

CBER Brief: Guilford County's Retail "Exports"

Dr. Andrew Brod, April 2008

How much of Guilford County's retail sales are made to residents of other counties? Without conducting a costly survey, it's difficult to get a direct answer based on hard data. This CBER Brief summarizes two ways to tackle this. One approach uses government data but answers the question only indirectly; the other provides a more direct answer but is based on a series of intermediate estimates.

1. Retail Pull Factor

A county's retail pull factor (RPF) is the ratio of its share of statewide taxable retail sales (not all retail sales are taxable) to its share of statewide population. An RPF greater than 1.0 implies that shoppers are being pulled in from other counties, while an RPF less than 1.0 implies that residents are shopping elsewhere.

A related measure is the adjusted retail pull factor, or ARPF, which relates taxable sales to personal income instead of population. The ARPF corrects for income differences among counties. Even holding population constant, residents of rich counties are likely to generate more retail sales than those of poor counties.

Based on data obtained from the state of North Carolina, the following are the RPFs and ARPFs for selected Triad counties for the 2006-07 fiscal year.

RPFs and ARPFs for Selected Triad Counties, FY 2006-07

County	Retail Pull Factor	Adjusted Retail Pull Factor*
Guilford	1.31	1.17
Forsyth	1.24	1.10
Alamance	0.96	1.09
Caswell	0.13	0.17
Davidson	0.59	0.63
Randolph	0.53	0.65
Rockingham	0.52	0.64
Stokes	0.34	0.40

*Uses 2005 personal-income data because county-level data are not yet available for 2006.
 Sources: N.C. Department of Commerce, N.C. Department of Revenue, analysis by author

Clearly, with the exception of Forsyth and Alamance, Guilford's retail stores are a big net draw for shoppers in nearby counties. Guilford's RPF of 1.31 implies that the county's

retail sales are 31% greater than would be expected from its own population. The ARPF of 1.17 implies that Guilford’s retail sales are 17% greater than would be expected from the income of its residents.

2. Retail Export Rate

The above RPFs are derived directly from government data, but they answer the question only indirectly. The approach of this section is something of the reverse. It tackles the issue head-on but its results are a couple of steps removed from the original government data. Another difference is that this approach uses total retail sales, not just taxable sales.

The IMPLAN modeling system is an industry standard for economic-impact analysis, but it can be used for other purposes as well. The model’s detailed regional data include county-level estimates generated from a variety of sources. One can use the IMPLAN model to obtain estimates of data that are not generally available at the county level.

IMPLAN keeps track of commodity supply and demand as well as inflows to and outflows from a county. When demand cannot be met by local supply, imports flow in from other counties. For commodities sold at retail in mercantile centers like Guilford County, supply generally exceeds local demand, with the difference registering as retail “exports” to residents of other counties. The following table summarizes the export rate for the sectors in IMPLAN’s retail group. Remember, the figures in this table are not data per se. They are estimates generated by a highly detailed and reliable model of regional economics.

Retail Export Rates, Guilford County, 2006

IMPLAN sector	Commodity Supply (\$ millions)	Domestic Exports* (\$ millions)	Retail Export Rate (%)
Motor vehicle and parts dealers	668.4	319.1	47.7
Furniture and home furnishings stores	318.3	218.3	68.6
Electronics and appliance stores	52.4	0.0	0.0
Building material and garden supply stores	285.2	93.6	32.8
Food and beverage stores	278.4	17.7	6.4
Health and personal care stores	211.6	88.8	42.0
Gasoline stations	257.8	140.5	54.5
Clothing and clothing accessories stores	233.1	66.6	28.6
Sporting goods, hobby, book, and music stores	87.1	29.6	34.0
General merchandise stores	393.4	137.5	34.9
Miscellaneous store retailers	122.1	37.5	30.7
Total Retail Sector	2,908.0	1,149.0	39.5

* IMPLAN keeps track of foreign exports as well, but those are essentially nil for retail commodities.

Sources: IMPLAN, analysis by author

According to these estimates, 39.5% of total retail sales (not just taxable sales) in Guilford County are “exported,” i.e. made to residents of other counties.