

# TACIR



# FAST FACTS

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One of TACIR's goals is to bring useful information to Tennessee's residents and to everyone who is interested in understanding the challenges public policy makers face. As part of that continuing effort, we are developing a set of indicators that anyone can use to assess what's going on in their own county. This report is the second in a series that will present and explain those indicators. The series is intended to prompt discussion. Your feedback is welcome.

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## Local Economic Activity Status and Momentum of Tennessee Counties

by Lynnisse Roehrich-Patrick

In these challenging times, understanding economic conditions across the state is more important than ever. TACIR's role in facilitating that assessment is to evaluate objective data and find ways to present it that are at once credible and easy to understand. For this report in our series on Tennessee's counties, we identified five readily available and current measures of the economic "health" of the state's county areas. And as noted in the first report in this series, we have devised a way—one way—to combine them into a single indicator of current status and, along with that, an indicator of momentum. We define momentum for this purpose as the speed and direction the status indicator is moving. *All of the data used for the indices in this report are divided by population so that overall size doesn't matter.*

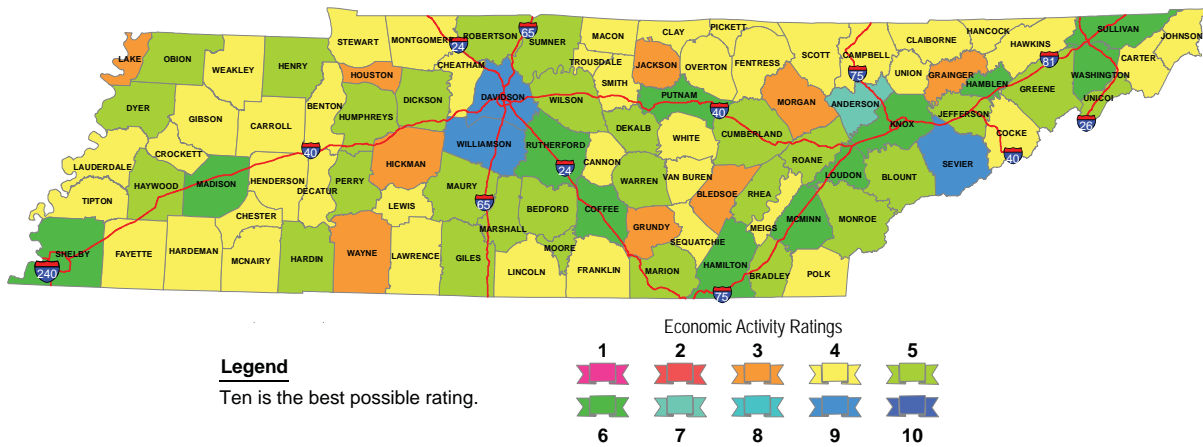
Economic activity varies widely across the state—even when compared to population—and differences appear to be increasing.

*TACIR's new index of local economic activity, described on page 4, confirms that economic activity varies a lot from county to county, and there are clear urban-rural patterns.* In the first report in this series, we saw that residents of Williamson County have the highest economic well-being in the state. We noted then that Williamson County has expanded its business base and become a job generator as well. Based on TACIR's new economic activity index, Williamson now shares the healthiest-economy-in-the-state status with Davidson. Sevier County, our thriving "Gateway to the Smokies," comes very close. The next closest county, Anderson, falls considerably behind these three.

Nine counties, shown in orange on Map 1, are grouped toward the opposite end of the scale. All rate below 4 on the 10-point scale. In contrast with our index of personal and family well-being presented in the first report in this series (see Fast Facts No. 5-1, May 2008), no county rates below a 3 for economic activity. The county ratings for economic activity do not track those for personal and family economic well-being as closely as you might expect. Hancock County alone rated less than 2 on the personal and family economic index, but it rates 4.0 on the overall economic activity scale and out performed ten other counties on this scale.

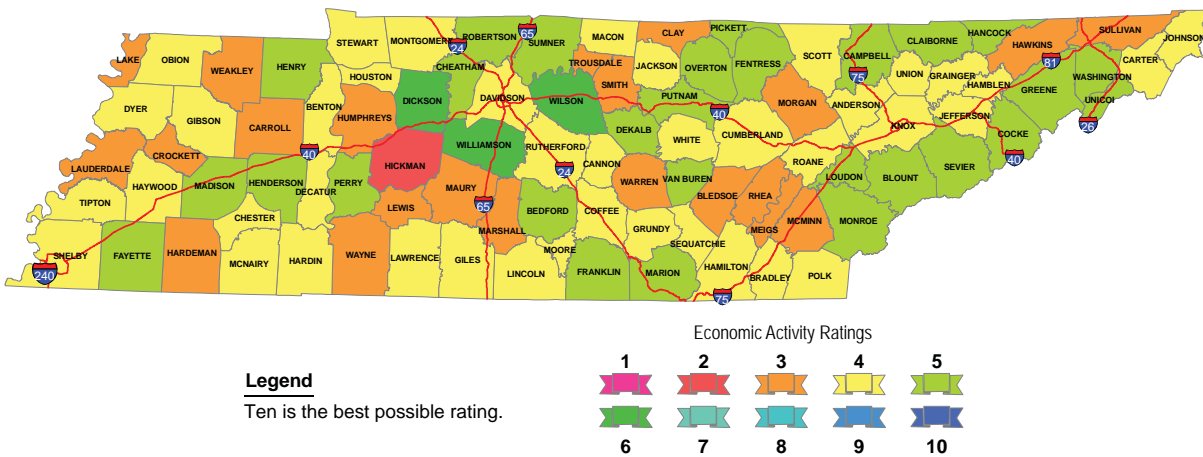
The ratings for economic activity do not show the same extremes as the index for personal and family economic well-being does. Why this is is not clear. But most counties rate a 4 or less on both indices, and around three-quarters of them rate a 5 or less on both indices.

