

# TACIR

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on Intergovernmental Relations



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## *MEMORANDUM*

**TO:** TACIR Commission Members

**FROM:** Harry A. Green *Harry*  
Executive Director

**DATE:** June 30, 2009

**SUBJECT:** Fiscal Capacity in Transition

TACIR produced the sole fiscal capacity element to be used in calculating Basic Education Plan (BEP) funding from the inception of the program in 1992 through fiscal year 2007. Starting with fiscal year 2008, a new tax capacity model produced by the University of Tennessee began a phased replacement of the TACIR model. The TACIR model was an early effort, and subsequent suggested improvements have not been implemented because they invariably change the distribution of BEP funds, creating both winners and losers. When advantages are so evenly balanced with disadvantages, the status quo generally wins.

As TACIR has pointed out in previous publications, there is no other state quite like Tennessee in school system organization. Even the most general statement that every county has a county system that is the default provider of public education has an exception. Gibson County has only smaller subsystems and no countywide system. In the rest of the counties, some cities and special school districts have opted out of the county system and run separate systems, though many counties have just one school system.

Tennessee school boards do not have taxing authority. Cities and counties must request that their local governing bodies pass necessary increases, and special school districts require permission from the state legislature. And counties must parcel out the funds from any taxes they levy for education based on the number of students attending school in each district. Furthermore, BEP funds are provided directly to school systems. In counties with multiple systems, all of the systems in the county are credited with having the same fiscal capacity,

though the tax-generating assets are likely not evenly distributed among those systems.

TACIR attempted to update the formula over the years to correct what staff sees as its biggest flaws:

- measuring capacity at the county level rather than the system level
- relying on outdated tax equivalent payment data
- the exclusion of state-shared tax revenue
- weaknesses in the per capita personal income measure
- questions about the usefulness of service burden

These attempts brought attention to what others feel are the model's biggest weakness: its complexity. The TACIR model makes use of five measures to figure a county's fiscal capacity:

- sales tax base,
- property tax base,
- the percent of property assessments that are based on residential and farm property,
- per capita income, and
- the number of students as a percent of the total population.

The first two measure ability to generate tax dollars and the third is a measure of the ability to export the tax burden to non-residents of the county. Per capita income is included as a measure of ability to pay, and the percentage of population that are students is the service burden, measuring how many members of the general population support each student. The weight of each measure in the calculations is determined by its average contribution across counties to local education spending in the past.

TACIR runs these measures, along with actual local education funding, through a regression, which is a statistical tool that measures the average effect of each variable on local education funding. The TACIR model then uses that average effect to calculate the fiscal capacity for each county based on the levels of each fiscal capacity input that county has. For those who have not studied statistics, it is very much a black box process, and such processes tend to generate mistrust. So there was a will to change the method to something simpler, but very little agreement on what to change it to. Once again, counties tended to back the method that benefited them most.

PC369, passed in 2007, required that fiscal capacity be figured in the future using an average tax rate model based only on the sales and property tax bases. The new model to replace the TACIR model is a tax capacity model calculated by the Center for Business and Economic Research (CBER) at the University of Tennessee. It measures the dollars a county would raise if it levied the average

## Formula for Calculating CBER Fiscal Capacity Index

$\begin{array}{l} \text{Property} \\ \text{Tax Base} \end{array} \times \begin{array}{l} \text{Estimated} \\ \text{Average} \\ \text{Property Tax} \\ \text{Rate Used} \\ \text{for} \\ \text{Education} \end{array}$	+	$\begin{array}{l} \text{Estimated} \\ \text{Value of} \\ \text{Industrial} \\ \text{Development} \\ \text{Board} \\ \text{Projects} \end{array} \times 38\%$	+
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$\begin{array}{l} \text{Actual} \\ \text{Sales Tax} \\ \text{Revenues} \end{array} \times$	$\begin{array}{l} \text{Local Rates and} \\ \text{Rate Changes} \\ \text{During the Year} \end{array} \times$	$\begin{array}{l} \text{Estimated} \\ \text{Average Sales} \\ \text{Tax Rate} \\ \text{Used for} \\ \text{Education} \end{array}$
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Sum of Numerators for All Counties

tax rate from across the state on its sales and property tax bases. It sounds simple, but Tennessee's complex school finance system has also made this approach less straightforward.

CBER calculates the local sales tax base using actual fiscal year sales tax collections divided by the local sales tax rate adjusted for varying rates in a county or changes in the rate during the fiscal year. The adjustment rate they use is internally produced. CBER includes the estimated assessed total value of properties with Industrial Development Board tax exemptions to help correct for exempted properties in the tax base. For business property, land is assessed at 40% of appraised value and personal property is assessed at 30% of appraised value. CBER and the Department of Property Assessments determined that the average distribution of land and other property for businesses suggests that 38% is the best estimate of what assessments would be on these properties if they were not exempt. CBER adds 38% of Industrial Development Board estimated property values, as reported by the businesses to the Comptroller.

In order to smooth the spikes that can be caused by year-to-year changes in these variables, both models use three-year averages to determine fiscal capacity. TACIR has traditionally made its results available to the Department of Education in early March so that the department can produce BEP estimates on April 1. Because of events in the legislature the past two years, the Department has not produced those April 1 estimates. This has allowed CBER to make use of newer property tax base numbers, so that both bases used in the CBER model come from the same year. If this situation continues, TACIR may begin using the newer data in its model as well and deliver the results a month later.

