

**2015 Stone County, Mississippi  
Retail Trade Analysis**

---



Prepared By:

Dr. Chad Miller, Associate Professor  
Dr. Shannon Campbell, Director, Lott National Center  
Tanner Jones, Graduate Assistant

NOVEMBER 2015

## **ACKNOWLEDGEMENTS**

The USM research teams wants to express appreciation to the following individuals who contributed to the 2015 Stone County Retail Analysis.

**The University of Southern Mississippi  
Department of Economic Development and Trent Lott National Center**

Mihailigorevici (Michael) Brinza, Graduate Assistant  
Tasha May, Marketing Coordinator

**Stone County Economic Development Partnership**

Betsy Rowell, Executive Director  
Isaac Harbuck, Executive Board Chairman  
Nell Murray, Executive Board Member

---

**TABLE OF CONTENTS**

Introduction.....	3
Trends.....	4
Pull Factors.....	6
Reilly’s Law.....	13
Trade Area Capture.....	15
Trade Sales Potential.....	15
Location Quotients.....	17
Retail Leakage.....	18
Commuting Patterns.....	22
Purchasing Power analysis.....	30

## EXECUTIVE SUMMARY

The Stone County Area Development Partnership commissioned The University of Southern Mississippi to conduct a retail trade analysis of the county. This report is a summary of the findings for Stone County and is intended to provide insight into the challenges and opportunities facing the county over the next 3-5 years. In 2013, Stone County captured approximately 66% of the retail trade of its area residents based upon a comparison between retail sales and population size. The other 34% of area retail sales are being made outside of the county. From 2010 to 2013, the largest growth in sales, by percentage, was the Automotive Sector (36.2%), while the two largest declining industries were Equipment and Supplies (-31.3%) and Furniture (-28.8%). Equipment and Sales industry sector represents potential for the largest growth (1271.4%) in order to meet per capita expectations. In 2014, Stone County showed a noteworthy increase in retail activity from 66% to 70% in meeting the retail needs of its residents.

Historic data in retail sales indicated that Stone County could gain potential sales in categories such as Specialty Food Sales (\$297,000), Gifts Novelty and Souvenir Sales (\$534,000), and Hobby, Toy, and Game sales (\$281,000) based upon 2014 sales. Other potential retail sales categories are provided in the report. An estimated 14,038 automotive shoppers and 22,386 general merchandise shoppers did business in Stone County in 2013 as compared to 11,716 average Stone County resident shoppers. The City of Wiggins' geographic trade area runs 6.2 miles south, 8.1 miles north, 14.8 miles west, and 18.3 miles east. Retail development initiatives have greater potential to attract shoppers along Highway 49 and along east Highway 26 area based upon commuting patterns and population density.

## **INTRODUCTION**

Stone County Economic Development Partnership requested a retail analysis be conducted by The University of Southern Mississippi. The analysis includes an assessment of the size and shape of Stone County's trade area to provide valuable insight into the strengths and weaknesses of its local economy. Retail trade generates sales tax revenue, which makes up a significant portion of a communities operating budget. This study will identify current retail sector and future prospects for Stone County.

## **POPULATION AND EMPLOYMENT**

Stone County is located in south Mississippi, just north of Mississippi's Gulf Coast. The county's largest city, Wiggins, is centrally located in the county and makes up a large portion of the county's retail sector. Wiggins is approximately 32 miles south of Hattiesburg, Mississippi, 57 miles west of Mobile, Alabama, 33 miles north of Gulfport, Mississippi, and 81 miles northeast of New Orleans, Louisiana. Highway 49 runs directly through the center of Stone County and Wiggins, providing the majority of the county's traffic flow.

Between 2011 and 2015, Stone County remained fairly constant in population with only a 1 percent increase for the entire county (Table 1). The City of Wiggins experienced a slight population decrease by 1 percent. The 2015 total population for the county was 18,022 of which the majority live outside the City of Wiggins.

Table 1

*Stone County and Wiggins Population*

Area	2011 Population	2015 Population	% Change 2011-2015
Stone County	17,923	18,022	1%
Wiggins	4,418	4,362	-1%

Source. U.S. Census Data

Stone County's employment base is fairly diversified with a large presence on education jobs (Table 2). Manufacturing, healthcare, and retail sectors are also significant employers. There has been a significant increase in healthcare from 19 to 189 workers (895%) and Full Service Restaurant employment from 46 to 112 workers (143%). Total employment remained constant.

Table 2

*Top Employment by Sector*

NAICS	Description	2005 Jobs	2015 Jobs	2005 – 2015 % Change
903611	Elem and Secondary Schools (Local Government)	438	650	48%
903612	Colleges, Universities (Local Government)	461	348	(25%)
321212	Softwood Veneer and Plywood Manufacturing	269	285	6%
722513	Limited-Service Restaurants	284	241	(15%)
452910	Warehouse Clubs and Supercenters	252	239	(5%)
622110	General Medical and Surgical Hospitals	19	189	895%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	242	159	(34%)
113310	Logging	213	140	(34%)
722511	Full-Service Restaurants	46	112	143%
322121	Paper (except Newsprint) Mills	180	105	(42%)
902999	State Government, Excluding Ed and Hospitals	95	94	(1%)
447110	Gasoline Stations with Convenience Stores	100	83	(17%)
<b>Total</b>		<b>4,538</b>	<b>4,546</b>	<b>&lt;1%</b>

Source. EMSI Data Analysis Software.

Employment location quotients (LQ) are ratios describing Stone County's distribution of employment by industry to be compared to the United States' distribution of employment. An LQ greater than one indicates an industry has a greater share of the Stone County employment than is the case in the United States. Table 3 provides a summary of 22 retail sectors which have an employment LQ greater than one indicating a greater concentration of these types of jobs in Stone County as compared to the U.S.

Table 3

*Employment Location Quotients Greater > 1*

NAICS	Description	2014 Location Quotient
445220	Fish and Seafood Markets	4.64
453210	Office Supplies and Stationery Stores	4.06
453930	Manufactured (Mobile) Home Dealers	3.97
452990	All Other General Merchandise Stores	3.78
441210	Recreational Vehicle Dealers	3.29
441228	Motorcycle, ATV, and All Other Motor Vehicle Dealers	3.26
454210	Vending Machine Operators	2.95
453991	Tobacco Stores	2.31
447110	Gasoline Stations with Convenience Stores	2.24
441120	Used Car Dealers	2.09
451211	Book Stores	2.03
444210	Outdoor Power Equipment Stores	2.00
445210	Meat Markets	1.99
444220	Nursery, Garden Center, and Farm Supply Stores	1.85
452910	Warehouse Clubs and Supercenters	1.54
441320	Tire Dealers	1.43
446110	Pharmacies and Drug Stores	1.42
446199	All Other Health and Personal Care Stores	1.29
451120	Hobby, Toy, and Game Stores	1.25
445310	Beer, Wine, and Liquor Stores	1.24
441110	New Car Dealers	1.14
442210	Floor Covering Stores	1.09

Source: EMSI Data Analysis, 2014.4

## TRENDS

Stone County Economic Development Partnership is interested in working with commercial developers who specifically target the retail and commercial sectors. From 2010 to 2013, the largest growth in sales, by percentage, was the Automotive sector (36.2%), while the two largest declining industries were Equipment and Supplies (-31.3%) and Furniture (-28.8%) (See Table 4). Similarly, the largest increase in total sales was in the Automotive sector with an increase of \$7.2 million. However, the largest decline in total sales was in the Contracting sector, where there was a decrease in sales of approximately \$6.8 million. Overall, the county saw a net growth of only \$39,652 in retail sales between 2010 and 2013.

Table 4

### *Stone County Retail Gross Sales by Industry Sector*

Retail Category	2010	2013	% Change 2010 to 2013
Automotive	\$19,949,702	\$27,172,897	36.2%
Equip. and Supplies	2,090,367	1,435,452	-31.3%
Food and Beverage	30,512,362	32,405,680	6.2%
Furniture	756,203	538,628	-28.8%
Public Utilities	10,984,215	10,645,047	-3.1%
General Merchandise	54,230,166	54,466,910	0.4%
Building Materials	7,578,108	6,090,585	-19.6%
Misc. Retail	7,030,570	7,959,898	13.2%
Misc. Services	4,390,708	3,401,904	-22.5%
Contracting	28,522,676	21,728,160	-23.8%
Recreation	0	239,568	
<b>Total</b>	<b>\$166,045,077</b>	<b>\$166,084,729</b>	<b>0.0%</b>

*Source.* Mississippi Department of Revenue Annual Report for County Sales and Tax by Industry Group.

In smaller, more rural counties such as Stone County, retail development can serve as a crucial source of tax revenue needed for community infrastructure and support. Stone County authorities can assess its competitive position in various retail sectors and then concentrate on specific areas of focus for development. Areas of focus can be accomplished by comparing retail



growth in the county to the state of Mississippi's retail growth to determine gaps and opportunities not being fully realized in the county.