**Map 1. Local Economic Activity  
County Ratings for Current Status (2006)**



*While economic activity varies widely across Tennessee's 95 counties, the rate of change does not.* The rate of change in economic activity varies considerably more across the counties than the rate of change in personal and family economic well-being. Two counties (Williamson and Wilson) stand out here with ratings of 6.9 and 6.8; Dickson County comes close with a rating of 6.2. Hickman, with a rating of 2.9, lags considerably behind the rest. A colorful momentum map is not necessarily a good thing. In this case, the color variation occurs because so many counties have below-average momentum as economic activity becomes more concentrated in a few counties.

**Map 2. Local Economic Activity  
County Ratings for Momentum (1990-2006)**



*Voting with their feet?* More counties fared better for residents' economic well-being than for overall economic activity (see our May 2008 Fast Facts report). We think this is because many residents cross county lines each day for work, commuting to counties with more economic activity. They may earn more by doing that, but they also spend more of their income outside their county of residence. This phenomenon, reflected in Map 1, means that in order to provide comparable public services, their home cities and counties would have to charge higher tax rates. It may be that residents either don't need or don't want comparable services. At any rate, rising fuel prices are making this lifestyle less cost effective. If high prices hold, we may see this pattern change.

## Overall Local Economic Activity

	Current Status		Momentum	
	10-pt Scale	Rank	10-pt Scale	Rank
Tennessee	6.1		4.6	
Anderson County	7.1	4	4.0	71
Bedford County	5.2	35	5.4	14
Benton County	4.2	76	4.4	59
Bledsoe County	3.9	89	3.7	81
Blount County	5.9	17	5.2	24
Bradley County	5.7	22	4.6	52
Campbell County	4.4	62	5.0	31
Cannon County	4.1	79	4.7	41
Carroll County	4.3	71	3.8	75
Carter County	4.0	82	4.7	46
Cheatham County	4.8	49	5.7	7
Chester County	4.1	78	4.5	56
Claiborne County	4.6	53	5.2	23
Clay County	4.0	86	3.2	92
Cocke County	4.4	67	5.0	29
Coffee County	6.2	12	4.3	65
Crockett County	4.3	70	3.8	78
Cumberland County	5.5	27	4.7	47
Davidson County	8.7	2	4.3	66
Decatur County	4.6	54	4.9	33
DeKalb County	5.3	33	5.3	17
Dickson County	5.9	19	6.2	3
Dyer County	5.5	28	4.4	60
Fayette County	4.9	48	5.1	27
Fentress County	4.3	72	5.0	30
Franklin County	4.7	50	5.5	10
Gibson County	4.9	47	4.5	54
Giles County	5.0	44	4.9	34
Grainger County	3.7	93	4.7	48
Greene County	5.3	31	5.2	22
Grundy County	3.5	95	4.5	53
Hamblen County	6.8	7	4.8	38
Hamilton County	6.9	5	4.4	61
Hancock County	4.0	85	5.6	8
Hardeman County	4.4	63	3.9	73
Hardin County	5.6	24	4.7	42
Hawkins County	4.4	65	3.6	85
Haywood County	5.0	40	4.4	63
Henderson County	4.9	45	5.4	15
Henry County	5.0	43	5.2	20
Hickman County	3.9	87	2.9	95
Houston County	3.9	90	4.5	58
Humphreys County	5.6	26	3.4	88
Jackson County	3.8	91	4.1	70
Jefferson County	5.0	42	4.7	49
Johnson County	4.0	84	4.7	45
Knox County	6.6	9	4.6	50

