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THE EDUCATION TAX POLICY INSTITUTE

REVENUE OPTIONS FOR OHIO'S FUTURE

Report prepared for

The Education Tax Policy Institute
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by

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and
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EXECUTIVE SUMMARY

This report presents an overview of Ohio's state and local tax system with an eye toward presenting policy options in the wake of the 2008-09 economic recession. We first provide some necessary context by considering Ohio's tax system and tax burden in comparison to those in other states, and also by summarizing and evaluating the performance of the broad package of tax policy changes implemented by House Bill 66 in 2004. We then take a detailed look at Ohio's three major taxes—the individual income tax, the general sales tax, and the property tax—in order to provide informed options about policy changes that could provide revenue flexibility going forward.

Ohio's state and local tax burden is similar to the national average and is also near the median of a set of benchmark states. State-level taxes in Ohio were a smaller share of the economy in 2009 than in 1994, and preliminary data suggest a continued decline in 2010. While the state-level tax burden in Ohio is the 17th lowest among all states (and is also very low relative to most of the benchmark states), it is important to recognize that local taxes contribute a relatively larger share of combined state and local taxes in Ohio than in most other states.

Tax revenues in Ohio were growing more slowly than the state's economy even before the recent recession. State tax revenues have shrunk by 14.6 percent during the recession. This impact has been much worse than the average state's 11.1 percent decline. The recession and H.B. 66 have resulted in Ohio's General Revenue Fund having about $3 billion less in revenue per year than would have been anticipated during the development of H.B. 66. Though tax revenues have begun to grow again, the effects of lower revenues on public service expenditures will be strongly felt with the expiration of the ARRA stimulus funds beginning in July 2011. Ohio and its leaders need to decide quickly whether the resulting decline in important public services is consistent with service demands by the state's citizens or if new revenue sources should be found.

H.B. 66 brought a variety of tax policy changes to Ohio, including the phase-out of the Tangible Personal Property Tax and Corporate Franchise Tax, the phase-in of the new Commercial Activity Tax (CAT), reductions in individual income and sales tax rates, and an increase in the cigarette tax rate, among other things. Assessment of the performance of H.B. 66 is difficult because the reforms were phased in between 2005 and 2009, which partially overlapped the recession, and the fact that it may simply be too early to fully evaluate the reforms. In general, we find that H.B. 66 reduced the overall progressivity of Ohio's tax system while generally improving efficiency by reducing distortions of economic activity. At the same time, while H.B. 66 likely led to improvements in overall tax compliance and administration, it also hindered the tax system's ability to keep up with the economy. Taxes imposed directly on businesses were increased via the CAT as the set of business taxpayers was dramatically expanded. On the other hand, elimination of the tax on business tangible personal property during a similar window of time resulted in a net reduction in business tax liabilities.

Income taxes are the largest source of state and local tax revenues in Ohio at 30.0 percent. Ohio's state-level individual income tax structure is not grossly out of line with most other income-taxing states. While Ohio has more tax brackets than most other states, the top rate is below the national median and average and also applies to a higher-than-typical starting income level of $200,000. The tax base is at least as broad as those in other states, in that federal adjusted gross income (AGI) is the starting point, exemption amounts are lower than national averages, and few deductions are permitted. Most policy actions that would increase conformity with individual income tax systems in other states, such as the provision of additional deductions or credits, would therefore be revenue-reducing, and many of them would not be good policy options for other reasons.

From the perspective of revenue productivity, broader taxation of Social Security, railroad retirement, and other retirement income sources would offer the most productive base-broadening option. Specifically, Ohio could realize up to $244 million per year in additional revenues if it removed the exemption for federally-taxable Social Security and railroad retirement income and another $120 to $135 million if it removed the retirement income tax credit. While such reforms would be admittedly politically unpopular, they could result in improvements in both equity and efficiency (by, for example, keeping relative taxes on workers low) without resulting in significant out-migration of retirees. That said, it appears that marginal tax rate increases would be more fruitful in terms of revenue enhancement. We estimate that returning to pre-H.B. 66 marginal tax rates would generate up to about $2.5 billion in new revenue. Limiting such a rate increase to filers with taxable income above $100,000 would generate up to about $1.6 billion. Reversing half of the H.B. 66 rate reductions to-date would generate up to about $1.0 billion.

Ohio's reliance on the sales tax is very similar to the national norm. Ohio's state sales tax rate is below the national median, but the combined state and local rate is at the national median. The base of taxable transactions is a relatively smaller share of the state's economy in Ohio than the national average, but it has not declined as rapidly as in most other states. Rapid growth in service consumption, much of which is not taxed, and robust expansion of remote sales have been the primary forces behind the narrowing of Ohio's tax base relative to the economy. Ohio taxes more services than many states but does not tax many of the more rapidly growing services. Ohio could help stabilize its sales tax base relative to the economy, improve revenue growth, and reduce the distorting effects that arise when goods are broadly taxed while many services are exempt if the taxation of services were broadened. Construction, marina, cable TV, sports, digital media, parking lots, amusements, and some professional services are among services that could be added to the base, though others can easily be identified. Any expansions of the base should be carefully designed to avoid greater taxation of business purchases. Restaurant takeout food could also be added to the base. Finally, Ohio could take stronger steps to seek better compliance with the sales tax on remote transactions, such as by becoming a full member of the Streamlined Sales Tax Governing Board.

Property taxes are the largest local government tax source in Ohio, just as they are in the rest of the country, though the share of revenues raised by the property tax is somewhat lower in Ohio than in the average state. Ohio's counties and other local governments differ radically in the effective tax rates that must be imposed to generate property tax revenues (because of the large variation in per capita property tax bases) and in the amount they actually raise from the property tax. The differences in revenue generation capacity are moderated to some extent by state programs, such as the evidence-based model used for education finance. Ohio's recent decision to narrow the property tax base to real property is good policy, though it has shifted property tax burdens relatively more towards households and away from business.

Three key issues are identified with the property tax. However, these are not easily addressed without comprehensive reform, and some fixes could require a constitutional amendment. First, the property tax is overly complicated and not transparent to taxpayers for reasons including the very large number of ballot initiatives and detailed funding options on which taxpayers are voting, the complex method of calculating gross and net tax rates using tax reduction factors, and the role of various tax credits. The result surely is that few taxpayers actually understand how their tax liability is being determined. Second, the property tax is strongly interconnected with education finance in ways that further complicate how the tax operates. Finally, the state has narrowed the property tax base in a variety of ways over the past several decades. The results have been greater stress on the state's fiscal condition because of reimbursements made to local governments, the requirement for higher tax rates to generate any given amount of revenue, and shifts in the relative tax burdens across businesses and households.

TABLE OF CONTENTS

INTRODUCTION

The severe 2008-09 recession put state and local tax structures in turmoil and has left states with significantly less tax revenue than they enjoyed during the earlier expansion years. States have been forced to make radical changes in services, such as reducing employment, placing workers on furloughs, reducing capital expenditures, and many others. This report is prepared in the context of this dramatic transition in state and local government finance, but is a study of the long-term fiscal options for Ohio and not of the influences that the recession has had on the ability of Ohio governments to handle the recession.

The report focuses on five issues: the current state of the Ohio tax structure, an assessment of H.B. 66, and the specific characteristics of the personal income, sales, and property taxes. The personal income, sales, and property taxes are each broadly analyzed, but with a focus on options for reforming these tax sources and on generating additional revenues. The analysis is conducted by tax but state and local tax and revenue structures are best understood as a package rather than as a set of individual revenue instruments. The main reason is that there are portfolio effects within the overall tax structure, with the strengths of one tax or fee possibly offsetting weaknesses in another and vice versa. Thus, we bring analysis of the tax structure pieces together in an overall assessment of how the system can be transformed. We also present the best options should the state want to generate additional tax revenues.

TAXES IN OHIO TODAY

Criteria for Evaluating Tax Policy

A series of criteria is generally used to evaluate the performance of revenue systems. Adequacy, equity, minimal effects on the economy, and low administration and compliance costs are the most common goals for a tax system, and the ones we adopt here. In addition, political acceptability is an important aspect of a good tax system, though one that is not discussed here. This section provides a brief summary of each criterion to provide readers a similar baseline to understand our analysis. The knowledgeable reader can bypass this primer without missing the substance of our evaluation of Ohio's tax system.

Adequate Tax Revenues

Adequacy has three components: the capacity to generate sufficient revenues to finance desired services today, to continue delivering the desired services over time, and to allow services to be reasonably maintained across business cycles. Revenues are adequate today if they allow state and local governments to finance the services that Ohio residents demand. Revenues can be too large, resulting in overspending relative to service demands, or too limited to meet Ohio's service demands, resulting in inadequate education, infrastructure, and other spending.

No single measure exists today of whether revenues are adequate, though some people will certainly say government is too large and others that it is too small at any point in time, since there is a continuum of service demands. One common approach to measuring adequacy is to compare a state's per capita revenues or revenues as a share of personal income with that raised in a set of states that can serve as a benchmark. Similarly, Ohio's tax structure can be compared over time using a similar benchmark to see whether it is larger or smaller than before. Metrics for comparing the size of government across states and over time are discussed further below. The comparisons are useful, but do not precisely answer whether Ohio's revenues are sufficient to deliver the public services demanded by the state's citizens, since Ohio residents may have different demands for public services than those in benchmark states. Thus, the comparisons are indicative but not definitive measures of whether government is on target.

State and local governments are responsible for delivering a consistent set of services over time, since children go to school every year, prisoners often must be kept for many years, and so forth. A revenue system is only adequate if it expands with the economy so that services can be maintained at the desired levels over time. The growth over time can be separated into two dimensions: (1) trend growth necessary to meet demands that rise with population, inflation, and growth in the "real" economy, and (2) growth (or limited losses) across the business cycle, so that necessary services can be delivered in difficult times such as 2009 and 2010. Trend growth is best evaluated over long time periods, say at least 10 years, which allows for inclusion of an expansion and a recession. This criterion is achieved when states select a portfolio of taxes and develop the appropriate characteristics to achieve the desired revenue growth. The tax system must be changed routinely if the implicit revenue growth rates are not generally consistent with service demands. Tax rates, and more importantly underlying growth rates, must be cut if revenues are growing too fast, and the reverse if revenues are growing too slowly. Frequent changes in tax structures are politically difficult (often resulting in changes occurring slowly) and introduce uncertainty in the tax system, so the best approach is to develop a system that produces appropriate revenues over time.

Cyclical growth refers to how the revenue system performs during the downswings and upswings in the economy, and is an evaluation of how the tax system responds to underlying trends. It is possible that long term revenue growth is acceptable but the performance is highly volatile, making it difficult to deliver services from year to year. Revenue performance should not be overly volatile because services must be provided both in expansion and recession years. All tax systems are cyclical to some degree, so this must be evaluated in a relative sense (see Bruce, Fox and Tuttle, 2006, and Boyd, 2007).[1] Further, the past several years demonstrate that state and local tax systems in Ohio, as elsewhere, can be much more volatile than had been the experience in previous decades. Indeed, state and local revenues declined much more radically during the two recessions in the 2000s than had been the experience during the previous 20 to 30 years.

Unfortunately, state and local tax systems cannot be structured so that volatility in the bases on which taxes are levied can be eliminated, though taxes can be structured to limit the swings. For example, Ohio's Commercial Activity Tax (CAT) has been much more stable than corporate income taxes used in many other states. Inability to eliminate fluctuations means that states must find other ways to maintain service levels over the business cycle, such as reserve funds, rate changes, or other methods, because state tax instruments cannot be

[1] Donald Boyd, *The Volatility of State Tax Systems* (working title), Working Paper for the Pew Center on the States, 2007 and Donald Bruce, William F. Fox, and Markland Tuttle, "Tax Base Elasticities: A Multistate Analysis of Long Run and Short Run Dynamics," *Southern Economic Journal*, October 2007.

structured in a way that offsets the revenue volatility to the extent needed. State and local governments also must make acceptable spending cuts to keep budgets in balance during recessions.

Fair Tax Revenues

Fairness is in the eye of the beholder, so no tax structure will be seen as fair by all observers. Fairness has two elements: horizontal equity and vertical equity. Horizontal equity refers to how taxpayers with the same ability to pay are treated and vertical equity refers to how taxpayers with different ability to pay are treated. Most people believe that horizontal equity means people with the same ability to pay should have similar tax liabilities.

Vertical equity is often thought to mean that tax liabilities should rise with income. Taxes are often described as progressive, regressive, or proportional depending on how fast tax liabilities rise with income, and disagreement exists regarding which is the most vertically equitable. It is important to remember that these concepts describe taxes as a *percent* of income and actual tax liabilities normally rise with income even with regressive taxes. Thus, the choice comes down to how fast tax liabilities should grow with income, which is in the eye of the beholder. So, if the state pursues the simple goal by which taxes rise with income, it is not necessary that such taxes be progressive.

Fairness is a difficult concept to apply to businesses because firms do not have ability to pay in the same sense that individuals do. Economists normally argue that business taxes should be neutral, which means that taxes should be imposed evenly on the capital used in each industry. Further, the tax burden on business should not be unduly large. Often, the latter is taken to mean that businesses should pay taxes according to the benefits they receive from public services. While the notion of benefit taxes is conceptually appealing, it is difficult to implement in practice.

Limited Distortions in Behavior

All taxes have the potential to distort behavior, whether it be by discouraging work, saving, investment, consumption, or other choices. Tax structures should be built to limit these effects whenever possible because these distortions make people worse off, since they cause people to behave differently than they would like to, which can reduce economic growth. In some cases, states may want to use tax structures to reinforce certain policy goals, such as

discouraging smoking or excessive alcohol consumption or stimulating economic activity in one sector. But, the use of tax systems to influence behavior must be done judiciously because many decisions, such as most business investment choices, are often better left to the private market economy and individual choice.

Low Collection Costs

Good tax administration is imperative to ensure that state and local governments collect those revenues that are due. Good administration is also necessary to encourage voluntary compliance since people are more willing to pay their liability if they believe that others are paying their taxes. Still, resources used by Ohio state and local governments to administer taxes are not available to provide desired public services, such as K-12 education or upkeep to roads. Similarly, compliance costs reduce business profits. Thus, a balance must be struck so that taxes are collected effectively, but taxes must be structured so that they can be collected at relatively low administration and compliance costs.

Ohio Tax Structure Today

This section describes Ohio's tax structure, including its size, sources of revenues, state versus local contribution, role played by business, and equity. Whether tax revenue generated by Ohio state and local governments is sufficient to meet public service demands is an important issue that we do not seek to answer directly in this study. This decision must be made by Ohio's people and its political leaders. Instead we provide a perspective on the size of Ohio governments by showing how financing of Ohio's state and local governments has changed over time and by comparing levels of taxation in Ohio with those in benchmark states.[2] Ohio tax revenues are at or below the national average whether measured in per capita terms or as a percent of personal income. Similarly, it appears likely that Ohio tax revenues will register at the median of benchmark states when cross-state data are available for 2010. Both state and local tax revenues rose slightly as a percent of personal income from the early 1990s until approximately 2006 and have fallen since. In fact, state tax revenues were lower as a share of personal income in 2009 than in 1994, and taxes were a still smaller share of personal income in 2010.

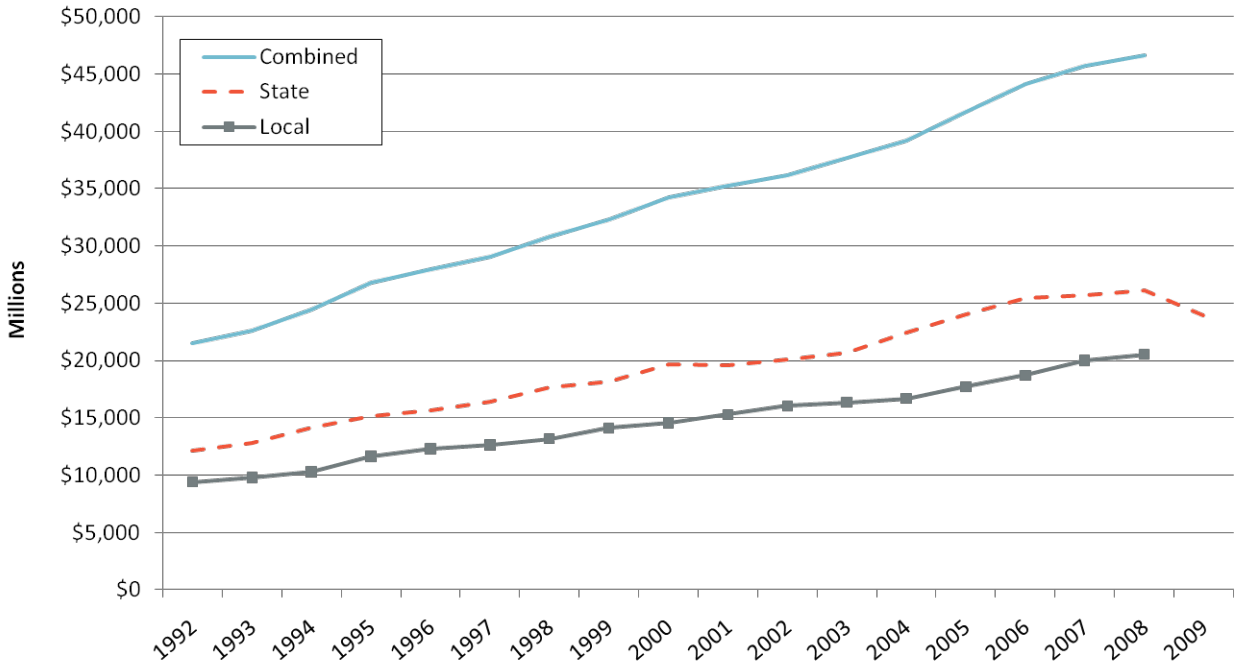
[2] Of course, neither of these are measures of the degree to which Ohio has sufficient revenues in an abstract sense of how big government should be. No attempt is made to quantify the appropriate size of government.

Size of Ohio Government

Ohio state government collected $23.05 billion during fiscal year 2010, down from $26.98 billion in 2008.[3] Ohio local governments raised an additional $20.53 billion in 2008, up slightly from $20.00 billion in 2007. Figure 1 provides state and local government tax collections in Ohio since fiscal year 1992 to demonstrate the path of revenue growth over time. Of course, tax collections have risen with economic and population growth and with inflation, so the pattern of taxes relative to the economy and to population are better metrics for evaluating how Ohio's ability to invest in key education and infrastructure has changed across years. Figure 2 evidences tax collections as a share of personal income for both state and local governments. Taxes were a fairly constant share of the economy at both the state and local levels from 1994 through 2003. Taxes then rose as a percent of the economy for several years, likely as the result of the economic bubble in the middle of the 2000s, along with the sales tax increase to 6.0 percent and subsequent decrease back to 5.5 percent. In addition, the cigarette tax rate was hiked by $0.70 per pack in 2005. State taxes have fallen relative to personal income since 2006, and local revenues have fallen relative to personal income since 2007. Those provisions of H.B. 66 that were expected to lower revenues and the subsequent decrease in the revenue elasticity probably explain much of the initial decline, but onset of the recession in 2008 also had an impact. The reported declines in revenues relative to the economy will be more precipitous when we know 2009 and 2010 data for all taxes and personal income.

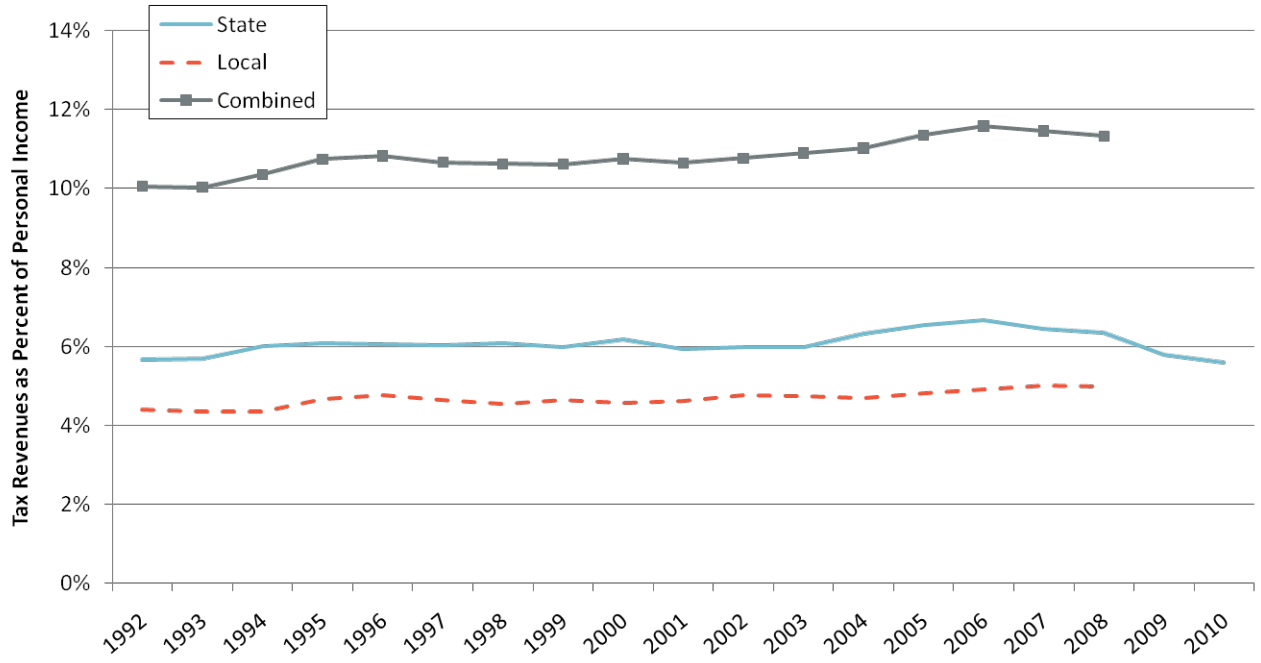
[3] This section generally relies on data drawn from the U.S. Census of Governments to allow comparability across states. The 2010 collections are calculated by aggregating quarterly data available from the Census. See http://www.census.gov/govs/qtax/.

Figure 1: Ohio State, Local, and Combined Tax Revenue, 1992-2009



Note: Local and combined revenues for 2001 and 2003 are not reported by the U.S. Census Bureau. Here they are listed as averages of the surrounding years (2000 and 2002, 2002 and 2004, respectively).

Figure 2: State, Local, and Combined Tax Revenue Collections as Percents of Personal Income, 1992-2009



Note: Local and combined revenues for 2001 and 2003 are not reported by the U.S. Census Bureau. Here they are listed as averages of the surrounding years (2000 and 2002, 2002 and 2004, respectively).

Revenues tend to be a little higher relative to personal income in expansions and a little lower in recessions, at least this has been true for the recessions at the beginning of the 1990s and in the 2000s. Simply, this means that tax revenues are more volatile than the state's economy. The data evidence very volatile tax collections, even when compared with an Ohio economy that is cyclical (since tax revenues fall relative to personal income), particularly during the past two years when tax collections almost surely have plummeted to modern lows relative to personal income. At least some of this decline will be offset as the economy rebounds more vigorously in the coming months and years, but taxes were falling relative to the economy because of H.B. 66 before the recession, evidencing that the pattern includes policy-determined trend declines in tax revenues and the size of Ohio government.

The Recession and Ohio Tax Revenues

Ohio tax revenues declined from $26.98 billion during fiscal year 2008 to approximately $23.05 billion in 2010. Overall, the severe recession and the changes enacted in H.B. 66 reduced revenues by 14.6 percent between 2008 and 2010, worse than the 11.1 percent revenue reduction that occurred on average across states.[4] The result is a much smaller government than was anticipated when H.B. 66 was being crafted. For example, the general revenue fund (GRF) was anticipated to have approximately $19.3 billion in FY 2007, but instead collected $19.5 billion. Starting with FY 2009, the GRF fell dramatically to $16.2 billion in FY 2010, suggesting that the GRF was at least $3.0 billion lower than policy makers had anticipated. Some of the revenue reduction was backfilled with federal stimulus dollars over the last several years, but the reality of the reduction in state own source revenues will be felt beginning in July 2011.

Tax revenues have begun to rise again. For example, Ohio tax revenues were up 6.7 percent during the third quarter of 2010 (the first quarter of fiscal year 2011) as both the income and sales tax began to grow again.[5] Still, tax revenues will remain considerably below the 2008 level and below the amounts anticipated by policy makers during the design of H.B. 66 for at least several more years. An important question for Ohio and its leaders is whether this reduction in the size of government is consistent with the state's ability to invest in its long term future through education and infrastructure and the quality of life demanded by the state's citizens. If not, policies must be developed quickly to replace some or all of the lost revenue.

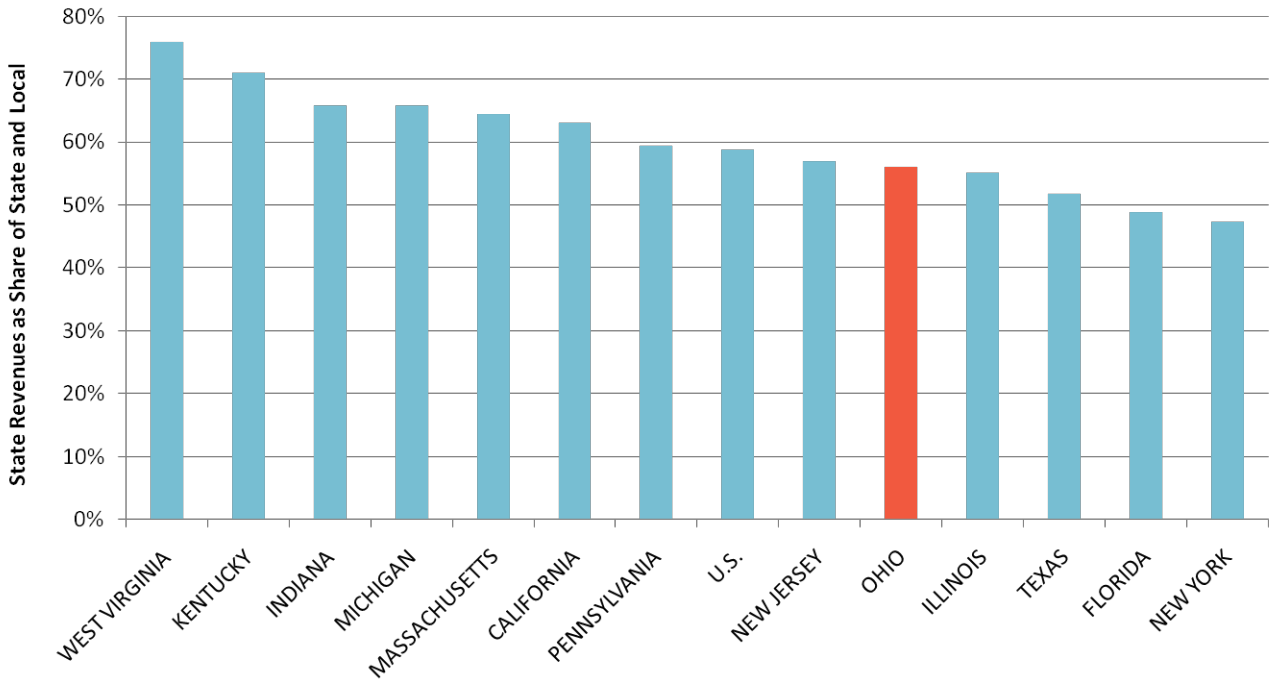
Ohio Relative to Benchmark States

State and local governments play very different service delivery roles across states, so it is best to consider them together to evaluate cross-state tax levels. Overall, state government generates 56.0 percent of tax revenues in Ohio and local governments collect the other 44.0 percent. Ohio state government revenues are a smaller share of combined state/local revenue than the national average (58.8 percent) and lower than every neighboring state (Figure 3).[6] Ohio's share is much lower than its direct neighbors. Decisions on the relative collection of taxes are ultimately driven by many policy decisions regarding such things as relative service

[4] Data that reflect local government tax collections during the recession are not fully available as yet.
[5] See Lucy Dadayan and Donald J. Boyd, "State Tax Revenues Gained New Strength in Fourth Quarter," Nelson A. Rockefeller Institute of Government, University of Albany, February 2011.
[6] The comparison group is the set used by the Ohio Department of Taxation to evaluate Ohio taxes. Information from 2008 for state and local governments and 2009 for state governments is the most current data available from the U.S. Bureau of the Census. The most current data are generally used for cross-state comparisons between Ohio and other states.

delivery roles, willingness to use grants (since states always collect more revenues than they spend), and local access to a range of tax instruments.

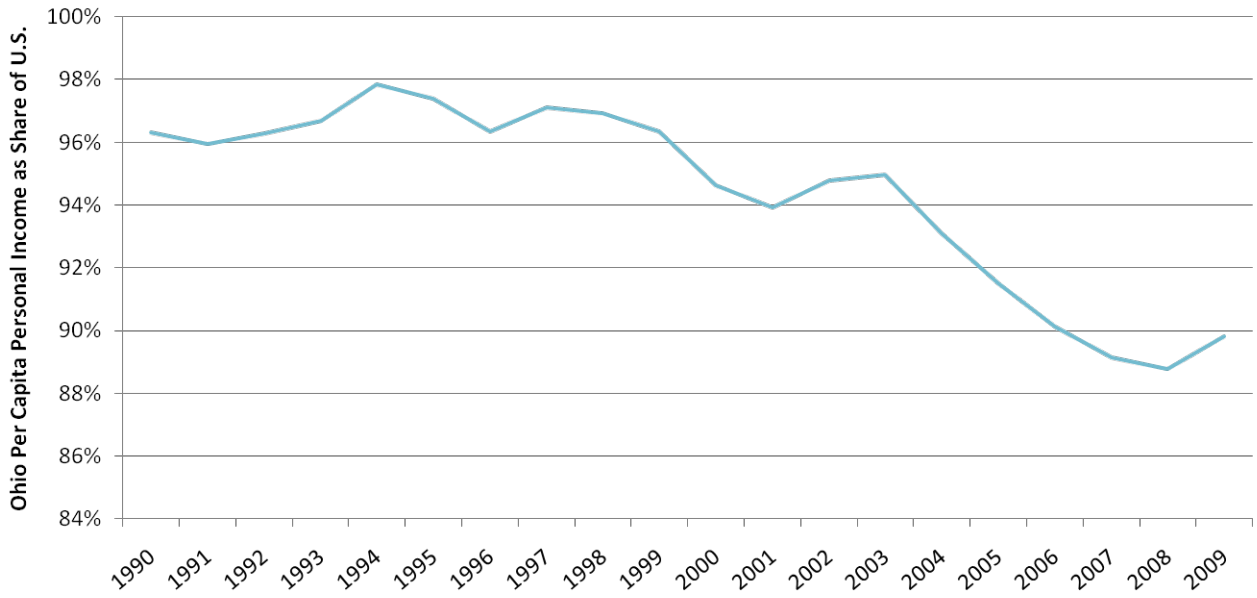
Figure 3: State Tax Revenues as a Share of State and Local Tax Revenues, 2008



We describe comparisons based on state as well as state and local data because we believe it is also useful to understand the size of state government by itself. Taxes measured relative to the state's economy and people's ability to pay are the best means for evaluating the level of taxation. Personal income, which we use as a measure of the state's economy, is a common metric for state economies. We further discuss the choices to use these measures below.[7] Ohio's per capita personal income was $35,590 in 2009, which was 10.2 percent below the national average. Per capita personal income in Ohio grew slowly relative to the national average even before the recession, so it has been declining relative to the nation in recent years (Figure 4). For example, Ohio personal income was only 5.0 percent below the national average in 2004.

[7] Personal income is defined as the income received by, or on behalf of, all the residents of an area (nation, state, or county) from all sources. It consists of the income received by persons from participation in production, from government and business in the form of transfers, and from government in the form of interest (which is treated like a transfer receipt). It does not include realized or unrealized capital gains or losses. See http://bea.gov/regional/pdf/spi2009/01%20Introduction.pdf

Figure 4: Ohio per Capita Personal Income as Percent of Nation, 1990-2009



Ohio's *state* taxes are at the national average relative to personal income, but Ohio is the 17th lowest state. Ohio's state taxes are also low relative to almost all states in the comparison group (See Figure 5).[8] Ohio *state and local* taxes in 2008 relative to personal income are higher than the national average and the median of the comparison group (Figure 6).[9] We suspect that this will no longer be true and Ohio taxes will be at or below these norms by 2010 and going forward. The dramatic revenue loss in 2009 and 2010 in Ohio (which was a greater loss than the national average) is one reason.[10] Also, the last installment of personal income tax cuts included in H.B. 66 will not take place until 2011, which will lower Ohio taxes further while at least 10 states have increased their sales tax rate and 9 have raised their highest personal income tax rate during the recession. Thus, we believe that Ohio's current state and local taxes should be viewed as no higher than the national average.

[8] The combination of Ohio being at the average but well below the median suggests either that large states are generally higher-tax than smaller states or that some states have very high taxes relative to the norm.

[9] Ohio ranks lower relative to other states when compared on the basis of own source revenues rather than taxes. Own source revenues include taxes and other non-transfer revenues such as user fees and other charges. Nonetheless, specific comparisons about how much states employ user charges are difficult to make because states differ widely in the extent to which priced services are delivered in the public sector and user tax revenues are generated. Higher education tuition, hospitals, and sewerage are the biggest user fee sources in Ohio.

[10] Arithmetically, Ohio taxes as a share of personal income will fall relative to the national average unless Ohio's per capita personal income grows slower relative to the nation than its taxes.

