



# TAX ADMINISTRATORS NEWS

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## FTA EXAMINES TAX LEVEL MEASUREMENT METHODS

Popular publications, elected officials and others often use various measures of state and local tax levels or burdens in an effort to judge whether a state is a "high tax" or "low tax" state. Unfortunately, no single measure generally "tells the whole story" because of various characteristics and limitations of the data used. This article examines the issues and limitations associated with the three methods commonly employed by analysts to measure tax burden — average tax payment, ability to pay, and representative taxpayer.

### Average Tax Payment

The per capita tax level is the most popular and simplest burden measure to compute. It divides revenue collections by its population and reveals the average revenues collected per person. A similar figure can be computed for households within a specific jurisdiction. Average tax payment measures are helpful in making simple inter-jurisdictional comparisons by normalizing actual collections for the population served by the governmental unit. Real or inflation-adjusted per capita levels, measured over time, will also indicate the extent to which the tax burden may be exceeding or lagging inflation and population growth.

Importantly, these measures do not suggest anything about the relationship of the tax burden to the underlying state economy. Stated simply, a high or low per capita dollar figure does not necessarily mean a government's burden is excessive or minimal. For example, Connecticut had a \$3,386 per capita state and local own source revenue burden (ranked 8th nationally) in 1990, a sure candidate for the dubious distinction as a "high tax state." However, when the state's revenue collections were measured as a percent of personal income they ranked 49th nationally (13.9 percent of personal income in 1990). Neither does this measure account for any ability to export a state tax burden by offsetting it against federal liabilities or via certain features of the state economy such as resource production or tourism.

### Economic Base Measurements

To account for the ability of a state to carry a particular tax or revenue level, it is necessary to relate revenue collections to some economic variables such as Gross State Product (GSP) or personal income. These measurements provide information on the ability of a state's residents, taken as a whole, and a state's productive capacity to meet governmentally imposed revenue

burdens. Three different techniques are used for comparing revenue levels to the underlying economic base. Importantly, these are all aggregate tax level measures; they do not speak to the distribution of the tax burden across income groups.

The first technique measures revenue burden as a percent of personal income. Dividing a jurisdiction's revenue collections by its total personal income sheds more light on the ability of a state's taxpayers to carry the tax burden imposed than per capita measures. Personal income in most cases serves as a readily available and reasonable proxy for the state's tax base as a whole. However, the personal income measure suffers two deficiencies: not all tax bases are tied to personal income and its scope is

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limited because the measure neglects certain types of state economic activity.

GSP fills some of the gaps inherent to personal income. GSP measures the value of goods and services produced by a state's labor and resources during a specific year and reflects the entire economic base upon which a state can impose taxes. GSP, as computed by the U.S. Department of Commerce, entails four components: compensation of employees; proprietor income; indirect business taxes and nontax liability; and other capital charges like depreciation allowances.

Despite its broad base, GSP suffers several deficiencies that make it an imperfect burden measure. First, GSP does not include government transfers to individuals (i.e., food stamps, Medicare etc.) which causes it to understate income and buying power.

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Second, GSP figures exclude pension and other retirement income when recipients live in another state. Finally, GSP can overstate a locality's effective tax base in a city like Washington, D.C. because the city cannot tax commuters from surrounding states. GSP can also capture, to a degree, some tax exporting by including within the denominator of the calculation the value of a product taxed in the state but shipped out of state, e.g., natural resources and severance taxes. Personal income as an economic base is not as likely to capture such matters.

Finally, there is a representative revenue or representative tax system (RRS/RTS) developed by the Advisory Commission on Intergovernmental Relations. RRS/RTS estimates a state's "revenue or tax capacity" by computing the revenues that a state and its local governments could derive from imposing a tax, at the

tial but not always readily available. Second, RRS/RTS does not clearly answer questions about the level of the tax burden. Instead, it focuses on the tax burden compared to other states.

