
Financing Pennsylvania's Public Sector after The Federal Tax Cuts and Jobs Act of 2017

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1. INTRODUCTION

Chairman Kampf and members of the Select Subcommittee, I would like to thank you for the opportunity to testify this morning about Pennsylvania's general fiscal position among the states, and the fiscal implications for Pennsylvania of recent federal tax law changes, *The Tax Cuts and Jobs Act of 2017*.² I would like to thank the Pennsylvania House for the endorsement of my efforts a little over four years ago to level the playing field between internet and Pennsylvania bricks and mortar vendors. Pennsylvania House Resolution 571 which passed the House Floor on December 13, 2013 by a vote of 189 Yeas, 10 Nays and 3 Present, and which urged the US Congress to take the same advice you took on the matter of internet taxation, was quite gratifying. I continue to hope that Congress will actually do something along the lines that happened here.

Before turning to my remarks, I would like to give you some context about what I bring to my observations this morning about the fiscal position of Pennsylvania among the states, and how recent federal tax law change might impact our financial position. The first context is my background, and the second context is a general normative framework or set of goals one can use to evaluate a system of public finance and spending, and also some empirical information about aspects of Pennsylvania's system of state and local government.

1.1 Some Background Information about me

I am a native of Ohio, educated in the public schools of suburban Cleveland, and the public Universities of Michigan (AB Economics, Ann Arbor) and Wisconsin (Phd Economics, Madison), and describe myself as somebody who understands current federal, state, and local tax law and why (and why not) elected officials might take it upon themselves to change current law. My wife, Celeste, and I have been in SW Pennsylvania for better than 35 years, and we are Steelers, Pirates, and Penguin fans, as are our three grown children.

With respect to my professional background, at the federal level, I have done such things, while at the US Treasury and Staff of the Joint Tax Committee of the US Congress, as the design and enactment of: federal block grants to all state and local governments in the US via General Revenue Sharing, the federal bailout of New York City, the refundable earned income tax credit, and the New Jobs Tax Credit which reduced the national unemployment rate then by about .8% at a cost/job of about \$17,000. At the state level, I have been directly involved in helping other states solve their fiscal problems. In West Virginia (1984-5) I designed and helped with the enactment of the elimination of their cascading gross receipts taxes; this past summer they re-enacted it, perhaps demonstrating that sometimes old, bad tax habits can be reborn out of fiscal necessity. In the State of Washington (1986/7), I planned and devised their migration from cascading gross receipts taxation to income taxes were the US Supreme Court to find Washington's gross receipts taxes entirely unconstitutional. Something like 60% of their biennial budget was at risk due to the constitutional challenge.³

² This written testimony seeks to address the two matters of Pennsylvania's relative position among the states and the implications of the *Tax Cuts and Jobs Creation Act of 2017*, and also to present related information which I presented on November 15, 2017 to the House Select Committee on Tax Modernization and Reform. I distinguish sections with new materials with an *.

For the November testimony,

see http://www.andrew.cmu.edu/user/rs9f/rpstrauss_written_testimony_select_committee_11_12_2017.pdf, and the streaming video of the November 15 hearing at: <https://cmu.box.com/s/sg8afkc3rz9g76ifarje1792rwwprfx>

³Ultimately the US Supreme Court reached a narrow decision in favor of the plaintiffs, without commenting on the necessity for a refund. The Washington State legislature immediately amended their tax code to provide a constitutional system of tax and credits with the result that the slightly revised system of cascading gross receipts taxes was no longer discriminatory and therefore constitutional. Thus Washington remains a state without an individual or business income tax.

Here in Pennsylvania, I have been involved in two major state tax reform efforts: the 1979-1981 Thornburgh/Cyert Pennsylvania Tax Commission (March, 1981).⁴ I directed the research and drafted the Final Report that was unanimously adopted by Commission members. In 1987, I was appointed to serve as a voting member of Governor Casey's Local Tax Reform Commission after both Governor Casey and Senator Jack Stauffer suffered heart attacks and consequently underwent emergency cardiac surgery during a rather contentious budget. During that reform effort I not only was a voting member, but also directed the research and drafted the October, 1987 Report⁵ and minority and majority opinions.

As part of what I hope to convince you this morning is what you might spend some time reading, I suggest you read both reports, as I think they contain lots of solid thinking about how to modernize and reform our state and local tax system. Moreover, upon reflection of what was suggested, and what has been changed over the years, there has been a fair bit of progress.

In addition to working on state level tax matters, I have also researched, and opined publicly and privately about the City of Pittsburgh's finances, including the matters of whether or not to sell or lease the assets of the Pittsburgh Parking Authority, whether or not to sell or lease the assets of the Pittsburgh Water and Sewer Authority, and periodically been asked to take a close look at Philadelphia's real property assessment system. I have been involved in several major studies for the Pennsylvania State Board of Education which focused on the importance of teacher content knowledge relative to student achievement,⁶ and most recently studied school safety and student learning outcomes across the state and in Philadelphia and Pittsburgh.⁷

1.2 Goals and Implementation Mechanisms of a Modern Public Budget and its Financing System*

1.2.1 Goals of a Good Tax System*

The 1981 *Final Report of the Pennsylvania Tax Commission* recommended by consensus that Pennsylvania's system of state and local taxation system seek to achieve a set of six goals. I repeat and explain them below as a good multidimensional lens through which one might think about any tax system. Also, I shall expand a bit on these normative principles by discussing the linkage between taxes and desired spending through the public expenditure identity which requires that public spending be financed through public resources. The 1981 Goals and Criteria for Pennsylvania's Tax System were stated as follows:⁸

- A. Simplicity: taxes should be readily understood by taxpayers and tax administrators.

⁴ The 1981 *Report* can be found online at:

http://www.andrew.cmu.edu/user/rs9f/final_report_pa_tax_commission_March_1981.pdf

⁵ The *Final Report and Recommendations of the Local Tax Reform Commission* (October 30 , 1987) can be found online at:

http://www.andrew.cmu.edu/user/rs9f/www/casey_1987.pdf

⁶ My personal web page at Carnegie Mellon, www.Andrew.cmu.edu/user/rs9f/, is a full disclosure of what I have done in terms scholarship, public service, and my opinions over the years. Appendix 1 of this testimony contains a bibliography of things I have researched with Pennsylvania data as well as their hyperlinks.

⁷ When one looks at school safety incidents across the Commonwealth, and ignores whether or not an arrest was made in conjunction with a school safety incident, the pattern of reported violence, especially student assaults on staff, is quite troubling. See: http://www.andrew.cmu.edu/user/rs9f/rpstrauss_school_safety_3_1_2016.pdf

⁸ *Final Report of the Pennsylvania Tax Commission* (Harrisburg, PA, March, 1981), page 1.

Comment: this can be measured by the amount of time and money taken to comply with the tax law, the readability of tax return instructions and tax laws, and the extent of litigation about particular tax law provisions.

- B. Certainty: taxes should have known and predictable liabilities over time, and not be the subject of constant debate and appeal by taxpayers and/or administrators.
- C. Equity: taxes should treat taxpayers in the same economic circumstance in the same way, and provide that taxpayers with differing abilities to pay should pay different amounts consistent with the distributional objectives of the state.

Comment: The Uniformity Clause of the Pennsylvania constitution requires such identical tax treatment, with exceptions for the poor and the elderly, within each taxing jurisdiction.⁹

- D. Economy of Administration: taxes should be inexpensive to administer. It is often said that any tax which costs more than 2% of revenues raised is unduly expensive to administer for taxpayers and tax collectors.
- E. Economic Neutrality: taxes should not unintentionally alter consumer, worker, or producer choices. To the extent possible, social and economic policy objectives should be met through explicit expenditure policies rather than through the use of tax expenditures. When tax expenditures are socially desirable, they should be justified in relation to their benefits and costs, and periodically reviewed and evaluated.
- F. Revenue Adequacy: the overall tax system should provide reasonable growth in revenues so that a constant set of tax rates are adequate to finance expenditure needs of state and local government.

Comment: a corollary of this goal, for governmental units, subject to a proportional tax system and balanced budget requirements, is that the tax system and rates should generate sufficient revenues over the business cycle to support adequate reserve revenues. Best practice recommended by the Municipal Finance Officers Association for local governments is 10% of annual spending.

1.2.2 Two Further Normative Principles to Consider: Congruity of Benefit and Financing Periods, and Financial Transparency*

As my remarks are before a subcommittee of the Pennsylvania House Appropriations Committee with primary responsibilities for the Commonwealth's spending, it may be helpful to state the linkage between taxation results and the rest of the budget. The typical accounting identity for a government's public expenditures subject to a balanced budget requirement over a 12 month accounting period, either calendar or fiscal, looks like:

$$\text{Expenditures} = \text{Taxes} + \text{Fees} + \text{Transfers from Other Governments} + \Delta \text{ Net Worth} \quad (1)$$

or:

$$\text{Taxes} = \text{Expenditures} - \text{Fees} - \text{Transfers from other Governments} - \Delta \text{ Net Worth} \quad (1a)$$

State budget laws often differentiate operating from capital spending for equation (1). The last term in (1),

⁹ See Section 3.5 below for an analysis of Pennsylvania's local tax structure along with empirical information about the quality (or lack thereof) of local real estate assessments.

Δ Net Worth, reflects the fact that a government, like a person or business, has a balance sheet, and adjusts it through various capital transactions which can include the sale of bonds and their use to acquire assets or retire existing debt. Also, sale of assets can generate cash inflows. It is useful to recall that financial reporting and accounting principles for governments are different than for businesses in that, especially at the state and local level, monies are kept in various *funds*, and there can be differences in the fiscal period of various funds as well as differences in accounting rules (cash, accrual, modified accrual) with the result that one government may have far more flexibility than, say, a publicly traded domestic corporation. In Pennsylvania, local governments are not required by state law to follow Generally Accepted Accounting Principles (GAAP), and only do so when required by the capital market. Also, in Pennsylvania, local controllers are not independent since they both keep the books and write the checks; as a result an independent audit can only be done through retention of a third party auditor.

