



The Equity of Sales Tax Revenue in North Carolina Counties

Whitney B. Afonso

Introduction

Local option sales taxes (LOSTs)¹ are receiving more attention from elected officials, practitioners, and academics than ever before. This is because their use has become widespread (thirty-eight states now have some form of LOSTs), and they have become local governments' second largest own-source revenue stream. The increased importance of LOSTs has raised concerns about the equity of revenue-raising capacity. These concerns are generated by what academics refer to as *tax leakage*: the notion that some jurisdictions will generate sales tax revenue not only from their own citizens but also from the citizens of other jurisdictions. Conversely, that means that some jurisdictions will not collect the sales tax revenue from their own citizens and that they are exporters of LOST revenue. The financial strain brought on by the Great Recession has made this perceived inequity even more troubling for some local governments and citizens. This bulletin addresses tax leakage and the revenue-raising capacity issue. It is intended to inform the conversation about the potential consequences of maintaining the status quo or shifting to greater use of per capita distributions or point-of-delivery distributions in North Carolina.²

Background

Of the thirty-eight states that have LOSTs, North Carolina is the only state in which any of the revenue is distributed on a per capita basis. The concern over the equity of revenue-raising capacity is not limited to North Carolina, however. In fact, it has been argued elsewhere that the disparity in revenue-raising capacity created by LOSTs is unconstitutional.³

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1. North Carolina LOSTs are both sales and use taxes.

2. These concerns are nothing new to North Carolina. As recently as 2008, half of the LOSTs in North Carolina were distributed on a per capita basis, and there is continued interest in some jurisdictions in increasing per capita distributions.

3. See Craft (2002) for the full article on this topic, which is based on Iowa. According to Iowa's state constitution, there cannot be unequal capacity for spending on public schools.

One of the reasons LOSTs have become so popular with local governments is that they present an opportunity to import tax dollars by shifting tax burdens to non-residents.⁴ The jurisdictions that are best positioned to import non-resident dollars are either urban areas or regional retail centers. Urban areas generally have large commuter populations, high rates of tourism, and numerous shopping venues. Regional retail centers, on the other hand, are often located in rural areas but offer the most shopping options available locally. For example, if a rural county has a large outlet mall, it may become a shopping hub for the citizens of the surrounding counties and import significant sales tax revenue from those counties. Thus, the other nearby counties are exporting (or losing) their citizens' sales tax dollars. This means that the exporter counties subsidize the importer counties. Therefore, equity concerns are not limited to the wealth of the citizens in a particular jurisdiction or the size of a jurisdiction's population. They also include a jurisdiction's ability to shift tax burdens to non-residents.

LOST Distribution among North Carolina Counties

North Carolina statutorily authorizes county governments to adopt multiple LOSTs, which are then collected by the state and distributed to counties⁵ on either a per capita or a point-of-delivery basis.⁶ Article 39 of Chapter 105 of the North Carolina General Statutes (hereinafter G.S.) authorized the first LOST in North Carolina, and the revenue from it is distributed to counties by a point-of-delivery method. The statutes provide for other LOSTs as well, but Article 39 is the only LOST considered and referenced hereafter unless otherwise noted. For reference, Table 1 presents an overview of LOSTs in North Carolina.

LOST revenue typically is framed in one of two ways: total revenue collections or per capita revenue collections. Both are discussed here in terms of four county classifications: *urban*, *suburban*, *tourism-rich*, and *rural*.⁷ Figure 1 presents total revenue collections for each of the classifications. At first glance, it appears that the concerns over equity are warranted and that the inequity may be even greater than presumed by researchers, with urban counties generating the most revenue by far. However, it is critical to look at collections on a per capita basis as well. Imagine a scenario where county A has three times the population of county B. Even in a world with no tax leakage and identical residents, county A would be expected to generate a substantial amount more revenue than county B. That is why population must be considered.