Figure 5: State Tax Revenues as Percent of Personal Income, 2009

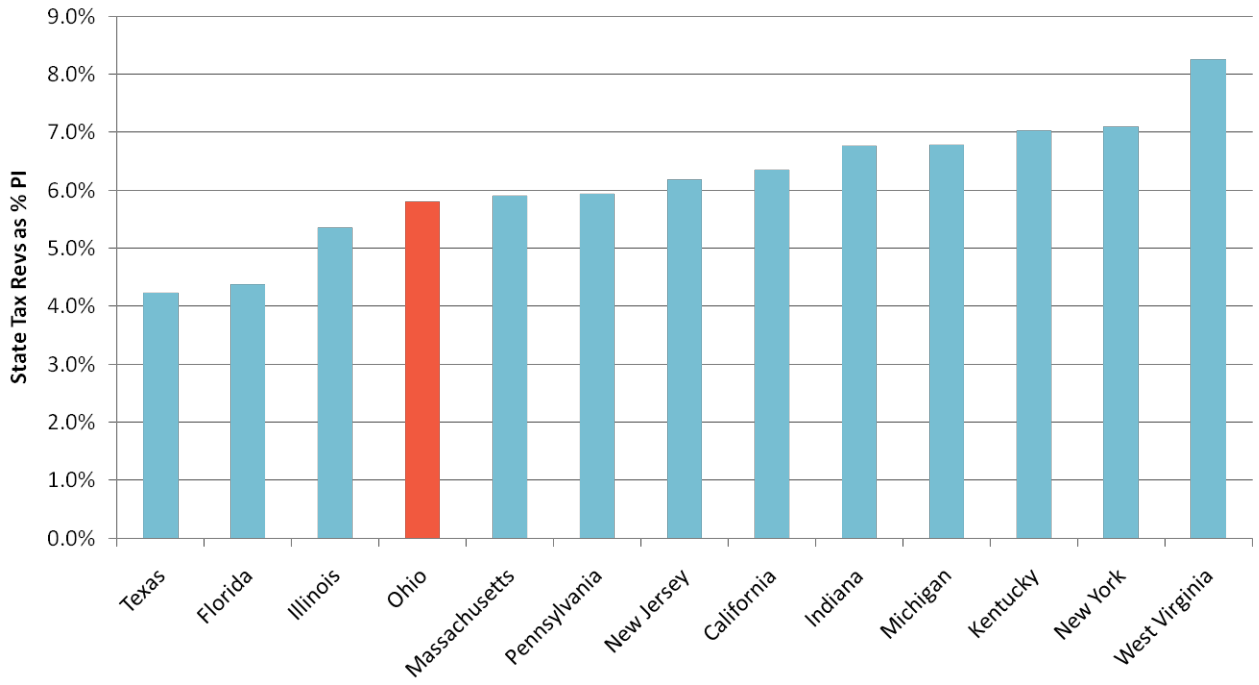
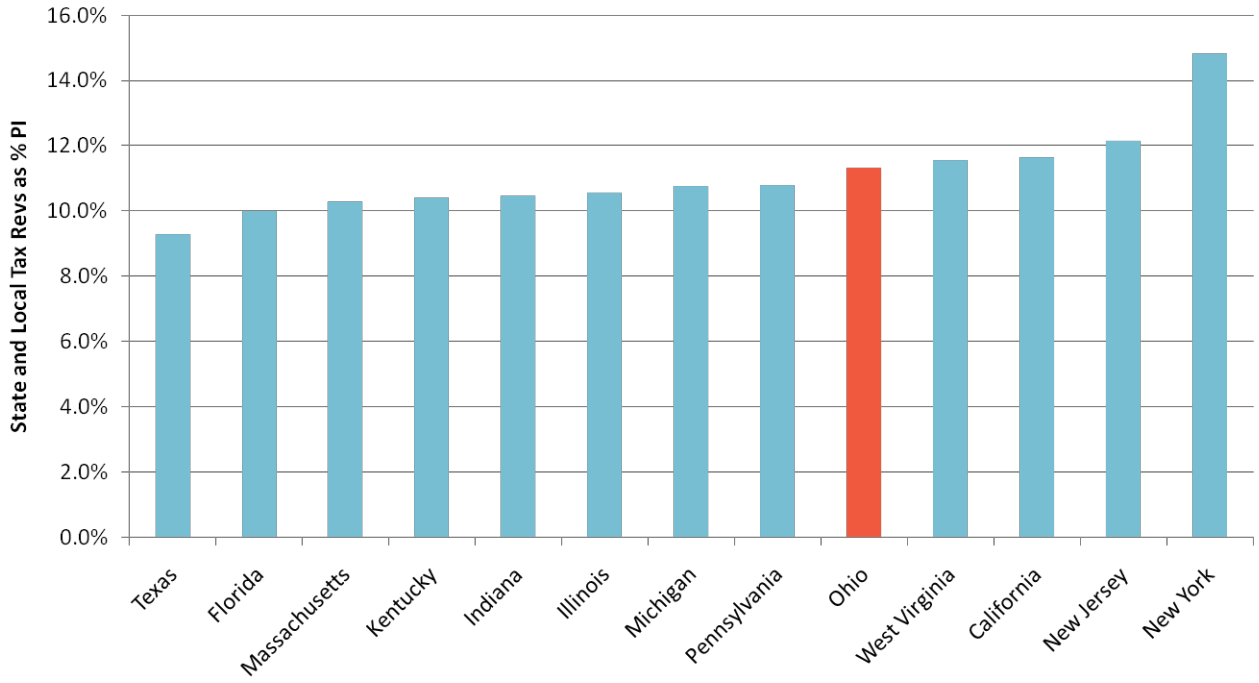
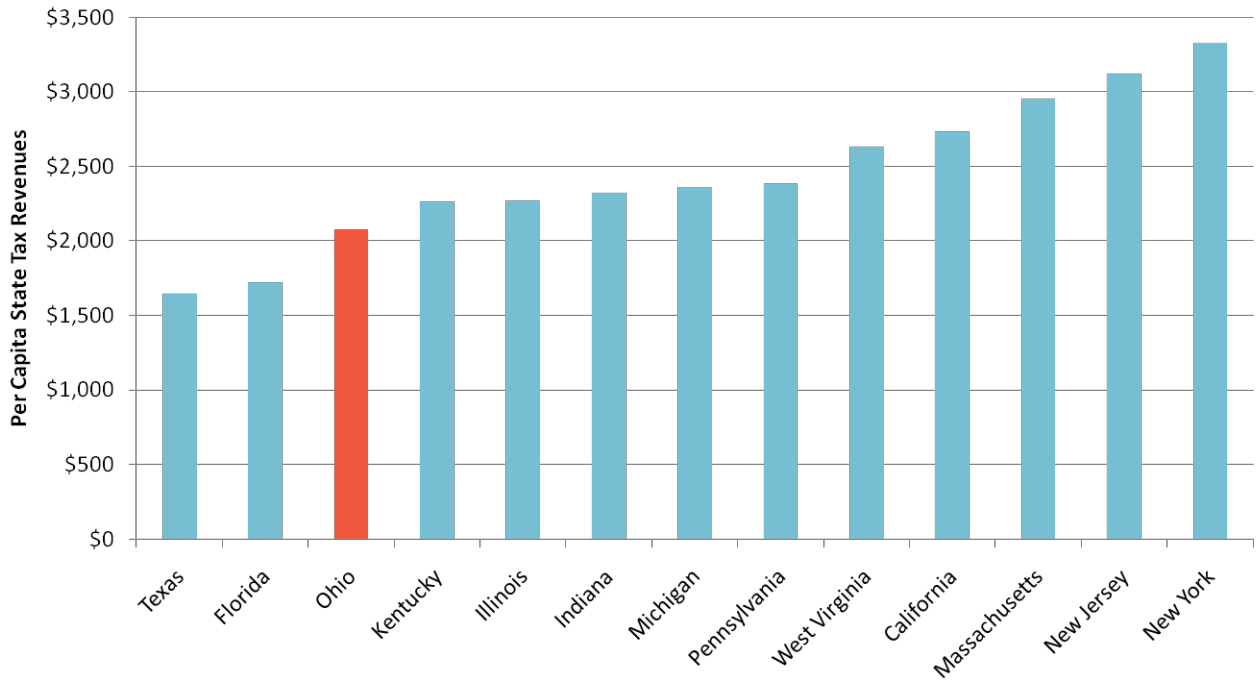


Figure 6: State and Local Tax Revenues as Percent of Personal Income, 2008



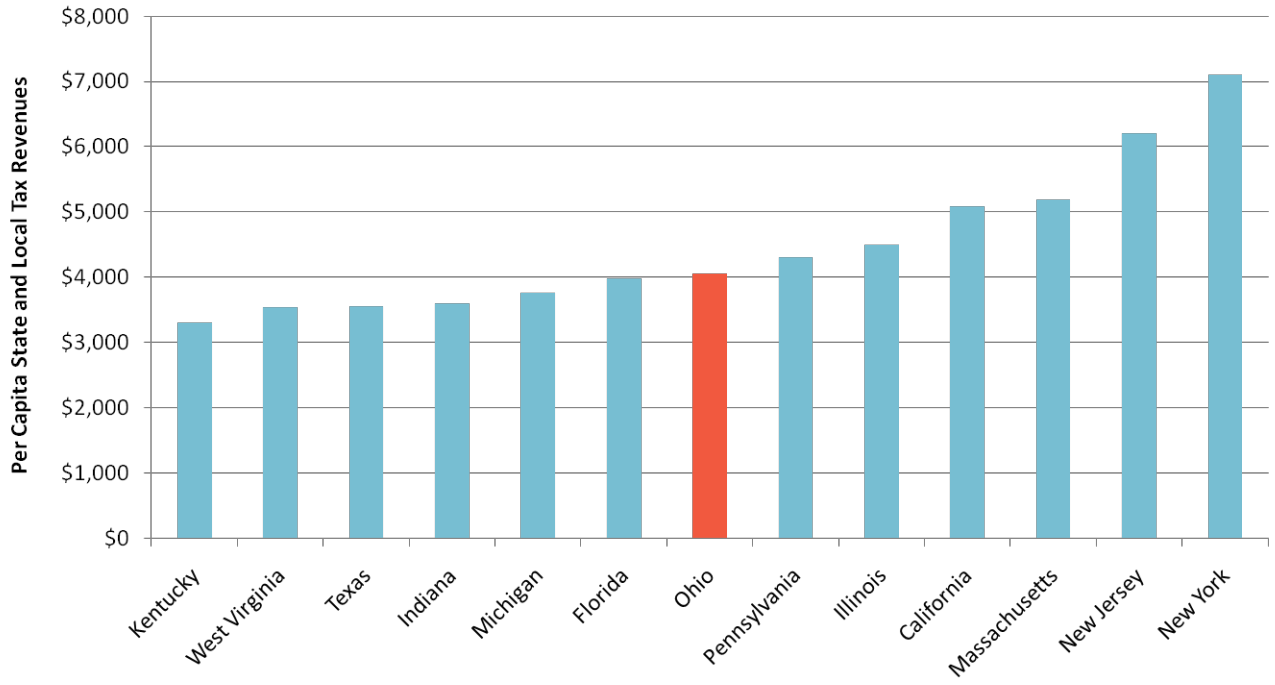
Ohio *state* government collected $2,075 per person in 2009,[11] which is 11.1 percent below the national average of $2,334. Ohio's taxes per capita are 15th lowest in the U.S. and the lowest of any neighboring state. Per capita Ohio taxes are higher than two southern states, Florida and Texas, of the 12 comparison states (see Figure 7). Ohio *state and local* taxes are $4,048 per person, which is 7.4 percent below the national average and is the median of the benchmark group (see Figure 8).

Figure 7: Per Capita State Tax Revenues, 2009



[11] See http://www.taxadmin.org/fta/rate/09taxbur.html.

Figure 8: Per Capita State and Local Tax Revenues, 2008



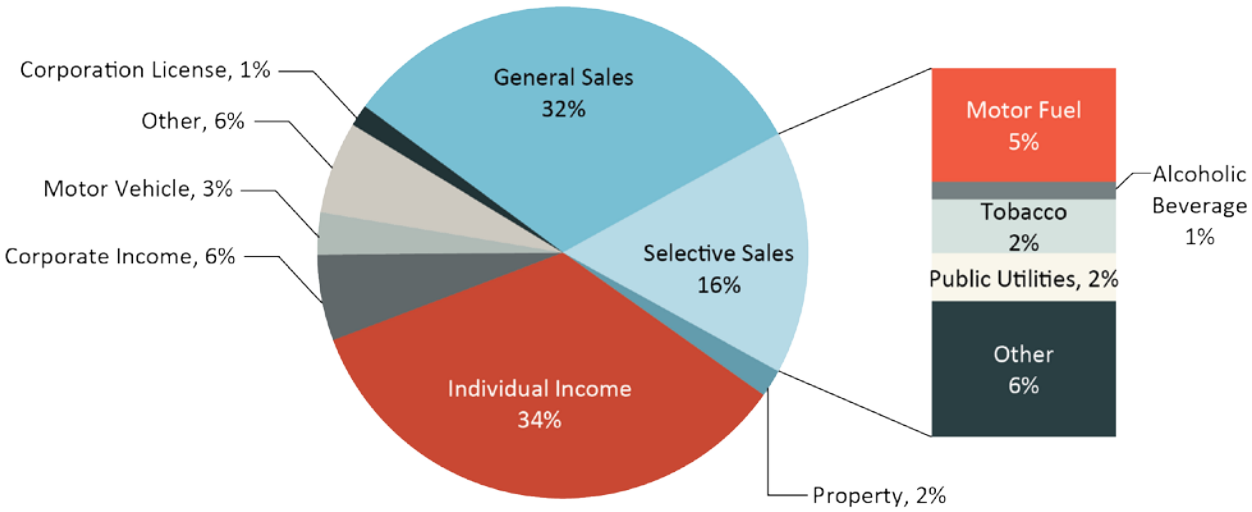
Ohio Tax Sources

Ohio employs a diverse set of tax instruments (see Figure 9), and relies on the major tax instruments very similarly to the average state. The individual income tax is the largest state tax source, though it has declined from 38 percent of taxes in 2008 to 35 percent in 2009.[12] Income taxes are volatile, so the relative decline is not surprising.[13] Further, an explicit decision was made through H.B. 66 to reduce the share of taxes raised with the individual income tax. Sales taxes generate the second largest share of tax revenues, at 31 percent. The sales tax share has fallen dramatically, from 35.1 percent in 2004.[14] However, the permanent sales tax rate was changed as part of H.B. 66.[15] The increase in the permanent rate offset some of the decline in sales tax revenues that would have been expected with a recession. Both the sales and income tax shares differ by only 1 percent from national norms. Ohio raises more from selective sales taxes (alcohol, beer, tobacco, etc.) than the average state but does not impose a statewide property tax and relies less on assorted other taxes.

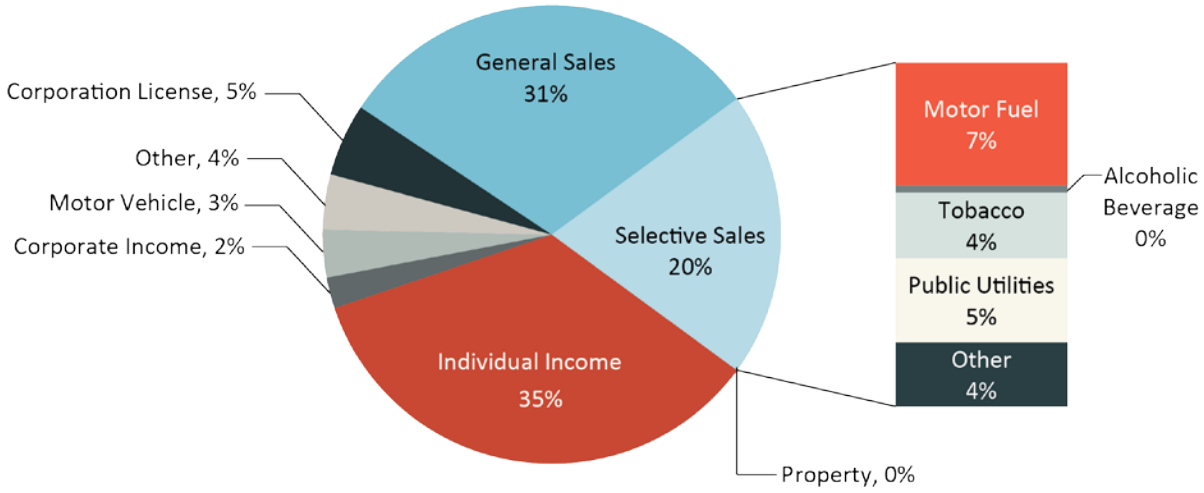
[12] Income taxes declined further to 32.6 percent in 2010, based on the quarterly tax data reported by the U.S. Census.
[13] Non-labor income, specifically from sources such as capital gains, dividends, and interest, is very volatile across economic cycles. Declines in labor income are generally relatively smaller.
[14] The 2010 sales tax share was a similar 31.7 percent.
[15] Whether H.B. 66 increased or decreased the tax rate involves some controversy. The legislation changed a temporary increase in the sales tax rate of 1 cent during FY04 and FY05 to a permanent increase of one-half cent. Thus, depending on one's perspective, the change was either an increase in the permanent rate or a decrease in the most recent rate.

Figure 9: Distribution of State Tax Collections 2009

US



Ohio



Taxes on Business

H.B. 66 increased the share of taxes that is initially collected via specific taxes on business. Ohio raised 6 percent of its tax revenue from corporations in 2004 but now collects about 7 percent from businesses. Of course, the CAT (classified as a license tax in the Census data) is imposed on both incorporated and unincorporated businesses. Ohio's share from business taxes is the same as the average state's use of corporate income and license taxes.

It is important to remember that businesses pay almost every tax, not just the taxes that are initially imposed only on business structures. For example, businesses pay sales taxes on many inputs they purchase,[16] gasoline taxes on transportation, and so forth. Ernst and Young (2010) has estimated the share of *all* taxes that are initially on business, including this range of taxes that is also imposed on people.[17] They estimate that businesses paid $21.2 billion in state and local taxes in Ohio in 2009, of which $11.0 billion was at the state level and $10.2 billion was at the local level.[18] The estimated business taxes represent 44.0 percent of total taxes, slightly under the 45.4 percent share of taxes paid by business in the average state. Property tax is the largest tax levied on Ohio businesses at 39.9 percent of the total state and local business tax burden, followed by sales taxes at 18.0 percent (Figure 10). On the other hand, a report by Policy Matters Ohio concluded that businesses paid about 30 percent of the total state and local tax burden in 2003, down about 10 percent from several decades before.[19]

States generally use one (or more) of three basic structures when targeting business for specific taxes: gross receipts taxes such as the CAT (some of which allow some deductions), corporate income based taxes (as Ohio had prior to the CAT), and taxes levied on the value of the business that rely on measures such as total outstanding stock and debt (often termed franchise taxes in other states). A strong movement across states has occurred away from franchise taxes.

Ohio could consider additional taxes levied directly on business if it chooses to generate additional tax revenues. It is important to remember that taxes are ultimately paid by people

[16] The sales tax is intended as a consumption tax, so business to business transactions should be exempt (see Sales Tax chapter below). Sales taxes on intermediate transactions are similar to some elements of the CAT, but the rates are much higher so the potential for perverse effects on the economy is much greater.

[17] Ernst & Young, "Total State and Local Business Taxes: State-by-State Estimates for Fiscal Year 2009," March 2010, 25 pp.

[18] Ernst & Young uses the national income accounts to develop the tax liabilities for this study. The business property tax share looks high relative to Department of Taxation data. The Department indicates that Class II real property plus tangible personal property taxes levied in 2009 totaled about $4.2 billion, while The Ernst & Young study indicates a business property tax share of $8.4 billion. It is possible that the national income accounts have failed to fully reflect the recent exemption of tangible personal property. Agricultural property (included in Class I) plus business activity at households would explain some of the difference, but does not seem likely to account for such a large discrepancy. See http://www.tax.ohio.gov/divisions/tax_analysis/tax_data_series/tangible_personal_property/pd23/PD23CY09.stm

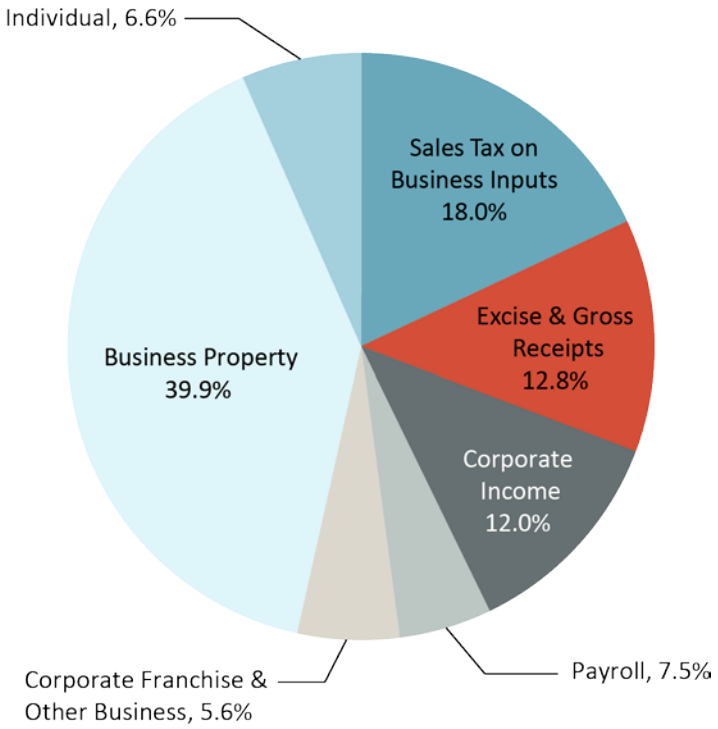
[19] See ETPI, "Business Taxes and Education Funding: A Study Prepared for the Ohio Education Association," September 2004.

and not by businesses so these taxes are an indirect means of taxing people. Some hope that business taxes can be forward shifted (or exported) to people outside Ohio when goods are sold to non-residents. A limited amount of exporting may occur, but the more likely scenario is that higher business taxes result in lower earnings for Ohio workers or land owners rather than higher prices for non-residents, given the global environment in which Ohio operates.

The CAT is levied at destination, which means the tax is imposed on sales into Ohio and not outside the state, so the tax is not likely to be exported.[20] The CAT imposed on final sales to consumers works much like a very broadly based sales tax (though at very low rates), and raising the CAT rate can be thought of as comparable to an increase in a sales tax rate (though less perverse since the base is so broad). The CAT on intermediate transactions raises the cost of doing business in Ohio. A very low rate CAT should have modest effects on business decisions, such as where to locate or whether to vertically integrate. However, the potential disincentive effects will rise rapidly if rates get too high, thus decisions to raise the rate should be carefully considered so that Ohio remains appropriately competitive. It should be remembered that research on business locations concludes that higher taxes discourage the location and expansion of business in a state, but the effects are of modest consequence.

[20] Some CAT imposed on intermediate transactions could be included in product prices and part of it could be exported.

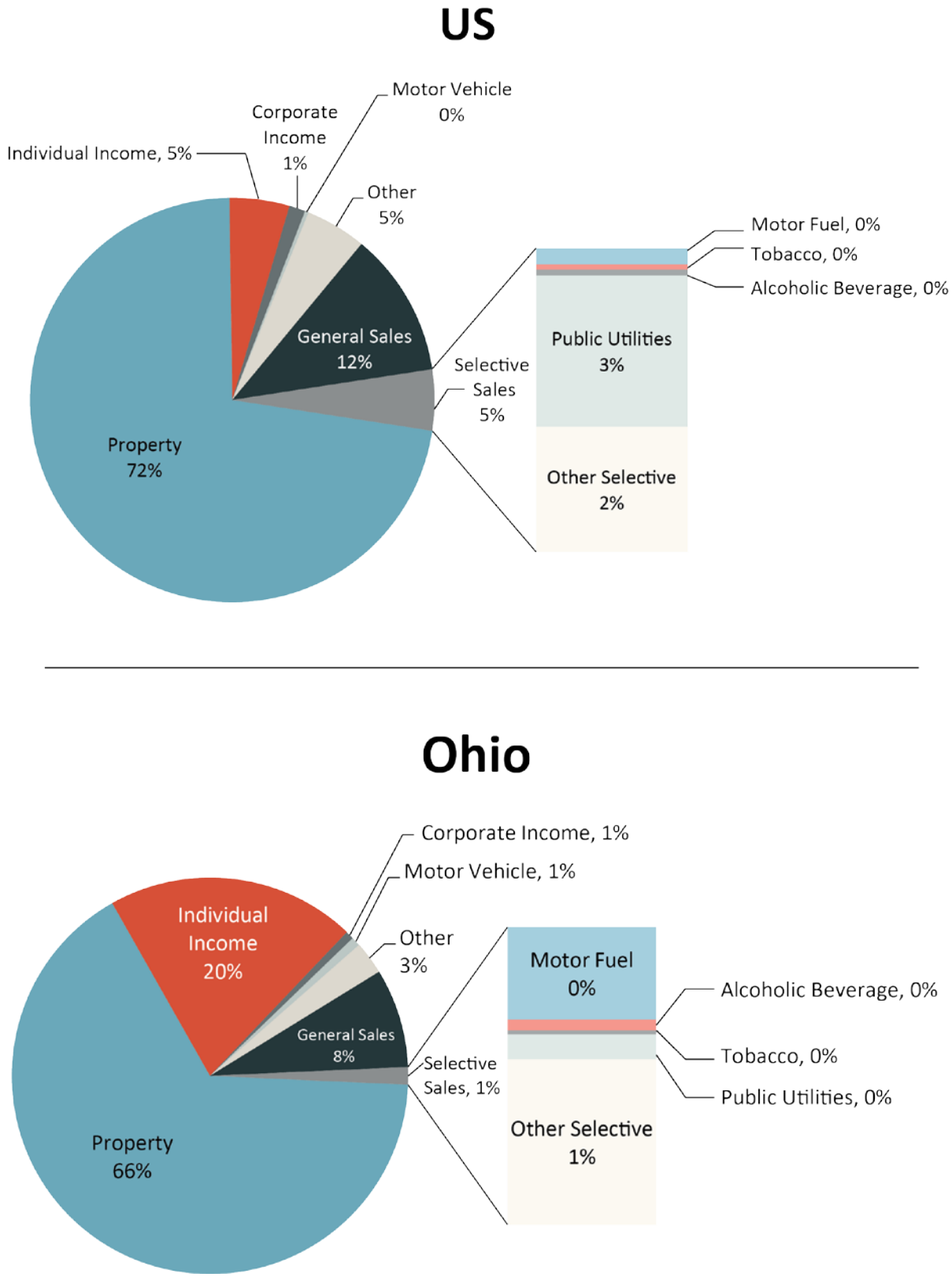
Figure 10: State and Local Business Taxes in Ohio, 2009



Source: Ernst & Young

Ohio local governments have more diverse tax structures than those in many other states. Ohio is one of the few states that allow local governments access to both local sales and income taxes. Only 35 states permit local sales taxes and only 13 allow local income taxes. As a result, Ohio local governments rely less on the property tax than in the average state (Figure 11). The key difference is that local income taxes generate 20 percent of local revenues in Ohio versus the national norm of only 5 percent. Local sales taxes, on the other hand, provide a smaller share of local revenues than in the average state (8 percent in Ohio versus 12 percent in the average state).

Figure 11: Distribution of Local Tax Collections, 2008



Gambling tax revenues will become a more important issue in Ohio in future years. State Issue No. 3 of 2009 allows four casinos to be built at specific locations in Ohio, and construction is currently underway. The associated tax revenues are earmarked entirely for local governments. Eighty-five percent of the casino tax revenue is to be divided among counties based on population (51 percent) or student counts (34 percent) and 5 percent goes to the cities where the casinos are located (Cincinnati, Cleveland, Columbus, and Toledo). This additional revenue would appear to reduce the need for state support for education, but the constitutional amendment allowing the casinos specifies that the funds are to supplement not supplant state support for education. This appears to support additional spending on education and provide at least implicit pressure for the state to sustain its funding for education. In addition, Governor Strickland proposed allowing video gambling at horse tracks. Though the video gambling proposal was stalled in the courts, it may well come up again.

Gambling taxes will allow additional revenues for Ohio governments. However, gambling taxes perform poorly in terms of adequacy (see Fox, 2010). Researchers have analyzed casino and lottery gambling across the U.S. and have concluded that casino gambling taxes grow relatively slowly, particularly in states with more mature gambling industries. This suggests that gambling taxes may grow relatively rapidly in the early years after the casinos open but revenue growth will slow markedly after a moderate time period. Gambling revenues are also volatile across the business cycle, but not to the extent that the corporate income, personal income, and sales taxes have proven to be.

Ohio Revenue Growth

Tax revenue in Ohio has grown slowly, even relative to the Ohio economy that was rising less rapidly than the nation and prior to H.B. 66 and the recession. Table 1 presents tax elasticities for Ohio taxes for two time periods, the trend growth prior to H.B. 66 and the trend growth including some effects from H.B. 66.[21] Elasticities are defined as the percent change in tax revenues over time divided by the percent change in personal income, which is a broad measure of the Ohio economy. Thus, a value greater than one means tax revenues are increasing faster than the economy, equal to one means they are growing at the same rate, and less than one means that tax revenues are rising more slowly than personal income. We estimate elasticities for two time periods because we are seeking to understand the underlying relationships between tax revenues and economic growth, and the effects of H.B. 66 confound

[21] Simple geometric elasticities are used in this report. Elsewhere, we have estimated more sophisticated, econometric based elasticities in an academic paper. See Donald Bruce, William Fox, and Markland Tuttle, "Tax Base Elasticities: A Multi-State Analysis of Long-Run and Short-Run Dynamics," *Southern Economic Journal* 73(2): 315-341, 2006.

the natural long term growth rates with effects from phase-in of policy changes. We omit effects of the sales and tobacco tax rate increases so that we can have a better estimate of how these taxes perform without the effects of rate increases.[22] We are most interested in looking forward to what the tax revenue performance will be in coming years rather than in describing the past. Thus, where appropriate, we comment on how future elasticities may differ from past performance.

Table 1: Ohio Elasticities Adjusted for Tax Rate Changes

Tax	1994-2004 Elasticity	1998-2008 Elasticity
Total	0.86	0.91
General Sales	0.94	0.73
Motor Fuel	0.52	0.93
Alcoholic Beverage	0.25	0.40
Tobacco	-0.39	-1.33
Individual	1.31	1.18
Corporate	1.20	-0.04

Ohio's total revenue elasticity is estimated to be between .86 and .91, meaning tax revenues have risen about 90 percent as fast as the state's personal income. This means that the state's tax revenues can be expected to fall as a share of the economy over the long term, unless some tax rates are increased.

As occurs in almost every state, the long term personal income elasticity was greater than one. Personal income taxes rise faster than income because of specific structural characteristics including a zero bracket amount and progressive rates. A reasonable expectation is that the personal income tax elasticity will be slightly lower than the 1994-2004 time period once H.B. 66 has been fully implemented because tax rates will be slightly less progressive. The legislation reduced the income tax and its role in Ohio tax financing, and probably modestly lowered the elasticity. The corporate tax elasticity is not meaningful given the change in tax

[22] The effects are approximated by ratioing revenues to reflect the tax rate changes between the earlier years and the later years.

structures to the CAT. The CAT probably has an elasticity of about 1, and perhaps slightly higher.

The sales tax elasticity was surprisingly high before H.B. 66. Sales tax elasticities are generally expected to be lower than one, as evidenced by estimates for other states. Omission of food from the base (taxation of which decreases the elasticity) may explain some of this. The Ohio elasticity has been much lower in recent years, including the time after the rate increase. One possible explanation for the lower elasticity is that a considerable share of sales tax revenues emanates from construction and housing, since construction materials, carpets, appliances, furnishings, and related purchases are often sales-taxable. The recession has slowed these purchases dramatically, but our estimates are based on years before the recession became severe. Sales tax performance is discussed in greater detail in the sales tax chapter below.

Ohio levies a series of excise or special sales taxes on a range of goods, including motor fuel, alcoholic beverages, and tobacco products. All of these commodities have elasticities that are well below one, because the rates are primarily imposed on the number of units sold, not on the value of these products. The negative tobacco tax elasticities evidence the decrease in tobacco sales associated with higher tax rates. The elasticity would be very low even if rates had not been increased, though the elasticity would be positive (cigarette sales likely would have grown).

Fairness

As noted above, there is general agreement that fairness should be thought of in terms of horizontal equity and vertical equity, but within these constructs, many different perspectives exist on what constitutes fairness. Wide, though not universal, agreement exists that horizontal equity means that people in similar positions should bear similar tax liabilities. The disagreement is around what constitutes similar positions. Should family size, geographic location and cost of living, and age be taken into account when deciding what are similar positions? We will address horizontal equity when we examine the individual taxes because the horizontal inequities usually arise when decisions are made on breadth of the tax base, exemptions, and many other elements of defining the tax base.

Vertical equity is better examined by considering all taxes as a package because regressive elements of some taxes may be offset by progressive elements of others. We adopt the limited goal of describing the vertical equity characteristics and do not seek to reach a conclusion of whether the tax structure is fair. No analysis of vertical equity can reflect all

situations, so each must be seen as indicative but not conclusive of fairness. The District of Columbia has prepared tax burden studies of state and local taxes for many years.[23] The studies examine the tax burden on a hypothetical three-member household with two working adults and one child. Taxes for the largest city in each state are used for the analysis, which for Ohio is Columbus. One obvious problem with the D.C. study is that it does not account for how business tax burdens are shifted to households through higher product prices, lower earnings, or lower profits.