PC369 requires that its provisions "be phased in, in accordance with funding as made available each fiscal year through the general appropriations act." During the transition from the TACIR to the CBER model, the results of both are to be used in calculating fiscal capacity. In the first year of transition, FY 2008, each model was used to calculate 50% of each county's fiscal capacity.

PC369 additionally required that "no LEA's measurement of ability to raise local revenue shall be adjusted more than forty percent (40%) within the BEP formula in any single year." There was an administrative decision made within the Governor's office and the Department of Education to lower that measure to 30% in practice. In the first year of transition (FY2008), if the CBER calculation produced a percent of total fiscal capacity number that was more than a 30% change from the TACIR calculation, then the CBER percentage was adjusted such that the change was only 30%.

The county with the largest difference can serve as an example. In FY2008, Hancock County's percent of total state fiscal capacity as measured by the TACIR model was .0197%. The comparable measure produced by the CBER model was .0517%. Dividing the CBER number by the TACIR number and subtracting one shows the increase  $[(.0517/.0197) - 1 = 1.62]$  of 162%. The

CBER calculation for Hancock County was then adjusted so that this change would only be 30%.  $[(.0256/.0197) - 1 = .3]$ . Thus Hancock County's CBER calculation was adjusted to .0256%. The two calculations were then averaged to produce Hancock County's final fiscal capacity percent of .0226%.

Since each model was to supply 50% of the final fiscal capacity figure, the two indexes were simply averaged to get the final fiscal capacity calculation. The weight of each measure was to shift toward CBER annually until its calculation was the only one used. Due to lack of necessary funding, however, the transition appears to have stalled and the percentages will remain at 50/50 for the foreseeable future.

In FY2008, there were 27 counties that required a fiscal capacity adjustment because the CBER model assigned them a fiscal capacity that was at least 30% higher than the level produced by the TACIR model. These counties, and the percentage increase the CBER model represented over the TACIR model, are shown to the right.

In FY2009, the methodology used to identify counties that needed their fiscal capacities reduced to smooth the transition changed. Since the legislative requirement compared the fiscal capacity measure to that of the previous year, the average of the two models became the comparison rather than the TACIR model number alone. Continuing with the Hancock County example, the 2009 TACIR figure was .0194%. The new CBER calculation was .0522%. These numbers are both pretty similar to the year before, and the old formula would have produced a similar adjustment.

The new adjustment formula averaged the two calculations first and then compared them to the final number from the previous year. So .0194% and .0522% average to .0358%. This represents an increase of  $[(.0358/.0226) - 1 = .584]$  58.4%. This exceeds 30%, so CBER's number was replaced by one that would make the increase exactly 30%:  $[(.0294/.0226) - 1 = .3]$ . Thus Hancock County's FY2009 percent of state fiscal capacity became the average of .0294% (the adjusted CBER number) and .0226% (the TACIR number), which comes out to .026%.

<b>County</b>	<b>Percentage increase of CBER model over TACIR model FY08</b>
Bledsoe	48.45%
Cumberland	42.40%
DeKalb	44.21%
Fayette	42.47%
Franklin	42.17%
Grainger	48.89%
Hancock	162.76%
Haywood	42.29%
Hickman	66.10%
Jefferson	40.22%
Johnson	91.35%
Lake	36.95%
Lewis	30.25%
Loudon	34.38%
Meigs	77.30%
Monroe	34.13%
Moore	44.15%
Morgan	59.36%
Perry	31.23%
Pickett	106.67%
Polk	33.03%
Sequatchie	48.46%
Sevier	34.45%
Stewart	47.16%
Union	100.68%
Van Buren	70.68%
Wayne	65.30%

This calculation drastically reduced the number of counties that received a transitional adjustment to just three: Hancock, Pickett, and Union. When this methodology was repeated in FY2010, no counties received an adjustment.

The number of counties that still have a CBER fiscal capacity percent that is at least 30% higher than that produced by TACIR has remained stable over the three year period. In FY 2009, Clay County was added to the list while Perry and Haywood Counties came off of it. In FY2010, Cocke, Grundy, Hardin and Scott Counties were added to the list, while Lake County came off of it.

### **FY 2010**

The fiscal capacity results calculated for FY2010 using both models are attached, as are the final numbers that will be used in the BEP. Some counties have a higher fiscal capacity percentage under the TACIR model (as they must since the percentages for all counties must sum to 100% for each model), but the differences are smaller. The TACIR model does not produce a percentage that represents a 30% increase over the CBER model for any counties. Furthermore, only four counties have a double-digit increase when comparing the TACIR model results to the CBER results: Coffee (11.11%), Montgomery (23.92%), Obion (11.54%), and Shelby (25.37%). For comparison, 24 counties have a CBER fiscal capacity that is between 10% and 30% higher than the TACIR capacity. This means that a total of 53 counties have double-digit fiscal capacity increases when figured by the CBER model vs. the TACIR model. A map showing these counties is attached.

To see what might account for this difference, staff looked at the components of TACIR's model that are not used in the CBER model to see what the causes might be. This analysis is on the FY2010 counties that have at least a 30% higher fiscal capacity using the CBER model than the TACIR model. For ease of discussion, we will call these counties the "big change" counties. There are 29 of them.