	Current Status		Momentum	
	10-pt Scale	Rank	10-pt Scale	Rank
Lake County	3.7	92	3.3	89
Lauderdale County	4.2	75	3.2	90
Lawrence County	4.5	58	4.0	72
Lewis County	4.0	83	3.2	91
Lincoln County	4.7	52	4.7	43
Loudon County	6.1	15	5.7	6
McMinn County	6.2	13	3.7	80
McNairy County	4.6	56	4.6	51
Macon County	4.4	61	4.9	36
Madison County	6.9	6	5.1	28
Marion County	5.1	39	5.5	11
Marshall County	5.8	21	3.8	77
Maury County	5.8	20	3.6	84
Meigs County	4.0	80	3.5	86
Monroe County	5.2	37	5.2	21
Montgomery County	4.9	46	4.7	44
Moore County	5.6	25	4.2	68
Morgan County	3.6	94	3.5	87
Obion County	5.6	23	4.8	39
Overton County	4.2	73	5.1	25
Perry County	5.0	41	5.6	9
Pickett County	4.5	59	5.9	4
Polk County	4.3	69	4.5	55
Putnam County	6.1	14	5.1	26
Rhea County	5.3	34	3.8	76
Roane County	5.4	30	4.9	32
Robertson County	5.2	36	5.5	13
Rutherford County	6.0	16	4.5	57
Scott County	4.4	68	4.9	35
Sequatchie County	4.6	57	4.2	69
Sevier County	8.5	3	5.3	19
Shelby County	6.3	11	4.4	62
Smith County	4.7	51	3.1	93
Stewart County	4.5	60	4.3	64
Sullivan County	6.5	10	3.7	83
Sumner County	5.3	32	5.5	12
Tipton County	4.2	74	4.8	40
Trousdale County	4.4	64	3.1	94
Unicoi County	5.4	29	5.7	5
Union County	4.0	81	4.9	37
Van Buren County	4.2	77	5.3	18
Warren County	5.2	38	3.7	82
Washington County	6.8	8	5.3	16
Wayne County	3.9	88	3.8	74
Weakley County	4.4	66	3.8	79
White County	4.6	55	4.3	67
Williamson County	8.7	1	6.9	1
Wilson County	5.9	18	6.8	2

Note: Rankings are based on unrounded ratings. Ties would occur only if the unrounded ratings were identical.



## Economic Activity

### Top Ten Counties for Current Status

- 1 Williamson
- 2 Davidson
- 3 Sevier
- 4 Anderson
- 5 Hamilton
- 6 Madison
- 7 Hamblen
- 8 Washington
- 9 Knox
- 10 Sullivan

### Top Ten Counties for Momentum

- 1 Williamson
- 2 Wilson
- 3 Dickson
- 4 Pickett
- 5 Unicoi
- 6 Loudon
- 7 Cheatham
- 8 Hancock
- 9 Perry
- 10 Franklin

This is just one way to look at the variation of economic activity across the state's 95 counties. We offer it as a basis for discussion and thought. Comments about it are welcome.

The TACIR staff will be working on quality of life measures and measures of human capital for future indices.

## What goes into TACIR's indicator of economic activity?

There are several readily available and widely used measures of county-level economic activity in Tennessee: taxable property values from the state Comptroller's Division of Property Assessment, taxable sales from the state Department of Revenue, employment and wage data from the U.S. Bureau of Labor Statistics, and commuting patterns from the U.S. Census Bureau. For this indicator, TACIR staff chose total appraised property values; the combined value of commercial, industrial, and utility property; the number of workers commuting into each county for work; and taxable sales. All five measures of economic activity were divided by the population of each county so that the size of the county would not affect its rating.

## How does TACIR combine all of those different measures into one?

It's not easy, but it's not highly technical. If you've had a college course in statistics, you probably know how. And if you have an ordinary spreadsheet package like Excel, you can easily do it. Some high school math classes include these methods. Each of the measures is on a different scale. Most are in dollars, but they vary widely in amounts per capita, with property values per capita ranging from around \$30,000 to well over \$100,000 and taxable sales ranging from less than \$2,000 to only \$29,000. The number of workers commuting into each county from elsewhere, when divided by the county's population, is a tiny fraction.

One way to combine these widely varying sets of data would be simply to rank the counties for each one and then combine, maybe average, the rankings. But rankings fail to indicate how far apart the actual numbers are. Another way to combine them, admittedly more complicated, is to use a statistical measure called the standard deviation to determine how far each county is from the average of all counties. You can subtract the figure for each county by the average and divide the difference by the standard deviation to get something that is arbitrarily called a z-score. Z-scores show how far a number is from the average. Z-scores for different measures—like per capita income and percent of children living with families that are poor—can be combined, and they still show how close or far apart the original numbers are.

## That sounds complicated. How does TACIR make it easy to understand?

We take those z-scores and average the five figures for each county and convert the result to a rating on a ten-point scale. A ten is the top of the heap. A one is at the bottom. But there may or may not be a ten or a one. That depends on how spread out the counties are to begin with. Take poverty, for example, one of the measures used in our first report on these indices. Theoretically, it's possible for a county to have no one who's poor. It would be at 0%, and that would be a ten. It's equally possible (theoretically) for everyone in a county to be poor. That county would be at 100%, and it would get a one. But no Tennessee county is at 100%, and no one is at 0%. The counties' poverty rates are more clumped than that. And the amount of change in the counties' poverty rates as time goes by is even more clumped. So counties' ratings on the ten-point scale would be equally clumped around the middle. By allowing the data itself to determine how to spread the counties over the ten-point scale, we are able to show how similar and how different they are. To make it easier to compare the different indices that we have presented and the ones we will develop in the future, we use the same ten-point scale for all of them.