Good or best practice implementation of the above expenditure equation is through the following normative principle:

G. The financing period of a public service should be matched to the benefit period of the public service.

Comment: a corollary of this principle is that bond or debt finance is not appropriate for current operations expenditure activities, and that long-lived public services like a limited access highway or turnpike should be financed by debt whose maturity is the same length as the useful life of a limited access highway. So, if a limited highway lasts 30 years with typical maintenance, then using bonds with a maturity of 30 years is sensible. Of course, paying off the bonds must be in the design, and this can be accomplished with tolls.

A second corollary to this is *generational equity*—the notion that each generation of Pennsylvania’s population should pay its share of services which it benefits from. Technically, this means that the application of (1) should be such that the present value of each generation’s public service benefits should be financed by the present value of that generation’s taxes and fees. One can view Pennsylvania’s balanced budget requirement, and the prohibition on supporting local debt, or using debt to finance current operations, to be an attempt to implement principle G.

In a system of a state government and local governments which are created through constitutional provisions and the laws of municipal incorporation, the state’s constitution and state’s laws define what a governmental unit is, what the unit’s scope of spending responsibility is, and what the unit’s scope of taxing authority is in terms of the definition of the tax base[s] it is allowed to impose a tax on, and the range of tax rate[s] the unit, through a public vote of its legislative body. It is useful to define further what Taxes are in (1) above. They are, for any unit of government what is allowed to be used, a combination of a definition by law of the filing unit and the filing unit’s tax base, the definition by law of the tax rate, and the manner by which the tax rate is imposed or chosen by a governmental unit. Under the Pennsylvania Constitution, tax rates are imposed by elected bodies of the governmental unit, and at the local level the allowable increase in certain tax revenues can be limited by state law and subject to referendum or petition to a local judge, except for Home Rule jurisdictions and the City of Philadelphia which is enabled through the Sterling Act to devise its own tax structure without much state supervision. Basically, we have:

$$\text{Taxes} = \sum \text{Tax Base[s]} \times \text{tax rate[s]} \quad (2)$$

A prominent reason for this morning’s hearing has to do with how the federal Tax Cuts and Job Creation Act of 2017 will affect the expenditures of Pennsylvania through the Transfers component of (1), how these federal changes will reverberate directly on the definition of the Tax Base in (2), and how these federal changes will indirectly impact Pennsylvania through competitive pressures, as other states, especially our contiguous neighbors, also react to how the federal law changes impact (2). As we shall see in Section 2 below, I imagine the impact to

be relatively minor for Pennsylvania's personal (PIT), perhaps of some consequence for the corporate net income (CNI) tax, and negligible for Pennsylvania's Sales and Use Tax.

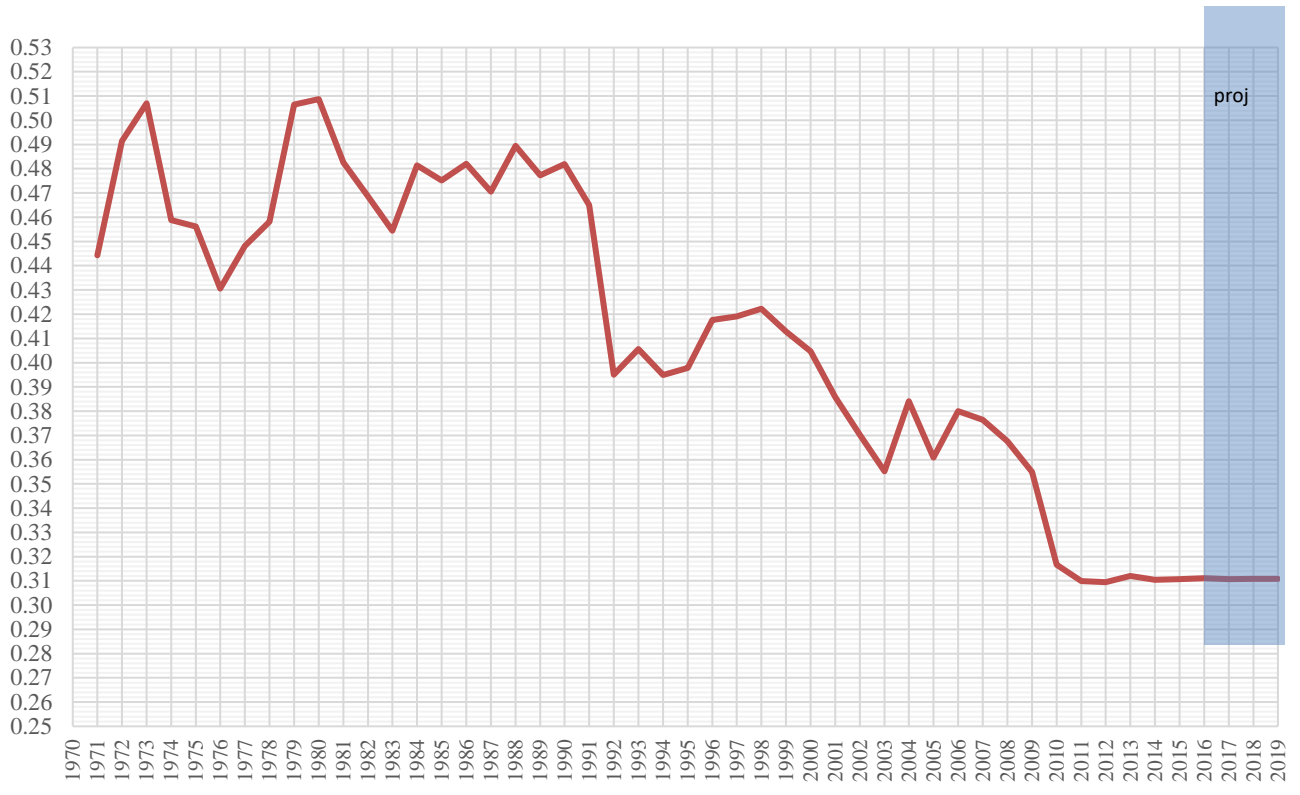
A second additional goal beyond Goals A-G above that warrants consideration involves the general desirability of enabling the public to know about the components of (1) or (1a) :

H: financial transparency: the measurement of the capital and operating activities of a state of state and local governments should be readably visible to the public to ensure the public trust and confidence in the honesty and probity of governmental actions.

Comment: Confidence in government and in our local tax system is generally provided through publicly visible, annual reporting of state and local governments. The Right to Know Law is in place to enable the interested to find out about details of governmental activity at little or no cost. Similarly, the local property tax rolls are publicly disclosed, and in some of Pennsylvania's more populous counties, assessed values and property taxes paid are publicly viewable on the Internet.

However as noted below, Pennsylvania like most states was forced in the 19th century to promise, after defaulting on its debt, to balance its budget in return for renewed access to capital markets. However, while access in one form or another has continued, it is worth noting that the extent to which Pennsylvania state government practices financial transparency has varied over the business cycle. Figure 1 compares the amount of the General Fund to the state's consolidated accounts as reported by the US Census Bureau's Governments Division across the period 1970 through 2016. As is evident, in 1973, 51% of overall state spending was through the General Fund; however, that proportion collapsed between 1990 and 1992 to 40%, and has been about 31% since 2011. Unlike other major states, Pennsylvania does not obligate its general purpose local governments (counties, cities, boroughs, townships) and local public authorities to follow Generally Accepted Accounting Principles (GAAP). Further, such local governments are controlled by row offices which keep the books as well as are expected to somehow audit the books with the result that none is independent. This arrangement has several side effects: it creates ongoing tensions between elected local executives, local legislative bodies, and elected controllers, and forces jurisdictions when they must be independently audited for, say, federal grant purposes or entry into the capital market, to outsource that audit responsibility to a private, for profit, third party.

Figure 1.1:
PA's Reported General Fund subject to PA Balanced Budget Requirement /
US Census Bureau Gov. Division's Estimate of PA's Consolidated State Budget
(CAFR)



1.2.3 Aligning the Nature of Taxation to Particular Public Services*

In addition to these six original goals from the 1981 Tax Reform Commission Report and the two additional ones I suggest above this morning, The 1981 Pennsylvania Tax Commission suggested that a tax must be justified by either one of two criteria: justified by the benefit principle of taxation or justified by the ability to pay principle of taxation. Under the former, taxes are used as pseudo prices to reflect what a particular class of taxpayers gets in the way of public services. The property tax is often pointed to as a benefit tax when used to support the costs of municipal services such as fire and police. An income or broadly-based consumption tax is usually pointed to as an ability to pay tax, and thought to most properly finance redistribution through the public budget.

Some examples about how to think about aligning method or type of finance with particular public services can be helpful in thinking about the sort of tax structure one might wish to design, *de novo*, or move towards over time. In working through the following framework, it is important to be clear about what one thinks the incidence effects are for various kinds of taxes and fees in Pennsylvania. I think it is reasonable to assume, as a first order of approximation, that Pennsylvania does *not* benefit from tourism the way Florida and Nevada do. That is, the reason that these two states do not have an income tax, but have quite heavy sales and use taxes is because a substantial portion of their sales and excise taxes are paid by temporary visitors to their states. Studies show, for example, that as much as 25% of the Florida sales tax is paid by non-residents.

