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Local Sales Tax Collections in TN Cities during the COVID Pandemic

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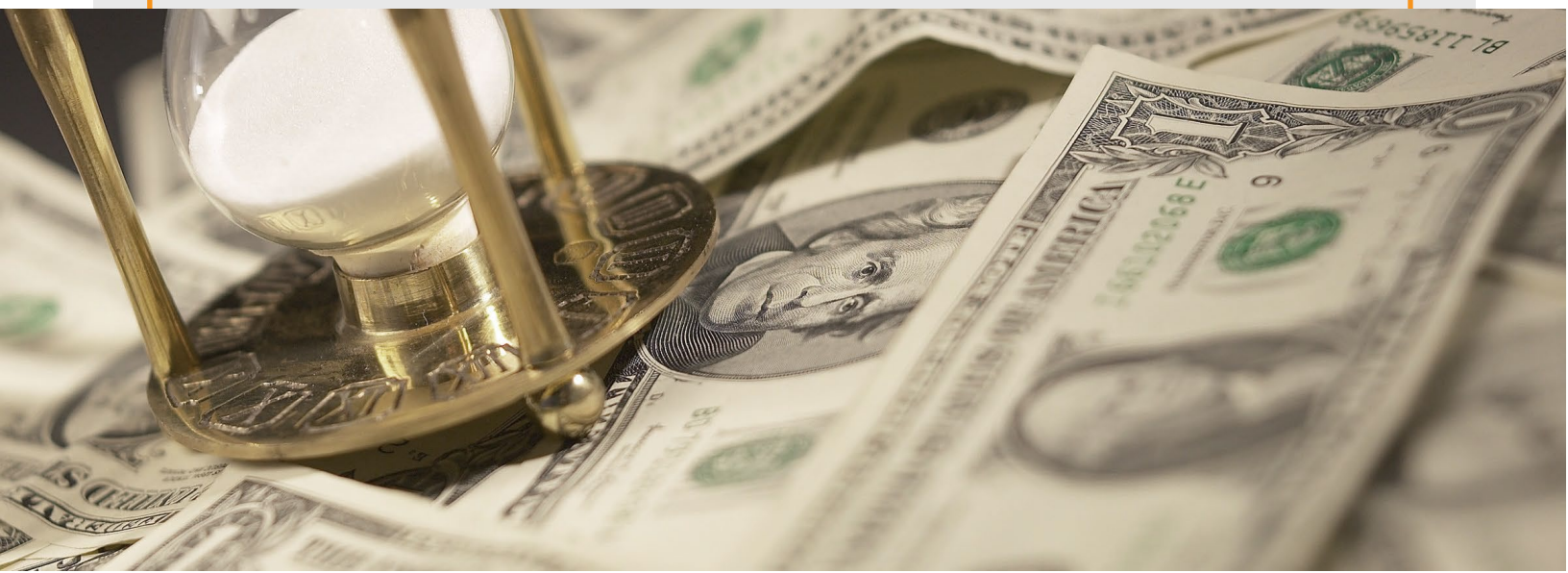


Introduction

The pandemic-driven economic shutdown in spring 2020 and the accompanying directives by public health authorities plunged the nation into a recession that dramatically changed the viability of thousands of businesses, the levels of labor force participation and employment, household income, and consumer behavior. The combination of business lockdowns, restrictions on public gatherings, job & income loss, and rising fear of contagion significantly altered household purchasing and travel decisions. The financial consequences of these changes particularly in local jurisdictions with budgets more dependent on volatile revenue sources such as sales taxes, proved to be significant but far milder than expected (Joffe 2021). Undoubtedly, South Dakota v. Wayfair (2018) helped to cushion declines in sales tax revenue as millions of consumers turned to internet sources rather than big box stores to acquire needed goods during the pandemic (Greenblatt 2021). Nationally, the cities that proved to be most financially vulnerable turned out to be those with economies heavily dependent on tourism and a labor force more extensively employed in the leisure and hospitality sectors, e.g., restaurants, hotels, and entertainment venues (Ettlinger 2021). This pattern holds true for Tennessee cities as well. This analysis of the pandemic's financial impact in TN cities focuses on the trend in revenue derived from the local option sales & use tax, the second most important revenue source for TN localities, on average, after revenue from the property tax. All incorporated cities in the state impose a local sales and use tax that ranges between 1.5 and 2.75 percent. This tax is levied on the first $1600 of the sales price of any single article of tangible personal property. The modal rate among TN cities is 2.75%. This tax is paid by consumers in addition to the state's 7% state sales tax on non-food purchases. A 4% sales tax is levied on food purchases.