Figure 2 presents revenue collected on a per capita basis. This shift in approach yields markedly different results. The difference in LOST capacity between the four classifications of counties is less dramatic, and a different picture of the counties that benefit the most emerges. Urban counties, which are defined in part by their population density, do not generate the most revenue per capita. Thus, controlling for differences in population reduces the perception of inequality. The per capita measure more accurately reflects the fiscal condition, and it is therefore the preferred measure for formal statistical modeling.

4. See Zhao (2005), Sjoquist et al. (2007), and Burge and Piper (2012) for evidence that jurisdictions that are tax importers have been early adopters of LOSTs.

5. LOST revenue is also shared with municipal governments and is distributed on either a per capita or an ad valorem basis. The county determines the method, and the state distributes the revenue to the municipalities directly.

6. For more information on these LOSTs (Articles), see Millonzi (2014) and Troutman (2015).

7. For more details on these classifications, see Afonso (2013b).

Table 1. Overview of LOSTs in North Carolina

G.S. Article	Rate	Distribution Method	Restrictions
Article 39	One cent	Point-of-Delivery	None
Article 40	One-half cent	Per Capita	30% used for public school capital
Article 42	One-half cent	Point-of-Delivery	60% used for public school capital
Article 46	One-quarter cent	Point-of-Delivery	Not shared with municipalities

Note: G.S. Article 43, which is available only for public transit, is not included in this table.

Figure 1. Total Revenue from G.S. Article 39 by Classification

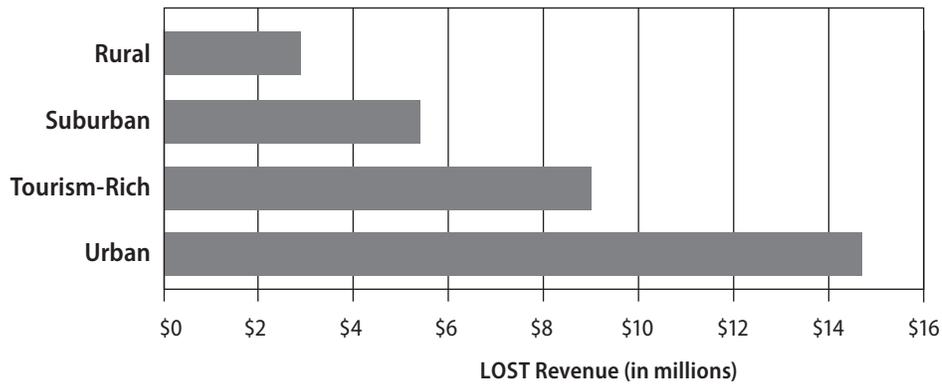
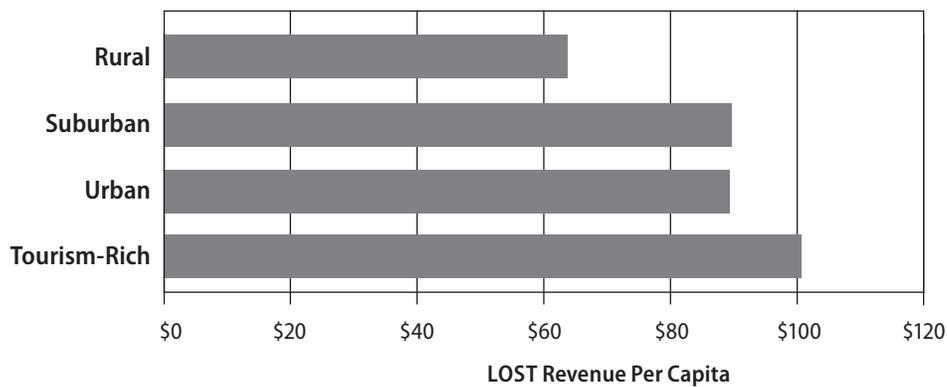


Figure 2. Per Capita Revenue from G.S. Article 39 by Classification



The maps in Figure 3 illustrate the relationship between classification and LOST revenue nicely. The first map presents population information for North Carolina, with the most populous counties shaded dark brown and the least populous counties shaded white. The second map presents total LOST revenue, and it has a pattern similar to the first. Clearly, there is a strong correlation between population and sales tax revenue, except in the coastal and mountainous counties (which is why tourism-rich counties are considered separately). The final map presents LOST revenue collections on a per capita basis, and a different picture of counties with the greatest LOST capacity emerges.