To begin, let us consider in normative terms how to finance governmental outlays that are purely redistributive in character. That is, how should a state's commitment to provide a safety net via cash and in-kind transfers be financed for those who are unable, due to physical and mental infirmities to support themselves? The distinction between benefit and ability to pay taxes makes the argument that such redistribution should be paid out of income or broad-based taxes which do not require the poor to be taxed. The thought is that poor people should not be asked to support the costs of transfers to themselves. It is for this reason that federal Food Stamps obligates the states to exempt from state and local sales taxes any purchases for food by Food Stamp beneficiaries. If a state refuses to structure such an exemption, the Federal government will not provide Food Stamps to those eligible in that state. If one accepts this line of reasoning, then the next task is to identify those state and local expenditures and services which are intended to be redistributive, and work through what the attending personal income tax and/or sales tax rates should be. Besides taking care of the infirmed and those unable to work or take care of themselves, one might include the general budgets for health, education, and public transportation since most of these programs are income conditioned or their prices are intentionally subsidized to make them available for those who are poor. Obviously, how much to transfer and therefore to tax is ultimately a matter of altruism and politics.

Related to this alignment issue in the case of public redistribution and the utilization of ability to pay sorts of taxes is the assignment of such responsibilities to either state government and/or local governments, and the enablement of particular kinds of local taxing authority. Thus, if service delivery design concludes that local governments should be required to deliver public health services, which are known to become more expensive over time, then it follows that local governments should have access to a tax base which is elastic and grows over time to enable financing of the local public health services, and/or the state takes on some of the financing responsibilities and makes transfers to the local governments which are then serving as the state's agents or delivery mechanism of health services. Clarity on such matters is desirable but usually politically difficult.

At the other extreme, in terms of types of state and local services whose impact is primarily on the discretionary users of them, one winds up thinking about user fees. State and local services that fall into this category include limited access highways, to be financed through tolls, water and sewage systems and their use, to be financed through water and sewer charges, licenses for the right to hunt and fish, drive on public roads and so forth.

To give further granularity to what I call the "alignment" problem, consider the general classification of state and local spending which the US Bureau of the Census' Governments Division collects and reports about comparable data among the states. Table 1 is devised into a total spending column, and then amounts for state and local spending responsibilities. Keep in mind that the allocation between state and local governments in a functional spending area is nuanced. One can require through state statute that the entirety of a functional responsibility resides at the state level, but the implementation is either through a local state office, or a local government office which provides the state service and does so through state reimbursement of local outlays. Further variations on this include presumed local matching, or a required or presumed minimum local spending per unit out of own source monies. The reader is encouraged to think about what *proportion* of responsibility the state and its localities should have. I am not going to speculate about this as in many areas of public services in the Commonwealth, there continue to be vast differences of opinions. Consider the long-standing issue over court costs, or public education. It goes without saying that in the case of education there are states which pay very high, even 100% of local education costs, and others that pledge to pay, say 50%, but wind up paying only 35%. So working with Table 1 from a first principles perspective is a way both to think through the organization of state vs. local delivery, and to align spending to an appropriate method or type of finance. Filling out this Worksheet and then discussing what members of this Committee think is appropriate might be a useful, albeit difficult, exercise.

Table 1.1 Worksheet: Typical Classification of Public Spending: Entries would be Type of Financing: Fee (F), Income/ Sales Tax (IC), Property Tax (P), and State vs. Local Balance	Total	State	Local
Education services: Higher education			
Education Services: Elementary & Secondary			
Education Services: Vocational Education			
Libraries			
Safety Net: Public Welfare			
Safety Net: Public Hospitals			
Safety Net: Public Health			
Safety Net: Employment Security (UI,WC)			
Veterans			
Transportation: Highways			
Transportation: Local Roads			
Transportation: Air Transportation			
Transportation: Parking			
Transportation: Ports			
Public Safety: Police			
Public Safety: Fire			
Public Safety: Corrections			
Environment: Natural Resources			
Parks and Recreation			
Public Housing			
Sewer			
Solid Waste Management			
Governmental administration: Financial			
Governmental Administration: Judicial and legal			

1.3 What is Government in Pennsylvania? How many are there? *

Before working through where Pennsylvania stands among the states in terms of its tax structure, and how the *Tax Cuts and Job Creations Act of 2017* will impact it, it may be useful to step back and inquire just what entities are authorized to provide public services, and what entities are allowed to levy various kinds of taxes in Pennsylvania. This leads to an initial analysis of what I call the demography of governments. As the Census Bureau measures the number of governments, Pennsylvania had 4,898 in 2012. We are among the states number 3 in terms of the number of governments; we have more local governments than all but Illinois (6,964), and Texas (5,148). We also have more local governments than California (4,426) even though California has three times the population of Pennsylvania! As measured by the Census Bureau in 2012, Pennsylvania's governmental units are composed of: 66 county governments, 1,015 municipalities, 1,546 townships, 1,756 special districts, and 514 school districts. All but special districts in Pennsylvania are enabled to levy taxes of various sorts. See Table 1.2 (below). This count does not include all our local public authorities which are numerous, and who do more local borrowing than visible, local governments than elsewhere in the US.

Table 1.2		2012	2007	2002	1997	Rank	State	2012	2007	2002	1997
	US	90,107	89,527	87,576	87,504	26	MT	1,266	1,274	1,128	1,145
1	IL	6,964	6,995	6,904	6,836	27	AL	1,209	1,186	1,172	1,132
2	TX	5,148	4,836	4,785	4,701	28	ID	1,169	1,241	1,159	1,148
3	PA	4,898	4,872	5,032	5,071	29	MS	984	1,001	1,001	937
4	CA	4,426	4,345	4,410	4,608	30	NC	974	964	961	953
5	OH	3,843	3,703	3,637	3,598	31	TN	917	929	931	941
6	KA	3,827	3,932	3,888	3,951	32	NM	864	864	859	882
7	MO	3,769	3,724	3,423	3,417	33	MS	858	862	842	862
8	MN	3,673	3,527	3,483	3,502	34	MA	841	851	827	833
9	NY	3,454	3,404	3,421	3,414	35	WY	806	727	723	655
10	WI	3,129	3,121	3,049	3,060	36	VT	739	734	734	692
11	CO	2,906	2,417	1,929	1,870	37	SC	679	699	702	717
12	MI	2,876	2,894	2,805	2,776	38	AZ	675	646	639	638
13	IN	2,710	3,232	3,086	3,199	39	WV	660	664	687	705
14	ND	2,686	2,700	2,736	2,759	40	CN	644	650	581	584
15	NE	2,582	2,660	2,792	2,895	41	UT	623	600	606	684
16	SD	1,984	1,984	1,867	1,811	42	NH	542	546	560	576
17	IO	1,948	1,955	1,976	1,877	43	LA	530	527	474	468
18	WA	1,901	1,846	1,788	1,813	44	VA	519	512	522	484
19	OK	1,853	1,881	1,799	1,800	45	MD	348	257	266	421
20	FL	1,651	1,624	1,192	1,082	46	DE	340	339	340	337
21	AK	1,557	1,549	1,589	1,517	47	NV	192	199	211	206
22	OR	1,543	1,547	1,440	1,494	48	AS	178	178	176	176
23	GA	1,379	1,440	1,449	1,345	49	RI	134	135	119	120
24	NJ	1,345	1,384	1,413	1,422	50	HI	22	20	20	20
25	KY	1,339	1,347	1,440	1,367	51	DC	2	2	2	2

1.4 Organization of Remarks

Section 2 below responds to your inquiry about my views about Pennsylvania's fiscal situation, where we are in terms of taxation among the states, and what the implications are for Pennsylvania of the *Tax Cuts and Jobs Act of 2017*. The first part of Section 2, Section 2.1, examines Pennsylvania's tax structure among the states, and among its contiguous neighbors in terms of personal, sales, and corporate net income tax rates and amounts standardized by population. The second part of Section 2, Section 2.2, analyzes how the *Tax Cuts and Job Creation Act of 2017* might impact Pennsylvania's individual and corporate net income taxes.

Section 3 replicates my November 15 testimony before the Pennsylvania Select Committee on Tax Modernization and Policy; it provides observations about the history of Pennsylvania's state and local tax structure, and then six points about Pennsylvania's state and local tax structure. In Section 4 I summarize what I think are the most salient points, and Section 5 contains a bibliography which reports references used here along with many of my papers over the years that have focused on various aspects of Pennsylvania's state and local taxes. Appendix 1 contains more detailed county by county tables that substantiate statements in the body of my testimony.

Since demography ultimately drives the public expenditure budget, and therefore the amount of taxes to be levied to finance needed or desired public services, allow me to briefly recollect a few numbers about our population which informs our future. In 1790, Pennsylvania's population was 11% of the US population, while by 1980 it was only 5%. By 2016 it fell further to 4% of the US population. From 2000 to 2016, our state population only grew from 12.2 million to 12.7 million and our share of the US population fell from 4.1% to 4.0%. These demographic facts suggest that, in working through practical tax modernization and reform ideas, more attention rather than less will be required to think through what competing states are doing whose growing populations are attracted by more enticing economic opportunities. This necessarily raises questions of expenditure design and efficacy which is likely to be a novel set of questions the appropriations process.

Another way to think about this is to remember that the first reason we tax ourselves is to support the costs of public services. As Pennsylvania's economy changes and becomes more competitive because of regional, national, and international pressures, our businesses and families increasingly find themselves as price or wage takers rather than price and wage setters with the result that they become more sensitive about both the level and nature of taxes they pay, but also more sensitive to the *value proposition* between taxes paid and the quantity and quality of state and local services provided.

2. PENNSYLVANIA'S FISCAL POSITION, PENNSYLVANIA'S PLACE AMONG THE STATES, AND THE FEDERAL TAX CUTS AND JOBS ACT*

2.1 Introduction

While the *Tax Cuts and Jobs Act of 2017* (HR 1)¹⁰ is only a few weeks old, for a variety of reasons, it has caught the attention of state and local governments and their legislative bodies throughout the US.

There are several reasons for this.

