

State and Local Tax Burdens: A Comparative Analysis

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Executive Summary

Kentucky's tax burden relative to its contiguous states is both higher and lower. This seemingly contradictory statement stems from varying calculation methods used to measure tax burden. The two most common methods are based upon: 1) per capita; and 2) income. Each method has certain merits, but generally produces different results which often leads to uncertainty about one state's system of taxation relative to another. To remedy that situation, this paper explains the different calculation methods, including the benefits and shortcomings of each, and shows the calculated tax burden for Kentucky, its contiguous states, and the nation as a whole.

The per capita basis is one method used to determine tax burden. It is a simple calculation that divides total tax revenues by total population. Including all persons in a tax burden calculation, however, distributes the calculated burden to persons who are not actively engaged in economic activity. For example, newborn babies do not directly participate in the marketplace yet, under the per capita method, would be included in this tax burden calculation. As a result, the effective tax burden borne by persons engaging in economic activity is reduced proportionally by the number of persons not engaging in economic activity. Despite this obvious detraction, the per capita method provides a straightforward method for calculating tax burden and is one for which information is generally readily available.

The second tax burden calculation method is based upon income. In this calculation, total tax revenues are divided by some measure of total personal income. The result is the percentage of personal income paid as taxes. The higher this percentage is, the greater the tax burden. This method, while generally more accepted, also may not accurately measure the true tax burden. Of particular interest is the notion of tax exporting. That is, a governmental jurisdiction that collects taxes from non-residents may be able to effectively "export" that tax to another area. Governmental jurisdictions that have a greater ability to export a portion of their taxes will have an inflated local tax burden figure. In this case, the tax burden figure is misleading since a portion of the taxes revenues were collected from non-residents. A similar caveat applies to the per capita calculation method as well.

	Per Capita		
	State	Local	Total
Kentucky	1,808	569	2,377
Contiguous State Median	1,552	955	2,507
U.S. Mean	1,750	1,113	2,863
	% Of Personal Income		
	State	Local	Total
Kentucky	8.6%	2.7%	11.3%
Contiguous State Median	6.3%	4.0%	10.3%
U.S. Mean	6.8%	4.3%	11.2%

Introduction

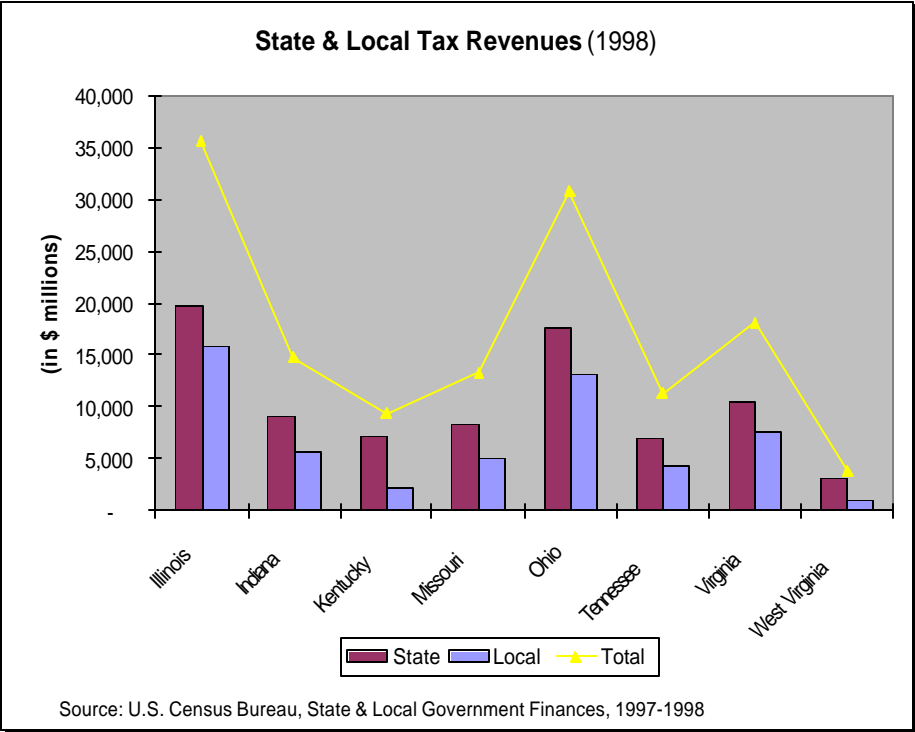
Every state in the country employs a unique system of taxes. No two states tax exactly the same activities and goods at exactly the same rate. Because taxes inherently affect behavior, different tax systems often are reduced to one state’s ability to attract and retain labor and capital relative to another state. A state’s tax structure, as a result, becomes an important component of its overall economic status.