This study describes the extent, magnitude, and duration of the decline in local option sales tax (LOST) revenue in the wake of the pandemic and identifies the factors that help to explain differences among cities. The paper examines why some cities exhibited greater fiscal resiliency and rebounded more quickly from the recession that began in March 2020. The study concludes with a brief discussion of the implications of the findings for local government policy and practice.

Data and Methods

Data on monthly sales & use tax data for all 345 incorporated Tennessee municipalities for calendar years 2019 and 2020 was collected from the TN Department of Revenue (DoR) with the invaluable assistance of Ms. Tracey Shadix of the Financial Control Division. The monthly DoR sales tax data are organized by county and then by city within each county. To assure accurate monthly totals for each municipality, the authors summed the amounts reported separately for those cities with corporate boundaries that spanned more than one county. The city is the unit of analysis in this study.

There are two primary dependent indicators in the study. The first variable is the percent change in sales tax revenue between March, April, & May of 2020 (the first three months of the recession) compared to the same three-month period in 2019. This measure captures the magnitude of change in LOST revenue for an identical time frame for each city pre- and post-pandemic.

The second dependent variable measures the percent change in sales tax revenue received by each city between June, July & August 2020 and the preceding three-month period. This variable indicates the extent to which cities began to rebound from the observed revenue trough in spring 2020.

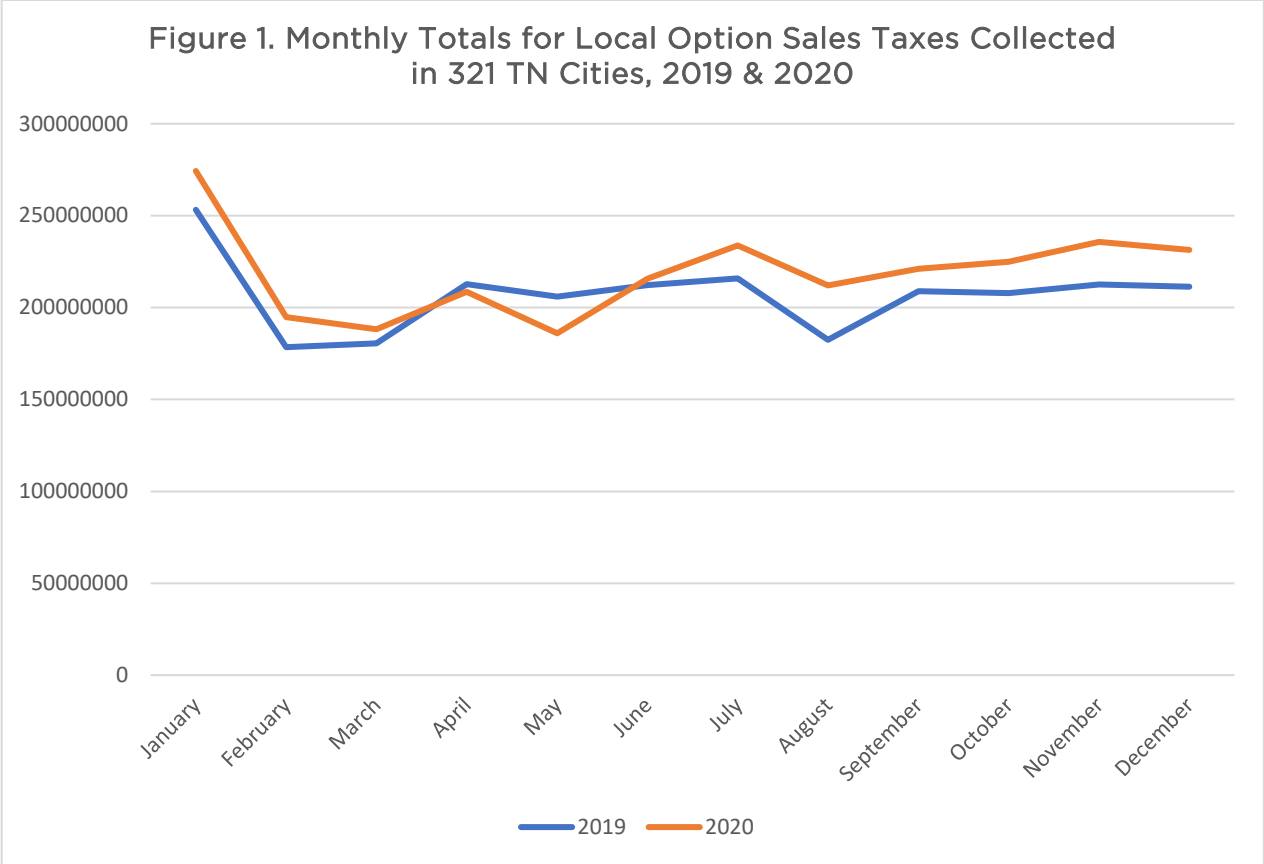
Data on community demographic, economic, and social variables was collected from the U.S. Census ACS 5-year average profile data for 2015-2019. Data on form of government was obtained from the UT MTAS Library resources, and data on whether a city had one or more interstate interchanges within corporate boundaries was ascertained by the authors using GIS software.