Statistical analysis of these relationships, where factors such as proximity to an urban county, median income, and other demographic variables can be controlled for, suggests that there are (statistically) significant differences between the classifications of counties—but they are not what one might expect. Suburban counties fare the worst. Urban counties are expected to generate over \$5 more per capita, rural counties almost \$12 more, and tourism-rich counties approximately \$16 more than their suburban counterparts.⁸

While each of the perspectives discussed above offers important information to consider, it is even more important to consider how the different classifications of counties fare when property taxes are added to the equation. That is because sales tax bases and property tax bases may be uncorrelated (or even negatively correlated). Property taxes make up the vast majority of counties' own-source revenue, and what many policy makers and local governments actually care about is equity in overall revenue-raising capacity, not just sales taxes.

Table 2 presents the data on LOSTs in addition to actual property tax revenue, the total assessed value of property in the county, and finally the revenue-raising capacity. The revenue-raising capacity is calculated by using the average property tax rate and applying it to the total property value. That way, the policy choice of setting the property tax rate (which is reflected in the revenue) is removed—this is a measure only of capacity, not actual receipts.

A similar picture emerges. In terms of total dollars, urban jurisdictions have a much greater revenue-raising capacity than any of the other classifications. However, there is a great deal more parity when capacity is examined in per capita dollars. Rural counties still have the least capacity, and suburban and tourism-rich counties do better than anticipated. Once again, statistical analysis performed on the data to control for confounding factors reveals a surprise. There is no statistically significant difference in revenue-raising capacity between the different classifications.⁹