To begin examining tax burdens, we first describe Kentucky’s unique tax structure, including its primary tax revenue sources. We also discuss Kentucky’s tax revenue sources in comparison with its contiguous states¹. From this examination, we gain knowledge about the general tax systems used by several states and their distribution of tax revenue collections between the state and local governments². We then continue by specifically describing two methods for calculating tax burdens.

Overview of Kentucky’s Tax Revenues

The Commonwealth of Kentucky collected \$9.4 billion in state and local tax revenue in 1997-1998. The majority of those revenues, \$7.1 billion, were remitted to the state. As indicated in **Graph 1**, Kentucky’s total state and local tax revenues were second lowest among its contiguous states. Only West Virginia collected fewer total tax revenues than Kentucky. Although total tax revenues provide a general snapshot of a state’s tax system, they are not sufficient to explain its tax structure or burden. The ensuing sections, therefore, examine the composition of Kentucky’s tax structure and tax burden relative to its contiguous states and the national average.

Graph 1



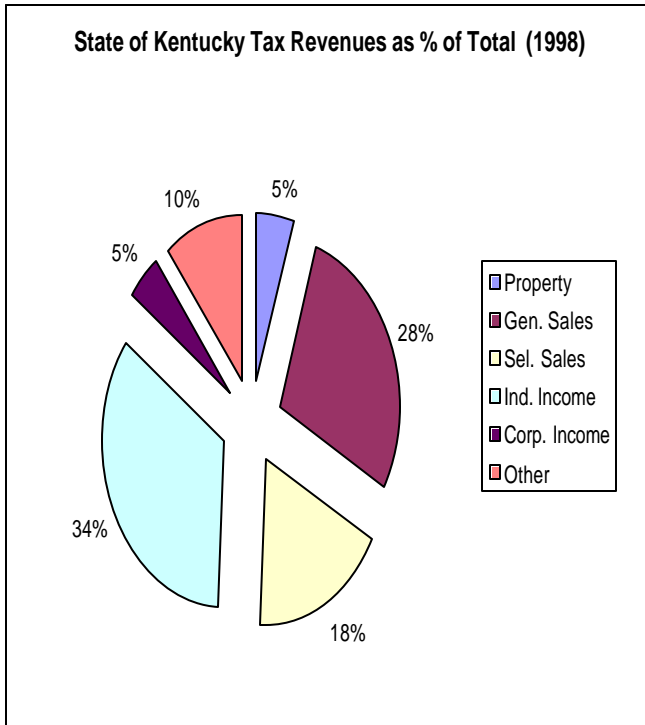
¹ Only states contiguous to Kentucky were chosen because the competition for labor and capital primarily occurs within a limited geographic scope. Certainly, competition for these resources also arises on a national and even international level. However, a fairly well documented precedent has been established by previous studies that have focused attention on regional economies to the detriment of national and international level analysis. Several factors, in particular, make an international and national focus less appealing in this case, including the uniformity of federal tax law across the United States.

² Although the issue of equity frequently accompanies tax burden discussions, this paper does not analyze taxes paid by different income classes. An analytical endeavor such as this, while very important, requires a separate effort.

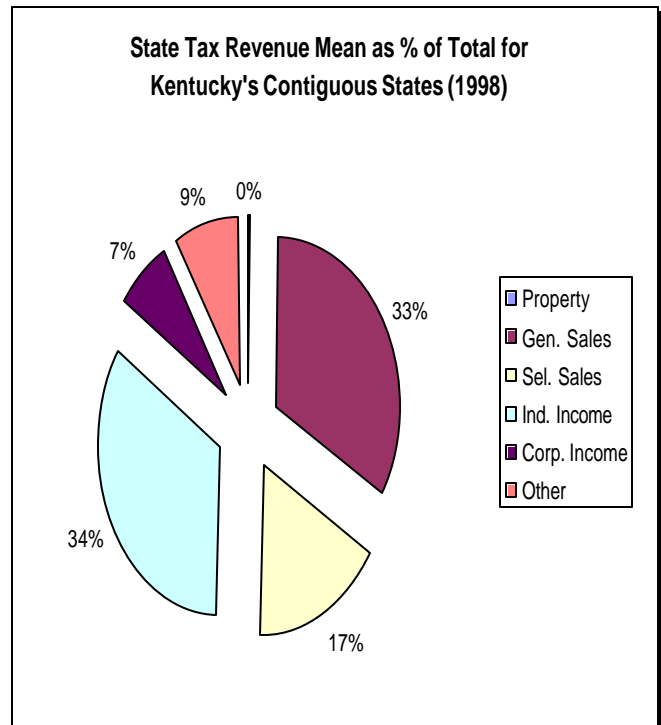
Tax Structure:
State

The State of Kentucky receives tax revenues from several sources. As with most states, the individual income and general sales taxes provide the most tax revenues. For Kentucky, these two taxes account for slightly more than three-fifths of total state tax revenues (see **Graph 2**). Kentucky’s contiguous states, on average, rely on individual income taxes in the same proportion as Kentucky, but receive relatively more general sales tax revenue: 33% compared with 28% for Kentucky (see **Graph 3**).