Among cities with few residents and very modest sales tax revenues, small changes in dollar totals result in large percent differences. These distort comparative analyses of variables that employ this measure. Consequently, the authors excluded from the analysis the 24 cities with very small population totals (less than 1,000) *and* with very large percent differences on the two dependent indicators (more than two-thirds larger than the mean). The cities not included in the study had a mean population of 408 and a mean percent change in 2019-2020 LOST revenue of -138%. The study includes the remaining 321 incorporated cities in TN.

Multiple regression techniques identified factors that helped to explain variation in the dependent indicators for the 321 cities in the study.

The Revenue Trough

Figure 1 shows the trend in monthly collections for local option sales tax revenues in 2019 and 2020. March 2020 marked the onset of a national recession and clearly, collections declined during the three-month period of March, April and May 2020 compared to the same period in 2019.



Total local sales tax revenue fell by 2.71% (about $16.2 million) during this 3-month period in 2020. This decline in the total amount of local sales tax collected masks tremendous variation among communities. Appendix A shows that only 79 cities (24.6%) actually realized a decline in local option sales tax revenue. The other 242 (75.4%) cities in the state recorded *increases* compared to 2019.

The 79 cities that fell short of 2019 collections averaged a -12.13% revenue decline. Several of the state's largest cities are in this group. This fact helps to explain why the 2020 trough appears in Figure 1 in the first place. Large declines in revenues among the state's biggest sales tax generators are bound to have a significant impact on the total revenue sum. Local sales tax revenue dropped, for example, by -15.15% in Nashville-Davidson, -10.21% in Bristol; -9.94% in Chattanooga, -6.89% in Johnson City, -5.88% in Knoxville, and -.922% in Kingsport. Coincidentally, revenue collections in Memphis, the state's second largest city, actually *increased* by 14.89% during March, April, and May 2020 compared to the same period in 2019. This anomaly alone helped to shallow the sales tax trough for the entire state.

Table 1 shows the dozen cities that experienced the largest percent reductions during the March, April and May 2020 period compared to the same period in 2019. Many of these cities have economies that are heavily dependent on tourism. Clearly, business shutdowns and limits on public gatherings had a disproportionate impact on these communities.

