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Estimating Retail Development Capacity: Gap Analysis in Action

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Abstract: *This article discusses one method for converting retail trade gap data into estimates of retail real estate development capacity using both public and proprietary data sources. This information is useful to Extension agents and economic development professionals interested in downtown redevelopment and targeted retail business recruitment.*

Introduction

Previous articles in the *Journal of Extension* (JOE) introduced retail gap analysis as a valuable tool in community economic development. For example, Barta and Woods (2001) discussed the value of a specific "gap analysis report" to Extension officers in Oklahoma. Sharp, Clark, Davis, Smith, and McCutcheon (2011) described how gap analysis was used to study local food systems in Ohio. In this article, we expand on this prior work by introducing one method that Extension agents can use to turn retail trade gap data into estimates of real estate development capacity.

Defining the Retail Trade Gap

So what is a retail trade gap? Barta and Woods rightly acknowledge that a trade gap can only be identified within the context of a well-defined trade area. This often corresponds to an established community (i.e., neighborhood, retail corridor, city, county, or region). Using data for the trade area, the analyst first measures the value of consumer expenditures made by local area residents. They then measure the total value of retail sales in the area. By subtracting total retail sales (supply), from total retail expenditures (demand), the analyst can derive the net balance of trade, or retail trade gap, within the local retail sector (Sharp et al., 2011). The retail trade gap can be either positive or negative for different retail sub-sectors. A negative trade gap indicates a net retail leakage. This is equal to the amount of money spent by local residents outside of the trade area. Conversely, a positive trade gap indicates a net injection of retail sales dollars. This is equal to the amount of money that residents from outside the community spent within the trade area. These calculations are illustrated using hypothetical demand and supply numbers in Table 1 below.

As in the case of Barta and Woods (2001), retail trade data are available for purchase from a variety of private vendors. However, some public data sources also exist. The U.S. Bureau of Labor Statistics (BLS) publishes data from the Consumer Expenditure Survey (CE) that provides per capita estimates of consumer demand at the national and regional level, based on various demographic characteristics. In combination with a unique consumer profile for the local area, it is possible to use these figures to derive estimates of local consumer retail spending. On the supply side, local retail sales tax data are often used by economists to develop estimates of local

retail sales. These data are typically available through the city, county, or state tax assessor's office. When data are available, one must simply multiply total retail sales tax receipts by the tax rate to estimate gross sales. Whatever the source, the results are roughly the same and data derived from either public or private sources can be used with the following methodology to estimate local real estate development potential.

Table 1.
Retail Trade Gap Analysis

Retail Category	Consumer Expenditures (Demand)	Retail Sales (Supply)	(Leakage)/Injection
Automotive Supply	$4,800,000	$6,900,000	$2,100,000
Furniture & Home Furnishings	$7,200,000	$10,200,000	$3,000,000
Electronics & Appliances	$7,700,000	$7,860,000	($160,000)
Building Material, Garden Equip	$32,000,000	$77,000,000	($45,000,000)
Food & Beverage	$46,000,000	$88,400,000	$42,400,000
Health & Personal Care	$16,000,000	$19,400,000	($3,400,000)
Clothing & Clothing Accessories	$15,000,000	$22,500,000	($7,500,000)
Sporting Gds, Hobby, Book, Music	$6,300,000	$10,500,000	($4,200,000)
General Merchandise	$41,000,000	$44,500,000	$3,500,000
Miscellaneous Store Retailers	$7,700,000	$10,000,000	($2,300,000)
Non-Store Retailers	$20,000,000	$39,400,000	($19,400,000)
Foodservice & Drinking Places	$31,000,000	$46,500,000	($15,500,000)
Auto and Other Vehicle Dealers (a)	$60,000,000	$90,000,000	($30,000,000)
Gasoline Stations	$35,000,000	$45,000,000	($10,000,000)
All Categories with Leakage	**$230,700,000**	**$368,160,000**	**($137,460,000)**
Notes: (a) Includes auto and other motor vehicles.			

Turning the Trade Gap into Development Capacity

One way to operationalize information on the retail trade gap is to estimate the additional square footage of indoor retail sales space that could potentially be supported by the capture of leaked domestic retail spending. This is done by multiplying the total value of the retail leakage by the average sales per square foot for the corresponding retail product category. This data can be acquired from a variety of business associations and real estate advisory groups, but is most often culled from a book published by the Urban Land Institute (2008), called the *Dollars and Centers of Shopping Centers*. The result of this calculation is a base estimate of sales floor space that must be adjusted to accommodate additional administrative or office space, as well as a healthy vacancy rate. For most leased retail space the administrative component is equal to roughly 15 percent of the sales floor area. Depending on the characteristics of the local real estate market, a healthy vacancy rate can range anywhere from five to 10 percent. For some retail categories, such as automotive dealers and gasoline stations, these calculations will be conducted on a per acre basis, due to the way that average sales figures are recorded.

Table 2.
Existing Additional Supportable Retail Square Feet

Retail Category	(Leakage)/Injection	Sales Per Sq. Ft.	Supportable Sq. Ft.	Non-Retail Adjust. (a)	Supportable Sq. Ft. (b)
Automotive Supply	$2,100,000	$200	n.a.	n.a.	n.a.
Furniture & Home Furnishings	$3,000,000	$350	n.a.	n.a.	n.a.
Electronics & Appliances	($160,000)	$500	320	365	356
Building Material, Garden Equip	($45,000,000)	$425	105,774	120,582	117,832
Food & Beverage	$42,400,000	$400	n.a.	n.a.	n.a.
Health & Personal Care	($3,400,000)	$475	7,158	8,160	7,974
Clothing & Clothing Accessories	($7,500,000)	$200	37,500	42,750	41,775
Sporting Gds, Hobby, Book, Music	($4,200,000)	$250	16,800	19,152	18,715
General Merchandise	$3,500,000	$250	n.a.	n.a.	n.a.
Miscellaneous Store Retailers	($2,300,000)	$375	6,133	6,992	6,833
Non-Store Retailers	($19,400,000)	n.a.	n.a.	n.a.	n.a.
Foodservice & Drinking Places	($15,500,000)	$400	38,750	44,175	43,168
All Categories with Leakage	**($97,460,000)**		**212,435**	**242,176**	**236,652**

a. Adjustment to account for an additional 14 percent for non-retail outlets (business and personal services).
b. Includes adjustment to account for a ten percent vacancy allowance.

Retail Category	(Leakage)/Injection	Sales Per Acre	Additional Supportable Acres
Auto and Other Vehicle Dealers (c)	($30,000,000)	$7,500,000	4
Gasoline Stations (c)	($10,000,000)	$4,000,000	3
All Categories with Leakage	**($40,000,000)**		**7**
0. Calculated on a sales per acre basis.			

Turning Numbers into Outcomes

The final step necessary to operationalize the retail trade gap data is to compare the derived estimates of supportable square footage to 1) the existing stock of retail real estate and 2) the site requirements of potential retail recruitment targets. The first piece is most easily accomplished by creating an inventory of leasable retail space that is either vacant, planned, or under construction. This will give some sense as to whether the existing retail leakage could reasonably be accommodated by the community's existing retail real estate assets, or if additional real estate development may be warranted. The second piece is necessary in order to better understand whether the existing leakage is sufficient to support an average size store within a given retail category. For example, the Electronics and Appliances category shown in Table 2 has a reported leakage of $160,000. This is equal to approximately 356 supportable square feet. With the average size of an electronics store somewhere around 2,000 square feet, the estimated leakage in this category is likely insufficient to support an additional store and would be better captured through the expansion of an existing establishment.

References

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