

**SALES TAX RATES AND BUYING BEHAVIOR:  
EVIDENCE FROM COMMUNITIES NEAR THE  
COOK COUNTY BOUNDARY**

**Preliminary Summary**



**May 9, 2009**

Joseph Schwieterman, Ph.D., Director  
Cyrus Khazai  
Jill Doub

Chaddick Institute for Metropolitan Development  
College of Liberal Arts & Sciences  
DePaul University, Loop Campus,  
243 S. Wabash, Suite 9000  
312/362-5732

Institute web page: <http://las.depaul.edu/chaddick>

**T**his report summarizes preliminary findings of the Metropolitan Sales Tax Study at DePaul University. The Study, a collaborative effort between the Chaddick Institute for Metropolitan Development and Economic Research Associates, Inc., explores the implications of the changing sales tax rates in the metropolitan area over the past 15 years. The study was launched after a DePaul University symposium held in May 2008 to discuss the implications of sales tax increases.

The analysis presented here is based on a longitudinal data set we assembled consisting of sales tax rate information, retail sales figures, population and income measures, and other various variables in 375 communities in six Illinois counties throughout the region between 1995 and 2009. Each incorporated community is recorded as one observation in the data set. When a community straddles a county boundary, it is divided into multiple sections to account for differences in sales tax rates within municipal limits. For example, we record the portion of Tinley Park within Cook County as one observation and the portion within Will County as another.

The Institute expects to issue a report in September 2009 that provides a more comprehensive assessment of its findings and well as geographic (GIS) analysis. Three preliminary findings, however, are relevant to the contemporary policy debate:

**1. The average differences in sales tax rates between various parts of the metropolitan area have risen markedly since 1995. With the average difference between Cook and all but one Collar County now approaching or exceeding 2 percent, consumers face much stronger incentives to alter their purchasing behavior than in the past.**

The average difference in tax rates between Cook County and the five Collar Counties—DuPage, Kane, Lake, McHenry, and Will—has gradually widened since 1995. Table 1 shows the difference in the average rate of sales tax (weighted by sales) between Cook County and the five Collar Counties. The average difference between Cook and the outer-ring counties in 1995 were each between 1.48% and 1.77%. By 2000, the difference had widened to more than 1.8% between Cook and both Kane and McHenry counties.

Due to the combined effects of the Cook County and RTA sales tax increases in 2008, rates rose 1.25% in Cook but only 0.5% in the Collar Counties. This made Cook

County rates among the highest in the country and widened the gap between it and each of the Collar Counties by 0.75%. It also increased the margin between Cook County and Northwestern Indiana by 0.25%. (Indiana increased its sales tax rates by a percentage point in April 2008 as part of state initiative to provide property tax relief. Its rate now stands at 7%.).

The average sales tax rate for Cook County is now 2.25% higher than each Collar County except Kane (where the difference is 2.16%). Cook now has an average rate nearly 3% higher than that of Northwestern Indiana. These differences are apparently the largest of any major urbanized area in the country.

**Table 1**  
**Extent to which Cook County Sales Tax Rates**  
**Exceed Surrounding Illinois Counties**  
 Weighted Average

1995    2005    2008 (est)\*

DuPage	+1.48%	+1.60%	+2.25%
Kane	+1.77%	+1.82%	+2.16%
Lake	+1.70%	+1.77%	+2.34%
McHenry	+1.77%	+2.10%	+2.58%
Will	+1.20%	+1.46%	+2.29%

\* weighted on the basis of 2007 sales estimates

Another way to assess the widening disparity in sales tax rates in the region is to rank communities on the basis of sales tax rates and then compute the interquartile range, i.e., the range that separates the top 25% of communities with the lowest 25%. As shown in Table 2, the interquartile range has risen from 1.25 in 1995 to 2.25 in 2008.

**Table 2**  
**Distribution of Sales Tax Rates in Metropolitan Chicago, 1995 - 2008**  
*High, Low and Interquartile Range*

	Lowest	25th		75 <sup>th</sup>	Highest	Interquartile
	Rate	Percentile	Midpoint	Percentile	Rate	Range
1995	6.5	6.5	6.75	7.75	9	<b>1.25</b>
2000	6.5	6.5	6.75	7.75	9	<b>1.25</b>
2005	6.5	6.5	7.25	7.75	9.25	<b>1.25</b>
2007	6.5	6.5	7.5	8	9.25	<b>1.5</b>
2008	7	7	8	9.25	10.5	<b>2.25</b>

Presently, 25.0% of the region's population lives in communities with tax rates of 7.75% or below. The fact that these areas now have an almost equal share of retail inventory while accounting for a slightly higher percentage (28.3%) of retail sales suggests that

relatively low-tax areas are becoming formidable competitors to higher-tax areas.