First, since most tax planning is driven by marginal tax rate considerations, and federal individual and corporate marginal tax rates have historically been a multiple of state and local tax rates, states and their local governments are now in a reactive position to the federal tax law changes of December, 2017. When the Internal Revenue Code changes the tax treatment of an activity, such as the elimination of the State and Local Tax Deduction (SALT) that had long been in place, it follows that state and local taxes,

¹⁰ The full text of the statute and statement of managers which is over 1,000 pages, including revenue estimates, may be found at: <http://docs.house.gov/billsthisweek/20171218/CRPT-115HRPT-466.pdf>

per se, will be less favored activities since their costs cannot be deducted as in the past by federal individual income tax payers. Lowered federal tax rates could of course offset this result, but that becomes a close, numerical calculation. Similarly, when federal marginal rates are lowered, and the amount of the standard deduction increased, fewer taxpayers will find it advantageous to deduct limited property taxes or mortgage interest.

There are news reports of governors and mayors in high tax states thinking about changing the way they finance their state and local governments. Speculations abound about how governments may establish charitable trusts that might receive in 2018 and thereafter charitable donations which might be construed as different than previously deducted taxes since HR-1 raised the federal limit on cash donations to charitable organizations from 50% of the allowable base to 60%. Even if the IRS issues guidance about such attempts to circumvent the \$10,000 limit on property tax deductions, questions can arise about the near-term ability of the IRS to enforce the new limit.

States with above average levels of tax rates and taxes, for example California and New York as described below, now will find that their payment will no longer be softened by their deductibility.

Second, despite the fact that the US Constitution contemplates state and local autonomy in their choice of how to raise taxes, in fact there is vast intermingling of federal and state tax laws, regulations, and practice. States and major localities find it to their advantage to share confidential tax return information with the Internal Revenue Service through bilateral exchange agreements in order to double check what shows up on state personal income tax returns compared to what shows up on federal personal income tax returns. This document checking is mirrored by the IRS sharing of audit findings which enables states and major localities to benefit from federal audit and collection activities. The administration of wage tax withholding is a cooperative effort between the federal government, the states and major localities as well as with major employer and payroll administration groups.

States vary in their reliance on the provisions in the Internal Revenue Code; some automatically adopt Congressional amendments to Title XXVI of the US Code, while others periodically take positive actions to update their reliance on new federal provisions. Pennsylvania is largely decoupled from the federal individual tax, *per se*, since it does **not** begin the calculation of state taxable income with reference to federal Adjusted Gross Income; however, there may be some linkages in the business tax area as discussed below.

Two kinds of impacts are of interest: direct interactions which result from federal tax concepts automatically flowing through to Pennsylvania's personal and business income tax system, indirect interactions which might affect Pennsylvania's revenues because of behavioral changes by Pennsylvania taxpayers to changed federal tax treatment.

This section of my testimony is devoted to comparing Pennsylvania's taxes with other states, and to analyzing the likely effects of recent federal tax law changes on Pennsylvania. This is a complicated set of subjects, and this part of my testimony is organized into several parts. In Section 2.2, I compare Pennsylvania's tax *rates* on personal, and corporate net income, and sales and use taxes by looking across the US, as well as making comparisons with Pennsylvania's neighboring states. Since state tax rates do not tell the complete story, because tax base definitions vary across the states, as do the allocation of state vs. local spending responsibilities and allowable tax bases, Section 2.3 examines taxation from a dollar

and per-capita dollar perspective. Section 2.3.1 displays details of Pennsylvania's state and local governments revenues in 2015; this provides a lens through which subsequent state by state comparisons with Pennsylvania's are made. This is accomplished by dividing various state and local revenue totals by state population. Then comparisons of par-capita taxes are made across the states and with neighboring states. Section 2.4 presents an analysis of how the recently enacted federal Tax Cuts and Jobs Act might impact Pennsylvania, and also impact neighboring states. This is accomplished first by sketching out the components of the PIT and CNI in Section 2.4.1, and identifying in Section 2.4 what Congress thinks are the fiscal impacts of the Tax Cuts and Jobs Act of 2017 over the 10 year budget window. Recall that for the purposes of accomplishing enactment, Congress passed this Act to last for 10 years in order to avoid the risk of cloture being invoked in the US Senate. Section 2.4.3 examines the matter of federal *itemizers* across the states, and also in terms of Pennsylvania's neighboring states.

2.2 Comparisons of Pennsylvania's State Tax Rates: Personal Income, Corporate Net Income and Sales and Use Tax Rates

In this section I compare the rate of tax on the three most prevalent state level taxes: personal income tax, corporate net income tax, and sales and use tax. The tax rates are displayed in three ways: 1) by highest tax rate by state, ordered by the state's name (Panel A); 2) by highest tax rate by state, (Panel B), and 3) Pennsylvania is compared to its neighboring states.

2.2.1 State Personal Income Tax (PIT) Rates in 2017

Table 2.1A and 2.1B, derived from the Federation of Tax Administrators web site, shows the bottom and top tax rates on individual income. Alaska, Florida, Nevada, South Dakota, Washington State and Wyoming do not tax individual income at all, while New Hampshire and Tennessee essentially tax only some capital income (dividends and interest). Pennsylvania's tax rate at 3.07% is about¹¹ 43rd from the highest taxing state, which is California at 12.3%. Compared to the six states which touch Pennsylvania's borders, Pennsylvania's 3.07% state PIT tax rate is the lowest, while New Jersey's state PIT tax rate at 8.97% is the highest. Ohio, with a top PIT tax rate of 4.997% is closest to Pennsylvania's 3.07% PIT tax rate. (See Table 2.2 below). Note that for residents of New York City, the combined state and local PIT rates are the highest.

¹¹ Whether or not to rank states taxing only capital income, at higher tax rates than Pennsylvania's 3.07% changes slightly Pennsylvania's ranking. There are other aspects of Pennsylvania's PIT which differentiate from many other states' personal income taxes: Pennsylvania does not accord personal exemptions, is at a flat rate, treats capital gains as ordinary income, and does not allow business losses to flow through to reduce wage and salary and other positive sources of income.

Table 2.1 A List of States and Lowest, Top PIT Rates for 2017			Table 2.1 B and Ranked from Highest Top Rate to Lowest Top Rate for 2017			
State	Bottom Rate	Top Rate	Rank	State	Bottom Rate	Top Rate
Alabama	2.00%	5.000%	1	California	1.000%	12.300%
Alaska	0.00%	0.000%	2	Oregon	5.000%	9.900%
Arizona	2.59%	4.540%	3	Minnesota	5.350%	9.850%
Arkansas	0.90%	6.900%	4	Iowa	3.600%	8.980%
California	1.00%	12.300%	5	New Jersey	1.400%	8.970%
Colorado	4.63%	4.630%	6	Vermont	3.550%	8.950%
Connecticut	3.00%	6.990%	7	New York	4.000%	8.820%
Delaware	0.00%	6.600%	8	Hawaii	1.400%	8.250%
DC	4.00%	6.901%	9	Wisconsin	4.000%	7.650%
Florida	0.00%	0.000%	10	Idaho	1.600%	7.400%
Georgia	1.00%	6.000%	11	Maine	5.800%	7.150%
Hawaii	1.40%	8.250%	12	South Carolina	0.000%	7.000%
Idaho	1.60%	7.400%	13	Connecticut	3.000%	6.990%
Illinois	4.95%	4.950%	14	DC	4.000%	6.901%
Indiana	3.23%	3.230%	15	Arkansas	0.900%	6.900%
Iowa	3.60%	8.980%	16	Montana	1.000%	6.900%
Kansas	2.90%	5.200%	17	Nebraska	2.460%	6.840%
Kentucky	2.00%	6.000%	18	Delaware	0.000%	6.600%
Louisiana	2.00%	6.000%	19	West Virginia	3.000%	6.500%
Maine	5.80%	7.150%	20	Georgia	1.000%	6.000%
Maryland	2.00%	5.750%	21	Kentucky	2.000%	6.000%
Massachusetts	5.10%	5.100%	22	Louisiana	2.000%	6.000%
Michigan	4.25%	4.250%	23	Missouri	1.500%	6.000%
Minnesota	5.35%	9.850%	24	Rhode Island	3.750%	5.990%
Mississippi	3.00%	5.000%	25	Maryland	2.000%	5.750%
Missouri	1.50%	6.000%	26	Virginia	2.000%	5.750%
Montana	1.00%	6.900%	27	North Carolina	5.490%	5.490%
Nebraska	2.46%	6.840%	28	Kansas	2.900%	5.200%
Nevada	0.00%	0.000%	29	Massachusetts	5.100%	5.100%
N H (div+interest)	5.00%	5.00%	30	NH (div+interest)	5.000%	5.000%
New Jersey	1.40%	8.970%	31	Alabama	2.000%	5.000%
New Mexico	1.70%	4.900%	32	Mississippi	3.000%	5.000%
New York	4.00%	8.820%	33	Oklahoma	0.500%	5.000%
North Carolina	5.49%	5.490%	34	Utah	5.000%	5.000%
North Dakota	1.00%	2.900%	35	Ohio	0.000%	4.997%
Ohio	0.00%	4.997%	36	Illinois	4.950%	4.950%
Oklahoma	0.50%	5.000%	37	New Mexico	1.700%	4.900%
Oregon	5.00%	9.900%	38	Colorado	4.630%	4.630%
Pennsylvania	3.07%	3.070%	39	Arizona	2.590%	4.540%
Rhode Island	3.75%	5.990%	40	Michigan	4.250%	4.250%
South Carolina	0.00%	7.000%	41	Tennessee (dividends, interest)	4.000%	4.000%
South Dakota	0.00%	0.000%	42	Indiana	3.230%	3.230%
Tennessee (dividends, interest)	4.00%	4.000%	43	Pennsylvania	3.070%	3.070%
Texas	0.00%	0.000%	44	North Dakota	1.000%	2.900%

