Sales Tax Disparities in Ohio Counties (Update):

A study for Greater Ohio

By Thomas Wisemiller

The following updated study of sales tax disparities among Ohio Counties, which incorporates sales tax data through 2005, was conducted by former Greater Ohio intern Tom Wisemiller, a graduate of Cornell University's City and Regional Planning program. The Full Study, released in 2004, is available at: http://www.greaterohio.org/policy/sales_tax.html. For more information, contact Greater Ohio at 614-258-1713.

Background: the Full Study (2004)

A 2004 study of county sales tax disparities in Ohio revealed that more than two-thirds of Ohio's 88 county governments were losing retail sales tax revenues generated from within their own county borders. The study converted decades of disparate county sales tax data (through 2002) into uniform, easily comparable *sales tax ratios*, normalized for county-to-county differences in population, sales tax rate, per capita income, inflation, and economic fluctuations.

Explanation of sales tax ratios: A sales tax ratio of 1.00 describes a county that is "breaking even" on retail activity: as many shoppers are entering the market area as are leaving it. Most counties in Ohio have sales tax ratios that are significantly higher (destination counties) or significantly lower (donor counties) than 1.00. In fact, the 2004 study revealed that some of Ohio's destination counties had sales tax ratios above 1.30, whereas some donor counties have ratios below 0.60.

Ohio counties manage a variety of state-mandated programs, including under-appreciated services like sheriff's departments, court systems, and family & health services. To help pay for these programs, county governments receive about one-third of their general revenues from county sales taxes.

The study pointed out that widening revenue disparities were creating possible revenue-service imbalances as counties struggled to provide ever increasing service levels. Moreover, counties services were seen to be in demand from people who could least afford to support the county tax base.

The 2004 study highlighted some important discoveries, including:

- Ohio's 7 major urban-core counties typically had above average sales tax ratios because specialized retailers cluster in densely populated and affluent markets, giving cities, and a few selected suburbs, a diverse retail base; however, exurban growth patterns were beginning to push retail centers beyond the boundaries of urban-core counties, potentially undermining their long-range tax base needed to pay for disproportionately high service obligations.
- Many of Ohio's rural counties, especially in the Appalachian region, were also at-risk. Some rural counties had high poverty and crime rates, a lot of long-distance commuters, and high percentages of school-age children (all indicators of local service costs), but very weak sales tax capacities.

The report concluded that, until a more efficient revenue sharing system is in place that allows counties to better fulfill their state-mandated obligations, the state legislature should make every effort to preserve and restore the Local Government Funds—the closest thing Ohio has to an equity fund for local governments. Also, the report recommended that the State should explore more creative investment tools for Ohio's rural communities and downtown commercial districts.

Update: Recent Trends in County Sales Tax Disparities

In recent years, Ohio county retail patterns have largely followed trends that were evident in the first part of the decade. This update will review the most recent trends through 2005 utilizing the same methodology employed in the original Full Study. Following are two tables summarizing sales tax ratios for all counties in Ohio. The first table shows sales tax ratio trends for all Ohio counties between 2000 and 2005, and the second table (next page), compares 1995 and 2005 sales tax ratios for all Ohio counties.

Sales Tax Ratios for all Ohio Counties in the Last Five Years (2000 - 2005)

