Laclede County
Retail Trade Analysis:
Sales, Employment, and Income
1990-2001

February 2003

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Acknowledgements

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Laclede County Baseline Advisory Panel

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Glenda Mott, Laclede County Clerk
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Dalton Wright, President/Owner, Lebanon Publishing Company

These people contributed insights, questions and important comments throughout the project.
Executive Summary

Many localities use the expansion of their retail trade sector as an economic development tool. There are many benefits of having a strong retail sector, including growth in employment, sales, local government sales tax revenues, as well as improvements in local quality of life. In addition, the existence of a strong retail sector is often considered important to firms that are thinking of locating in a community. On the other hand, retail trade expansion as an economic development tool is limited by two factors. First, retail trade creates little added value because these stores purchase most of the goods they sell from outside the local area. Second, increased sales in one geographic area may be at the expense of lost sales in a nearby area. Still, having a strong retail sector is generally beneficial to the local economy and the local government.

This report first analyzes County retail sales using several tools to quantify the current level of retail sales and to identify areas of potential expansion. The economic importance of the retail sector to the County is then presented. The next section compares the retail sales of counties adjacent to Laclede County that may be competing for the broader region’s retail dollars. Finally, the shift-share analysis is presented. The appendices in this report provide definitions for and the interpretation of several terms and tools used in this report. Charts of Laclede County's disaggregated retail categories are included in the final appendix. All dollar figures in this study are adjusted for inflation and reported in constant 2001 dollars.

Key Findings

- After adjusting for inflation, Laclede County’s retail sales increased from $237 million in 1990 to $302 million in 2001 -- a growth of 27.5 percent. This is higher than a 19.8 percent growth in retail sales for the state as a whole over the same time period.

- If we consider Laclede retail sales combined with sales from Hotels and Auto Repairs, they increased by 42.7 percent, vs. 24.6 percent statewide.

- County retail sales have experienced a small decline in real terms between 1999 and 2001 -- from $313 million to $302 million (2001 dollars).

- The number of retail firms in Laclede County increased from 800 units in 1990 to 900 units in 2000.

- In 2000, over 3,700 people were employed in retail businesses in Laclede County – 19 percent of total county employment.

- Payroll from the retail sectors totaled more than $66,232,000 -- 10 percent of the wage, salary and other labor earnings of Laclede County residents.

- Even though overall pull factor for Laclede County declined from 1.15 in 1990 to 1.09 in 2001, it remains greater than 1, which means that Laclede County residents’ demands for goods and services are being fully filled by the local businesses.

- Furniture retail category in Laclede County shows promise for expansion. This category has a pull factor of less than one and high growth rate.

- The shift-share decomposition of retail sales showed that out of the $60.58 million in total change in Laclede retail sales between 1990 and 2001, $34.92 million were attributable to the overall growth in the State retail sales, $2.12 million to the change in the composition of Laclede’s retail sector to include more of the categories that are growing faster than State average, and $23.53 million due to the unusually fast growth within the retail sector in Laclede County—the so-called competitive effect.
Issues for the Future

Retail trade analysis provides local decision-makers with information about their current retail situation and prospects for expansion. The analyses presented in this report are for large retail categories and should not be used to predict the profitability of individual businesses. Moreover, these statistics indicate what has happened to a particular retail category, but not why. Local people familiar with the community should attempt to identify reasons for the changes in the local economy. By knowing the relative strengths and weaknesses of a locality's retail sector, merchants and community leaders should be able to capitalize on areas of opportunity.

In general, County retail sales can be increased when:
1. existing firms capture more retail dollars from local residents;
2. existing firms increase sales to incommuters or tourists;
3. new retail firms fill a gap in the local retail sector; and
4. local demand for retail goods increases.

The first two strategies tend to shift retail sales within a larger region. The latter two strategies create or increase demand for retail goods, and make the retail development more than a 'zero-sum game' within the larger region. These and other issues that may exist in Laclede County should be addressed in order to expand its local retail trade sector.

There are many methods that a community can use to achieve the goal of increasing local retail sales. The tools that are successful in increasing retail sales will depend on why people choose to shop or not shop in Laclede County. A marketing survey is one tool that can help determine which issues need to be addressed to induce people to shop within the County. For example, if people perceive that stores are not open at convenient times, then the retail stores may want to adjust their business hours. Similarly, if people do not shop locally because it is hard to find parking, then parking accessibility is an issue that should be addressed.

Understanding the local retail sector becomes even more crucial given the changes occurring in the retail industry nationwide. First, there has been an increased concentration of sales in large, multi-purpose 'supercenters.' In many cases, these large retailers have had a detrimental effect on smaller, locally owned retail firms, sometimes decreasing the variety of store types available to customers. On the other hand, these large centers draw many customers to the area. Not having such a store to act as an anchor in a shopping center may contribute to declining retail sales. No matter the case, determining the preferences and shopping patterns of customers will allow local officials and businesses to make strategic plans to improve the Laclede County retail sector.

The second major change occurring in the retail industry is the increased use of catalog, mail order, and Internet shopping. These forms of non-local shopping often replace local shopping. The trade association for online retailers, Shop.org (http://www.shop.org) with the Boston Consulting Group, in evaluating the U.S. online retail market, reported that in 2001 online sales to consumers reached $51.3 billion, an increase of 21 percent over 2000 levels. It is estimated that online sales will increase by another 41 percent in 2002. Missourians are also participating in this shift in shopping behavior. If internet retail purchases grow as much as projected, there will be substantial impacts on local retailers and all levels of government that depend on retail sales for revenue.

As state and local governments are desperately searching for new revenue sources under the current state of government financing, taxing Internet purchases becomes a more and more attractive option. According to the study conducted by the University of Tennessee, in 2001,
Missouri ranked among the 10 states with the highest local revenue losses from e-commerce as percentage of total local taxes.1 Whereas the Congress extended the Internet Tax Moratorium, also known as the Internet Tax Freedom Act (ITFA) in 2001 until November 1, 2003, the ITFA only precludes states from taxing consumers on the use of Internet service providers. The moratorium is not applicable to either sales taxes or federal taxes. Presently, even though the buyers owe sales and used taxes on all online transactions, it is illegal for the states to require remote sellers to collect these taxes. Therefore, currently consumers are expected to compute the state sales tax on Internet purchases that they owe and voluntarily pay it to the states. At the same time, most consumers have no idea that they are supposed to pay these taxes, and even if they do, they ignore them, because the states have no enforcement mechanism in place.2

In 1992, the US Supreme Court ruled that states can only require those sellers that have a physical presence or nexus in the states of consumers’ residence to collect use taxes. The Supreme Court ruled that if the states wish to collect the taxes on online purchases, they will have to simplify and unify the existing sales tax system. As a result, the Streamlined Sales Tax Project (SSTP) was launched by the National Governors Association in 2000 with an idea to have a single tax rate for personal property or services in all participating states by the end of 2005. Online sales would be included in those services.3 Even though the implementation of the Internet and catalog sales tax is at least two or three years away, the expected massive tax reform associated with it would simplify the burden of sales tax collection and will save businesses millions of dollars, if proven to be efficient.4

1 http://cber.bus.utk.edu/ecommm/ecom1001.pdf
3 http://finance.pro2net.com/x36546.xml
4 http://www.nga.org/nga/legislativeUpdate/1.1169_C_ISSUE_BRIEF^D_2855.00.html
The performance of the local retail sector is a key economic indicator that has important economic implications. Because the retail sector is mostly patronized by local residents and businesses, it provides an initial indication about the vitality of the local economy. The retail sector also helps describe the fiscal capability of local government, as sales tax is one of the most important sources of revenue for state and local governments.

Smaller towns find it difficult to compete successfully with retail stores in nearby larger communities. Moreover, if a community experiences loss of employment and residents, the tax base is reduced and is frequently no longer sufficient to provide the services necessary to attract new residents, which may cause further loss of employment. Unemployment also has a negative relationship to sales, since unemployed people have fewer available resources to spend. Uncertainty about the future also reduces average family purchases. Interestingly, many researches have found that aged residents exhibit a positive correlation with retail sales. Since it is not unusual for retirees to have reduced incomes, a positive correlation might mean that they spend a greater proportion of their limited incomes inside the community than do other residents.

Previous research suggests that among the most important factors influencing retail trade are current personal income, family income, population, employment, labor force, number of retirees in the region and the adequacy of the transportation system. Increases in relative per capita income are an impetus to local spending, whereas relative population changes influence spending patterns within and outside the county. Many of the factors influencing retail trade have already been analyzed and can be found in the report titled the “Laclede County Economic Analysis and Baseline: 2001 – 2011”.