In 2014, Stone County generated a total of \$158,411,785 in gross sales which resulted in \$9,963,212 sales tax revenues collected. Retail Trade represented the industry category of highest gross sales of \$107 million with slightly over \$7 million in gross taxes (see Table 5). Although Construction sales generated second highest gross sales (\$19 million), Accommodation and Food Service sector generated second highest sales tax of \$1.167 million. Beginning in 2014, the Mississippi Department of Revenue changed its sales tax classification categories making comparisons to previous years difficult.

Table 5

*2014 Stone County Retail Gross Sales by Industry Sector*

Industry Category	Number of Tax Payers	Gross Sales 2014	Gross Sales Tax 2014
Utilities	6	\$5,295,676	\$288,184
Construction	49	19,314,267	754,400
Wholesale Trade	22	3,947,237	160,809
Retail Trade	180	107,081,848	7,165,726
Real Estate Rental and Leasing	7	937,545	65,628
Professional, Scientific, Technical Services	5	63,524	4,447
Admin Support, Waste Mgt, Remediation	7	563,876	39,471
Arts, Entertainment, and Recreation	8	351,214	24,585
Accommodation and Food Service	50	16,673,965	1,167,178
Other Service	31	4,182,633	292,784
<b>TOTAL</b>		<b>\$158,411,785</b>	<b>\$9,963,212</b>

*Source.* Mississippi Department of Revenue Annual Report for County Sales and Tax by Industry Group.

### **PULL FACTORS**

A pull factor is a measure of the size of a local retail sector in relation to the local population it serves. It is calculated by dividing a local area's per capita sales by the state wide

per capita sales adjusting for local income differences (Richard, 2012). A pull factor of greater than one indicates that the local retail sector is selling to people outside of the local area.

Conversely, a pull factor less than one implies that local citizens are traveling outside the area to do their retail shopping, commonly known as retail ‘leakage’.

**2013 Pull Factors for Stone County.** In 2013, Stone County was supporting only 66% of the retail needs of their area residents (See Table 6 and Figure 1). As a result, 34% of area retail sales are being made outside of the county. The only retail sector in which the county is meeting and exceeding the needs of its residents is the General Merchandise sector (1.25). The county is nearly meeting the needs its population within the sectors of Automotive (.79), Food and Beverage (.70), and Contracting (.74), but there is growth opportunities in these market needs. The remaining sectors have large deficiencies, as area residents are meeting their retail needs in other counties. The largest deficiencies are in the Equipment and Supplies (.07) and Furniture (.11) categories, where the county has very little retail presence.

Table 6

*2013 Industry Sector Pull Factors for Stone County*

	2013 Population	FY 2013 Retail Sales (\$)	Per Capita Income	2013 Pull Factor
Mississippi	2,991,207	46,009,439,519	20,156	1
Stone County	17,854	166,084,729	18,576	0.656

Industry Sector	FY		2013 Pull Factor
	Mississippi	Stone County	
Automotive	6,282,431,452	27,172,897	0.79
Equip. and Supplies	3,578,629,037	1,435,452	0.07
Food and Beverage	8,449,284,789	32,405,680	0.70
Furniture	853,711,041	538,628	0.11
Public Utilities	4,369,848,666	10,645,047	0.44
General Merchandise	7,896,794,345	54,466,910	1.25
Building Materials	2,672,756,137	6,090,585	0.41

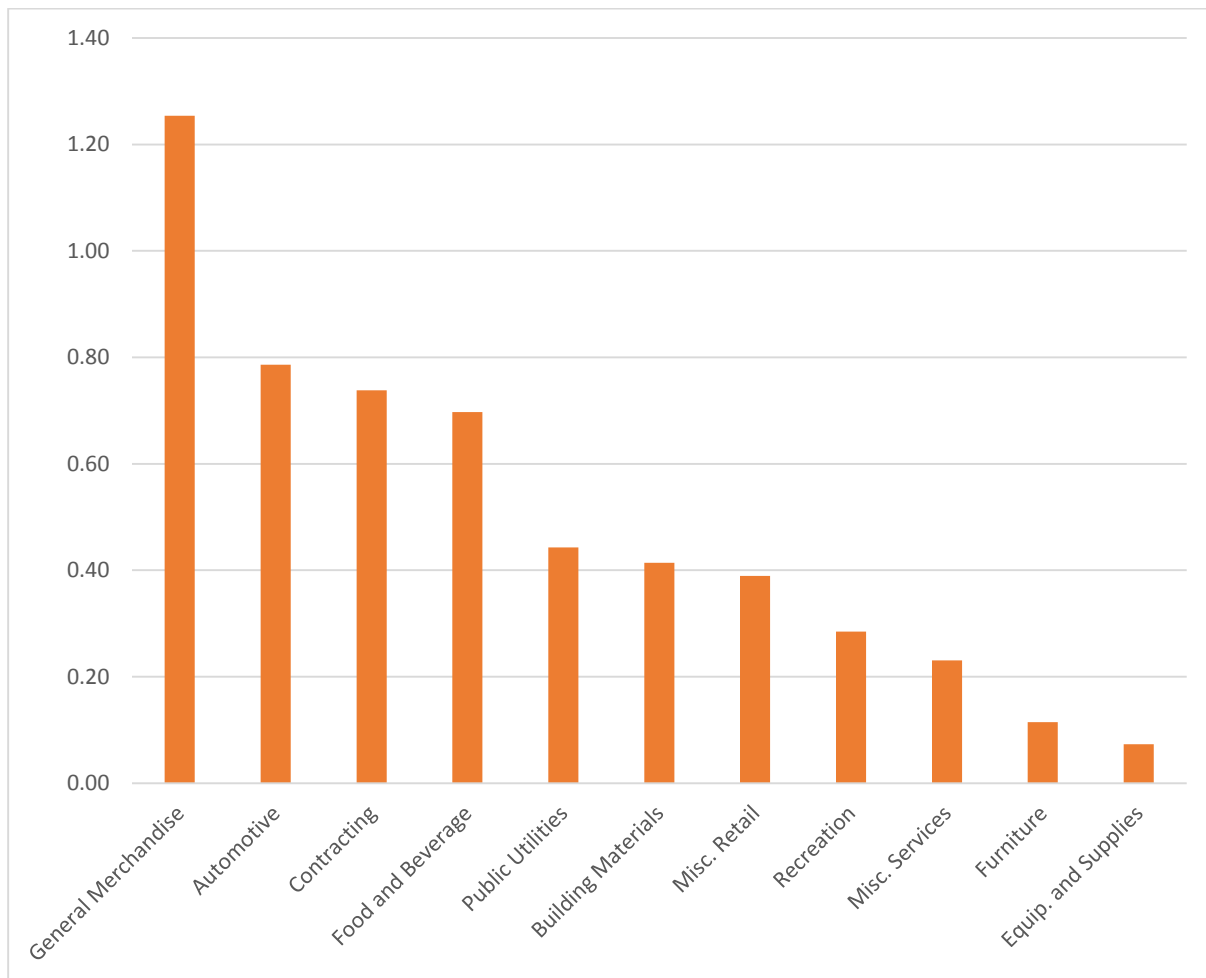
Misc. Retail	3,715,848,240	7,959,898	0.39
Misc. Services	2,683,213,844	3,401,904	0.23
Contracting	5,353,835,075	21,728,160	0.74
Recreation	153,086,893	239,568	0.28
<b>Total</b>	<b>46,009,439,519</b>	<b>166,084,729</b>	<b>0.66</b>

*Sources.*

<sup>1</sup>U.S. Bureau of Census, State and County Quick-Facts

<sup>2</sup>Mississippi State Tax Commission, *Annual Report*, FY 2014

<sup>3</sup>Regional Economic Information System, Bureau of Economic



*Figure 1.* Pull Factor for Retail Trade. Mississippi Department of Revenue, Census Bureau.

**2014 Pull Factors for Stone County.** In 2014, Stone County showed an increase in retail activity with an increase from 66% to 70% in meeting the retail needs of its area residents as shown in Table 7 (Department of Revenue, 2015). However, 30% of –retail sales are being made

outside of the county. The only retail sector in which the county meets and exceeds the needs of its residents is the General Merchandise sector (1.25). The county is close to meeting the needs of the Automotive (.79), Food and Beverage (.70), and Contracting (.74) sectors, but there is room for improvement to meet the market needs. The remaining sectors have large deficiencies, as area residents are meeting their retail needs in other counties. The largest deficiencies are in the Equipment and Supplies (.07) and Furniture (.11) categories, where the county has very little retail presence.