Graph 2



Graph 3



The other noteworthy distinction between Kentucky’s state tax revenues and that of its contiguous states is the property tax. Specifically, Kentucky receives 5% of its total tax revenues from the property tax. By comparison, no other contiguous state relies on a state property tax for more than 1% of its total tax revenues. This unusual reliance also exists when making national comparisons. On average, all states receive less than 2.4% of their revenues from a state property tax.

Table 1 details the information found in the previous two graphs. In addition, the table provides ratios on Kentucky’s state tax structure relative to its contiguous states and the nation. These ratios create one method for comparing state and local tax structures. Most notably, by comparing Kentucky to its contiguous state median we can infer certain facts. For example, Kentucky imposes a state property tax to a degree unmatched in its contiguous states. Specifically, we know that the State of Kentucky relies on property tax revenues for almost 53 times as much of its total tax revenue than its contiguous states—a very significant difference. Other similar comparisons can be made with each of the other tax types listed below. Lastly, Kentucky’s rank relative to its contiguous states is included. This indicates whether Kentucky has a relatively high or low reliance on a certain type of tax. For example, its rank on the state property tax places it first while its general sales tax revenues are second lowest. These rankings are useful in beginning to develop the basis for examining tax burdens across states.

Table 1

State Tax Revenue by Type as Percent of Total (1998)						
	Tax Revenue as % of State Total					
	Property	Gen. Sales	Selected Sales	Ind. Inc.	Corp. Inc.	Other
Illinois	0.0%	34.6%	13.7%	37.7%	10.2%	3.8%
Indiana	1.0%	28.3%	17.8%	35.3%	9.9%	7.6%
Kentucky	5.1%	27.8%	17.9%	34.0%	4.7%	10.4%
Missouri	0.2%	32.0%	14.3%	41.0%	4.4%	8.2%
Ohio	0.1%	31.4%	15.8%	39.5%	4.3%	9.0%
Tennessee	0.0%	57.6%	18.5%	2.3%	8.7%	13.0%
Virginia	0.2%	21.1%	16.0%	51.3%	4.2%	7.2%
West Virginia	0.1%	28.4%	23.3%	28.8%	7.4%	12.1%
U.S. Mean	2.3%	32.8%	15.1%	33.8%	6.6%	9.4%
<u>Ratios</u>						
KY: U.S. Mean	2.27: 1	0.84: 1	1.18: 1	1.00: 1	0.71: 1	1.11: 1
KY: Contiguous Median	52.9: 1	0.89: 1	1.12: 1	0.90: 1	0.64: 1	1.27: 1
KY: Contiguous Mean	21.4: 1	0.84: 1	1.05: 1	1.01: 1	0.67: 1	1.20: 1
Kentucky's Contiguous State Rank (high=1, low=8)	1	7	3	6	5	3
<i>Source: U.S. Census Bureau, www.census.gov/govs/estimate/9818ky.html State and Local Finances by Level of Government, 1997-1998</i>						

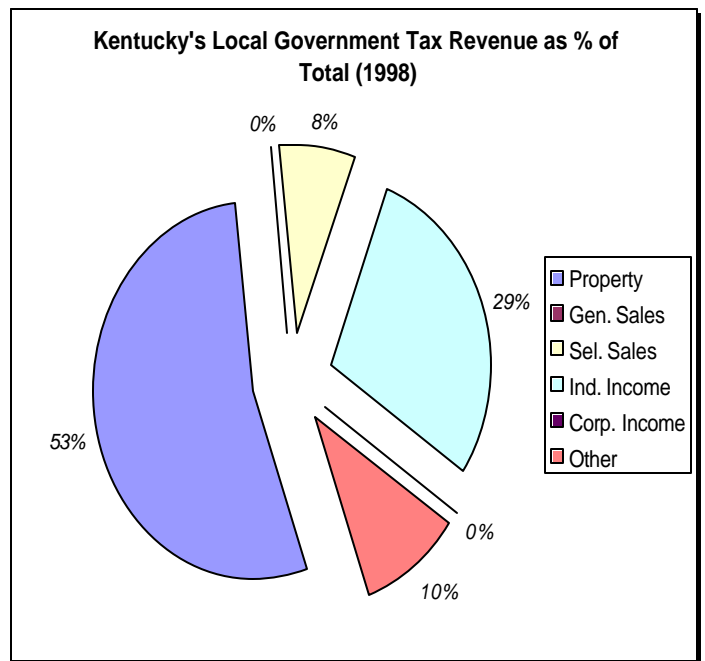
Tax Structure:

Local

Kentucky's local tax structure varies significantly from its contiguous states. In particular, Kentucky local governments only receive 53% of their total tax revenues from the property tax. Local governments in states bordering Kentucky, meanwhile, receive 73% of their local revenues from this tax (see **Graphs 4 & 5**). Approximately the same variance applies when making comparisons with the national average. Why do local governments in Kentucky rely on the property tax to such a relatively small extent? Part of the answer rests with constraints imposed by state legislation in past years.