Per Glenda Mott, Laclede County Clerk, the County approved a one-half cent sales tax in 1984 for the general operations of the County. This sales tax currently generates approximately 48% of the revenues for the County.

In 1994, voters approved an additional one-half cent law enforcement sales tax to construct a new jail, justice center and administration offices presently known as the “Laclede County Government Center”. The additional one-half cent sales tax for construction will expire January 1, 2005. As the City of Lebanon grows, so does the demand for more county services to be provided. The County will greatly benefit and position itself better financially if this additional one-half cent sales tax can be renewed prior to January 2005, to assist in the cost of law enforcement operations, capital improvements and road improvements.

In 2001, retail sales tax revenue in Laclede County was $ 3,265,463 and comprised 47.2 percent of the total county revenues. This constituted the largest County revenue category. The importance of sustained growth in the retail sector for Laclede County should not be underestimated.

Note that the retail sales level reported by the Tax Administration Bureau is different from what one would calculate using the County sales tax revenue as a base. The difference is due to reporting and processing lags. According to the Tax Administration Bureau, the time between when a consumer pays a retail sales tax and when the County actually records receiving the sales tax money could be two to three months.
Retail Trade Analysis

Retail sales, as defined in the 1997 Census of Retail Trade, includes “merchandise sold for cash or credit at retail and wholesale by establishments primarily engaged in retail trade; amounts received from customers for layaway purchases; receipts from rental of vehicles, equipment, instruments, tools, etc.; receipts for delivery, installation, maintenance, repair, alteration, storage, and other services; the total value of service contracts; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer or wholesaler and passed on to the retailer.” Under this definition, firms not considered a retail store might also have taxable retail sales. An example of such a non-retail firm would be a hair salon that also sells shampoo or other hair products. In this analysis, total retail sales include all taxable retail sales, either made through a firm classified as retail or not. In later sections, this report further analyzes only those firms that the government has classified as retail, as well as two service sectors that have high levels of retail sales.

According to Missouri statute Chapter 144, RSMo 1986 and 1993 Supplement, sales taxes in Missouri must be paid on the gross receipts of tangible personal property, admission to entertainment and athletic events, utilities, restaurant meals, hotel accommodations, and rental of tangible personal property. There are three major categories exempt from paying or charging sales taxes. First, non-profit or governmental organizations do not pay any sales tax on items that are otherwise considered taxable. Second, businesses that purchase retail items for further resale are also exempt from paying sales tax. Finally, sales tax may not be charged on selected services and commodities, such as medical services, vehicle repair, and household maintenance and repair.

Figure 1 illustrates the level of total taxable retail sales for the State of Missouri, Laclede County and Lebanon City over the last 11 years. The figure reveals that the retail sales in both Laclede County and Lebanon City have been following a pattern similar to that of the State. Between 1990 and 2001, Laclede County retail sales increased by 27.5 percent, vs. 23 percent in the City of Lebanon and 20 percent in the State of Missouri. During the economic slowdown in the early 1990s, retail sales declined -- the trend present not only in Missouri but in U.S. as a whole. Thus, the total taxable retail sales in Laclede County declined by 3 percent from 1990 to 1991, but increased by 18 percent between 1993 and 2001. The County had its highest retail sales in 1999, declining in the last two years. Note, that as a percent of total county retail sales, Lebanon retail sales ranged from 88 percent in 1990 to 81 percent in 2001.
In general, growth of retail sales follows the same path as the growth of personal income. However, this may not be the case during economic slowdown and expansion. In general, in the time of recession, retail sales tend to grow slower than personal income, while in the time of economic boom, retail sales tend to grow faster than personal income. This implies that local governments may have to make extra effort to keep a balanced budget during economic recessions. Figure 2 demonstrates the growth in retail sales and in personal income in Laclede County between the years 1991 and 2001.6

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6 Due to the lack of time-series data for income on a city level, the same type of analysis cannot be conducted for Lebanon City.
The graph of per capita retail sales (Figure 3) for Laclede County and the state of Missouri is very similar to that of the total retail sales. Per capita retail sales declined between 1990 and 1991. This 4 percent decline in the County sales reflects the nationwide economic downturn. The County per capita sales increased by 2.2 percent between 1993 and 2001.

The most notable feature in Figure 3 is the high level of per capita retail sales in Lebanon City: in 2000, Lebanon per capita sales were 1.9 times larger than the State’s and 2.3 times larger than those in Laclede County. Such high level of per capita sales in Lebanon City is explained by the fact that the City generates more than 80 percent of total county retail sales, yet in 2000 its population comprised only 37 percent of the County population.7

Another interesting feature of Figure 3 is the lower level of per capita spending in Laclede County compared to the State. The gap has remained relatively constant over the years. There are several factors that contribute to this gap. First, Laclede County has a lower per capita personal income than the State. However, equally important are the shopping habits of Laclede County businesses and residents. Shopping that occurs outside of the county often replaces local shopping. The purchases residents make outside of the county do not show up as county retail sales. This is the case whether the person travels to Lake of the Ozarks to shop or buys products through mail order firms.

Figure 3. Laclede County and Lebanon City vs. State Per Capita Retail Sales, 1990-2001 (2001 dollars)

Data Source: Missouri Department of Revenue, Tax Administration Bureau, U.S. Bureau of Census Analysis by CPAC

Next, the overall performance of Laclede County with regard to generating taxable retail sales was compared to that of adjacent counties. The comparison was made for the years 1990, 1995 and 2001. Camden County dominates in the amount of both the total and per capita taxable retail sales it generates in the area (Figures 4 and 5). On the other hand, Dallas County has the smallest total taxable retail sales in the region, and Pulaski County has the smallest per capita taxable retail sales in the region for 1990, 1995 and 2001.8

7 At the time this report was written, population estimates for cities have not yet been released. Therefore, the chart only shows per capita retail sales for Lebanon up to 2000.
8 Note that retail sales in Wright County are expected to experience a noticeable increase in 2002 due to
Next, the overall performance of Lebanon with regard to generating taxable retail sales was compared to that of the similar size cities in the region. The comparison was made for the years 1990, 1995 and 2001. Rolla and Lebanon dominate in the amount of the total taxable retail sales they generate in the area (Figure 6). On the other hand, Monett had the smallest total the opening of Wal-Mart.
taxable retail sales in the region in 1995 and 2001, and Carthage has the smallest per capita taxable retail sales in the region for 1990 and 2001 (Figure 7).

**Figure 6. Lebanon and Adjacent Cities**

*Total Retail Sales 1990-2001 (in 2001 dollars)*

Data Source: Missouri Department of Revenue, Tax Administration Bureau, U.S. Bureau of Census

Analysis by CPAC

**Figure 7. Lebanon and Adjacent Cities**

*Per Capita Retail Sales 1990 and 2000 (in 2001 dollars)*

Data Source: Missouri Department of Revenue, Tax Administration Bureau, U.S. Bureau of Census

Analysis by CPAC

In order to analyze regional retail sales, one needs to establish the boundaries of the retail trade area to be examined. The most straightforward way to identify a trade area is to use political boundaries such as counties. If trade area is defined based on county borders it is often easier
to perform socio-economic analysis for the area due to readily available data. Socio-economic analysis, in turn, serves as a basis for studying the purchasing patterns of the county population. Therefore, trade area capture and the pull factor (as defined below) for the years 1990, 2001 were calculated.

Retail sales change not only over time, but also in the way they are concentrated both in the localities and throughout the state. There are several ways to measure the spatial concentration of retail sales. The most frequently used measures are the trade area capture (TAC) and the pull factor (PF). TAC is used to determine the number of customer equivalents, based on the state per capita retail sales levels that are being served by the local retail sector. Ideally, the TAC should meet or exceed the population of the county. The PF calculates the portion of customers’ needs that are met locally. If Laclede County retailers were meeting all the needs of Laclede County residents and businesses, the PF would be 1.0. Numeric comparison of per capita taxable sales, TAC, PF and sales per establishment for Laclede and adjacent counties for the years 1990 and 2001 are reported in Table 1. Camden County had the highest numbers for all 4 economic indicators both in 1990 and 2001. Laclede had the second highest numbers among all adjacent counties in both 1990 and 2001.