The 29 big change counties are fairly evenly distributed over the per pupil property tax base quintiles as can be seen in the attached map. It is interesting to note that all but six of the counties had above average growth in their per pupil property tax base compared to last year's figure. This suggests that these big change counties have varying levels of capacity based on the property tax base but they share the fact that the property tax base is growing. Just under half of the counties overall have above average growth (44 of 95) on this measure, while 79% of the big change counties did.

The sales tax base did not offer a similar result. Of the 29 big change counties, fully 13 are in the bottom quintile for sales tax base per pupil tax base. The rest of this distribution can be seen in the attached map. As with the property tax base measure, the big change counties are more likely to have had above average growth in the sales tax base than the other 66 counties. 39 of 95 counties (41%)

## Fiscal Capacity Results for FY2008 to FY2010

	TACIR Result	CBER Result	Fiscal Capacity for BEP FY 2010	Percentage Change in Capacity from FY09 to FY10	Fiscal Capacity for BEP FY 2009	Percentage Change in Capacity from FY08 to FY09	Fiscal Capacity for BEP FY 2008
Anderson	1.12%	1.08%	1.0952%	-0.34%	1.0990%	0.58%	1.0927%
Bedford	0.54%	0.56%	0.5474%	-0.18%	0.5484%	0.88%	0.5436%
Benton	0.14%	0.16%	0.1468%	-0.39%	0.1474%	-1.02%	0.1489%
Bledsoe	0.06%	0.10%	0.0812%	-2.40%	0.0832%	6.49%	0.0781%
Blount	1.69%	2.06%	1.8744%	1.24%	1.8514%	-0.52%	1.8611%
Bradley	1.38%	1.39%	1.3847%	-0.48%	1.3914%	-0.16%	1.3937%
Campbell	0.38%	0.47%	0.4231%	-0.04%	0.4233%	1.73%	0.4161%
Cannon	0.10%	0.12%	0.1069%	-1.32%	0.1084%	0.64%	0.1077%
Carroll	0.24%	0.27%	0.2561%	-4.26%	0.2675%	-5.03%	0.2817%
Carter	0.46%	0.53%	0.4948%	0.95%	0.4902%	0.76%	0.4865%
Cheatham	0.39%	0.42%	0.4051%	-0.22%	0.4061%	1.91%	0.3985%
Chester	0.12%	0.13%	0.1254%	-2.63%	0.1288%	-2.16%	0.1316%
Claiborne	0.24%	0.30%	0.2745%	-0.50%	0.2759%	0.05%	0.2757%
Clay	0.05%	0.07%	0.0595%	-1.04%	0.0601%	-2.96%	0.0619%
Cocke	0.30%	0.39%	0.3474%	1.21%	0.3432%	0.26%	0.3424%
Coffee	0.87%	0.78%	0.8238%	-0.59%	0.8287%	-0.75%	0.8350%
Crockett	0.11%	0.11%	0.1129%	-4.92%	0.1188%	-3.98%	0.1237%
Cumberland	0.62%	0.89%	0.7564%	1.25%	0.7471%	6.49%	0.7015%
Davidson	14.86%	14.54%	14.6980%	0.11%	14.6820%	0.68%	14.5822%
Decatur	0.11%	0.12%	0.1144%	-0.20%	0.1147%	-0.90%	0.1157%
DeKalb	0.17%	0.25%	0.2119%	0.60%	0.2106%	5.87%	0.1989%
Dickson	0.66%	0.71%	0.6852%	-0.25%	0.6869%	-1.02%	0.6940%
Dyer	0.55%	0.50%	0.5250%	-2.63%	0.5391%	-1.77%	0.5488%
Fayette	0.30%	0.45%	0.3791%	2.81%	0.3688%	7.90%	0.3418%
Fentress	0.14%	0.18%	0.1615%	2.16%	0.1581%	2.60%	0.1541%
Franklin	0.38%	0.54%	0.4601%	-0.85%	0.4641%	3.07%	0.4502%
Gibson	0.53%	0.49%	0.5109%	-1.53%	0.5188%	-1.47%	0.5266%
Giles	0.33%	0.35%	0.3385%	-1.97%	0.3453%	-1.30%	0.3499%
Grainger	0.10%	0.17%	0.1334%	0.84%	0.1323%	8.47%	0.1219%
Greene	0.88%	0.87%	0.8752%	-0.83%	0.8825%	2.03%	0.8649%
Grundy	0.08%	0.11%	0.0942%	0.84%	0.0934%	-2.22%	0.0955%
Hamblen	0.99%	1.01%	0.9961%	-2.05%	1.0169%	-0.91%	1.0263%
Hamilton	6.13%	5.92%	6.0256%	-0.68%	6.0667%	-0.22%	6.0803%
Hancock	0.02%	0.05%	0.0354%	20.30%	0.0294%	30.00%	0.0226%
Hardeman	0.20%	0.23%	0.2124%	-1.50%	0.2156%	-2.04%	0.2201%
Hardin	0.30%	0.39%	0.3456%	2.57%	0.3370%	0.60%	0.3349%
Hawkins	0.48%	0.54%	0.5095%	-1.63%	0.5180%	-3.25%	0.5354%
Haywood	0.19%	0.23%	0.2105%	-2.63%	0.2162%	-1.11%	0.2187%
Henderson	0.29%	0.28%	0.2887%	-3.61%	0.2996%	-2.68%	0.3078%
Henry	0.38%	0.40%	0.3909%	-1.88%	0.3984%	-1.70%	0.4053%
Hickman	0.12%	0.19%	0.1538%	0.22%	0.1534%	15.71%	0.1326%
Houston	0.05%	0.07%	0.0599%	-1.61%	0.0609%	-1.61%	0.0619%
Humphreys	0.23%	0.24%	0.2324%	-0.63%	0.2338%	-1.97%	0.2385%
Jackson	0.07%	0.09%	0.0777%	-2.70%	0.0799%	-2.04%	0.0816%
Jefferson	0.46%	0.66%	0.5581%	1.17%	0.5517%	5.86%	0.5212%
Johnson	0.10%	0.18%	0.1361%	4.90%	0.1298%	26.56%	0.1025%
Knox	8.16%	7.98%	8.0682%	-0.01%	8.0693%	-0.04%	8.0722%
Lake	0.04%	0.05%	0.0411%	-1.56%	0.0417%	2.02%	0.0409%
Lauderdale	0.19%	0.21%	0.2025%	-2.13%	0.2069%	-2.85%	0.2130%
Lawrence	0.41%	0.41%	0.4106%	-4.10%	0.4282%	-3.51%	0.4438%