	2000	2001	2002	2003	2004	2005		2000	2001	2002	2003	2004	2005		2000	2001	2002	2003	2004	2005
Adams	0.70	0.69	0.74	0.74	0.66	0.72	**Hamilton**	1.25	1.23	1.22	1.20	1.19	1.17	**Muskingum**	1.11	1.08	1.09	1.05	1.01	1.04
Allen	1.23	1.20	1.23	1.16	1.20	1.26	**Hancock**	1.34	1.30	1.26	1.18	1.22	1.32	**Noble**	0.49	0.51	0.50	0.49	0.46	0.52
Ashland	0.81	0.84	0.83	0.77	0.76	0.87	**Hardin**	0.73	0.68	0.70	0.62	0.62	0.65	**Ottawa**	0.98	0.99	1.03	1.00	0.98	1.00
Ashtabula	0.82	0.80	0.81	0.77	0.77	0.81	**Harrison**	0.48	0.49	0.50	0.50	0.52	0.57	**Paulding**	0.53	0.54	0.53	0.52	0.52	0.52
Athens	0.74	0.72	0.74	0.71	0.72	0.76	**Henry**	0.66	0.71	0.78	0.74	0.74	0.69	**Perry**	0.51	0.49	0.52	0.48	0.48	0.51
Auglaize	0.80	0.78	0.76	0.76	0.77	0.81	**Highland**	0.75	0.75	0.76	0.74	0.73	0.73	**Pickaway**	0.69	0.65	0.71	0.70	0.66	0.65
Belmont	1.12	1.12	1.13	1.09	1.08	1.11	**Hocking**	0.64	0.65	0.77	0.81	0.74	0.72	**Pike**	0.82	0.76	0.80	0.76	0.74	0.81
Brown	0.54	0.58	0.57	0.56	0.55	0.56	**Holmes**	1.07	1.03	1.09	1.10	1.04	1.08	**Portage**	0.79	0.81	0.81	0.79	0.77	0.78
Butler	0.91	0.92	0.92	0.89	0.90	0.90	**Huron**	0.80	0.79	0.80	0.79	0.75	0.80	**Preble**	0.65	0.65	0.62	0.63	0.60	0.65
Carroll	0.56	0.57	0.57	0.55	0.54	0.58	**Jackson**	0.88	0.89	0.88	0.86	0.87	0.89	**Putnam**	0.68	0.62	0.66	0.64	0.62	0.67
Champaign	0.64	0.66	0.66	0.60	0.62	0.68	**Jefferson**	0.79	0.79	0.82	0.81	0.82	0.84	**Richland**	1.18	1.15	1.15	1.08	1.15	1.17
Clark	0.83	0.86	0.85	0.80	0.79	0.77	**Knox**	0.79	0.77	0.79	0.75	0.78	0.84	**Ross**	0.97	0.97	0.97	0.91	0.92	0.91
Clermont	0.96	0.99	1.00	0.96	0.94	0.91	**Lake**	1.16	1.16	1.16	1.14	1.11	1.09	**Sandusky**	0.94	0.97	0.95	0.92	0.88	0.88
Clinton	0.92	0.93	0.96	0.95	1.02	1.01	**Lawrence**	0.72	0.72	0.76	0.64	0.66	0.65	**Scioto**	0.77	0.78	0.77	0.73	0.70	0.73
Columbiana	--	0.63	0.68	0.69	0.69	0.75	**Licking**	0.96	0.98	0.97	0.94	0.93	0.94	**Seneca**	0.76	0.76	0.79	0.72	0.70	0.73
Coshocton	0.67	0.72	0.73	0.71	0.67	0.72	**Logan**	0.94	0.98	0.98	0.93	0.93	0.96	**Shelby**	0.87	0.89	0.93	0.93	0.88	0.93
Crawford	0.75	0.68	0.70	0.69	0.70	0.72	**Lorain**	0.86	0.89	0.93	0.88	0.88	0.87	**Stark**	--	--	--	0.86	1.06	1.05
Cuyahoga	1.04	1.02	1.00	0.98	1.00	1.01	**Lucas**	1.15	1.14	1.14	1.06	1.08	1.10	**Summit**	1.13	1.10	1.11	1.08	1.06	1.07
Darke	0.81	0.85	0.81	0.78	0.77	0.77	**Madison**	0.74	0.70	0.72	0.73	0.81	0.69	**Trumbull**	0.93	0.93	0.99	0.86	1.06	0.84
Defiance	1.07	1.10	1.18	1.02	1.03	1.03	**Mahoning**	0.95	1.01	1.02	1.00	0.99	1.09	**Tuscarawas**	1.00	1.00	1.00	0.94	0.94	0.94
Delaware	1.03	1.06	1.28	1.33	1.31	1.25	**Marion**	0.98	0.96	0.97	0.92	0.90	0.91	**Union**	1.09	1.70	1.30	1.75	1.31	1.33
Erie	1.27	1.24	1.27	1.26	1.24	1.30	**Medina**	0.92	0.92	0.95	0.92	0.90	0.91	**Van Wert**	0.69	0.74	0.74	0.75	0.72	0.74
Fairfield	0.97	0.94	0.98	0.91	0.88	0.90	**Meigs**	0.57	0.56	0.54	0.52	0.48	0.49	**Vinton**	0.43	0.43	0.43	0.41	0.37	0.40
Fayette	1.48	1.46	1.52	1.35	1.29	1.34	**Mercer**	0.77	0.76	0.77	0.75	0.77	0.77	**Warren**	1.08	1.10	1.08	1.04	0.99	1.02
Franklin	1.41	1.36	1.30	1.27	1.26	1.18	**Miami**	0.88	0.89	0.93	0.87	0.90	0.89	**Washing.**	0.90	0.91	0.92	0.89	0.89	0.90
Fulton	0.92	0.87	0.90	0.85	0.82	0.83	**Monroe**	0.64	0.65	0.57	0.45	0.51	0.55	**Wayne**	0.93	0.91	0.92	0.90	0.87	0.90
Gallia	0.88	0.89	0.92	0.90	0.87	0.89	**Montgomery**	1.09	1.08	1.05	1.04	1.02	1.04	**Williams**	0.82	0.77	0.78	0.71	0.71	0.72
Geauga	0.75	0.75	0.78	0.81	0.76	0.84	**Morgan**	0.49	0.49	0.50	0.47	0.48	0.50	**Wood**	0.96	1.00	1.03	1.01	1.00	1.05
Greene	1.07	1.13	1.13	1.07	1.09	1.07	**Morrow**	0.50	0.51	0.50	0.48	0.46	0.50	**Wyandot**	0.73	0.75	0.73	0.75	0.74	0.71
Guernsey	0.86	0.88	0.93	0.86	0.87	0.90														