<table>
<thead>
<tr>
<th>Table 1.</th>
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<tr>
<td><strong>Comparison of Laclede with Adjacent Counties</strong></td>
</tr>
<tr>
<td><strong>1990</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Laclede</td>
</tr>
<tr>
<td>Camden</td>
</tr>
<tr>
<td>Dallas</td>
</tr>
<tr>
<td>Pulaski</td>
</tr>
<tr>
<td>Texas</td>
</tr>
<tr>
<td>Webster</td>
</tr>
<tr>
<td>Wright</td>
</tr>
</tbody>
</table>

*Constant 2001 dollars
** Sales per Establishment are for year 2000
Source: Missouri Department of Revenue, Tax Administration Bureau
U.S. Bureau of the Census
Analysis by CPAC

Camden and Laclede Counties had the highest trade area capture estimates in the area for both years of interest with Dallas County having the smallest (Figure 8). Camden County experienced a 26.7 percent growth and Webster County – a 49.7 percent growth in TAC between 1990 and 2001. Trade area capture estimate for Laclede County increased by 15.7 percent between 1990 and 2001, the third highest among the counties included in this analysis.

See Appendix B for a detailed description of TAC and PF.
Laclede and Camden are the only counties in the region being studied that had a pull factor greater than one for both years of interest (Figure 9). Therefore, both counties are drawing customers from outside their borders or their residents are spending more on retail sales than the state average. Laclede County’s pull factor was 1.15 in 1990 and 1.09 in 2001. This suggests that the demands of Laclede residents for goods and services are being fully met by the local businesses.
Economic Impact of Retail Trade

The retail trade sector contributes more than just sales tax revenue to the county. As do all businesses, retail firms add to the employment and income in the local economy. Using input-output modeling, the employment and income impacts of the retail sector on the County were measured (Table 2). In 2000, about 3,700 people were employed in retail businesses in Laclede County. The combined retail categories directly make up about 19 percent of the total county employment. Income from the retail categories totaled more than $66.2 million, excluding proprietor’s income, which is 10 percent of the wage, salary and other labor earnings of Laclede County residents.

Retail businesses add even more jobs and income to the community through the linkages they have with other sectors in the economy. Multipliers measure linkages by including indirect and induced employment and income effects. *Indirect effects* refer to the purchases of goods and services that retail businesses make from other local businesses in order to produce the goods and services they provide. *Induced effects* occur when those employed in the retail sector spend part of their earnings in local retail stores. For example, the income multiplier of 1.19 for the Building Materials category means that for every dollar earned by employees in a local Building Materials retail business, 19 cents of income is generated in other county businesses. Including the multiplier effect, the proportion of total employment due to retail trade increases to 25 percent. Income generated from the retail sector is 14.5 percent of total labor earnings in the County.

Table 2.
Laclede County Retail Trade Impact on Employment and Income, 2000

<table>
<thead>
<tr>
<th>Retail Sector</th>
<th>County Employment *</th>
<th>Employment Multiplier</th>
<th>Total Employment Impact</th>
<th>Earnings (1,000)</th>
<th>Income multiplier</th>
<th>Total Income Impact (1,000)</th>
<th>Average Wage per Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Materials</td>
<td>162</td>
<td>1.23</td>
<td>199</td>
<td>$2,956</td>
<td>1.19</td>
<td>$3,531</td>
<td>$17,760</td>
</tr>
<tr>
<td>General Merchandise</td>
<td>627</td>
<td>1.16</td>
<td>(D)</td>
<td>(D)</td>
<td>(D)</td>
<td>(D)</td>
<td>(D)</td>
</tr>
<tr>
<td>Food Stores</td>
<td>242</td>
<td>1.18</td>
<td>285</td>
<td>$4,305</td>
<td>1.19</td>
<td>$5,113</td>
<td>$17,965</td>
</tr>
<tr>
<td>Automotive and Gas</td>
<td>738</td>
<td>1.20</td>
<td>886</td>
<td>$12,759</td>
<td>1.22</td>
<td>$15,585</td>
<td>$17,589</td>
</tr>
<tr>
<td>Apparel</td>
<td>109</td>
<td>1.16</td>
<td>(D)</td>
<td>(D)</td>
<td>1.30</td>
<td>(D)</td>
<td>(D)</td>
</tr>
<tr>
<td>Furniture</td>
<td>228</td>
<td>1.25</td>
<td>294</td>
<td>$4,740</td>
<td>1.24</td>
<td>$5,870</td>
<td>$20,661</td>
</tr>
<tr>
<td>Eating</td>
<td>898</td>
<td>1.20</td>
<td>1,076</td>
<td>$8,877</td>
<td>1.38</td>
<td>$12,209</td>
<td>$11,344</td>
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<tr>
<td>Miscellaneous</td>
<td>429</td>
<td>1.15</td>
<td>494</td>
<td>$15,963</td>
<td>1.21</td>
<td>$19,248</td>
<td>$38,943</td>
</tr>
<tr>
<td>Hotels and Motels</td>
<td>190</td>
<td>1.28</td>
<td>243</td>
<td>$3,081</td>
<td>1.46</td>
<td>$4,506</td>
<td>$18,543</td>
</tr>
<tr>
<td>Auto Repair</td>
<td>79</td>
<td>1.44</td>
<td>114</td>
<td>$3,584</td>
<td>1.49</td>
<td>$5,335</td>
<td>$46,758</td>
</tr>
<tr>
<td>Total</td>
<td>3,702</td>
<td>1.33</td>
<td>4,933</td>
<td>$66,232</td>
<td>1.41</td>
<td>$93,187</td>
<td>$18,891</td>
</tr>
</tbody>
</table>

* The employment for Building Materials through Miscellaneous Categories are estimates based on ES-202 data from MO Works! and the 1-digit employment SIC for retail sales.

Source: Minnesota IMPLAN Group
U.S. Bureau of the Census, Bureau of Economic Analysis, REIS;
MO Works! [http://mo.works.state.mo.us]; and
Analysis by CPAC

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Refer to the "Input-Output Modeling" section for an explanation of input-output.

In 2000, Laclede TPI was $640,329,000 and Laclede proprietors’ income was $57,102,000.
The distribution of the indirect and induced effects shows that virtually every major sector in the local economy receives some benefit from having a healthy retail sector (Table 3). These linkages supported about 1,230 additional jobs and almost $27 million in earnings in the local economy in 2000.

Table 3. Distribution of Retail Trade Employment and Income Impacts on All Economic Sectors, Laclede County, 2000

<table>
<thead>
<tr>
<th>Sector</th>
<th>Direct Employment</th>
<th>Indirect Employment</th>
<th>Induced Employment</th>
<th>Direct Income (1,000)</th>
<th>Indirect Income (1,000)</th>
<th>Induced Income (1,000)</th>
<th>Total Income (1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>-</td>
<td>21</td>
<td>22</td>
<td>43</td>
<td>$0</td>
<td>$199</td>
<td>$203</td>
</tr>
<tr>
<td>Mining</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Construction</td>
<td>-</td>
<td>15</td>
<td>9</td>
<td>24</td>
<td>$0</td>
<td>$349</td>
<td>$216</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-</td>
<td>79</td>
<td>104</td>
<td>183</td>
<td>$0</td>
<td>$2,689</td>
<td>$3,514</td>
</tr>
<tr>
<td>Transportation and public utilities</td>
<td>-</td>
<td>31</td>
<td>34</td>
<td>65</td>
<td>$0</td>
<td>$1,046</td>
<td>$1,156</td>
</tr>
<tr>
<td>Trade</td>
<td>3,433</td>
<td>91</td>
<td>255</td>
<td>3,779</td>
<td>$59,567</td>
<td>$1,584</td>
<td>$4,425</td>
</tr>
<tr>
<td>Finance, insurance, and real estate</td>
<td>-</td>
<td>25</td>
<td>47</td>
<td>72</td>
<td>$0</td>
<td>$614</td>
<td>$1,156</td>
</tr>
<tr>
<td>Services</td>
<td>269</td>
<td>211</td>
<td>235</td>
<td>715</td>
<td>$6,665</td>
<td>$3,983</td>
<td>$4,397</td>
</tr>
<tr>
<td>State and local</td>
<td>-</td>
<td>1</td>
<td>51</td>
<td>51</td>
<td>$0</td>
<td>$13</td>
<td>$1,406</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>3,702</td>
<td>474</td>
<td>758</td>
<td>4,933</td>
<td>$66,232</td>
<td>$10,477</td>
<td>$16,478</td>
</tr>
</tbody>
</table>

Source: Minnesota IMPLAN Group
U.S. Bureau of the Census, Bureau of Economic Analysis, REIS;
Analysis by CPAC

Comparing the relative impacts of different sectors can help the County assess the benefits of focusing development efforts on one sector versus the other. For example, even though the retail sector directly generates about 19 percent of the total jobs in Laclede County, they are lower paying jobs than, say, those in the manufacturing sector.
Next, the behavior of selected retail categories in Laclede County will be examined in a temporal context. Note that sometimes no analysis is displayed in some years for a particular category. This is due to data not being reported because of the Missouri Department of Revenue’s data disclosure law. If a category had less than seven firms represented in the reporting year, the retail sales of that category were not disclosed. In the charts, this nondisclosed data is denoted with a (D) where the data would have appeared.