Utah	5.00%	5.000%	45	Alaska	0.000%	0.000%
Vermont	3.55%	8.950%	46	Florida	0.000%	0.000%
Virginia	2.00%	5.750%	47	Nevada	0.000%	0.000%
Washington	0.00%	0.000%	48	South Dakota	0.000%	0.000%
West Virginia	3.00%	6.500%	49	Texas	0.000%	0.000%
Wisconsin	4.00%	7.650%	50	Washington	0.000%	0.000%
Wyoming	0.00%	0.000%	51	Wyoming	0.000%	0.000%

Table 2.2			
Pennsylvania and Contiguous States Ranked by Highest 2017 PIT Tax Rate			
States	Bottom	Top	Rank
New Jersey	1.400%	8.970%	1
New York	4.000%	8.820%	2
Delaware	0.000%	6.600%	3
West Virginia	3.000%	6.500%	4
Maryland	2.000%	5.750%	5
Ohio	0.000%	4.997%	6
Pennsylvania	3.070%	3.070%	7

2.2.2 State Corporate Net Income (CNI) Tax Rates in 2017

Table 2.3A displays CNI tax rates, again derived from the Federation of Tax Administrators web site, in terms of lowest and top 2017 tax rate; Table 2.3B orders or ranks the states from highest tax rate (Iowa at 12%), to lowest; Pennsylvania’s CNI tax rate of 9.99% is the second highest in the US. Mitigating Pennsylvania’s very high tax rate, compared to others across the US, are a number of complex considerations. First, Pennsylvania’s CNI filing unit is not consolidated as contrasted to California which continues to require filing on a “unitary” basis. Thus, only those parts of a multi-state business which do business in Pennsylvania must be part of the Pennsylvania CNI return. Second, Pennsylvania excludes dividends received by a resident Pennsylvania based corporation from subsidiaries. This 100% exclusion enables establishing subsidiaries out of state to whom parent income is redirected, and then paid by the subsidiary to the parent company as dividends which are excluded from parent company’s income. Third, Pennsylvania allows the apportionment of multi-state income of a parent corporation and subsidiaries doing business inside and outside of Pennsylvania to be on a single, destination based sales factor.

Table 2.4 Displays Pennsylvania and contiguous states, ordered by the top CNI tax rate. Pennsylvania’s CNI tax rate at 9.99% is the highest nominal tax rate among the seven states with New

Table 2.3A 2017 CNI Bottom and Top Tax Rates	Bottom CNI Tax Rate	Top CNI Tax Rate	Table 2.3B	Ranked by Top Rate		
			Rank	State	Bottom CNI Rate	Top CNI Rate
Alabama	6.500%	6.500%	1	Iowa	6.000%	12.000%
Alaska	0.000%	9.400%	2	Pennsylvania	9.990%	9.990%
Arizona	4.900%	4.900%	3	Minnesota	9.800%	9.800%
Arkansas	1.000%	6.500%	4	Alaska	0.000%	9.400%
California	8.840%	8.840%	5	DC	9.000%	9.000%
Colorado	4.630%	4.630%	6	New Jersey	9.000%	9.000%
Connecticut	7.500%	7.500%	7	Maine	3.500%	8.930%
Delaware	8.700%	8.700%	8	California	8.840%	8.840%
DC	9.000%	9.000%	9	Delaware	8.700%	8.700%
Florida	5.500%	5.500%	10	Vermont	6.000%	8.500%
Georgia	6.000%	6.000%	11	Maryland	8.250%	8.250%
Hawaii	4.400%	6.400%	12	New Hampshire	8.200%	8.200%
Idaho	7.400%	7.400%	13	Louisiana	4.000%	8.000%
Illinois	7.750%	7.750%	14	Massachusetts	8.000%	8.000%
Indiana	6.250%	6.250%	15	Wisconsin	7.900%	7.900%
Iowa	6.000%	12.000%	16	Nebraska	5.580%	7.810%
Kansas	4.000%	4.000%	17	Illinois	7.750%	7.750%
Kentucky	4.000%	6.000%	18	Oregon	6.600%	7.600%
Louisiana	4.000%	8.000%	19	Connecticut	7.500%	7.500%
Maine	3.500%	8.930%	20	Idaho	7.400%	7.400%
Maryland	8.250%	8.250%	21	Rhode Island	7.000%	7.000%
Massachusetts	8.000%	8.000%	22	Montana	6.750%	6.750%
Michigan	6.000%	6.000%	23	Alabama	6.500%	6.500%
Minnesota	9.800%	9.800%	24	Arkansas	1.000%	6.500%
Mississippi	3.000%	5.000%	25	New York	6.500%	6.500%
Missouri	6.250%	6.250%	26	Tennessee (dividends, interest)	6.500%	6.500%

Montana	6.750%	6.750%	27	West Virginia	6.500%	6.500%
Nebraska	5.580%	7.810%	28	Hawaii	4.400%	6.400%
Nevada	0.000%	0.000%	29	Indiana	6.250%	6.250%
New Hampshire	8.200%	8.200%	30	Missouri	6.250%	6.250%
New Jersey	9.000%	9.000%	31	New Mexico	4.800%	6.200%
New Mexico	4.800%	6.200%	32	Georgia	6.000%	6.000%
New York	6.500%	6.500%	33	Kentucky	4.000%	6.000%
North Carolina	3.000%	3.000%	34	Michigan	6.000%	6.000%
North Dakota	1.410%	4.310%	35	Oklahoma	6.000%	6.000%
Ohio (no CNI, but on Gross Receipts, up to .26%)	0.000%	0.000%	36	Virginia	6.000%	6.000%
Oklahoma	6.000%	6.000%	37	Florida	5.500%	5.500%
Oregon	6.600%	7.600%	38	Mississippi	3.000%	5.000%
Pennsylvania	9.990%	9.990%	39	South Carolina	5.000%	5.000%
Rhode Island	7.000%	7.000%	40	Utah	5.000%	5.000%
South Carolina	5.000%	5.000%	41	Arizona	4.900%	4.900%
South Dakota	0.000%	0.000%	42	Colorado	4.630%	4.630%
Tennessee (dividends, interest)	6.500%	6.500%	43	North Dakota	1.410%	4.310%
Texas (no CNI, but franchise tax on gross receipts, .75%)	0.000%	0.000%	44	Kansas	4.000%	4.000%
Utah	5.000%	5.000%	45	North Carolina	3.000%	3.000%
Vermont	6.000%	8.500%	46	Nevada	0.000%	0.000%
Virginia	6.000%	6.000%	47	Ohio (no CNI, but on Gross Receipts, up to .26%)	0.000%	0.000%
Washington (Gross Receipts Tax, rate varies by activity)	0.000%	0.000%	48	South Dakota	0.000%	0.000%
West Virginia	6.500%	6.500%	49	Texas (no CNI, but franchise tax on gross receipts, .75%)	0.000%	0.000%
Wisconsin	7.900%	7.900%	50	Washington (Gross Receipts Tax, rate varies by activity)	0.000%	0.000%
Wyoming	0.000%	0.000%	51	Wyoming	0.000%	0.000%

Jersey ranked second with a CNI tax rate of 9%. Several years ago Ohio eliminated its property tax on inventories and its CNI tax, and replaced both with a gross receipts tax at low rate.

Table 2.4			
2017 CNI Rates for Pennsylvania and Contiguous States Ranked Highest to Lowest Tax Rate			
States	Bottom	Top	Rank
Pennsylvania	9.990%	9.990%	1
New Jersey	9.000%	9.000%	2
Delaware	8.700%	8.700%	3
Maryland	8.250%	8.250%	4
New York	6.500%	6.500%	5
West Virginia	6.500%	6.500%	6
Ohio (no CNI, but tax on Gross Receipts, up to .26%)	0.000%	0.000%	7

2.2.3 Comparison of State Sales and Use Tax Rates in 2018

Table 2.5A and Table 2.5B below display the states’ general sales and use tax rates as captured by Commerce Clearing House’s Omnitax system. All rates are those in effect in 2018. Among the states, California’s state sales and use tax rate of 7.25% is the highest. Alaska, Delaware, Montana, New Hampshire and Oregon have no sales and use tax at all. Pennsylvania’s state sales and use tax rate of 6% is sixth highest among the states, and that rate is employed by Florida, Idaho, Iowa, Maryland, Michigan, South Carolina, Vermont, and West Virginia. Delaware’s decision not to impose a sales and use tax encourages a fair bit of shopping diversion in the South East, and as Philadelphia has been allowed to impose its own, city-wide rate, now at 2%, pressures to shop across the border have undoubtedly grown stronger. Some analysis of the breadth of Pennsylvania’s sales and use tax base are discussed in Section 3 below.

With regard to Pennsylvania’s sales and use tax rate of 6%, it and Maryland’s sales and use tax rates rank second to New Jersey’s sales and use tax rate of 6.875%. The lowest tax rate among our neighbors is Delaware’s rate of 0.0%. (See Table 2.6).

