

# WHICH TENNESSEE COUNTIES MIGHT SEE THE LARGEST DROP IN SALES TAX REVENUE?

## An Analysis of Local Sales Taxes in the Great Recession

The COVID-19 pandemic caused by the new coronavirus poses both health and economic challenges for Tennessee. Signs clearly point to the start of a recession that will create financial difficulties for our state and local governments, which are currently crafting their budgets for the coming year.

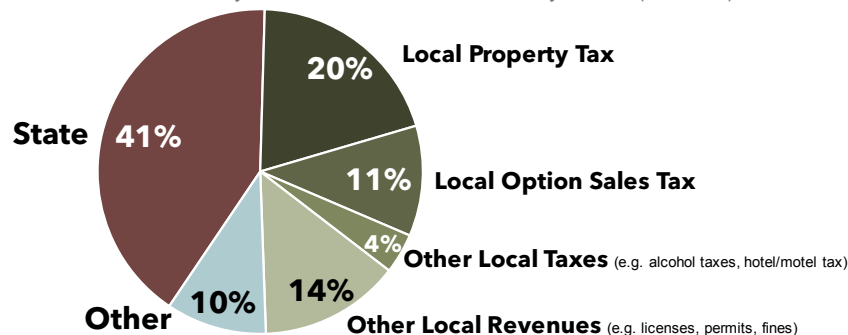
However, some counties will likely see greater revenue declines than others due to differences in their local economies, budget policies, and the spread of and response to the virus. Consumer spending, in particular, has taken a swift hit as businesses closed their doors and Tennesseans stayed home. This report uses local sales tax data from before, during, and after the Great Recession to shed light on how these changes might affect a key source of revenue for county governments across Tennessee. This is our second in a series of reports exploring different aspects of the relationship between state and local government in Tennessee.

### KEY TAKEAWAYS

- Sales taxes are most counties' 2nd largest local tax revenue stream and a large source of funding for schools. In 17 counties, they generated 15% or more of all FY 2017 revenue.
- The coronavirus recession is expected to take a significant toll on sales tax receipts. The ultimate impact on state and local budgets remains unclear, but history can offer clues.
- During and after the Great Recession, inflation-adjusted local sales tax revenues fell in 75 counties. These counties averaged a 7% drop, and only 16 recovered within three years.
- Most counties where real sales tax receipts fell did not hit bottom until after the Great Recession ended.
- If past is precedent, a drop in local sales tax receipts this time may hit Blount, Cumberland, Carroll, Dickson, Dyer, Greene, Knox, Sevier, and Sullivan Counties the hardest.

### Figure 1. Local Sales Taxes Provided 11% of the Average Tennessee County's 2017 Budget

Average Composition of Tennessee County Governments' Total Revenues by Source (FY 2017)



Excludes revenues from utilities (e.g. the sale of water or electricity). Sources: The Sycamore Institute's analysis of data from the Tennessee Comptroller (1) and the U.S. Census Bureau via the Government Finance Database (2)

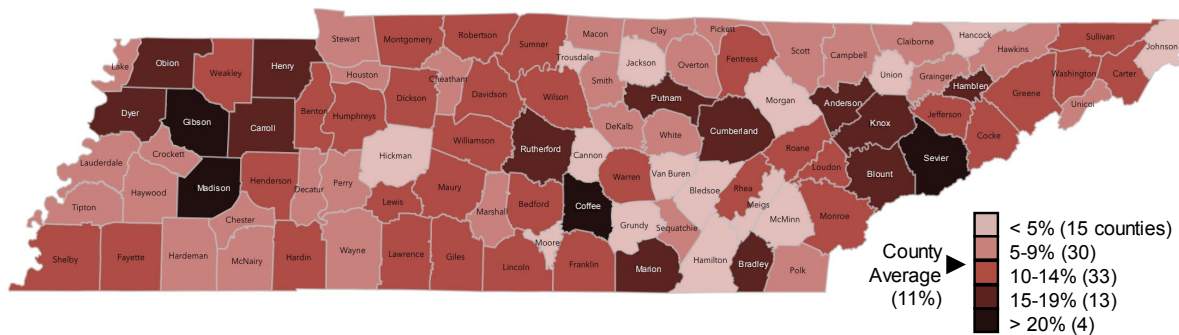
## Local Sales Taxes Generate 11% of County Revenues, on Average

**Sales taxes are most county governments' second largest source of local tax revenue (Figure 1).** Local governments have the option to levy their own sales tax of up to 2.75% in addition to the state's 7% general sales tax and 4% grocery tax. On average, these local option sales taxes provided about 11% of counties' total FY 2017 budgets while property taxes accounted 20%. (1) (2)

**Some counties rely on local option sales taxes much more than others (Figure 2).** In FY 2017, the local option sales tax ranged from about 1% of all revenues in Trousdale and McMinn Counties to 33% in Sevier County. In 17 counties, it generated 15% or more of all revenues. Across every county, local option sales tax collections totaled \$2.3 billion in FY 2017. (1) (2)