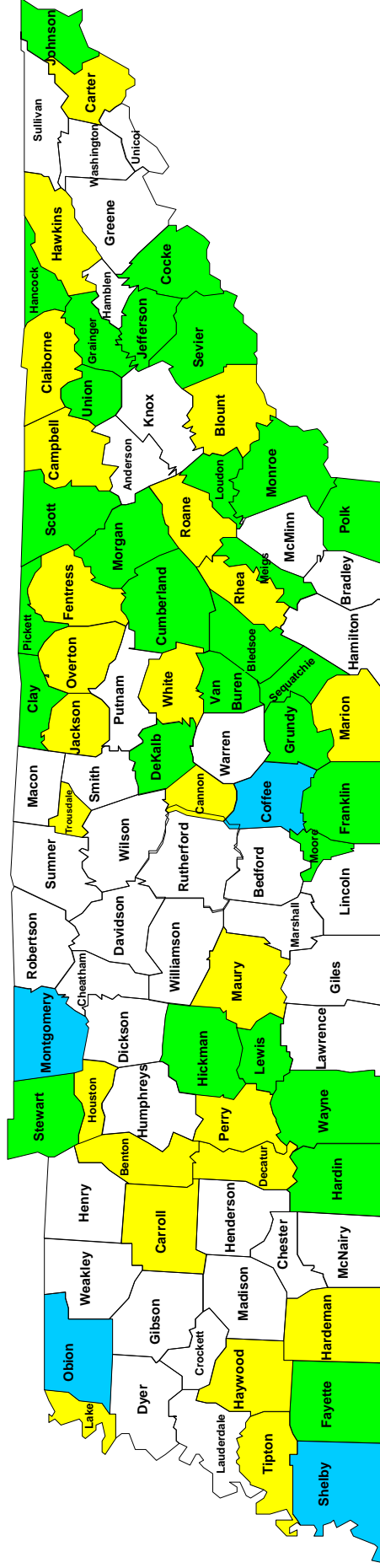
## Fiscal Capacity Results for FY2008 to FY2010