Table 2.5 A 2018 State Sales Tax Rates (CCH- OMNITAX)	State Sales Tax Rate	Rank	Table 2.5 B 2018 State Sales Tax Rates Ranked Highest to Lowest (CCH- OMNITAX)	State Sales Tax Rate
Alabama	4.000%	1	California	7.250%
Alaska	0.000%	2	Indiana	7.000%
Arizona	5.600%	2	Mississippi	7.000%
Arkansas	6.500%	2	Rhode Island	7.000%
California	7.250%	2	Tennessee	7.000%
Colorado	2.900%	3	Minnesota	6.875%
Connecticut	6.350%	3	New Jersey	6.875%
Delaware	0.000%	3	Nevada	6.850%
DC	5.750%	4	Arkansas	6.500%
Florida	6.000%	4	Kansas	6.500%
Georgia	4.000%	4	Kentucky	6.500%
Hawaii	4.000%	4	Washington	6.500%
Idaho	6.000%	4	Connecticut	6.350%
Illinois	6.250%	5	Illinois	6.250%
Indiana	7.000%	5	Massachusetts	6.250%
Iowa	6.000%	5	Texas	6.250%
Kansas	6.500%	6	Florida	6.000%
Kentucky	6.500%	6	Idaho	6.000%
Louisiana	5.000%	6	Iowa	6.000%
Maine	5.500%	6	Maryland	6.000%
Maryland	6.000%	6	Michigan	6.000%
Massachusetts	6.250%	6	Pennsylvania	6.000%
Michigan	6.000%	6	South Carolina	6.000%
Minnesota	6.875%	6	Vermont	6.000%
Mississippi	7.000%	6	West Virginia	6.000%
Missouri	4.225%	7	DC	5.750%
Montana	0.000%	7	Ohio	5.750%
Nebraska	5.500%	8	Arizona	5.600%
Nevada	6.850%	9	Maine	5.500%
New Hampshire	0.000%	9	Nebraska	5.500%
New Jersey	6.875%	10	New Mexico	5.125%
New Mexico	5.125%	11	Louisiana	5.000%
New York	4.000%	11	North Dakota	5.000%
North Carolina	4.750%	11	Wisconsin	5.000%
North Dakota	5.000%	12	North Carolina	4.750%
Ohio	5.750%	13	Utah	4.700%
Oklahoma	4.500%	14	Oklahoma	4.500%
Oregon	0.000%	15	Virginia	4.300%

Table 2.5 A 2018 State Sales Tax Rates (CCH- OMNITAX)	State Sales Tax Rate	Rank	Table 2.5 B 2018 State Sales Tax Rates Ranked Highest to Lowest (CCH- OMNITAX)	State Sales Tax Rate
Pennsylvania	6.000%	16	Missouri	4.225%
Rhode Island	7.000%	17	Alabama	4.000%
South Carolina	6.000%	17	Georgia	4.000%
South Dakota	4.000%	17	Hawaii	4.000%
Tennessee	7.000%	17	New York	4.000%
Texas	6.250%	17	South Dakota	4.000%
Utah	4.700%	17	Wyoming	4.000%
Vermont	6.000%	18	Colorado	2.900%
Virginia	4.300%	19	Alaska	0.000%
Washington	6.500%	19	Delaware	0.000%
West Virginia	6.000%	19	Montana	0.000%
Wisconsin	5.000%	19	New Hampshire	0.000%
Wyoming	4.000%	19	Oregon	0.000%

Table 2.6 Ranking of Pennsylvania and Neighboring States Sales and Use Tax	State Sales Tax Rate	Rank
New Jersey	6.875%	1
Pennsylvania	6.000%	2
Maryland	6.000%	3
West Virginia	6.000%	4
Ohio	5.750%	5
New York	4.000%	6
Delaware	0.000%	7

2.3 Comparisons regarding Total and Per-capita Amounts of Revenues and Taxes Collected in 2015

2.3.1 Aggregate Revenues for Pennsylvania and its Local Governments in 2015

The most recent data on Pennsylvania's revenues and spending is 2015 that can be compared to those of other states, and is due to the US Census Bureau's Governments Division Census of Governments. If we ignore revenues from the State Liquor stores, insurance trust revenues for unemployment compensation,

employee retirement, worker's compensation and small miscellaneous sources, Pennsylvania's public sector received in 2015 about \$114 billion of which about \$25 billion was from the federal government in the form of transfers; state government received \$74 billion of which \$23 billion was from federal transfers and local governments received about \$60 billion of which federal transfers were about \$2.4 billion, and transfers from state government were about \$20.7 billion. See Table 2.7 below.

The fact that Pennsylvania state government received \$23 billion in federal transfers compared to \$52 billion state government itself raised indicates show how important federal policy is to successful balanced budgeting at the state level. When \$2.23 out of every \$7.47 or about 30% of state spending depends on the national government, it is evident that when Congress is slow or unable to resolve its own budget, the state governments and their elected representatives, including you in Pennsylvania, are at risk.

Table 2.7 shows that Pennsylvania's 2015 total state and local taxes were about \$63 billion with the state imposing/receiving about \$36 billion and local governments imposing/receiving about \$27.3 billion. State and Local Charges or fees were \$25.6 billion overall, and \$15.6 billion at the state level, and \$10 billion at the local level.

Table 2.8 shows the percent distribution of the same Pennsylvania data without federal transfers per Table 2.1 as well as the percent distribution for all state and local governments throughout the US, all state governments, and all local governments. This comparison is intended to show similarities and differences between Pennsylvania and the general average across the US. We see for example, that for Pennsylvania, overall, taxes were 71.3% of own-source monies, while across the US, 69.3% of own source revenues were from taxes. As a consequence, somewhat less in Pennsylvania, 28.7% of own source revenues, were derived from fees and charges, whereas the overall reliance throughout the US on fees and charges was 27.0%. Fees and charges were 26.9% for Pennsylvania's local governments, while fees and charges were 35.3% for all local governments in the US. Unlike most states, Pennsylvania enables local municipalities and school districts to levy a local version of the PIT; this composes 17.8% of Pennsylvania's local tax revenues, but local income taxes constitute only 4.8% across the US. Since public education is a redistributive service in part, Pennsylvania, compared to the rest of the US, seems to have this part of its local tax structure based on a solid conceptual base. On the other hand, since individual income fluctuate over the business cycle, this can cause some kinds of revenue uncertainties which require mitigation through the establishment of strong opening balances or local Rainy Day Funds.

Table 2.7 US Census Bureau's 2015 Financial Data on Pennsylvania's Public Sector	State & local (\$1,000s)	State (\$1,000s)	Local (\$1,000s)
General revenue ¹	\$114,163,015	\$74,731,554	\$60,331,591
Intergovernmental revenue ¹	\$25,230,423	\$23,065,920	\$23,064,633
From Federal Government	\$25,230,423	\$22,852,863	\$2,377,560
From State government ¹	\$0	\$0	\$20,687,073
From local governments ¹	\$0	\$213,057	\$0
General revenue from own sources	\$88,932,592	\$51,665,634	\$37,266,958
Taxes	\$63,366,215	\$36,110,311	\$27,255,904
Property	\$18,958,870	\$41,860	\$18,917,010
Sales and gross receipts	\$19,860,684	\$18,369,809	\$1,490,875
General sales	\$10,723,197	\$9,865,270	\$857,927
Selective sales	\$9,137,487	\$8,504,539	\$632,948
Motor fuel	\$2,731,605	\$2,731,605	\$0
Alcoholic beverage	\$394,454	\$358,887	\$35,567
Tobacco products	\$1,028,979	\$978,006	\$50,973
Public utilities	\$1,326,065	\$1,268,072	\$57,993
Other selective sales	\$3,656,384	\$3,167,969	\$488,415
Individual income	\$16,337,896	\$11,488,974	\$4,848,922
Corporate income	\$2,975,580	\$2,510,136	\$465,444
Motor vehicle license	\$892,817	\$892,817	\$0
Other taxes	\$4,340,368	\$2,806,715	\$1,533,653
Charges and miscellaneous gen rev	\$25,566,377	\$15,555,323	\$10,011,054
Current charges	\$18,177,527	\$10,527,926	\$7,649,601
Education	\$6,762,134	\$5,886,336	\$875,798
Higher Education	\$5,861,128	\$5,425,549	\$435,579
School lunch sales	\$289,307	\$0	\$289,307
Hospitals	\$3,227,890	\$3,205,278	\$22,612
Highways	\$1,078,155	\$936,105	\$142,050
Air transportation	\$568,083	\$41	\$568,042
Parking facilities	\$342,520	\$0	\$342,520
Sea and inland ports	\$11,078	\$0	\$11,078
Natural resources	\$52,286	\$48,292	\$3,994
Parks and recreation	\$193,577	\$38,450	\$155,127
Housing & comm. Dev.	\$251,918	\$59,880	\$192,038
Sewerage	\$2,737,536	\$0	\$2,737,536
Solid waste	\$648,256	\$0	\$648,256
Other charges	\$2,304,094	\$353,544	\$1,950,550
Miscellaneous general revenue	\$7,388,850	\$5,027,397	\$2,361,453

Table 2.8:	PA: Total	US: All	PA: State	US:	PA: Local	US:
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% 2015 Distribution of Taxes and Charges		State and Local		All States		All Local
General revenue from own sources	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Taxes	71.3%	69.3%	69.9%	73.0%	73.1%	64.7%
Property	29.9%	31.1%	0.1%	1.7%	69.4%	72.1%
Sales and gross receipts	31.3%	34.8%	50.9%	47.3%	5.5%	17.3%
General sales	54.0%	67.6%	53.7%	66.4%	57.5%	72.0%
Selective sales	46.0%	32.4%	46.3%	33.6%	42.5%	28.0%
Motor fuel	29.9%	24.8%	32.1%	29.4%	0.0%	4.2%
Alcoholic beverage	4.3%	4.0%	4.2%	4.4%	5.6%	1.9%
Tobacco products	11.3%	10.3%	11.5%	12.2%	8.1%	1.4%
Public utilities	14.5%	15.9%	14.9%	9.3%	9.2%	46.2%
Other selective sales	40.0%	45.0%	37.3%	2.7%	77.2%	0.3%
Individual income	25.8%	23.5%	31.8%	36.9%	17.8%	4.8%
Corporate income	4.7%	3.7%	7.0%	5.3%	1.7%	1.3%
Motor vehicle license	1.4%	1.7%	2.5%	2.7%	0.0%	0.3%
Other taxes	6.8%	5.3%	7.8%	6.1%	5.6%	4.2%
Charges and miscellaneous general revenue	28.7%	30.7%	30.1%	27.0%	26.9%	35.3%

Another way to compare the general level of revenues and taxes raised in Pennsylvania viz a viz other states, is to calculate the various measures of available own-sources revenues, basically kinds of taxes and fees, on a per person basis.¹² Two types of geographic comparisons suggest themselves: comparisons of Pennsylvania to our continuous states: Delaware (DE), Maryland (MD), New Jersey (NJ), New York (NY), Ohio (OH), and West Virginia (WV), and comparisons to other major industrial states: California (CA), Florida (FL), Illinois (IL), Michigan (MI), and Texas (TX).