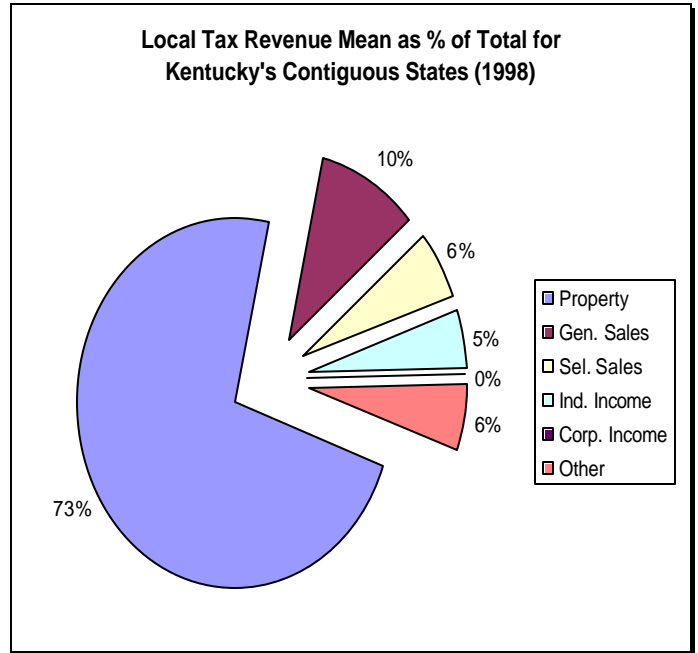
In 1979, H.B. 44 was enacted. This law constrained local governments' ability to raise property tax revenues by more than 4% from one year to the next. Although language in the law permits local governmental entities to exceed the

Graph 4



Graph 5

4% revenue limit, it also allows the voters of the governmental jurisdiction to petition for a referendum to repeal that portion of the property tax that raises revenue by more than 4%. Anecdotal evidence suggests that local governments have viewed this revenue growth marker as a binding constraint. They have been generally unwilling to grow property tax revenues by more than 4% annually out of concern that local voters will defeat the increase during a referendum. We cannot verify or refute these claims at the present time due to the lack of available, centralized data on property tax rates, compensating tax rates, and property values. Still, we may infer the relative revenue constraints imposed by H.B. 44 due to Kentucky's significant property tax variance with the national average and the median for its contiguous states.



Another notable difference between Kentucky's local government tax revenues and those of its contiguous states is the income³ tax. Local governments in Kentucky received almost 30% of their total tax revenues from this tax. In total, 173 counties and cities imposed an occupational license, or earnings, tax. Local governments in contiguous states, however, received, on average, only 5% of their total tax revenue from this source. For local governments nation-wide, the average was essentially the same, 5.2%.

Lastly, local governments in Kentucky do not have the authority to impose a local option sales tax. Many other states, however, including five of Kentucky's seven contiguous states allow this tax. The disparity is quite evident by examining **Graphs 4 and 5**. Local governments in states contiguous to Kentucky receive, on average, 10% of their total tax revenues from the local option sales tax compared with essentially 0% in Kentucky.

Overall, these graphs show that Kentucky's local governments rely significantly less on property and general sales tax revenue and significantly more on the individual income tax as tax revenue sources than do local governments in other states. In fact, Kentucky had the lowest reliance on property tax revenue as a percent of total tax revenues relative to any of its contiguous states in 1998. In contrast, it had the highest reliance on the individual income tax. **Table 2** below details this information.

³ The term "income" is used loosely. In Kentucky, for instance, local governments may impose a local *earnings* tax. This means that only wage earnings are taxed. Dividend, interest, and other forms of income are not taxed.