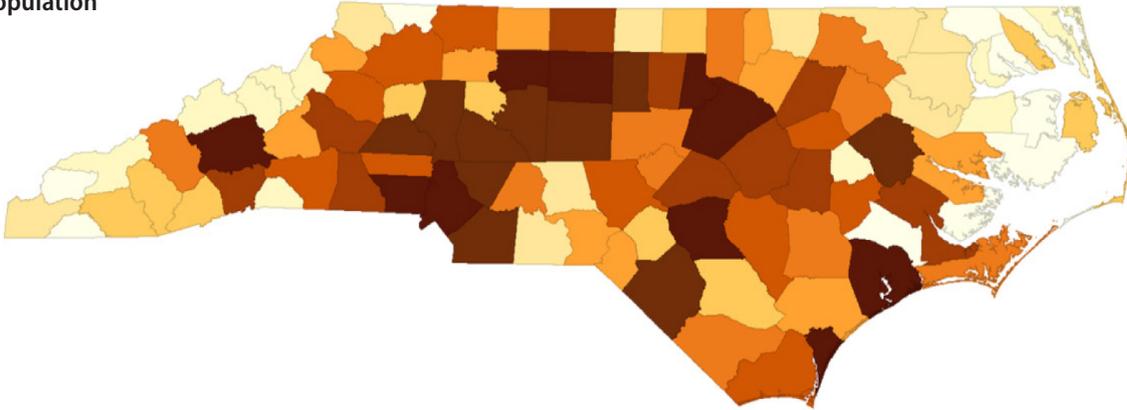
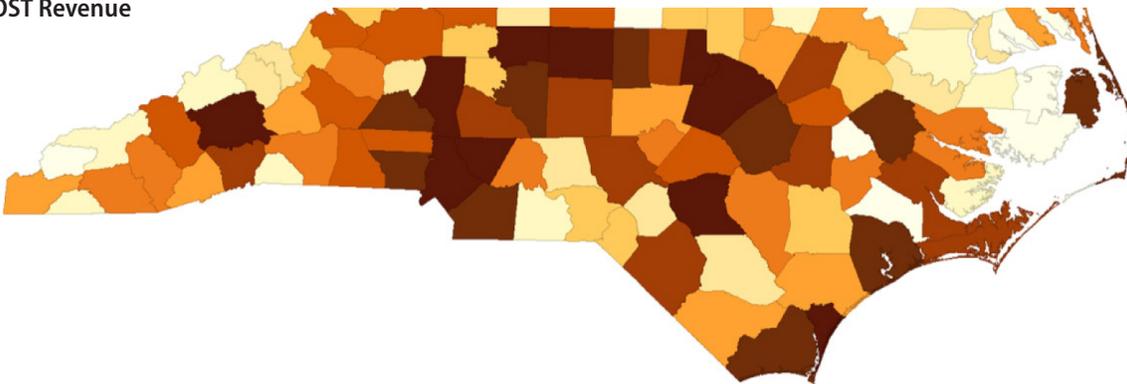
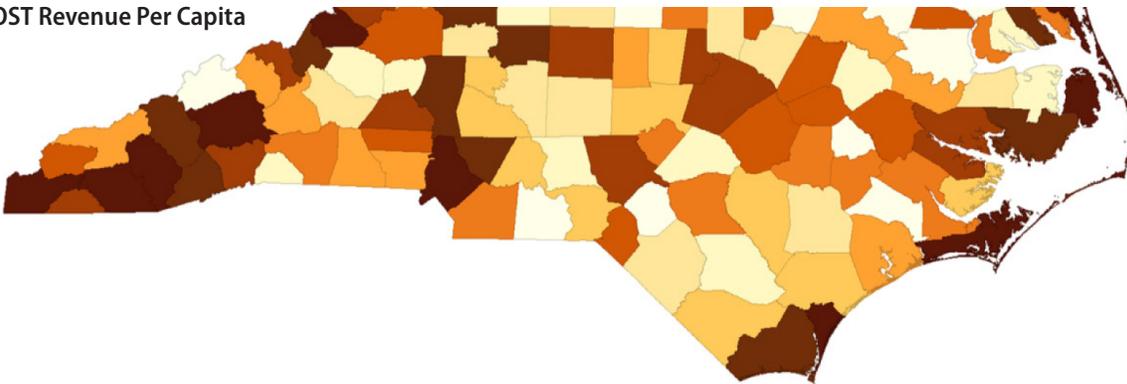
One final point on the equity or fairness of LOSTs concerns the broader question of “who pays?”¹⁰ Tax importing is often viewed from the perspective of urban areas (importers) *winning* and suburban and rural areas (exporters) *losing*. However, the reason that urban (and tourism-rich) areas are importers is that a large number of non-residents who are not property

8. Additionally, this research estimates that there is a penalty for neighboring an urban county. This also makes sense, because people prefer the shopping options offered by a nearby urban area.

9. This is due in part to the fact that these classifications have wide ranges of revenue-raising capacity. The ranges are as follows: \$360.68–\$1,175.00 for urban areas, \$354.15–\$2,419.52 for suburban areas, \$250.22–\$2,147.46 for rural areas, and \$348.42–\$3,636.66 for tourism-rich areas.

10. Another question is “how much does it cost?” Small jurisdictions often are not able to take full advantage of economies of scale, and it may cost them more than it costs larger jurisdictions to provide similar services. That issue is outside the scope of this bulletin, but it is worth noting.

Figure 3. Maps of North Carolina's Population, LOST Revenue, and LOST Revenue Per Capita

Population**LOST Revenue****LOST Revenue Per Capita**

The color of the county corresponds to the decile in the distribution of counties of which it is a part. The white counties belong to the lowest decile (counties with the smallest population and LOST revenue-raising capacity), and the dark brown counties belong to the highest decile (counties with the largest population and LOST revenue-raising capacity).