Table 7

*2014 Industry Sector Pull Factors for Stone County*

	2014 Population <sup>1</sup>	2014 Total Retail Sales (\$) <sup>2</sup>	2014 Per Capita Income (\$) <sup>3</sup>	2014 Pull Factor
Mississippi	2,994,079	44,641,037,017	20,618	1.0
Stone County	17,875	158,411,785	18,576	0.7
Industry Sector	2014 Stone County Retail Sales	2014 Mississippi Retail Sales		Pull Factor
Utilities	5,295,676	1,439,020,326		0.7
Construction	19,314,267	5,716,049,581		0.6
Wholesale Trade	3,947,237	3,658,202,206		0.2
Retail Trade	107,081,848	25,048,766,295		0.8
Transportation, Warehouse	-	7,546,220,574		0.0
Information	-	2,450,901,488		0.0
Finance	-	2,970,615,646		0.0
Real Estate, Rental, Leasing	937,545	2,238,247,954		0.1
Professional, Scientific Services	63,524	146,993,789		0.1
Management of Companies, Enterprises		20,588		0.0
Administrative Support, Waste Management, Remediation	563,876	335,162,626		0.0

Educational Services	-	4,553,789	0.0
Healthcare and Social Assistance	-	2,450,254	0.0
Arts, Entertainment, and Recreation	351,214	124,954,880	0.0
Accommodation and Food Service	16,673,965	4,590,835,958	0.0
Other Service	4,182,633	1,335,778,771	0.0
<b>Total</b>	<b>158,411,785</b>	<b>57,608,774,725</b>	

## Sources:

<sup>1</sup>U.S. Bureau of Census, State and County Quick-Facts<sup>2</sup>Mississippi State Tax Commission, *Annual Report*, FY 2014<sup>3</sup>Regional Economic Information System, Bureau of Economic Analysis, U. S. Dept. of Commerce (County level data).

Stone County's retail sector is highly competitive in attracting customers to Meat Markets, Warehouse Clubs and Supercenters, Outdoor Power Equipment Stores, and Used Merchandise Stores as compared to Mississippi (shown in Table 8). Given the high pull factors, these retail sectors appear to be meeting the supply needs of the immediate area, and would not be targets for further retail development unless demand increases.

Table 8

*2014 Retail Sector Highest Ranking Pull Factors*

NAICS	Retail Sector	Stone County Sales	State of Mississippi Sales	Pull Factor
44521	Meat Markets	\$309,481	\$12,332,291	4.2
45291	Warehouse Clubs and Supercenters	\$17,843,973	\$1,273,460,905	2.3
44421	Outdoor Power Equipment Stores	\$427,546	\$33,168,343	2.2
45331	Used Merchandise Stores	\$1,033,779	\$82,235,298	2.1
722310	Food Service Contractors	\$1,885,337	\$213,702,557	1.5
44422	Nursery, Garden Center, and Farm Stores	\$1,684,862	\$224,983,075	1.3
44613	Optical Goods Stores	\$146,788	\$20,833,945	1.2
44131	Automotive Parts and Accessories Stores	\$2,073,209	\$328,025,009	1.1

44711	Gasoline Stations/Convenience Stores	\$3,822,776	\$617,831,188	1.0
44611	Pharmacies and Drug Stores	\$4,353,163	\$740,394,410	1.0

*Source.* EMSI Data Analyst, Input-Output Model: Regional Jobs, Earnings and Sales.

### POTENTIAL GROWTH IN SALES

Potential growth in sales can be calculated by each retail sector of Stone County's economy using the following formula:

$$\text{Potential sales growth} = \text{Stone Co. Population} \times \text{Retail Sales per Capita} \\ \times (\text{Stone Co. per Capita} / \text{Mississippi per Capita})$$

Analyzing sales growth potential in combination with pull factors is useful in fine tuning the type of retail development needed for the area. The top three categories of retail sales in which Stone County is losing potential sales includes \$297,000 in Specialty Food sales, \$534,000 in Gift, Novelty and Souvenir sales, and \$281,000 in Hobby, Toy, and Game sales as shown in Table 9. A total of 28 retail categories are identified as having highest potential for retail development (Table 9).

Table 9

#### *2014 Retail Highest Potential Growth in Sales*

NAICS	Industry	Stone County Sales	MS Sales	Pull Factor	Potential Sales	Growth Potential
44529	Other Specialty Food Stores	\$14,392	\$55,326,442	0.0	\$297,592	1968%
45322	Gift, Novelty, Svenir Stores	\$26,248	\$99,347,974	0.0	\$534,377	1936%
45112	Hobby, Toy, Game Stores	\$16,152	\$52,302,310	0.1	\$281,326	1642%
44814	Family Clothing Stores	\$47,286	\$111,555,248	0.1	\$600,038	1169%
45321	Office Supplies Stationery	\$69,712	\$145,996,310	0.1	\$785,290	1026%

45421	Vending Machine Ops	\$18,525	\$25,845,305	0.1	\$139,018	650%
72111	Hotels and Motels	\$385,323	\$484,608,448	0.1	\$2,606,630	576%
44819	Other Clothing Stores	\$42,809	\$53,645,097	0.1	\$288,548	574%
72251	Cafeterias, Buffets	\$42,194	\$51,557,442	0.1	\$277,319	557%
44411	Home Centers	\$418,354	\$462,810,864	0.2	\$2,489,385	495%
44612	Cosmetics, Beauty Supply	\$91,130	\$100,325,994	0.2	\$539,637	492%
44512	Convenience Stores	\$53,808	\$55,902,462	0.2	\$300,690	459%
45399	All Other Misc. Store Retailers	\$282,590	\$242,542,303	0.2	\$1,304,596	362%
45311	Florists	\$123,500	\$95,095,108	0.2	\$511,501	314%
44211	Furniture Stores	\$254,107	\$193,725,129	0.2	\$1,042,016	310%
44314	Electronics, Appliance	\$356,445	\$267,992,282	0.2	\$1,441,487	304%
44221	Floor Covering Stores	\$76,563	\$54,936,115	0.2	\$295,492	286%
45439	Other Direct Selling Estblmt	\$312,691	\$214,012,647	0.2	\$1,151,139	268%
45121	Book Stores, News Dealers	\$82,882	\$51,174,956	0.3	\$275,262	232%
44831	Jewelry Stores	\$141,922	\$81,284,216	0.3	\$437,215	208%
72251	Nonalcoholic Beverage Bars	\$76,364	\$43,554,655	0.3	\$234,273	207%
44121	Recreational Vehicle Dealers	\$76,528	\$41,422,187	0.3	\$222,803	191%
45113	Sewing, Needlework Stores	\$49,379	\$25,339,286	0.3	\$136,296	176%
44132	Tire Dealers	\$492,188	\$251,589,883	0.3	\$1,353,261	175%
45111	Sporting Goods Stores	\$302,847	\$147,492,502	0.3	\$793,338	162%
72251	Full-Service Restaurants	\$3,417,479	\$1,491,758,477	0.4	\$8,023,927	135%
44511	Supermarkets	\$2,275,012	\$957,624,568	0.4	\$5,150,907	126%
44719	Other Gasoline Stations	\$206,682	\$81,641,580	0.4	\$439,137	112%

*Source.* EMSI Data Analyst, Input-Output Model: Regional Jobs, Earnings and Sales.

There exists potential areas for additional retail development in the county based upon market trends, pull factors, and potential sales growth.

### REILLY’S LAW OF TRADE AREA DISTANCE

Reilly’s Law is a popular method of estimating the distance customers will travel to buy goods and services after comparing prices, quality, styles, and other shopping factors (Myles, 2003). The purpose of the law is to find a point of indifference between two locations or to identify the distance in which two locations are equally attractive for shopping. Reilly’s Law can be computed from using either population size or sales. The law assumes people want to shop in larger towns, but their desire declines the farther and longer they must travel to get to those places. As it relates to population size, residents living farther south than 6.2 miles from Wiggins would likely shop in Gulfport as shown in Table 10.

Table 10

*Trade Area Distance by Population for City of Wiggins*

	Distance (from Wiggins to...)	Population	Trade Area Distance in Miles
Wiggins	0	4,446	
Gulfport	30.8	71,012	6.2
Hattiesburg	34.4	47,556	8.1
Poplarville	26.5	2,818	14.8
Lucedale	33.4	3,002	18.3

*Source.* Census Bureau.

Residents living more than 8.1 miles north of Wiggins are more likely to shop in Hattiesburg (Figure 2). Residents living farther than 14.8 miles from Wiggins are more likely to shop in Poplarville while residents living farther than 18.3 miles from Wiggins are more likely to shop in Lucedale. Retail development initiatives have potential to attract shoppers along Highway 49 and along east Highway 26 based upon commuting patterns and population density.