Table 2

Local Tax Revenue by Type as Percent of Total Revenues					
	Tax Revenue as % of Local Total				
	Property	Gen. Sales	Selected Sales	Ind. Inc.	Other
Illinois	82.7%	5.3%	9.0%	0.0%	3.1%
Indiana	89.7%	0.0%	1.1%	7.9%	1.3%
Kentucky	53.8%	0.1%	7.6%	28.6%	10.0%
Missouri	59.2%	21.8%	8.9%	5.4%	4.6%
Ohio	66.2%	7.8%	0.9%	21.9%	3.2%
Tennessee	59.1%	29.3%	5.8%	0.0%	5.9%
Virginia	72.4%	8.5%	9.9%	0.0%	9.1%
West Virginia	82.3%	0.0%	3.5%	0.0%	14.2%
U.S. Mean	72.9%	11.1%	4.9%	5.2%	5.9%
Ratios					
KY: U.S. Mean	0.73: 1	0.007: 1	1.54: 1	5.55: 1	1.70: 1
KY: Contiguous Median	0.74: 1	0.01: 1	1.31: 1	0.00: 1	2.17: 1
KY: Contiguous Mean	0.74: 1	0.01: 1	1.35: 1	5.69: 1	1.69: 1
Kentucky's Contiguous State Rank (high=1, low=8)	8	6	4	1	2
Source: U.S. Census Bureau, www.census.gov/govs/estimate/9818ky.html State and Local Finances by Level of Government, 1997-1998					

Tax Burdens

Developing state and local tax burden figures frequently leads to conflicting reports. Although most may be technically correct, they generally fail to adequately explain the consequences of using one tax burden approach versus another. As a result, we often end up wondering which, if any, tax burden figure to believe. To remedy this situation, this section of the paper presents two of the most frequently used measures of tax burden—per capita and percent of personal income—and explains their shortcomings. In addition, it calculates tax burdens for Kentucky and its contiguous states using both of these methods.

Definition

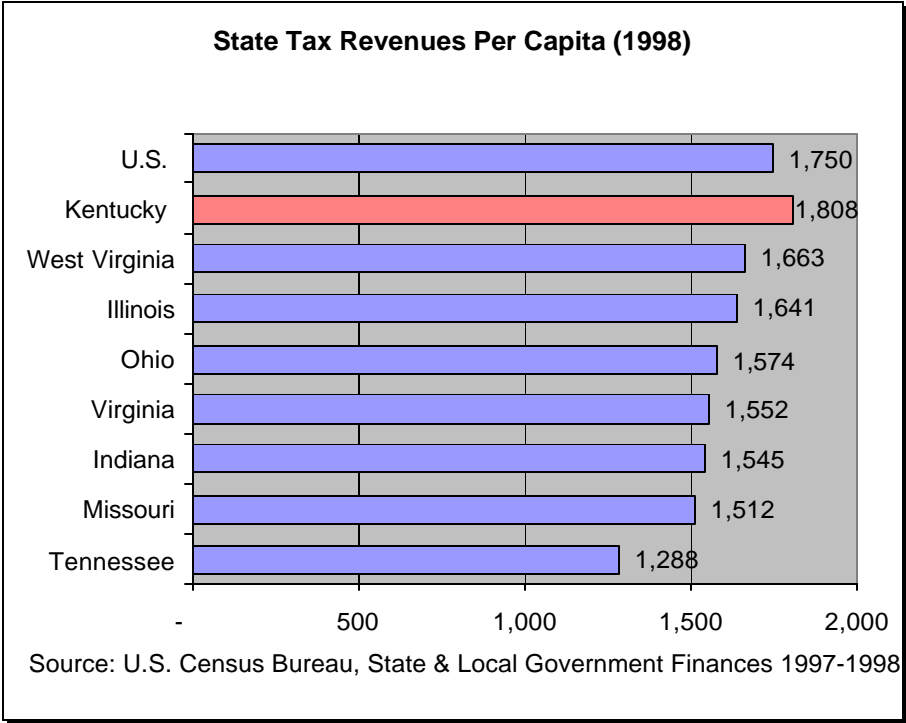
Tax burden: the proportion of taxes paid relative to a standard unit of measurement (e.g., number of people)

Per Capita

The first tax burden calculation method is per capita. It is a simple calculation of total tax revenues divided by total population.

In 1998, Kentucky collected more state tax revenues on a per capita basis than any contiguous state. During that year Kentucky collected \$1,808 in per capita state tax revenues. Compared with Kentucky’s contiguous states, Kentucky collected approximately \$250 more, on average, in per capita total state tax revenues. Compared with the national average, Kentucky also collected approximately \$58, or 3%, more (see **Graph 6**).