Table 1. Cities with the Largest Declines in Local Option Sales Tax Revenue in March, April, May 2019 to 2020

City	Percent
Cottage Grove	-57.63870164
South Carthage	-56.2279677
Pigeon Forge	-54.15126096
Gatlinburg	-48.71409792
Liberty	-39.14839614
Townsend	-36.44024653
Alexandria	-34.92491921
Crab Orchard	-28.64215927
Berry Hill	-27.32241146
Sevierville	-25.69058889
Pittman Center	-24.61990064
Lynchburg	-23.63471369

On the other hand, more than three-fourths of cities (242) realized sales tax revenue increases during this 2020 period. The average increase was 16.52% and the median increase was 11.52%. Appendix A lists the percent change for each of these cities. For municipal officials, revenue gains obviously are more desirable than losses. Nonetheless, these figures do not illuminate the extent to which revenue gains in these cities either met or fell short of forecasted amounts for this revenue source in local budgets. The trend line for 2019 suggests that sales tax revenue may normally decline by about 18% during the post-holiday cycle. The decline in 2020 however was almost twice as large (about 32%), something that was impossible to forecast 7-8 months earlier during preparation of the FY20 budget.

Post-Trough Revenue Recovery

Local sales tax collections during June, July & August 2020 show that there was a large rebound or recovery in revenue collected from this source. Among the cities with revenue declines during the previous three months, all except one (Copperhill) recorded an increase in local sales tax revenue during the subsequent three months. The average increase was +14.42%.

Among the 242 cities that did not experience any decline during the trough months, local sales tax revenue increased an average of 15.52% during June, July & August 2020. Appendix A indicates that only six cities in this group experienced a decline from the levels they attained during the trough period. These cities include Sommerville,

Springfield, Sharon, Graysville, Burns, and Newburn. So, of the 231 cities in the study, 236 or 73.5% experienced *neither* a year over year revenue decline in spring 2020 *nor* any revenue drop-off during the 3-month "post-trough" period.

Clearly, the pandemic's financial impact on municipal budgets was much less severe than reported by cities in other states (Guo and Chen 2021). What factors help to explain why TN cities weathered the economic consequences of the pandemic better than their counterparts in other states merits study but is beyond the focus of this report. This analysis focuses on an intrastate comparison that explores why some TN cities experienced larger declines in sales tax revenue during the trough and why some cities rebounded during the post-trough months.

Explaining Percent Change in LOST Revenue During the Trough and Recovery Periods

Previous research on the economic impacts of the pandemic suggest that several variables might help to explain the magnitude of change in revenue derived from highly elastic sources such as sales taxes (Guo & Chen 2021). Business shutdowns, social distancing rules, limits on public gatherings, and job loss drive affect behavior. Changes in consumer behavior with respect to travel, food purchases, and spending ability have ramifications for local budgets based on pre-pandemic forecasts of local revenues.

Accordingly, we hypothesized that local sales tax revenue would be lower during the early months of the pandemic in 2020 compared to the same period in 2019 among those cities that had:

- one or more interstate interchanges within their corporate boundaries
- a larger proportion of the local workforce employed in arts, entertainment, recreation and accommodation and food services,
- a larger proportion of the local workforce employed in transportation, and
- larger populations.

Conversely, we hypothesized that cities with a larger proportion of the local work force employed in healthcare support occupations would be less likely to experience a decline in local sales tax revenue. The demand for the services of health care professionals in the wake of the pandemic increased dramatically during the onset of the pandemic and typically exceeded the supply available. Full, sustained, and even expanded employment in this sector during the pandemic should help to minimize any sales tax revenue decline.

Table 2 shows the results of the regression of the percent change in local sales tax revenue in TN cities during the "Trough" months of March, April and May 2020 compared to the same period in 2019. The model explains just over 13% of the variation in local sales tax revenue among cities. Only one of the variables, total population, did not attain statistical significance meaning that city size does not help to explain variation in the local sales tax revenue. The other four variables did prove to be useful for explaining differences among cities' local sales tax revenue during the early months of the pandemic.

Table 2. Regression of Percent Change in Local Option Sales Tax During the Trough on Selected Community and Economic Variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	11.594	3.019		3.840	<.001
	Interstate Var	-6.511	2.376	-.151	-2.740	.006
	Transportation and Warehousing, and Utilities %	.580	.235	.131	2.464	.014
	Arts, Entertainment, and Recreation, and Accommodation and Food Services %	-.782	.188	-.225	-4.153	<.001
	Healthcare Support Occupations %	.827	.388	.113	2.132	.034
	Total Population	-1.310E-5	.000	-.039	-.720	.472
a. Dependent Variable: Trough19-20 MarAprMay %chng.						