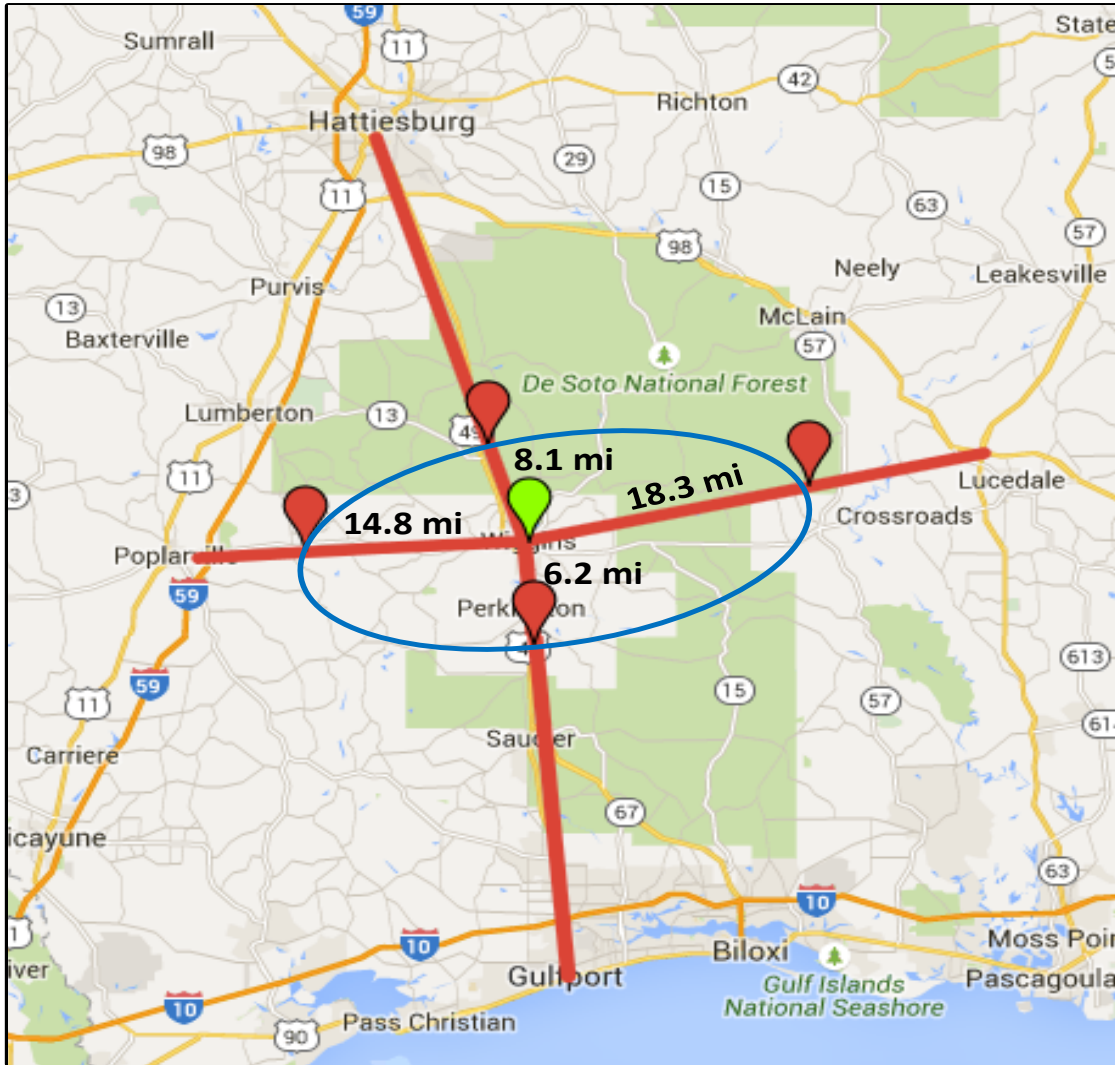


Figure 2. Stone County trade area map based upon population of nearby towns.

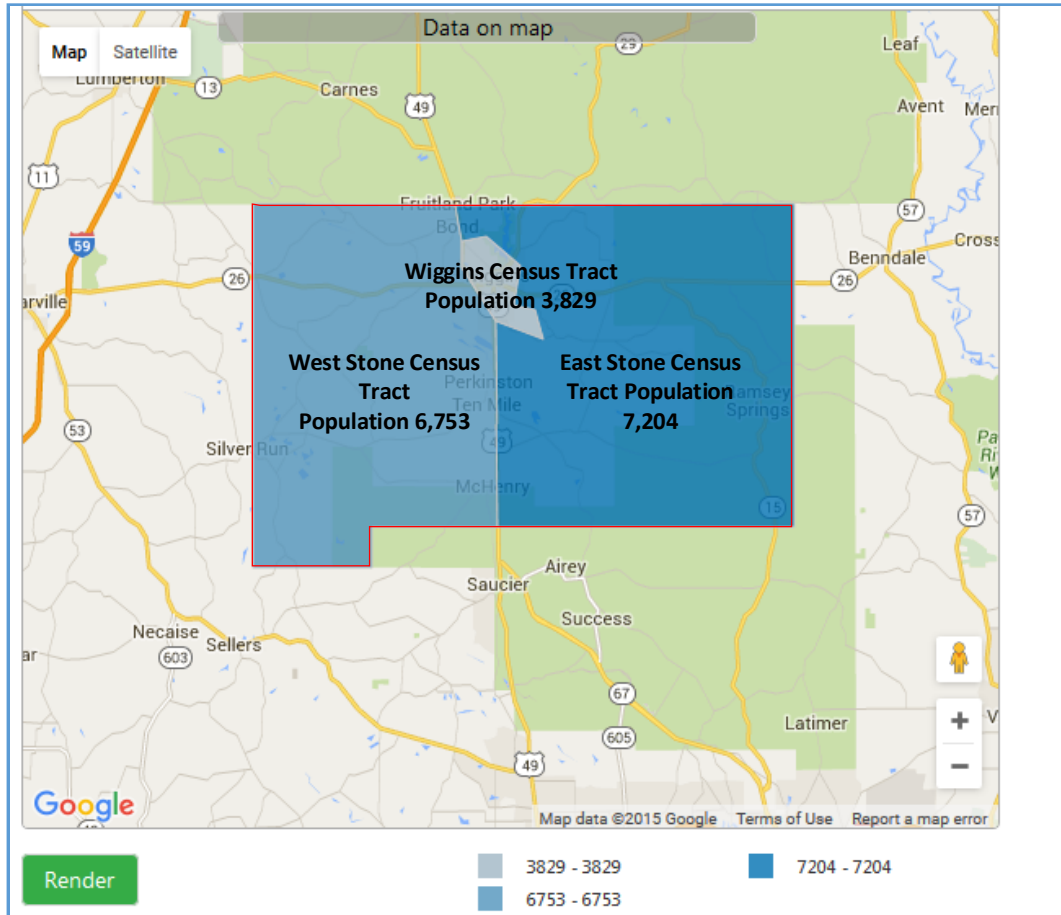


Figure 3. Stone County population by census tract. [www.usboundary.com](http://www.usboundary.com)

Reilly's Law can also use retail sales volume to estimate the distance a resident of Wiggins might likely be willing to travel for retail activity. The larger the neighboring town's retail sales, the less likely Wiggins will attract the neighboring town's residents to shop in Wiggins. Using Reilly's Law for retail sales, Wiggins' residents living farther south than 7.2 miles are more likely to shop in Gulfport as shown in Table 11. For this particular study, the difference in distance calculated using each of the two variables, population size and retail sales, was negligible.

Table 11

*Trade Area Distance by Retail Sales for City of Wiggins*

	Distance (from Wiggins to...)	Retail Sales	Trade Area Distance in Miles
Wiggins	0	\$101,046,744	
Gulfport	30.8	\$1,075,230,122	7.2
Hattiesburg	34.4	\$1,202,152,647	7.7
Poplarville	26.5	\$27,790,856	17.4
Lucedale	33.4	\$126,696,918	15.8

Source: Department of Revenue.

### TRADE AREA CAPTURE

Stone County has a competitive advantage in attracting customers outside of its borders who shop for automobiles and general merchandise based upon a *Trade Area Capture* formula. An estimated 14,038 automotive and 22,386 general merchandise people shopped in Stone County in 2013 as compared to 11,716 average Stone County shoppers (Table 12). Trade area capture is an estimate of the number of customers who have shopped in the local economy over a one-year period (Hankins, 2010). It assumes that local individuals will buy goods at the same rate as the state average with per capita income being the only force causing changes in spending patterns.

If a trade area capture estimate is larger than the city's population, such as with Automotive and General Merchandise retail sectors shown in Table 12, then two explanations are possible: either the city is attracting customers from outside its boundaries or residents of the city are spending more than the state average. Conversely, if the estimate is smaller than the city's population, the city is losing its customers to other regions or residents of the city are spending less than the state average.

Table 12

*Trade Area Capture for Industry Sectors in Stone County*

	2013 Population	FY 2013 Retail Sales (\$)	Trade
Mississippi	2,991,207	46,009,439,519	2,991,207
Stone County	17,854	166,084,729	11,716
Industry Sector Retail Category	Mississippi	Stone County	Trade Area Capture
Automotive	6,282,431,452	27,172,897	14,038
Equip. and Supplies	3,578,629,037	1,435,452	1,301
Food and Beverage	8,449,284,789	32,405,680	12,448
Furniture	853,711,041	538,628	2,047
Public Utilities	4,369,848,666	10,645,047	7,906
General Merchandise	7,896,794,345	54,466,910	22,386
Building Materials	2,672,756,137	6,090,585	7,396
Misc. Retail	3,715,848,240	7,959,898	6,952
Misc. Services	2,683,213,844	3,401,904	4,114
Contracting	5,353,835,075	21,728,160	13,172
Recreation	153,086,893	239,568	5,079
Total	46,009,439,519	166,084,729	11,716

*Source.* U.S. Bureau of Census, State and County Quick-Facts

### INDUSTRY SECTOR SALES GROWTH POTENTIAL

Equipment and Supplies industry sector represents potential for the largest growth (1271.4%) in order to meet per capita expectations as indicated in Table 13 and Figure 3. Although sales in Mississippi were strong in this category, Stone County lost 31% of sales in Equipment and Supplies between 2010 and 2013 as indicated in Table 3 earlier. Stone County's leadership should further exam companies in this category to determine the feasibility of recovering lost sales. Automotive (27.18%), Food and Beverage (43.43%), and Contracting (35.54%) industry sectors are already represented in Stone County and would therefore be likely to experience the smallest percentage increases.