Graph 6



Based upon the per capita measure, Kentucky has a significantly higher state tax burden than other states. However, several important caveats should be considered. First, the per capita tax burden, by definition, includes every woman, man, and child in the calculation, regardless of whether they pay taxes or not. Certainly, a newborn baby bears no direct tax burden—they are unable to participate in any way, shape, or form, in economic activity. Other examples abound, including certain persons under state supervision. Therefore, the per capita method invariably understates the actual burden borne by persons participating in the marketplace. Second, the per capita tax burden considers all taxes are borne by persons living within its taxing jurisdiction. That is, the per capita tax burden measure (and, as will be shown below, the percent of personal income method) considers all tax revenues to be paid by residents of a state or local government. Very few, if any, taxing jurisdictions, however, receive all of its tax revenues from residents of that jurisdiction. More than likely, tax revenues also come from non-residents. For example, vacationers from Ohio who stop in Lexington to buy a ceramic horse on their way to Atlanta pay a sales tax that is remitted to the state. Clearly, this tax revenue cannot be attributed to Kentucky residents’ per capita share, although that is the way it is calculated under this method.

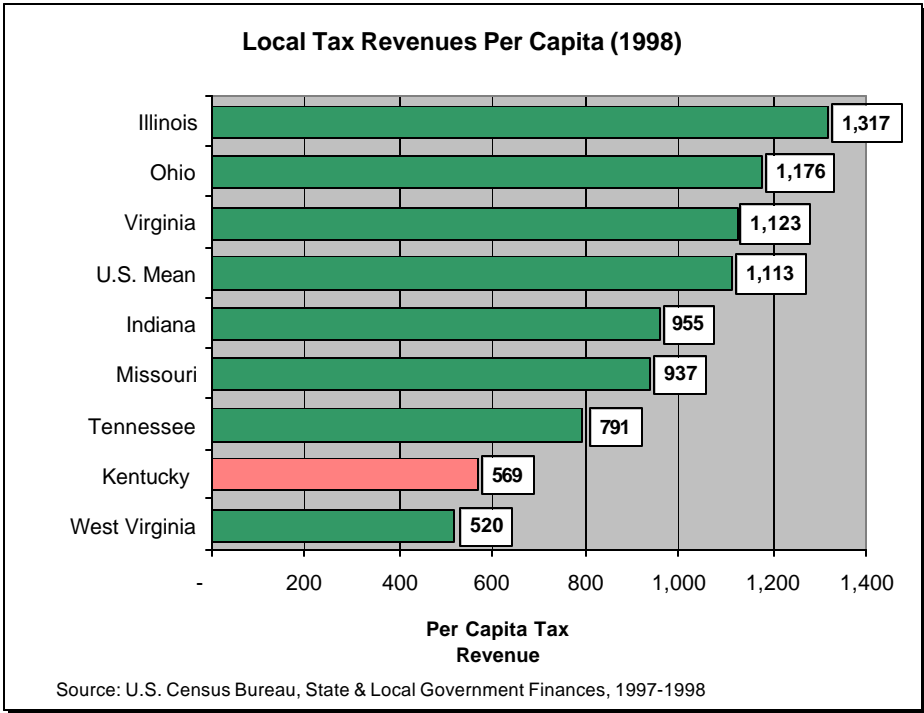
Interestingly, comparisons between states on a per capita basis will disproportionately favor states that have a greater ability to export, or shift, the burden of their taxes to non-residents. While such states will show a relatively higher per capita tax amount, the actual resident tax burden will be less. States like Florida, for example, with its significant volume of out-of-state travelers who purchase taxable goods

contribute to Florida’s total tax revenues. The degree to which tax exporting occurs in this manner, I am uncertain. However, I suspect that it may play some role when making comparisons using these numbers.

Similar reasoning applies to the local tax burden calculation. Here too, the tax burden may be borne by residents of different taxing jurisdictions. Some level of tax exporting, especially in more urbanized areas, likely occurs.

Kentucky’s local per capita tax burden in 1998 was \$569 (see **Graph 7**). This was the second lowest among Kentucky’s contiguous states. Only West Virginia had a lower local per capita tax burden. Further, local per capita tax revenues in Kentucky were significantly lower than the national average of \$1,113.

Graph 7



Kentucky’s relatively low local per capita tax burden indicates, for the most part, tax constraints imposed by the state government. Over the past few decades, the legislature and governor have enacted various pieces of legislation that have effectively curtailed the ability of local governments to raise local revenues. In particular, H.B. 44, enacted in 1979, limited property tax revenue growth to 4% unless the voters approved growth above this amount. This soft constraint was primarily intended to curb property tax growth, but in effect, it appears to have reduced local government’s willingness to exceed a 4% revenue growth rate.

Other local government tax options face restrictions as well. For example, local governments may assess an occupational license tax, but most counties and municipalities face a maximum tax rate⁴. In addition, local governments in Kentucky cannot implement a general sales tax. Most other states permit their local governments to assess a general sales tax. Finally, Kentucky’s state government provides significant financial resources to school districts. Primarily through the SEEK (Support Education Excellence in Kentucky) program, the state transfers more than a billion dollars to local governments each year⁵. The magnitude of this transfer program partially reflects a shift to a higher state tax burden and lower local burden.