1995 & 2005 SALES TAX COLLECTION RATIOS FOR OHIO COUNTIES,
ADJUSTED FOR COUNTY POPULATION, PER CAPITA INCOME, AND COUNTY SALES TAX RATE

	1995	2005
Adams	0.68	0.72
Allen	1.24	1.26
Ashland	0.77	0.87
Ashtabula	0.78	0.81
Athens	0.76	0.76
Auglaize	0.79	0.81
Belmont	0.97	1.11
Brown	0.52	0.56
Butler	0.73	0.90
Carroll	0.55	0.58
Champaign	0.69	0.68
Clark	0.87	0.77
Clermont	0.98	0.91
Clinton	0.92	1.01
Columbiana	0.68	0.75
Coshocton	0.78	0.72
Crawford	0.64	0.72
Cuyahoga	1.02	1.01
Darke	0.79	0.77
Defiance	0.96	1.03
Delaware	0.76	1.25
Erie	1.29	1.30
Fairfield	0.87	0.90
Fayette	1.52	1.34
Franklin	1.41	1.18
Fulton	0.81	0.83
Gallia	0.82	0.89
Geauga	0.71	0.84
Greene	1.01	1.07
Guernsey	0.87	0.90

	1995	2005
Hamilton	1.27	1.17
Hancock	1.24	1.32
Hardin	0.67	0.65
Harrison	0.49	0.57
Henry	0.74	0.69
Highland	0.75	0.73
Hocking	0.59	0.72
Holmes	1.06	1.08
Huron	0.81	0.80
Jackson	0.89	0.89
Jefferson	0.79	0.84
Knox	0.79	0.84
Lake	1.15	1.09
Lawrence	0.75	0.65
Licking	0.90	0.94
Logan	0.90	0.96
Lorain	0.84	0.87
Lucas	1.15	1.10
Madison	0.65	0.69
Mahoning	0.99	1.09
Marion	1.01	0.91
Medina	0.89	0.91
Meigs	0.59	0.49
Mercer	0.79	0.77
Miami	0.96	0.89
Monroe	0.78	0.55
Montgomery	1.13	1.04
Morgan	0.52	0.50
Morrow	0.46	0.50