	TACIR Result	CBER Result	Fiscal Capacity for BEP FY 2010	Percentage Change in Capacity from FY09 to FY10	Fiscal Capacity for BEP FY 2009	Percentage Change in Capacity from FY08 to FY09	Fiscal Capacity for BEP FY 2008
Lewis	0.08%	<b>0.11%</b>	0.0945%	1.17%	0.0935%	-1.35%	0.0947%
<i>Lincoln</i>	0.33%	<b>0.36%</b>	0.3492%	-0.66%	0.3515%	0.19%	0.3509%
<i>Loudon</i>	0.61%	<b>0.87%</b>	0.7431%	3.27%	0.7195%	5.96%	0.6790%
<i>McMinn</i>	0.70%	<b>0.77%</b>	0.7342%	0.57%	0.7300%	-0.04%	0.7303%
McNairy	<b>0.26%</b>	0.24%	0.2528%	-1.24%	0.2560%	0.12%	0.2557%
Macon	0.21%	<b>0.22%</b>	0.2165%	-0.49%	0.2176%	1.13%	0.2151%
Madison	<b>1.84%</b>	1.76%	1.8000%	-1.88%	1.8346%	-2.67%	1.8850%
<i>Marion</i>	0.33%	<b>0.39%</b>	0.3611%	0.54%	0.3591%	0.58%	0.3570%
Marshall	0.35%	<b>0.37%</b>	0.3602%	-0.20%	0.3609%	-2.32%	0.3694%
Maury	1.08%	<b>1.26%</b>	1.1699%	0.12%	1.1686%	-0.89%	1.1791%
Meigs	0.06%	<b>0.11%</b>	0.0840%	0.75%	0.0833%	17.76%	0.0708%
<i>Monroe</i>	0.44%	<b>0.60%</b>	0.5162%	1.32%	0.5095%	5.54%	0.4827%
Montgomery	<b>2.58%</b>	2.08%	2.3313%	3.27%	2.2576%	3.05%	2.1908%
Moore	0.06%	<b>0.09%</b>	0.0769%	4.83%	0.0734%	9.05%	0.0673%
Morgan	0.08%	<b>0.14%</b>	0.1091%	3.91%	0.1050%	10.45%	0.0950%
<i>Obion</i>	<b>0.44%</b>	0.39%	0.4155%	-2.92%	0.4280%	-3.64%	0.4441%
Overton	0.15%	<b>0.18%</b>	0.1672%	-1.89%	0.1704%	-1.44%	0.1729%
Perry	0.07%	<b>0.08%</b>	0.0727%	-1.58%	0.0739%	-1.93%	0.0754%
Pickett	0.03%	<b>0.06%</b>	0.0466%	6.21%	0.0439%	30.00%	0.0337%
Polk	0.11%	<b>0.17%</b>	0.1424%	0.08%	0.1423%	1.81%	0.1398%
Putnam	<b>1.12%</b>	1.12%	1.1241%	1.24%	1.1103%	1.08%	1.0984%
<i>Rhea</i>	0.28%	<b>0.35%</b>	0.3178%	1.22%	0.3140%	-1.18%	0.3178%
Roane	0.65%	<b>0.78%</b>	0.7112%	1.67%	0.6995%	5.73%	0.6616%
Robertson	0.79%	<b>0.84%</b>	0.8132%	1.04%	0.8049%	1.91%	0.7898%
<i>Rutherford</i>	3.90%	<b>3.91%</b>	3.9027%	2.73%	3.7991%	1.81%	3.7314%
<i>Scott</i>	0.17%	<b>0.22%</b>	0.1935%	-1.80%	0.1971%	1.41%	0.1943%
Sequatchie	0.11%	<b>0.16%</b>	0.1339%	3.91%	0.1289%	14.01%	0.1131%
Sevier	2.29%	<b>3.03%</b>	2.6587%	2.68%	2.5892%	4.16%	2.4859%
<i>Shelby</i>	<b>18.96%</b>	15.12%	17.0381%	-2.89%	17.5451%	-2.65%	18.0228%
Smith	0.18%	<b>0.19%</b>	0.1878%	0.13%	0.1876%	-3.76%	0.1949%
Stewart	0.09%	<b>0.13%</b>	0.1104%	2.70%	0.1075%	9.21%	0.0984%
<i>Sullivan</i>	<b>2.56%</b>	2.55%	2.5578%	-0.65%	2.5746%	-1.03%	2.6013%
Sumner	2.08%	<b>2.26%</b>	2.1671%	2.82%	2.1076%	2.55%	2.0552%
Tipton	0.50%	<b>0.57%</b>	0.5311%	2.00%	0.5206%	1.30%	0.5139%
Trousdale	0.06%	<b>0.07%</b>	0.0608%	-1.07%	0.0614%	-1.12%	0.0621%
Unicoi	0.18%	<b>0.19%</b>	0.1863%	2.45%	0.1818%	3.26%	0.1761%
Union	0.08%	<b>0.17%</b>	0.1213%	7.91%	0.1124%	30.00%	0.0865%
Van Buren	0.03%	<b>0.06%</b>	0.0441%	3.77%	0.0425%	20.70%	0.0352%
Warren	0.45%	<b>0.46%</b>	0.4570%	-4.37%	0.4779%	-1.01%	0.4828%
<i>Washington</i>	1.88%	<b>2.02%</b>	1.9491%	1.43%	1.9217%	0.05%	1.9207%
Wayne	0.08%	<b>0.13%</b>	0.1025%	-3.06%	0.1058%	11.80%	0.0946%
Weakley	<b>0.32%</b>	0.30%	0.3118%	-1.42%	0.3163%	-2.61%	0.3248%
White	0.20%	<b>0.26%</b>	0.2294%	-1.18%	0.2321%	0.67%	0.2306%
<i>Williamson</i>	4.77%	<b>4.82%</b>	4.7963%	4.93%	4.5710%	4.00%	4.3954%
<i>Wilson</i>	1.76%	<b>1.82%</b>	1.7919%	3.50%	1.7313%	4.61%	1.6550%

The bold number represents the higher fiscal capacity calculated between the two models.  
*Italicized counties have more than one school system*



# Comparison of TACIR and CBER Fiscal Capacity Results for FY 2010



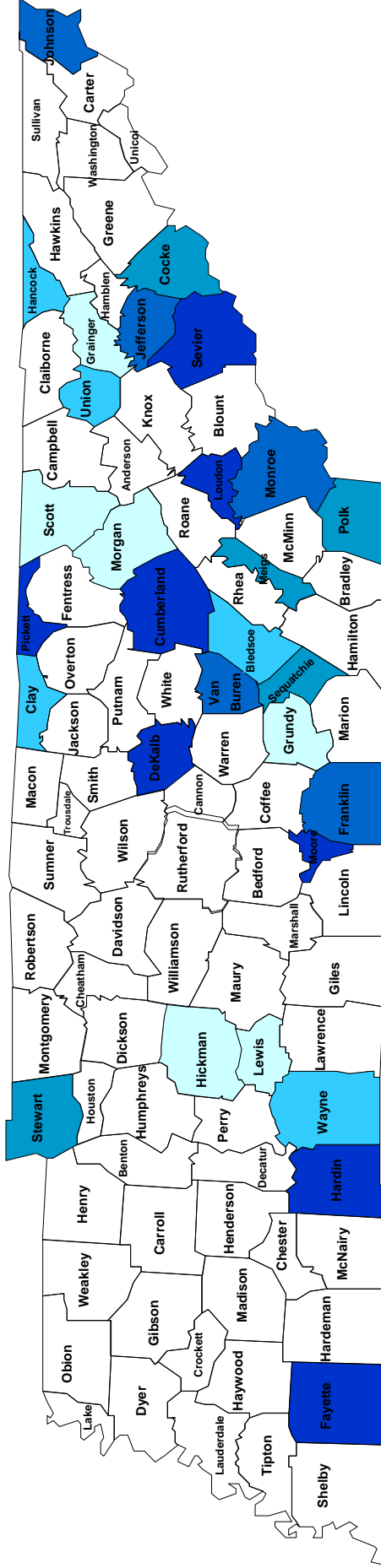
29 CBER results are more than 30% higher than TACIR results