R	R Square	Adjusted R Square	Std. Error of the Estimate
.383a	.147	.133	17.24382

Each of these factors had an impact in the expected direction. Cities with one or more interstate interchanges (potentially important sources for generating sales taxes) were more likely to experience a decline in revenue. Likewise, cities with larger proportions of the local workforce employed in Arts, Entertainment, Accommodation and Food Services also were more likely to record a local sales tax decline. Cities with larger proportions of the local workforce employed in transportation, warehousing and utilities also were more likely to experience sales tax reductions during the early months of the pandemic. The business shutdowns during the early months of a pandemic appears to have had a more direct negative impact on some types of transportation jobs.

Table 3 shows the results of the regression of the percent change in local sales tax revenue in TN cities during "Recovery" period of June, July and August 2020 compared with the previous 3 month "Trough" period. The variables in this model explain almost 20% of the variation in local sales tax revenue.

Table 3. Regression of Percent Change in Local Option Sales Tax During Recovery Period on Selected Community and Economic Variables

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.282	6.428		-.044	.965
	Trough19-20 MarAprMay %chng.	-.130	.029	-.239	-4.495	<.001
	Population Density (Per Sq. Mile)	-.005	.001	-.206	-3.703	<.001
	In Labor Force %	.140	.068	.137	2.047	.041
	Arts, Entertainment, and Recreation, and Accommodation and Food Services %	.403	.102	.213	3.950	<.001
	With Social Security Income %	.264	.076	.243	3.480	<.001
	Healthcare Support Occupations %	-.458	.209	-.115	-2.194	.029
a. Dependent Variable: Recovery MAM20 to JJA20						

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.462[a]	.213	.198	9.03815

We found that cities that had a deeper trough (or larger decline in sales tax revenue) faced a greater challenge in recovering during the subsequent three-month period. Likewise, cities with higher population densities had less robust percent increases in sales tax revenue. Finally, cities with larger proportions of their workforce employed in health care support occupations had smaller percent changes in revenue perhaps because they were among the cities least likely to experience much of a decline, if any, during the initial months of the pandemic.

The cities with larger percent increases in local sales tax revenue during the three-month period after the initial pandemic revenue "trough" had a larger proportion of their population in the labor force, and employed in Arts, Entertainment, Accommodation, and Food Services, and a larger proportion of the population with Social Security income (over 62 years of age).

These findings suggest that household travel and vacation plans may have been put on hold for a few months. Also, perhaps more people discovered that they could work remotely from locations where they normally might vacation. Age also appears to be a factor as residents sixty-two years of age and older resumed customary purchasing and travel behaviors in greater numbers than their younger counterparts. This led to cities with higher proportions of elderly residents recording larger percent increases in local sales tax revenue during June, July, and August 2020.

Conclusion and Implications

The pattern of municipal sales tax revenue in the months following the pandemic in 2020 suggests that local economies across the state are, in most cases, remarkably strong and resilient. About three-fourths of cities never experienced any decline in local sales tax revenue during the first three months of the pandemic. Among the one-fourth of cities that recorded a year over year decline in local sales tax revenue, their "trough" was short-lived. With the next three-month period, all cities except a few cities collected more local sales tax revenue.

We find evidence that cities more dependent on businesses linked to travel-related enterprises such as those located at interstate interchanges and those with workforces employed in entertainment, recreation, motels, and food services are more vulnerable to the kind of abrupt changes in consumer travel and purchasing behaviors that coincided with the pandemic's onset. The chief policy implication for cities with economies blessed with these features is to maintain a sufficient unassigned fund balance that can be used to fill the gap between revenue forecasts and collections. Generally, it is prudent for cities that are more dependent on elastic revenues such as sales taxes to maintain a fund balance even larger than the 3-month minimum reserve recommended by the Government Finance Officers Association (GFOA).

