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## Fiscal Capacity and Fiscal Equity

*by Harry A. Green, Ph.D.*

*Executive Director*

The fiscal capacity index used to calculate Basic Education Program (BEP) funding was originally developed by Harry A. Green, Executive Director of TACIR in the early 1990s. This index (the GREEN index) has been used from its inception in 1992 through fiscal year 2007. Starting fiscal year 2008, a new tax capacity model (the FOX model) produced by the Center for Business and Economic Research (CBER) at the University of Tennessee is used in combination with the GREEN model (Tennessee Code Annotated § 49-3-307). While the GREEN model uses a statistical technique known as multiple regression analysis, the FOX model is an arithmetic model. In order to smooth year-to-year changes, the GREEN model has historically used three-year averages of the fiscal capacity variables and CBER has adopted that practice. The GREEN model includes additional factors addressing each county area's service burden, ability to pay, and ability to export its tax burden. Both models produce indices of each county's percent of the state's total fiscal capacity.

As TACIR has noted in various reports, no other state's school systems are structured like Tennessee's. Even the most general statement that every county has a county system that is the default provider of public education has exceptions. For example, Gibson County has only smaller subsystems and no countywide system, and Carroll County has a countywide system that provides limited services, mainly transportation.

Sixty-seven of Tennessee's 95 counties have only one county system. In the other 28 counties, some cities and special school districts have opted out of the county system and operate separate systems. There are currently 15 special school districts and 27 municipal school systems in Tennessee. Twenty-eight counties have two or more systems. In counties with multiple systems, all of the systems in the county are credited with the same fiscal capacity, though the tax-generating assets are not evenly distributed among those systems.

The GREEN model includes factors addressing each county area's service burden, ability to pay, and ability to export its tax burden. Both models produce indices of each county's percent of the state's total fiscal capacity.

## TACIR Model (GREEN)

Fiscal capacity is determined using three-year averages of the following factors for each of the 95 counties:

### Per Pupil Own-Source Revenue

This is the amount of local money that the school systems in the county report that they spend on education, divided by enrollment (average daily membership (ADM)).

### Per Pupil Equalized Property Assessment

The total property assessment for the county area, equalized by the appropriate county appraisal-to-sales ratio, and then divided by ADM. This is a measure of the local ability to raise revenue.

### Per Pupil Taxable Sales

The local sales tax base divided by ADM. This is a measure of the local ability to raise revenue.

### Per Capita Income

Per capita income is included in the fiscal capacity model as a proxy measurement for ability to pay for education and for all other local revenue not accounted for by property or sales taxes.

### ADM Divided by Population (Service Burden)

This measure is included as a reflection of spending needs. The greater the number of pupils per 100 residents, the greater the fiscal burden for each taxpayer.

### Equalized Residential and Farm Assessment Divided by Total Equalized Assessment (Tax Burden)

This variable is intended as a proxy for a county's potential ability to export taxes. A high residential and farm ratio indicates a low ability to pass taxes on to non-residents and hence, a potential for higher local tax burdens.

The GREEN fiscal capacity model is based on a set of averages. The method, which is called multiple regression analysis, takes one factor at a time and compares it with all counties. From this process, an average weight is calculated for each factor. These averages are multiplied by the value of each factor for each county, and the results are summed. This produces a fiscal capacity amount per pupil. Because of a time lag in the collection

and publication of official statistics, the data is frequently 18 to 24 months old. The formula is based on a three-year “moving” average of the data used. This averaging helps “smooth out” major changes in the model’s results and reduces volatility from year to year. Figure 1 displays the formula for calculating the per pupil fiscal capacity for each county.

**Figure 1. Formula for Calculating Per Pupil Fiscal Capacity in the GREEN Fiscal Capacity Model**

$$\begin{aligned}
 \text{Per Pupil Fiscal Capacity} &= \text{y-Intercept*} \\
 &+ \beta_1 \times \text{Property per Pupil} \\
 &+ \beta_2 \times \text{Sales per Pupil} \\
 &+ \beta_3 \times \text{Per Capita Income} \\
 &+ \beta_4 \times [\text{Residential and Farm Assessment} \div \text{Total Assessment}] \\
 &+ \beta_5 \times [\text{ADM} \div \text{Population}]
 \end{aligned}$$

\* $\beta_1$ - $\beta_5$  are formula weights calculated by the model.