4 TACIR results are more than 30% higher than CBER results

24 CBER results are between 10% and 30% higher than TACIR results

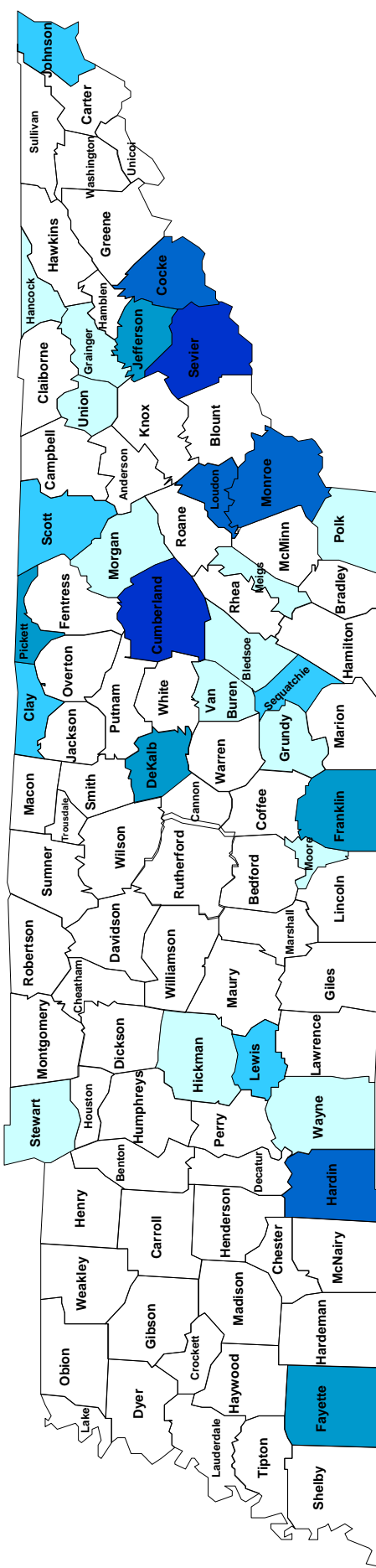
4 TACIR results are between 10% and 30% higher than CBER results

# “Big Change” Counties: Per Pupil Property Tax Base Quintiles



-  Are in the top quintile for per pupil property tax base
-  Are in the second quintile for per pupil property tax base
-  Are in the third quintile for per pupil property tax base
-  Are in the fourth quintile for per pupil property tax base
-  Are in the bottom quintile for per pupil property tax base

# “Big Change” Counties: Per Pupil Sales Tax Base Quintiles



- 2** Are in the top quintile for per pupil sales tax base
- 4** Are in the second quintile for per pupil sales tax base
- 5** Are in the third quintile for per pupil sales tax base
- 5** Are in the fourth quintile for per pupil sales tax base
- 13** Are in the bottom quintile for per pupil sales tax base

overall have above average growth, but 59% of the big change counties did. This difference is not as great as it was with the property tax base, but it is still significant.

Of the 29 big change counties, 14 are in the bottom quintile for per capita personal income while only two are in the highest. The full distribution can be seen in the attached map. In the three lower quintiles 56% of the big change counties had an above average increase in per capita personal income over the previous year. In the two higher quintiles, 75% of the big change counties had an above average increase.

The ratio of residential and farm property assessments to overall assessments showed a big difference for big change counties. This ratio serves as a proxy for the ability to export tax burden to non-residents. The more commercial property, in a county the more tax revenues that county may receive from outside of the county. Because it is the residential and farm portion of assessments that are included in TACIR's model, a lower number means a higher fiscal capacity. To make all of the measures comparable for analysis, staff considered the highest numbers to be in the lowest quintile.

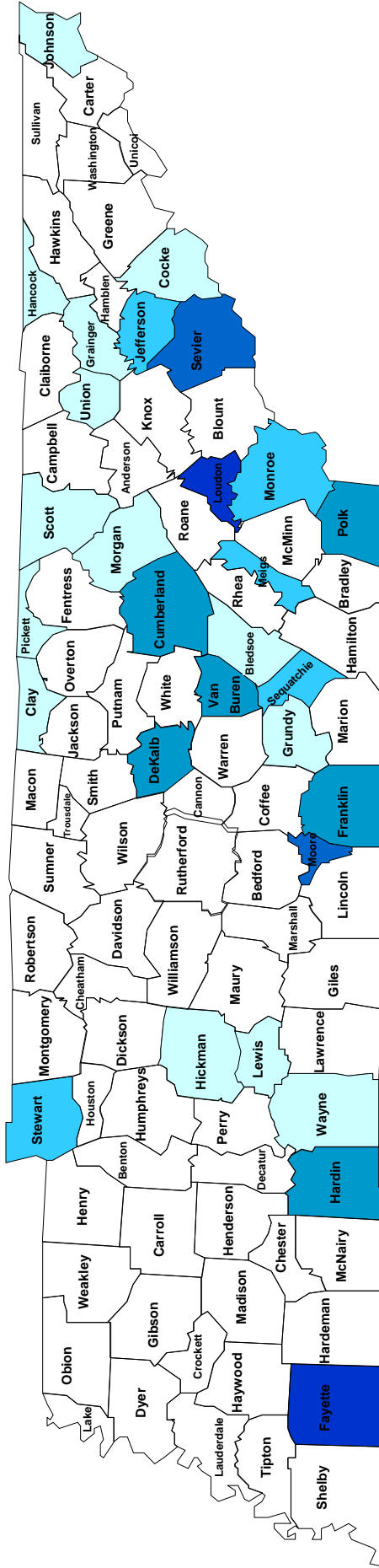
Of the 29 big change counties, 15 were in the bottom quintile while just one was in the top quintile. The distribution is shown on the attached map. A little less than half (46 of 95) counties had above average improvement in this measure in the last year, while 31% of big change counties did.