Clearly, pandemic-related mortalities, unemployment, business closures, school closers and the multi-faceted impacts on community life have left deep and lasting scars on millions of Americans. Although the Covid-19 pandemic was tragic, Tennessee municipalities proved to be resilient. Tennessee cities were indeed fortunate to weather the fiscal consequences of the pandemic remarkably well, at least as measured by collections in local sales tax revenue. This outcome is not accidental. It is evidence of competent management of local finances and local economic development. It also is testament to the prudence of the investment by the state in a variety of training opportunities in equipping local government officials with the knowledge and skills critical for continued successful fiscal management and governance of TN cities. Sometimes, the fruit of those investment is revealed best in the worst of circumstances, a condition for which the pandemic clearly qualifies.

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Appendix A.

Percent Change in Local Option Sales Tax Revenue During the Trough (Mar., Apr. May 2020 – 2019) and Recovery (Jun., Jul., Aug. 2020 - Mar., Apr., May 2020)

City	Trough (Mar, Apr, May 2020 minus 2019)	Recovery (Jun., Jul., Aug. 2020 minus Mar, Apr, May 2020)
Cottage Grove	-57.64	13.18
South Carthage	-56.23	16.90
Pigeon Forge	-54.15	9.47
Gatlinburg	-48.71	15.67
Liberty	-39.15	8.06
Townsend	-36.44	1.58
Alexandria	-34.92	25.02
Crab Orchard	-28.64	10.21
Berry Hill	-27.32	8.78
Sevierville	-25.69	2.65
Pittman Center	-24.62	10.73
Lynchburg	-23.63	7.78
Minor Hill	-23.27	39.12
Altamont	-23.21	5.76
Atwood	-22.73	3.92
Pikeville	-22.30	8.98
Parker's Crossroads	-19.19	11.78
Samburg	-16.84	20.76
Bells	-16.26	29.42
Nashville (Davidson County)	-15.15	25.40
Carthage	-14.82	10.21
Pleasant View	-14.60	12.34
Collierville	-14.43	11.36
Henning	-14.17	7.93

Grand Junction	-13.15	18.80
Byrdstown	-12.46	21.78
Monteagle	-12.08	2.49
Stanton	-11.87	19.56
Franklin	-11.76	9.81
Orlinda	-10.87	22.35
Caryville	-10.48	7.93
Bristol	-10.22	9.62
Farragut	-10.08	13.86
Cornersville	-10.07	18.34
Chattanooga	-9.94	9.86
Belle Meade	-8.95	9.72
Germantown	-8.93	12.69
Cookeville	-7.94	12.17
Niota	-7.79	42.32
Bell Buckle	-7.66	44.19
Jellico	-7.28	11.45
Cumberland Gap	-7.27	0.14
Johnson City	-6.89	26.55
Jackson	-6.89	19.19
Knoxville	-5.88	2.33
Mosheim	-5.71	9.85
St. Joseph	-5.37	8.52
Maryville	-5.11	7.59
Alcoa	-4.93	11.87
Etowah	-4.80	13.33
Copperhill	-4.72	-10.07
Manchester	-4.38	13.02
Moscow	-4.37	5.88
Morrison	-4.36	3.44
Gallaway	-4.36	12.19

Morristown	-4.18	15.56
Rockford	-4.01	10.91
Gordonsville	-3.96	22.07
Goodlettsville	-3.19	7.97
Eastview	-2.85	28.11
Crump	-2.51	15.98
Bluff City	-2.11	30.09
Watauga	-1.83	33.45
Oliver Springs	-1.61	22.99
Murfreesboro	-1.48	3.53
Hendersonville	-1.29	10.45
New Johnsonville	-1.18	16.11
Kingsport	-0.92	41.29
Dickson	-0.88	19.54
East Ridge	-0.86	14.73
Clinton	-0.85	28.21
Kimball	-0.82	21.08
Mt. Juliet	-0.71	17.70
New Tazewell	-0.63	6.96
Columbia	-0.51	3.00
Selmer	-0.49	1.57
Algood	-0.34	9.05
Crossville	-0.24	13.13
Lawrenceburg	-0.19	18.34
Paris	0.04	19.50
Dyersburg	0.07	16.12
McKenzie	0.15	30.63
Elkton	0.61	16.12
Smyrna	0.92	13.54
Celina	1.02	10.33