Once TACIR determines capacity per pupil for each county, this value is multiplied by average daily membership. This produces a countywide measure of total fiscal capacity. The values for the 95 counties are summed, and each county’s value is expressed as a proportion of the total, which represents that county’s share of the total local capacity to fund education. The result is the proportion each county pays of the local share of the BEP funding formula. If the index goes up or down, that share changes. In multi-system counties, the county share is divided among the school systems based on how much money each gets from the BEP formula. See Table 1 for the county level fiscal capacity and fiscal capacity index for the GREEN model used as part of the fiscal capacity measure in the fiscal year 2009 BEP.

The coefficient of determination ( $R^2$ ) is a statistical measure used to indicate how well a regression model works. The  $R^2$  measures the “goodness of fit” of the model to the data, or how close the line produced by graphing the results of the model is to the dots for each county. The closer the coefficient comes to 1.0, the better the line (the regression model) fits the data. The  $R^2$  for the GREEN model has improved from .78 in the fiscal year 1993 model to .87 for fiscal year 2009, the latest iteration, making it a very powerful estimating model.

In counties with multiple systems, all of the systems in the county are credited with the same fiscal capacity, though the tax-generating assets are not evenly distributed among those systems.

Although complicated, the GREEN Index is an excellent estimating model. A perfect model would produce an  $R^2$  of 1.0. Since perfect models are never achieved, an  $R^2$  of 0.87 is a powerful estimating result.

**Table 1. GREEN Fiscal Capacity and Fiscal Capacity Index, Fiscal Year 2009**

	Fiscal Capacity	Percent of State's Total		Fiscal Capacity	Percent of State's Total
Anderson	\$29,478,830	1.136%	Lauderdale	\$5,106,184	0.197%
Bedford	14,092,687	0.543%	Lawrence	11,148,814	0.430%
Benton	3,549,786	0.137%	Lewis	2,100,488	0.081%
Bledsoe	1,707,516	0.066%	Lincoln	8,814,154	0.340%
Blount	43,920,993	1.693%	Loudon	15,523,394	0.598%
Bradley	35,884,443	1.383%	McMinn	17,870,228	0.689%
Campbell	9,923,275	0.382%	McNairy	6,944,309	0.268%
Cannon	2,628,967	0.101%	Macon	5,553,141	0.214%
Carroll	6,582,922	0.254%	Madison	48,319,847	1.862%
Carter	11,810,155	0.455%	Marion	8,487,746	0.327%
Cheatham	10,334,802	0.398%	Marshall	9,226,264	0.356%
Chester	3,218,375	0.124%	Mauzy	28,613,840	1.103%
Claiborne	6,402,483	0.247%	Meigs	1,492,241	0.058%
Clay	1,345,674	0.052%	Monroe	11,172,042	0.431%
Cocke	7,777,004	0.300%	Montgomery	64,139,881	2.472%
Coffee	22,884,119	0.882%	Moore	1,542,511	0.059%
Crockett	3,096,287	0.119%	Morgan	1,936,234	0.075%
Cumberland	15,949,559	0.615%	Obion	11,621,567	0.448%
Davidson	381,948,163	14.720%	Overton	4,056,878	0.156%
Decatur	2,758,225	0.106%	Perry	1,675,697	0.065%
DeKalb	4,490,191	0.173%	Pickett	764,588	0.029%
Dickson	17,006,120	0.655%	Polk	3,094,394	0.119%
Dyer	14,501,124	0.559%	Putnam	28,914,617	1.114%
Fayette	7,785,544	0.300%	Rhea	7,313,529	0.282%
Fentress	3,702,707	0.143%	Roane	16,511,248	0.636%
Franklin	9,999,047	0.385%	Robertson	20,237,046	0.780%
Gibson	14,245,877	0.549%	Rutherford	98,425,231	3.793%
Giles	8,795,574	0.339%	Scott	4,520,164	0.174%
Grainger	2,667,007	0.103%	Sequatchie	2,693,211	0.104%
Greene	23,074,505	0.889%	Sevier	57,748,572	2.226%
Grundy	2,194,324	0.085%	Shelby	505,973,477	19.500%
Hamblen	26,149,021	1.008%	Smith	4,676,250	0.180%
Hamilton	159,178,737	6.135%	Stewart	2,299,536	0.089%
Hancock	502,404	0.019%	Sullivan	66,607,239	2.567%
Hardeman	5,105,280	0.197%	Sumner	52,826,591	2.036%
Hardin	7,604,489	0.293%	Tipton	12,572,836	0.485%
Hawkins	12,711,855	0.490%	Trousdale	1,454,545	0.056%
Haywood	4,897,563	0.189%	Unicoi	4,471,890	0.172%
Henderson	7,987,252	0.308%	Union	1,930,956	0.074%
Henry	10,062,567	0.388%	Van Buren	799,537	0.031%
Hickman	3,027,391	0.117%	Warren	12,346,835	0.476%
Houston	1,444,656	0.056%	Washington	48,041,352	1.851%
Humphreys	5,858,473	0.226%	Wayne	2,074,959	0.080%
Jackson	1,924,640	0.074%	Weakley	8,366,229	0.322%
Jefferson	11,746,079	0.453%	White	5,362,658	0.207%
Johnson	2,339,501	0.090%	Williamson	118,603,655	4.571%
Knox	211,308,447	8.144%	Wilson	44,266,261	1.706%
Lake	940,650	0.036%	TOTAL	\$2,594,788,156	100%