Table 13

*Industry Sector Sales Growth Potential for Stone County*

	2013 Population	FY 2013 Retail Sales (\$)	Per Capita Income		
Mississippi	2,991,207	46,009,439,519	20,156		
Stone County	17,854	166,084,729	18,576		
<b>Industry Sector</b>	Mississippi	Stone County	State Sales Per Capita	Potential Sales	% Change
Automotive	\$6,282,431,452	\$27,172,897	2100	\$34,559,279	27.18%
Equip. and Supplies	3,578,629,037	1,435,452	1196	19,685,824	1271.40%
Food and Beverage	8,449,284,789	32,405,680	2825	46,479,009	43.43%
Furniture	853,711,041	538,628	285	4,696,213	771.88%
Public Utilities	4,369,848,666	10,645,047	1461	24,038,276	125.82%
Genrl Merchandise	7,896,794,345	54,466,910	2640	43,439,793	-20.25%
Building Materials	2,672,756,137	6,090,585	894	14,702,671	141.40%
Misc. Retail	3,715,848,240	7,959,898	1242	20,440,659	156.80%
Misc. Services	2,683,213,844	3,401,904	897	14,760,199	333.88%
Contracting	5,353,835,075	21,728,160	1790	29,451,126	35.54%
Recreation	153,086,893	239,568	51	842,122	251.52%
<b>Total</b>	46,009,439,519	166,084,729	15382	253,095,170	52.39%

Source. Mississippi Department of Revenue, Census Bureau

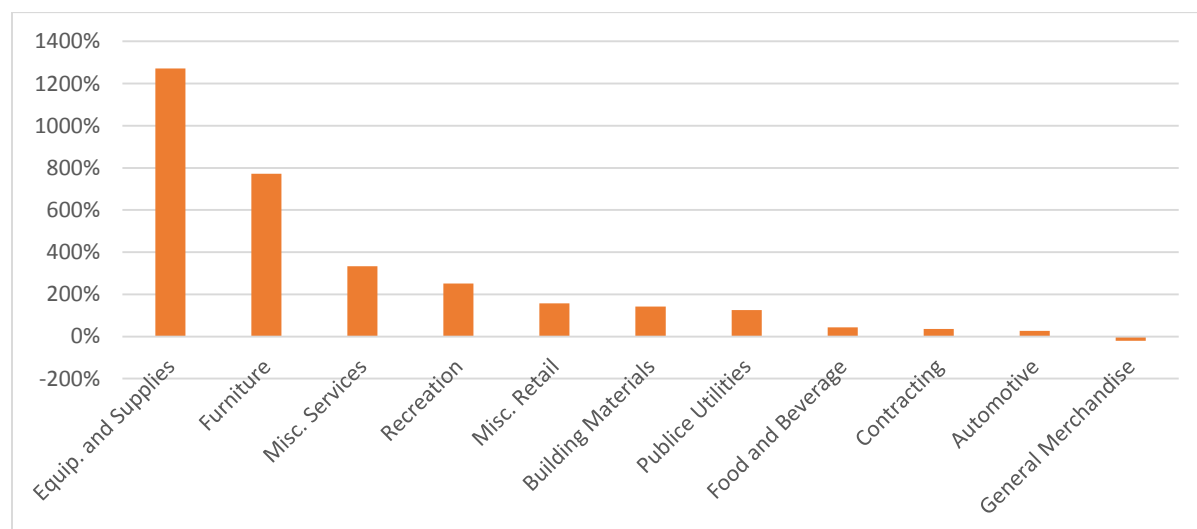


Figure 3. Potential Percent Change in Industry Sector Retail Sales. Mississippi Department of Revenue, Census Bureau

## COMMUTING PATTERNS

Worker commuting flows reveal significant information about regional economic relationships that may have an impact on the county's retail performance and competition. For example, areas with high density of residences who commute outside the county may represent sources of potential sales leakage. Figure 4 and 5 graphically indicates Stone County commuters and characteristics of worker inflows and outflows. In 2013, 2,163 of the workers employed by Stone County live outside the area, while 3,897 live in Stone County but commute outside the county to work. Only 24.72% of those employed (1,990) live and work in Stone County.

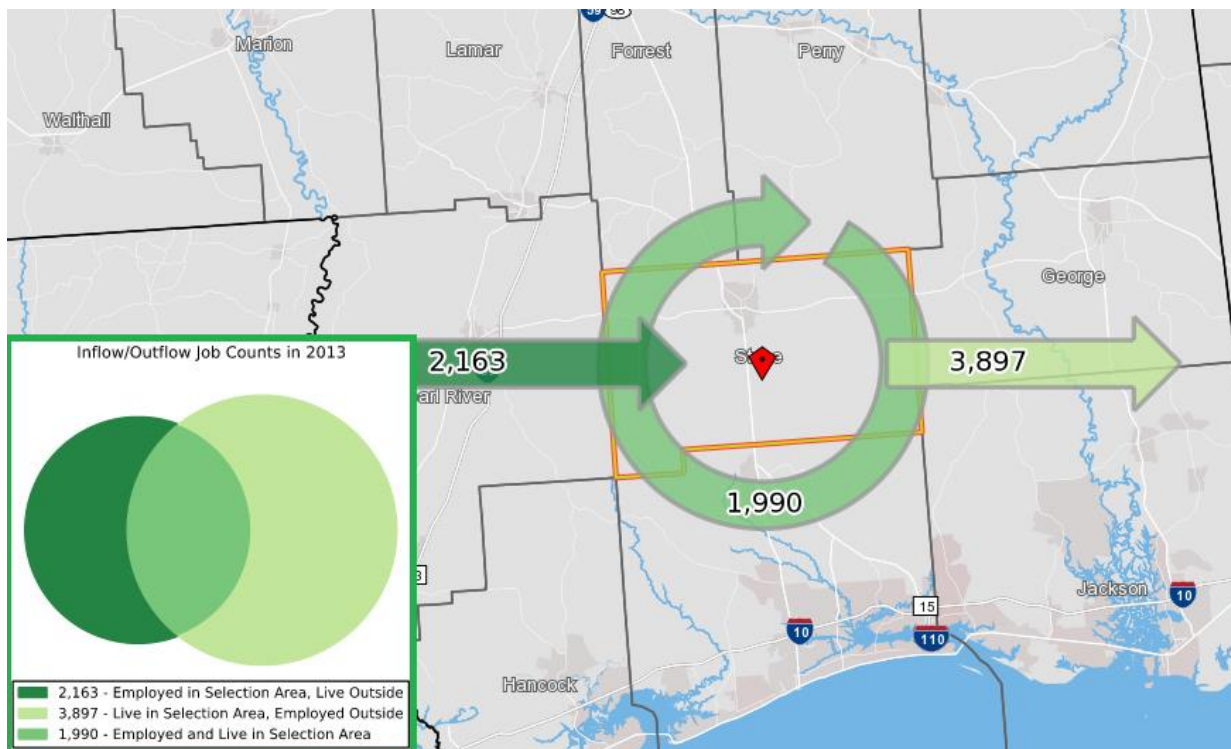


Figure 4. Stone County Inflow/Outflow Job counts in 2013.

<http://onthemap.ces.census.gov/index.html>



Figure 5. Distance Home Census Block to Work Census Block. <http://onthemap.ces.census.gov>

The majority of workers (1,476) commuting from Stone County to surrounding counties primarily travel south to and from Harrison and Jackson Counties each day (see Figure 6 and Figure 7). An additional 985 workers commute north to Forest County.