Kentucky’s overall state and local tax burden on a per capita basis is the 6th lowest among its contiguous states. This occurs because Kentucky’s relatively high state tax burden is nearly offset by its relatively lower local tax burden (see **Table 3**).

Table 3

State & Local Taxes Per Capita (1998)			
	State	Local	Total
Illinois	1,641	1,317	2,959
Indiana	1,545	955	2,500
Kentucky	1,808	569	2,377
Missouri	1,512	937	2,449
Ohio	1,574	1,176	2,750
Tennessee	1,288	791	2,079
Virginia	1,552	1,123	2,675
West Virginia	1,663	520	2,183
U.S. Mean	1,750	1,113	2,863
<u>Ratios</u>			
KY: U.S. Mean	1.03: 1	0.51: 1	0.83: 1
KY: Contiguous Median	1.16: 1	0.60: 1	0.95: 1
KY: Contiguous Mean	1.17: 1	0.58: 1	0.95: 1
Kentucky's Contiguous State Rank (high=1, low=8)	1	7	6
<i>Source: U.S. Census Bureau, www.census.gov/govs/estimate/9818ky.html</i>			
State and Local Finances by Level of Government, 1997-1998			

⁴ The maximum occupational license tax rates vary by county population and class of city. Counties with a population greater than 300,000 (i.e., Jefferson) may assess a maximum 1.25% occupational license tax. Counties with a population greater than 30,000, but less than 300,000, may impose a maximum 1.00% occupational license tax. Counties with a population less than 30,000 do not face statutory tax limits. Cities of the 2nd thru 5th class also do not have a statutory maximum tax rate. Cities of the 1st class, however, have a 1.25% maximum tax rate.

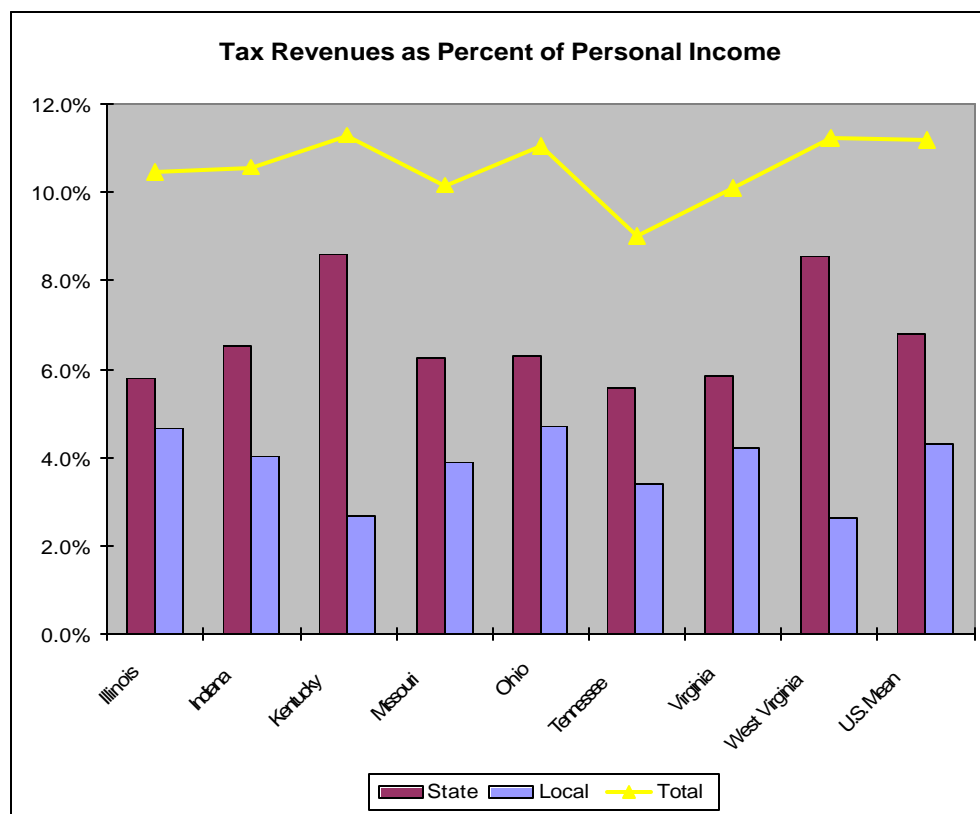
⁵ In 2000, total SEEK transfers from the state government to school districts totaled \$1.8 billion.

Percent of Personal Income

The second method for calculating tax burdens is as a percent of personal income. It is calculated by dividing total personal income by total tax revenues.

Using this method, Kentucky has a total tax burden higher than any contiguous state as well as the national average (see **Graph 8**). For 1998, Kentucky's combined state and local tax burden was 11.3%. This compares with a median rate of 10.3% for states contiguous to Kentucky and 11.2% for the national average.