## Figure 2. Some County Budgets Rely on Local Sales Taxes Much More than Others

Local Option Sales Tax Revenues as a % of Total Revenues by County (FY 2017)

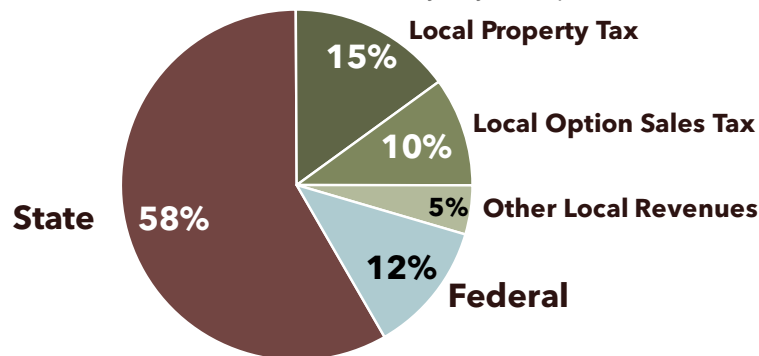


Excludes revenues from utilities (e.g. the sale of water or electricity). See the **Methods Appendix** for more information.

Sources: The Sycamore Institute's analysis of data from the Tennessee Comptroller (1) and the U.S. Census Bureau via the Government Finance Database (2)

## Figure 3. Tennessee School Districts Get 10% of Their Funding from Local Sales Tax, On Average

Average Composition of Revenues for Tennessee's County, City, and Special School Districts (FY 2018-FY 2019)



Excludes the Achievement School District and the State Board of Education. Sources: The Sycamore Institute's analysis of data from the Tennessee Department of Education's 2018 Annual Statistical Report (3)

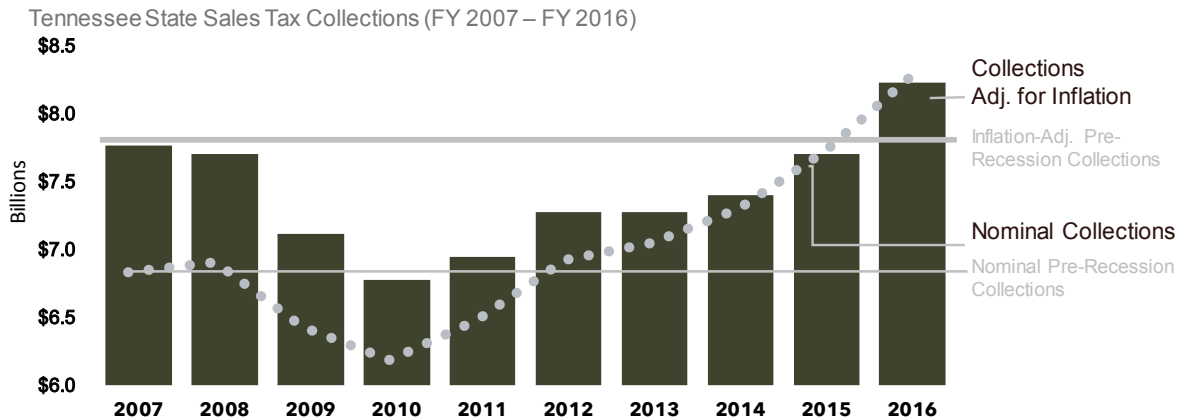
**Local sales taxes are an important source of funding for public schools.** State law requires cities and counties to use at least half of their local sales tax revenues for K-12 education. (4) For the 2018-2019 school year, local option sales taxes made up 10% of all revenues for the average Tennessee school district (**Figure 3**) – ranging from no sales tax dollars for the Morgan County school district to 38% for the Sevier County school district. (3)

### Coronavirus Recession Likely to Shrink Sales Tax Revenues

**The coronavirus recession is expected to take a significant toll on sales tax revenues as consumer spending falls.** [Tennessee's sales tax collections for April](#), which represent economic activity in March, were down 6% from last year. By the end of April, private sector data show consumer spending in several major industries had plunged across Tennessee. Spending fell 35% in restaurants and hotels, nearly 69% in entertainment and recreation, and nearly 65% on transportation compared to the start of the year. (5)

**The ultimate impact on state and local government budgets remains unclear, but history can offer clues.** While every economic downturn is different, knowing how previous recessions affected sales tax revenues could help policymakers respond to the current situation. Looking at the Great Recession, Tennessee's state sales tax collections took four years to regain prior levels in nominal terms and nine years with inflation (**Figure 4**). (6) (7)