Source: TACIR

## CBER Model (FOX)

The new model that is used in conjunction with the GREEN model is a tax capacity model calculated by the Center for Business and Economic Research (CBER) at the University of Tennessee (FOX model). It measures the dollars a county would raise if it levied the average 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 than it sounds.

The methodology for calculating the FOX model is shown in Figure 2. Like the GREEN model, the FOX model uses three-year averages for its data sets. FOX calculates the local sales tax base using actual fiscal year sales tax collections divided by the local sales tax rate adjusted for varying rates within a county and changes in the rate during the fiscal year. Equalized property assessments are

calculated as in the GREEN model, and include an estimate of the assessed value of property owned by industrial development boards rather than the tax-equivalent payments used for the GREEN model. FOX has chosen to use 38% of the estimated total value of properties with Industrial Development Board (IDB) tax exemptions as a measure of payments in lieu of taxes or tax equivalent payments. FOX then uses detailed data from the Department of Education to estimate the amount of property taxes and local option sales tax collections used to finance local education in each county. This data is used to calculate average statewide education property tax and sales tax rates. These rates are then applied to the estimated property and sales tax bases to produce each county’s fiscal capacity. That capacity is then expressed as an index by dividing it by the total statewide capacity. The FOX fiscal capacity estimate and fiscal capacity index for each county is shown in Table 2.