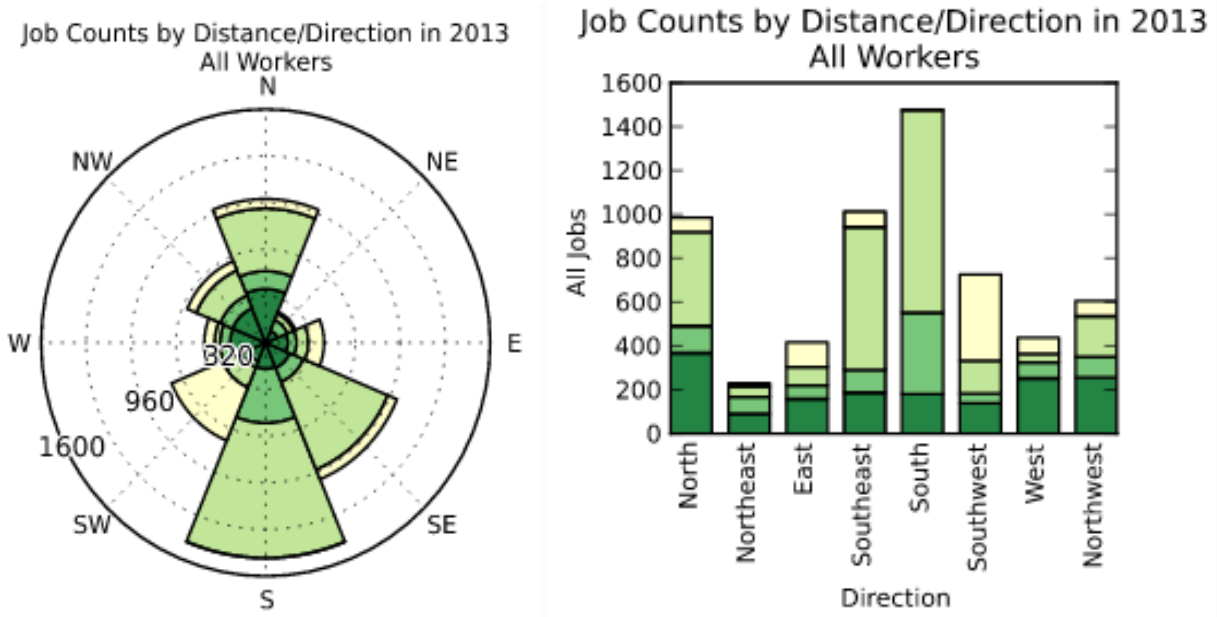


Figure 6. Distance and number of jobs in the surrounding counties. <http://onthemap.ces.census.gov/>

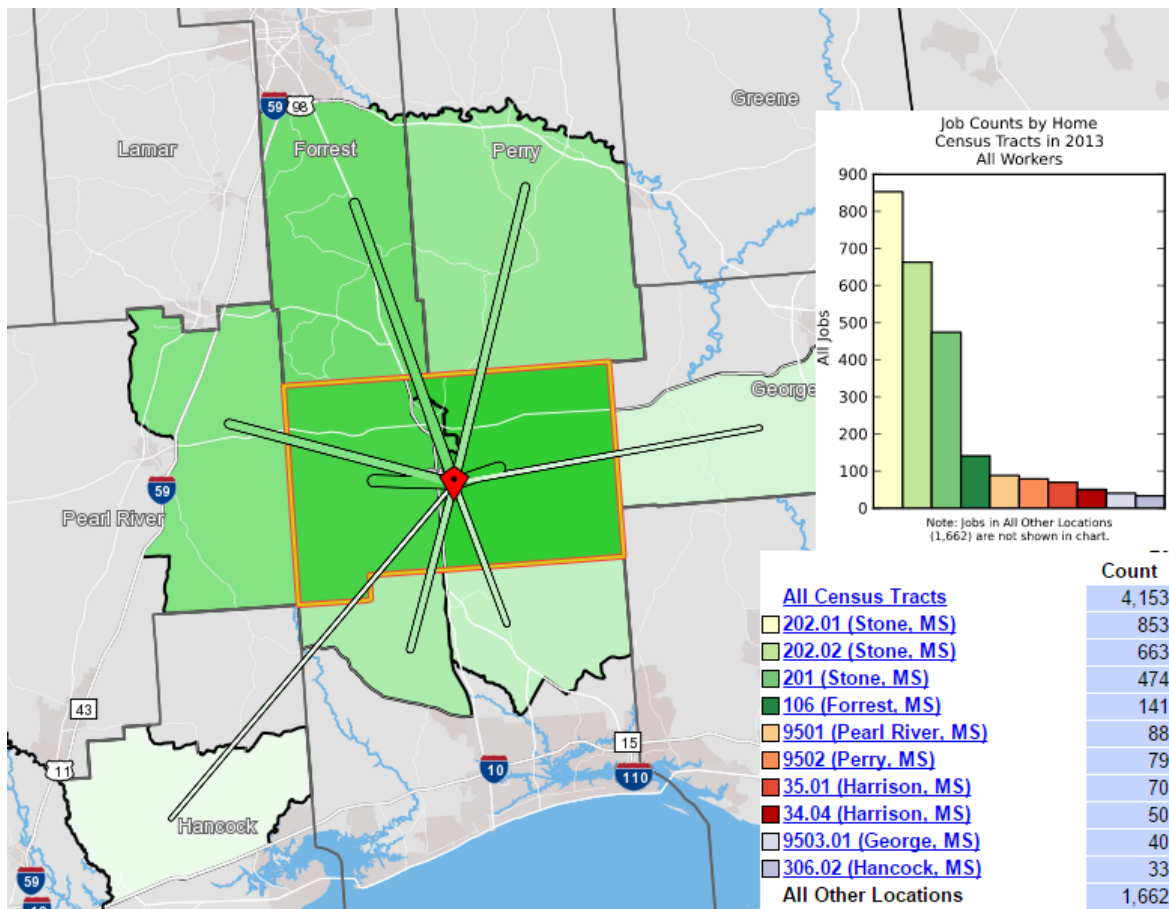


Figure 7. Direction and job counts by home census tracts. <http://onthemap.ces.census.gov/>



Figure 6 and 7 indicate most of the workers (1,476) are leaving for work south of Stone County into Harrison and Jackson Counties. An additional 985 workers commute north to Forest County.

### **TRAFFIC COUNTS**

U.S. Highway 49 is a four-lane highway running north and south of Stone County which dissects its two largest communities, Wiggins and Perkinston. As a result of its location and importance in connecting Gulfport, Hattiesburg and Jackson, there are no areas in Stone County where traffic counts are higher. Four maps are provided indicating 2014 traffic count data for Stone County as published by the Mississippi Department of Transportation (MDOT). The blue numbers in the following figures represent the traffic count estimations by the Annual Average Daily Traffic (AADT) for the year 2014. The red numbers represent the actual registered traffic counts for the same year. As seen in Figure 8, the largest AADT counts are found along Highway 49. The two highest counts of 19,000 AADT and 18,000 AADT are found in the southern portion of Wiggins and just south of McHenry, north of Saucier and Highway 67. The majority of recorded traffic counts on the map's exterior roads and highways are much lower than the counts on Highway 49. The highest of exterior traffic counts can be found on Highway 26, east of Wiggins, at 1,800 AADT and on New Hope Road with 2,400 AADT.

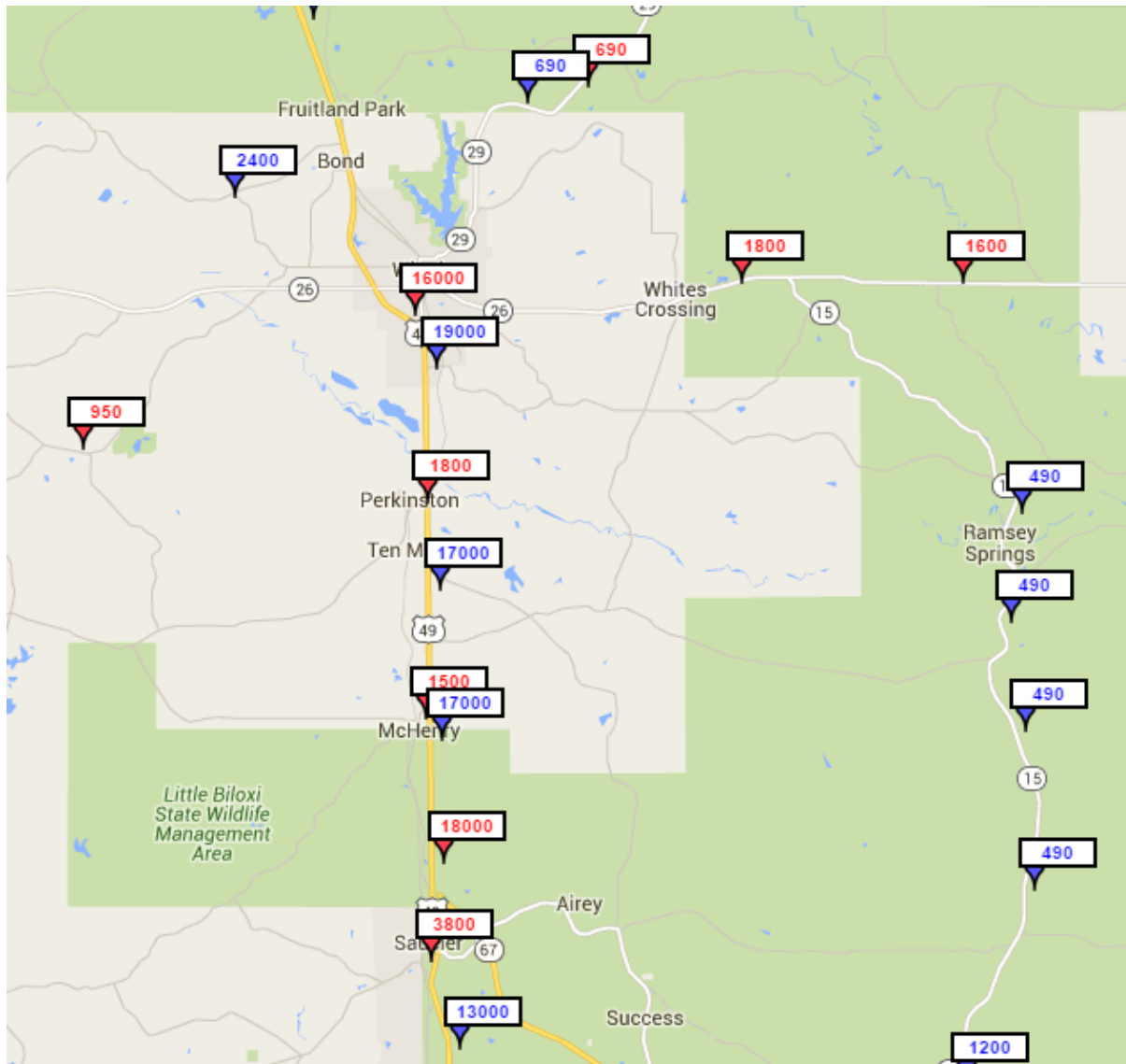


Figure 8. Stone County, Highway 49 Annual Average Daily Traffic Counts. MDOT, ArcGIS data