We review the implications for Ohio from this study. The D.C. study is based on the personal income, sales, property, and automobile taxes. Tax burdens are compared with federal adjusted gross income (AGI), which is a much narrower version of income than personal income that is used above. Figure 12 is based on the D.C. study and shows Ohio's state and local tax burden as a share of federal AGI for a range of AGI values. The data are for calendar year 2008, so they do not reflect the last stage of the income tax rate decrease in Ohio. Ohio's tax structure appears to be approximately proportional beyond the lowest income level. The tax burden falls significantly from the lowest income bracket ($25,000) to the next bracket ($50,000) but falls only slightly at incomes above this level. The proportionate tax burdens seen in Figure 12 hide the difference in dollar amount of tax burdens (which generally hold even with regressive taxes). Table 2 evidences that taxpayers in the highest tax bracket pay more than four times the tax liability of those in the lowest income bracket.[24]

Table 2: Tax Liability by Income Bracket, 3-Person Household

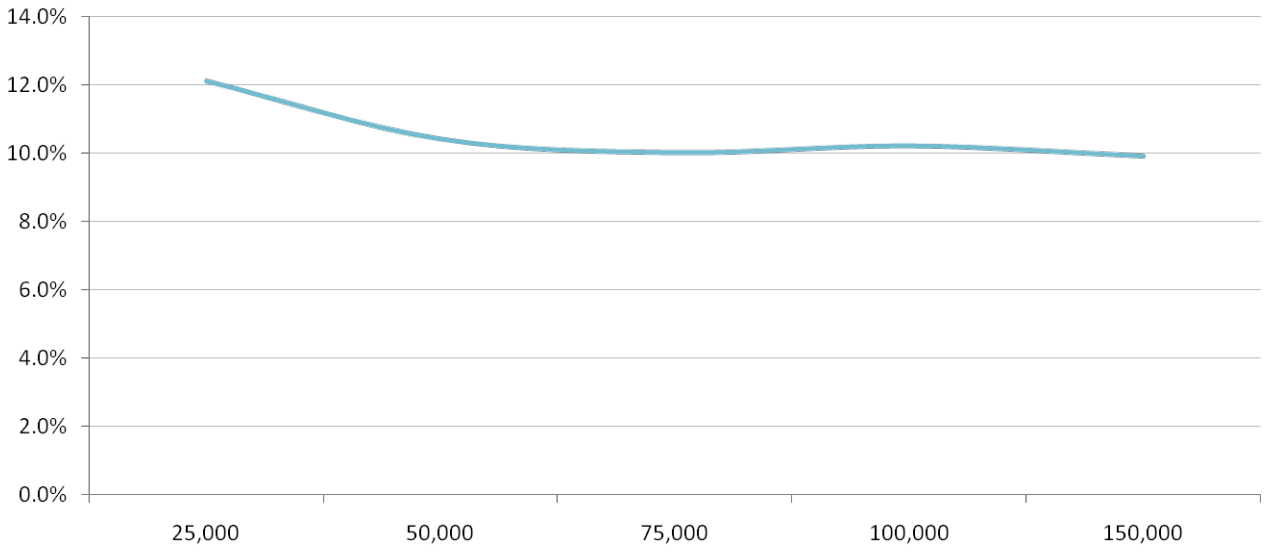
Income	Tax Liability	Percent of Income
$25,000	$2,983	11.9
$50,000	$4,559	9.1
$75,000	$7,224	9.6
$100,000	$10,048	10.0
$150,000	$14,514	9.7

Source: District of Columbia Office of Chief Financial Officer, "Tax Rates and Tax Burdens in the District of Columbia – A Nationwide Comparison: 2008," September 2009, 56 pp.

[23] District of Columbia Office of Chief Financial Officer, "Tax Rates and Tax Burdens in the District of Columbia – A Nationwide Comparison: 2008," September 2009, 56 pp.

[24] Analysis conducted by the Institute on Taxation and Economic Policy suggests greater regressivity at much higher incomes.

Figure 12: Taxes as a Percent of Income



H.B. 66: HOW HAS IT WORKED?

Summary of the Major Components of H.B. 66

Phase-out of the Tangible Personal Property Tax (TPPT)

The TPPT was a tax on tangible personal property used by businesses. Taxable property for the TPPT included machinery, equipment, and inventory. Beginning in 2005, the applicable tax rates for the TPPT (23 percent for inventories and 25 percent for machinery, equipment, furniture, and fixtures) were gradually reduced to 18.75 percent in 2006, 12.5 percent in 2007, and 6.25 percent in 2008. New machinery and equipment purchases were exempted from the TPPT during the phase-out period. The TPPT was completely phased out (except for public utility companies) in 2009. Telecommunications businesses historically paid tax on their personal property as public utilities. H.B. 66 shifted telecommunications' companies from the public utility to the general tangible personal property tax. Then H.B. 66 phased out the tangible personal property on telephone utilities beginning with this year.

Phase-out of the Corporate Franchise Tax (CFT)

The CFT was a tax on the net worth or net profits of incorporated business entities, whichever yielded the greatest tax at the relevant tax rates. This tax was phased out between 2005 and 2009, with corporations paying a steadily declining percentage of the full tax that would have been due each year under the original CFT. Specifically, corporations paid 100 percent of the full tax due in 2005, 80 percent in 2006, 60 percent in 2007, 40 percent in 2008, and 20 percent in 2009. The CFT was completely phased out (except for financial institutions and other selected sectors) in 2010.

Phase-in of the new Commercial Activity Tax (CAT)

The CAT is a new tax on the gross receipts of all business entities; it is not limited to corporations. In other words, many businesses that did not originally have to pay TPPT and/or CFT now have to pay the CAT. Mirroring the phase-out structure for the CFT, businesses were required to pay steadily increasing percentages of the full CAT tax liability, calculated as 0.26 percent of gross receipts. For July 2005 through March 2006, businesses paid 23 percent of their full CAT liability. This percentage increased to 40 percent as of April 2006, 60 percent as

of April 2007, 80 percent as of April 2008, and 100 percent as of April 2009. The full tax only applies to businesses with gross receipts in excess of $1 million (translating into a tax payment of $2,600 for a business with gross receipts of $1 million). Businesses with gross receipts between $150,000 and $1 million pay a flat tax amount of $150, while those with gross receipts below $150,000 are exempt from the CAT.

As originally enacted, the CAT had provisions by which the tax commissioner would compare its actual revenue performance to the revenue projections at the time of its enactment. Based on these comparisons, the commissioner would recalibrate the CAT rate to approximate the projections. Ultimately, the CAT has underperformed its original estimates, but subsequent legislation forestalled the recalibration of the rate.

Reduction of Marginal Tax Rates for the Individual Income Tax

Marginal tax rates for Ohio's individual income tax were originally scheduled as part of H.B. 66 to be reduced by 21 percent between 2005 and 2009. Like the business tax reforms listed above, this rate reduction was intended to be phased in over the 2005-2009 period, with marginal rates falling by 4.2 percent in each of those years. However, H.B. 318 postponed the final 4.2 percent reduction until 2011. Thus, the maximum rate of 7.5 percent (which applied to taxable income above $200,000 in 2004) has been reduced to 6.24 percent for 2010 and 5.87 percent for 2011 and beyond. The income brackets associated with each marginal tax rate remained unchanged during this period of gradual tax rate reductions, but brackets began to be indexed for inflation (not as part of H.B. 66) starting with the 2010 tax year.

Permanent State Sales Tax Rate Reduction

The state sales tax rate had been temporarily increased from 5.0 percent in 2003 to 6.0 percent in 2004 and 2005. H.B. 66 reversed this temporary increase by half, such that the new permanent rate was set to 5.5 percent starting in 2006.

Cigarette Tax Rate Increase

The final major component of H.B. 66 was an increase in the cigarette tax rate from $0.55 per pack to $1.25 per pack.

Repeal of the 10 percent Rollback of Business Real Property Taxes

H.B. 66 repealed the 10 percent rollback of real estate taxes on business property. This change had the effect of increasing business real estate taxes. It also saved the state General Revenue Fund an equivalent amount of dollars because the state no longer needed to reimburse local governments for the lost revenue caused by that rollback. Business property taxes were raised by more than $300 million.

Motivation for H.B. 66

Like most states, Ohio has undergone substantial review of its revenue system from time to time. The most recent comprehensive review culminated in the *Report of the Committee to Study State and Local Taxes* (CSSLT, 2003). In this extensive report, the CSSLT identified the Tangible Personal Property Tax on inventories as unusual, given that similar taxes were not observed in most other states with broad taxes on business activity. The CSSLT also noted that Ohio's Corporation Franchise Tax rate was high relative to other states, but interestingly generated relatively low revenue.

Ohio's business tax system before H.B. 66 certainly offered a wide range of incentives for businesses to engage in tax planning. Non-corporate entities could remain unincorporated in order to avoid the CFT. Incorporated businesses could simply locate out of state, substitute workers for equipment and buildings or restructure (or downsize) to avoid these taxes. The obvious problem with all of these margins for behavioral distortion is that they inevitably result in reduced revenues for the state of Ohio. Beyond these efficiency and revenue losses, Ohio's business tax system was perceived by some as unfair. Entities with unusually high inventories or plants and equipment (such as many manufacturing firms) ended up paying higher taxes than other entities (such as those in service industries) due to the TPPT.

Despite longstanding criticism of Gross Receipts Taxes in the academic literature, the new CAT (a GRT) was intended in part to address these margins for distortion of economic activity and the perception of inequity in the system. The CAT is built upon the classic pillars of tax efficiency: a broader tax base and a lower tax rate. With fewer avenues for tax planning or other tax-minimization behavior (via the broader base) and a reduced return from such activities (via the lower rate), the CAT was hailed as a vastly more efficient business tax system. The CAT applies to all commercial activity regardless of the legal form of the business entity, thus bringing non-corporate entities (or at least those above the minimum gross receipts threshold) into the state's major business tax. It also applies uniformly across major industrial

sectors (although public utilities are still subject to TPPT, and financial firms and a few others still pay CFT).

H.B. 66 was designed to be revenue-reducing. This was accomplished in three main ways. First, the low CAT rate was designed to bring in less revenue than the CFT and TPPT. Second, marginal individual income tax rates were gradually reduced as described above. Both of these were designed to stimulate new economic activity and attract activity from other states. Third, the general sales tax rate was permanently reduced from its temporary high rate of 6.0 percent. Although the simultaneous increase in the cigarette tax rate was not revenue-reducing, the action was not out of line with those in many other states during this period of time. Forty-seven states raised cigarette tax rates about 100 times since 2000.[25] The national average year end tobacco tax rate has grown from about 20 cents per pack in 1989 to about $1.34 per pack in 2009. The federal tax rate has also been increased to $1.01 per pack, so the combined tax, including federal, state, and local rates, reaches much higher. As noted above, the repeal of the 10 percent rollback for business real property also increased tax revenue by a significant amount.

Evaluating the Performance of H.B. 66

A number of important factors make assessment of the performance of the H.B. 66 reforms very difficult. First, the reforms were phased in between 2005 and 2009. For those years, all three major business taxes (TPPT, CFT, and CAT) were in effect to some degree. While transition periods such as this are useful policy instruments in many cases, they also make it difficult for researchers to isolate the impacts of any one change on outcomes of interest. Second, the latter part of the phase-in period overlapped the latest national economic recession. It will be important to remember that the revenue performance of the reformed tax system has likely been heavily impacted by macroeconomic events that were beyond the control of Ohio's tax administrators and policy makers. Third, some of the data needed to conduct a complete evaluation is not available for the full phase-in period due to traditional lags in data releases. It may simply be too early to fully evaluate the performance of H.B. 66.

[25] See http://www.taxadmin.org/fta/rate/cig_inc02.html.

Equity

Fairness is in the eye of the beholder, with no tax system being viewed as more or less fair by everyone. That said, there are elements within the menu of tax policy changes implemented by H.B. 66 that would be seen by most as equity-enhancing and others that would be seen as equity-reducing. We assess each component below before offering our general sense of the overall equity impact of H.B. 66.

Regarding the business tax changes, as noted above, the new CAT system brings all business entities that are above the minimum gross receipts threshold into the major business tax system, thereby enhancing perceptions of fairness. The rather generous *de minimis* provisions (exempting firms with less than $150,000 in gross receipts and levying a flat tax of $150 on firms with gross receipts above $150,000 but below $1 million) might be seen as fair to smaller entities but unfair to larger businesses that have to pay the full CAT. One might also take issue with the fact that the CAT liability increases from $150 to $2,600 at a gross receipts level of $1 million, creating a sudden increase in tax liability, although the tax rate is still very low by any standard.

Beyond these exemption provisions for low-gross-receipts entities, the CAT (unlike the TPPT and CFT) taxes businesses in a uniform manner relative to gross receipts. Specifically, while the earlier system placed a higher tax burden on businesses with high inventories or plants and equipment, the new CAT system applies uniformly across businesses regardless of capital intensity and inventory. That said, the CAT could be seen as unfair in that two firms with identical gross receipts but unequal cost structures (and thus unequal ability to pay) would end up paying the same amount of tax under the new system. Thus, the CAT is a higher tax relative to gross margin on low markup firms than on high markup firms. The CAT is essentially blind to the profit situation of the business entity. Indeed, firms with losses must still pay the CAT, as it is based on gross receipts rather than profits. Of course, loss making firms benefit from services provided by Ohio state and local governments, as do profit making firms.

The lower marginal individual income tax rates that were phased in by H.B. 66, as shown in Figure 13, could be seen by some as more fair and by others as less fair. On one hand, every taxpayer received the same percentage cut in their marginal tax rate, resulting in a flatter, lower-rate system. Figure 14 below shows average tax rates (tax liability divided by taxable income) by taxable income for 2004 and 2009 and shows how H.B. 66 flattened Ohio's individual income tax rates. On the other hand, the equal percentage cuts represented larger absolute rate cuts as taxable income rises, and thus resulted in a slightly less progressive individual income tax system. Figure 15 shows values of a progressivity index, defined as the difference in the average tax rate (multiplied by 1,000) across a range of taxable income that

spans from $5,000 below to $5,000 above each income level. For example, the 2009 index value of about 2.0 for a taxable income of $55,000 shows that the average tax rate increased by about 0.002 between taxable incomes of $50,000 and $60,000. The figure reveals that H.B. 66 resulted in only a modest reduction in individual income tax progressivity, mainly at taxable incomes below $100,000. For those who think that the most fair tax is a low-rate "flat" tax on taxable income, these changes enhance overall fairness. Those who prefer a greater degree of progressivity would view these changes as slightly equity-reducing.

Figure 13: Marginal Tax Rates Under the Ohio Individual Income Tax

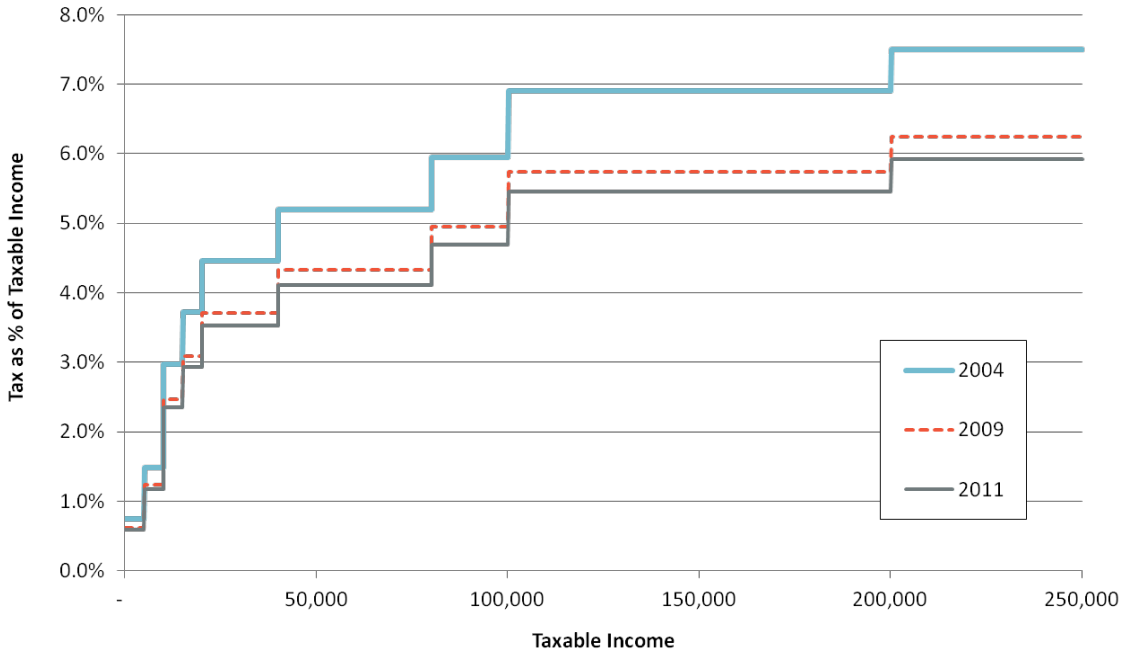
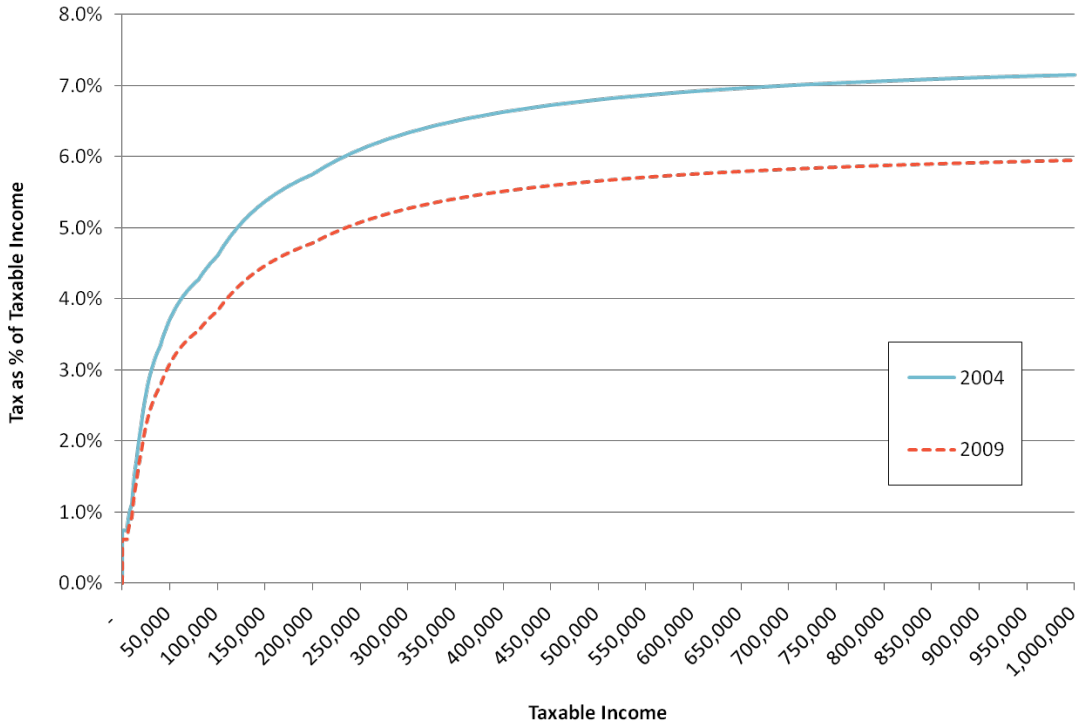
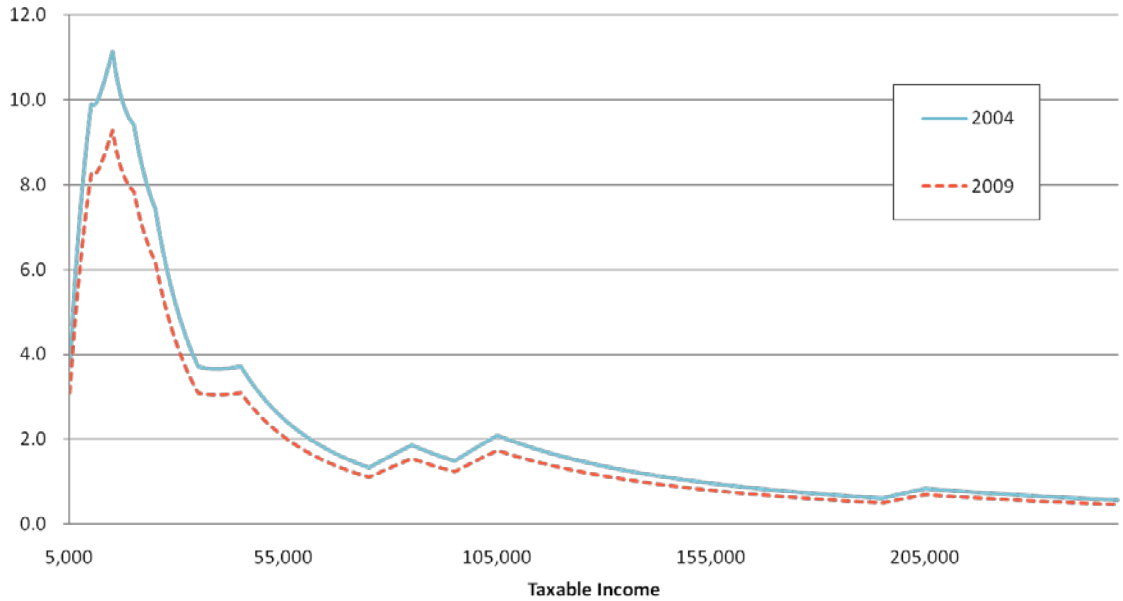


Figure 14: Average Tax Rates Under the Ohio Individual Income Tax



Source: Authors' calculations.

Figure 15: Ohio PIT Progressivity Index



Source: Authors' calculations.

The permanent increase in the state sales tax rate from 5.0 percent to 5.5 percent and the increase in the cigarette tax rate also both represent reductions in the progressivity of Ohio's tax system, in that lower-income households (that presumably spend a relatively larger share of their incomes on sales-taxable items and cigarettes) are paying more toward these taxes as shares of their incomes. Thus, while H.B. 66 reduced taxes across the board, the remaining tax burden was shifted more heavily onto lower-income households.

Another way in which economists evaluate the overall progressivity of a state's tax system is by considering the share of all tax revenues that are generated by taxes on individual and corporate income (the higher this percentage, the more progressive the tax system). H.B. 66 represented a broad reduction in corporate and individual income taxes alongside an increase in sales and cigarette taxes (on a permanent basis). Consequently, Ohio's system became less progressive. Again, this may be seen by some as more fair and by others as less fair.

Efficiency

Researchers judge a tax system's efficiency by the extent to which tax rates and other provisions distort economic activity. The most efficient tax is one that raises the necessary revenue while minimizing distortions away from otherwise efficient outcomes. Several aspects of H.B. 66 represent efficiency enhancements while others have the potential to reduce efficiency. In this section, we discuss several areas in which H.B. 66 might impact efficiency:

1. Changes in marginal tax rates;
2. Changes in the business tax base, to include effects on:
    a. The size distribution of business entities,
    b. The distribution of business entities across various organizational forms,
    c. The growth rate of business establishments by firm size,
    d. The distribution of business entities across major industrial sectors, and
    e. The taxation of non-corporate entities; and
3. Cross-border issues regarding the conformity of business tax systems.

Changes in Marginal Tax Rates. Economists measure efficiency losses using a technical formula that includes the square of the tax rate. As a result, a tax rate increase disproportionately increases the amount of the efficiency loss. For example, doubling the tax rate would generally quadruple the efficiency loss. The easiest way to reduce efficiency losses is to reduce marginal tax rates, and H.B. 66 delivers in some ways but fails to deliver in others. On one hand, the reduction in individual income tax rates increases efficiency. Similarly, the lower CAT rate (relative to the original TPPT and CFT systems) increases efficiency. On the other hand, the increase in the general sales (relative to the 5.0 percent rate) and cigarette tax rates reduce efficiency.

Changes in the Business Tax Base. Another way to increase a tax system's efficiency is to broaden the tax base, and H.B. 66 does this by expanding the business tax base away from tangible personal property and profits (or net worth) and toward gross receipts, and by bringing a larger number of business entities into the tax system. These changes reduce efficiency losses by reducing the number of margins on which businesses can engage in tax reduction strategies by changing their structure or the level or location of commercial activity.

The literature has generally concluded that replacing a corporate income tax with a gross receipts tax does not enhance efficiency, primarily due to such things as induced incentives to vertically integrate. While Ohio's relatively low CAT rate of 0.26 percent reduces the likelihood of observing significant responses in the data, it remains possible that the phase-out of the CFT and the TPPT and the phase-in of the CAT, which applies to a broader set of business entities, have had impacts on the distribution of businesses across organizational form types, size categories, or industrial sectors. Firms have less of a disincentive to incorporate or to remain small, although the *de minimis* CAT threshold might encourage firms to remain below $1 million in gross receipts. Further, the removal of the TPPT might foster increased growth among capital-intensive firms as the tax burden is essentially shifted onto less capital-intensive industries. We explore each of these possibilities below.

Firm Size. Where the old system favored smaller, non-corporate entities, the new system is essentially blind to organizational form. If preexisting distortions were significant in Ohio, we might expect H.B. 66 to have caused a gradual transition toward larger corporate entities, given the removal of the incentives to stay small and/or non-corporate. The following table provides data on the distribution of firms, establishments, and employment by the employment size of the firm from 2003 through 2007. The distribution of firms by firm employment category remained relatively stable during this period for both Ohio and for the nation. The reduction in smaller establishments (among firms with fewer than 20 employees) and increase in larger establishments (among firms with 500 or more employees) in Ohio was

matched in the national data as well. Similar trends are seen with the employment and payroll data. With Ohio's data generally matching the nation's, it does not appear that H.B. 66 caused a noticeable shift in the size distribution of business entities in Ohio. The CAT was not fully phased in during the period for which data are available and any effect on business size could grow over time.

Table 3: Employer Firms, Establishments, Employment, Annual Payroll and Receipts by Firm Size

		Ohio Firms with Employment				U.S. Firms with Employment			
		<20	20-99	100-499	500+	<20	20-99	100-499	500+
2003		85.3%	10.6%	2.4%	1.7%	89.3%	8.9%	1.5%	0.3%
2004		85.3%	10.6%	2.4%	1.7%	89.3%	8.9%	1.5%	0.3%
2005	Firms	85.5%	10.5%	2.4%	1.7%	89.5%	8.7%	1.5%	0.3%
2006		85.1%	10.7%	2.4%	1.8%	89.3%	8.9%	1.5%	0.3%
2007		85.1%	10.6%	2.4%	1.8%	89.4%	8.8%	1.5%	0.3%
2003		67.3%	10.7%	5.1%	16.9%	71.7%	9.5%	4.6%	14.2%
2004		67.1%	10.6%	5.1%	17.2%	71.9%	9.4%	4.5%	14.3%
2005	Establishments	67.2%	10.4%	5.0%	17.4%	72.1%	9.1%	4.4%	14.4%
2006		66.3%	10.4%	5.1%	18.1%	71.4%	9.2%	4.5%	14.8%
2007		65.5%	10.7%	5.5%	18.4%	71.0%	9.4%	4.6%	15.0%
2003		16.6%	17.8%	14.9%	50.7%	18.4%	17.8%	14.5%	49.3%
2004		16.8%	18.0%	14.8%	50.4%	18.4%	17.9%	14.6%	49.1%
2005	Employment	16.6%	17.7%	14.8%	50.8%	18.3%	17.6%	14.5%	49.6%
2006		16.4%	17.6%	14.6%	51.4%	18.0%	17.6%	14.6%	49.8%
2007		16.3%	17.3%	14.5%	51.9%	18.1%	17.3%	14.2%	50.4%
2003		14.1%	16.1%	13.7%	56.1%	15.6%	15.7%	13.7%	55.0%
2004		14.0%	16.2%	14.0%	55.9%	15.5%	15.8%	13.8%	54.9%
2005	Annual payroll	13.9%	16.0%	14.0%	56.1%	15.5%	15.6%	13.8%	55.1%
2006		13.5%	15.7%	13.7%	57.2%	15.2%	15.5%	13.8%	55.6%
2007		13.2%	15.4%	13.7%	57.7%	14.9%	15.3%	13.7%	56.1%

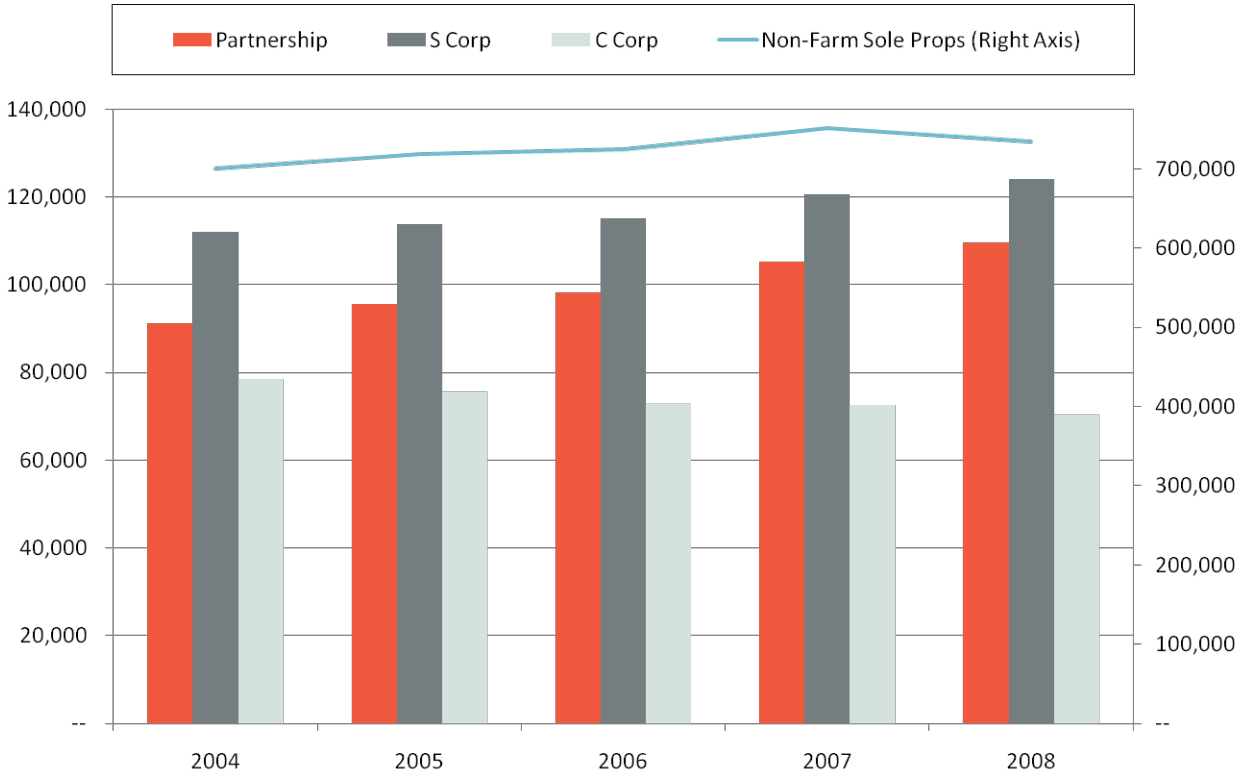
Source: Authors' calculations using U.S. Census Bureau *Statistics of U.S. Businesses* data.

The new CAT system might have created an incentive for firms to remain under the $1 million gross receipts threshold. Unfortunately, data are not yet available on the size distribution of firms by gross receipts for a similar time period. Given the relatively low tax liabilities just below and above the threshold, it is not likely that this possible distortion would be observed in the data anyway.

Organizational Form. Perhaps a better way to look at the possible distortions of business form is to examine the numbers of federal tax returns from Ohio by the type of the return. To be sure, the relative tax treatment of various organizational forms is only one of the many factors in the decision over which form to choose. That said, we might have expected the number of corporate returns to increase after H.B. 66, alongside a reduction in non-corporate returns of various forms. Perhaps surprisingly, Figure 16 shows that the number of federal individual income tax returns filed from Ohio with non-farm business or professional income (right axis) increased gradually between 2004 and 2008 with the exception of a small decrease in 2008. The numbers of S corporation and partnership returns (left axis) also increased, while the number of corporate income tax returns (left axis) fell rather substantially. These data do not suggest that H.B. 66 resulted in a wave of incorporations, revealing either that the prior tax system did not distort organizational form decisions or that the new system did not reduce preexisting distortions.

Under the prior system, so-called S corporations and LLCs were treated as partnerships for CFT purposes. The corporations acted as pass-through entities for personal income tax purposes, and the S corporations themselves had no CFT liability. CFT avoidance (through S corporations or LLCs) may therefore have already reached a maximum. A more complete analysis of the potential H.B. 66 effects would require an analysis to determine whether a shift occurred from S corporations to C corporations in Ohio.