	1995	2005
Muskingum	1.04	1.04
Noble	0.55	0.52
Ottawa	0.99	1.00
Paulding	0.53	0.52
Perry	0.49	0.51
Pickaway	0.75	0.65
Pike	1.06	0.81
Portage	0.73	0.78
Preble	0.65	0.65
Putnam	0.60	0.67
Richland	1.18	1.17
Ross	0.95	0.91
Sandusky	0.85	0.88
Scioto	0.77	0.73
Seneca	0.76	0.73
Shelby	0.87	0.93
Stark	0.86	1.05
Summit	0.78	1.07
Trumbull	0.91	0.84
Tuscarawas	1.05	0.94
Union	1.05	1.33
Van Wert	0.75	0.74
Vinton	0.44	0.40
Warren	0.96	1.02
Washington	0.92	0.90
Wayne	0.91	0.90
Williams	0.84	0.72
Wood	0.93	1.05
Wyandot	0.67	0.71

Sources used to derive ratios: REIS county and state per capita income from Regional Economic Information System, Bureau of Economic Analysis, Table CA1-3;

2005 pop. estimates from Table CO-EST2002-01-39 - Ohio County Pop. Estimates: Population Div., U.S. Census Bureau;
adjusted sales tax revenue calculated by using multiplier based on Consumer Prince Indices; income adjustment used in sales tax ratios derived from Bureau of Labor Statistics

Consumer Expenditure Surveys, 1998-2003; county & state tax revenues downloaded from Ohio Dept. of Taxation website,

http://www.odod.state.oh.us/

Summary of Recent Trends:

Urban Core Counties: the vibrant retail bases enjoyed by Franklin and Hamilton counties for the last two decades appear to be weakening. Recent trends in county sales tax ratios suggest that Franklin and Hamilton counties are joining the ranks of Cuyahoga, Hamilton, Montgomery, Lucas, Mahoning, and Summit counties—urban core counties with relatively modest retail bases:

SALES TAX RATIOS FOR 7 TRADITIONAL URBAN CORE COUNTIES IN OHIO (1990-2005)

	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Franklin (Columbus)	**1.18**	1.26	1.27	1.30	1.36	1.41	1.39	1.36	1.42	1.41	1.41	1.41	1.39	1.41	1.39	1.34
Hamilton (Cincinnati)	**1.17**	1.19	1.20	1.22	1.23	1.25	1.25	1.22	1.25	1.27	1.27	1.33	1.33	1.33	1.35	1.29
Lucas (Toledo)	**1.10**	1.08	1.06	1.14	1.14	1.15	1.14	1.11	1.15	1.14	1.15	1.18	1.11	1.09	1.17	1.14
Mahoning (Youngstown)	**1.09**	0.99	1.00	1.02	1.01	0.95	0.99	1.10	1.01	0.99	0.99	1.01	1.01	1.00	0.98	1.01
Summit (Akron)	**1.07**	1.06	1.08	1.11	1.10	1.13	1.06	1.08	1.12	1.12	0.86	1.15	1.08	1.17	1.20	1.15
Montgomery (Dayton)	**1.04**	1.02	1.04	1.05	1.08	1.09	1.07	1.06	1.10	1.11	1.14	1.20	1.22	1.14	1.17	1.15
Cuyahoga (Cleveland)	**1.01**	1.00	0.98	1.00	1.02	1.04	0.98	0.99	1.01	1.01	1.02	1.03	1.01	1.02	1.02	1.00

Historically, retail diversity has allowed urban-core counties to outperform less populated counties on a per person basis. Small villages can support retailers that sell everyday convenience items like groceries, gasoline, or prescription drugs. Other towns can support furniture stores, nurseries, and jewelers, yet cannot support large department stores. Large cities can support the full spectrum of retail sectors. Retailers selling specialized items like computers or eyeglasses must locate in densely populated markets, preferably in affluent areas, to pull from the widest customer base possible. Furthermore, more specialized retailers prefer to locate in the vicinity of other complimentary retailers, preferably close to a "magnet store" in a regional shopping center. Despite decades of decentralization, urban-core counties are still desirable locations for regional shopping centers; however, urban core counties are facing increasing competition from adjacent exurban counties with relatively high per capita incomes.