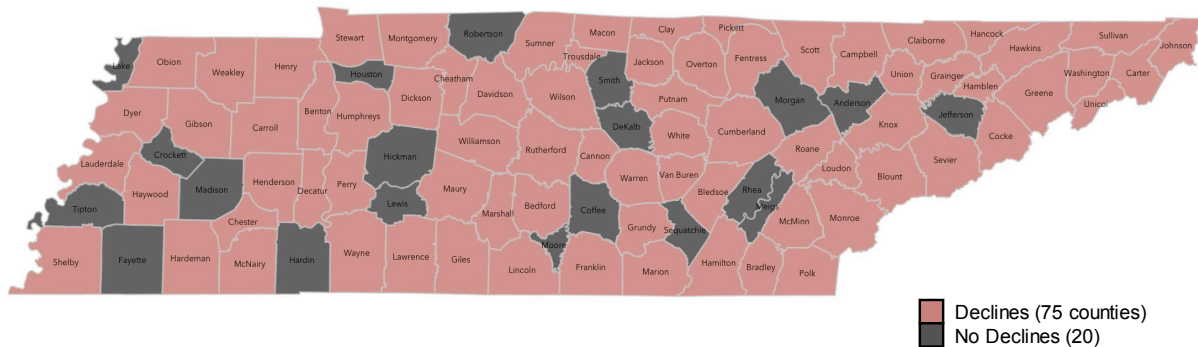
**Figure 4. With Inflation, Tennessee Sales Tax Receipts Did Not Exceed Pre-Great Recession Levels for 9 Years**



Inflation-adjusted collections are shown in 2016 dollars using the GDP price index. (8)  
 Sources: The Sycamore Institute's analysis of data from the TN Department of Revenue and U.S. Bureau of Economic Analysis (6) (7)

**Figure 5. In the Great Recession, 4 out of 5 Tennessee Counties Saw a Decline in Real Sales Tax Receipts**

Counties Where Inflation-Adj. Local Option Sales Tax Revenues Fell Below FY 2007 Level (FYs 2008-2016)



Based on each county’s local option sales tax revenues adjusted for inflation using the GDP price index. (8) See the **Methods Appendix** for more information. Sources: The Sycamore Institute’s analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14)

**Real Sales Tax Receipts Fell in 75 Counties in the Great Recession**

**Adjusting for inflation, local option sales tax revenues fell in four out of five of Tennessee’s 95 counties during and after the Great Recession (Figure 5).** (1) (9) (10) (11) (12) (13) (7) (14) Taking inflation into account allows apples-to-apples comparisons of the value of money over time. (8) The magnitude and duration of the decline varied widely. In the 75 counties where inflation-adjusted (i.e. “real”) local sales tax receipts fell:

- The average decline was about 7% below FY 2007 levels – ranging from -1.4% in Union County to -20% in Trousdale County and -15% in Van Buren, Clay and Davidson Counties.\* **(Figure 6)**
- The vast majority did not hit bottom until FY 2010 or later, after the recession was officially over. **(Figure 7)** Thirty-nine counties collected their lowest sales tax receipts in FY 2010 or 2011, while 18 did not bottom out until FY 2014 or 2015.\*
- Just one in five saw collections recover within three years.\* Four counties took just one year to bounce back – Carter, Rhea, Rutherford, and Union. Five still had not regained their prior highs by FY 2016 – Cumberland, Greene, McMinn, Scott, and Warren. **(Figure 8)**

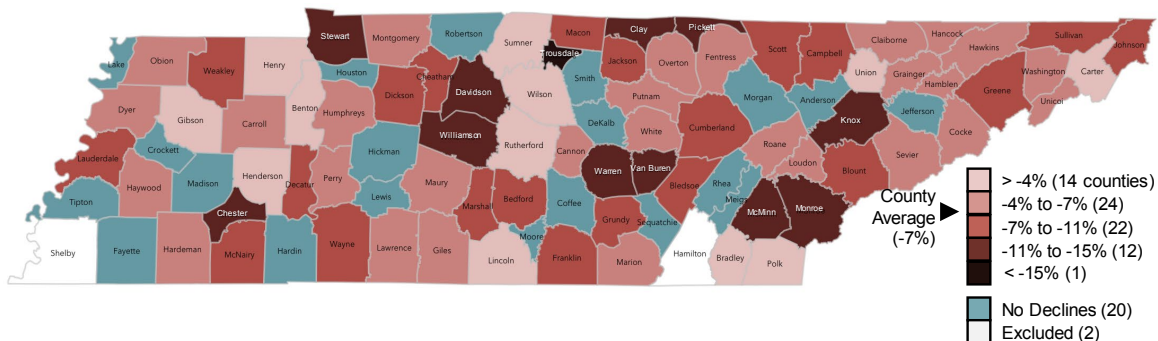
Note: Analyses marked with an asterisk (\*) exclude Hamilton and Shelby Counties due to significant local policy changes that prevent accurate year-to-year comparisons. See the footnote at bottom for details.

### WHY ADJUST FOR INFLATION?

Taking inflation into account allows apples-to-apples comparisons of the value of money over time. Even small changes in inflation can add up - especially over longer periods of time. "Real" refers to inflation-adjusted numbers. "Nominal" refers to unadjusted numbers.