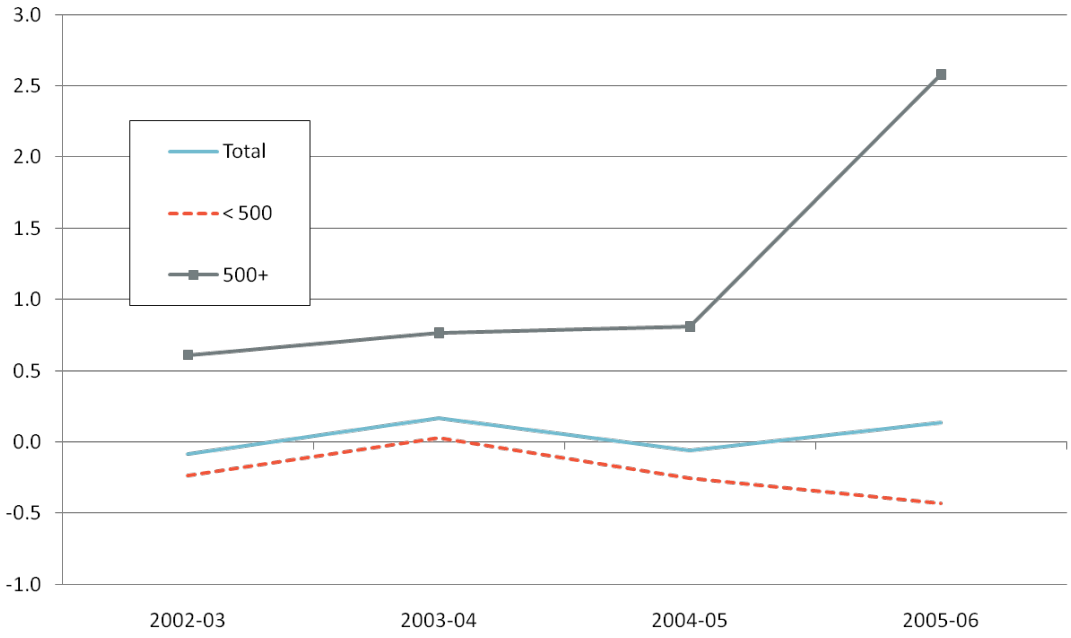
Figure 16: Federal Returns from Ohio by Type



Source: Authors' calculations using Internal Revenue Service *Statistics of Income* data.

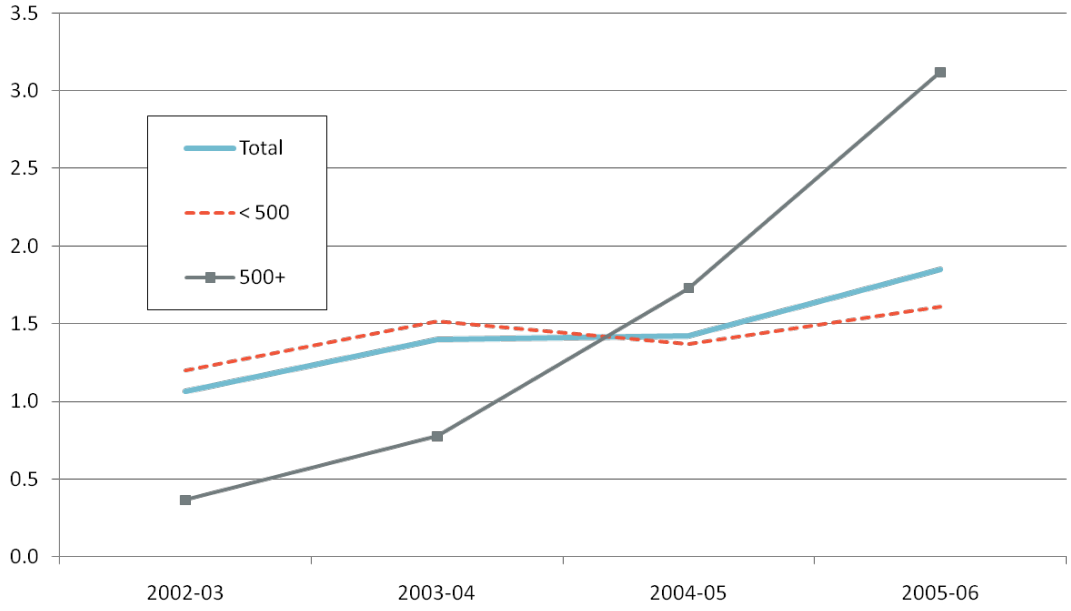
Growth Rate of Establishments by Firm Size. By bringing all types of businesses into the CAT, H.B. 66 might have discouraged new small firm formation even though the CAT rate is very low. On the other hand, H.B. 66 might have fueled the creation of new establishments among firms that no longer needed to worry about triggering additional tax liability. Figures 17 and 18 below reveal a spike upward in the net establishment birth rate among firms with 500 or more employees in Ohio between 2005 and 2006 following three years of very low growth. The net establishment birth rate among smaller firms (with fewer than 500 employees) was negative in 2004-2005 and became even more negative in 2005-2006. A similar diversion in net establishment births by firm employment class is not seen in the U.S. data in Figure 18, suggesting that H.B. 66 might have had some role.

Figure 17: Net Ohio Establishment Birth Rates by Employment Size of the Firm



Source: Authors' calculations using U.S. Census Bureau *Statistics of U.S. Businesses* data.

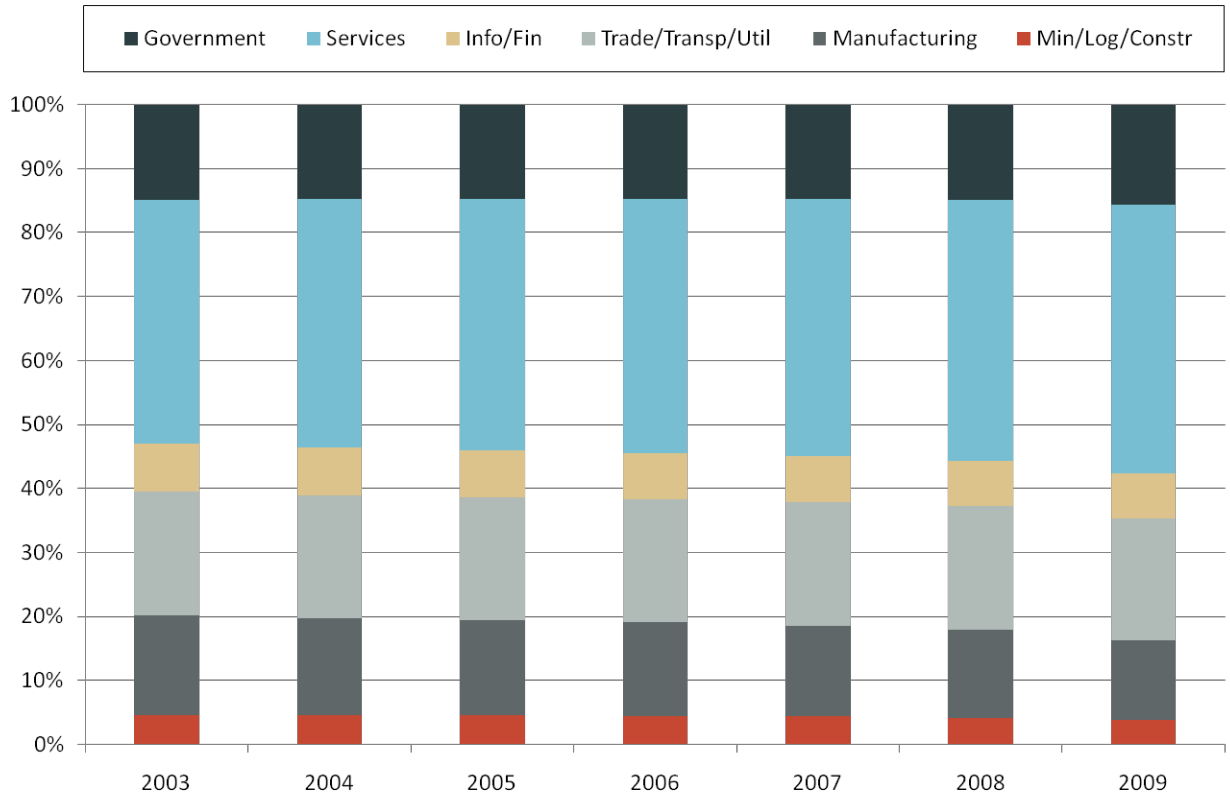
Figure 18: Net U.S. Establishment Birth Rates by Employment Size of the Firm



Source: Authors' calculations using U.S. Census Bureau *Statistics of U.S. Businesses* data.

Industrial Mix of Business Entities. Another way in which H.B. 66 might have increased efficiency is by removing a major component of the old system's inequity toward capital-intensive or inventory-intensive firms. By phasing out the TPPT, more of the relative tax burden was shifted away from these firms toward less capital-intensive firms. It is interesting to consider whether this resulted in a shift of economic activity toward manufacturing and other capital-intensive industries and away from the more labor-intensive service industries. However, as shown in Figure 19, the distribution of Ohio employment by major industrial sector continued to gravitate toward services and away from manufacturing during the H.B. 66 phase-in period. Other major sectors appeared to remain unchanged. These patterns are similar to national trends.

Figure 19: Distribution of Ohio Employment by Major Sector



Source: Authors' calculations using Bureau of Labor Statistics *Current Employment Statistics* data.

Taxation of Non-Corporate Business Entities. The layering of the CAT on top of the individual income tax for pass-through entities such as sole proprietorships and partnerships increases efficiency losses on the surface, but only for those above the *de minimis* thresholds. Specifically, pass-through entities that did not pay TPPT or CFT but are now included in the CAT must continue to pay individual income taxation on the net profits from their businesses. Of course, the overall tax rate reductions in the individual income tax and the low CAT rate mitigate (and may erase) any increase in efficiency losses. Smaller entities with high gross receipts might have seen an overall tax increase, but most pass-through entities probably enjoyed a tax reduction.

While H.B. 66 left the TPPT in place for public utilities and the CFT in place for financial firms and selected others, it is not clear if or how this remaining unequal treatment impacted the efficiency of the tax system.

Cross-Border Tax System Conformity. An important area for efficiency considerations is the effect of H.B. 66 on business tax burdens in Ohio relative to those in other states. The phase-out of the CFT and the TPPT, especially the tax on inventories, reduced the business tax burden among corporate entities in Ohio relative to those in other states. While the CAT reduces Ohio's conformity with the national network of state-level business taxes (an issue to which we return below), the changes in sum probably reduce the incentive for Ohio businesses to leave the state.

The CAT is levied on a destination basis, that is, at the location where the goods or services are enjoyed or used. This is generally consistent with the way that goods are sitused in state corporate income tax apportionment formulas, but only 11 states situs services in this fashion. Services are frequently sitused in the corporate income tax formula based on where the greatest cost of performance is located, or some similar approach to the origin, rather than the destination of the services. Similarly, goods are normally taxed on a destination basis under state sales taxes, but services are often taxed at the origin.

Destination taxation is expected to lessen the negative consequences that the CAT might have on Ohio's economic competitiveness. Specifically, no tax is imposed on sales outside of Ohio, so the CAT does not raise the costs of exports (to other states or countries) from the state. Similarly, CAT is imposed on imports from other states or countries, so external firms are subject to the same tax as internal Ohio sales. Two caveats arise in this regard. CAT is imposed on sales by one Ohio business to another Ohio business, and this tax is implicit in the costs for the latter firm as it subsequently seeks to sell outside the state. Second, administration is probably better for firms physically in Ohio than for firms selling into the state from outside, and this could make the effective tax higher on fully domestic transactions versus imports.

Revenue Elasticity and Performance Across Business Cycles

Two factors make it extremely difficult to determine the effect of H.B. 66 on revenue elasticity. First, the package of tax policy changes in H.B. 66 was designed to be revenue-reducing. Second, the major components of H.B. 66 were phased in during a significant economic recession. It will be important to continue to assess the performance of Ohio's tax system as the national economy improves.

There was at least a theoretical possibility that the reduction of tax rates and a broadening of business tax bases would unleash the power of economic activity such that overall revenues might increase. Indeed, early estimates suggested that this impact could be substantial.[26] However, the overall reduction in revenues has shown that the tax rate cuts and recessionary impacts far outweighed any increase in taxable activity that might have resulted from the other tax changes. This is not an unexpected result, given the relatively low estimates in the recent academic literature of the responsiveness of taxable income to marginal tax rate changes.

Several aspects of the H.B. 66 policies could result in improved elasticity as Ohio climbs out of the recession. First, the new CAT system makes it more difficult and less rewarding to engage in tax-minimizing activities regardless of the macroeconomic situation. Second, the use of gross receipts as the primary business tax base should result in faster post-recession growth if receipts tend to grow faster than the prior tax bases (profits and/or net worth).

At the same time, several aspects of H.B. 66 could result in reduced revenue elasticity in response to economic growth. First, the overall package was revenue-reducing. While this may improve the stability and predictability of revenues, it could reduce the revenue system's responsiveness to economic growth. Second, the reduction in individual income tax rates will compress the possible revenue growth as income growth expands going forward. On a similar note, the lower individual income tax rates and the relatively low CAT rate reduce the tax system's ability to serve as an automatic stabilizer within the state economy. It will be more difficult to generate revenue surpluses during stronger growth periods.

In sum, the CAT is probably a less elastic tax than the CFT, at least as measured in Table 1 (although the TPPT was almost certainly a lower-elasticity tax than either the CAT or the CFT). Further, the sales and cigarette taxes are much less elastic than the individual income tax. As a result, the net effect of H.B. 66 is likely to be a reduction in the ability of the overall revenue

[26] *The Dynamic Economic and Fiscal Impact of the Ohio Administration's Proposed Changes to the Commercial Activity Tax, Corporate Franchise Tax, Personal Income Tax, Tangible Personal Property Tax, and Sales Tax*, Prepared for the Ohio Department of Development and the State of Ohio, REMI Consulting Inc, April 18, 2005.

system to keep pace with the economy. This is not a result of the switch to the CAT as the primary business tax, but is instead due to the overall revenue reduction inherent in the H.B. 66 tax policy changes.

In part, the income tax reductions in H.B. 66 resulted from a perception that the combined state and local income tax rates in Ohio were too high. The high rates were seen as a disincentive to business locations and as an incentive for retirement by high income taxpayers in states like Florida with no income tax rate. Our recent research is consistent with taxes having a greater impact on tax planning by high income taxpayers than on the actual location of high income taxpayers.[27]

Compliance and Administration

As with our other benchmarks for evaluating tax systems, the record from H.B. 66 regarding taxpayer compliance and tax administration is mixed. Several features have improved compliance and administration while others have not. It is almost certainly more difficult for businesses to evade or avoid taxation under the new CAT system than under the original TPPT and CFT systems. The CAT is also a much simpler tax, with the tax return resembling a postcard and allowing for no deductions. These features and the low CAT rate should certainly be expected to improve voluntary compliance. On a similar note, the lower individual income tax rates should at worst leave compliance unchanged and at best improve compliance.

At the same time, the inclusion of a much larger set of business entities in the state's business tax system could make it more costly for the state to administer, even given the simpler nature of the CAT relative to prior systems. Returns to audit and enforcement activity are also expected to be lower given the low CAT rate and generally lower CAT liabilities among most business taxpayers. In other words, an additional audit might cost more in terms of state resources than the additional tax revenue it generates from the detection of non-compliance or any induced improvement in future compliance. If this results in less effort to monitor and enforce the new tax laws, compliance could fall as a result.

The higher cigarette tax rate might lead to greater effort to avoid or evade the tax, perhaps by importing or smuggling cigarettes from lower-tax jurisdictions. Ohio's per-pack rate of $1.25 exceeds that in three of five neighboring states (Indiana at $0.995, Kentucky at $0.60, and West Virginia $0.55), but is lower than that in the other two (Michigan at $2.00 and

[27] See Donald Bruce, William F. Fox, and Zhou Yang, "Base Mobility and State Personal Income Taxes." *National Tax Journal*, December 2010.

Pennsylvania at $1.60). According to Ohio Department of Taxation data, cigarette tax receipts spiked upward in fiscal year 2006, but have declined substantially since then. Revenues have not risen nearly as fast as tax rates have been increased (as evidenced in Table 1 above), suggesting higher rates have significantly lowered the number of taxed packages that are purchased in Ohio and likely has resulted in more purchases outside the state and more bootlegging. Anti-tobacco advocates claim that higher tobacco taxes reduce consumption and this is surely true to some extent. Lovenheim (2008) offers an alternative explanation that also is probably true to some extent. He finds that between 13 and 25 percent of U.S. consumers purchase cigarettes in lower tax states, Native American reservations, or through bootlegging. The result is that total cigarette consumption is relatively unresponsive to home state tax increases even if local purchases fall. Indeed, consumption may actually increase in some cases as tax rates rise and home state consumers increase out-of-state purchases. So, home state tax rate increases may not decrease consumption and may have little effect on revenues, since smuggling and cross state purchasing rises with the tax rate increases.

Finally, when considering business tax systems across the nation, most states still tax profits and not gross receipts. Washington, Delaware, Michigan, and Texas have versions of gross receipts taxes, but all impose them very differently than Ohio. This non-conformity with other states could increase confusion, reduce compliance, or encourage more elaborate tax minimization schemes.

A Note on the Local Impact of H.B. 66

No evaluation of H.B. 66 would be complete without a discussion of the bill's impact on local governments. The removal of the TPPT was merely a component of the broader effort to change the way Ohio taxes business entities, but it placed a significant limitation on local property tax bases in the process. In recognition of this, H.B. 66 earmarked CAT revenues for local governments as a means of compensation. Specifically, CAT revenues have been used to finance a required 100 percent replacement of lost TPPT revenues to schools and local governments on a dollar-for-dollar basis. For non-school local governments, this 100-percent replacement guarantee will be phased out between 2013 and 2017 (after being extended in recent years). At this time, the long-term status of revenue replacement for non-school local governments remains uncertain. Current law will end such replacement after 2017. It neither guarantees a permanent replacement nor a mechanism by which such replacement would occur. In the case of replacements for schools, the current law schedules the 100 percent replacement to continue through FY2012 and FY2013. Beyond that point, 70 percent of CAT revenues are earmarked for replacement of school TPPT losses, but a formula for such

replacement does not exist. Presumably, the other 30 percent of CAT revenue would be available for continued replacement of non-school local government losses, but legislation will be required to implement such a commitment of CAT revenues.

Two aspects of this shift are particularly important. First, the replacement of local TPPT revenues with state CAT revenues provided to local governments causes a shift of control over public education funding away from local school districts and toward state policy makers, at least for a few years. At a minimum, the relative state contribution to K-12 education was increased and the local contribution decreased. This has advantages and disadvantages depending on one's perspective. Of course, many local governments are free to use other local revenue sources (e.g., higher tax rates or new tax instruments) to replace the lost TPPT revenue, but districts differ both in their current efforts to tax available bases and in their capacity to raise additional revenues from those existing bases. In short, some districts will find it easier than others to replace any lost revenue.

A complete review of local tax and expenditure changes that have been induced by H.B. 66 is beyond the scope of this report, but it should be noted that any induced change carries with it the same set of efficiency, equity, adequacy, and other issues discussed in preceding sections. Some local governments might choose to replace TPPT revenues with local income tax revenues. Those jurisdictions might experience greater equity and adequacy at the expense of less efficiency in their revenue systems. Further, the proliferation of local-level income taxes increases the compliance burden on business entities that operate in multiple jurisdictions. Some local governments might instead choose to shift the property tax burden onto classes of real property that remain taxable, recognizing that a referendum is probably necessary to tax property at higher rates. Higher property taxes could create a greater efficiency loss (due to the larger tax wedge between taxed and untaxed property) and lower overall revenue adequacy (given the longstanding difficulty with generating revenue growth under property tax systems in Ohio).

Second, the change in revenue streams introduces significantly greater uncertainty into local school budgeting processes. Districts were able to plan around a much more stable TPPT revenue stream before H. B. 66, but could soon be at the mercy of what could amount to annual revisions of a state redistribution formula for CAT revenues. Although we would argue that continuing to hold local districts harmless on a dollar-for-dollar basis is not recommended due to the possibility of shifts in student populations as well as changes in school system quality and need over time, we would also note that any redistributive formula is bound to create winners and losers. Indeed, it is our understanding that several school districts that are likely to

end up on the losing end of a redistribution are already working toward a permanent hold-harmless structure.

Taking a longer-run view, it is not clear that earmarking CAT revenues for local government use is optimal. In other words, if the state is going to continue to provide substantial revenues to local governments for the purposes of providing public education, it does not matter whether those funds are generated by the CAT or any other revenue source.[28] The revenue sources will be fungible, and earmarking of a particular source is not likely to influence how much revenue local governments receive. Further, such a direct earmarking structure could place the state government in a situation of having to use even more general revenue fund dollars to offset underperforming CAT revenues if collections fall short of the hold-harmless level.

Summary

It is impossible to design a set of tax policies that simultaneously improves equity, efficiency, elasticity, compliance, and ease of administration. Major tax policy changes typically involve a series of tradeoffs among these desirable qualities, with improvements on one dimension often being offset by deterioration on another. H.B. 66 was no exception. In general, the changes implemented by H.B. 66 slightly reduced the overall progressiveness of Ohio's tax system while generally improving efficiency. At the same time, while H.B. 66 likely led to greater (or at least easier) tax compliance and facilitated easier administration, it also hindered the tax system's ability to keep up with the economy.

The question remains as to whether the benefits generated by H.B. 66 have outweighed the costs. To be sure, the answer to that question depends on one's relative weighting of the various features of good tax systems. It also depends on one's view of the proper scale and scope of state government services, as H.B. 66 reduced total revenues, and at an inopportune time just before the onset of a very significant economic recession. Those who favor efficiency, better compliance, simpler administration, and smaller state government may have a favorable impression of H.B. 66. Alternatively, those who would prefer a more progressive tax system that is better able to provide an enhanced revenue stream that is better able to keep up with economic growth might like to see additional changes. Of course, future efforts to enhance the fairness or revenue production of the tax system may require a reduction in efficiency.

[28] Indeed, due to CAT revenues falling short of expectations, the state is already using other sources to fulfill the hold-harmless provision.

Similarly, efforts to improve the system's revenue elasticity may be seen as unfair or too costly in terms of administration and compliance.

REFORMING THE OHIO INDIVIDUAL INCOME TAX

Wisconsin enacted the first state income tax in 1911, and Philadelphia introduced the first local income tax in 1939. Today, income taxes are used by 41 states and the District of Columbia. Connecticut was the most recent to enact an income tax, having passed legislation in 1991. Two other states, New Hampshire and Tennessee, have limited income taxes that apply only to interest and dividend income. Ohio voters approved a constitutional amendment authorizing an income tax in 1912, but such a tax was not enacted in Ohio until 1971 (effective January 1, 1972).

Data from the U.S. Bureau of the Census (as tabulated by the Federation of Tax Administrators) shows that, in the 41 states with broad-based income taxes, the importance of the individual income tax ranges from a low of 15.3 percent of total state taxes in North Dakota to a high of 73.2 percent of total state taxes in Oregon, a state without a general sales tax.

Local governments in 15 states report revenue from income taxes, ranging from a low of 0.05 percent of total local taxes in Kansas up to a high of 35.6 percent in Maryland in 2008. Local income taxes were responsible for less than 5 percent of total local taxes nationwide in 2008. Individual income taxes contributed 22.9 percent of combined state and local tax revenues in 2008.[29] This makes income taxes the second-largest source of state and local taxes, tied with general sales taxes. Property taxes provide the largest share of state and local tax revenue at 30.8 percent.

The story is much different in Ohio, where income taxes are the largest source of state and local tax revenues at 30.0 percent. This places Ohio in a tie for 10th in terms of the contribution of income taxes to total state and local revenues. It also reveals the importance of local income taxes in Ohio, as income taxes only contributed 34.7 percent of total Ohio state taxes in 2009, a value that was only slightly above the national average of 34.4 percent of total state taxes.[30] Local income taxes in Ohio represented 20.3 percent of total local taxes in 2008, placing Ohio 4th highest in the rankings. Any discussion of future tax reform options in Ohio must, therefore, include income taxes.

Income taxes are popular for a number of reasons. First, they involve a tax base—personal income or some variant of it—that grows with the economy. Income taxes are highly elastic taxes as described earlier. Second, they are often built upon the principle of ability-to-pay, where individuals with more income pay more income taxes. Third, income taxes play an important role as an automatic stabilizer in the economy. As the economy grows, so does

[29] See http://www.taxadmin.org/Fta/rate/slsource.html.
[30] See http://www.taxadmin.org/Fta/rate/09taxdis.html.

income (and income tax collections). Excess collections during good times can be saved for future downturns, when income tax collection growth naturally slows. Fourth, income taxes are highly visible and reinforce the taxpayer's attachment to his or her government. Finally, like the federal income tax, state and local income taxes have become important mechanisms for enacting social policy. It has become much easier to pass a tax credit that favors a certain type of activity rather than a separate spending program that would accomplish the same goal.

Income Tax Structure

Table 4 presents key features of state income tax rates and bases. Most states begin with some measure of income from the U.S. federal individual income tax. Twenty-seven states, including Ohio, start with federal adjusted gross income (AGI) and an additional nine states begin with federal taxable income. Rhode Island's income tax is essentially specified as a flat rate—25 percent—of federal income tax liability. The remaining five states with broad-based income taxes do not employ a federal starting point. Those states that have linked their individual income taxes to federal tax laws either link to current federal law (15) or to federal law as of a specific point in time (21). Linkages to the federal income tax are designed to increase simplicity and reduce compliance costs. Linkages to federal law at a specific point in time are further intended to protect states from the effects of possible future federal tax law changes.

Table 4: Individual Income Tax Structures

	Tax Rate Range		No. of Brackets	Income Brackets		Personal Exemptions			Federal PIT Deductible	Federal Starting Points	
	Low	High		Lowest	Highest	Single	Married	Dep.		Tax Base	IRC Date
ALABAMA	2	5	3	500	3,000 (b)	1,500	3,000	300	*		
ARIZONA	2.59	4.54	5	10,000	150,000 (b)	2,100	4,200	2,300		AGI	1/1/2009
ARKANSAS (a)	1	7 (e)	6	3,899	32,600 (b)	23	46	23 (c)			
CALIFORNIA (a)	1.25	9.55 (w)	6	7,300	47,900 (b)	98	196	98 (c)		AGI	1/1/2005
COLORADO	4.63	4.63	1	Flat Rate						Taxable Income	Current
CONNECTICUT	3	6.5	3	10,000	500,001 (b)	13,000	26,000	0 (f)		AGI	Current
DELAWARE	2.2	6.95	6	5,000	60,001	110	220	110 (c)		AGI	Current
GEORGIA	1	6	6	750	7,000 (g)	2,700	5,400	3,000		AGI	1/1/2009
HAWAII	1.4	11	12	2,400	200,001 (b)	1,040	2,080	1,040		AGI	12/31/2008
IDAHO (a)	1.6	7.8	8	1,320	26,418 (h)	3,650	7,300	3,650 (d)		Taxable Income	2/17/2009
ILLINOIS	3	3	1	Flat Rate		2,000	4,000	2,000		AGI	Current
INDIANA	3.4	3.4	1	Flat Rate		1,000	2,000	1,000		AGI	1/1/2008
IOWA (a)	0.36	8.98	9	1,407	63,316	40	80	40 (c)	*	AGI	1/1/2008
KANSAS	3.5	6.45	3	15,000	30,000 (b)	2,250	4,500	2,250		AGI	Current
KENTUCKY	2	6	6	3,000	75,000	20	40	20 (c)		AGI	12/31/2006
LOUISIANA	2	6	3	12,500	50,000 (b)	4,500	9,000	1,000 (i)	*	AGI	Current
MAINE (a)	2	8.5	4	4,949	19,750 (b)	2,850	5,700	2,850		AGI	2/17/2009
MARYLAND	2	6.25	8	1,000	1,000,001	2,400	4,800	2,400		AGI	Current
MASSACHUSETTS (a)	5.3	5.3	1	Flat Rate		4,400	8,800	1,000		AGI	1/1/2005
MICHIGAN (a)	4.35	4.35	1	Flat Rate		3,300	6,600	3,300		AGI	Current
MINNESOTA (a)	5.35	7.85	3	22,770	74,781 (j)	3,650	7,300	3,650 (d)		Taxable Income	3/31/2009
MISSISSIPPI	3	5	3	5,000	10,000	6,000	12,000	1,500			
MISSOURI	1.5	6	10	1,000	9,000	2,100	4,200	1,200	* (r)	AGI	Current
MONTANA (a)	1	6.9	7	2,600	15,401	2,110	4,220	2,110	* (r)	AGI	Current
NEBRASKA (a)	2.56	6.84	4	2,400	27,001 (k)	118	236	118 (c)		AGI	2/26/2009
NEW JERSEY	1.4	10.75	8	20,000	1,000,000 (l)	1,000	2,000	1,500			
NEW MEXICO	1.7	4.9	4	5,500	16,000 (m)	3,650	7,300	3,650 (d)		AGI	Current
NEW YORK	4	8.97	7	8,000	500,000 (x)	0	0	1,000		AGI	Current
NORTH CAROLINA	6	7.75 (n)	3	12,750	60,000 (n)	3,650	7,300	3,650 (d)		Taxable Income	1/1/2009
NORTH DAKOTA (a)	1.84	4.86	5	34,000	373,650 (o)	3,650	7,300	3,650 (d)		Taxable Income	Current
OHIO (a)	**0.618**	**6.24**	**9**	**5,000**	**200,000**	**1,550**	**3,100**	**1,550 (p)**		AGI	10/16/2009
OKLAHOMA	0.5	5.5 (q)	7	1,000	8,701 (q)	1,000	2,000	1,000		AGI	Current
OREGON (a)	5	11	5	2,000	250,000 (b)	176	352	176 (c)	* (r)	Taxable Income	5/1/2009
PENNSYLVANIA	3.07	3.07	1	Flat Rate							
RHODE ISLAND	3.8	9.9 (y)	5	33,500	372,950 (y)	3,650	7,300	3,650 (d)		AGI	6/3/2001
SOUTH CAROLINA (a)	0	7	6	2,740	13,701	3,650	7,300	3,650 (d)		Taxable Income	12/31/2009
UTAH	5	5	1	Flat Rate				(t)		Taxable Income	Current
VERMONT (a)	3.55	8.95	5	33,950	372,951 (u)	3,650	7,300	3,650 (d)		Taxable Income	1/1/2008
VIRGINIA	2	5.75	4	3,000	17,000	930	1,860	930		AGI	12/31/2008
WEST VIRGINIA	3	6.5	5	10,000	60,000	2,000	4,000	2,000		AGI	1/1/2009
WISCONSIN (a)	4.6	7.75	5	10,220	225,001 (v)	700	1,400	700		AGI	12/31/2008

Table 4: Individual Income Tax Structures (continued)

Source: The Federation of Tax Administrators from various sources.

(a) 16 states have statutory provision for automatic adjustment of tax brackets, personal exemption, or standard deductions to the rate of inflation. Massachusetts, Michigan, and Nebraska index the personal exemption amounts only.

(b) For joint returns, the taxes are twice the tax imposed on half the income.

(c) Tax credits.

(d) These states allow personal exemption or standard deductions as provided in the IRC.

(e) A special tax table is available for low-income taxpayers, reducing their tax payments.

(f) Combined personal exemptions and standard deduction. An additional tax credit is allowed ranging from 75% to 0% based on state adjusted gross income. Exemption amounts are phased out for higher income taxpayers until they are eliminated for households earning over $61,000.

(g) The tax brackets reported are for single individuals. For married households, the same rates apply to income brackets ranging range from $1,000 to $10,000.

(h) For joint returns, the tax is twice the tax imposed on half the income. A $10 filing tax is charge for each return and a $15 credit is allowed for each exemption.

(i) Combined personal exemption and standard deduction.

(j) The tax brackets reported are for single individuals. For married couples filing jointly, the same rates apply for income under $33,280 to over $132,221. A 6.4% AMT rate is also applicable.

(k) The tax brackets reported are for single individuals. For married couples filing jointly, the same rates apply for income under $4,800 to over $54,000.

(l) The tax brackets reported are for single individuals. For married couples filing jointly, the tax rates range from 1.4% to 10.75% (with 9 income brackets), applying to income brackets from $20,000 to over $1 million.

(m) The tax brackets reported are for single individuals. For married couples filing jointly, the same rates apply for income under $8,000 to over $24,000. Married households filing separately pay the tax imposed on half the income.

(n) The tax brackets reported are for single individuals. For married taxpayers, the same rates apply to income brackets ranging from $21,250 to $100,000. Lower exemption amounts are allowed for high-income taxpayers. Tax years 2009 and 2010 include a surcharge that equals 2% of total liability for taxpayers with income over $60,000 single filer ($100,000 joint) and 3% of total liability for income over $150,000 ($250,000).

(o) The tax brackets reported are for single individuals. For married taxpayers, the same rates apply to income brackets ranging from $56,850 to $373,650. An additional $300 personal exemption is allowed for joint returns or unmarried heads of household.

(p) Plus an additional $20 per exemption tax credit.

(q) The rate range reported is for single persons. For married persons filing jointly, the same rates apply to income brackets ranging from $2,000 to $15,000.

(r) Deduction is limited to $10,000 for joint returns and $5,000 for individuals in Missouri and Montana, and to $5,600 in Oregon.

(s) Federal Tax Liability prior to the enactment of Economic Growth and Tax Relief Act of 2001. Or, taxpayers have the option of computing tax liability based on a flat 7.0% (6.5% in 2009) of gross income.

(t) Tax credits are equal to 6% of federal standard/itemized deductions (w/o state taxes paid) and 75% of Federal personal exemption amounts. The credit amount is phased out above $12,000 in income ($24,000 for joint returns).

(u) The tax brackets reported are for single individuals. For married couples filing jointly, the same rates apply for income under $56,700 to over $372,950.

Table 4: Individual Income Tax Structures (continued)

(v) The tax brackets reported are for single individuals. For married taxpayers, the same rates apply to income brackets ranging from $13,620 to $300,000.