The retail categories being analyzed deserve some explanation. First, note that Gasoline Service Stations are reported as part of the Automotive Dealers category based on the 2-digit Standard Industrial Classification (SIC) code. However, Gasoline Stations generate 24.2 percent of total Auto Dealers’ sales in Laclede County (2001 data). Therefore, it might be beneficial to examine the behavior of this retail category by itself. The Miscellaneous category includes such stores as liquor stores, used merchandise stores, and gun dealers. Finally, two other categories were included in the analysis of retail sales in Laclede County: Hotels and Auto Repair Services. Neither of these categories are classified as retail based on their SIC codes. However, both Hotels and Auto Repair Services have a sizable part of their revenues generated by retail sales. Therefore, they were included in the analysis and are referred to as part of the retail trade sector in this report, even though this is not accurate with respect to government data classification.

Table 4 describes the actual and potential sales in Laclede County. Potential sales is the level of sales the county could achieve if 100 percent of local demand for retail goods were captured locally. Several types of retail establishments in the County show potential for further growth. In 2001, General Merchandise Stores, Gasoline Services Stations, Auto Repair Services, Eating, Automotive and Furniture categories had lower sales than could be expected from the local population (also, see Table 5). The General Merchandise category lost over $13 million in sales, representing the largest retail leakage for the county. Annual expenditures on Miscellaneous Retail are the highest, compared to other categories. This category also has the highest retail surplus in the County. The public sector would benefit the most through an increase in sales tax revenues that would result from capturing a larger portion of potential sales in the General Merchandise category. Note that even though the data for Apparel in 2001 was not disclosed, we can analyze the data for this category for year 2000. Thus, the 2000 actual sales for Apparel (in 2001 dollars) were $232,631, vs. the potential sales of $7,172,810, indicating a leakage of $6,940,179.

---

12 See Appendix B for detailed description of potential sales.
Table 4.
Actual vs. Potential sales for Selected Retail Sectors
Laclede County, Missouri, 1990 and 2001 (2001 dollars)

<table>
<thead>
<tr>
<th>Category* (by SIC code)</th>
<th>1990 Actual Sales ($1,000)</th>
<th>1990 Potential Sales ($1,000)</th>
<th>1990 Leakage/Surplus</th>
<th>2001 Actual Sales ($1,000)</th>
<th>2001 Potential Sales ($1,000)</th>
<th>2001 Leakage/Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>13,727</td>
<td>10,198</td>
<td>3,529</td>
<td>11,851</td>
<td>9,753</td>
<td>2,098</td>
</tr>
<tr>
<td>General Merchandise</td>
<td>5,267</td>
<td>25,663</td>
<td>-20,396</td>
<td>5,270</td>
<td>18,535</td>
<td>-13,265</td>
</tr>
<tr>
<td>Food Store</td>
<td>40,453</td>
<td>29,853</td>
<td>10,600</td>
<td>31,263</td>
<td>29,326</td>
<td>1,937</td>
</tr>
<tr>
<td>Automotive</td>
<td>7,568</td>
<td>6,802</td>
<td>766</td>
<td>8,410</td>
<td>8,450</td>
<td>-40</td>
</tr>
<tr>
<td>Gas</td>
<td>4,129</td>
<td>2,337</td>
<td>1,792</td>
<td>2,034</td>
<td>2,669</td>
<td>-635</td>
</tr>
<tr>
<td>Apparel</td>
<td>18,491</td>
<td>6,219</td>
<td>12,272</td>
<td>(D)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td>6,815</td>
<td>8,013</td>
<td>-1,198</td>
<td>10,369</td>
<td>13,160</td>
<td>-2,791</td>
</tr>
<tr>
<td>Eating</td>
<td>21,727</td>
<td>18,547</td>
<td>3,180</td>
<td>23,057</td>
<td>24,120</td>
<td>-1,063</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>21,941</td>
<td>22,169</td>
<td>-228</td>
<td>105,072</td>
<td>66,616</td>
<td>38,456</td>
</tr>
<tr>
<td>Hotels and Motels</td>
<td>4,500</td>
<td>4,406</td>
<td>94</td>
<td>5,753</td>
<td>4,923</td>
<td>830</td>
</tr>
<tr>
<td>Auto Repairs</td>
<td>1,433</td>
<td>2,794</td>
<td>-1,361</td>
<td>1,454</td>
<td>4,576</td>
<td>-3,122</td>
</tr>
<tr>
<td>Total</td>
<td>146,051</td>
<td></td>
<td></td>
<td>204,533</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* See Appendix A for category definitions
(D) Data not disclosed

Source: Missouri Department of Revenue, Tax Administration Bureau
U.S. Bureau of the Census
Bureau of Economic Analysis
Analysis by CPAC

Table 5 summarizes trade area capture estimates and pull factors along with the retail sales growth rates for Laclede County retail categories for 1990 and 2001. Miscellaneous Retail appears to be the fastest growing category with respect to maintaining or capturing customers within its trade area. The trade area capture for this category in 2001 was nearly twice as large as its 1990 level and the growth rate of its sales increased by 379 percent over the 1990 level.

Some of the retail categories in Laclede County have experienced a decline in both trade area capture and pull factor between 1990 and 2001. Gasoline Service Stations category had the largest decrease in both trade area capture and pull factor among other categories – 48 and 57 percent, respectively compared to the 1990 level of performance. Auto Repairs experienced a 25 percent decline in trade area capture between the two years of the analysis. However, some other retail categories – such as General Merchandise, Auto Dealers (excluding Gas Stations) and Hotel and Motels – experienced growth in both trade area capture and pull factor (in addition to Miscellaneous category) between 1990 and 2001.

If we compare growth in Apparel between the years 1990 and 2000, we'll notice that this retail category declined by 99 percent. In 2000, Apparel's TAC was 1,058 customers and PF – 0.032, representing a 99 percent decline in each case between 1990 and 2000.
### Table 5.

<table>
<thead>
<tr>
<th>Category*</th>
<th>Growth Rate of Sales 1990-2001</th>
<th>Trade Area Capture 1990</th>
<th>2001</th>
<th>Percent Change</th>
<th>Pull Factor 1990</th>
<th>2001</th>
<th>Percent Change***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>-13.7</td>
<td>36,651</td>
<td>39,940</td>
<td>9.0</td>
<td>1.35</td>
<td>1.22</td>
<td>-9.7</td>
</tr>
<tr>
<td>General Merchandise</td>
<td>0.1</td>
<td>5,588</td>
<td>9,345</td>
<td>67.2</td>
<td>0.21</td>
<td>0.28</td>
<td>38.5</td>
</tr>
<tr>
<td>Food Store</td>
<td>-22.7</td>
<td>36,896</td>
<td>35,040</td>
<td>-5.0</td>
<td>1.36</td>
<td>1.07</td>
<td>-21.3</td>
</tr>
<tr>
<td>Automotive</td>
<td>11.1</td>
<td>30,295</td>
<td>32,712</td>
<td>8.0</td>
<td>1.11</td>
<td>1.00</td>
<td>43.2</td>
</tr>
<tr>
<td>Gas</td>
<td>-50.7</td>
<td>48,117</td>
<td>25,050</td>
<td>-47.9</td>
<td>1.77</td>
<td>0.76</td>
<td>-56.9</td>
</tr>
<tr>
<td>Apparel</td>
<td>N/A</td>
<td>80,956</td>
<td>(D)**</td>
<td>N/A</td>
<td>2.97</td>
<td>(D)**</td>
<td>-</td>
</tr>
<tr>
<td>Furniture</td>
<td>52.2</td>
<td>23,155</td>
<td>25,897</td>
<td>11.8</td>
<td>0.85</td>
<td>0.79</td>
<td>-7.4</td>
</tr>
<tr>
<td>Eating</td>
<td>6.1</td>
<td>31,896</td>
<td>31,420</td>
<td>-4.5</td>
<td>1.17</td>
<td>0.96</td>
<td>-18.4</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>378.9</td>
<td>26,948</td>
<td>51,842</td>
<td>92.4</td>
<td>0.99</td>
<td>1.58</td>
<td>64.5</td>
</tr>
<tr>
<td>Hotels and Motels</td>
<td>27.9</td>
<td>27,807</td>
<td>38,411</td>
<td>38.1</td>
<td>1.02</td>
<td>1.17</td>
<td>14.4</td>
</tr>
<tr>
<td>Auto Repairs</td>
<td>1.4</td>
<td>13,970</td>
<td>10,440</td>
<td>-25.3</td>
<td>0.51</td>
<td>0.32</td>
<td>-38.1</td>
</tr>
</tbody>
</table>

* See Appendix A for category definitions  
** Data not disclosed  
*** Calculation is based on PFs that are not rounded to 2 digits

Source: Missouri Department of Revenue, Tax Administration Bureau  
U.S. Bureau of the Census  
Bureau of Economic Analysis  
Analysis by CPAC

The change in the pull factor (PF) measures the success or failure of drawing customers to local retail establishments. It is also used to measure the growth or decline of a particular retail category. Using pull factors, retail categories that show promise for expansion can be easily identified. Previous research indicates that in general, there are three groups of categories that indicate potential future expansion based on their pull factors and the growth rates of their sales. The first group are the categories with pull factors less than one and high growth rates. Second are the categories with very large pull factors and high growth rates. Therefore, even though these categories exceed local demand for their goods, their steady growth can potentially increase these categories’ contribution to the county economy. Finally, retail categories with pull factors just above or below one and moderate growth rates can also be expanded. These categories can make a large potential contribution to the local economy via expansion of direct sales and tax revenues.