Bartlett	1.14	10.48
Elizabethton	1.19	20.47
Calhoun	1.22	17.06
Fayetteville	1.23	12.70
Livingston	1.45	15.06
Winchester	2.04	36.70
Oneida	2.05	37.68
South Pittsburg	2.17	7.42
Greeneville	2.19	8.50
Union City	2.22	22.86
Decherd	2.34	17.27
Winfield	2.61	35.93
Martin	2.76	8.99
Jasper	2.90	11.56
Jamestown	3.07	12.26
Lenoir City	3.22	26.15
Clarksville	3.27	14.88
Dunlap	3.37	10.12
McMinnville	3.37	14.52
Somerville	3.40	-4.56
Estill Springs	3.42	12.15
Lebanon	3.49	8.85
White House	3.50	5.64
Newport	3.52	61.40
Millersville	4.14	11.63
Dandridge	4.14	10.36
Red Bank	4.21	17.88
Lexington	4.29	11.92
Jacksboro	4.30	13.61
Portland	4.44	20.52
Englewood	4.53	13.43

Madisonville	4.61	22.48
Tusculum	4.86	18.83
Lewisburg	4.92	19.63
Whiteville	5.00	12.81
Millington	5.03	6.73
Brentwood	5.07	6.75
Smithville	5.09	36.57
Rogersville	5.13	18.45
Harriman	5.20	10.21
Covington	5.20	21.54
Rutledge	5.26	9.34
Cowan	5.29	9.32
Gallatin	5.40	17.20
Dayton	5.55	24.87
Ducktown	5.58	8.71
Ethridge	5.61	28.29
Dresden	5.70	8.43
Gilt Edge	5.74	9.81
Bolivar	5.81	11.46
Middleton	5.91	4.89
Greenback	5.93	5.73
Oak Ridge	6.00	9.43
Tiptonville	6.04	12.23
Brownsville	6.09	26.83
Coalmont	6.13	12.77
Kenton	6.17	13.82
Savannah	6.22	7.18
Tazewell	6.31	12.79
White Pine	6.52	9.88
Adamsville	6.70	23.30
Collegedale	6.83	15.65

Allardt	7.12	11.19
White Bluff	7.24	13.21
Rockwood	7.25	16.11
Hollow Rock	7.27	10.56
Trenton	7.29	12.93
Springfield	7.32	-0.49
Erin	7.33	10.38
Huntsville	7.43	9.78
Ripley	7.59	18.38
Tullahoma	7.72	21.58
Michie	7.72	20.75
Sweetwater	7.75	10.60
Huntingdon	7.76	12.19
Loudon	7.83	11.05
Shelbyville	7.87	28.21
Palmer	7.91	12.82
Sneedville	7.92	14.85
Hohenwald	7.96	12.47
Unicoi	7.98	30.19
Spring Hill	7.99	13.23
Jefferson City	8.01	13.06
Waynesboro	8.07	3.97
Mount Pleasant	8.25	18.18
Woodland Mills	8.37	16.99
Kingston	8.38	13.13
Lafayette	8.59	9.46
Atoka	8.65	21.35
Hickory Valley	8.69	1.25
Linden	8.71	22.68
Loretto	8.72	15.08
Decatur	9.06	13.56

Mount Carmel	9.12	8.47
Westmoreland	9.16	12.30
Saltillo	9.53	10.21
Monterey	9.59	12.83
LaFollette	9.60	9.75
Tracy City	9.64	19.24
Soddy-Daisy	9.78	8.64
Pulaski	10.02	6.11
Halls	10.44	9.31
Bulls Gap	10.56	10.63
Collinwood	10.71	3.90
Camden	10.71	8.56
Beersheba Springs	10.77	25.67
Gainesboro	10.80	7.04
Maynardville	10.86	7.93
Braden	11.05	6.01
Milan	11.11	18.65
Ardmore	11.21	10.02
Wartburg	11.37	16.21
Luttrell	11.42	17.45
Rocky Top	11.44	14.18
Centerville	11.48	13.46
Spring City	11.57	15.00
Baxter	11.84	14.31
Benton	12.11	20.91
Jonesborough	12.16	12.97
Greenfield	12.23	15.23
Watertown	12.52	34.26
Cross Plains	12.72	29.76
Cleveland	12.79	15.55
Gleason	12.80	13.35