(w) An additional 1% tax is imposed on taxable income over $1 million. Tax rates are scheduled to fall by 0.25% after 2011.

(x) The tax brackets reported are for single individuals. For married taxpayers, the same rates apply to income brackets ranging from $16,000 to $500,000.

(y) Or an alternative flat rate of 6.5%. Rates reported are for a single filer calculated based on a tax of 25% of federal liability using IRC in 2001. For married taxpayers filing jointly, the same rates apply to income brackets ranging from $56,700 to $372,950.

Despite the prevalence of formal linkages to the federal income tax base, state income tax bases vary widely. For example, 26 of the 41 states with income taxes, including Ohio, did not tax Social Security benefits in 2006.[31] Additionally, Wisconsin stopped taxing Social Security benefits in 2008, and Iowa and Missouri are in the process of at least partially phasing out the taxation of Social Security benefits. States that continue to tax Social Security benefits often have rules to reduce the effective tax rate on them relative to other forms of income. Also, most states exempt one type or another of non-Social-Security pension benefits. These provisions are designed in part to attract elderly individuals to a state or to enhance perceptions of equity. States also differ in the extent to which they tax capital gains, unemployment compensation, state and municipal bond interest, and active duty military pay, among other income sources.[32]

Most states follow the federal structure in specifying a standard deduction or a set of allowable itemizable deductions. The primary departure from federal rules concerns the deductibility of state taxes, which is permitted on the federal income tax but not allowed on some state income taxes. In addition to standard or itemized deductions, all but a few states generally allow certain personal exemption amounts to be subtracted from their chosen measure of income. The exemption for married filers is often but not always twice that for single filers. Additional exemptions are specified for dependents such that tax liabilities can be adjusted for household size in the pursuit of greater horizontal and vertical equity. Ohio does not allow many deductions (standard or itemized) and its exemption amounts for single or married filers are slightly below national medians or averages.

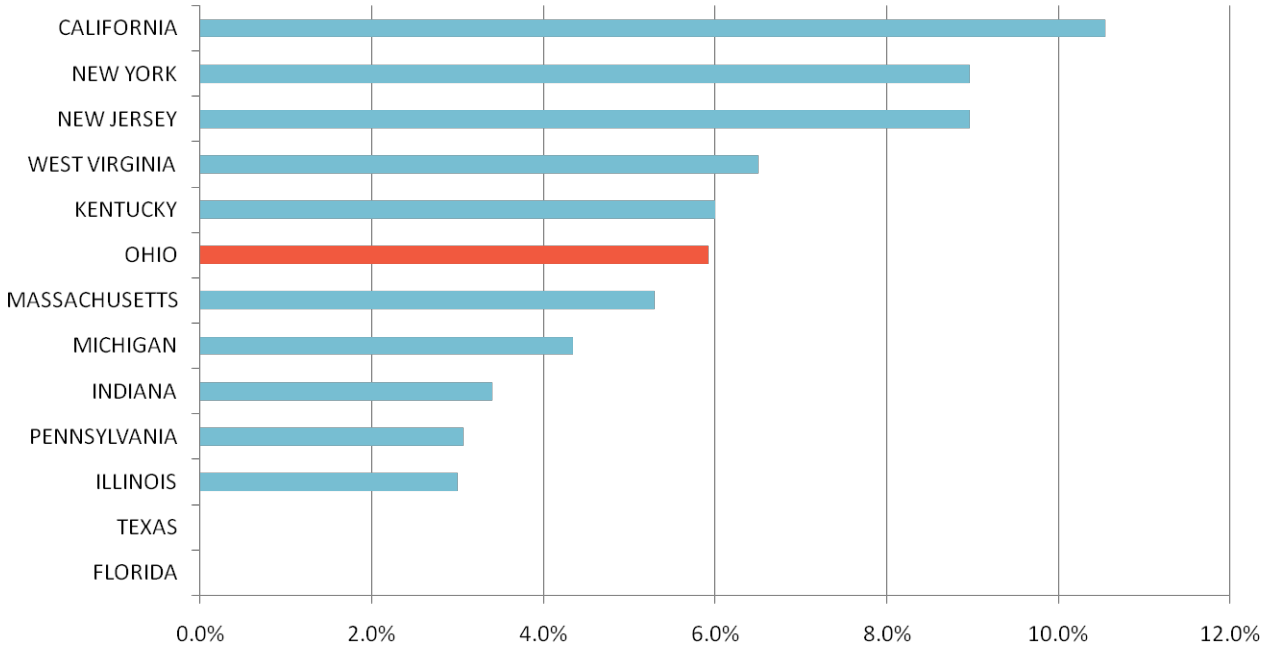
[31] For more details on state taxation of social security and pension benefits, see Baer (2007) at http://assets.aarp.org/rgcenter/econ/ib84_taxation.pdf.

[32] For a detailed assessment of the differences in state income taxes focusing on the 2007 tax year, see Reinhardt (2009) at http://legis.wisconsin.gov/lfb/Informationalpapers/4_individual%20income%20tax%20provisions%20in%20the%20states.pdf.

Most states apply a series of graduated or increasing tax rates to their chosen measure of income (minus deductions and exemptions). As with the federal income tax, different rate schedules typically apply to different filing statuses (e.g., single, married, or head of household). Seven states have explicit flat-rate income taxes, while Rhode Island applies a flat rate to federal income tax liability, as noted above. Another 10 states also have essentially flat-rate systems because even though they have multiple tax brackets, the top tax rate begins to apply at an income level below $20,000. The highest marginal income tax rate is observed in Hawaii at 11 percent. Hawaii and Missouri have the most tax brackets, with 12 and 10 respectively. The median top income tax rate is 6.45 percent and the average is 6.675 percent. The median starting point for the top income tax bracket is $60,000 while the average is $172,680.

Ohio's individual income tax structure is not grossly out of line with most other income-taxing states. Specifically, while Ohio has the third-highest number of tax brackets (9), the top rate is 6.24 percent (below the national median and average) and only applies to income above $200,000 (well above the national median and average). As shown in Figure 20, the 2011 top marginal rate in Ohio is the median top marginal rate among the comparison states. These facts are largely due to the tax rate reductions brought about by H.B. 66. And while Ohio's income tax does not provide separate tax rates or brackets for different filing statuses, a joint filer credit is available to reduce taxes for married couples filing jointly.

Figure 20: Top Marginal Individual Income Tax Rates, Ohio and Comparison States



Tax structures in 16 states—including Ohio as of 2010—are at least partially indexed for inflation. Indexing permits tax brackets, exemptions, or deduction amounts to rise as the general price level in the economy rises. Without such indexing, an individual's tax liability could increase over time in dollar terms as his or her income rises, given statutory tax brackets that remain unchanged. The problem with this is that if prices also rise, the purchasing power (or real value) of income is not necessarily increasing over time. Rising tax liabilities over time alongside constant real incomes are perceived to be unfair. One important reason for states' failure to index their tax codes is that the resulting "bracket creep" creates welcome growth in income tax collections over time.

Income taxes are favored by some for their progressivity. As described in the introductory section of this document, progressive taxes place a larger burden on higher-income households (as a share of their income) than lower-income households. States enhance the progressivity of their overall tax systems by applying more sharply increasing income tax rates as household income rises. It should be noted, however, that the bulk of the progressivity inherent in state income taxes appears at low to middle income levels. States can also enhance the overall progressivity of their income tax systems by reducing tax burdens on low-income families. About 23 states have what are called earned income tax credits (EITCs) that resemble the federal EITC.[33] These provisions allow tax filers in the very lowest income brackets to reduce their income tax payments if they meet certain restrictions regarding income and household composition (e.g., the presence of a qualifying child). In all but two states, these credits are refundable; if the EITC amount exceeds tax liability, the tax filer can actually receive a check for the difference. Ohio does not have an EITC, but it does have a modest low-income credit for filers with less than $10,000 in taxable income.

In sum, Ohio's state-level individual income tax system appears to be in line with those in most other income-taxing states. The Ohio individual income tax base is at least as broad as those in other states, in that federal AGI is the starting point, exemption amounts are lower than national averages, and few deductions are permitted. Most policy actions that would increase conformity with individual income tax systems in other states, such as the provision of additional deductions or credits (like a state-level earned-income credit), would therefore be revenue-reducing.

The same cannot be said about local income taxes in Ohio, of which there are two varieties. The first is a municipality-level tax that applies to income earned by individuals and businesses either living in a particular municipality or earning income in that municipality. The

[33] Additionally, Colorado has an EITC on the books, but it has been suspended due to budget pressures for two years in a row. For more information on state EITCs, see http://www.stateeitc.com/ or the informative summary provided by the Center on Budget and Policy Priorities (2009) at http://www.cbpp.org/files/policybasics-seitc.pdf.

Ohio Department of Taxation reports that, as of the most recent data (for 2006), 235 cities and 331 villages levied such a tax. Municipal income taxes must have a flat rate according to state law, and that rate cannot exceed 1.0 percent without voter approval. As of 2006, municipal income tax rates ranged from 0.3 to 3.0 percent. Other state laws pertain to the municipal income tax base, including a series of required exemptions and the disallowance of personal exemptions. Municipal income taxes, which are administered by the individual municipalities and not the state Department of Taxation, raised nearly $4 billion for Ohio's cities and villages in 2006.

The structure of municipal income taxation in Ohio raises at least three primary concerns. First, the taxation of income earned by nonresidents working in a particular municipality raises the possibility of double-taxation of that income by the municipality of residence and that where the work takes place. While municipalities may offer credits for taxes paid in other jurisdictions, these credits are not required. Second, on a related note, this structure could result in an unequal distribution of local income tax collections given the concentration of the taxable income base in larger urban centers. Third, the tax on business income is based on apportioned income, in much the same way as state-level corporate income taxes operate. This represents a dramatic increase in complexity among multi-jurisdictional businesses that have to remit tax to several local governments. The local-level administration of these taxes only adds to the possibility of significant administration and compliance costs.

The second form of local income taxation in Ohio is the school district income tax, levied by 172 of Ohio's 614 school districts as of 2009 according to the Ohio Department of Taxation. The base for these taxes is typically, but not always, Ohio taxable income.[34] Unlike the municipal income taxes described above, school district income taxes are administered by the state Department of Taxation. Also unlike the municipal income taxes, the school district taxes are based on residency alone (rather than where the income is earned) and do not apply to businesses that do not report their income on individual tax returns. Rates, which must be in increments of 0.25 percent, must be voter-approved and ranged from 0.5 to 2.0 percent in 2009. Despite the state administration of school district income taxes, they require separate returns. School district income taxes netted about $307 million for the 172 districts in question in 2009.

Table 5 provides some useful information regarding the historical performance of the state-level individual income tax in Ohio.[35] A horizontal line is shown between 2004 and 2005

[34] About 19 of the 172 school districts tax only earned income, including wages, salaries, and self-employment income. These districts also do not allow most of the deductions that apply to federal and state income taxes.

[35] Data for the first two tax years (1972 and 1973) are not directly comparable and are thus not reported by the Ohio Department of Taxation.

to reflect the introduction of H.B. 66, which has steadily reduced marginal tax rates in 2005, 2006, 2007, and 2008.[36] As shown in the Table 5 and in Figure 21, the number of tax returns increased rather steadily, with some exceptions during and just after recessionary periods. The Ohio Department of Taxation currently receives about 5.4 to 5.5 million returns each year.

Interestingly, Figure 21 also shows that with the exception of 2008, total Ohio income tax revenue grew in 2005, 2006, and 2007 despite the corresponding marginal tax rate reductions during this period. Part of this is due to broad economic growth during this period, along with an increase in the number of returns. However, the average tax per return (Figure 22) also grew during the first three years of H.B. 66. The 2008 reduction in total and average tax liabilities likely reflects the impact of the recent recession. Indeed, aside from reductions in 2001 and 2008, total and average Federal AGI (FAGI) on Ohio income tax returns has grown considerably throughout the history of the tax. Total taxes and the average tax per return were lower in 2008 than they were in 2004. It is not straightforward to determine the extent to which the 2008 decline was due to economic recession, the associated reduction in the number of returns, or to the impacts of the H.B. 66 tax rate cuts. Each of these likely played a significant role.

[36] The fifth and final reduction has been postponed until the 2011 tax year.

Table 5: Ohio Individual Income Tax History

Tax Year	Number of Ohio Income Tax Returns	Total Federal AGI ($ Billions)	Average FAGI per Return	Total Ohio Income Tax ($Millions)	Average Income Tax per Return
1974	3,790,969	45.0	11,867	450	119
1975	3,649,737	46.0	12,605	467	128
1976	3,793,971	51.8	13,645	563	148
1977	3,861,468	57.5	14,879	688	178
1978	3,950,939	63.5	16,082	797	202
1979	4,064,255	70.5	17,341	943	232
1980	4,044,015	74.7	18,473	1,049	259
1981	4,051,687	80.4	19,843	1,187	293
1982	4,014,982	82.1	20,449	1,569	391
1983	3,935,354	83.4	21,193	2,178	554
1984	4,070,499	93.1	22,882	2,579	634
1985	4,106,441	98.4	23,958	2,642	643
1986	4,229,473	107.6	25,436	3,075	727
1987	4,410,967	120.0	27,203	3,184	722
1988	4,560,529	133.1	29,194	3,580	785
1989	4,704,060	139.9	29,748	3,821	812
1990	4,791,316	147.7	30,825	4,032	842
1991	4,842,551	149.0	30,765	4,155	858
1992	4,853,972	158.1	32,568	4,503	928
1993	4,887,049	163.3	33,415	4,803	983
1994	4,961,073	172.9	34,861	5,062	1,020
1995	5,080,488	187.0	36,814	5,548	1,092
1996	5,131,032	202.1	39,385	5,582	1,088
1997	5,226,526	220.7	42,222	6,386	1,222
1998	5,349,673	243.7	45,550	6,716	1,255
1999	5,366,304	254.1	47,353	7,486	1,395
2000	5,416,090	267.7	49,435	7,642	1,411
2001	5,386,612	256.0	47,521	7,844	1,456
2002	5,304,827	256.6	48,380	7,834	1,477
2003	5,299,150	266.4	50,263	8,057	1,520
2004	5,302,862	293.5	55,338	8,807	1,661
2005	5,340,854	324.0	60,663	8,937	1,673
2006	5,348,729	339.4	63,452	9,142	1,709
2007	5,503,171	376.0	68,327	9,437	1,715
2008	5,375,281	330.3	61,453	8,339	1,551

Source: Ohio Department of Taxation.

Figure 21: Ohio Income Tax Returns and Collections, 1974-2008

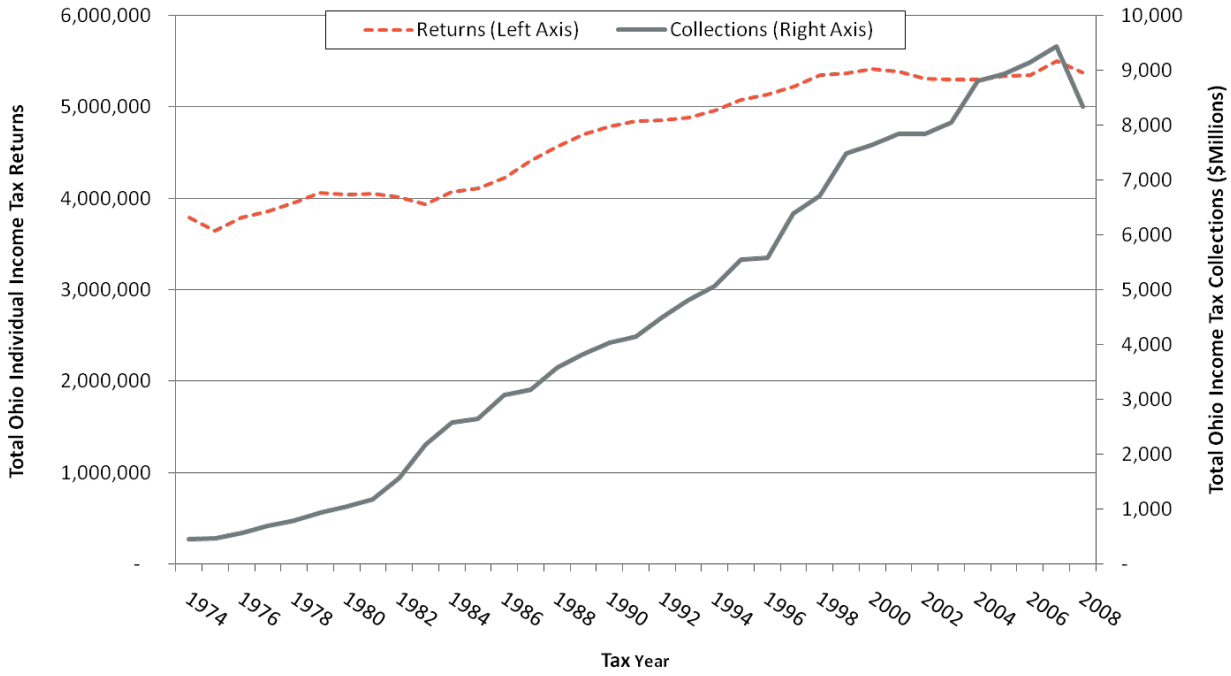
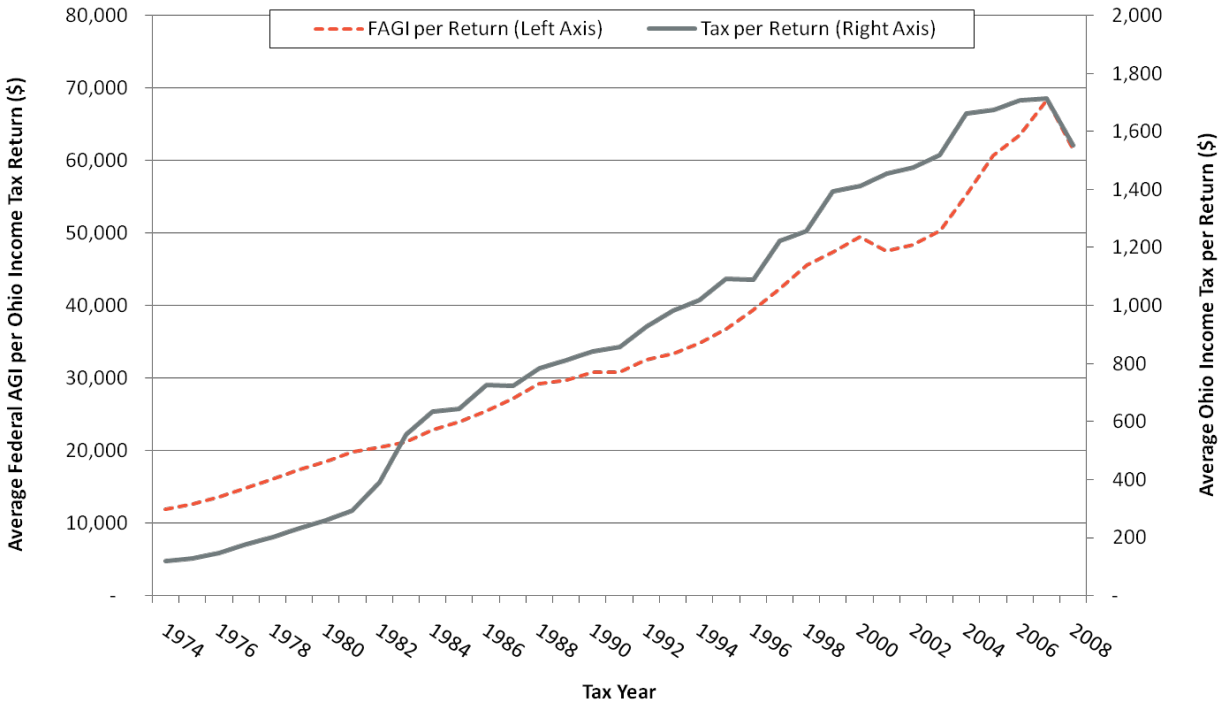


Figure 22: Average Federal AGI and Taxes Paid Per Ohio Income Tax Return, 1974-2008



Options for Reforming Ohio's State Income Tax System

If policy makers desired to raise additional revenues through the state-level individual income tax (or to cut rates further), two main avenues exist. First, policies could be enacted to broaden the tax base. Examples would be the elimination or phase-out of certain deductions or credits. Second, marginal tax rates could be increased, either across-the-board or targeting certain tax brackets. We address both of these major categories of options below.

Base Broadening Options

The first opportunity for base broadening comes in the process of making adjustments to Federal AGI (FAGI) in calculating Ohio AGI. These adjustments can either take the form of additions to FAGI (for items that are not necessarily taxable at the federal level) or deductions from FAGI (for items that may be taxable at the federal level but not at the state level). Total adjustments to FAGI on Ohio state income tax returns resulted in net reduction of $12.2 billion in 2008 according to data provided by the Ohio Department of Taxation, yielding a total Ohio AGI of $318.1 billion.[37] These adjustments amounted to a reduction of Federal AGI of only about 3.7 percent. The vast majority of these adjustments—nearly 93 percent of the net reduction of $12.2 billion—were reported by taxpayers with Ohio taxable income below $100,000. This is perhaps unsurprising, given the largest deduction is for Social Security and railroad retirement income included in FAGI.

Combined, these adjustments reduced Ohio taxable income by $12.2 billion, but it is not clear how their elimination would impact tax collections. Specifically, it is likely that taxpayers would adjust their behavior in such a way as to reduce their tax liabilities if this income were taxable. Under the admittedly restrictive assumptions that removing the entire menu of adjustments would not move a taxpayer into a different tax bracket nor cause significant behavioral changes, the net effect would have been an increase in revenues of about $370 million in 2008. This includes a *reduction* in revenues of about $2.7 million among taxpayers with Ohio taxable income above $200,000, as the net effect of existing adjustments is an addition of some $42.5 million to Federal AGI. The $370 million figure should not necessarily be viewed as an upper boundary, because removing all statutory adjustments to FAGI would cause some taxpayers to move into higher tax brackets and others to move into lower tax brackets. Further, some taxpayers would alter their behavior in order to reduce their tax liabilities.

[37] Ohio Department of Taxation data for this section were obtained from http://www.tax.ohio.gov/channels/research/other_tax_statistics.stm.

The Ohio Department of Taxation provides data by Ohio taxable income class on total additions to and total deductions from Federal AGI. These data can be used to assess the revenue impact of removing only the revenue-reducing adjustments (while leaving the revenue-increasing adjustments intact). Total deductions were $15.0 billion in 2008. Removing these provisions (and assuming that all taxpayers would remain in their existing tax bracket and leave behavior unchanged) would have generated additional tax collections of about $534.6 million in 2008.

It is worthwhile to consider the possibility for greater taxation of Social Security benefits. While many states (including Ohio) exempt Social Security and other types of pension or retirement benefits, economic theory would typically favor full taxation of these and all other sources of income. Ohio allows the full deduction of Social Security and railroad retirement benefits that are included in FAGI, and the total dollar value of these deductions was $5.8 billion in 2008. Evaluated at each taxpayer's actual marginal tax rate, the lost revenue amounted to about $244.2 million. This is not dramatically different from the Ohio Department of Taxation's estimate of $251.4 million.[38] These figures might exceed the potential revenue gain from removing the deduction for Social Security and railroad retirement benefits for several reasons. First, greater taxation of these benefits might cause some retirees to relocate out of state or otherwise arrange their affairs in order to reduce their tax bills. Second, these calculations are based on 2008 tax rates, while current rates are lower. On the other hand, these estimates could be too low given the ongoing aging of Ohio's population. This is reflected in the increasing annual estimates of the revenue loss associated with this deduction as reported by the Ohio Department of Taxation.[39]

None of the other deductions from FAGI are estimated by the Ohio Department of Taxation to result in revenue losses exceeding $100 million per year. The most significant of these other deductions is that for excess medical expenses (above 7.5 percent of FAGI, as allowed as an itemized deduction for federal income tax purposes). While medical expenses have grown considerably in recent years, the revenue impact of this deduction was estimated at $64.2 million in 2008 and $82.5 million in 2011.[40] This is likely due to the fact that most taxpayers do not itemize deductions on their federal return, and thus do not include this deduction on their Ohio income tax form.

[38] *State of Ohio Executive Budget, Fiscal Years 2010 and 2011, Book Two: Tax Expenditure Report*, Prepared by the Department of Taxation, February 2009. (Available at http://www.tax.ohio.gov/divisions/communications/publications/index.stm.) Note that these tax expenditure estimates are for General Revenue Fund impacts only, not total revenue impacts.
[39] Ibid.
[40] Ibid.

Following the series of adjustments to Federal AGI in calculating Ohio AGI, the major step in calculating Ohio taxable income is the subtraction of personal exemptions of $1,600 per taxpayer and dependent. For the 2008 tax year, in which the exemption amount was $1,500, these exemptions resulted in a net subtraction of about $15.9 billion from Ohio AGI. Nearly 87 percent of the total was reported by taxpayers with Ohio taxable income below $100,000. The Ohio Department of Taxation estimates that these exemptions resulted in a revenue reduction of between $500 and $520 million per year between 2008 and 2011.[41] These are reasonably accurate estimates, as it is not likely that taxpayers would change their household size in response to a change in the exemption level.

It is useful to consider the revenue impact of changing the value of the personal exemption. Using total exemption counts from the 2008 tax year along with the 2011 marginal tax rate schedule, cutting the exemption amount from $1,600 to $800 would raise tax revenue by approximately $292 million. Cutting the exemption amount from $1,600 to $800 for taxpayers with Ohio taxable income above $100,000 would only generate new revenue on the order of about $62 million.

Taken together with the impact of adjustments to federal AGI, this information on the effect of personal exemptions reveals that Ohio taxable income is a relatively broad base for income taxation, representing nearly 92 percent of Federal AGI in 2008. Total adjustments, deductions, and exemptions do not appear to significantly reduce Ohio individual income tax revenues in such a way as to mandate policy action to restore the tax base.

Following the calculation of Ohio individual income tax by applying the series of graduated marginal tax rates to Ohio taxable income, a number of lucrative credits can reduce a taxpayer's net tax liability. Total tax before all credits was $12.5 billion in 2008, while total tax after credits was only $8.3 billion. The bulk of the net total of $4.2 billion in tax credits occurs for reasonable reasons, however. First, the largest tax credits in dollar terms were for (a) taxes paid to other states on income earned in those states by Ohio residents, and (b) for income earned outside of Ohio by non-residents or part-year residents. These credits, intended to reduce the double-taxation of income at the state level, amounted to $3.5 billion of the total $4.2 billion in tax credits. Importantly, about $3.3 billion of the $3.5 billion was reported by taxpayers with Ohio AGI above $200,000, suggesting that greater efforts to tax these sources of out-of-state income could be met with significant effort among those individuals to relocate.

The next two largest Ohio tax credits are personal exemption credits (of $20 per taxpayer and dependent) and joint filer credits (of about $200 per claiming return), which

[41] Ibid.

totaled $212.3 million and $253.5 million, respectively, in 2008. The personal exemption credits are unusual given the personal exemptions of $1,600 per individual. The $1,600 exemption is worth more to those taxpayers in higher tax brackets, so the $20 personal exemption credit is perhaps designed to provide an additional flat-dollar-amount benefit that does not rise with income. Nonetheless, this seemingly-low benefit of $20 per individual costs the state of Ohio more than $200 million per year. The joint filer credit is designed to account for the fact that the Ohio income tax is blind to filing status (i.e., married or single), unlike the federal income tax which has different tax brackets and rates for different statuses. Any effort to reduce the joint filer credit would be seen as a direct increase in the relative taxation of married couples and would likely be met with fierce political opposition.

The total value of other tax credits from Schedule B of the Ohio individual income tax form (including the retirement income credit, senior citizen credit, low-income credit, lump sum distribution credit, child care and dependent care credit, lump sum retirement credit, displaced worker training credit, Ohio political contributions credit, and Ohio adoption credit) was $323.6 million in 2008. The most expensive of these is the retirement income credit, which provides up to $200 per taxpayer with qualified retirement income in their Ohio AGI. The Ohio Department of Taxation estimates that this credit reduces state general fund revenues by about $120 to $135 million per year.[42] Similar to the above discussion regarding Social Security and railroad retirement benefits, economic theory would prefer inclusion of retirement income in the tax base. Removing or reducing this credit would certainly increase state revenue, but could come at a cost of driving some retirees out of the state.

A popular option in discussions at the federal level and in some states is the phasing out of tax credits or other features at high income levels. In a political sense, it may be easier to generate revenue through base-broadening that is focused on higher-income taxpayers. It should be noted that, setting aside the out-of-state income and non-resident or part-year resident credits, only about $52.6 million (or about 6.7 percent) of the remaining tax credits are claimed by taxpayers with Ohio taxable income above $200,000. Efforts to target base broadening to higher-income Ohioans would therefore not generate major sources of new revenue, and would come at a cost of greater tax complexity, perceptions of reduced fairness, and a potential for revenue-reducing behavioral responses (including out-migration) among affected taxpayers.

The main lesson from the above discussion is that avenues for revenue-enhancing base broadening are limited within the Ohio individual income tax, due primarily to its already-broad base and relatively simple design. Many available options would surely be politically unpopular.

[42] Ibid.

That said, it appears that there are two main areas where improvements can be made to the income tax base in Ohio. First, the deductions for Social Security and railroad retirement income and the credit for qualified retirement income in Ohio AGI (and also perhaps the $50 senior citizen tax credit) could be reduced, or at least targeted to lower-income taxpayers. These provisions are collectively intended to encourage older Americans to remain in (or relocate to) Ohio. Given that the recent research has concluded that interstate mobility is not driven significantly by taxes, removing or reducing these tax preferences would not likely result in significant out-migration from Ohio. Also, such a policy change could improve equity and efficiency within the income tax by equalizing the tax treatment of labor income and transfer payments.

Second, the dual personal exemption structure (which combines a $1,600 deduction and a $20 credit per individual) could be streamlined for simplification purposes. As one example, the two provisions could be combined into a larger credit, thereby creating larger percentage benefits to taxpayers in lower tax brackets. At the average marginal tax rate (using the 2008 schedule) of 3.3 percent, the $1,600 deduction would be equivalent to a credit of about $53. Thus, the total combined credit would be about $73 per person. Alternatively, the exemption credit could be removed in favor of a slightly higher deduction amount. Again using the average marginal tax rate of 3.3 percent, the $20 credit would be equivalent to an additional deduction amount of about $606, yielding a combined deduction of about $2,206 per person.

Marginal Tax Rate Options

Regardless of the political issues involved in raising revenues, given the relative breadth of the Ohio individual income tax base, it appears that marginal tax rate increases would be more fruitful in terms of revenue enhancement. Options that we consider here include (a) increasing all marginal tax rates to pre-H.B. 66 levels, (b) increasing only the top two marginal tax rates to pre-H.B. 66 levels, (c) increasing all rates by some fixed amount, or (d) moving toward a flat-rate structure.

To investigate the impact of these marginal tax rate changes, we assume that the distributions of tax returns and taxable income across tax brackets (as defined by time-invariant taxable income thresholds) remain unchanged from 2008 data. We then apply proposed alternative tax rates to this income distribution to get a rough estimate of total tax collections before credits. We compare this to 2008 data (also before credits), as seen in the first row of Table 6. The difference between the two totals provides an estimate of the initial revenue

impact of the possible rate change before the impact of the menu of tax credits. A summary of our calculations is provided in Table 6.

Table 6: Summary of Revenue Impacts of Marginal Tax Rate Scenarios

Scenario	Total Taxes Before Credits ($Millions)	Difference from 2008 Baseline ($Millions)
2008 Marginal Tax Rate Schedule	$12,510	-
2004 Marginal Tax Rate Schedule	$15,036	$2,526
2004 Marginal Tax Rates for Top Two Brackets Only	$14,141	$1,631
2008 Marginal Tax Rate Schedule Increased by 8.4%	$13,561	$1,051
Flat Tax Rate of 3.0%	N/A	$751
2011 Marginal Tax Rate Schedule	$11,924	($585)

Using this methodology, we estimate that returning to pre-H.B. 66 marginal tax rates would generate significant new revenue. Specifically, total tax liabilities before credits would increase by about $2.5 billion if the 2004 marginal tax rate schedule were applied to the 2008 distribution of tax returns and taxable income. Of course, it is reasonable to expect that such a policy would generate behavioral responses that would reduce taxable income and thus total tax collections. Furthermore, several of the existing tax credits are functions of total tax liability before credits, and thus their value may increase with an increase in marginal tax rates. Consequently, the $2.5 billion (along with subsequent estimates in this section) should be viewed as an upper boundary.

Reverting to 2004 tax rates for the top two brackets only (those filers with Ohio taxable income above $100,000) would generate a slightly smaller amount of new taxes (before credits) of about $1.6 billion. This is perhaps unsurprising given that taxpayers in these two brackets contributed about 65 percent of total taxes before credits in 2008. Those in the top bracket (with taxable income above $200,000) contributed nearly half (about 48.4 percent) of all taxes before credits in 2008.

Another possibility would be to increase all marginal tax rates by 8.4 percent, thereby reversing half of the H.B. 66 rate reductions to-date. Such a policy would increase the top marginal tax rate from the current 6.24 percent to a new rate of 6.764 percent, which would be

only slightly greater than the current national average top rate of 6.675 percent (and would continue to apply to a much smaller component of the income distribution—income in excess of $200,000—than is covered by the top marginal rate in most other states). Increasing all marginal tax rates in this manner would increase total taxes before credits by just over $1.0 billion.