As evident from Table 5, Laclede County has several retail categories with a PF greater than one for 2001. Most categories actually experienced growth in sales between 1990 and 2001. Therefore, these retail categories show promises of expansion in Laclede County. These include Miscellaneous Retail, General Merchandise, Hotels and Motels, and Automotive. It is worth noting that the expansion of the categories would have greater positive impacts if the expanding categories do not compete for existing customers. An expansion of a retail category should correspond to an increase in demand for retail items. An increase in demand can be caused by attracting customers from outside the trade area and/or inducing local residents to shop more locally.

Figures 10 and 11 are graphical representations of the information contained in Table 5. In analyzing trade area capture for Laclede’s retail categories, we observe that not all categories do equally well in providing local customers with their goods and services. Miscellaneous and Building materials had the highest TACs in 2001, but in 1990 Apparel and Gasoline Service had the highest TACs. Among the categories that did not have a non-disclosed data, Gasoline Service also experienced the biggest decline between 1990 and 2001. General Merchandise had the lowest TAC among disclosed categories.
Auto Repairs, General Merchandise, Automotive and Furniture were the only categories with a pull factor less than one in 1990 (Figure 11). In 2001, PFs for Gasoline Service Stations and Eating categories also fell below one. Again, Miscellaneous and Building Materials had the highest pull factors in 2001 (1.58 and 1.22, respectively). General Merchandise had the lowest PF among disclosed categories for both years of interest.
Comparative Analysis by Retail Category

This section examines the changes in both trade area capture and pull factors for Laclede County's major retail categories regionally, by comparing each category's results to those of nearby counties. The counties included in this analysis are those that are adjacent to Laclede County.

Camden County had the highest TACs for Building Materials among the counties in the area for both 1990 and 2001 (Figure 12). Webster County’s TAC increased drastically from 1990 to 2001. Pulaski and Dallas were the only counties whose TACs for Building Materials declined between 1990 and 2001. Laclede County's TAC for this category increased by 9 percent from 1990 to 2001.

Figure 12. Laclede County and Adjacent Counties
Building Materials, Hardware and Garden Supply
Trade Area Capture, 1990, 2001

Camden, Pulaski and Laclede Counties had the largest trade area captures in the area for General Merchandise Stores in 2001 (Figure 13). TAC in Dallas County had the fastest growth among the other counties in the area from 1990 to 2001: it increased by 42 fold. However, the actual percent growth in TAC (and PF) for this county should not be over-emphasized, because it is a result of the small 1990 base numbers. The 2001 TAC for Laclede County increased by 67 percent over its 1990 value.

The pull factor charts for retail categories for Laclede County can be found in Appendix C.
All, but Laclede and Wright counties, experienced a growth of TAC for the Food Stores category between 1990 and 2001 (Figure 14). Camden and Webster had the largest trade area capture estimates in both years of interest. The Food Stores’ TAC for Laclede County declined by 5 percent between 1990 and 2001.
Camden and Laclede had the largest TACs for the Auto Dealers category for both 1990 and 2001, with Camden’s TAC growing by 61 percent and Laclede’s - by 8 percent between the two years of interest (Figure 15).

Figure 15. Laclede County and Adjacent Counties
Auto Dealers (Excludes Gas Services)
Trade Area Capture, 1990, 2001

TACs for Gasoline Service Stations experienced a decline for all counties in the area with the exception of Camden and Pulaski counties between 1990 and 2001 (Figure 16). Camden had the largest TAC for the Gasoline Stations category among other counties in 2001. The TAC for Laclede declined by 48 percent from 1990 to 2001.

Figure 16. Laclede County and Adjacent Counties
Gasoline Service Stations
Trade Area Capture, 1990, 2001

Camden and Laclede had the largest TACs for the Furniture category (Figure 17). Both of these counties experienced a growth of TAC between 1990 and 2001 (by 24 percent and 12

Note that we did not make charts for TAC and PF for Apparel since very few counties in the area had their data disclosed for this category.
percent, respectively), whereas all other counties in the area experienced a decline in TAC for this retail category.

**Figure 17. Laclede County and Adjacent Counties**  
**Furniture, Home Furnishings and Equipment**  
**Trade Area Capture, 1990, 2001**

Camden County had the highest TAC for the Eating and Drinking Place category for both 1990 and 2001, with Laclede being on the second place (Figure 18). However, while Camden experienced a 15 percent increase in TAC, Laclede’s TAC actually declined by 1.5 percent between 1990 and 2001. Laclede and Wright were the only counties in the area whose TACs declined between 1990 and 2001 for this retail category. Wright and Dallas had the smallest TACs in the area for both years of interest.

**Figure 18. Laclede County and Adjacent Counties**  
**Eating and Drinking Places**  
**Trade Area Capture, 1990, 2001**

Camden and Laclede had the highest TACs for the Miscellaneous Retail category for both 1990 and 2001 (Figure 19). Both of these counties had large increases in TAC for this category from...
1990 to 2001. Camden’s TAC went up by 98 percent and Laclede’s - by 92 percent. Texas, Wright, Webster and Dallas had the smallest TACs compared to the other counties for both 1990 and 2001. However, Wright County experienced a 310 percent increase in TAC for the Miscellaneous category between 1990 and 2001. Again, the actual percent growth in TAC for this county should not be over-emphasized, because it is a result of the small 1990 base numbers.

Camden had the largest TAC for Hotels category in this area for both 1990 and 2001 (Figure 20), followed by Laclede County. Camden experienced a decrease in TAC between the 2 years of the study, by approximately 16 percent. Laclede County experienced a 38 percent increase in TAC from 1990 to 2001.

Data Source: Missouri Department of Revenue, Tax Administration Bureau, U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC

Laclede County Retail Trade Analysis
Camden County had the highest TAC for the Auto Repair Services category for both 1990 and 2001, followed by Pulaski (Figure 21). However, while Camden County had a significant increase in TAC for this category from 1990 to 2001 (about 20 percent), Pulaski County experienced a decline of 31 percent. Laclede had the smallest TAC compared to the other counties in 2001. Laclede County’s TAC for this category decreased by about 25 percent between the 2 years of interest.

Figure 21. Laclede County and Adjacent Counties
Auto Repair Services
Trade Area Capture, 1990, 2001

To summarize, Camden County had PFs greater than 1.0 for all retail categories but General Merchandise for both 1990 and 2001. Laclede County’s customer base declined for a number of the retail categories between 1990 and 2001. Other counties adjacent to Laclede also had declining TACs for a number of retail categories. Interestingly enough, all counties, but Camden and Laclede, had a declining TAC in furniture category.

The analysis indicates the success of Camden County’s retail sector in drawing customers from nearby areas. Whereas exhibiting a rather good performance in retail sales capture, compared to the nearby counties, the Laclede County might try to induce its residents to shop more locally versus travelling to Camden County. Admittedly, Camden County, and especially, its Factory Outlet Village at Osage Beach, attracts people from all over the state for shopping. People tend to travel to Camden County to do more than shop. A lot of them are drawn to Camden by the beauty of the Lake and the numerous tourist attractions associated with it; thus, shopping becomes a “by-product” of visiting the lake. Therefore, shopping locally in Laclede County would generally not be a substitute for the shopping done in Camden.
A shift-share analysis is designed to decompose the total growth of retail sales (or any other spatial variable) between the two points in time into three major components: aggregate state effect, category/sector effect and competitive/local effect. These components differentiate the growth between Laclede County and the State of Missouri. In our case, such decomposition of retail sales is performed by retail categories. The shift-share analysis analyzes mix of retail categories in a particular county and their competitiveness. The results of the analysis can be used to determine which retail categories are hurting the local economy and which are benefiting it.