**Figure 6. Counties Where Real Sales Tax Receipts Fell Saw an Average 7% Drop from 2007 Levels**

% Decline in Inflation-Adj. Local Option Sales Tax Revenues from FY 2007 to Low Point (FYs 2008-2016)



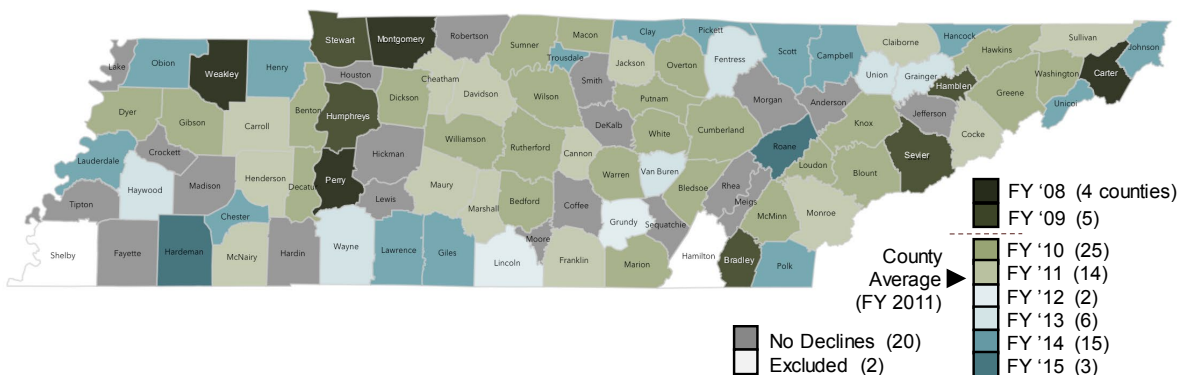
Based on each county's local option sales tax revenues adjusted for inflation using the GDP price index. (8) Excludes Hamilton and Shelby Counties due to year-to-year comparison issues.

See the **Methods Appendix** for more information.

Sources: The Sycamore Institute's analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14)

**Figure 7. Most Counties Where Real Sales Tax Receipts Fell Did Not Hit Bottom Until After the Great Recession Ended**

Year with Lowest Inflation-Adj. Local Option Sales Tax Revenues Compared to FY 2007 (FYs 2008-2016)

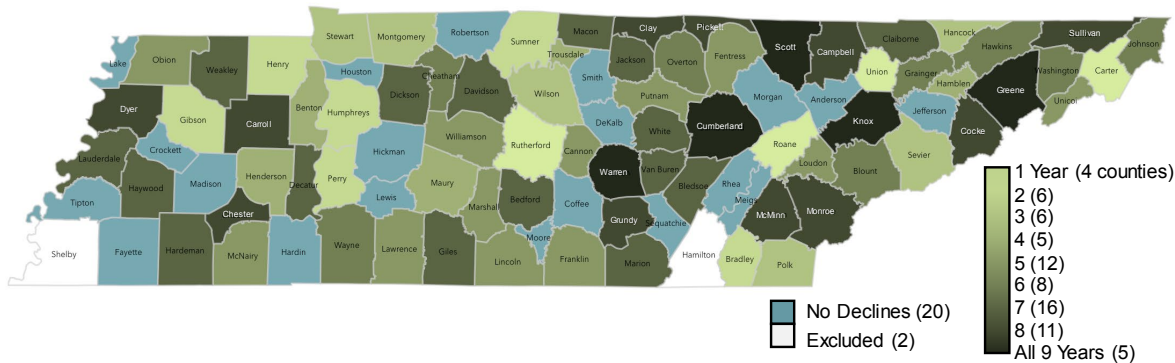


Based on each county's local option sales tax revenues adjusted for inflation using the GDP price index. (8) Excludes counties that did not experience a decline in revenues and Hamilton and Shelby Counties due to year-to-year comparison issues. See the **Methods Appendix** for more information.

Sources: The Sycamore Institute's analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14)

### Figure 8. Just 1 in 5 Counties with Real Sales Tax Declines in the Great Recession Saw Collections Recover Within 3 Years

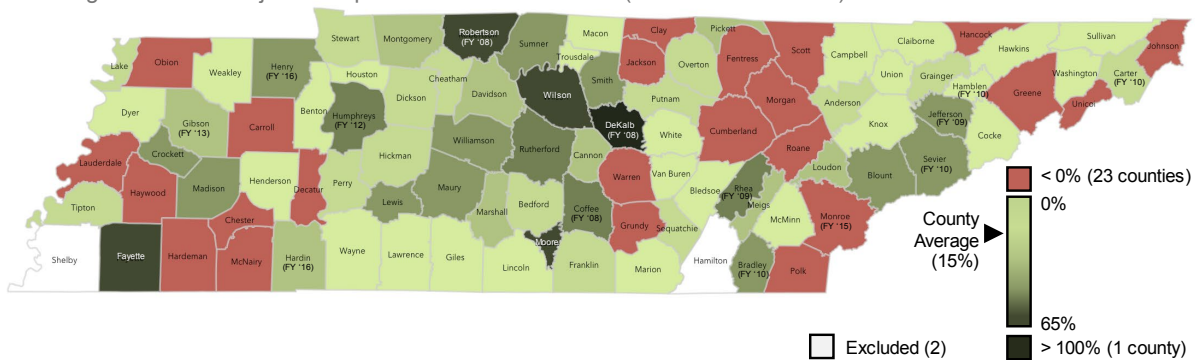
Years with Inflation-Adj. Local Option Sales Tax Revenues Below FY 2007 Level (FYs 2008-2016)