The ratio of average daily membership to the total population (or service burden) is also a negative measure; that is, the higher the proportion of students in the county's overall population, the lower the fiscal capacity of that county. For this measure also, then, the highest ratio is considered the bottom quintile. Only two counties fell in that bottom quintile while six were in the top quintile. The distribution is shown on the attached map.

Only 43% of all counties had above average improvement in this measure, while 48% of big change counties did. The fairly even distribution of counties in quintiles and the fact that the percentage of counties with above average improvement rates was about the same for big change counties and for all counties suggests that this measure was not behind the big difference between TACIR and CBER fiscal capacity calculations for these counties.

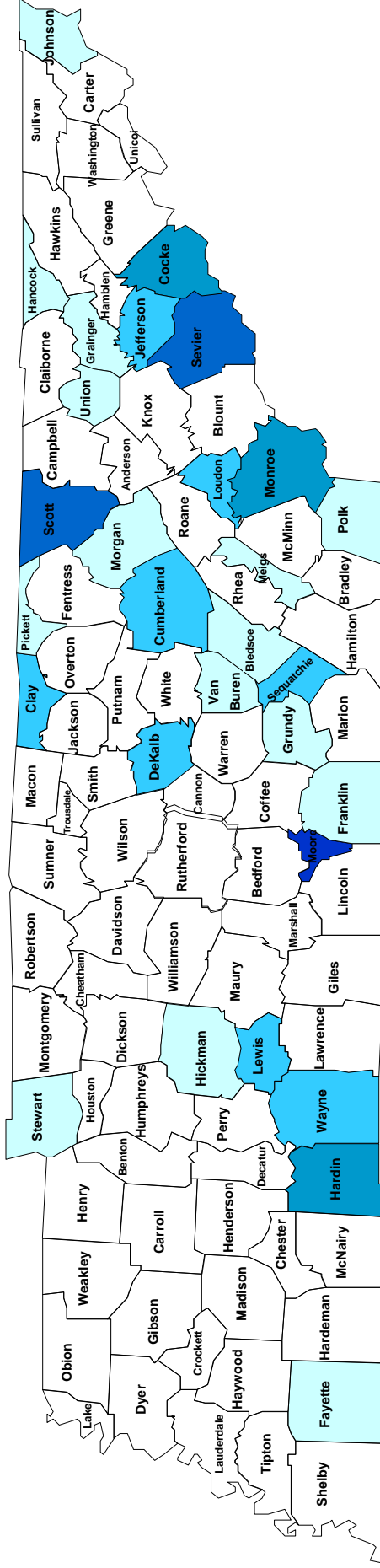
Averaging the quintile ranks show that some counties (those highlighted in red on the attached quintile rank table) are in the lowest quintiles on every measure. Additionally, several of these counties are experiencing an above average rate of growth in on some or all of the measures. Since the service burden measure seemed little different for this group than for counties overall, staff also averaged the quintile ranks for the four other measures. This shows that a significant number of these counties are at the low end of all four of these measures, and

# “Big Change” Counties: Per Capita Income Quintiles



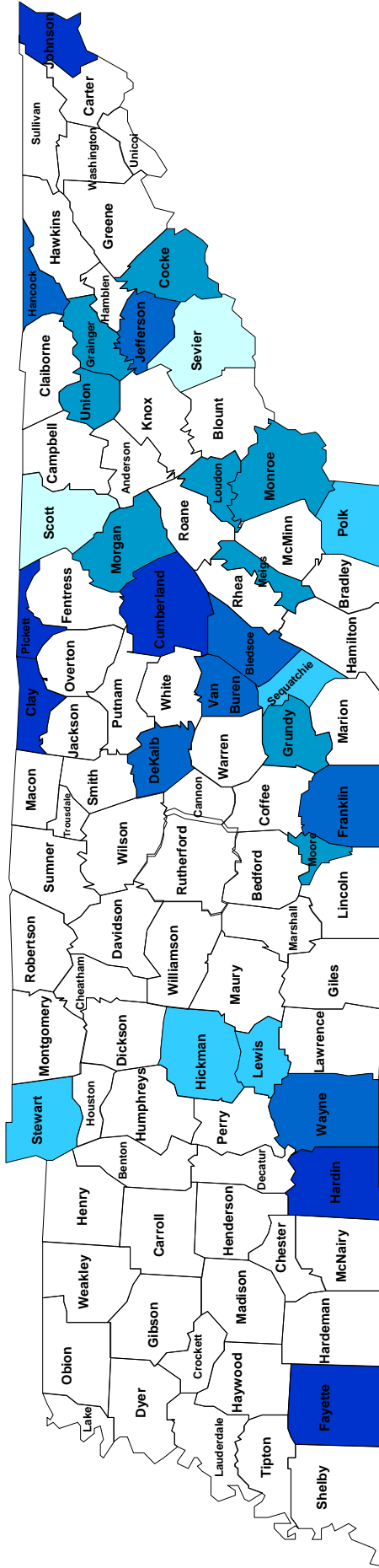
-  Are in the top quintile for per capita income
-  Are in the second quintile for per capita income
-  Are in the third quintile for per capita income
-  Are in the fourth quintile for per capita income
-  Are in the bottom quintile for per capita income