Figure 22 depicts shift-share decomposition of retail categories in thousands of dollars. The aggregate state effect shows the amount of retail sales that a county would have if it were to grow at the rate of the average state retail sales. Thus, Building Materials, for example, would have had the expected sales of $3,378 thousands if it were to grow at the same rate as the state total sales (across all retail categories). In reality, however, sales in Building Materials in the County declined between 1990 and 2001 by $1,876 thousands, or almost 14 percent.

The next component, retail category effect, measures county growth due to the differences in the business structure of a county and that of the state. Thus, category-specific effect for sales in Building Materials and most other retail categories (with the exception of Furniture, Miscellaneous and Auto Repair) was negative between 1990 and 2001, indicating a decline in these categories' sales at the state level relative to the state average for total retail sales.

See Appendix B for detailed discussion, interpretation and mathematical representation of shift-share. Note that Apparel Category shows 100 percent decline between 1990 and 2001. This is because the individual apparel stores in Laclede County ceased to exist due to the shift in selling apparel through general merchandise stores – a common nationwide trend. See Appendix B for definition, calculation and interpretation of shift-share decomposition elements.

Comment [AK2]: Shows that Laclede is specializing in certain fast-growing retail categories.
The last component, competitive/local effect, measures the growth of sales in a particular category compared to that experienced statewide in the same category. A positive competitive effect for Building, Merchandise, Automotive, Furniture, Miscellaneous and Hotels retail categories suggests that the retail firms in these categories in Laclede County have increased their state market shares at the expense of competing firms in other counties.

Table 6.

<table>
<thead>
<tr>
<th>Retail Category</th>
<th>Aggregate State Effect</th>
<th>Category/Sector Effect</th>
<th>Competitive/Local Effect</th>
<th>Total Change Over Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furniture</td>
<td>807</td>
<td>1,046</td>
<td>1,777</td>
<td>-240</td>
</tr>
<tr>
<td>Hotels</td>
<td>533</td>
<td>515</td>
<td>1,048</td>
<td>1,107</td>
</tr>
<tr>
<td></td>
<td>Total Effect</td>
<td>34,922</td>
<td>2,123</td>
<td>23,532</td>
</tr>
</tbody>
</table>

1990-95 data for Apparel was treated as true zero.

Table 6 shows the change in retail sales by category (both total change and its decomposition) between 1990-95, 1995-2001 and 1990-2001. Thus, out of the $60.58 million in total change in Laclede retail sales between 1990 and 2001, $34.92 million were attributable to the overall growth in the State retail sales, $2.12 million to the change in the composition of Laclede's retail sector to include more of the categories that are growing faster than State average, and $23.53 million due to the unusually fast growth within the retail sector in Laclede County—the so-called competitive effect.

Figure 23. Laclede County
Decomposition of Shift-Share Analysis
1990-2001 (in %)

Data Source: Missouri Department of Revenue, Tax Administration Bureau
Analysis by CPAC
Figure 23 depicts the shift-share decomposition in percentage terms. The percentage terms were obtained by dividing each component of the shift-share equation by the amount of the retail sales of a particular sector in Laclede County in the base year. The aggregate state effect, which is the overall growth of the State average retail sales between 1990 and 2001, was equal to 24.6 percent. The shift-share analysis for Laclede reveals that the composition of retail sectors within the county underwent some significant changes. In particular, examination of the retail category effect component expressed in percentage terms reveals that the difference between the growth of a particular retail category across all Missouri Counties and the growth of the state average retail sales (across all retail categories) was negative for most retail categories, with the exception of Furniture, Miscellaneous and Auto Repairs categories. Note that Miscellaneous category experienced the highest growth and Merchandise category - the largest decline for category effect.

In examining the competitive/local effect, keep in mind that this effect is influenced by travel (as measured by travel intensity), employment growth, retail category mix, (per capita) income, and the location of a county.18

Thus, category effect shows that Miscellaneous category grew faster than any other category in the State and competitive/local effect indicates that Miscellaneous sales grew even faster in Laclede than in the State.

Table 7 represents the results of a shift-share decomposition analysis for Laclede County in percentage terms for three time periods. It also compares total change in Laclede’s retail sales with that in the State between 1990-2001. Note that the total reported changes for Laclede sales between 1990 and 2001 are exactly the same as those in Table 5. In considering the growth of total Laclede retail sales including sales from Hotels and Auto Repairs, it was noted that Laclede sales grew by 42.7 percent vs. 24.6 percent statewide between 1990 and 2001. The sectors that were performing worse than the state average are Food, Gas, Eating and Auto Repairs. Out of this 42.7 percent total growth, 24.6 percent is attributable to the aggregate state growth, 16.6 – to the competitive/local effect and a mere of 1.5 percent – to the category effect. The fact that combined Laclede sales for the analyzed retail categories grew by almost twice as much as those in the State is mainly attributable to the high growth of Miscellaneous category that includes liquor stores, used merchandise stores, gun dealers, non-store retailers, non-auto fuel (propane, coal, etc.), ice dealers and others.

Table 7

<table>
<thead>
<tr>
<th>Retail Sales Shift-Share Decomposition Analysis</th>
<th>Laclede County, 1990-2001, in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate State Effect</td>
<td>Category/Sector Effect</td>
</tr>
<tr>
<td><strong>Building</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Merchandise</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Food</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Auto</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Gas</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Apparel</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Furniture</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Eating</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Hotels</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Auto Repair</strong></td>
<td>11.84</td>
</tr>
<tr>
<td><strong>Total Effect</strong></td>
<td>24.61</td>
</tr>
</tbody>
</table>

18 Ma, Ibid.
Conclusions

Retail Trade Analysis provides local decision-makers with valuable information regarding the current conditions of retail trade in the locality, and compares those conditions with the potential of a community, given the purchasing habits of average Missourians. It also examines the potential that exists for expanding all or some of the retail categories. Several retail categories in Laclede County had pull factors less than one in 2001. This implies that the county does not capture sales dollars from outside its boundaries and loses its own customers to surrounding counties, nearby trade centers, or mail order for these retail categories. Moreover, some retail categories experienced a decline in sales between 1990 and 2001, while sales were increasing for these categories in some of the nearby counties. Therefore, if the county retail sector can capture more local dollars and attract more customers from outside the county boundaries, the resulting benefit to the retailers, the local economy, and county revenues could be increased.

To induce people to spend more money in Laclede County, well-known economic strategies can be implemented. Some of the strategies that can be applied are: capturing more of an existing market, increasing export sales of an existing market, attracting new businesses and industries, and attracting more consumers who earn their income outside the county. Understanding the changes occurring nationally, such as an increase in shopping in large ‘supercenters’ and over the Internet, will also help Laclede County position itself to compete for retail sales dollars. These retail trade analysis results will provide Laclede County with information that can be used to identify opportunities that will help satisfy the tastes and needs of those who shop in the County.

Comment [AK3]: Building, Food store, Gas
Comment [AK4]: Increase in Building and Gas – in Camden; in Gas – in Pulaski, in Building and food – in Webster; and in Building – in Wright.
Appendix A: Definitions of SIC Categories Used in the Report

The Standard Industrial Classification (SIC) system is used to group retail establishments according to the principal lines of commodities sold (e.g., groceries, hardware, etc.), or the usual trade designation (e.g., drug store, cigar store, etc.). Based on this classification, major subcategories of retail establishments are 52 through 59, with 554 and 591 based on a 3-digit level, and the rest on a 2-digit SIC level. Two categories designated as service categories (Hotel and Motels and Auto Repairs) are included in the analysis of retail trade because of the level of retail sales that come from these categories. To find the full definitions of the Standard Industrial Classification categories please visit <http://www.osha.gov/oshstats/sicser.html>.