**Figure 2. Formula for Calculating FOX Fiscal Capacity Index**

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

**Table 2. FOX Fiscal Capacity and Fiscal Capacity Index, Fiscal Year 2009**

	Fiscal Capacity	Percent of State's Total		Fiscal Capacity	Percent of State's Total
Anderson	\$27,563,659	1.062%	Lauderdale	\$5,634,689	0.217%
Bedford	14,371,468	0.554%	Lawrence	11,076,773	0.427%
Benton	4,101,769	0.158%	Lewis	2,750,175	0.106%
Bledsoe	2,611,741	0.101%	Lincoln	9,432,292	0.363%
Blount	52,176,428	2.010%	Loudon	21,823,822	0.841%
Bradley	36,334,365	1.400%	McMinn	20,021,559	0.771%
Campbell	12,045,756	0.464%	McNairy	6,343,420	0.244%
Cannon	2,995,235	0.115%	Macon	5,739,139	0.221%
Carroll	7,301,878	0.281%	Madison	46,903,392	1.807%
Carter	13,631,748	0.525%	Marion	10,151,024	0.391%
Cheatham	10,741,139	0.414%	Marshall	9,503,792	0.366%
Chester	3,465,580	0.134%	Maury	32,039,367	1.234%
Claiborne	7,917,890	0.305%	Meigs	2,833,953	0.109%
Clay	1,773,892	0.068%	Monroe	15,271,677	0.588%
Cocke	10,039,035	0.387%	Montgomery	53,037,680	2.043%
Coffee	20,126,860	0.775%	Moore	2,266,976	0.087%
Crockett	3,069,034	0.118%	Morgan	3,511,984	0.135%
Cumberland	22,826,855	0.879%	Obion	10,591,693	0.408%
Davidson	380,101,840	14.644%	Overton	4,786,819	0.184%
Decatur	3,193,126	0.123%	Perry	2,160,524	0.083%
DeKalb	6,441,117	0.248%	Pickett	1,605,980	0.062%
Dickson	18,646,800	0.718%	Polk	4,292,901	0.165%
Dyer	13,482,121	0.519%	Putnam	28,715,388	1.106%
Fayette	11,355,703	0.437%	Rhea	8,985,612	0.346%
Fentress	4,503,439	0.174%	Roane	19,797,293	0.763%
Franklin	14,087,954	0.543%	Robertson	21,540,208	0.830%
Gibson	12,682,549	0.489%	Rutherford	98,761,192	3.805%
Giles	9,128,606	0.352%	Scott	5,709,740	0.220%
Grainger	4,197,857	0.162%	Sequatchie	3,996,999	0.154%
Greene	22,731,767	0.876%	Sevier	76,644,106	2.953%
Grundy	2,653,578	0.102%	Shelby	404,667,463	15.591%
Hamblen	26,634,588	1.026%	Smith	5,059,886	0.195%
Hamilton	155,704,814	5.999%	Stewart	3,278,008	0.126%
Hancock	1,356,107	0.052%	Sullivan	67,023,605	2.582%
Hardeman	6,086,631	0.234%	Sumner	56,566,390	2.179%
Hardin	9,885,333	0.381%	Tipton	14,450,576	0.557%
Hawkins	14,174,714	0.546%	Trousdale	1,733,405	0.067%
Haywood	6,326,016	0.244%	Unicoi	4,966,107	0.191%
Henderson	7,561,127	0.291%	Union	4,130,010	0.159%
Henry	10,617,835	0.409%	Van Buren	1,404,291	0.054%
Hickman	4,936,955	0.190%	Warren	12,457,652	0.480%
Houston	1,716,241	0.066%	Washington	51,702,963	1.992%
Humphreys	6,277,843	0.242%	Wayne	3,415,991	0.132%
Jackson	2,222,753	0.086%	Weakley	8,048,929	0.310%
Jefferson	16,889,435	0.651%	White	6,686,498	0.258%
Johnson	4,396,028	0.169%	Williamson	118,648,827	4.571%
Knox	207,520,383	7.995%	Wilson	45,595,201	1.757%
Lake	1,226,230	0.047%	TOTAL	\$2,595,599,794	100%

Source: UT CBER

## Combined Index

During the transition from the GREEN to the FOX 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. If the FOX calculation produced a percent of total fiscal capacity number that was more than a 30% change from the GREEN calculation, then the FOX percentage was adjusted such that the change was only 30%. The two indexes were then averaged to get the final fiscal capacity calculation. The stated intent of the administration was for the weight of each measure to shift toward FOX annually until its calculation was the only one used, but the percentages have remained at 50/50 for FY 2009. The Department of Education has not announced an official transition schedule for future fiscal years.

In order to smooth the spikes that can be caused by year-to-year changes in these variables, both models use three-year averages of each variable 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 by 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 FOX model come from the same year. In the future, TACIR may begin using the newer data in its model as well.

The fiscal capacity results calculated for FY 2009 using both models is shown in Table 3, as are the final numbers that will be used in the BEP. The difference between the FY08 combined fiscal capacity and FY09 combined fiscal capacity was capped at 30%. Only three counties (Hancock, Pickett, and Union) had a change of more than 30% from last year's final fiscal capacity calculation, so the cap on changes did not have much of an effect this year. For those three systems, a change of 30% in the combined index was substituted in the BEP for the original index.

The stated intent of the administration was for the weight of each measure to shift toward FOX annually until its calculation was the only one used. The percentages have remained at 50/50 for FY 2009. At the BEPRC meeting on August 21, 2008, DOE officials indicated that no one knows when the GREEN model will be phased out.