In the last five years, Franklin County sales tax ratios have dipped from 1.41 to 1.18 in 2005, perhaps due in part to the 2001 opening of Polaris Fashion Place. Polaris is located in the city of Columbus, but in the county of Delaware. Thus the city collects income taxes from Polaris retail workers, but Delaware County gets the sales tax revenue.

Similarly, sales tax ratios in Hamilton County have gradually fallen from 1.35 in 1991 to 1.17 in 2005.

The retail base in Lucas County was consistent but unspectacular prior to dipping in 2003 and 2004. In the last three years, Summit County's sales tax ratio has leveled off between 1.06 and 1.08. Retail activity in Mahoning and Cuyahoga counties has kept pace with the statewide average, but these counties cannot afford to merely keep pace with the rest of Ohio because they have very high county service demands.

Ohio Counties with Highest Sales Tax Ratios in 2005

Fayette	1.34
Union	1.33
Hancock	1.32
Erie	1.30
Allen	1.26
Delaware	1.25

As a result of the declining retail bases in Hamilton and Franklin counties along with the static performance of other urban core counties, the six Ohio counties with the highest sales tax ratios in 2005 did not include a single urban core county (see: table to the right).

20 Counties w/ Highest Per Cap Inc

	2005 REIS per capita inc.	2005 sales tax ratio
Geauga	40,863	0.84
Delaware	**40,703**	**1.25**
Hamilton	39,937	1.17
Cuyahoga	37,082	1.01
Franklin	36,547	1.18
Summit	34,395	1.07
Warren	33,524	1.02
Medina	33,450	0.91
Erie	**33,426**	**1.30**
Lake	33,298	1.09
Greene	32,780	1.07
Clermont	32,190	0.91
Montgomery	32,133	1.04
Ottawa	32,095	1.00
Hancock	**31,771**	**1.32**
Butler	31,662	0.90
Lucas	31,045	1.10
Miami	30,645	0.89
Licking	30,509	0.94
Auglaize	30,380	0.81

Booming Exurban Counties: Delaware County has been one of the fastest growing counties in the United States. In the 1990s, sales tax ratios in Delaware rose steadily from 0.68 to 1.03. After Polaris Fashion Place opened in 2001, the sales tax ratio quickly jumped to 1.28 the following year. After peaking at a 1.33 sales tax ratio in 2003, however, the retail base of Delaware County actually cooled off a little in 2005, with its sales tax ratio dropping to 1.25

In any case, affluent exurban counties like Delaware, Erie, and Hancock have continued to enjoy strong retail bases. In fact, a county's per capita income is a better predictor of its sales tax ratio than its total population, even though the ratios normalize for income disparities. One likely reason for that trend is the high degree of mobility in today's society. By locating regional shopping centers in booming exurban areas, retail developers can purchase large tracts of moderately priced land (compared to land in the urban core counties) that is adjacent to upscale exurban residential areas yet is also accessible by automobile to consumers throughout a sprawling metro area. These counties have relatively low county service demands; in some cases, the strong retail bases may enable them to lower their property tax rates, thereby further strengthening their positions.

Note: One might expect that Geauga County, an affluent exurban county in the Cleveland metro area, would have a stronger sales tax ratio than 0.84 it did in 2005; however, the county has grown much more slowly than, say, Delaware, and has yet to lure a regional shopping center.

Appalachian/Rural Counties: Many of Ohio's rural counties, especially in Appalachia, continue to have very weak retail bases. In fact, the retail bases in these counties are well below the capacity of residents to purchase retail goods, which forces those consumers to commute to neighboring counties to make purchases. Of course, rural residents have long commuted to larger population centers to make specialized purchases; nevertheless, sales tax ratios among Appalachian and lower-income rural counties in Ohio continue to stagnate or fall.

The few counties in Ohio's Appalachian region that have built up a modest retail base are mostly traversed by highways. Along the east/west I-70 corridor, Muskingum (1.04), Guernsey (0.90), and Belmont (1.11) had three of the highest sales tax ratios in the region in 2005. The north/south I-77 corridor runs through Tuscarawas County (0.94) and Guernsey County, before crossing the West Virginia border in Washington County (0.90).