It is worthwhile to consider the impact of a flat-rate income tax structure for comparison purposes. Under the 2008 system, the average tax rate (total income tax liability divided by total Ohio taxable income) was about 2.75 percent. The 2.75 percent essentially represents a revenue-neutral flat income tax rate given the 2008 income distribution. This generated the roughly $8.3 billion (after credits) in income tax revenue. A slightly higher flat rate tax of 3.0 percent of taxable income would have generated a little more than $750 million in additional revenue in 2008, assuming no changes in taxpayer behavior. Such a policy change, while efficiency-enhancing for those who would enjoy a marginal tax rate reduction, would obviously come at the cost of a significant loss in the progressivity of the income tax and of the entire Ohio tax system.

For comparison purposes, we also consider the impact of the fifth and final step in the marginal tax rate reductions set in place by H.B. 66 but recently postponed until the 2011 tax year. Applying the 2011 marginal tax rate schedule to the 2008 distributions of taxpayers and taxable income results in total income taxes that are approximately $585 million below the 2008 level. We note that this estimate does not account for the indexing of tax brackets that began in 2010, because we do not have updated information regarding the distributions of taxpayers and taxable incomes across the new tax brackets. Our use of 2008 tax brackets could therefore result in an overestimate of the revenue impact, since more taxable income will be moved into lower tax brackets as the bracket thresholds increase. On the other hand, the lower marginal tax rates that become effective for the 2011 tax year might result in an increase in economic activity, thereby making our $585 million estimate more of a lower boundary. In sum, it is not clear whether the $585 million estimate is systematically biased in one direction or the other.

Ongoing Policy Issues with the Individual Income Tax

The revenue-increasing options described above could be expected to have a number of positive or negative side-effects, which we discuss briefly in this section. First, higher tax rates or broader tax bases could lead to greater efficiency losses if they result in greater distortions of economic activity either within Ohio's borders or across state lines. Second, these tax changes

could improve or reduce the overall fairness of Ohio's tax system. Third, they could increase or decrease administration and compliance costs. Fourth and finally, they could improve the ability of Ohio's tax revenue stream to keep up with economic growth or, depending on the specific policy change, they could increase volatility and/or reduce stability.

Income Taxes and Taxpayer Behavior

The revenue-increasing options described above could be expected to influence taxpayer behavior. They could result in a loss of economic efficiency if individuals deviate from their preferred choices in response to the new tax policies. While these impacts should not be ignored in ongoing policy discussions, we believe that state income tax changes along the lines discussed above are not likely to have dramatic impacts on taxpayer decisions for two main reasons. First, the existing research generally finds small behavioral responses (elasticities) to income taxes in general. Second, state income tax rates are much lower than federal tax rates, which have been the focus of virtually all of the research in this area.

Income tax increases (either by rate increases or base-broadening measures) essentially represent a reduction in the wage that is earned per hour of work. Some workers will respond to this by working more hours if possible, such that their after-tax income is the same as it would have been in the absence of the tax. Other workers will respond by working fewer hours, given that the reward for working has been reduced by the presence of the income tax. The conventional wisdom is that the net effect of an income tax rate increase on labor hours across all of society is very small, especially among men in their prime working years. Research has shown, however, that married women are somewhat more responsive to changes in income tax rates.

Of course, many aspects of a worker's daily life can change in response to changes in tax rates even though observed hours of work might not change at all. Specifically, a worker can change the type or location of her job and other job conditions either by moving or bargaining with her employer, without actually changing her work hours. More recent research has addressed this criticism by focusing on the responsiveness of taxable income to changes in tax rates. This relatively new strand of literature has generally indicated that the elasticity of taxable income with respect to marginal income tax rates is also very small but highly variable over time. Other research has focused on the effects of tax rates on individual savings, housing demand, the decision to engage in some form of entrepreneurial activity, and just about any other economic decision that could possibly be affected by tax rates.

One behavioral response that has received a great deal of attention and is likely to be more important than those discussed above involves interstate migration in response to tax policies. Given the wide variety of tax rates across the states, as well as the fact that seven states do not have income taxes and two others have only limited taxes, it is not surprising that certain individuals—especially high-income taxpayers—might decide to relocate to a state with a lower (or no) income tax. The recent research generally finds that taxes matter on the margin but that the magnitude of the impact is not economically meaningful. In other words, state income taxes are not a primary driving force in interstate migration decisions.

Fairness Issues

Fairness is obviously in the eye of the beholder. Where some of the discussed policy changes could be seen as equity-enhancing by some taxpayers, others may view them as equity-reducing. For example, greater taxation of Social Security and retirement income might be viewed as an improvement in fairness, since taxpayers with those sources of income have essentially the same ability to pay taxes as those with equivalent amounts of other sources of income, yet they enjoy significant tax advantages under the current Ohio system. By the same token, it is not clear whether tax adjustments for household size should be linked to marginal tax rates (as in the current personal exemption of $1,600 per person) or held constant (as in the personal exemption credit of $20 per person). Any effort to change those provisions will be viewed as equity-enhancing by some and equity-reducing by others.

A similar set of arguments pertains to possible changes in marginal tax rate schedules. Targeting tax increases to higher-income taxpayers is typically seen as fair among those in lower brackets and unfair among those in higher brackets. A flat-rate structure could be called fair in that everyone faces the same marginal tax rate, but at the same time could be called unfair because tax payments do not necessarily rise with income (or ability to pay). There is no obvious solution to the fairness question, but fairness must be evaluated alongside the other impacts of policy changes.

Administration and Compliance Issues

Perhaps as a result of their many ties to the federal income tax system, state income taxes are notoriously among the most complex taxes faced by taxpayers at the state and local levels. This complexity, together with ignorance of the tax rules, outright cheating and financially strapped enforcement agencies, results in a high degree of noncompliance relative

to other taxes. Of course, Ohio's income tax is simpler and more straightforward (both for compliance and administration) than those in many other states.

It is possible that some of the revenue-increasing policy options could increase compliance and administration costs. Greater taxation of Social Security and retirement benefits could be made simpler by directly linking Ohio AGI to Federal AGI (i.e., not allowing certain state-only deductions). Changes to the personal exemption deduction and credit could also have the effect of simplifying the tax for many filers. A flat rate tax would also presumably be simpler, but at the cost of a reduction in fairness (at least in the eyes of some taxpayers).

Revenue Elasticity and Volatility

In general, the revenue-enhancing options described above could yield important benefits in terms of the stability of tax collections and the ability of the revenue stream to keep up with the economy. Specifically, bringing Social Security and retirement income into the tax base (at least partially) would bring a stable, growing component of income into the tax base. Higher marginal rates (either across-the-board or targeted) would create a slightly more elastic system, allowing the state to accumulate reserves in good economic times for the purposes of maintaining service provision during recessions.

REFORMING THE OHIO SALES TAX

Introduction

Kentucky and Mississippi were the first states to implement a state sales tax, both in 1930. Shortly thereafter, Ohio enacted its retail sales tax in 1936, during the Great Depression, to support public schools. The 3.0 percent tax generated $47.8 million during its first year.[43] Forty-five states, including Ohio, employ a sales tax today.

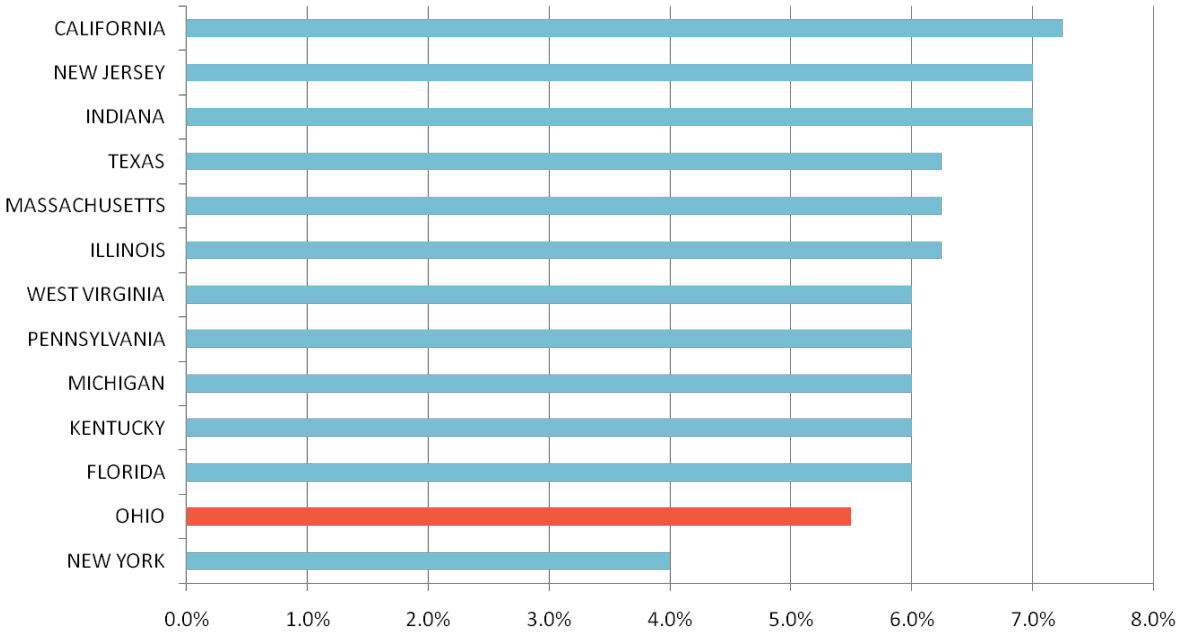
Ohio, like all sales-taxing states, levies a sales tax and a corresponding use tax. The use tax is imposed on the "storage, use, or other consumption" of all tangible personal property and the "receipt of certain services that are subject to the sales tax." The use tax is generally imposed when the sales tax has not been collected, such as may occur with certain remotely made purchases, or when goods are transferred from a nontaxable to a taxable purpose, such as might happen when a firm purchases an item for resale and decides to use the item in operating the business. This section generally refers to both the sales and use taxes as the sales tax.

Ohio State and Local Sales Tax Rates are at the National Norm; the State Rate is Low

The Ohio state sales tax is levied at a standard 5.5 percent rate, slightly below the 6.0 percent median rate for all states. Ohio's sales tax rate is very low relative to the comparison group (see Figure 23). The state's rate was raised from 3.0 to 4.0 percent in 1967. The rate was temporarily raised from 5.0 percent to 6.0 percent in 2004 and was permanently lowered back to 5.5 percent as part of H.B. 66. The state rate had previously been increased from 4.0 to 5.0 percent in 1981.

[43] See http://www.ohiohistorycentral.org/entry.php?rec=1453&nm=Ohio-Retail-Sales-Tax-Law-of-1935

Figure 23: State Sales Tax Rates, 2010

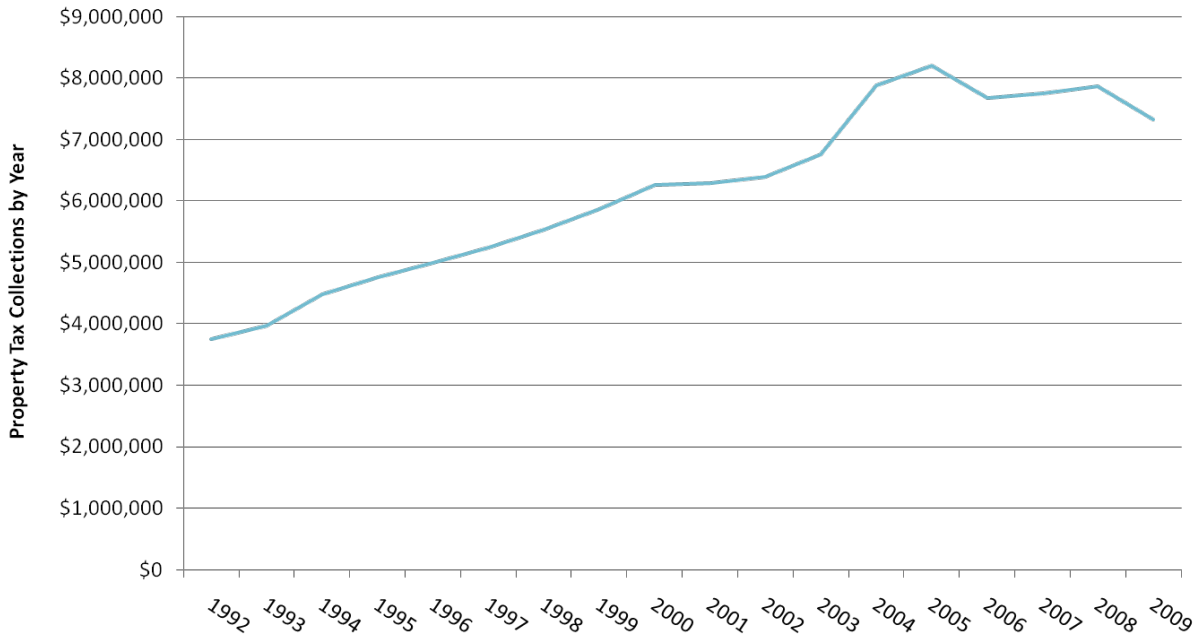


Ohio is one of 34 states permitting local sales taxes. Counties and transit authorities are permitted to levy additional local rates in 0.25 percent increments to a combined maximum of 3.0 percent, meaning the maximum state and local rate is 8.5 percent. Currently, all counties and eight transit authorities levy a permissive sales tax. Cuyahoga County has the highest combined state and local sales tax rate at 7.75 percent.[44] Stark County has the lowest rate at 6.0 percent. Transit levies must be approved by a majority of voters. County levies must also be accepted by a majority of voters unless approved by a unanimous vote of the county commissioners. The current median Ohio state and local sales tax rate across counties is 7.0 percent and the average state and local sales tax rate is approximately 6.8 percent.[45] Ohio's state and local average rate is exactly at the median of all states.

The state sales tax generated $7.3 billion in fiscal year 2009, down 6.8 percent from the previous year, the lowest amount since 2003 (see Figure 24). Sales tax revenues grew very fast from 1992 through 2003, but much of this occurred by 1994 as a rebound to the early 1990s recession. Since 2003, the rate changes and recession have buffeted tax collections. Ohio raises 31 percent of state tax revenues with the tax, essentially the same as the average state's 32 percent (see Figure 9). Ohio local governments collected $1.66 billion in sales taxes in 2008.

[44] See http://www.tax.ohio.gov/divisions/tax_analysis/tax_data_series/sales_and_use/documents/salestaxmapcolor.pdf
[45] See http://www.taxch.com/STRates.stm

Figure 24: Sales Tax Collections, 1992-2009



Sales Tax Base

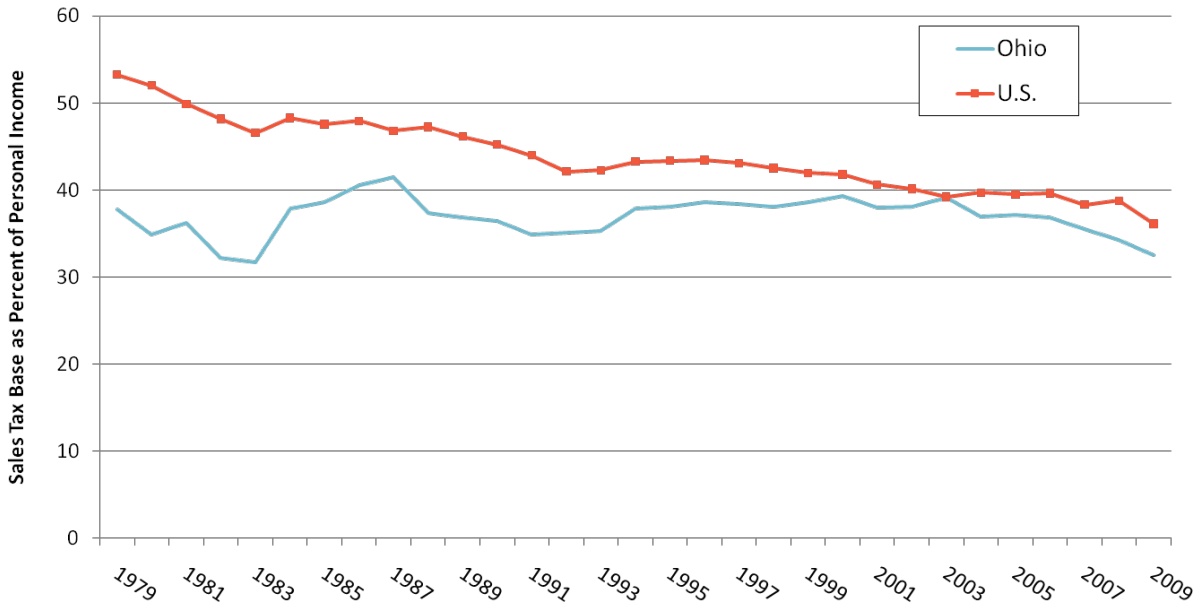
Economists generally argue that the sales tax should be structured as a tax on consumption. A broadly-based consumption tax would have the following features:

- Tax all purchases by households, since they all represent consumption.[46]
- Tax all purchases regardless of the vendor. The tax is intended to be imposed on the consumer, so the seller should not matter.
- Tax should not depend on the buyer's income level or the source of income used to pay for the transaction.
- All business purchases should be exempt. Businesses purchase intermediate inputs to produce. Businesses do not consume, even when the intermediate inputs are used up in the production process. Determining what constitutes a business purchase can be administratively difficult.

[46] A number of technical issues arise here. For example, an argument can be made that vehicles are not fully consumed when purchased, but corrections for many of these would be administratively difficult.

Neither Ohio nor other states strictly follow these guidelines. A range of other goals enter into public discussions and cause some consumption to go untaxed and some business purchases to be taxed. Figure 25 illustrates that Ohio's sales tax base as a share of the economy (as measured by personal income) is a little narrower than the national average. In 2008, Ohio's was 34.3 percent versus the national average of 39 percent. In both cases, the chart evidences that the sales tax is imposed on a relatively small share of the economy. The Ohio sales tax base is narrow despite significant taxation of business inputs, though Ohio may tax relatively fewer business inputs than many states.[47]

Figure 25: Ohio Sales Tax Base as a Percentage of Personal Income, 1979-2009



The chart also illustrates that Ohio's base has shrunk from 37.8 percent of personal income to 34.3 percent, indicating that the share of the economy taxed has fallen. Though the base is somewhat smaller, Ohio has seen less relative sales tax base decline than the average state over this 30-year window (the national line slopes down more than the state line). Some of the erosion in Ohio's sales tax base was caused by the recession, particularly in 2009. As in other states, erosion has been caused by three other factors: legislated exclusions and

[47] The difference in taxation of business inputs may explain why Ohio sales taxes as a percent of personal income are smaller than the national average.

exemptions, changes in what people purchase, and increases in the extent of cross-border transactions. These factors also explain much of why the base is so narrow relative to the economy.

Ohio state and local sales tax rates are applied to the same tax base, while a number of states allow different bases. For example, Colorado allows local governments to define their own tax base. Identical bases are a significant advantage in terms of tax compliance and administration and transparency of the tax. The Department of Taxation administers the tax for counties, transit authorities, and the state, which is also an important compliance advantage.

Exemptions

Purchases of tangible personal property are generally taxable unless specifically exempted. The Department of Taxation identifies at least 61 exemptions from the sales tax.[48] Exemptions are granted in a wide variety of ways. Some *items* are specifically exempt, such as food for human consumption, newspapers and prescription drugs. Sales by some *vendors* are exempt, such as sales by churches and nonprofit organizations if they take place no more than six days per year. Sales to some *purchasers* are exempt, such as sales to nonprofit organizations operated for charitable purposes, churches, 501(c)(3) organizations, Ohio and its political subdivisions, and the federal government. Thus, vendors must determine taxability based on who the buyer is.[49] Sometimes the exemptions are only for purchases to be used in specific *ways*. For example, purchases by teachers of computers that are used to prepare for elementary and secondary teaching are exempt. Many exemptions, particularly by businesses, are based on how the purchases are to be used. Tangible personal property purchases for resale are exempt. Tangible personal property used or consumed in manufacturing is exempt. Many purchases are exempt when they are directly used in production, such as in agriculture, by public utilities, and for preparation of printed materials.

Exemptions are granted for many reasons, including:

- purchases are used by business
- concerns about fairness
- administrative difficulties in collection
- efforts to promote a particular activity

[48] See http://www.tax.ohio.gov/faqs/Sales/sales_taxability.stm#A02
[49] Exempt buyers are required to present an exemption certificate.

- concerns that other states fail to tax the same good or service and that loss of sales tax base and other economic activity could result if the tax is imposed.

The justifications for exemptions have differing degrees of validity depending on the vendor and item, but the bottom line is that the exemptions result in a base that is much smaller than consumption, require higher rates for any given amount of revenue, and distort decisions between taxable and non-taxable transactions.

The Tax Expenditure Study estimates a total of $5.01 billion in exemptions from the tax base in 2011.[50] The estimates include exemptions specified in legislation, but **should not** be seen as the total amount of consumption that is untaxed. About two-thirds of these exemptions are for inputs used by business in production – items that should be exempt from the tax. Property included in production of tangible personal property is the largest share of exempt inputs. Packaging, building materials for certain construction, and sales of tangible personal property to electricity producers are other significant examples. Also, services are generally not included as taxable transactions, so failure to tax these items is not seen as exemption for purposes of the list. Thus, the $5 billion does not include many exempt service purchases.

Changing Consumption Patterns

Shifting consumption patterns toward relatively more services and relatively fewer goods are a second reason for erosion of the sales tax. Unlike with goods, services are generally taxable only when specifically articulated. Ohio taxes only 68 of the 168 services identified by the Federation of Tax Administrators (see Table 7),[51] which is the 17th largest set of services among all states. Ohio taxes many more services than Indiana, Kentucky, and Michigan and somewhat more services than Pennsylvania. West Virginia has much more extensive taxation of services than Ohio (105 services).

The tendency not to tax many services means that the share of consumption taxed by Ohio generally falls as service consumption expands. Table 8 illustrates the relative shift in consumption behavior during the past 30 years for the nation as a whole. Consumption growth has been particularly significant in health care and technology based services, few of which Ohio taxes.

[50] http://tax.ohio.gov/divisions/communications/publications/documents/FY2010-2011_TER_1.pdf
[51] A number of services were added in 1981.

Table 7: Services Taxed in Ohio

900 Number services	Health clubs, tanning parlors, reducing salons	Online data processing services
Aircraft rental to individual pilots, long term	Hotels, motels, lodging houses	Other fuel (including heating oil)
Aircraft rental to individual pilots, short term	Income from intrastate transportation of persons	Other fuel (including heating oil)
Armored car services	Income from taxi operations	Personal property, long term (generally)
Auto service, except repairs, incl. painting & lube	Information services	Personal property, short term (generally)
Automotive road service and towing services	Installation charges - other than seller of goods	Photo finishing
Automotive rustproofing & undercoating	Installation charges by persons selling property	Photocopying services
Automotive storage	Internet Service Providers - dialup	Printing
Automotive washing and waxing	Internet Service Providers - DSL or other broadband	Private investigation (detective) services
Barber shops and beauty parlors	Interstate telephone & telegraph	Rental of hand tools to licensed contractors.
Bulldozers, draglines, and const. mach., long term	Interstate telephone & telegraph	Rental of video tapes for home viewing
Bulldozers, draglines, and const. mach., short term	Intrastate telephone & telegraph	Repair labor, generally
Carpet and upholstery cleaning	Intrastate telephone & telegraph	Repair material, generally
Cellular telephone services	Labor charges on repairs of other tangible property	Security services
Chartered flights (with pilot)	Labor charges on repairs to intrastate vessels	Service contracts sold at the time of sale of TPP
Cold storage	Labor charges on repair of aircraft	Shoe repair
Commercial linen supply	Labor charges on repairs to motor vehicles	Short term automobile rental
Custom fabrication labor	Labor on radio/TV repairs; other electronic equip.	Sign construction and installation
Data processing services	Landscaping services (including lawn care)	Software - downloaded
Diaper service	Laundry and dry cleaning services, non-coin op	Software - package or canned program
Direct Satellite TV	Limousine service (with driver)	Swimming pool cleaning & maintenance
Cellular telephone services	Long term automobile lease	Taxidermy
Employment agencies	Mainframe computer access and processing serv.	Temporary help agencies
Exterminating (includes termite services)	Maintenance and janitorial services	Tire recapping and repairing
Fur storage	Massage services	Tuxedo rental
Garment services (altering & repairing)	Membership fees in private clubs	Welding labor (fabrication and repair)
Gift and package wrapping service	Mini –storage	Window cleaning

Table 8: Personal Consumption Expenditures 1979 and 2007

	1979 Percent	2007 Percent
Total Expenditure	100.0	100.0
Durable Goods	13.4	11.2
Autos	5.9	4.5
Furn & Household	5.2	4.3
Other Durables	2.4	2.3
Nondurable Goods	39.1	29.2
Food and Beverage	20.3	13.7
Other Nondurables	18.8	15.2
Services	47.4	59.7

Growing Remote Transactions

Finally, remote shopping continues to grow rapidly. For example, the value of e-commerce transactions grew 16 percent at a compound annual rate between 2000 and 2008, to total almost $3.7 trillion in 2008.[52] The taxability of transactions is generally the same regardless of whether the goods and services are purchased in Ohio or remotely because of the use tax, but Ohio's ability to collect the tax that is due is affected. Thus, tax is due on Internet, mail order, and other remote purchases if the tax is due on sales in the state. However, a collection problem often arises. Ohio can only require remote vendors that have nexus (taxable presence) with the state to collect and remit the tax.[53]

The state is dependent on use tax collection when vendors do not remit the tax, and use tax compliance is very limited for individuals. Businesses are more compliant, but the best available analysis indicates that businesses remit about three-fourths of their use tax liability.[54] Based on a recent study, Ohio state and local governments will lose $307.9 million in sales taxes in 2012 because of its inability to collect all of the taxes that are due on e-commerce, despite the fact that only an estimated 15.4 percent of transactions over the Internet are taxable.[55]

[52] See U.S. Bureau of the Census, E-Stats at http://www.census.gov/econ/estats/index.html

[53] This emanates from the U.S. Supreme Court decision in *Quill v. North Dakota,* where the courts ruled that states can only require firms with physical presence in the state to collect the tax. Ohio defines physical presence to include regularly having employees in the state, regularly delivering goods in the state, or any other physical presence. Firms without nexus may voluntarily remit sales and use taxes.

[54] http://dor.wa.gov/Docs/Reports/Compliance_Study/compliance_study_2008.pdf

[55] Donald Bruce, William Fox, and LeAnn Luna, "State and Local Government Sales Tax Revenue Losses from Electronic Commerce," *State Tax Notes*, 2009. Over 90 percent of e-commerce is sales from one business to another, and many, but by no means all, of these sales are not taxable.

Further, e-commerce is only one of the avenues through which Ohio is losing revenues on remote commerce. Non-store retailers, such as catalog stores, account for about 60 percent as much revenue loss as e-commerce. Consumers travel outside of Ohio and make purchases where the tax is due in Ohio. The propensity of non-registered businesses to exploit Ohio's economy, particularly along the state's borders (such as Northern Kentucky and Cincinnati), is likely growing. Many of these firms surely have nexus in Ohio but the state may be unable to identify their presence.

Ohio has taken two steps to assist in collecting tax on remote sales. First, Ohio is one of 23 states that include a line on the individual income tax return allowing taxpayers to remit their use tax liability.[56] Ohio is in the group of 11 states that require taxpayers to specifically indicate that they have no use tax liability. Only 0.9 percent of returns indicated a use tax liability in 2008. These 48,411 returns reported $2.4 million in sales tax liabilities. Obviously, use tax collections via the income tax are very small relative to the revenue loss from e-commerce alone.

Second, Ohio is an Associate Member of the Streamlined Sales Tax Governing Board. The Streamlined effort has yielded relatively little revenue at this point based only on voluntary compliance with the tax, but it is intended to assist in increasing collections from remote vendors over the long term. The Streamlined Sales Tax Project (SSTP) was begun approximately 10 years ago by a group of states and businesses in an effort to simplify state sales and use taxes. The main purpose is to create an environment where states could require remote vendors to collect sales and use tax on sales into states. The hope was that either Congressional action or a reconsideration of the *Quill* case would take place. The Main Street Fairness Act was recently introduced in the House of Representatives by Representative Bill Delahunt (D). The bill has not passed nor has a parallel bill been introduced in the Senate.

The SSTP evolved into the Streamlined Sales Tax Governing Board, which is currently composed of 24 full and associate member states. [57] A number of administrative and compliance advantages have resulted, even though remote vendors have not been required to collect the tax. Among the many improvements in sales tax structure and administration that are being promoted by the project are the following:

- State governments must administer all sales and use taxes (thereby prohibiting local administration).

[56] See Nina Manzi "Use Tax Collection on Income Tax Returns in Other States," Policy Brief, Research Department, Minnesota House of Representatives, June 2010.
[57] For a list of states see http://www.streamlinedsalestax.org/

- State and local tax bases must be the same.
- States are limited to one state tax rate plus one on food, prescription drugs, and electricity. Local governments are limited to one tax rate each.

A Sales Tax Reform Program

This section identifies a series of sales tax reforms that could offset some of the relative sales tax base decline that has taken place over recent decades, as it limits the extent of tax base erosion in the future. Adoption of these proposals would generally, but not always, either increase sales tax revenues in the year the reforms are enacted or allow a tax rate decrease. Adoption would also permit better sales tax revenue growth in coming years.

Some people appear to believe that all purchases should be taxable, and they regard exemptions or failure to tax any purchase as a "tax expenditure". We presume that Ohio's sales tax is intended to tax consumption, and deviations of the tax base from a consumption tax are distortions from the goal. Inherent in this assumption is that business purchases should be widely exempt because businesses purchase to produce, not to consume, so exemptions of business purchases are not tax expenditures. The recommendations provided below are generally intended to align the base more with a consumption tax, and this requires expansion of the base in some cases and contraction in others.

Adopting these proposals offers a number of advantages. First, the proposed reforms would move the sales tax base closer to a tax on consumption. The sales tax base is too narrow, since it does not tax food for consumption at home and some services. On the other hand, the base is too broad because it is imposed on some intermediate inputs, which are not consumption. Admittedly, this is a conceptual advantage, not a pragmatic reason for reform. There are many pragmatic reasons for why adopting a base that is more aligned with consumption is advantageous. Developing a tax base closer to a true measure of consumption would limit a number of existing problems that include the following:

- Current policy encourages consumers to purchase more items that are taxed at lower rates or go untaxed. For example, consumers can be expected to purchase more food for consumption at home and less food in restaurants. Also, Ohio does not tax digital delivery of products such as books, videos, and software, though it often taxes the same item if purchased in physical form. A broad sales tax base would eliminate the effects of taxes on purchasing decisions.

- The costs of doing business in Ohio rise to the extent that intermediate inputs are taxed, making the state a less desirable location for business activity. This disincentive is lessened by reducing taxation of business-to-business transactions.

- Firms are discouraged from using those inputs that are taxed in Ohio relative to those that are not.

- The tax rate is higher than necessary to obtain any given amount of revenue to the extent that the base on consumption is too low. Higher tax rates cause even larger tax induced changes in behavior.

- The tax burden is higher on those who purchase relatively more of taxed versus non-taxed items, thereby leading to inequities between people depending on their consumption choices.

- Compliance costs are raised for firms that remit sales tax revenues and must make decisions on taxable versus tax exempt transactions.

It is tempting to argue for a significant increase in consumption taxes (perhaps linked with a reduction in income or other taxes) because they can offer some economic stimulus relative to personal income taxes. Two arguments mitigate against this for state/local tax structures. First, sales tax revenues grow much more slowly than income taxes, meaning that maintaining investments in education and infrastructure is more difficult as sales taxes become more dominant. The problem of slow revenue growth in the overall tax system is exacerbated because of the very slow growing excises on alcohol, tobacco products, and motor fuels. Second, sales taxes as imposed in the U.S. are significant levies on business input purchases, which raise the cost of doing business in the state. Thus, increases in sales taxes should be focused on consumption by final consumers and not on rate increases if Ohio is to remain competitive.

Taxation of Remote Sales

Ohio should consider becoming a full member of the SSTP to further support cooperative state efforts to collect the sales tax on remote transactions. Movement to some form of an "Amazon Law" is an option used by other states that Ohio could consider. For example, New York enacted legislation asserting that a vendor must collect taxes on behalf of the state if in-state affiliates solicit sales and direct customers to the site.[58] North Carolina, Rhode Island, and several other states passed similar legislation, though in some cases the

[58] The term *affiliates* is used in a different context in the discussion of Amazon Laws than in many others. These affiliates are normally not owned or controlled by the vendor.

legislation was subsequently vetoed or cancelled. Amazon is currently challenging New York's authority to require collection of the sales tax and lost the first round in New York courts.

Colorado enacted reporting requirements for firms that do not collect sales taxes for the state. Firms with more than $100,000 in sales to Colorado buyers are required to report to the Department of Revenue to whom the sales were made and the dollar amount. The vendors are also required to send letters to buyers of more than $500 in purchases to alert them that use tax may be due to Colorado. The Direct Marketers' Association is challenging the legislation in court, and the legislation has been stayed in federal court. Oklahoma has also enacted legislation requiring firms to say that tax may be due on their purchases.

Taxation of Services Should be Expanded

Most states, with the exception of Hawaii (160 services), New Mexico (158 services), and South Dakota (146 services), tax a relatively narrow set of services. Some other states also tax services broadly, though they do so through gross receipts taxes. Washington taxes many services through its Business and Occupations (B&O) Tax and Delaware taxes some services through gross receipts taxes, though it has no general sales tax. The Ohio CAT may have been enacted in part as a way of taxing services without facing the political challenge of extending the sales tax. Of course, the CAT rate is much lower than the sales tax rate, so significant differentials remain between the tax rates levied on many goods and services.