Table 2. Average Property Tax Revenue, LOST Revenue, and Revenue-Raising Capacity

	LOST	Property Tax Revenue	Total Property Value	Revenue-Raising Capacity
Total Dollars				
Urban	\$14,700	\$291,709	\$44,000,000	\$315,000
Suburban	5,463	41,237	8,225,920	58,800
Rural	3,020	19,948	3,308,751	31,900
Tourism-Rich	8,953	60,061	12,300,000	77,600
Per Capita Dollars				
Urban	89.75	610.00	93,316.00	685.48
Suburban	89.53	633.00	143,450.60	1,019.72
Rural	64.54	465.00	79,798.64	594.49
Tourism-Rich	100.71	554.00	132,354.30	969.18

The suburban and rural counties that have been re-coded as tourism-rich are not included in the suburban and rural averages. The LOST, property tax revenue, total property value, and revenue-raising capacity values in total dollars are presented in thousands of dollars; the per capita values are not.

tax payers visit their jurisdictions and benefit from the services they provide, such as roads, public parks, and public safety. The importation of sales tax dollars allows urban jurisdictions to capture revenue from non-residents who would otherwise be considered “free riders.”¹¹

Potential Policy Options

If stakeholders (citizens, state and local officials, etc.) consider the inequity in revenue-raising capacity created by LOSTs a problem that the state needs to address, there are multiple policy options.¹² Before any discussion of potential changes, however, two points should be made about the status quo. First, one reason that the discrepancy between the different classifications is not larger is that food is taxed in North Carolina.¹³ If the state were to remove that tax, not only would revenues drop dramatically, but the inequities would likely grow. Second, as the probability of an Internet sales tax increases and online businesses begin to collect sales taxes, it is not only likely that overall revenues will increase but also that the gap in revenue-raising capacity will become smaller. Sites such as Amazon provide both convenience and extensive retail selections, which are even more valuable to people with fewer substitutes locally.

11. The concept of a “free rider” originates in the economic literature and can most easily be defined as a person who benefits from public goods and services and does not pay for them. One of the most common results of a free rider problem is the underprovision of public goods.

12. By no means should the three options presented here be considered an exhaustive list of actions available.

13. An exception is G.S. Article 46, which does not apply to food.

Intergovernmental Transfers

One option for the state is to increase intergovernmental transfers to counties that have smaller sales tax bases. Doing so would add additional strain to the state budget, though, and thus might not be feasible. Intergovernmental transfers also have the potential to make local governments increasingly reliant on the state for revenue and therefore less fiscally autonomous. During periods of fiscal crisis, states and local governments are often negatively affected simultaneously, and in order to balance their budgets¹⁴ states frequently make cuts to their intergovernmental transfers to local governments. This can leave local governments in a tight spot—especially since those that would be the most affected by the cuts already have the least capacity to generate revenue.

Distribution of LOST Revenue on a Per Capita Basis

A second option for the state is to distribute all LOST revenue on a per capita basis. Like the first option, this would result in the areas with higher sales tax bases¹⁵ subsidizing the rest of the state.¹⁶ It would also remove the *local* part of the LOST by essentially making it a state-level tax that is distributed across the counties according to population. The result would indeed be a more even distribution of LOST revenue across the state, which is the presumed goal, but there could be other consequences as well. For example, there would no longer be an incentive to increase the size of a county's sales tax base, and some counties might shift their efforts into increasing the size of their property tax base through zoning and economic development. That would be an unwelcome change for the many jurisdictions that have been actively increasing their sales tax base, because they would no longer be able to benefit from those efforts.¹⁷

It should be noted that the portion of sales taxes currently distributed on a per capita basis (G.S. Article 40 LOSTs) is actually distributed on a *weighted* per capita basis. If the state were to maintain these weights, it would still increase the equity of sales tax distribution by moving to a 100 percent per capita distribution basis, but the increase would not be as great. Figure 4 presents a map of G.S. Article 40 collections. The pattern is similar to the per capita collections from G.S. Article 39 presented in Figure 3.