Table 2.9 (below) shows the 2015 per-capita total state and local taxes in Pennsylvania and neighboring states, and Table 2.10 (immediately below Table 2.9) shows neighboring states' total state and local per-capita taxes as a percentage of Pennsylvania's total state and local per-capita taxes. Line 7 of Table 2.9 shows the total own sources revenues at the state and local level in Pennsylvania in 2015 to be \$6,947. Delaware, Ohio, and West Virginia were *lower* at, respectively \$5,919, \$6,492, and \$6,309. On the other hand, Maryland, New Jersey and New York was considerable higher in total state and local revenues per capita of, respectively \$7,675 \$8,620 and \$11,514. For someone living in South East Pennsylvania, Pennsylvania's revenue levels resulting from taxation and fees look affordable compared to Maryland, New Jersey, and New York, but expensive when compared to Delaware. On the other hand, for those living in South West Pennsylvania, Pennsylvania's revenue levels resulting from taxation and fees look expensive compared to Ohio and West Virginia.

¹² The US calculations are based on the sum across all states divided by the total US population, and abstract from choices made by some states to not impose, say, income taxes on all sources of income, e.g. Florida, Nevada, Washington, Texas, and should be viewed as rough comparisons. More precise comparisons are reported below for states neighboring Pennsylvania.

Table 2.9 2015 Per capita Taxes of Pennsylvania and Contiguous States	State + Local Per capita	State + Local Per capita	State + Local Per capita	State + Local Per capita	State + Local Per capita	State + Local Per capita	State + Local Per capita
line	PA	DE	MD	NJ	NY	OH	WV
7: Total Own Source Revenues	\$6,947	\$5,919	\$7,675	\$8,620	\$11,514	\$6,492	\$6,309
8: Taxes	\$4,950	\$3,715	\$5,846	\$6,664	\$8,722	\$4,414	\$4,098
9: Property	\$1,481	\$855	\$1,555	\$3,074	\$2,697	\$1,271	\$888
10: Sales and Excise	\$1,551	\$527	\$1,550	\$1,466	\$2,125	\$1,694	\$1,497
18: Individual Income	\$1,276	\$1,205	\$2,200	\$1,479	\$2,789	\$1,186	\$1,048
19: Corporate Income	\$232	\$424	\$167	\$288	\$613	\$23	\$102
21: Motor Veh Tax	\$339	\$1,501	\$293	\$285	\$422	\$165	\$561
22: Charges and Fees	\$1,997	\$2,204	\$1,829	\$1,956	\$2,792	\$2,078	\$2,211

Table 2.10 PA and Overall US Per capita Taxes in 2015 by Level of Government	PA: State & local	US: State & Local	PA: State	US: State	PA: Local	US: Local
General revenue from own sources	\$6,947	\$7,047	\$4,036	\$3,888	\$2,911	\$3,160
Taxes	\$4,950	\$4,881	\$2,821	\$2,838	\$2,129	\$2,043
Property	\$1,481	\$1,520	\$3	\$48	\$1,478	\$1,473
Sales and gross receipts	\$1,551	\$1,697	\$1,435	\$1,343	\$116	\$354
General sales	\$838	\$1,147	\$771	\$892	\$67	\$255
Selective sales	\$714	\$550	\$664	\$451	\$49	\$99
Motor fuel	\$213	\$137	\$213	\$132	\$0	\$4
Alcoholic	\$31	\$22	\$28	\$20	\$3	\$2
Tobacco	\$80	\$57	\$76	\$55	\$4	\$1
Public utility	\$104	\$88	\$99	\$42	\$5	\$46
Other sel. sales	\$286	\$247	\$247	\$202	\$38	\$46
Individual income	\$1,276	\$1,146	\$897	\$1,047	\$379	\$99
Corporate income	\$232	\$178	\$196	\$152	\$36	\$27
Motor vehicle license	\$70	\$82	\$70	\$76	\$0	\$6
Other taxes	\$339	\$258	\$219	\$172	\$120	\$86
Charges and misc. gen rev	\$1,997	\$2,166	\$1,215	\$1,050	\$782	\$1,116

Table 2.11A 2015 State Per capita Taxes of Pennsylvania and Contiguous States	State Per capita	State Per capita	State Per capita	State Per capita	State Per capita	State Per capita	State Per capita
line	PA	DE	MD	NJ	NY	OH	WV
7: Total Own Source Revenues	\$4,036	\$5,919	\$7,675	\$4,761	\$5,259	\$3,562	\$4,567
8: Taxes	\$2,821	\$3,715	\$5,846	\$3,524	\$3,951	\$2,437	\$3,018
9: Property	\$3	\$0	\$1,555	\$1	\$0	\$0	\$4
10: Sales and Excise	\$1,435	\$527	\$1,550	\$1,446	\$1,209	\$1,482	\$1,420
18: Individual Income	\$897	\$1,205	\$2,200	\$1,479	\$2,208	\$765	\$1,048
19: Corporate Income	\$196	\$424	\$167	\$288	\$257	\$0	\$102
21: Motor Veh Tax	\$219	\$1,501	\$293	\$239	\$208	\$125	\$443
22: Charges and Fees	\$1,215	\$2,204	\$1,829	\$1,237	\$1,309	\$1,126	\$1,548

Table 2.11B 2015 Neighboring State's Per capita Taxes As % of Pennsylvania Per capita Taxes	State Per capita	State Per capita	State Per capita	State Per capita	State Per capita	State Per capita	State Per capita
line	PA	DE/PA	MD/PA	NJ/PA	NY/PA	OH/PA	WV/PA
7: Total Own Source Revenues	100.0%	146.7%	190.2%	118.0%	130.3%	88.3%	113.2%
8: Taxes	100.0%	131.7%	207.3%	124.9%	140.1%	86.4%	107.0%
9: Property	100.0%	0.0%	47569.7%	15.5%	0.0%	0.0%	110.8%
10: Sales and Excise	100.0%	36.7%	108.0%	100.8%	84.3%	103.3%	99.0%
18: Individual Income	100.0%	134.3%	245.2%	164.8%	246.1%	85.2%	116.8%
19: Corporate Income	100.0%	216.1%	85.2%	146.9%	131.0%	0.1%	52.2%
21: Motor Veh Tax	100.0%	684.6%	133.5%	109.2%	94.9%	57.0%	201.9%
22: Charges and Fees	100.0%	181.4%	150.5%	101.8%	107.7%	92.7%	127.4%

Table 2.12A 2015 State Per capita Taxes of Pennsylvania and Contiguous States	Local Per capita	Local Per capita	Local Per capita	Local Per capita	Local Per capita	Local Per capita	Local Per capita
line	PA	DE	MD	NJ	NY	OH	WV
7: Total Own Source Revenues	\$2,911	\$1,685	\$3,270	\$3,858	\$6,255	\$2,929	\$1,743
8: Taxes	\$2,129	\$1,045	\$2,516	\$3,140	\$4,771	\$1,977	\$1,080
9: Property	\$1,478	\$855	\$1,432	\$3,074	\$2,697	\$1,271	\$884
10: Sales and Excise	\$116	\$18	\$143	\$21	\$916	\$212	\$77
18: Individual Income	\$379	\$61	\$811	\$0	\$580	\$421	\$0
19: Corporate Income	\$36	\$6	\$0	\$0	\$357	\$23	\$0
21: Motor Veh Tax	\$120	\$104	\$130	\$45	\$214	\$40	\$118
22: Charges and Fees	\$782	\$640	\$754	\$718	\$1,484	\$952	\$663

Tqble 2.12B 2015 State Per capita Taxes of Pennsylvania and Contiguous States	Local Per capita	Local Per capita	Local Per capita	Local Per capita	Local Per capita	Local Per capita	Local Per capita
line	PA	DE/PA	MD/PA	NJ/PA	NY/PA	OH/PA	WV/PA
7: Total Own Source Revenues	100.0%	57.9%	112.3%	132.5%	214.9%	100.6%	59.9%
8: Taxes	100.0%	49.1%	118.2%	147.5%	224.1%	92.9%	50.7%
9: Property	100.0%	57.9%	96.9%	208.0%	182.5%	86.0%	59.9%
10: Sales and Excise	100.0%	15.3%	122.7%	17.6%	786.5%	182.2%	66.1%
18: Individual Income	100.0%	16.2%	214.1%	0.0%	153.2%	111.3%	0.0%
19: Corporate Income	100.0%	16.7%	0.0%	0.0%	980.8%	62.2%	0.0%
21: Motor Veh Tax	100.0%	87.2%	108.4%	37.8%	178.7%	33.5%	98.8%
22: Charges and Fees	100.0%	81.9%	96.4%	91.9%	189.7%	121.8%	84.8%

Table 2.13A 2015 Percapita Taxes of Pennsylvania and Selected Other NonContiguous States	State + Local Percapita	State + Local Percapita	State + Local Percapita	State + Local Percapita	State + Local Percapita	State + Local Percapita
line	PA	CA	FL	IL	MI	TX
7: Total Own Source Revenues	\$6,947	\$8,320	\$5,626	\$7,361	\$6,239	\$5,982
8: Taxes	\$4,950	\$5,842	\$3,448	\$5,742	\$4,008	\$4,120
9: Property	\$1,481	\$1,451	\$1,232	\$2,087	\$1,382	\$1,731
10: Sales and Excise	\$1,551	\$1,777	\$1,779	\$1,790	\$1,351	\$2,082
18: Individual Income	\$1,276	\$1,991	\$0	\$1,237	\$938	\$0
19: Corporate Income	\$232	\$230	\$110	\$315	\$119	\$0
21: Motor Veh Tax	\$339	\$293	\$258	\$178	\$115	\$218
22: Charges and Fees	\$1,997	\$2,478	\$2,178	\$1,619	\$2,231	\$1,862

