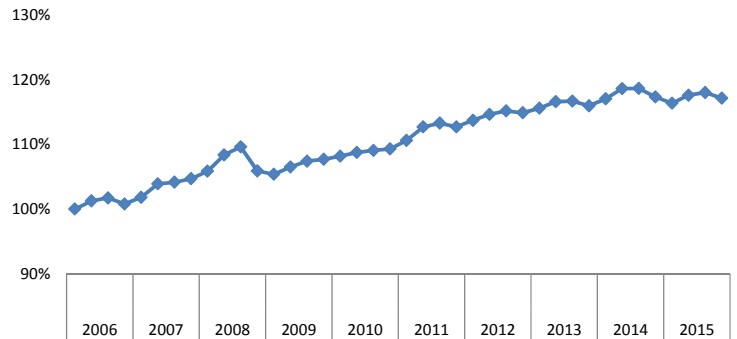
# Other Factors Influencing Retail Sales

## 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 2006 as the benchmark period.

**Midwest Consumer Price Index**  
(100% = Price Levels in 2006-Q1)

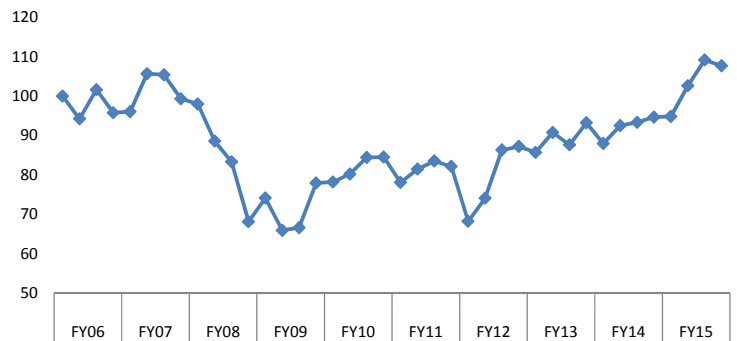


## Consumer Confidence

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 start of Fiscal Year 2006. Source data were obtained from the Index of Consumer Sentiment, University of Michigan Surveys of Consumers, via the Federal Reserve Bank of St. Louis.

**U.S. Consumer Sentiment**  
(100 = Index Value in 1st Quarter FY2006)

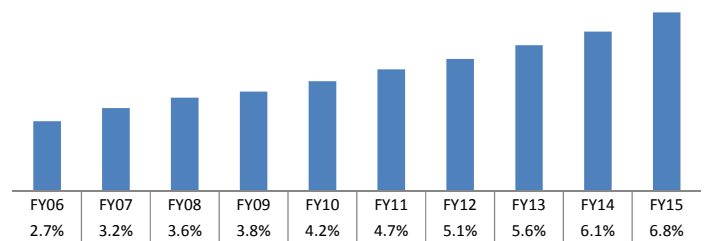


## Internet and Catalog Sales

E-commerce represents a small but rapidly growing share of retail activity in the United States. While e-commerce presents a sales growth opportunity for many retailers, it also poses a potentially important new source of retail sales leakage for 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.

**E-Commerce Sales in the U.S.**  
(as a Percentage of Total Retail Sales)



## 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.** Some cities' reported sales values 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 2013. 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>, 02/25/16.

**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>, 02/25/16.

**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.

**Nonfarm Personal Income:** U.S. Bureau of Economic Analysis. This report excludes farm earnings and income from measures of local personal income due to the annual volatility of farm income and the fact that many farm-related purchases are exempt from Iowa sales tax.

**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
	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
	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
	Carroll.....	20,816	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
Iowa.....	16,355	None	

## County Peer Group Definitions

3 (continued from previous page)	County Name	2010 Population	Metropolitan or Micropolitan Statistical Area Name
	Jackson.....	19,848	None (not part of a metropolitan or micropolitan area)
Kossuth.....	15,543	None	
Lucas.....	8,898	None	
Marion.....	33,309	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 (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. The ACS income estimates are spatially-smoothed, then used to derive pull factor and related retail measures that account for variations in local income levels.

## 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.

This project was supported with funding from the Iowa Agriculture and Home Economics Experiment Station, the research program directed by the College of Agriculture and Life Sciences at Iowa State University.

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