**Table 3. Combined GREEN/FOX Fiscal Capacity Index  
and Index Used in the FY 2009 Basic Education Program Model**

County	FY 09 Fiscal Capacity Index			Comparison of FY 08 and FY 09		
	GREEN	FOX	Combined (50/50)	FY 08 Combined (50/50)	% Difference	Index Used in BEP <sup>1</sup>
Anderson	1.14%	1.06%	1.10%	1.09%	0.60%	1.10%
Bedford	0.54%	0.55%	0.55%	0.54%	0.90%	0.55%
Benton	0.14%	0.16%	0.15%	0.15%	-1.00%	0.15%
Bledsoe	0.07%	0.10%	0.08%	0.08%	6.50%	0.08%
Blount	1.69%	2.01%	1.85%	1.86%	-0.50%	1.85%
Bradley	1.38%	1.40%	1.39%	1.39%	-0.20%	1.39%
Campbell	0.38%	0.46%	0.42%	0.42%	1.70%	0.42%
Cannon	0.10%	0.12%	0.11%	0.11%	0.60%	0.11%
Carroll	0.25%	0.28%	0.27%	0.28%	-5.00%	0.27%
Carter	0.46%	0.53%	0.49%	0.49%	0.80%	0.49%
Cheatham	0.40%	0.41%	0.41%	0.40%	1.90%	0.41%
Chester	0.12%	0.13%	0.13%	0.13%	-2.20%	0.13%
Claiborne	0.25%	0.31%	0.28%	0.28%	0.10%	0.28%
Clay	0.05%	0.07%	0.06%	0.06%	-3.00%	0.06%
Cocke	0.30%	0.39%	0.34%	0.34%	0.30%	0.34%
Coffee	0.88%	0.78%	0.83%	0.83%	-0.80%	0.83%
Crockett	0.12%	0.12%	0.12%	0.12%	-4.00%	0.12%
Cumberland	0.61%	0.88%	0.75%	0.70%	6.50%	0.75%
Davidson	14.72%	14.64%	14.68%	14.58%	0.70%	14.68%
Decatur	0.11%	0.12%	0.11%	0.12%	-0.90%	0.11%
DeKalb	0.17%	0.25%	0.21%	0.20%	5.90%	0.21%
Dickson	0.66%	0.72%	0.69%	0.69%	-1.00%	0.69%
Dyer	0.56%	0.52%	0.54%	0.55%	-1.80%	0.54%
Fayette	0.30%	0.44%	0.37%	0.34%	7.90%	0.37%
Fentress	0.14%	0.17%	0.16%	0.15%	2.60%	0.16%
Franklin	0.39%	0.54%	0.46%	0.45%	3.10%	0.46%
Gibson	0.55%	0.49%	0.52%	0.53%	-1.50%	0.52%
Giles	0.34%	0.35%	0.35%	0.35%	-1.30%	0.35%
Grainger	0.10%	0.16%	0.13%	0.12%	8.50%	0.13%
Greene	0.89%	0.88%	0.88%	0.86%	2.00%	0.88%
Grundy	0.08%	0.10%	0.09%	0.10%	-2.20%	0.09%
Hamblen	1.01%	1.03%	1.02%	1.03%	-0.90%	1.02%
Hamilton	6.13%	6.00%	6.07%	6.08%	-0.20%	6.07%
Hancock	0.02%	0.05%	0.04%	0.02%	58.20%	0.03%
Hardeman	0.20%	0.23%	0.22%	0.22%	-2.00%	0.22%
Hardin	0.29%	0.38%	0.34%	0.33%	0.60%	0.34%
Hawkins	0.49%	0.55%	0.52%	0.54%	-3.30%	0.52%
Haywood	0.19%	0.24%	0.22%	0.22%	-1.10%	0.22%
Henderson	0.31%	0.29%	0.30%	0.31%	-2.70%	0.30%
Henry	0.39%	0.41%	0.40%	0.41%	-1.70%	0.40%
Hickman	0.12%	0.19%	0.15%	0.13%	15.70%	0.15%
Houston	0.06%	0.07%	0.06%	0.06%	-1.60%	0.06%
Humphreys	0.23%	0.24%	0.23%	0.24%	-2.00%	0.23%
Jackson	0.07%	0.09%	0.08%	0.08%	-2.00%	0.08%
Jefferson	0.45%	0.65%	0.55%	0.52%	5.90%	0.55%
Johnson	0.09%	0.17%	0.13%	0.10%	26.60%	0.13%
Knox	8.14%	8.00%	8.07%	8.07%	0.00%	8.07%
Lake	0.04%	0.05%	0.04%	0.04%	2.00%	0.04%
Lauderdale	0.20%	0.22%	0.21%	0.21%	-2.80%	0.21%