For the city of Wiggins, traffic counts range from a low of 2,500 to a high of 16,000 (see Figure 9). The two most heavily traveled roads are U.S. Highway 49 running north and south as well as MS Highway 26 running east and west. While the traffic on Highway 49 is discussed in the previous paragraph, Figure 9 shows just how much lower the traffic counts are the Wiggins' second busiest highway, with 6,000 AADT on the east side of town and 8,600 AADT on the west side of town. The two blue circles, labelled 4 and 5, are analyzed to provide a closer look at traffic counts within Wiggins.

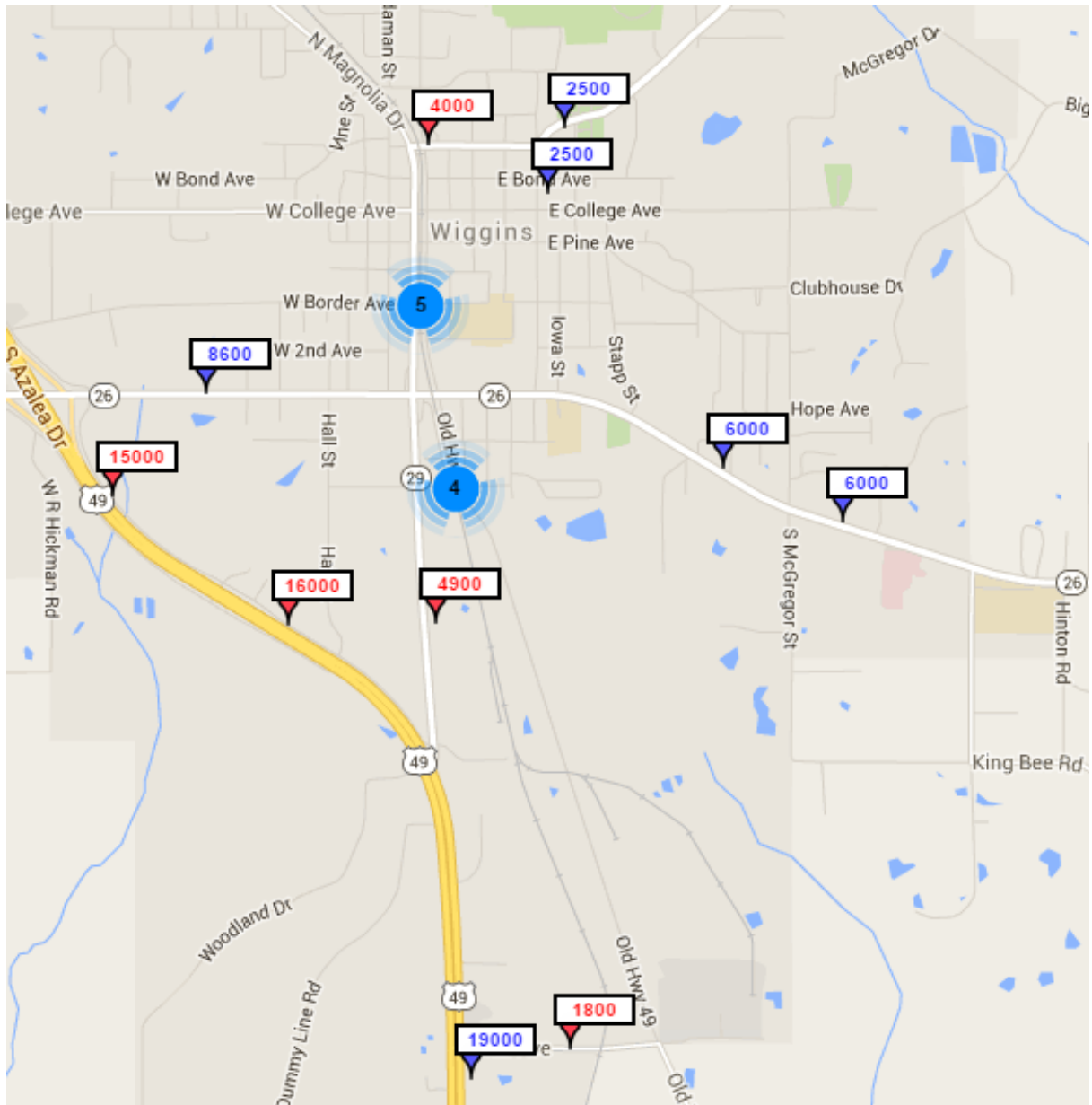


Figure 9. City of Wiggins Annual Average Daily Traffic Counts. MDOT, ArcGIS data

Figure 10 gives a closer look at the blue circle in Figure 9 labelled with the number four. Along Highway 26 within the city limits traffic counts average 9,400 AADT. A retail developer considering optimum locations for development might choose to locate on Highway 26 near Highway 49.

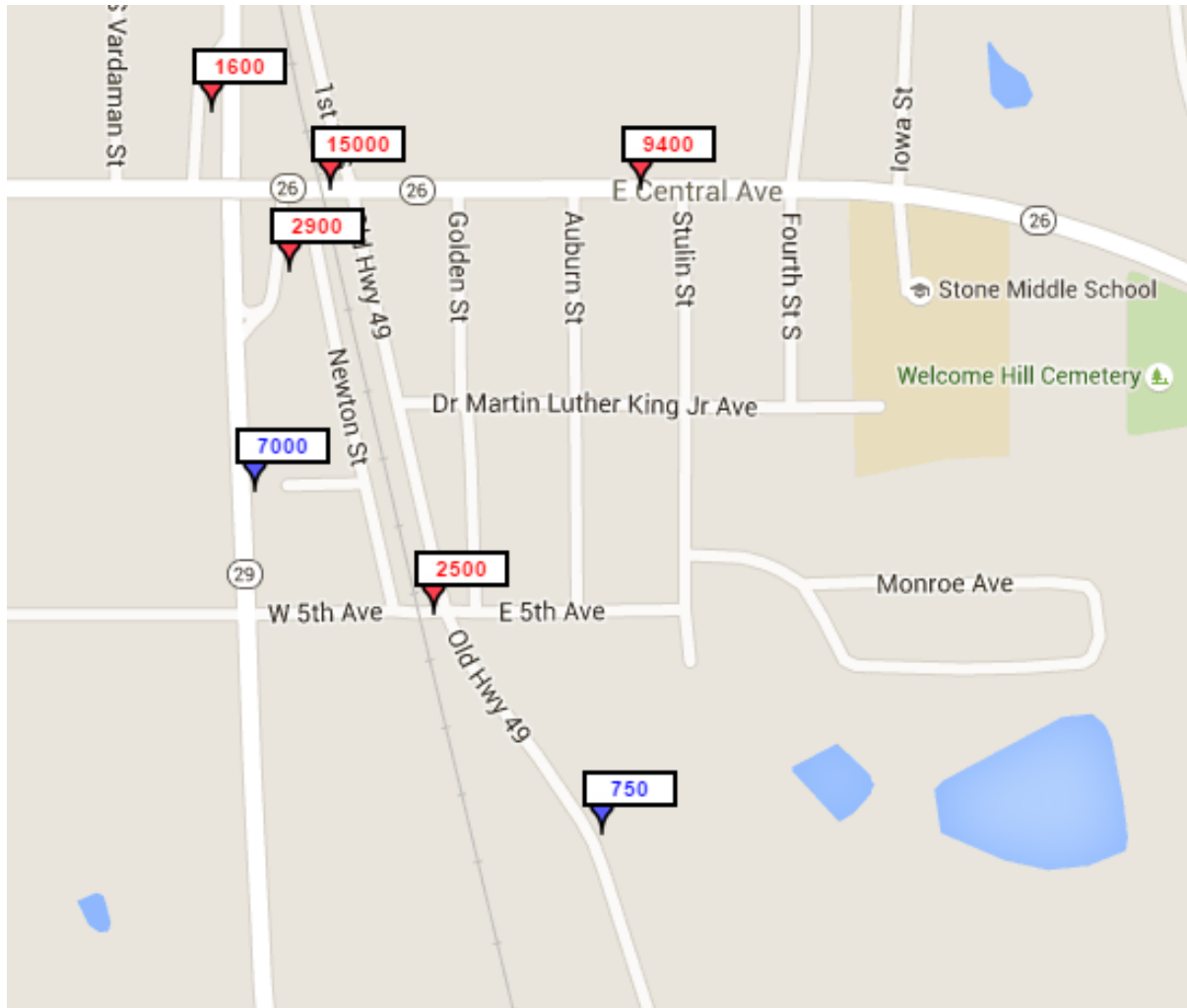


Figure 10. City of Wiggins Annual Average Daily Traffic Counts. MDOT, ArcGIS data

Figure 11 offers a closer look at the area in Figure 9 marked by the blue circle labelled with a five. Of the area not previously discussed, the highest counts of 6,300 AADT are found on Highway 29 between East Cavers Avenue and East Borders Avenue, and 2,300 AADT on East College Drive between First Street North and North Magnolia Drive.