Graph 8



The primary reason for Kentucky's high tax burden using this method is the state's relatively low income. **Table 4** below displays Kentucky's personal income per capita compared with its contiguous states and the national average. For 1998, Kentucky had a per capita personal income rate of \$21,063. The median per capita figure for states contiguous to Kentucky for the same year, however, was \$24,101, more than \$3,000, or 14%, greater than in Kentucky. The variance with the national average was even larger at almost \$4,600 per capita. Due to Kentucky's low per capita personal income rate, the tax burden borne by Kentucky residents automatically exceeds that borne by residents in states with higher per capita personal income. That is, a \$1 tax creates a greater tax burden in Kentucky than a similar tax does in a state with a higher per capita personal income rate.

From this information, we also note that state taxes account for most of the tax burden in every state. However, the relative state proportion of taxes in Kentucky is noticeable higher than most of its contiguous states. For 1998, the tax burden in Kentucky was 8.6% of total personal income, tied for the highest. Among contiguous states, the median was 6.3%. In sharp contrast, the local government tax

burden in Kentucky was only 2.7%, which tied for the lowest. The median for contiguous states was 4.0%. The overall tax burden in Kentucky, nevertheless, was 11.3%, which tied West Virginia for the highest rate.

Table 4

Personal Income Per Capita (1998)	
	<u>Pers. Inc./Capita</u>
Illinois	28,260
Indiana	23,640
Kentucky	21,063
Missouri	24,109
Ohio	24,921
Tennessee	23,099
Virginia	26,539
West Virginia	19,437
U.S. Average	25,634
Contiguous States	
- Median	24,109
- Mean	24,286
- Maximum	28,260
- Minimum	19,437
KY: Contiguous Median (X: 1)	0.87
KY: Contiguous Mean (X: 1)	0.87
Kentucky's Contiguous State Rank (high=1, low=8)	7
<i>Source: U.S. Census Bureau, www.census.gov/govs/estimate/9818ky.html</i>	
<i>State and Local Finances by Level of Government, 1997-1998</i>	

The contrast in state and local tax burdens in Kentucky underlies the tax restrictions imposed on local governments. As indicated previously, local governments in Kentucky face numerous constraints on their ability to raise tax revenues. Couple that with a significant state education transfer program and it becomes easier to understand why Kentucky’s tax burden shows significant variances between the state and local governments. **Table 5** below details this information.

Table 5

Taxes by Governmental Level as Percent of Personal Income (1998)			
	Taxes as % of Personal Income		
	State	Local	Total
Illinois	5.8%	4.7%	10.5%
Indiana	6.5%	4.0%	10.6%
Kentucky	8.6%	2.7%	11.3%
Missouri	6.3%	3.9%	10.2%
Ohio	6.3%	4.7%	11.0%
Tennessee	5.6%	3.4%	9.0%
Virginia	5.8%	4.2%	10.1%
West Virginia	8.6%	2.7%	11.3%
U.S. Mean	6.8%	4.3%	11.2%
<u>Ratios</u>			
KY: U.S. Mean	1.26: 1	0.62: 1	1.01: 1
KY: Contiguous Median	1.37: 1	0.67: 1	1.08: 1
KY: Contiguous Mean	1.34: 1	0.68: 1	1.09: 1
Kentucky's Contiguous State Rank (high=1, low=8)	1 (tie)	8 (tie)	1 (tie)
Source: U.S. Census Bureau, www.census.gov/govs/estimate/9818ky.html State and Local Finances by Level of Government, 1997-1998			

Several other measures of personal income can also be used to calculate tax burdens. These measures generally vary according to whether they treat government transfers, interest and dividend income, and imputed wealth as personal income. Overall, the personal income method appears to provide a more desirable measure of tax burden than the per capita method. In part, this results from the fact that the per capita calculation method assigns a tax burden figure to every resident regardless of whether they contribute to economic activity. As previously indicated, this appears to understate the actual tax burden borne by persons paying taxes. The personal income method, on the other hand, determines tax burden according to a measure of income—which is generally understood as one indicator of overall economic activity. Furthermore, persons with no reported income generally cannot/will not engage in legal economic transactions where taxes would be collected. It appears more appropriate, therefore, to make tax burden comparisons based upon an economic standard of personal income.

Conclusion

Depending upon the method used, Kentucky residents have either a relatively high or low tax burden. Using the per capita method, Kentucky has a relatively low state and local tax burden figure. When using the percent of personal income as the basis, however, Kentucky's tax burden is higher than most states, including each of its contiguous states. In both cases, however, the state tax burden was relatively high and the local tax burden relatively low. This reflects, in part, tax limits imposed upon local governments as well as significant state transfer programs.