<table>
<thead>
<tr>
<th>SIC Code</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>Building</td>
<td>Building Materials, Hardware, Garden Supply</td>
</tr>
<tr>
<td>53</td>
<td>General Merchandise</td>
<td>General Merchandise Stores</td>
</tr>
<tr>
<td>54</td>
<td>Food Store</td>
<td>Food Stores</td>
</tr>
<tr>
<td>55</td>
<td>Automotive</td>
<td>Automotive dealers (Excluding Gas Services)</td>
</tr>
<tr>
<td>554</td>
<td>Gas</td>
<td>Gasolins Service Stations</td>
</tr>
<tr>
<td>56</td>
<td>Apparel</td>
<td>Apparel and Accessory Stores</td>
</tr>
<tr>
<td>57</td>
<td>Furniture</td>
<td>Furniture, Home Furnishings and Equipment</td>
</tr>
<tr>
<td>58</td>
<td>Eating</td>
<td>Eating and Drinking Places</td>
</tr>
<tr>
<td>59</td>
<td>Miscellaneous</td>
<td>Miscellaneous Retail *</td>
</tr>
<tr>
<td>70</td>
<td>Hotels and Motels</td>
<td>Hotels, Rooming Houses, Camps/Other</td>
</tr>
<tr>
<td>75</td>
<td>Auto Repairs</td>
<td>Automotive Repair, Services and Garages</td>
</tr>
</tbody>
</table>

*Miscellaneous Retail includes drug stores, liquor stores, used merchandise stores, gun dealers, nonstore retailers, non-auto fuel (propane, coal, etc.), ice dealers, and others

More specifically,

MISCELLANEOUS RETAIL (SIC Major Group 59):

This major group includes retail establishments not elsewhere classified. These establishments fall into the following categories: liquor stores; used merchandise stores; miscellaneous shopping goods stores; non-store retailers, fuel dealers, florists, cigar stores and stands, news dealers and newsstands, and miscellaneous retail stores not elsewhere classified.

GENERAL MERCHANDISE STORES (SIC Major Group 53):

This major group includes retail stores which sell a number of lines of merchandise, such as dry goods, apparel and accessories, furniture and home furnishings, small wares, hardware, and food. The stores included in this group are known as department stores, variety stores, general merchandise stores, catalog showrooms, warehouse clubs, and general stores. Establishments primarily engaged in selling used general merchandise are classified in SIC 593, and those selling general merchandise by mail, vending machine, or direct selling are classified in SIC 596.
Appendix B: Definition, Calculation and Interpretation of Retail Trade Analysis Tools

Sales data for the Trade Area Capture, Pull Factors, and Potential Sales were taken from the retail sales reports obtained from the Missouri Department of Revenue's Tax Administration Bureau. The data are public data, although not commonly published. Population data were obtained from the U.S. Bureau of the Census, Population Estimates Program. Personal income data were obtained from the Bureau of Economic Analysis through their Regional Economic Information System (REIS). Employment and payroll were obtained from 1995 and 1996 County Business Patterns CD-ROM, data published by the U.S Bureau of the Census. Impact analysis was completed using IMPLAN, an input-output analysis program. All dollar amounts have been adjusted for inflation using the Consumer Pricing Index, published by the Bureau of Labor Statistics, U.S. Department of Labor.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
</tr>
</thead>
</table>
Trade Area Capture (TAC)

Definition: Trade area capture refers to “the number of customers drawn to a particular community or county to purchase a product or service”\(^{19}\) based on state average expenditures (retail sales) of that product or service, after adjusting for differences in per capita income between the state and the local area.

Calculation:

\[
\text{County TAC for Category } i = \left( \frac{\text{County Retail Sales for Category } i}{\text{State Per Capita Retail Sales}} \right) \times \left( \frac{\text{State Per Capita Income}}{\text{County Per Capita Income}} \right)
\]

Interpretation: This measure uses state retail sales levels, adjusted for income differences, to determine the customer base of the local area. If the trade area capture is larger than the population of the county, then the county is assumed to be attracting customers from outside its borders. It could also be assumed that local residents spend more money on retail than the state average. If the trade area capture is less than the county's population, then the community is either not capturing the commercial purchases of its own residents or local residents are spending relatively less on retail sales than the state average.

Pull Factor (PF)

*Definition:* Pull factor estimates “the portion of customers that a community draws from outside its boundaries.” This measure helps identify export and import sectors.

*Calculation:*

\[
\text{County PF for Category } i = \left( \frac{\text{County TAC for Category } i}{\text{County Population}} \right)
\]

*Interpretation:* Virtually the same as that for trade area capture. Namely, if the PF is greater than 1.0, the community is attracting consumers from outside its borders or local people are spending more on retail sales than the state average. In either case, the retail category would be considered an exporter. If the PF is less than one, then the retail category would be identified as an importer. The PF, when calculated over time, gives decision-makers an understanding of the community’s market capture efficiency.

Potential Sales (PS)

*Definition:* The PS measure is used to estimate the retail sales levels that could be achieved if each retail category captured 100 percent of the local market, assuming average state expenditure levels.

*Calculation:*

\[
\text{County PS for Category } i = \left( \frac{\text{County Retail Sales for Category } i}{\text{County PF for Category } i} \right)
\]

*Interpretation:* Potential sales give the dollar amount that each retail category would have achieved in sales if this category reached the statewide per capita level of sales (adjusted for the income differences between the state and the locality). Comparison of potential sales with actual sales yields the surplus or leakage in sales for this particular category. If potential sales fall behind the actual sales, there is a surplus in this retail category and the category is considered an exporter. On the other hand, leakage occurs when potential sales exceed the actual sales. In this case, the category is losing money because people are going outside of the locality to purchase some of the goods and services provided by the retail category.

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21 A category is referred to as an “exporting” category if it not only satisfies the demands of the local community for a particular good in question, but administers sales of this good to non-local residents: tourists, transients, in-commuters and others (Cox and Alwang, 1996).
Example
This example is for the Total Retail Sales and for Food Sales Category for Laclede County. The data are for 2001.

**Data for Laclede County**
- Population: 32,868
- Per Capita Income: $18,794
- Total Retail Sales: $301,555,652
- Food Stores' Sales: $31,263,262

**Data for Missouri**
- Population: 5,629,707
- Per Capita Income: $26,089
- Total Retail Sales: $65,058,241,699
- Food Stores' Sales: $6,972,740,359
- State Per Capita Food Sales: $1,239
- State Per Capita Total Sales: $11,556

**Trade Area Capture (TAC) calculation:**
- County TAC for Total Retail Sales = \( \left( \frac{301,555,652}{31,263,262} \right) \cdot \left( \frac{26,089}{18,794} \right) \)
- County TAC for Food Category = \( \left( \frac{31,263,262}{1,239} \right) \cdot \left( \frac{26,089}{18,794} \right) \)

TAC for Total Retail Sales = 36,224 (persons)
TAC for Food Category = 35,040 (persons)

**Pull Factor (PF) calculation**
- County PF for Total Retail Sales = \( \frac{36,224}{32,868} \)
- County PF for Food Category = \( \frac{35,040}{32,868} \)

PF for Total Retail Sales = 1.10
PF for Food Category = 1.07 (actually, it is 1.066077)

**Potential Sales (PS) calculation:**
- County PS for Total Retail Sales = \( \left( \frac{301,555,652}{1.10} \right) \)
- County PS for Food Category = \( \left( \frac{31,263,262}{1.07} \right) \)

PS for Total Retail Sales = $274,141,501.82
PS for Food Category = $29,325,519.36

Laclede County Retail Trade Analysis
Shift-Share for Retail Sales (RS)

The shift-share analysis in this paper is based on two assumptions. First is the assumption of the state-wide market orientation. Retail firms within a county are assumed to be competing with other retail firms in the state. Secondly, we assume no retail sales leakages in or out of the state (not as important in a case of one-county analysis). Both assumptions are largely shaped by the data limitations (only data for the State of Missouri were available for the years of the study).

Calculation of Shift-Share Decomposition:

The following shift-share decomposition is used in our analysis:

For retail sector i in county j, a shift-share equation can be written as follows:

\[
D_{ij} = G_{ij} + M_{ij} + C_{ij},
\]

where \(D_{ij}\) can be also written as change in retail sales of category i in county j between two points in time:

\[
D_{ij} = RS_{ij}^1 - RS_{ij}^0,
\]

where \(RS_{ij}^1\) is the retail sales of category i in county j at the end of the time period (say, in 2001; referred to as year 1), and \(RS_{ij}^0\) is the retail sales of sector i in county j at the beginning of the time period (say, 1990; referred to as year 0).

The three components of the total change are defined as follows:

**Aggregate State Effect (G_{ij}):**

Aggregate State Effect =

\[
\text{Aggregate State Effect} = \left( \frac{\text{State total RS in year 1} - \text{State total RS in year 0}}{\text{State total RS in year 0}} \right)
\]

Or, in condensed form:

\[
G_{ij} = RS_{ij}^0 \left( \frac{RS_{ij}^1 - RS_{ij}^0}{RS_{ij}^0} \right)
\]

Definition: Aggregate State Effect, \(G_{ij}\), is the expected growth of a retail category i in a county j given the overall average state retail sales growth.