**2. All parts of the region experienced severe weakness in retail sales in 2008. Although definitive conclusions about the general effects of the tax changes cannot be made, the decline has been pervasive in all parts of the region.**

Although retail sales fell by 4.8% through metropolitan Chicago in 2008, it is still not possible to make an accurate *general* assessment of the recent sales tax changes' effect on buying behavior. One reason is that areas with lower sales taxes were hit harder and earlier by the recent real-estate crisis and economic downturn than areas with higher sales taxes. Kane and Lake county, for example, were hit much harder by the decline in housing starts than Cook in early 2008. As a result, the effects of the recession were felt much earlier on the region's periphery than in Chicago.

Recent evidence, however, suggests cause for concern about the effects of high taxation. Over the course of the year, Cook County, experienced a 4.1% decline in 2008—marginally better than DuPage, Kane, and Lake counties, but worse than McHenry and Will County. Fourth quarter declines for Cook County were 10.8%, putting it near the middle of the pack among the region's counties. After the July release of data on the 1<sup>st</sup> Quarter of 2009, we believe there will be sufficient data to make more definitive statements about the effects of the tax on buying behavior.

**3. Communities near the edge of the Cook County border have suffered significantly greater losses in retail sales than other communities. Some of the decline appears to be a shift in consumer buying to lower-priced retail areas across the county boundary.**

Communities near the edge of Cook County offer a useful case-study example of the effects of differential taxation, allowing for direct comparisons between communities that are otherwise similar in many ways. The hardships being faced by municipalities can be seen by examining the decline in sales in 2008 for communities with geographic centers that are within *five miles* of a lower sales tax community across the county line. Consumers in these communities are typically more aware of sales tax differences than those further away from the county line and can divert to lower-tax areas with only a few minutes of additional travel time.

We found that these communities near the boundary experienced a 5.7% loss—substantially higher than the 4.1 % decline in Cook County as a whole. Conversely, communities on the opposite side of the boundary (in a Collar County) fared *better* than other communities in their respective county. Those outside of Cook whose geographic center is located within five miles of a Cook County community, for example, experienced a decline of just 1.7%—a performance far better than any of the Collar Counties as a whole.

The retail weakness experienced by communities near the Cook County line are

also evident in sales patterns observed for the subset of nine communities that straddle the county line but are located primarily in Cook County—Barrington, Barrington Hills, Elk Grove Village, Hoffman Estates, Orland Park, Park Forest, Sauk Village, Schaumburg, Steger, and Tinley Park. In the portion of these communities within Cook County, retail sales fell by 6.5% between 2007 and 2008, substantially higher than both Cook County and suburban Cook County as a whole. In comparison, the portions of these communities outside of Cook County outperformed their respective county as a whole, falling by just 3.1%, or less than half the rate of decline of the Cook County portion.

**Table 3**  
**Performance of Retail Sales in Boundary Communities**  
**Changes in Retail Sales in Portion Within Cook County**

Community	Rate	Chg.
Barrington	9.00%	-16.0%
Barrington Hills	9.00%	-3.9%
Elk Grove Village	10.00%	-5.5%
Hoffman Estates	10.00%	4.8%
Orland Park	9.75%	-8.0%
Park Forest	9.00%	-10.0%
Sauk Village	9.00%	-0.2%
Schaumburg	10.00%	-7.0%
Steger	9.00%	-13.6%
Tinley Park	9.00%	-3.9%

Orland Park and Schaumburg, both major retail centers, exemplify the vulnerability of communities near the county boundary (Table 3). The portions of these communities within Cook County experienced retail sales decreases of 8% and 7%, respectively, a decline more than 50% higher than suburban Cook County as a whole. In contrast, the portions of these communities outside of Cook County all *grew* modestly.

### Conclusion

The incentives facing consumers to avoid sales tax can manifest themselves in ways that our region does not yet fully understand. Consumers can shift to lower-taxed venues, purchase goods over the Internet, or make basic changes to their consumption patterns to avoid the tax. Rather than purchasing food at restaurants, a transaction subject to the entire sales tax, for example, consumers can shift incrementally toward store-bought food, which is not subject to the full tax.

These findings should not be interpreted as definitive statements about the effects of the recent increases in sales taxes. We expect to be able to make stronger conclusions

as more data becomes available. Nevertheless, the findings suggest a need for our region to focus more attentively on the probable changes in buyer behavior that are attributable to both the rising *absolute* rate of taxation and the *relative* differences in sales taxes throughout the region. The problems described above facing communities near the boundaries of Cook County are particularly notable in this regard.