Based on each county’s local option sales tax revenues adjusted for inflation using the GDP price index. (8) Excludes counties that did not experience a decline in revenues and Hamilton and Shelby Counties due to year-to-year comparison issues. See the **Methods Appendix** for more information.  
 Sources: The Sycamore Institute’s analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14)

### Figure 9. 1 in 4 Counties Collected Less Inflation-Adjusted Local Sales Tax in 2018 than Before the Great Recession

Change in Inflation-Adj. Local Option Sales Tax Revenues (FY 2007 to FY 2018)



Notes: Dates indicate FY in which a local option sales tax rate increase went into effect between FYs 2007-2018. Based on each county’s local option sales tax collections adjusted for inflation using the GDP price index. (8) Excludes Hamilton and Shelby Counties due to year-to-year comparison issues. See the **Methods Appendix** for more information.  
 Sources: The Sycamore Institute’s analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), the Tennessee Department of Revenue (15), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14)

**Sales tax rate increases in 12 counties appear to have prevented or mitigated a drop in their collections.** Between FY 2008 and FY 2018, local sales tax rate increases took effect in 14 counties. Based on a comparison of actual inflation-adjusted collections to estimates of collections without the rate increase (15) (16):

- Local rate increases that went into effect in FYs 2008 and 2009 may have held off declines in Coffee, DeKalb, Jefferson, Rhea, and Robertson Counties, where real sales tax revenues never dropped below FY 2007 levels.
- Later increases in seven counties – Blount, Bradley, Carter, Gibson, Hamblen, Humphreys, and Sevier – may have shortened the time that these counties’ inflation-adjusted collections were below pre-recession levels.
- Increases in the remaining two counties – Hardin and Henry Counties – went into effect in FY 2016. Hardin never experienced a drop in collections, and Henry County’s collections had already recovered to their pre-recession levels by the time the increase went into effect.

**One in four counties collected less inflation-adjusted local sales tax in FY 2018 than 11 years prior, even as the statewide average grew by 15% (Figure 9).** (1) (9) (10) (11) (12) (13) (7) (14)

Among the counties where inflation-adjusted sales tax revenues went up, growth ranged from just under 1% in Campbell and Bledsoe Counties to 104% in DeKalb County. This group includes all 14 counties that implemented rate increases during this period. (15) Meanwhile, FY 2018 collections in 23 counties were below FY 2007 levels, when accounting for inflation – with Grundy County’s 9% drop being the largest. In 19 of those counties, collections either did not decline during the Great Recession or declined, recovered, and then fell again.

See **Methods Appendix** for analysis of collections not adjusted for inflation.

## Which Counties’ Budgets May Be Hardest Hit?

**Every recession is different.** Consumer spending and employment in the Great Recession both fell much more gradually than today, when people began staying home en masse and businesses shut their doors practically overnight.

**These differences and changes to local economies since the last recession may affect how county revenues shift today.** For example, if college students don’t return to campus in the fall, counties with large student populations could see a larger decline than otherwise expected. Likewise, Nashville’s tourism boom likely means it has and will get hit harder this time around. Meanwhile, rural areas with fewer COVID-19 cases could be spared some of the most extreme economic effects.

**If past is precedent, however, a drop in local sales tax receipts may hit certain counties harder based on their sales tax reliance and their experience during and after the Great Recession.** A handful of counties – including Blount, Cumberland, Carroll, Dickson, Dyer, Greene, Knox, and Sullivan – saw large and/or lengthy declines in the wake of the Great Recession and also rely more on local option sales tax than most other counties. Sevier County may also be at greater risk given its especially high dependence on local option sales tax and the significant role of tourism in its economy (**Table 1**). See the **Methods Appendix** for a full list of the most at-risk counties for each metric.

**Table 1. Tennessee Counties that Could Face the Most Financial Pressure from a Drop in Local Sales Tax Revenues**

County	Local Sales Tax Revenues as a % of Total Revenues (FY 2017)	Rank (High to Low)	Inflation-Adjusted Local Option Sales Tax Revenue Declines Below FY 2007 Level (FYs '08-'16)			
			% Decline at Lowest Level	Rank (High to Low)	Duration (years)	Rank (High to Low)
<b>Sevier</b>	33%	1	-5%	50	3	58
<b>Cumberland</b>	18%	8	-11%	15	9	1
<b>Dyer</b>	18%	9	-6%	44	8	6
<b>Blount</b>	18%	12	-11%	15	6	33
<b>Knox</b>	17%	14	-13%	7	9	1
<b>Carroll</b>	17%	15	-7%	37	8	6
<b>Dickson</b>	14%	19	-9%	23	7	17
<b>Sullivan</b>	14%	21	-9%	18	8	6
<b>Greene</b>	14%	23	-9%	20	9	1

Note: Sevier was included based on its high dependence on local option sales tax. All other listed counties ranked in the top 25% of counties on 1) local option sales tax revenues as a percent of total revenues in FY 2017 and either 2) percentage decline in local option sales tax revenues below FY 2007 levels between FY 2008 and FY 2016 and/or 3) number of years in which local option sales tax revenues remained below FY 2007 levels between FY 2008 and FY 2016. Based on each county's local option sales tax collections adjusted for inflation using the GDP price index. (8) Excludes Hamilton and Shelby Counties due to year-to-year comparison issues. See the **Methods Appendix** for more information and a full list of the most at-risk counties for each metric.