# ***“Big Change” Counties: Percent of Total Appraisals that are Residential and Farm Quintiles (lowest is top quintile)***



- 1** Are in the top quintile for residential and farm percent
- 2** Are in the second quintile for residential and farm percent
- 3** Are in the third quintile for residential and farm percent
- 8** Are in the fourth quintile for residential and farm percent
- 15** Are in the bottom quintile for residential and farm percent

# “Big Change” Counties: Ratio of Average Daily Membership to Population Quintiles (lowest is top quintile)



-  Are in the top quintile for ADM to population ratio
-  Are in the second quintile for ADM to population ratio
-  Are in the third quintile for ADM to population ratio
-  Are in the fourth quintile for ADM to population ratio
-  Are in the bottom quintile for ADM to population ratio

that the CBER model is increasing the estimated fiscal capacity on counties that are disproportionately low in per capita personal income and tax exportability, somewhat low in per pupil sales tax base, and a little on the low end of per pupil property tax base.

No fiscal capacity model is perfect, and the quirks of Tennessee's school system and funding structures make system fiscal capacities in this state particularly difficult to measure. The idea that the calculation had become too complex was a large part of the recent change. Simplicity is always an advantage in matters that can create controversy, such as the distribution of state education funds. But it is important to be aware of the effects these changes have, especially when they disproportionately affect one of the state's Grand Divisions.

In East Tennessee, fully 15 of the 33 counties (45%) are big change counties. In Middle Tennessee it is 12 of 40 (30%). West Tennessee has just two of its 22 counties (9%) that rate as "big change" counties. Furthermore, if the group is divided a bit further, East Tennessee fares even worse. Ten counties have a CBER-generated fiscal capacity measure that is more than 50% higher than the TACIR measure. Of those 10, 7 are in East Tennessee (Beldsoe, Grainger, Hancock, Johnson, Meigs, Morgan, and Union) and three are in Middle Tennessee (Pickett, Van Buren, and Wayne).



## Quintile Rankings for Big Change Counties

Big Change Counties	Percentage Change CBER Index Compared to TACIR Index	Per Pupil Property Tax Base Quintile (1 is High)	Per Pupil Sales Tax Base Quintile (1 is High)	Per Capita Personal Income Quintile (1 is High)	Ratio of Residential and Farm Property Assessments to Total Assessments to Quintile (1 is High)	Ratio of Average Daily Membership to Population Quintile (1 is High)	Average of Quintile Ranks	Average of Quintile Ranks without Service Burden
Bledsoe	57.94%	4	5	5	5	2	4.2	4.75
Clay	33.62%	4	4	5	4	1	3.6	4.25
Cocke	31.23%	3	2	5	3	3	3.2	3.25
Cumberland	44.76%	1	1	3	4	1	2	2.25
DeKalb	45.84%	1	3	3	4	2	2.6	2.75
Fayette	49.01%	1	3	1	5	1	2.2	2.5
Franklin	44.29%	2	3	3	5	2	3	3.25
Grainger	67.41%	5	5	5	5	3	4.6	5
Grundy	30.36%	5	5	5	5	3	4.6	5
Hancock	178.18%	4	5	5	5	2	4.2	4.75
Hardin	30.07%	1	2	3	3	1	2	2.25
Hickman	62.41%	5	5	5	5	4	4.8	5
Jefferson	44.46%	2	3	4	4	2	3	3.25
Johnson	80.86%	2	4	5	5	1	3.4	4
Lewis	32.98%	5	4	5	4	4	4.4	4.5
Loudon	42.38%	1	2	1	4	3	2.2	2
Meigs	94.06%	3	5	4	5	3	4	4.25
Monroe	36.77%	2	2	4	3	3	2.8	2.75
Moore	46.24%	1	5	2	1	3	2.4	2.25
Morgan	86.41%	5	5	5	5	3	4.6	5
Pickett	110.15%	1	3	5	5	1	3	3.5
Polk	48.18%	3	5	3	5	4	4	4
Scott	31.01%	5	4	5	2	5	4.2	4
Sequatchie	44.10%	3	4	4	4	4	3.8	3.75
Sevier	32.71%	1	1	2	2	5	2.2	1.5
Stewart	37.81%	3	5	4	5	4	4.2	4.25
Union	116.25%	4	5	5	5	3	4.4	4.75
Van Buren	88.15%	2	5	3	5	2	3.4	3.75
Wayne	63.74%	4	5	5	4	2	4	4.5

Averages in red fall between 4 and 5.

Averages in purple fall between 3 and 4.

Averages in blue fall between 2 and 3.

Averages in white fall between 1 and 2.

*Counties in italics have more than one school system*