Sharon	12.94	-2.10
Alamo	12.95	8.96
Oak Hill	13.39	16.75
Henderson	13.49	9.72
Vanleer	13.67	26.13
Three Way	14.01	15.22
Bruceton	14.13	16.68
Whitwell	14.18	32.99
Coopertown	14.19	22.93
Mountain City	14.54	21.85
Woodbury	14.63	17.91
South Fulton	14.75	10.90
Henry	14.79	11.73
Memphis	14.89	0.70
Garland	15.05	10.49
Hartsville	15.09	12.83
Fairview	15.13	11.11
Ashland City	15.15	23.75
Red Boiling Springs	15.58	40.29
Baileyton	15.77	13.57
Lakeland	16.02	24.00
Dover	16.04	12.09
La Vergne	16.07	14.53
Bean Station	16.32	21.68
Munford	16.60	20.69
Waverly	17.41	5.94
Vonore	17.57	36.04
Sunbright	17.79	5.23
Big Sandy	18.03	24.73
Puryear	18.21	58.47
Greenbrier	18.28	6.87

Graysville	18.95	-5.93
Decaturville	19.25	16.52
Parsons	19.27	8.65
Dyer	19.28	31.65
Church Hill	19.35	5.59
Erwin	19.38	9.00
Tellico Plains	19.88	51.65
Kingston Springs	20.07	9.07
Scotts Hill	20.44	7.96
Humboldt	21.06	17.49
Eagleville	21.21	7.70
Hornbeak	21.83	10.39
Guys	22.10	33.39
Arlington	22.56	8.31
Gibson	22.58	11.89
Philadelphia	22.64	9.10
Norris	22.79	15.82
Maury City	23.04	17.98
Blaine	23.30	13.49
Huntland	23.88	30.78
Petersburg	23.90	40.36
Bethel Springs	24.51	32.31
Harrogate	24.73	12.24
Lakesite	24.83	6.81
McEwen	24.84	8.21
Parrottsville	24.99	20.21
Surgoinsville	25.15	8.59
Ridgely	25.16	14.46
Troy	25.29	15.14
Lobelville	25.55	30.19
Milledgeville	25.60	11.18

McLemoresville	25.62	11.56
Friendship	25.67	11.84
Obion	26.43	9.28
Clifton	26.43	18.56
Wartrace	27.89	33.43
Lookout Mountain	29.03	19.34
Pegram	29.11	11.96
Trezevant	29.30	5.33
Thompson's Station	29.80	7.16
Sparta	29.86	8.97
Enville	29.98	8.39
Charlotte	31.57	23.03
Gruetli-Laager	31.61	21.83
Hornsby	31.70	11.79
Piperton	31.81	9.35
Signal Mountain	31.96	10.25
Walden	32.02	19.14
Pleasant Hill	32.23	26.03
Burns	32.57	-3.84
Athens	33.62	8.18
Lynnville	34.14	27.44
Bradford	35.17	7.71
Doyle	36.41	65.79
Mason	37.22	8.79
Rutherford	37.50	9.54
New Market	37.52	4.95
Brighton	37.84	14.82
Tennessee Ridge	37.87	7.56
Ramer	37.89	15.31
Ridgetop	38.79	31.62
Auburntown	39.84	15.24

Sardis	40.95	12.24
Oakland	41.14	17.84
Friendsville	43.13	5.57
Centertown	43.28	7.13
Medina	43.96	13.79
Nolensville	46.43	34.64
Chapel Hill	46.86	30.19
Spencer	47.47	13.02
Medon	47.55	11.24
New Hope	49.64	9.57
Powells Crossroads	50.52	13.13
Louisville	52.25	13.96
Plainview	54.32	11.47
Orme	55.17	12.39
Newbern	55.87	-0.71
La Grange	57.99	12.40
Forest Hills	59.34	24.01
Clarksburg	60.24	6.08
Silerton	63.47	13.40
Mean	16.52	15.52389

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