Sources: The Sycamore Institute's analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), the Tennessee Department of Revenue (15), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14), and the U.S. Census Bureau via the Government Finance Database (2)

## Summary of Methods and Limitations

**To make these calculations, we analyzed the local option sales tax collections of Tennessee county governments before, during, and after the Great Recession.** While that recession officially spanned December 2007 to June 2009, our state continued to feel its effects for many years. We focused the bulk of our analysis on FYs 2007-2016 since it took that long for Tennessee's inflation-adjusted state sales tax receipts to recover to pre-recession levels. To estimate the impact of rate increases, we compared actual inflation-adjusted collections to an estimate of each county's collections in the absence of the increase based on the percentage increase in the tax rate.

**This analysis has important limitations.** For example, we excluded two counties (Hamilton and Shelby) from parts of the analysis due to significant policy changes that prevent accurate year-to-year comparisons. We also note where local rate increases may have affected county revenues. However, we could not systematically account for other factors outside the effects of the recession that might also explain changes in revenues – for example, changes to local economies. See the **Methods Appendix** for more details.



## Parting Words

Many of Tennessee's local governments will likely face significant financial challenges as a result of the ongoing pandemic. Even as our economy falls rapidly into recession, cities and counties across the state are attempting to craft their budgets for the coming year. In addition to the spread of and response to COVID-19, the makeup of local economies and the mix of local revenues will determine how this downturn impacts each county's financial situation. As state and local policymakers consider how to respond, the Great Recession's wide-ranging effects on local sales tax revenues may shed light on the challenges to come.

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 \* Hamilton and Shelby Counties are excluded from most analyses in this report for the following reasons.

- In FY 2012, Hamilton County's 1966 sales tax agreement with the City of Chattanooga ended. This had a significant impact on the county's revenues that our analysis could not disentangle.
- In FY 2014, the school districts within Shelby County underwent a significant reorganization. This prevented accurate financial comparisons of Shelby County Schools before and after the reorganization.

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## References

1. **Tennessee Comptroller of the Treasury.** Local Government Audited Financial Data for FY 2007 - FY 2019. [Online] [Cited: April 8, 2020.] Data provided by the Division of Local Government Audit on April 3, 2020.
2. **Hand, Michael, Pierson, Kawika and Thompson, Fred.** The Government Finance Database: A Common Resource for Quantitative Research in Public Financial Analysis. *Willamette University*. [Online] [Cited: February 4, 2020.] Accessed via The Government Finance Database at <https://willamette.edu/mba/research-impact/public-datasets/>.
3. **Tennessee Department of Education.** 2017-2018 and 2018-2019 Annual Statistical Reports (Tables 16 and 19). [Online] [Accessed on May 19, 2020.] <https://www.tn.gov/education/data/departement-reports/2019-annual-statistical-report.html>.
4. **State of Tennessee.** Tenn. Code Ann. § 67-6-712. [Online] [Accessed on April 21, 2020.]
5. **Chetty, Raj, et al.** Real-Time Economics: A New Platform to Track the Impacts of COVID-19 on People, Businesses, and Communities Using Private Sector Data. *Opportunity Insights*. [Online] May 2020. <https://tracker.opportunityinsights.org/>.
6. **Revenue, Tennessee Department of.** Collections Spreadsheets by Fiscal Year for FYs 2007-2016. [Online] [Accessed on April 9, 2020.] Obtained from <https://www.tn.gov/revenue/tax-resources/statistics-and-collections/collections-spreadsheets-by-fiscal-year.html>.
7. **U.S. Bureau of Economic Analysis.** National Income and Product Accounts: Table 1.1.4 Price Indexes for Gross Domestic Product. [Online] March 26, 2020. [Accessed on April 9, 2020.]