The importance of taxing services grows with the increasing role that services play in consumption. The question is often inappropriately posed as to whether services should be taxed at all. The best policy probably results in taxation of some but not all services. As a general rule, services should be taxable if:

- The services are primarily consumed by households.
- Ohio service producers are not adversely affected in their ability to produce for Ohio (or out-of-state) consumers.
- The services compete directly with other taxed goods or services.
- Administration and compliance costs are not prohibitively high.

A key issue is that the sales tax must be imposed on a destination basis; that is, the tax must be collected on consumption or use of the services in Ohio and not where the services are

produced. Enforceability of the tax on a destination basis is a key. Ohio producers can be harmed if taxed services can be easily produced outside the state and transferred, perhaps via the Internet, to in-state residents in cases where the tax cannot be easily collected. In addition, the use tax would be due on sales by out-of-state producers to Ohio businesses and residents, but collection can be a significant problem, placing in-state producers (from whom most of the tax could be collected) at a substantial disadvantage. Services purchased by businesses for their own use should be exempt from tax, just as goods used by business should be exempt.

A final rule is that the tax must be assessed where services are consumed, not where they are produced. A number of states tax services where "the greatest cost of performance" occurs, or a similar rule. This rule imposes the tax where the production of services takes place, not their consumption. Imposition of tax at the point of production increases the chance that services will be delivered from states with low or no sales tax so that the tax can be avoided. Thus, Ohio service producers could be disadvantaged in producing taxed services that can be delivered to remote locations (either in or out of Ohio), such as through the Internet. The preferred approach is to tax services where they are consumed to avoid these locational effects. The locational disadvantages of taxing at the point of production will continue to rise with the ability to sell services remotely. Goods are generally taxed in the state of consumption, so the approach advocated for services is consistent with goods.[59] The tax should still be collected from the vendor, assuming that it has taxable presence in Ohio.

Merriman and Skidmore (2000) find evidence that the retail share of the economy fell, and the service sector share rose, in high sales tax rate states.[60] Their findings indicate that the propensity to tax goods but not services can explain as much as one-third of the relative decline in the retail sector and as much as one-eighth of the relative gain in the service sector. This suggests that, as expected, sales taxes alter consumption behavior by increasing purchases of exempt compared with taxable items. A broader sales tax base should lessen the extent of such behavioral distortions and allow the economy to grow more effectively to meet consumer demands.

States with extensive service taxation normally started with many taxable services. Broadening the base to more services has proven politically difficult in most other states. Florida and Massachusetts expanded their base to include many services about 20 years ago. Both ultimately backed away from taxing so many services – in Massachusetts' case, before the

[59] Compliance is an obvious potential problem with taxing based on the place of consumption rather than the place of production.

[60] See Merriman, David and Mark Skidmore. "Did Distortionary Sales Taxation Contribute to the Growth of the Service Sector?" *National Tax Journal* 53 (1): 125-142, March 2000.

expansion was ever implemented. As a general rule, states have added relatively small services that provide a limited revenue increase.[61] A key problem has been the need to identify each service and achieve the political will to pass legislation that imposes a tax on the specific service. Of course, such legislation is actually leveling the playing field between currently taxed good and services and currently untaxed services. Ohio has added several services to the tax base in recent years, including lawn care services and health clubs.

A number of other services could be considered for taxation in Ohio. These include:

- Construction
- Marina services
- Residential utilities, including electricity, water, and natural gas
- All cable TV
- Dating services
- Personal instruction such as tennis, dance, and fishing and hunting guides
- Professional and college sports
- Interior decorating
- Downloaded media, including books and videos. Sales tax applies to rental and sale of tangible personal property, as occurs when a movie is rented from Blockbuster. The shift from delivery of films on DVDs to direct downloads means that failure to adopt the tax on downloads results in a net loss of revenue in the near future. The video and digital reader markets are changing fast and the revenue loss could grow rapidly.
- Parking lots
- Amusements, including amusement parks, billiard halls, bowling alleys, cable TV, circuses, and video game arcades
- Professional services, such as health care and accountants

Many of these services would generate relatively little revenue, but exceptions include construction, professional services, and residential utilities. Taxation is generally appropriate to

[61] Texas has more successfully expanded the base to some additional services than most states.

level the playing field, even if only a modest amount of revenue can be generated. Appropriate exemptions would need to be developed for business purchases, particularly in the cases of construction and professional services. Table 9 illustrates the state revenues that could be generated by broadening the base to selected services. Additional local sales tax revenues would result from taxation of these services. The Table also evidences the revenue neutral rate that could be achieved if the base were expanded to the item and the rate was lowered to generate the same tax revenues. Each service in Table 9 generally fits the criteria for services that should be taxable in states. These services are provided as examples, and other options could be found.

Table 9: Revenue Estimates for Sales Tax Base Expansion

Base Expansion	Revenue ($ Millions)	Revenue Neutral Rate
Construction	$968.0	4.9
Residential electricity	$295.3	5.3
Water	$25.8	
Bowling centers	$4.5	
Video arcades	$2.0	
Takeout restaurant food	$105.7	5.4

Ohio, like nearly every other state, taxes very few medical services and related goods. The Tax Expenditure Study identifies $710 million in exemptions for prescription drugs, prosthesis, and some other medical items, which are goods associated with provision of health care services. Presumably, Ohio does not want to extend the tax structure to medical care, though a case could be made that elective cosmetic surgery, some elective dental care, and some other health care services should be taxable (and potentially other health care services). Health care expenditure growth has been a very large share of the growth in service expenditures, so tax elasticity would be increased by taxing health care.

Construction

Construction services generate the most revenue of the options identified here. Construction materials are generally taxable in Ohio, as in most states, but the services associated with the construction are not. Most states exempt construction, though there are exceptions such as Arizona, Hawaii, and Washington, where services by construction contractors are generally taxable. The construction estimates provided here include new construction, additions and alterations, and maintenance and repair, which means real property repairs are a component of the estimate.

Construction in Ohio was valued at approximately $47.1 billion in 2007. However, this overstates the net value of construction since it includes both the general contractor and subcontractors. It also exceeds the currently untaxed value because it includes materials. Thus, we estimate that something less than $17.6 billion in net construction *services* were provided in 2007. This total includes government construction (with total sales of $4.1 billion) and religious buildings (totaling over $300 million). The potentially taxable component is reduced to exclude these two yielding an estimate of $ 952.3 million in tax revenues. This net construction estimate also includes business construction, and the revenue potential would be reduced significantly if only residential construction were taxable, but as previously discussed, at least some business purchases should be exempt. Construction of residential rental property is an example of a possible exception since no tax is imposed on the rents.

Residential Electricity and Other Utilities

Residential electricity is exempt in many states, including Ohio. Approximately 16 states tax residential electricity, though in some cases under a special utility tax.[62] Residential electricity meets the criteria identified above for services that should be taxed. The tax could be legislated in ways that do not create substantial concerns about vertical equity, specifically taxation of lower income households. Electricity consumption is likely correlated with income, so the burden should rise with income. Also, a small adjustment could be made in the income tax to offset any additional sales tax burden on lower income individuals, if there are further concerns about vertical equity. We estimate that a tax on residential electricity would generate more than $295 million, assuming that the kilowatt tax remains in effect, as we are not proposing a replacement tax. Taxation of natural gas for residential purposes could add $244.9 million, and taxation of water could add about $25.8 million.

[62] See Federation of Tax Administrators at http://www.taxadmin.org/fta/pub/services/services.html

The assumption in preparing the revenue estimates for this section is that Ohio has no sales tax on electricity. Some may view the kilowatt tax, which raised $544.6 million in 2009, as a special sales tax, and others may view it as a replacement for other business taxes imposed on electricity. This goes to the intent of the kilowatt tax, which was levied in 2001 on electricity sold in Ohio as part of the effort to deregulate the industry. Expansion of the general sales tax to electricity is appropriate if the kilowatt tax is seen as in lieu of other business taxes, including the tangible personal property tax. Expansion is not appropriate if the kilowatt tax is viewed as a sales tax.

Cable TV

Consideration should be given to fully taxing cable TV. About one-half of the sales-taxing states (22) impose the standard rate on cable TV, and at least four more states levy a different rate on cable TV. Ohio local governments impose license fees, but these should not be viewed as an alternative to a tax on the consumption of cable TV services.

Lessen Taxation of Intermediate Transactions

As described above, the sales tax is intended to tax consumption, and business inputs should be exempt because they are used for production, not for consumption. Many states, like Ohio, exempt intermediate inputs if they are sales for resale, integral components of manufacturing processes, and for various other purposes. Many other inputs, such as desks, computers, stationery, cash registers, and so forth remain taxable. These taxable inputs are also necessary to the overall process of operating a successful business and should also be exempt. A careful review should be undertaken of current taxation of business inputs to see whether additional exemptions can make the Ohio economy more competitive.

Three arguments have often been given for taxing some inputs, the first of which is a poor explanation and the last two of which can be valid reasons. First, taxes paid by business on purchases for their own use are not transparent to the public and hide the extent of taxation. The tax often becomes embedded in the cost of the good and is shifted forward to consumers without their knowledge. This could cause government to be larger than people would want if the size of taxes were fully transparent. States would need much higher tax rates if all businesses purchases were exempt. Estimates suggest that the Ohio rate would need to be about 40 percent higher (suggesting a state rate of 7.7 percent) if all business purchases were exempt.

Second, a blanket exemption for all business purchases could lead to widespread evasion as people claim that purchases for personal consumption are intended for business use so they can purchase items without paying the sales tax. This argument suggests that states probably cannot exempt all business purchases, and must carefully select the set of exemptions. Third, business input purchases should be taxable in cases where the final sales to consumers are exempt. Tax on the inputs is intended as an indirect, though limited, means of taxing the final output. This explanation particularly fits inputs used in the production of non-taxable services.

Tax Takeout Food

Ohio, along with thirty other states, fully exempt unprepared foods from the state sales tax (some of these states still impose the local sales tax on food) and a number of other states tax food at a preferred rate. Ohio's exemption is built into the state Constitution, thereby making change very difficult. Imposing the sales tax on food is generally good policy. Among the reasons are to generate additional revenue from a given tax rate or allow a lower tax rate, add stability to the sales tax structure, eliminate many tax administration decisions on what constitutes food exempt from taxation, ease auditing of grocery stores and other food vendors, and impose similar taxes on prepared and unprepared foods. Vertical equity is the normal argument given for exempting food. Purchases made using food stamps will remain exempt (because of federal law) even if food were generally taxed, which helps many in the lowest income bracket, and exempting food is a very poorly targeted means of helping low income households. Assistance directed to low income households, such as a refundable credit against the state income tax is much better targeted and much less costly (in terms of foregone state tax revenues).[63]

Ohio should consider taxing prepared foods for takeout. The current exemption distorts consumption choices by encouraging takeout, encourages evasion by saying food is for takeout when it is not, makes compliance and auditing very difficult, and requires a higher tax rate for any given amount of revenue.

Impose the Sales Tax on Motor Fuel

Ten states (including Indiana) tax motor fuel that is subject to motor fuel excise taxes, though in a few cases at different rates from the general sales tax. The argument for the tax is

[63] See the income tax section.

that motor fuel excise taxes (per gallon levies) are intended as user charges for driving on roads and highways and are not substitutes for a tax on general consumption. Following this logic, the purchase of gasoline is consumption that belongs in the tax base. Assuming gasoline sells at $3 per gallon, Ohio can generate about $209 million with a tax on the sales price of gasoline. Of course, the tax revenue would be volatile with the price and consumption of gasoline. Diesel fuel used for personal vehicles should also be in the base, but not diesel fuel used by business (and particularly used for trucking), since these are inputs and not consumption. Administration of the tax on diesel could be difficult since this requires imposition of the tax based on the use of fuel but it may be possible to use the International Fuel Tax Agreement to separate personal from business use for some diesel fuel. While Ohio could tax motor fuel under that sales tax, Section 5a of Article XII, Ohio Constitution, would require the State to use any sales tax revenue obtained from motor fuel transactions for highway purposes only. In other words, the sales tax on motor fuel could offer an alternative source of highway funds, but it cannot contribute to the State's General Revenue Fund without a constitutional amendment.

Expand Taxation of Not-for Profits

The term not-for-profit refers to two types of entities – those that are philanthropic in nature and those that are service providing and may be in competition with private sector firms. The case for special sales tax treatment arises because some not-for-profit entities undertake functions that are similar to governmental purposes. This situation most likely applies to philanthropic entities, but the same argument might apply to private schools. Special treatment also may be justifiable in cases where government wants to encourage a particular form of behavior, such as may be true with religious organizations.

Two sales tax issues arise with respect to the treatment of not-for-profit entities: how purchases by not-for-profits will be taxed and how sales by not-for profits will be taxed. About two-thirds of the states allow broad exemption for *purchases* by not-for-profit entities and the other third allow exemptions for certain purchases. The transactions should be exempt if the purchases are made to produce goods and services, just as they should be for goods and services provided by for-profit firms. Exemptions beyond those available to similar for-profit firms are subsidies to the not-for-profit entities. Further, the exemptions offer many opportunities for abuse if the purchases are not all for the organizations' exempt purposes (or are used for personal reasons), and the infrequency of audit means such problems may go largely undetected.

The common argument by economists is that *sales* by not-for-profit firms should be treated the same as for-profit firms. The sales tax is intended as a tax on consumers, not on profits or on the not-for-profit firm, so the tax should be imposed similar to the way it would apply to for- profit entities. Further, failure to tax sales by not-for-profits effectively subsidizes their activities, and the extent of subsidy depends on the firms' decisions about how large to become.

Ohio does not provide broad exemption for not-for-profit sales or purchases. Churches and not-for-profits with a public purpose and sales to state and local governments are exempt on their purchases. The Tax Expenditure Study estimates these combined exemptions are expected to total $477 million in 2011. These exemptions are not egregious relative to some states, but it is important that the Department of Taxation ensure that these exemptions are given only to entities that truly have public purpose.

Avoid Sales Tax Holidays

Ohio has avoided implementing a tax holiday, and this represents good tax policy. Economists generally believe that sales tax holidays are not productive. They may change the timing of when people shop but probably have little effect on what they purchase and particularly on the total amount of household purchases in a state. Thus, sales tax holidays are unlikely to have lasting effects on state economic performance. Holidays are often defended as a means of helping low income households, but the beneficiaries are not means tested and the benefits are likely to be very poorly targeted. Higher income households are better able to stockpile during the holidays and will purchase more expensive items. Many economists also believe that much of the benefits accrue to vendors who would otherwise offer a sale, but instead allow the state to forgo the tax revenues. Effectively, the vendors advertise the tax holiday, not their own price discounts. And, of course, tax holidays entail substantial administration and compliance benefits, as firms must comply differently with a tax for a few days each year.

REFORMING THE OHIO PROPERTY TAX

Ohio property taxes are more difficult to discuss than income and sales taxes because the specifics of the institutional structure are very complicated and are so important to understanding the issues. As a result, this section is intended to provide a general flavor of the extent of property taxation, how local governments differ in their ability to generate revenues from given tax rates, and specific issues and concerns with the tax. The section is not intended to provide a comprehensive explanation of all operational details of the tax. The interested reader is encouraged to read other reports for additional details.[64]

Property Taxes are the Largest Local Tax

Property taxes are the largest local government tax source in Ohio, as they are in the rest of the country, generating $13.6 billion in 2008 (see Figure 26). The Department of Taxation reports that $14.5 billion in property taxes were levied in 2009,[65] though actual collections will be somewhat smaller.[66] For example, $14.3 billion in property taxes were levied in 2008 versus the $13.6 billion that was collected.[67] Property tax revenue has risen relatively rapidly over the past 16 years, with the revenues increasing faster than personal income (see Table 10).

Property taxes raise 66 percent of local revenue in Ohio, versus 72 percent of local revenue in the average state (see Figure 11). Property taxes generate a lower share of local taxes in Ohio than in the average state because Ohio's local income, and to a lesser extent sales taxes, collect a combined 27 percent of revenue, much higher than the 17 percent collected in the average state.

[64] This section benefitted significantly from "Property Taxes for Funding Public Education: Ohio's Unique Method for Controlling Tax Increases," ETPI Policy Report, January 2009, and Meghan Sullivan and Mike Sobul, "Property Taxation and Local Education Finance," Tax Research Series Number One, Ohio Department of Taxation, February 2010. The reader is encouraged to study these documents for detailed discussion of how the Ohio property tax functions.

[65] See http://tax.ohio.gov/divisions/tax_analysis/tax_data_series/tangible_personal_property/pd30/PD30CY09.stm

[66] The Department of Taxation reports 2008 delinquent taxes at just over $2.4 billion, or about one-sixth of taxes assessed. Much of this will in all likelihood ultimately be collected. See http://tax.ohio.gov/divisions/tax_analysis/tax_data_series/all_property_taxes/td2/TD2CY08.

[67] Also, note that some of the differences may arise from the data sources since the collections data were taken from U.S. Census Bureau data and the levies from Department of Taxation data.

Figure 26: Local Property Tax Collections, 1992-2008

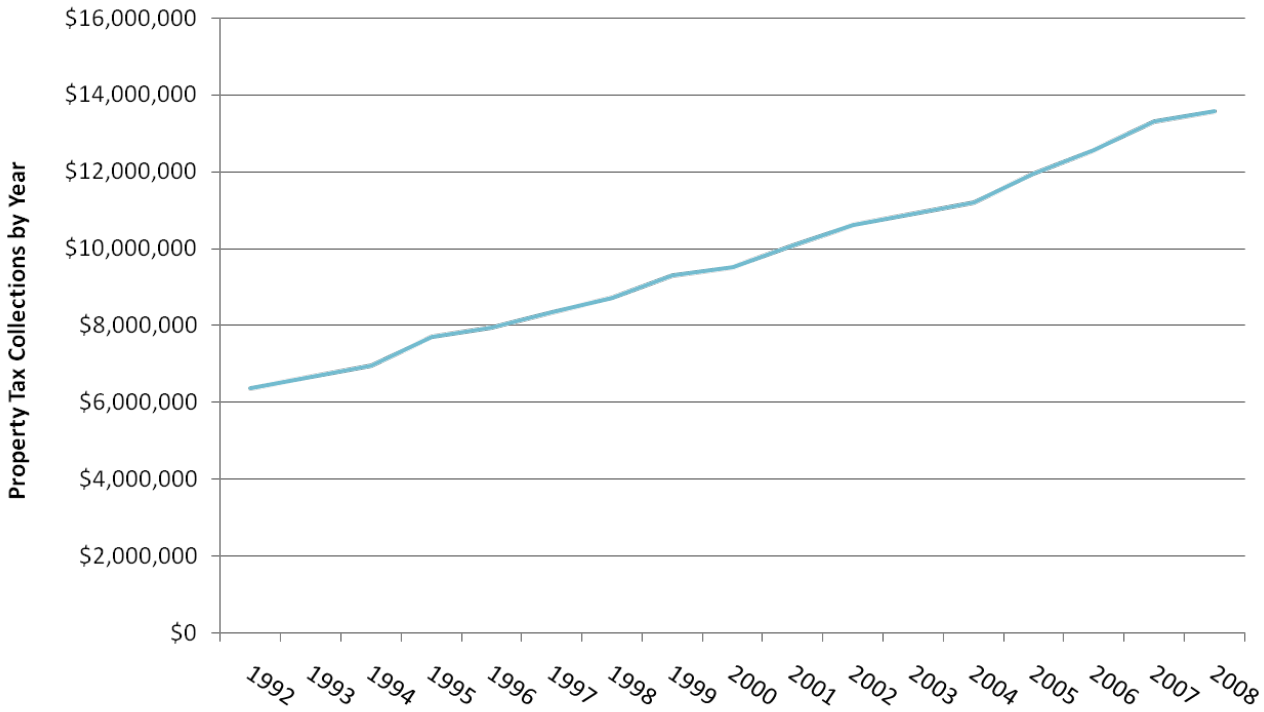


Table 10: Local Tax Revenue Performance

Tax Source	Growth Rate	Elasticity
Property	4.83%	1.19
Sales	6.35%	1.57
Income	4.58%	1.13
Total	5.00%	1.24

Assessed property values for all 88 counties totaled $250.4 billion in 2009, of which $241.1 billion was real property, $8.4 billion was public utility property, and $0.9 billion was general tangible personal property. Taxation of tangible personal property was phased out between 2006 and 2009 for all but public utility property. Telecommunications tangible personal property was phased out so that beginning in 2011, only other public utility tangible

personal property remains taxable.[68] As a result, the property tax base is composed essentially only of real property since the remaining taxable tangible personal property is a very small share of the total tax base. While the remaining taxable personal property does not make up a large percentage of total taxable value, it can have enormous importance to a few districts and other local governments where electric generation facilities and gas pipelines exist. Approximately one-eighth of the entire state's assessed value is in Cuyahoga County alone, and Cuyahoga County also raised the largest amount of tax revenue at $2.3 billion.

Real property is appraised at market value through reappraisals undertaken every six years. Triennial revaluations occur between assessments.[69] Agricultural property is the exception, as it is valued at its current use in agriculture (as determined by the Department of Taxation) rather than its best use. Actual real property values are then assessed at 35 percent to yield the taxable value.

Property tax rates, which can be imposed for many specific purposes, can be levied by counties, municipalities, townships, school districts, joint vocational school districts, and other special districts. For example, school taxes are imposed for four basic purposes: current expenses, permanent improvements, bonds, or emergencies. The average gross real property tax rate (the rate that voters approve) for the combination of all local governments in calendar year 2008 was 86.35 for residential and agricultural property (Class I) and 87.52 for public utility, commercial, industrial, and mineral property (Class II).[70] The 2008 average net property tax rate (the rate that is used to calculate tax liabilities) was 53.69 for Class I property and 62.6 for Class II property. Cuyahoga County, with a gross rate of 114.64 and a net rate of 68.07 on Class I property and 105.63 and 75.44 on Class II property, had the highest property tax rates of any county.[71] Wyandot County had the lowest net tax rates, with 32.31 on Class I property and 33.93 on Class II property. Governments within Shaker Heights imposed the highest combined net tax rate of any city for both Class I and Class II property, and Greenfield imposed the lowest rates.

Ohio reserves the property tax solely for local governments, though a number of other state governments, including Kentucky, generate some revenues using the property tax (see Figure 9).[72] Ohio eliminated the state property tax in 1902.

[68] The state reimbursed local governments to a substantial extent for the revenue loss for five years and school districts for seven years. The reimbursements fully phase out for local governments in 2018. No statement has been made about school district reimbursements after 2013. These payments by state government should be viewed as intergovernmental grants and not as property tax revenue.
[69] Triennial updates use sales ratio studies to update market values at the mid-point between reappraisals.
[70] See http://tax.ohio.gov/divisions/tax_analysis/tax_data_series/all_property_taxes/pr6/PR6CY08.stm
[71] See below for discussion of net versus gross tax rates.
[72] In total, the property tax generates about two percent of the average state government's tax revenue.

Local Governments Differ Significantly in their Ability to Raise Property Tax Revenues

Local government tax bases vary widely across Ohio.[73] Counties are used here to illustrate the differences. The statewide average tax base was $21,696 per person in 2009, but the per capita tax base differs significantly across counties (see Table 11) and even more so across cities and school districts. Large tax bases tend to be heavily concentrated in a relatively small number of counties, since only 25 counties have a per capita tax base above $20,000 and only 20 counties have a base above average. Ottawa County had the highest per capita tax base at $41,845 and Scioto County had the lowest per capita base at $11,681. Ottawa County is a significant outlier since only two other counties had per capita tax bases above $30,000; Delaware County, was second highest at $37,011, followed by Geauga County with $30,865. Cuyahoga and Franklin Counties have relatively high per capita tax bases that are nearly identical, with Hamilton County slightly lower. Only four other counties have higher tax bases than Cuyahoga and Franklin Counties.

[73] This section focuses on the property tax, but the local sales and income taxes are also structured to cause tax revenue to accrue to jurisdictions where business production tends to occur and not to bedroom communities.

Table 11: Property Tax Indicators by County

County	Tax Base Per Capita	Tax Revenue Per Capita	Effective Tax Rate (percent)	Tax Capacity	Unused Capacity
Total					
Adams	20,739	878	4.2	1,204	326
Allen	17,271	832	4.8	1,003	170
Ashland	17,853	840	4.7	1,036	196
Ashtabula	18,541	945	5.1	1,076	131
Athens	14,621	789	5.4	849	60
Auglaize	18,621	854	4.6	1,081	227
Belmont	15,017	665	4.4	872	207
Brown	15,556	611	3.9	903	292
Butler	22,770	1,207	5.3	1,322	115
Carroll	18,850	781	4.1	1,094	313
Champaign	18,142	854	4.7	1,053	199
Clark	17,183	980	5.7	997	18
Clermont	22,561	1,235	5.5	1,310	74
Clinton	19,592	850	4.3	1,137	287
Columbiana	14,826	648	4.4	861	213
Coshocton	18,111	802	4.4	1,051	250
Crawford	15,397	736	4.8	894	158
Cuyahoga	24,416	1,791	7.3	1,417	-373
Darke	18,751	736	3.9	1,088	353
Defiance	18,292	867	4.7	1,062	195
Delaware	37,011	2,102	5.7	2,148	46
Erie	26,627	1,307	4.9	1,546	239
Fairfield	22,448	1,048	4.7	1,303	255
Fayette	18,768	885	4.7	1,089	205
Franklin	24,345	1,654	6.8	1,413	-241
Fulton	21,326	1,113	5.2	1,238	125
Gallia	20,465	815	4.0	1,188	373
Geauga	30,865	1,751	5.7	1,792	41
Greene	24,020	1,398	5.8	1,394	-4
Guernsey	14,430	693	4.8	838	145
Hamilton	23,620	1,455	6.2	1,371	-84
Hancock	20,739	918	4.4	1,204	286
Hardin	14,387	602	4.2	835	233
Harrison	16,583	694	4.2	963	269
Henry	18,970	1,000	5.3	1,101	101

Table 11: Property Tax Indicators by County (continued)

County	Tax Base Per Capita	Tax Revenue Per Capita	Effective Tax Rate (percent)	Tax Capacity	Unused Capacity
Highland	15,486	585	3.8	899	314
Hocking	18,940	872	4.6	1,099	227
Holmes	17,831	811	4.5	1,035	224
Huron	16,879	691	4.1	980	289
Jackson	14,020	585	4.2	814	228
Jefferson	17,411	791	4.5	1,011	220
Knox	19,340	928	4.8	1,123	195
Lake	28,702	1,547	5.4	1,666	119
Lawrence	12,511	436	3.5	726	290
Licking	23,082	1,127	4.9	1,340	213
Logan	22,040	990	4.5	1,279	289
Lorain	22,488	1,192	5.3	1,305	113
Lucas	19,257	1,224	6.4	1,118	-107
Madison	19,912	1,005	5.0	1,156	151
Mahoning	17,314	1,001	5.8	1,005	4
Marion	15,568	707	4.5	904	196
Medina	27,186	1,402	5.2	1,578	176
Meigs	12,602	530	4.2	732	202
Mercer	19,982	970	4.9	1,160	190
Miami	21,085	923	4.4	1,224	301
Monroe	16,952	636	3.8	984	348
Montgomery	19,155	1,412	7.4	1,112	-300
Morgan	18,351	774	4.2	1,065	291
Morrow	19,162	837	4.4	1,112	275
Muskingum	17,580	825	4.7	1,021	195
Noble	16,123	633	3.9	936	302
Ottawa	41,845	1,600	3.8	2,429	829
Paulding	15,776	768	4.9	916	148
Perry	14,470	649	4.5	840	191
Pickaway	19,268	892	4.6	1,118	227
Pike	12,181	544	4.5	707	163
Portage	21,603	1,132	5.2	1,254	122
Preble	19,124	933	4.9	1,110	177
Putnam	18,374	746	4.1	1,067	321
Richland	16,689	901	5.4	969	68
Ross	14,829	656	4.4	861	205

Table 11: Property Tax Indicators by County (continued)

County	Tax Base Per Capita	Tax Revenue Per Capita	Effective Tax Rate (percent)	Tax Capacity	Unused Capacity
Sandusky	18,496	806	4.4	1,074	267
Scioto	11,681	568	4.9	678	110
Seneca	16,738	751	4.5	972	220
Shelby	19,479	856	4.4	1,131	275
Stark	19,390	976	5.0	1,126	150
Summit	23,020	1,413	6.1	1,336	-76
Trumbull	16,309	929	5.7	947	18
Tuscarawas	17,924	841	4.7	1,040	200
Union	26,426	1,531	5.8	1,534	3
Van Wert	16,594	792	4.8	963	171
Vinton	12,900	572	4.4	749	176
Warren	28,634	1,460	5.1	1,662	202
Washington	17,349	738	4.3	1,007	269
Wayne	19,051	972	5.1	1,106	134
Williams	17,973	820	4.6	1,043	224
Wood	22,563	1,252	5.5	1,310	58
Wyandot	17,587	603	3.4	1,021	418
State Averages	21,696	1,259	5.8	1,259	

The effective tax rate is defined as taxes levied divided by tax base.

The combined governments in the average county generated $1,259 per person in property tax revenues in 2009.[74] Tax revenues also differ widely across counties, with Lawrence County lowest at $436 per person and Delaware County highest at $2,102. Not surprisingly, counties with large property tax bases tend to raise more revenues. The three highest tax base counties (Ottawa, Delaware, and Geauga Counties) are among the five highest in revenues raised per capita. Cuyahoga and Franklin Counties are also among the five highest per capita property tax revenue counties.

Tax effort and tax capacity are often used to assess the relative tax performance of local governments. Tax capacity is usually a measure of the ability of one county to generate revenues compared with other counties. The measure is *relative*, not absolute, and is an indicator of counties' ability to finance services with the property tax and without assistance

[74] The analysis is based on taxes levied rather than taxes collected.

from the state. It is not an indicator of how much tax revenues any county can collect or should raise, but how much the county can raise compared with other counties. The U.S. Advisory Commission on Intergovernmental Relations developed a tax capacity measure (termed the Representative Tax System), which is defined as the revenues that a county could raise if it relied upon average tax rates.[75] The average tax rate, calculated as total tax revenue divided by total tax base is used to make these calculations. Class I, Class II, and tangible personal property are aggregated for these calculations. Per capita[76] property tax capacity for Ohio counties is given in Table 11. Using this definition, average taxes raised equals the average capacity.

Tax effort is how much revenue a county actually generates from (or relative to) its capacity. The effective tax rate in each county, measured as tax revenue raised divided by tax base, is one indicator of effort to raise revenues. Effective tax rates can vary for a variety of reasons including: (i) relatively low or high demand for public services, (ii) light or heavy reliance on alternative tax sources, and (iii) a small or large property tax base. Ohio's average effective rate is 5.8 percent, though the effective rate should be multiplied by 0.35 for comparison with actual property values.[77] Thus, tax liabilities were approximately 2.03 percent of actual property values.[78] The effective tax rates relative to actual property values are higher on Class II property and lower on Class I property because of the differences in tax reduction factors (the factors are higher on Class I property).[79]

The largest counties tend to make the greatest effort, since the effective rates in Cuyahoga and Franklin Counties are the state's highest and Hamilton County's rate is fourth highest (see Table 11). Lucas and Summit Counties also have effective rates above 6.0 percent. Wyandot County,[80] which also has the lowest net rates, has the lowest effective rate, followed

[75] Relative capacity measures that are calculated using average tax rates are particularly useful when trying to aggregate capacity across multiple revenue sources. The measure used here is perfectly correlated with the per capita property tax base.
[76] Meghan Sullivan and Mike Sobul, "Property Taxation and Local Education Finance," Tax Research Series Number One, Ohio Department of Taxation, February 2010 provides capacity estimates per pupil for school districts. The calculations provided here are for the entire county on a per capita measure, since we are seeking to measure differences in ability to fund all services, not just education. The Sullivan and Sobul paper illustrates much greater differences across jurisdictions because the analysis is for school districts which are geographically smaller than counties and have much greater tax base disparities. They show that differentials across school districts have not changed much over time, in part because some policy changes have moderated base differences. For example, they find that H.B. 66 reduced some of the differentials, as it eliminated most taxation of tangible personal property. Full effects of eliminating tangible personal property taxation will be realized in 2011.
[77] The 0.35 accounts for the assessment ratio.
[78] These effective tax rates have not been adjusted for the tax credits, since they are based on actual taxes levied. The average effective rate on assessed value is 5.41 percent, and the rate on actual value is 1.89 percent, based on the Census value for property taxes collected in 2008 and the Department of Taxation measure of the 2008 assessed tax base.
[79] As discussed below, the difference between gross and net tax rates results from "tax reduction factors" that lower the levied (the voted upon) gross tax rate to the net rate (the rate used to determine tax liability) so that reappraisals do not increase tax revenues. Tax reduction factors are calculated separately for Class I and Class II property. The tax reduction factors are larger for Class I property because the associated property values have risen faster, so the difference between gross and net tax rates is larger for Class I property.
[80] Wyandot County is near the bottom in tax revenues both because it imposes very low rates and has a very small base.

by Lawrence County -- these counties make the lowest relative effort in Ohio. Ottawa County's base is so large that it is able to impose the third lowest effective rate and still generate among the highest tax collections per person. Another possible reason for Ottawa County's low effective rate is the presence of considerable Lake Erie resort area property. This could mean a lot of high value lakefront property without the same demands on local public services, such as education, because of the second home phenomenon.