SALES TAX RATIOS OF APPALACHIAN COUNTIES NOT TRAVERSED BY INTERSTATE HIGHWAYS

	95	96	97	98	99	00	01	02	03	04	05
Adams	0.68	0.62	0.65	0.92	0.71	0.70	0.69	0.74	0.72	0.66	0.74
Brown	0.53	0.54	0.50	0.53	0.53	0.54	0.58	0.57	0.56	0.55	0.56
Gallia	0.82	0.80	0.82	0.87	0.90	0.88	0.89	0.92	0.89	0.87	0.90
Harrison	0.49	0.49	0.44	0.44	0.48	0.48	0.49	0.50	0.57	0.52	0.50
Highland	0.75	0.73	0.74	0.71	0.73	0.75	0.75	0.76	0.73	0.73	0.74
Jackson	0.89	0.83	0.86	0.79	0.83	0.88	0.89	0.88	0.89	0.87	0.86
Jefferson	0.80	0.79	0.75	0.75	0.77	0.79	0.79	0.82	0.84	0.82	0.81
Lawrence	0.76	0.74	0.71	0.66	0.71	0.72	0.72	0.76	0.65	0.66	0.64
Meigs	0.59	0.57	0.55	0.55	0.57	0.57	0.56	0.54	0.49	0.48	0.52
Monroe	0.78	0.79	0.66	0.59	0.60	0.64	0.65	0.57	0.55	0.51	0.45
Morgan	0.52	0.53	0.52	0.50	0.50	0.49	0.49	0.50	0.50	0.48	0.47
Perry	0.49	0.49	0.48	0.48	0.50	0.51	0.49	0.52	0.51	0.48	0.48
Vinton	0.44	0.44	0.44	0.43	0.42	0.43	0.43	0.43	0.40	0.37	0.41
										AVE	0.64

The rest of Ohio's Appalachian counties are still struggling to attract retail because of declining disposable income. Those counties that are without benefit of a highway junction or close proximity to a major metropolitan area tend to have either low or very low sales tax ratios: Brown (0.56), Harrison (.050), Meigs (0.52), Morgan (0.47), Perry (0.48), and Vinton (.041) have struggled to maintain viable retail bases.

In the same way that retail dollars "leak" from one market area to the next, retail dollars appear to be leaking from the entire Appalachian region to other regions in Ohio and bordering states (most likely to Parkersburg, West Virginia and Pittsburgh, Pennsylvania).

20 Counties w/ Lowest Per Cap Inc		
	REIS per capita inc.	sales tax Ratio
Noble	$17,835	**0.52**
Vinton	$19,453	**0.40**
Morgan	$20,206	**0.50**
Meigs	$20,307	**0.49**
Perry	$21,211	**0.51**
Athens	$21,928	**0.76**
Adams	$21,963	**0.72**
Pike	$22,024	**0.81**
Holmes	$22,087	**1.08**
Jackson	$22,460	**0.89**
Monroe	$22,794	**0.55**
Hardin	$22,796	**0.65**
Lawrence	$23,026	**0.65**
Harrison	$23,428	**0.57**
Scioto	$23,473	**0.73**
Guernsey	$23,664	**0.90**
Hocking	$23,677	**0.72**
Carroll	$23,701	**0.58**
Columbiana	$24,072	**0.75**
Highland	$24,270	**0.73**

Rural counties with low sales tax ratios are not confined to the Appalachian region. Other rural counties with struggling retail bases include: Champaign (0.68); Morrow (0.50), Preble (0.65), and Putnam (0.67). Rural counties have always had modest retail bases compared to urban counties, but U.S. census data indicate that per capita retail employment gradually declined in Ohio's rural counties between 1930 and 1990. In the last 10-15 years, the decline in rural sales tax ratios has finally leveled off. However, this respite is due in part to the proliferation of big-box retail establishments, which might stabilize county revenues yet hurt smaller downtown retailers in the process.