**Representative Taxpayer**

The last technique for measuring tax levels is to calculate the tax burden for "typical" or "representative" taxpayers or households based on actual law and assumptions about family size, housing, consumption, income and the like. The most prominent and comprehensive representative taxpayer study is prepared annually by the District of Columbia Department of Revenue and Finance. It calculates the annual tax burden for particular types of households in the largest city in each state.

The D.C. study computes and compares burdens for a "typical" household of two adults and two school-age children with an income of \$25,000, \$50,000, \$75,000 and \$100,000 that lives in an owner-occupied, single family dwelling in the city. To make the required calculations (based on actual law in each state) the D.C. study necessarily makes certain assumptions about the division of wage and non-wage income among spouses, types of income, motor vehicle ownership, itemized deductions, etc.

The D.C. study supplements other studies because it focuses on a "typical taxpayer" instead of the entire state tax system. It can begin to address the issue of the distribution of the tax burden across income groups, as it deals only with those taxes paid by city residents. However, the study is not without its problems. First, the results from a study like D.C.'s are predicated on its assumptions. In particular, generalizing about the relationship between housing value and household income across income groups is difficult, and the assumption of a family residing in owner-occupied housing is more or less relevant depending on the size of the metropolitan area in question. Second, these studies do not address state and local business taxes which would be included in any aggregate tax burden measurement. Finally, the D.C. study only focuses on the state's largest city and not other areas in the state. This raises questions about the study's findings being representative of the entire state since only one jurisdiction's revenue burden is examined.

**Conclusion**

Various methods exist for measuring the state and local tax burden. Each has unique characteristics and limitations which make it helpful for answering some questions and less than helpful for answering others. That can either help or hinder analysis. Unless assumptions, characteristics and limitations are adequately understood by producers and consumers of tax burden studies, more heat than light will be generated.

The accompanying chart presents state-by-state data on state and local revenue levels in 1990 under the various measures discussed in the article. In each case, the data used are for **state and local own source general revenues** which includes charges and miscellaneous revenues as well as tax revenues.

**Ed. Note:** The next issue of *TAN* will examine historical changes in the mix of state and local revenue sources.

TAX LEVEL MEASUREMENT METHODS		
METHOD	DATA INSIGHTS	DATA LIMITATIONS
AVERAGE TAX PAYMENT:	<ul style="list-style-type: none"> <li>•Easy Inter-jurisdictional burden comparisons.</li> <li>•Easily computed.</li> </ul>	<ul style="list-style-type: none"> <li>•Doesn't account for economic ability to pay.</li> <li>•Doesn't consider different household types.</li> </ul>
ECONOMIC BASE MEASUREMENTS	<ul style="list-style-type: none"> <li>•Accounts for economic base</li> <li>•Accounts for productive capacity (GSP).</li> <li>•Captures some tax exporting (GSP).</li> <li>•Relates tax burden with ability to tax by tax type (RTS).</li> </ul>	<ul style="list-style-type: none"> <li>•Fails to address distributional consequences.</li> <li>•Does not capture all exporting</li> </ul>
REPRESENTATIVE TAXPAYER	<ul style="list-style-type: none"> <li>•Tax burden comparison across income groups.</li> </ul>	<ul style="list-style-type: none"> <li>•Does not include business taxes.</li> <li>•Results depend on "typical" taxpayer assumptions.</li> </ul>

average rate of all states, against the representative tax base as it exists in that state. Tax or revenue effort, the burden measure in this method, is computed by dividing actual collections by capacity for each revenue source and for all sources as a whole. The result is a percentage which says whether a state is utilizing its tax capacity to a greater or lesser extent than the average state with the average state having a tax capacity and a tax effort of 100.

A RRS/RTS provides analysts with information to compare fiscal differences across states. It is also a means of relating the actual burden of any single tax or all taxes as a whole to the potential base supporting the tax as well as comparing the degree to which a state uses a particular tax source with other states. However, a RRS/RTS has shortcomings. First, accurate data about a location's economic condition and the tax base is essen-