Distribution of LOST Revenue on a Point-of-Delivery Basis

A third option for the state is to distribute all LOST revenue on a point-of-delivery basis. This would actually increase the current levels of inequity in LOST revenue collections but would not affect counties' revenue-raising capacity, because there is no statistical difference between the four classifications in terms of overall capacity (combined sales and property taxes). However, much like changing the distribution to 100 percent per capita, changing the distribution to 100 percent point-of-delivery might result in different behaviors. For example, it might lead to more local competition for retail centers, big box stores, and car dealerships, since counties with those types of businesses would receive an even greater share of LOST revenue than they do under

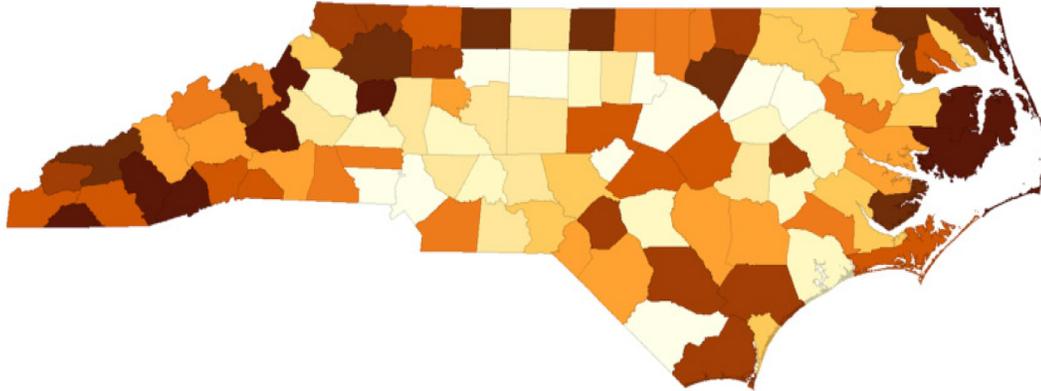
14. In North Carolina, both state and local governments are required to balance their budgets.

15. Also, counties with higher income tax bases for the intergovernmental transfers option would be subsidizing other, less affluent counties.

16. This sort of transfer already happens in every state. It also happens at the federal level through intergovernmental transfers to states.

17. The literature confirms these efforts to increase the size of the sales tax base, especially by competing for big box stores and car dealerships (Chapman 1998).

Figure 4. G.S. Article 40 Collections Per Capita



The color of the county corresponds to the decile in the distribution of counties of which it is a part. The white counties belong to the lowest decile (counties with the smallest population and LOST revenue-raising capacity), and the dark brown counties belong to the highest decile (counties with the largest population and LOST revenue-raising capacity).

the current system. It also might encourage the counties that generate the most LOST revenue to become increasingly reliant on it—and sales tax revenue is more volatile than property tax revenue, which is particularly critical during times of financial hardship.¹⁸

Conclusion

There is growing concern among local governments and elected officials about the equity of local sales tax collections. Their perception is that urban areas generate a great deal more revenue than their non-urban counterparts, although when compared on a per capita basis, the margin of difference is smaller than often presumed. Additionally, once sales tax capacity and property tax capacity are considered jointly, there is no statistical difference between the revenue-raising capacity of urban counties and that of suburban, tourism-rich, or rural counties. Despite this, North Carolina may still be interested in moving away from the status quo, possibly via one of the three options discussed above. If so, stakeholders should proceed carefully and examine the likely consequences in earnest.

The equity of LOST revenues is a complicated and important issue, and many factors must be considered when moving forward with policy decisions. It is also important to move the conversation past the notion of urban versus rural. The issue of revenue-raising capacity is more complicated than just county classification, particularly given the diversity within those categories. Further examination of the issues involved is both warranted and advisable.

18. See Afonso (2013a) for a discussion of the volatility of local sales tax revenue. The inclusion of food in the sales tax base makes local sales tax revenue less volatile than the state's sales tax revenue, however.

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