- [https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&select\\_all\\_years=0&nipa\\_table\\_list=4&series=a&first\\_year=1990&last\\_year=2019&scale=-.99&categories=survey&thetable=](https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&select_all_years=0&nipa_table_list=4&series=a&first_year=1990&last_year=2019&scale=-.99&categories=survey&thetable=)
8. -. Prices & Inflation. [Online] September 6, 2018. [Accessed on April 9, 2020.] <https://www.bea.gov/resources/learning-center/what-to-know-prices-inflation>.
9. **Washington County.** Washington County Comprehensive Annual Financial Reports for 2007-2018. [Online] [Accessed on April 8, 2020.] Available from <https://comptroller.tn.gov/advanced-search.html#%7B%22county%22:%22washington%22,%22type%22:%22audit%22,%22entity%22:%22county%22,%22division%22:%22local-government-audit%22%7D>.
10. **McMinn County.** McMinn County Annual Financial Report for 2007-2018. [Online] [Accessed on April 8, 2020.] Available from <https://comptroller.tn.gov/advanced-search.html#%7B%22county%22:%22mcminn%22,%22type%22:%22audit%22,%22entity%22:%22county%22,%22division%22:%22local-government-audit%22%7D>.
11. **Knox County.** Knox County Comprehensive Annual Financial Reports for 2007-2018. [Online] [Accessed on April 8, 2020.] Available from <https://comptroller.tn.gov/advanced-search.html#%7B%22county%22:%22knox%22,%22type%22:%22audit%22,%22entity%22:%22county%22,%22division%22:%22local-government-audit%22%7D>.
12. **Hamilton County.** Hamilton County Comprehensive Annual Financial Reports for 2007-2018. [Online] [Accessed on April 8, 2020.] Available from <https://comptroller.tn.gov/advanced-search.html#%7B%22county%22:%22hamilton%22,%22type%22:%22audit%22,%22entity%22:%22county%22,%22division%22:%22local-government-audit%22%7D>.
13. **Metropolitan Government of Nashville and Davidson County.** Metropolitan Government of Nashville and Davidson County Comprehensive Annual Financial Reports for 2007-2018. [Online] [Accessed on April 8, 2020.] Available from <https://comptroller.tn.gov/advanced-search.html#%7B%22county%22:%22davidson%22,%22type%22:%22audit%22,%22entity%22:%22county%22,%22division%22:%22local-government-audit%22%7D>.
14. **Shelby County.** Shelby County Comprehensive Annual Financial Reports for 2007-2019. [Online] [Accessed on April 13, 2020.] Available from [https://comptroller.tn.gov/advanced-search.html#%7B%22q%22:%22\\*%22,%22filters%22:%22%7B%22division%22:%22cot:division/local-government-audit%22,%22county%22:%22cot:county/shelby%22,%22entity%22:%22cot:entity/county%22,%22type%22:%22%7D](https://comptroller.tn.gov/advanced-search.html#%7B%22q%22:%22*%22,%22filters%22:%22%7B%22division%22:%22cot:division/local-government-audit%22,%22county%22:%22cot:county/shelby%22,%22entity%22:%22cot:entity/county%22,%22type%22:%22%7D).
15. **The Sycamore Institute's analysis of financial data from the Tennessee Comptroller's Office (cited above) and local tax rate information from the Tennessee Department of Revenues .** [Online] April 13, 2020. Local option sales tax rate information obtained from <https://www.tn.gov/content/dam/tn/revenue/documents/taxes/sales/taxlist.pdf>.
16. **University of Tennessee County Technical Assistance Center.** Tennessee County Tax Statistics: November 2004 (28th Edition). [Online] November 2004. <http://www.ctas.tennessee.edu/sites/default/files/2004%20Tax%20Stats.pdf>.
17. **Tennessee Department of Education.** 2018-2019 Annual Statistical Report (Table 7). [Online] [Accessed on April 13, 2020.] Available from <https://www.tn.gov/education/data/departments-reports/2019-annual-statistical-report.html>.

## METHODS APPENDIX

### Methods

We primarily used audited local finance data from the Tennessee Comptroller to conduct this analysis. The Comptroller maintains data for 89 counties in a standard format. Those data are extracted from each county's comprehensive annual financial report (CAFR), which the Comptroller audits. For the six counties not audited by the Comptroller, we extracted comparable data from each county's CAFR for FYs 2007-2018 for the post-recession analysis. To calculate these six counties overall reliance on local sales tax, we used 2017 data from the U.S. Census Bureau's Census of Governments.

For all 95 counties, we looked at local option sales tax revenues and other local tax revenues across each county's primary government, component units (e.g. school department), business-like activities and enterprise funds (e.g. utilities, hospital), and fiduciary funds (e.g. a pass-through fund for sales tax revenues that go to a city government or special school district).

For part of the analysis, we adjusted the data for inflation using the GDP price index. (8) This allows us to control for the purchasing power of the local option sales tax revenues over time.

We supplemented the revenue data with an analysis of changes in local option sales tax rates between FY 2007 and FY 2016. We compared the effective dates for rate increases with trends in revenues to highlight where it appeared a rate increase may have prevented or mitigated revenue declines.

Where we observed outliers in a county's revenue trend, we also took a more careful look at that county's CAFR and/or news reports from the time. For example, anomalous trends in data for Shelby and Hamilton Counties revealed significant policy shifts that limited our ability to compare their financial data across the entire time period. We also took a closer look at CAFRs for Monroe, Trousdale, Van Buren, and Williamson Counties when revenues dropped significantly from one year to the next, but we were unable to readily identify an explanation outside of the larger economic trends of the time.

To estimate the impact of rate increases, we compared actual inflation-adjusted collections to an estimate of each county's collections in the absence of the increase. We created these estimates using the percentage increase in the local option sales tax rate. For instance, if a county's local option sales tax rate increased by 10%, the prior rate represented 90% of the new rate. In this example, we would generate an estimate of collections in the absence of the rate increase by applying 90% to actual collections.