The difference between actual tax revenues and tax capacity is the amount of unused capacity that a county has – or, the additional tax revenues that a county could raise if it taxed itself the same as the average county. The unused capacity can be positive (indicating that the county would raise more revenue if it levied average tax rates) or negative (indicating the county would raise less revenues if it levied average tax rates). The unused capacity can be seen as an indicator of tax effort, but should not be seen as a conclusion that counties should raise more or less revenue. Only 7 counties have used more than their capacity (approximately half would have been expected), which means that 81 counties raise less than their capacity (see Table 11). The small number of counties with unused capacity results from the fact that the largest counties have high effective tax rates and generate high property tax revenue per capita -- Cuyahoga, Franklin, and Hamilton County all use above average capacity.[81] The tendency for large counties to use their capacity may evidence that large counties feel or actually have a need to deliver more public services.

Evaluation of Ohio's Property Tax[82]

This section discusses three basic problems with the property tax:

- The tax is overly complicated and not transparent
- Property taxation is difficult to separate from its role in education finance
- The tax base has been narrowed over the past several decades

[81] The average tax rate is weighted by the property tax base in the county rather than a simple average of the county average rates.

[82] Many of the issues below apply equally for property tax base increases and decreases. The discussion is couched only in terms of increases since they will be more common.

The Tax System is Overly Complicated

Tax Rates and Tax Rate Increases

A series of legislative actions has complicated Ohio's property tax structure, altered the tax liability relative to the tax base, and reduced the tax system's transparency. First, Ohio voters retain considerable control over local property tax rates. Voters control over tax rates offers clear advantages in democracy and control over the size of government, but also complicates Ohio's property tax because the control does not apply to all tax rates and is applied in a very disaggregated fashion. Constitutionally, the combination of all local governments in a county can impose a property tax rate of up to 10 mills or one percent (referred to as inside mills) without a vote by the population. Voters must approve any tax levies above the 10 mills (referred to as outside mills). The inside levy is low by comparison with the average gross tax rate of about 87 mills.

Voters are faced with many potential property tax levies. Initiatives are often intended to finance specific services, which give taxpayers greater control over the services for which the funding is provided. Detailed and frequent levies require taxpayers to have considerable information and understanding if they are to be good decision makers. For example, up to 35 separate types of school levies, plus general fund tax rates for counties and municipalities, and specific rates for fire, police, bonds, permanent improvements, parks, libraries, community colleges, and so forth are imposed. For example, Parma City School District has four current expense levies, and Parma City and Parma City School District residents confront 28 different tax rates when County rates are also included.[83]

More than 10,000 property tax levies were on the ballot between 1976 and 2009, and 433 levies were on the ballot in 2004 alone.[84] On average, the governments within every county have more than 3 levies on the ballot every year, of which about one-half pass. In some cases, such as with schools, the levies are continuing and do not need to be re-enacted unless a replacement (after reappraisal) or increase is needed. In some cases there may be more than one rate in effect for a particular purpose at any time. In other cases, such as children's services, the levies are not continuing and must be reenacted routinely. Effective property tax rates have risen only about 0.1 percent over the past 30 years for households and about 0.75 percent for businesses, despite the many tax levies that have been enacted.

The frequency of votes on levies combined with limited information on how the overall budget fits together must make it challenging for voters to make good decisions. Other

[83] See ETPI Policy Report January 2009.
[84] Data provided by William Driscoll and Howard Fleeter.

complications, described below, make it even more challenging for taxpayers to understand the tax structure and budgeting system so that they can make good decisions. At a minimum, Ohio should ensure that broad information on the budget and property tax finance is available as voters make these important decisions. Easily understandable Web pages offering broad information on expenditures, government budgets, taxes, and so forth are a minimum means of ensuring that taxpayers have good information for voting on tax initiatives.

Methods to Control "Unvoted Tax Increases" add significant confusion

Second, the difference between gross and net tax rates is another area where difficulties surely arise in understanding tax burdens. H.B. 920, enacted in 1976, established the basis for this distinction, and the cases in which tax base expansions can increase revenues. The legislation prevents property tax revenue from being increased by reappraisal or triennial updates of property values, except in certain circumstances. One is that new construction can increase tax bases and therefore tax revenues for both inside and outside mills. Another is that tax revenues can rise with appraisal-determined tax base increases associated with inside mills, but cannot increase for outside mills.

Revenue growth from reappraisal is prevented for outside mills by imposing tax reduction factors that lower the effective tax rates used for calculating tax liabilities.[85] Tax reduction factors are applied by calculating the tax rate after reappraisal (calculated as the post reappraisal net tax rate times the post-reappraisal tax base) that would yield the same revenue as before the reappraisal (calculated as the pre-appraisal net tax rate times the pre-reappraisal tax base). [86] The tax reduction factor, the amount the rate is reduced to hold revenues constant, explains the difference between gross and net property taxes. The tax reduction factors are applied to each individual levy, adding more complication to the system. Taxpayers can vote for higher rates if they want additional tax revenue as the reappraisal occurs or at other times. Tax reduction factors are not applied to bond or emergency levies,[87] inside mills, or TPPT.

[85] Technically, the tax reduction factor reduces the taxes charged against the property rather than the tax rate. As a practical matter, the concept of a reduction in the effective rate of the tax provides a more comprehensible explanation. However, legal issues make it important to distinguish between reduced rates and reduced taxes.
[86] Some other states have similar provisions. For example, Tennessee requires local governments to roll back the tax rate to offset any revenue gain from reappraisals. The constraint is less restrictive than Ohio's since Tennessee County or City Commissions can enact rate increases rather than having the requirement of a vote by the population.
[87] Emergency and bond levies are designed to raise specific amounts of revenue, so the rates are adjusted up or down as necessary to generate the appropriate amount of revenue.

For example, suppose a county with a tax base of $100 has a 60 mill gross and net tax rate prior to reappraisal, so that the tax generates $6 (6% times $100). Now, assume that property values to increase to $120 as a result of reappraisal so that the tax base is $120. A tax reduction factor would be applied to the gross tax rate to yield a net tax rate that would provide the same tax revenue after the reappraisal as before. In this case, a tax reduction of 16.6 percent (equal to 20/120) would be applied to the gross tax rate so that the net rate is now 50 mills and the tax would still generate $6 (5% times $120).

In practice, tax reduction factors are applied separately to Class I and Class II property, based on the growth in tax base in each class of property. The different tax reduction factors result in different net tax rates for the two property classes. Household property (Class I) has risen faster than business property (Class II), so the net rate is lower for Class I property. This means that the effective rate (defined as tax liability relative to actual value of property) is higher for household property than for business property.

Tax reduction factors add complication and confusion, but prevent tax liabilities from rising too rapidly since reappraisals cannot increase the average tax liability.[88] The notion is that the tax reduction factors prevent an "unvoted tax increase" -- that is, tax liabilities (on average) do not change without a voted rate increase. Such tax liability increases with economic growth and inflation are common for most taxes. For example, both the sales and income taxes rise with the economy without the need to alter the tax rate. A disadvantage of the property tax structure from the perspective of local finance is that tax reduction factors prevent local governments from seeing growth in revenues as values rise, though the cost of delivering a fixed amount of public services is likely rising, at least to some extent. The tax reduction factors can require a voted rate increase to maintain service levels.[89] Analysts often argue that growth in revenue with the economy is an element of a good tax system since it allows governments to continue delivering the same services without rate increases. Of course, the lack of automatic revenue growth makes it incumbent on local governments to make a case to the local population on the need for the higher tax rates (assuming there is need for additional revenue). Local populations can then vote to raise the gross tax rate to provide some additional tax revenue if they believe there is need. But, this requires frequent tax rate votes, as has occurred in Ohio over the past 35 years.

Ohio's approach to limiting property tax revenue growth is preferable to the type of tax growth limits that many states have built into their tax structures. For example, California limits

[88] The tax liability on any piece of property can rise or fall depending on whether its appraisal increases above or below the average of all property in the class.

[89] The tax base rises with new construction, but the new construction will be taxed at the net tax rate after adjustment for the tax reduction factors.

growth (referred to as Proposition 13) in the assessed value of property to 2 percent annually until the property is sold, at which point the property is valued at market. Mechanisms like California's, which have been enacted in many states, result in very different tax bases for similar properties depending on how long the property has been held. Housing and property markets are badly distorted by California-like systems, a problem that does not arise in Ohio. For example, houses sell less frequently and people are more likely to rent if their tenure in the state is short, and so forth.

Tax revenues can rise with reappraisal in one other case. Ohio statute prevents tax reduction factors from reducing *expense* levies for school purposes below a net rate of 20 mills. This threshold has important implications for tax revenue growth. Tax revenues can rise with property values when reappraisals occur if the net expense tax rate is 20 mills since the tax reduction factors cannot result in lower rates. Tax revenues cannot rise with reappraisals in governments with rates above 20 mills because the tax reduction factors will simply reduce the rate. This gives governments the incentive to impose expense rates of 20 net mills, as evidenced by 400 of Ohio's 613 school districts with 20 mill expense rates, for at least one property class in 2008. The 400 districts at the floor benefit from base growth with reappraisals and the other 200-plus districts do not. Emergency levies are enacted to generate additional tax revenue above the 20 mill floor, if necessary, for those districts wanting to maintain the 20 mill rate.

Ohio could simplify the mechanism for preventing/limiting revenue growth as a result of reappraisals. An option is to rollback the tax rate as reappraisals occur so that some limited revenue growth could occur for both inside and outside mills (say 2 percent annually)[90] without using gross and net tax rates and without distinguishing between inside and outside mills for the rollback.[91] Such a system would eliminate the incentive for school districts to keep the rate at 20 mills to benefit from revenue growth. Further, Class I and Class II property could be treated the same and as part of a single tax base.[92] For example, suppose revenue growth of 2 percent annually is permitted and the total tax base rose 22.6 percent across a six year reappraisal cycle. A 2 percent annual growth rate allows revenues to rise 12.6 percent across the six years (assuming compounding of the growth rate). A new, lower rate (which is simply a proportionate decrease in all inside and outside rates) can be calculated so that it generates 12.6 percent in new revenue, and this rate would be applied to all property. There would be no need to separate Class I and Class II property or to talk about gross and net tax rates. A 50 mill

[90] The existing structure allows some revenue growth since it does not apply to inside mills.
[91] The 10 mill limit on inside mills is constitutional, so we presume this cannot be changed.
[92] Class I property has grown faster in value than Class II, but the annual differences are not large given the relatively small differences between the average net rates for the two types of property.

rate would fall to about 46 mills given the example provided here.[93] Changes, such as described here, might require a constitutional amendment.

Tax Credits Further Alter Tax Burdens Relative to Voted Tax Rates

Third, tax liabilities are then reduced by three credits, the homestead exemption, 10 percent credit, and 2.5 percent credit, the first two of which were enacted in 1971 and the last in 1979. Homestead exemptions are provided to homeowners who are 65 or above, permanently or temporarily disabled, or surviving spouses 59 or above whose deceased spouse formerly received the credit.[94] The 10 percent credit reduces property tax liabilities by 10 percent for non-business property owners (including agriculture) and the 2.5 percent credit reduces tax liabilities for owner-occupied households. These combined credits reduced property tax levies by $850.0 million in FY2009. School districts and other local governments are reimbursed by the state for the cost of these credits. These credits reduce the effective tax rate on household property relative to business property.

Taxpayers must find it difficult to fully understand tax liabilities once these three considerations are taken into account: the need to vote on certain tax rates, imposition of tax reduction factors and application of household credits. All of the information about calculation of tax reduction factors and credits plus each individual levy is included on the tax statement, so full information is available for taxpayers. However, this level of detail is very complicated for taxpayers (and indeed analysts) to understand. Further, mortgage companies pay the property tax through an escrow account for many homeowners who probably do not see the bill, and renters do not see the property tax associated with their housing. Finally, households may not recognize that business is paying significant property taxes as well. These various causes for lack of transparency complicate taxpayers' ability to make good decisions on property tax finance. Transparency is reduced even more by the interaction between education finance and the property tax, which is discussed in the following section.

[93] All values are rounded in the example. The new tax rate would be calculated as the old tax rate times the allowable tax revenue (the pre-appraisal revenue times one plus the 12.6 percent growth) divided by the new property tax base multiplied by the old tax rate (this yields the revenue that would be obtained without the rate decrease). That is, the new tax rate is the old tax rate times 1.126 (the allowed revenue growth) divided by 1.226 (the revenue growth that would have occurred without the rate reduction).

[94] Eligibility was means tested until 2007. Elimination of the means test increased the number of beneficiaries of the credit from about 217,000 to 776,000.

Interaction Between the Property Tax and Education Funding

The property tax and the education funding formula have been revised significantly during the past decade, and some implications for property tax revenues are discussed in this section. The property tax is integral to education finance in Ohio, since a total of $8.4 billion in property taxes were levied for school purposes in 2009,[95] out of a total property tax assessment of $14.5 billion.

Education finance is a joint state and local responsibility in Ohio, as in almost every state, but various Ohio policies have reduced local government's role in education finance and increased the state's role. The newly enacted evidence-based model (EBM) for education determines an adequate amount of expenditures for education. School districts must finance a portion of the adequate amount, termed the charge-off, and the balance is financed by the state. School districts must levy at least 20 mills current expense property tax rate, which is broadly defined to include several tax sources, to qualify for aid.[96] Then, the annual charge-off is calculated as 22 mills times the property tax base until 2014, when it drops to 20 mills times the property tax base. That is, the local charge-off is the amount of revenue that would be raised with a 22 mill tax rate.

The property tax base is modified to the "recognized value" for purposes of calculating the charge-off. The recognized value allows for the assessed property values to be increased during reappraisals, even if tax reduction factors come into play, so that a school district receives no new revenues from the reappraisal. The recognized value is only used for districts with tax rates above 20.1 mills (the over 200 districts above 20 mills described above) because the intent is to take into account, at least to some extent, that the tax reduction factors reduce the revenues that these districts receive from reappraisals. But, the charge-off assumes that district tax revenues increase with higher assessed values. These base increases are phased in over three years (the time between reappraisals and triennial revaluations) to lessen the initial effects on those districts that cannot receive additional revenue because of tax reduction factors. This increase in assessed base not reflected in a revenue increase results in what has been referred to as phantom revenues. The EBM creates an even stronger incentive for districts to limit the expense levies to the 20 mill floor so that school district tax revenues actually rise from reappraisals as the local charge-off goes up with the higher assessed value.[97] On the other hand, the three year phase-in for recognized value reduces the incentive to be at the 20 mill minimum, to the extent that taxpayers understand the intricacies of the funding formula.

[95] See http://www.tax.ohio.gov/divisions/tax_analysis/tax_data_series/school_district_data/sd1/SD1CY09.stm
[96] This 20 mill floor differs from the 20 mill minimum discussed above with regards to the tax reduction factors.
[97] Emergency levies can be used to provide any additional revenues needed to operate the schools.

As illustrated above, tax bases differ widely across Ohio local governments. The school funding formula with a charge-off that is based on a fixed tax rate (22 mills) reduces the disparities between school districts by allowing all districts to finance an adequate education with the same effort (defined as 22 mills times the property tax base).[98] Thus, districts only differ in their ability to finance education expenditures above the adequate levels, and the importance of the difference depends on how well the adequate level meets the real cost of delivering a *quality* education to Ohio students.

There is reason to question why a 20 mill minimum property tax rate (which as described here arises in several ways in Ohio local government finance) should be imposed. Court education rulings (the requirement of thorough and efficient education) may argue for minimum education spending levels, but not necessarily for minimum tax revenue or rates for any specific revenue source. Similarly, the charge-off, which requires a specific local share of education finance, could exist as a minimum contribution without the requirement for a particular tax rate. Perhaps the best argument is that minimum tax rates are a good way to lessen the effects of differential tax rates on the location of business activity. Thus, a minimum property tax rate is a good idea if the property tax has more distorting effects on location than do local sales or income taxes. But, even in this case, the minimum property tax rate could be enacted without linking it specifically to education finance.

Narrowing of the Property Tax Base

State action has tended to narrow the property tax base over recent decades. Taxation of tangible personal property has been eliminated over the past five years except for some public utility property.[99] Exemption of some public utility personal property and other tangible personal property reduced local property tax bases by approximately 16 percent relative to 2004.[100] The state reimbursed local governments for much of the lost revenue through 2010 (reimbursements from the state are better categorized as intergovernmental transfers rather than property taxes), but the amount of reimbursement falls over time and the reimbursement is eliminated beginning in 2018. School districts are reimbursed through 2013, with H.B. 66 silent on what happens thereafter. The reimbursement is based on the revenue lost in 2005, so it declines over time relative to the revenue that would have been collected without the base narrowing, so the ability to finance any given level of local expenditures will require higher tax

[98] Note that the effort is defined in terms of total revenue and not in per pupil or per capita terms. Thus, the effort could differ across jurisdictions in terms of the amount per student or per person.
[99] The state had previously reduced the assessment ratios for TPPT, which also effectively narrowed the base for TPPT.
[100] This includes the public utility TPPT that remains taxable. See http://tax.ohio.gov/divisions/tax_analysis/tax_data_series/tangible_personal_property/pd30/pd30cy02.stm

rates than before. The state also enacted the tax credits for homeowners and non-business property which lowered the property tax base by reducing the property tax revenues that local governments get from residential property. In the case of the credits, however, the reimbursements grow with property taxes over time since they are based on actual property tax liabilities.

The state also rolled back business real property taxes by 10 percent, which effectively reduced the base, but H.B. 66 repealed the rollback. The net effect is for the business real property tax base to be unchanged compared with the pre-rollback time. Relative to 2004, the overall business tax burden was reduced, but by less than the value of exempting tangible personal property.

Base narrowing creates at least three problems including:

- The requirement of a higher tax rate to raise any given amount of tax revenues
- Pressure on state financing because of reimbursements
- Relative tax burdens are changed between households and businesses and between homeowners and renters

Higher Rates Change Behavior

Base narrowing requires local governments and voters to increase the property tax rate for any given amount of revenue. Higher tax rates are always reason for concern, because the distortions in behavior that result from taxation grow with the rate. Also, financing for local services will be harder to raise to the extent that voters fail to recognize the lost tax base.[101] Nonetheless, property tax revenues increased faster than personal income from 1992 to 2008 (see Table 10). Alternatively, narrowing the property tax base may cause local governments to rely relatively more on local income and sales taxes. Actual experience from 1992 through 2008 shows that local sales tax revenues grew faster than property taxes and local income taxes grew more slowly. Only school districts and municipalities have access to local income taxes; counties and transit districts have access to local sales taxes.

[101] On the other hand, a tendency to overprovide public services existed to the extent that business taxes could be exported to other states, since Ohio taxpayers likely did not recognize the costs of these taxes.

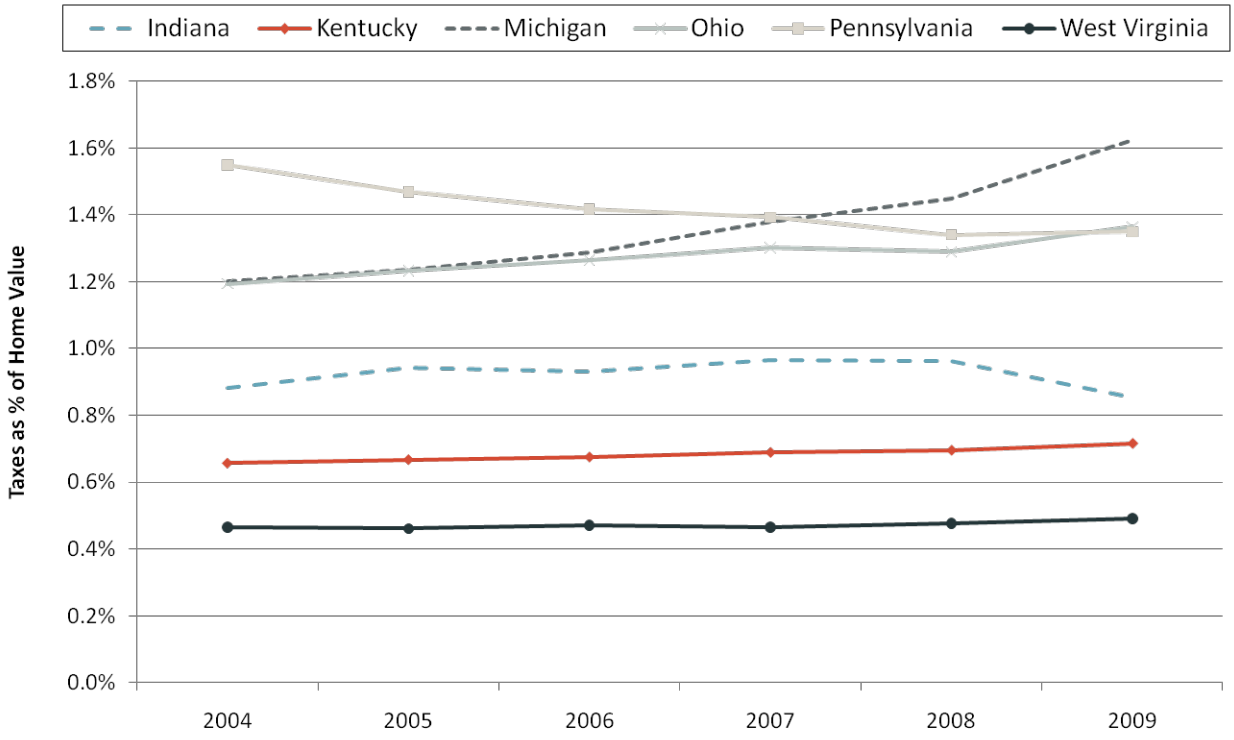
State Fiscal Stress Grows with Property Tax Reimbursements

Base narrowing also pressures state finances, since the state is financing the property tax replacement grants. State stress from eliminating tangible personal property taxation should decline during coming years since some reimbursements are fixed, so state revenues available for other purposes will increase.

The Relative Tax Burden is Changed Between Businesses and Households

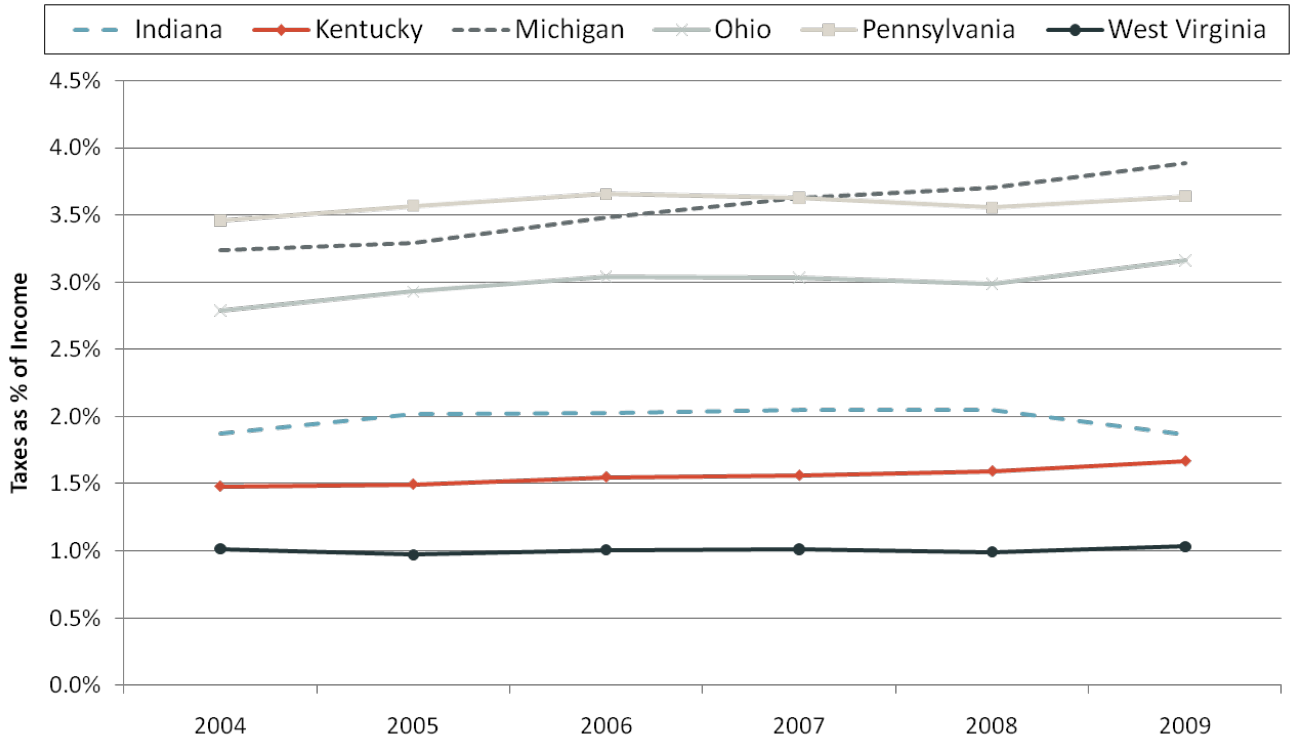
The various base changes also shift the initial relative tax burden first from households to businesses, through the household credits and tax reduction factors, and then from businesses to households, with elimination of tangible personal property taxation. Households have certainly seen their tax burdens rise since H.B. 66. Figure 27 illustrates that property taxes have risen relative to home values, and Figure 28 evidences that property taxes have also gone up relative to household median income. Notice that household property tax burdens are approximately in the middle of neighboring states.

Figure 27: Taxes as Percentage of Home Value



Source: The Tax Foundation.

Figure 28: Taxes as Percentage of Income



Source: The Tax Foundation.

Nonetheless, households experience lower tax burdens than businesses. The Minnesota Taxpayers Association[102] prepares an annual analysis of business property tax burdens. The 2009 study shows that classification of real property raises the business tax burden relative to households in all but about 10 states. Ohio's tendency to tax businesses more heavily than households, arising from the tax reduction factors and access to credits for households but not businesses, is ranked as 26th highest among states. Indiana, West Virginia, Pennsylvania, and Michigan all tax businesses relatively more heavily than Ohio. Kentucky taxes businesses lower than households. Ohio business tax burdens are not high relative to the rest of the U.S. when all property tax bases are considered. The Minnesota study indicates that commercial business

[102] http://www.lincolninst.edu/subcenters/significant-features-property-tax/upload/sources/ContentPages/documents/Pay-2009-PT-Report-MN-FINAL.PDF

taxes in Columbus are directly in the middle of urban taxes in all states.[103] Ohio industrial taxes are lower, lying in the bottom third of urban cities.

How base narrowing has affected the relative tax burdens over the longer term is difficult to judge because property is being revalued and tax rates are changing, but it appears that the tax has been shifted relatively more to households. Household credits are currently valued at approximately $850 million and the tax on public utility personal and tangible personal property was a combined $2.5 billion in 2004[104] (before the phase out of tangible personal property) indicating that the relative savings were larger for businesses. Of course, final incidence of taxes will see much of the business tax burden shifted to Ohio consumers, business owners, or workers.

Ohio tax policy has generally moved in a good direction by eliminating taxation of business personal property. Businesses should pay taxes because they benefit from public services, but this does not mean that business taxes should be used to subsidize services delivered to households. This principle provides a good framework for thinking about business tax burdens but fails to provide clear guidance on appropriate levels of business tax liabilities, since the benefits businesses receive from many public services, such as local education and libraries, are difficult to quantify. In terms of long term policy, there are advantages to Ohio taxing households directly rather than indirectly through business because of the potential distorting effects of the property tax on business behavior. For example, taxes initially incident on business (in excess of the value of public services) can cause firms to choose locations in low tax jurisdictions (either across jurisdictions in Ohio or across state lines). Taxes on households are less likely to cause people to move across state lines (though they may influence where people live within a state) both because households are likely less mobile and because the services are focused more on households.

Ohio must be careful to avoid shifting tax burdens back and forth; first cutting household tax burdens, then cutting business tax burdens to bring balance, and then starting the process again (this practice has happened in other states, such as South Carolina). The net outcome is a much narrower property tax base that reinforces the tendency to rely on alternative tax sources and could lead to underprovision of local services. Further, differential effective tax rates will result and alter how property is used. For example, the 2.5 percent tax credit and the homeowners' credit encourage homeownership as they impose relatively greater taxes on rental property. In addition, rental property is treated as business property for tax purposes, so the classification of business property increases tax burdens for renters even

[103] A large city in each state is chosen for this analysis.
[104] http://tax.ohio.gov/divisions/tax_analysis/tax_data_series/tangible_personal_property/pd30/pd30cy04.stm

more relative to homeowners. Research around the country has demonstrated that differential taxation has real effects on household behavior.[105]

[105] See John Deskins and William Fox, "Measuring Behavioral Effects of Property Taxes," in *Challenging the Conventional Wisdom on the Property Tax*, edited by Jorge Martinez, Lincoln Institute of Land Policy, 2010.

APPENDIX 1

Appropriate Measure of State Tax Burdens

Some controversy exists about the best ways to measure state tax burdens, particularly for cross-state comparisons, but also for evaluating Ohio's taxes over time. Agreement generally exists that a baseline is necessary for comparison due to variation in the size of state economies. The burden of taxes can only be seen relative to some standard that accounts for this difference. Population and a measure of the state economy, which is normally measured with either state personal income or state gross domestic product (GDP) are the alternatives usually considered.

Different perspectives exist over how to measure both taxes and the baseline for comparison. We believe that taxes compared with personal income as prepared by the Bureau of Economic Analysis are the best measure for our purposes, though we also report taxes per person. We believe it is generally most instructive to compare combined state and local tax liabilities when analyzing tax burdens across states (as was done above) because of the significant differences that exist between states in the relative responsibilities performed at each level of government. States also differ in the degree to which they want to collect taxes and redistribute revenues to local governments through grants. Indeed, states provide local governments the authority to raise revenues, so it is difficult to completely separate the two levels of government. Comparisons over time of Ohio state government or Ohio local government are much more meaningful than cross-state comparisons, since changes in responsibilities or grant programs are less frequent within a state.

Several different ways can be identified for measuring tax burdens, but for several reasons we strongly prefer using tax data as defined and reported by the U.S. Bureau of the Census. The Tax Foundation has been a visible proponent of different measures, particularly in Ohio. We also prefer personal income as the baseline for the base from which taxes are paid. One advantage of this preference is that it was also adopted by the Federation of Tax Administrators (FTA) and is available on its website.[106] FTA calculates tax burdens by dividing the tax revenues identified by the U.S. Bureau of the Census by personal income, which is developed by the Bureau of Economic Analysis. FTA also measures tax burdens by dividing tax revenue by population, which is also developed by the U.S. Bureau of the Census. A key advantage of relying on these data is that they have been measured by objective data collection agencies of the U.S. government and are broadly used and accepted for many purposes. It is

[106] See http://www.taxadmin.org/fta/rate/burden.html. FTA is the national association of state departments of taxation.

certainly possible to disagree with some Census decisions, such as their decision that lottery earnings and tolls are not taxes (though we generally view the Census decisions as reasonable). But, we believe it is best not to pick and choose which items should be included or excluded from the federal definitions because it opens the analysis to criticism that biases are included in the decisions. Further, consensus does not exist on adjustments that should be made in the classification of revenue. A similar argument can be made for using personal income. It is broadly available and painstakingly developed by the people who prepare the National Income and Product Accounts for the U.S. states and counties. Adjusting these data requires making a series of assumptions and allocating various potential categories across states. The data are often not available for making adjustments, so a set of allocation assumptions and others must be used, resulting in a different, but not generally accepted, measure of income.[107]

A recent Tax Foundation paper highlights a different perspective on measuring tax liabilities in Ohio.[108] The Tax Foundation argues for different measures of taxation and income than those that are used by FTA, and they have been adopted by many others.[109] Generally, these involve adding and subtracting items from the definitions of personal income and taxes that were developed by the federal data collection agencies. As described in the previous paragraph, we believe the preferred approach is to accept measures developed for objective purposes.

Perhaps more important, the Tax Foundation has a different purpose than ours for the data. Its intent is to measure the taxes paid by Ohio's (and other states') residents, whether imposed by the State of Ohio or exported to Ohio from other states. The estimates are prepared using a wide set of assumptions about who actually pays taxes (the tax incidence). The tax liability for Ohio residents is estimated using these assumptions to account for all cross-state tax exporting, both into and out of Ohio. General agreement does not exist on the incidence of many taxes, so very different assumptions could be made, and these could lead to very different results. The Tax Foundation paper describing the methodology includes tables where the results of alternative assumptions can be reported, but these parts of several tables are generally left blank. Even more important, *our purpose* is to analyze Ohio tax policy. This can only be done by examining the taxes under Ohio's control, not all taxes paid by Ohioans, many of which are determined by other states and do not depend on Ohio policy. It is

[107] For example, the Tax Foundation includes realized capital gains but not unrealized gains in its measure of income, presumably because the latter is difficult to measure. But, the latter is likely much greater in magnitude.

[108] See Mark Robyn and Rob Shrum, "Wishful Thinking About Tax Burdens in Ohio," Tax Foundation, Fiscal Fact No, 220, April 7, 2010.

[109] The Tax Foundation website directs the reader to a 2008 report for understanding of the methodology. The report is not fully complete as available on the website (10/5/10) but the methodology is generally clear. See http://www.taxfoundation.org/files/wp4.pdf for Gerald Prante, "Tax Foundation State and Local Tax Burden Estimates for 2008: An In-Depth Analysis and Methodological Overview," Tax Foundation Working Paper No. 4, August 7, 2008.

appropriate for this purpose to use only taxes levied by Ohio and not the taxes levied by other states, even if some of the taxes are shifted to or from Ohio residents. As a result, we rely on the comparisons made by FTA in this report.