Other Noteworthy Trends: Another county that has continued to leak retail dollars is Clark County. Since 1995, Clark County's sales tax ratio has dropped from 0.87 to 0.77. In the last five years, this gradual negative trend has been clearly visible: 0.86, 0.85, 0.80, 0.79, and 0.77 in 2005. Local organizations in Springfield and Clark County have initiated many innovative downtown revitalization strategies, which should bear fruit in the future; in the meantime, however, the declining trend in sales tax ratios points to the challenges faced by metro areas, which have been unable to attract 21st century style regional shopping centers or mixed-use lifestyle centers.

APPENDIX: EXPLANATION OF SALES TAX RATIOS

Sales tax ratios are designed to convert decades of disparate county sales tax data into uniform, easily comparable numbers. Ohio county populations range from over 1.3 million in Cuyahoga County to under 13,000 in Vinton County. Counties charge a variety of sales tax rates. Furthermore, per capita income also varies widely from county-to-county. Sales tax ratios normalize for all these differences—adjusting for population, sales tax rate, and per capita income. The strength of a county's past retail tax capacity is measured by a constant yardstick: any ratio above 1.00 was above the statewide standard; any ratio below 1.00 was below the statewide standard. The ratios tend to range from 0.5 (very low) to 1.40 (very high), with a few exceptions.

Theoretically, a county would capture its share of sales taxes, and only its share, if its residents conducted all of their retail purchases within the county and no shoppers from outside the county entered the market. In reality, consumers are constantly traveling to adjacent counties, or even states, to make purchases. And since some counties are better than others at attracting retail consumers, there are naturally "winners" and "losers." A sales tax ratio of 1.00 describes a county that is collecting its share of sales tax revenue from its own residents but no additional revenue from outside residents. A county with a sales tax ratio of 1.20 is also collecting its share of sales taxes but is also collecting an additional twenty percent from outside the county (1.0 + 0.20 = 1.20). We might refer to these counties as "destination counties." On the other hand, a county with a sales tax ratio of 0.80 is collecting twenty percent less than its share. We might refer to these counties as "donor counties." Because the ratios are adjusted to reflect differences in county per capita income, a prosperous metro-area county would have to collect higher per capita sales tax revenue than a relatively poor rural county for the wealthier county to break even.

Sales tax ratios are also less sensitive to economic fluctuations than year-by-year per capita revenues. The ratio is calculated against all other counties in the same year, instead of against a previous year's revenues—when retail might have been either booming or slumping. Looking at year-by-year revenues can be a mess, given inflationary and economic cycles. Finally, sales tax ratios provide a better measurement of a county's *potential tax-capacity/retail-base* than direct comparisons of past revenue collections. Since 1990, Mahoning County has changed its sales tax *rate* four times, but the county's sales tax *ratio* has remained relatively constant.

Once county sales tax data is converted into uniform sales tax ratios, it is easier to locate prevailing patterns within the context of Ohio's changing fiscal and geographic terrain.

SALES TAX RATIO "SCALE"	
If the sales tax ratio for an urban county is . . .	
> 1.50	=exceptionally high
1.20 – 1.50	=very strong
1.10 – 1.20	=strong
0.80 – 1.10	=low
< 0.80	=very low
If the sales tax ratio for a rural or moderately populated county is . . .	
> 1.30	=exceptionally high
1.00 – 1.30	=very strong
0.80 – 1.00	=strong
.65 - .80	=low
< 0.65	=very low

Sales tax ratio of county-X = [Tc/(ts+((Ts+((ic-is)**MPCT***))/(Ts)]/Pc**

Tc = county sales tax revenue (total)
ts = state per capita sales tax revenue
Ts = state per capita sales on taxable services/items.
ic = county per capita income
is = state per capita income
MPCT = marginal propensity to consume Ohio "taxables" = 0.18
PC = county population

Greater Ohio mission statement:

"The purpose of the Campaign is to support – through research, public education and grassroots advocacy – public policy in Ohio to grow our economy and improve our quality of life through intelligent land use. To this end, Greater Ohio will work to support redevelopment of existing communities, strengthen regional cooperation and protect the countryside and Ohio's natural resources."