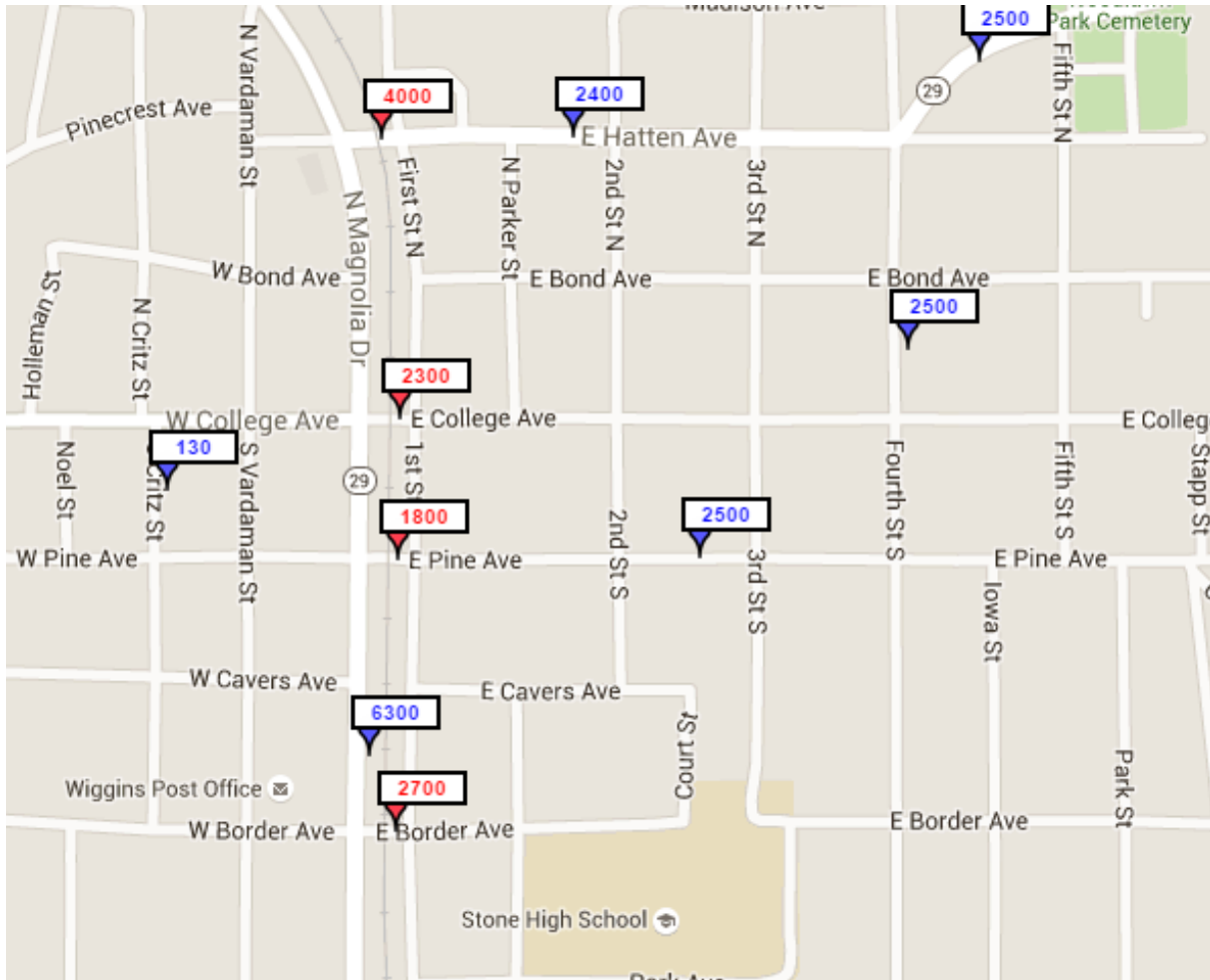


Figure 11. City of Wiggins Highest Annual Average Daily Traffic Count. MDOT, ArcGIS Data

## PURCHASING POWER ANALYSIS

Figure 12 shows the census tract surrounding the trade area ranked by the 2010 Tract Median Household Income. The values help estimate the purchasing power of the region and they range from \$20,000 to \$74,000. Forrest County contains both the minimal value of \$20,493 (Census tract: 0006.00), south of Hattiesburg and the maximum value of \$73,974 (Census tract: 0008.00) west of Hattiesburg, MS. The census tract in Wiggins registered an average value of \$38,250 income per household. The inner outline indicates the trade area captured within a 15 minute drive from Wiggins, while the outer line provides an estimation of a 30 minute drive from Wiggins, reaching locations with high purchasing power such as Hattiesburg, Poplarville, and areas close to Gulfport.

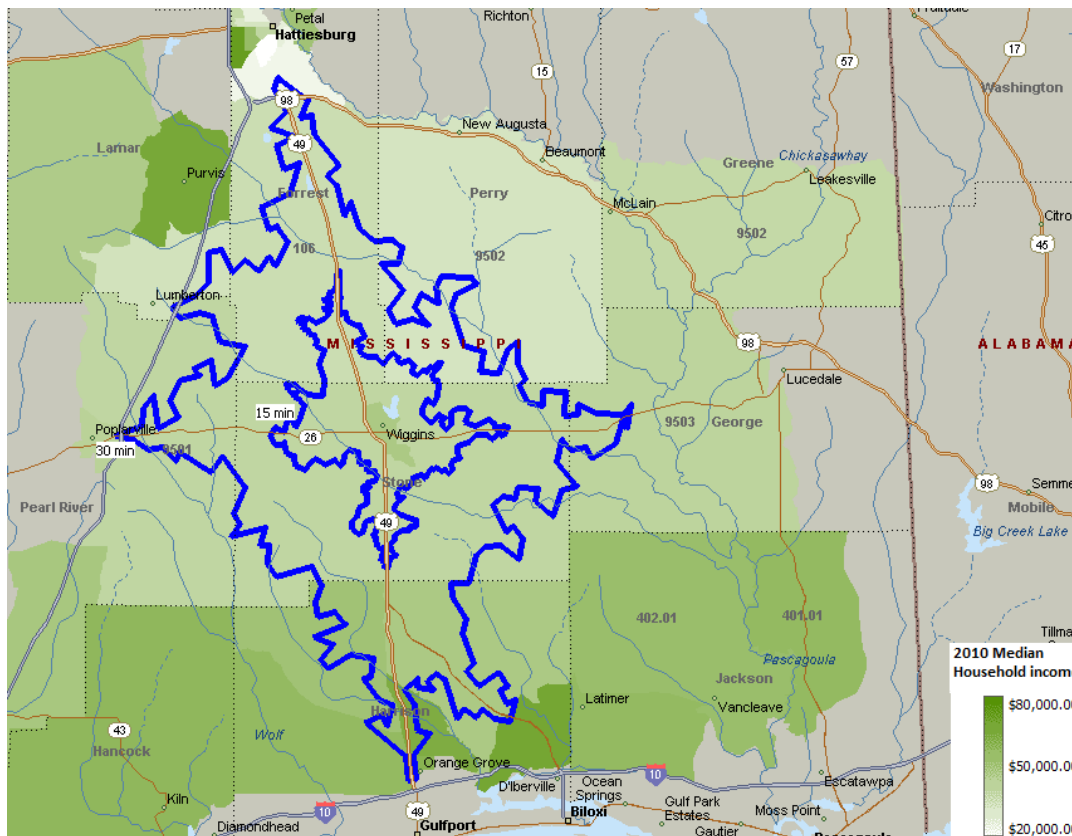


Figure 12. MapPoint, Data from Census Explorer.  
[www.census.gov/censusexplorer/censusexplorer.html](http://www.census.gov/censusexplorer/censusexplorer.html)

### **Works Cited**

Economic Modeling Software. (2014). Labor market information.

Hankins, M. (2010, May). Business development series: Trade area capture and trade pull factors for the retail trade sectors. Southwestern Oklahoma State University.

Richard, B. (2012, June). Leflore county retail analysis. The University of Southern Mississippi: Department of Economic and Workforce Development.

Mississippi Department of Transportation. (2015). Annual average daily traffic data.

Myles, A.E. (2003). Understanding your trade area: Implications for retail analysis. Mississippi State University Extension Service.

United States Census Data. Population and commuting trends.