### Limitations

Beyond the measures taken above, we did not do a systematic or comprehensive review of events or decisions external to the recession that may explain some of the trends in local sales tax revenues. These could include, for example, changes in the way a county might distribute sales tax dollars to various funds or significant changes to local economies.

Our analysis does not take into account how any rate increases by either a county or a municipality within a county may have affected the distribution of local option sales taxes to the county government.

What happened during the Great Recession won't necessarily happen again. Every downturn is different, and the types of activities driving each county's collections may have shifted since the last recession in ways that could influence how taxes are affected (e.g. a greater reliance on tourism in some areas).

For several reasons, the data do not necessarily cover the same set of functions, services, and relevant revenue sources for every county.

1. Not all county governments provide the same array or level of programs and services.
2. City and special school districts mean that not all county governments in Tennessee are wholly responsible for an entire school district, which could affect the accounting of local sales tax collections. Ninety-four county governments operate a school district covering all or part of the county. The following 29 counties have at least one special or city school district within their boundaries: Anderson, Blount, Bradley, Carroll, Carter, Cocke, Coffee, Crockett, Dyer, Franklin, Gibson, Greene, Hawkins, Henderson, Henry, Lincoln, Loudon, McMinn, Marion, Monroe, Obion, Rhea, Rutherford, Scott, Shelby, Sullivan, Washington, Williamson, and Wilson. (17)

## Nominal Results

Without adjusting revenues for inflation, 51 counties experienced drops in nominal local option sales tax revenues between FY 2007 and FY 2016. Among the counties where nominal sales tax collections fell (excluding Hamilton and Shelby\*):

- The average decline was about 5% below FY 2007 levels – ranging from -0.1% in Maury County to -10% in Davidson, Trousdale, and McMinn Counties.\*
- Collections stayed below FY 2007 levels for about three years, on average.\* The longest it took any county to bounce back was six years – a distinction shared by Chester, Clay, Monroe, Pickett, and Warren Counties.
- The majority of counties that saw declines reached their lowest point of nominal sales tax revenues in 2010 after the recession had officially ended.\* Thirty-two counties collected their lowest sales tax receipts in FY 2010 or 2011.

**Table A1. Tennessee Counties Most Vulnerable to Declines in Local Sales Tax Receipts, Based on 3 Metrics**

Rank (High to Low)	Local Sales Tax Revenues as a % of Total Revenues (FY 2017)		Inflation-Adjusted Local Option Sales Tax Revenue Declines Below FY 2007 Level (FYs '08-'16)			
			% Decline at Lowest Level		Duration	
1	Sevier	32.7%	Trousdale	-20.0%	Cumberland, Greene, Knox, Scott, Warren,	9 Years
2	Madison	26.0%	Van Buren	-14.8%		
3	Gibson	24.0%	Clay	-14.7%		
4	Coffee	22.7%	Davidson	-14.5%		
5	Bradley	19.6%	McMinn	-13.7%		
6	Anderson	18.9%	Monroe	-13.5%	Campbell, Carroll, Chester, Clay, Cocke, Dyer, Grundy, Monroe, Pickett, Sullivan, McMinn	8 Years
7	Putnam	18.5%	Knox	-13.3%		
8	Cumberland	18.4%	Chester	-13.1%		
9	Dyer	18.4%	Stewart	-12.2%		
10	Henry	18.3%	Williamson	-11.6%		
11	Hamblen	17.8%	Pickett	-11.6%		
12	Blount	17.8%	Warren	-11.5%		
13	Obion	17.5%	Scott	-11.1%		
14	Knox	17.0%	Cumberland	-10.7%		
15	Carroll	16.9%	Blount	-10.6%		
16	Rutherford	16.4%	Jackson	-9.9%	Bedford, Bledsoe, Claiborne, Davidson, Decatur, Dickson, Giles, Hardeman, Haywood, Jackson, Lauderdale, Macon, Marion, Van Buren, Weakley, White	7 Years
17	Marion	15.7%	Campbell	-9.7%		
18	Hardin	14.9%	Sullivan	-9.3%		
19	Dickson	14.3%	Marshall	-9.2%		
20	Loudon	14.1%	Greene	-9.0%		
21	Sullivan	14.1%	Lauderdale	-8.8%		
22	Roane	13.9%	Weakley	-8.8%		
23	Greene	13.7%	Dickson	-8.6%		
24	Carter	13.7%	Bedford	-8.5%		

Based on each county's local option sales tax collections adjusted for inflation using the GDP price index. (8)  
Excludes Hamilton and Shelby Counties due to year-to-year comparison issues.

See the **Methods Appendix** for more information.

Sources: The Sycamore Institute's analysis of data from the Tennessee Comptroller (1), the U.S. Bureau of Economic Analysis (7), the Tennessee Department of Revenue (15), and Davidson, Hamilton, Knox, McMinn, Shelby, and Washington Counties (1) (9) (10) (11) (12) (13) (14), and the U.S. Census Bureau via the Government Finance Database (2)