**Table 3. Combined GREEN/FOX Fiscal Capacity Index  
and Index Used in the FY 2009 Basic Education Program Model (cont.)**

County	FY 09 Fiscal Capacity Index			Comparison of FY 08 and FY 09		
	GREEN	FOX	Combined (50/50)	FY 08 Combined (50/50)	% Difference	Index Used in BEP <sup>1</sup>
Lawrence	0.43%	0.43%	0.43%	0.44%	-3.50%	0.43%
Lewis	0.08%	0.11%	0.09%	0.09%	-1.30%	0.09%
Lincoln	0.34%	0.36%	0.35%	0.35%	0.20%	0.35%
Loudon	0.60%	0.84%	0.72%	0.68%	6.00%	0.72%
McMinn	0.69%	0.77%	0.73%	0.73%	0.00%	0.73%
McNairy	0.27%	0.24%	0.26%	0.26%	0.10%	0.26%
Macon	0.21%	0.22%	0.22%	0.22%	1.10%	0.22%
Madison	1.86%	1.81%	1.83%	1.88%	-2.70%	1.83%
Marion	0.33%	0.39%	0.36%	0.36%	0.60%	0.36%
Marshall	0.36%	0.37%	0.36%	0.37%	-2.30%	0.36%
Mauzy	1.10%	1.23%	1.17%	1.18%	-0.90%	1.17%
Meigs	0.06%	0.11%	0.08%	0.07%	17.80%	0.08%
Monroe	0.43%	0.59%	0.51%	0.48%	5.50%	0.51%
Montgomery	2.47%	2.04%	2.26%	2.19%	3.00%	2.26%
Moore	0.06%	0.09%	0.07%	0.07%	9.10%	0.07%
Morgan	0.07%	0.14%	0.10%	0.10%	10.40%	0.10%
Obion	0.45%	0.41%	0.43%	0.44%	-3.60%	0.43%
Overton	0.16%	0.18%	0.17%	0.17%	-1.40%	0.17%
Perry	0.06%	0.08%	0.07%	0.08%	-1.90%	0.07%
Pickett	0.03%	0.06%	0.05%	0.03%	35.40%	0.04%
Polk	0.12%	0.17%	0.14%	0.14%	1.80%	0.14%
Putnam	1.11%	1.11%	1.11%	1.10%	1.10%	1.11%
Rhea	0.28%	0.35%	0.31%	0.32%	-1.20%	0.31%
Roane	0.64%	0.76%	0.70%	0.66%	5.70%	0.70%
Robertson	0.78%	0.83%	0.80%	0.79%	1.90%	0.80%
Rutherford	3.79%	3.80%	3.80%	3.73%	1.80%	3.80%
Scott	0.17%	0.22%	0.20%	0.19%	1.40%	0.20%
Sequatchie	0.10%	0.15%	0.13%	0.11%	14.00%	0.13%
Sevier	2.23%	2.95%	2.59%	2.49%	4.20%	2.59%
Shelby	19.50%	15.59%	17.55%	18.02%	-2.70%	17.55%
Smith	0.18%	0.19%	0.19%	0.19%	-3.80%	0.19%
Stewart	0.09%	0.13%	0.11%	0.10%	9.20%	0.11%
Sullivan	2.57%	2.58%	2.57%	2.60%	-1.00%	2.57%
Sumner	2.04%	2.18%	2.11%	2.06%	2.50%	2.11%
Tipton	0.48%	0.56%	0.52%	0.51%	1.30%	0.52%
Trousdale	0.06%	0.07%	0.06%	0.06%	-1.10%	0.06%
Unicoi	0.17%	0.19%	0.18%	0.18%	3.30%	0.18%
Union	0.07%	0.16%	0.12%	0.09%	35.10%	0.11%
Van Buren	0.03%	0.05%	0.04%	0.04%	20.70%	0.04%
Warren	0.48%	0.48%	0.48%	0.48%	-1.00%	0.48%
Washington	1.85%	1.99%	1.92%	1.92%	0.10%	1.92%
Wayne	0.08%	0.13%	0.11%	0.09%	11.80%	0.11%
Weakley	0.32%	0.31%	0.32%	0.32%	-2.60%	0.32%
White	0.21%	0.26%	0.23%	0.23%	0.70%	0.23%
Williamson	4.57%	4.57%	4.57%	4.40%	4.00%	4.57%
Wilson	1.71%	1.76%	1.73%	1.66%	4.60%	1.73%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>		<b>100%</b>

Sources: TACIR, UT CBER, and TN Department of Education

<sup>1</sup> The difference between last year's fiscal capacity and this year's fiscal capacity is capped at 30%.