---


23 To calculate these four categories in percentage terms, they are divided by County Retail Sales in category i in year 0.
Interpretation: the aggregate state effect shows the share of retail sales that a county would have if it were to grow at the rate of the average state retail sales. Then, the difference between the total growth, D_{ij}, and the aggregate effect, G_{ij}, (called net shift) represents the shift of retail sales for a county. The net shift is then further decomposed into M_{ij} and C_{ij}. \(^{24}\)

\textbf{Category/Sector Effect (M_{ij}):}

\text{Category/Sector Effect} = \frac{\text{State RS for sector } i, \text{ year } 0 - \text{ State RS for sector } i, \text{ year } 0}{\text{State RS for sector } i, \text{ year } 0} - \frac{\text{State total RS in year } 1 - \text{ State total RS in year } 0}{\text{State total RS in year } 0}

Or, in condensed form:

\[ M_{ij} = RS_{ij} \left( \frac{RS_{ij} - RS_{0i}}{RS_{0j}} - \frac{RS_{ij} - RS_{0j}}{RS_{ij}} \right) \]  \hspace{1cm} (4)

\textit{Definition}: Category/Sector effect, M_{ij}, represents a county’s growth due to the differences in the business structure of a county and that of a state.

\textit{Interpretation}: the category effect component measures the rate of growth of retail category i in county j relative to the difference between the growth of this retail category across all the counties in the state and the total growth of retail sales (across all retail categories) in the state for the years of the study. Retail category effect is usually shaped by regional/county forces.

\textbf{Competitive/Local Effect (C_{ij}):}

\text{Competitive/local effect} = \frac{\text{State RS for sector } i, \text{ year } 0 - \text{ State RS for sector } i, \text{ year } 0}{\text{State RS for sector } i, \text{ year } 0} - \frac{\text{State total RS in year } 1 - \text{ State total RS in year } 0}{\text{State total RS in year } 0}

\[ C_{ij} = RS_{ij} \left( \frac{RS_{ij} - RS_{0i}}{RS_{0j}} - \frac{RS_{ij} - RS_{0j}}{RS_{ij}} \right) \]  \hspace{1cm} (5)

\textit{Definition}: The competitive effect, C_{ij}, represents the differences between the rates of growth for a county and those for a state in individual retail categories. The competitive effect is also said to be influenced by the regional/county forces at work.

\textit{Interpretation}: If a county experiences a positive competitive shift, this means that the locational advantages for retail sales in this county have improved relative to other counties in the state. In other words, a positive competitive effect suggests that the retail firms in a county have increased their state market shares at the expense of competing firms in other counties. Thus, competitive effect measures a growth in retail sales generated by competitive advantages in retail category i in a county j.

\(^{24}\) The following definitions for each of the three components of the total change/growth over time of retail sales are drawn from Ma, \textit{Ibid.} and Senf, David R., \textit{Shift-Share Analysis of Rural Retail Trade Patterns}, Regional Science Perspectives, Vol. 18, No. 1, 1988, pp. 29-37. Some adjustments in the definitions have been made to reflect the fact that this study compares the growth of a county with that of the state, rather than the growth of a region with that of the nation. However, the extension from one to the other is straightforward.
Appendix C: Input-Output Modeling

Input-output (I/O) modeling was first developed in the late 1930s and has become widely used in regional economics since that time. I/O provides a framework for measuring the linkages among sectors (a term used interchangeably with 'industries') in a region's economy. The model is based on observed economic data for a specific geographical area (e.g. a county, state, or nation). The transactions table, the basis of the input-output system, keeps track of the flow of goods from each sector to other sectors and the final consumers. The flow of one sector's output to other industries reflects the inter-sectoral linkages in an economy. Goods sold to households, to the government or as exports are considered final demand.

There are several assumptions that are important to know in order to understand the strengths and limitations of I/O. The first assumption is that there is a fixed proportion of inputs for each unit of output. Fixed proportions imply that there are no substitutions between inputs, regardless of price changes or new technology. In addition, all of the firms in a sector are assumed to need the same average mix of inputs. For example, if a sector called "vehicle construction" included firms that produce full-sized trucks and firms that produce golf-carts, I/O assumes the same proportion of inputs, capital, and labor are used in both types of firms. Fixed proportions also signify that small and large producers have the same input mix and efficiency in production. Another assumption is constant returns to scale. That is, in order for output to double, all of the inputs used in production must double. Also, because there are no resource constraints, there is no assumed production capacity.

Impact analysis for PLANning: IMPLAN

In the past, to use I/O in a study, a lot of time and money was needed in order to collect necessary primary and secondary data and to set up the I/O model. Today, there are several pre-packaged I/O models available to researchers that can run on personal computers. One of the more popular models is called IMpact analysis for PLANning (IMPLAN). IMPLAN contains comprehensive national data that is used to estimate regional data on a county-by-county basis. This model allows the researcher to specify the geographic region of interest. In addition, the model is relatively easy to modify to include primary or more recent data. It is this flexibility that makes IMPLAN very effective in meeting the needs of various researchers.

IMPLAN is used in the creation of scenarios in conjunction with the Show Me Model. This model is frequently used to generate estimates of total employment and income when a community is interested in knowing the impacts of an economic development event. A change in employment or income has a multiplier effect because of the inter-industry linkages in the local economy. IMPLAN measures these linkages. The Show Me Model is then used to allocate the estimated changes in employment and income over several years. The fiscal, economic, and demographic projections that are made in a scenario now incorporate the new circumstances. The scenario results, when compared to the baseline, provide valuable information that can be used in local decision making.
Appendix D: Pull Factor Figures of Retail Categories for Laclede and Nearby Counties

This appendix contains the pull factor figures that match the trade area capture figures used in the main body of this report. For example, Figure C12 is the pull factor figure that goes with Figure 12, the trade area capture figure for the Building Materials category. Interpretation of the pull factor figures has been done for the first category. The remaining PF charts can be interpreted in a similar fashion.

Camden County had the highest pull factor for the Building Materials category for both 1990 and 2001 (Figure C12). Most counties in the area had a PF greater than one in both 1990 and 2001. Thus, the Building Materials category in these counties not only satisfy the local demand for these materials, but also "export" its surplus – that is, it either sells to people who reside outside the community or the average County resident purchases more from this retail category than do average Missourians.

Building Materials in counties with Pull Factor less than 1 is an importing category meaning that residents of these counties purchase some of the demanded building materials outside their counties' borders. With the exception of Camden, Wright and Webster, the PF for the counties in the area experienced a decline between 1990 and 2001. Pulaski County also had the smallest PF for Building Materials in the area (0.28 in 2001). Therefore, Pulaski's Building Materials category failed to draw customers to local retail firms. In other words, local demands for Building Materials in Pulaski are not being met. Laclede's PF for this category decreased by 9.73 percent between the two years of the study.
Figure C12. Laclede County and Adjacent Counties
Building Material, Hardware and Garden Supplies
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC

Figure C13. Laclede County and Adjacent Counties
General Merchandise Stores
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC
Figure C14. Laclede County and Adjacent Counties
Food Stores
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau, U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC

Figure C15. Laclede County and Adjacent Counties
Auto Dealers (Excludes Gas Services)
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau, U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC

Laclede County Retail Trade Analysis
Figure C16. Laclede County and Adjacent Counties
Gasoline Service Stations
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
(D) Data not disclosed
Analysis by CPAC

Figure C17. Laclede County and Adjacent Counties
Furniture, Home Furnishings and Equipment
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC
Figure C18. Laclede County and Adjacent Counties
Eating and Drinking Places
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC

Figure C19. Laclede County and Adjacent Counties
Miscellaneous Retail
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC
Figure C20. Laclede County and Adjacent Counties
Hotels, Rooming Houses, Camps and Other
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
(D) Data not disclosed
Analysis by CPAC

Figure C21. Laclede County and Adjacent Counties
Auto Repair Services
Pull Factor, 1990, 2001

Data Source: Missouri Department of Revenue, Tax Administration Bureau,
U.S. Bureau of Census, Bureau of Economic Analysis
Analysis by CPAC
The Community Policy Analysis Center provides objective analysis and policy decision support for Missouri Communities. Located at the University of Missouri-Columbia, CPAC is part of the Social Sciences Unit of MU’s College of Agriculture, Food and Natural Resources. Significant funding for the Center is provided by University of Missouri Outreach and Extension.

CPAC scientists work closely with state and local government leaders, local businesses and community groups to provide research and educational programs that will inform key decisions, and assist them in understanding how policy decisions at all levels of government affect their community's quality of life.

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