The Tennessee Supreme Court has ruled that all school children in Tennessee must have “substantially equal educational opportunities”.

## What is Equity in Education Funding?

A standard of education equity has been set by the Tennessee Supreme Court—and it relates to all 136 school systems. The standard may not be definitive but it is explicit. The Court has ruled that all school children in Tennessee must have “substantially equal educational opportunities”. The Court did not elaborate on how this was to be achieved.

From the beginning of the Basic Education Program—created by the Education Improvement Act in 1992—there has been a provision for 25% of the classroom portion and 50% of the non-classroom portion be provided by local governments and school systems based on “ability to pay”. The “ability to pay” was not defined by the legislature, but state policy makers selected a fiscal capacity model developed by the TACIR based on 95 counties (not 136 school systems).

In early 2003, Governor Bredesen created a Task Force on Teacher Pay and charged the group broadly to study the equity of the present system. From those efforts came a recommendation for a system-level fiscal capacity model to replace the limited 95-county model. Two separate sub-groups worked on this issue, and staff work was provided by the Comptroller's Office and TACIR. After considerable work and consultations, a system level model was submitted for consideration along with the Task Force's recommendations. Subsequently, the BEP Review Committee recommended that a system-level model be adopted to replace the 95-county model.

This model has not been adopted, but it has created a firestorm of criticism. However, no one has proposed an alternative 136-system model. That leaves public education in Tennessee with a state education system of 136 local school systems, but a fiscal capacity model based on 95 counties.

In an article by a member of the Oak Ridge School Board to *Tennessee Town and City*, the writer criticized the system-level model because it allegedly discriminated against city school systems. The writer asserted that it is unfair because these systems make the greatest fiscal effort and achieve the greatest results. There are two fundamental observations to make about this. First, this is a conclusion that public education advocates have made for years, that is, to produce quality results, school systems must be willing to spend appropriate amounts of money. Money makes a significant difference. Nowhere is that clearer than in the “lighthouse” city school systems in Tennessee, which perform very well indeed, but spend much more than average.

The second observation relates to fiscal ability. Cities can make this extra effort because they have both the capacity and the statutory authority it requires. They can add revenue from taxes imposed inside their borders, and they do not have to share those proceeds with any other system in the county. By contrast, county systems have to share every local dollar they raise from any source of revenue. The result? Consider this: in FY 2007 Anderson County could spend only 73% per pupil as much as Oak Ridge (the highest spending system in the state). Does this level of disparity in the same county meet the constitutional standard?

## Conclusion

Neither model reflects the actual tax structure and the revenue sharing requirements imposed on counties by the state. The fiscal disconnect is that Tennessee has 136 school systems but only 95 counties.

- Revenue sharing in multi-system counties is to a very real extent a one-way street.
  - All revenue raised by county governments for schools has to be shared with the other systems.
  - None of the revenue raised by the other systems, no matter its source, has to be shared with the county system. Half of the local option sales tax revenue collected by cities that have school systems goes into the sharing pot, but that revenue comes from everyone who shops in those cities, not just the ones who live there.

The FOX model does not do as good a job accounting for taxpayer equity.

- It has no measure of income and is based on the premise that taxable sales and property fairly represent the tax-paying ability of resident taxpayers.
- It has no measure of tax exportability or the difference in what makes up the tax base in each county, so it assumes that all counties are equal in this respect except to the extent that total taxable property varies from one to another.

In conclusion, the GREEN and the FOX models are proxies for reality and both are imperfect. When two flawed models are combined, the result is a third flawed model.

## The GREEN-FOX Index

Neither the GREEN nor the FOX model reflects the actual tax structure and the revenue sharing requirements imposed on counties by the state. Both models are flawed. When you combine the two models (the GREEN-FOX model) the result is a third flawed model.