Table 2.13B 2015 Percapita Taxes of Pennsylvania and Selected Other NonContiguous States	State + Local Percapita	State + Local Percapita	State + Local Percapita	State + Local Percapita	State + Local Percapita	State + Local Percapita
line	PA	CA/PA	FL/PA	IL/PA	MI/PA	TX/PA
7: Total Own Source Revenues	100.0%	119.8%	81.0%	106.0%	89.8%	86.1%
8: Taxes	100.0%	118.0%	69.7%	116.0%	81.0%	83.3%
9: Property	100.0%	98.0%	83.2%	141.0%	93.3%	116.9%
10: Sales and Excise	100.0%	114.5%	114.7%	115.4%	87.1%	134.2%
18: Individual Income	100.0%	156.0%	0.0%	97.0%	73.5%	0.0%
19: Corporate Income	100.0%	99.0%	47.5%	135.6%	51.4%	0.0%
21: Motor Veh Tax	100.0%	86.4%	76.2%	52.4%	33.8%	64.3%
22: Charges and Fees	100.0%	124.1%	109.1%	81.1%	111.7%	93.2%

Table 2.14A 2015 Percapita State Taxes of Pennsylvania and Selected Other NonContiguous States	State Percapita	State Percapita	State Percapita	State Percapita	State Percapita	State Percapita
line	PA	CA	FL	IL	MI	TX
7: Total Own Source Revenues	\$4,036	\$4,663	\$2,625	\$3,908	\$3,955	\$2,919
8: Taxes	\$2,821	\$3,862	\$1,836	\$3,174	\$2,717	\$2,005
9: Property	\$3	\$59	\$0	\$5	\$198	\$0
10: Sales and Excise	\$1,435	\$1,337	\$1,497	\$1,372	\$1,323	\$1,735
18: Individual Income	\$897	\$1,991	\$0	\$1,237	\$889	\$0
19: Corporate Income	\$196	\$230	\$110	\$315	\$119	\$0
21: Motor Veh Tax	\$219	\$146	\$161	\$115	\$85	\$194
22: Charges and Fees	\$1,215	\$801	\$789	\$734	\$1,238	\$913

Table 2.14B 2015 Percapita State Taxes of Pennsylvania and Selected Other NonContiguous States	State Percapita	State Percapita	State Percapita	State Percapita	State Percapita	State Percapita
line	PA	CA/PA	FL/PA	IL/PA	MI/PA	TX/PA
7: Total Own Source Revenues	100.0%	115.5%	65.1%	96.8%	98.0%	72.3%
8: Taxes	100.0%	136.9%	65.1%	112.5%	96.3%	71.1%
9: Property	100.0%	1809.1%	0.1%	145.0%	6050.6%	0.0%
10: Sales and Excise	100.0%	93.2%	104.3%	95.6%	92.2%	120.9%
18: Individual Income	100.0%	221.8%	0.0%	137.9%	99.1%	0.0%
19: Corporate Income	100.0%	117.4%	56.3%	160.8%	60.9%	0.0%
21: Motor Veh Tax	100.0%	66.6%	73.4%	52.3%	38.7%	88.4%
22: Charges and Fees	100.0%	65.9%	65.0%	60.4%	101.9%	75.2%

Table 2.15A 2015 Percapita State Taxes of Pennsylvania and Selected Other NonContiguous States	Local Percapita	Local Percapita	Local Percapita	Local Percapita	Local Percapita	Local Percapita
line	PA	CA	FL	IL	MI	TX
7: Total Own Source Revenues	\$2,911	\$3,657	\$3,001	\$3,453	\$2,284	\$3,063
8: Taxes	\$2,129	\$1,980	\$1,612	\$2,567	\$1,291	\$2,115
9: Property	\$1,478	\$1,392	\$1,232	\$2,083	\$1,184	\$1,731
10: Sales and Excise	\$116	\$439	\$283	\$418	\$28	\$347
18: Individual Income	\$379	\$0	\$0	\$0	\$49	\$0
19: Corporate Income	\$36	\$0	\$0	\$0	\$0	\$0
21: Motor Veh Tax	\$120	\$147	\$97	\$63	\$30	\$24
22: Charges and Fees	\$782	\$1,677	\$1,388	\$885	\$993	\$948

Table 2.15B 2015 Percapita State Taxes of Pennsylvania and Selected Other NonContiguous States	Local Percapita	Local Percapita	Local Percapita	Local Percapita	Local Percapita	Local Percapita
line	PA	CA/PA	FL/PA	IL/PA	MI/PA	TX/PA
7: Total Own Source Revenues	100.0%	125.6%	103.1%	118.6%	78.5%	105.2%
8: Taxes	100.0%	93.0%	75.7%	120.6%	60.6%	99.3%
9: Property	100.0%	94.2%	83.4%	141.0%	80.1%	117.2%
10: Sales and Excise	100.0%	377.3%	242.7%	358.8%	24.0%	298.1%
18: Individual Income	100.0%	0.0%	0.0%	0.0%	12.8%	0.0%
19: Corporate Income	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21: Motor Veh Tax	100.0%	122.6%	81.3%	52.4%	25.1%	20.1%
22: Charges and Fees	100.0%	214.5%	177.6%	113.2%	127.0%	121.3%

2.4 Possible Impacts of 2017 Federal Tax Law Changes on Pennsylvania

2.4.1 Major Components of PIT and CNI Tax Bases

Pennsylvania's PIT is based on eight enumerated income concepts:

- Gross Compensation (excluding exempt income such as combat pay or retirement income and less unreimbursed employee business expense)
- Interest Income
- Dividend and Capital Gains Distributions Income
- Net Income or Loss from the Operation of a Business, Profession or Farm
- Net Gain or Loss from the Sale, Exchange or Disposition of Property
- Net Income or Loss from Rents, Patents or Copyrights
- Estate or Trust Income
- Gambling and Lottery Winnings

Since the rate of tax is flat at 3.07% for income above a phased out poverty amount, and there are no personal exemptions or standard or itemized deductions as allowed for federal tax purposes, the structure of the PIT is relatively straight-forward. Capital gains and losses are treated as ordinary income, as are dividends and various sources of capital income. Note that losses in one category, e.g. business losses or capital gains losses, may not reduce positive incomes from other sources. This suggests that direct effects of the federal tax law changes will not have material effects on the PIT tax base. However, to the extent that business payouts of dividends rise because of federal changes below, it is imaginable that there can be increases in PIT collections in 2018. Similarly, if economic growth quickens nationally and in Pennsylvania, it is imaginable that PIT collections may increase. However, since our tax structure is basically proportional to economic activity, revenue increases/decreases will be proportional to underlying economic effects in Pennsylvania.

Pennsylvania's CNI base is in some respects closer to that reflected on federal corporate and Subchapter S returns than in the case of the PIT, so there may be some interaction between the change in federal corporate law (see below). Pennsylvania's CNI begins with line 28 from the federal return, which is taxable income before net operating loss deductions. Here is the sequence of items on the first page of federal form 1120. Federal total income, Line 11, is defined as Line 1a from federal tax form 1120 – Line 2 + Lines 4 through Line 10:

- Line 1a Gross receipts or sales
- Line 2 Cost of Goods Sold
- Line 3 Gross Profit
- Line 4 Dividends
- Line 5 Interest
- Line 6 Gross Rents
- Line 7 Gross Royalties
- Line 8 Capital gain net income
- Line 9 Get gain or loss from Form 4797 (Proceeds from Sale of Business Property)
- Line 10 Other Income

Deductions against federal 1120 Total Income are:

- Line 12 Compensation of Officers
- Line 13 Salaries and wages less employment credits
- Line 14 Repairs and maintenance
- Line 15 Bad Debts
- Line 16 Rents
- Line 17 Taxes and licenses (state and local)
- Line 18 Interest
- Line 19 Charitable Contributions
- Line 20 Depreciation
- Line 21 Depletion
- Line 22 Advertising
- Line 23 Pension Profit Sharing Plans
- Line 24 Employee benefit programs
- Line 25 Domestic Production Activities
- Line 26 Other deductions
- Line 27 total deductions (sum of Lines 12 – Lines 26)
- Line 28 Taxable Income (transferred to CNI form as starting point)

However, Pennsylvania does not tax the same filing unit as the Internal Revenue Code does, both for policy and constitutional reasons. In particular, Pennsylvania requires business taxpayers to file on a separate accounting basis which has the effect of excluding portions of a multi-state business without legal contact in Pennsylvania. Those remaining business entities that file on separate basis apportion their net income based on the ratio of sales into Pennsylvania divided by sales throughout the US. It is important to note that Pennsylvania adjusts Line 28 in certain ways. Of immediate interest is that Pennsylvania *deducts* dividends received which has the effect of making Line 4 null, e.g. dividends received by a corporate in Pennsylvania are 100% excluded from taxation, in order to avoid double taxation of corporate source income.

With the basic features of Pennsylvania’s PIT and CNI taxes in mind, we now turn below to the federal *Tax Cuts and Jobs Act of 2017*.

2.4.2 General Major Contours of Federal Changes

Under federal budgeting rules, enacted tax legislation must disclose estimated budgetary effects of the law changes. When the adoption of a budget act contains tax legislation, the reporting period of budget effects is 10 years. Table 2.10 below abstracts from the detailed budget impact statements in the Conference Report. Totals by type of area of tax change, Individual, Business, and International are shown are projected to be over 10 years, taking into account dynamic or feedback effects by the Staff of the Joint Committee on Taxation to be as follows:

- Individual tax cuts of: -\$1,126.6 Billion
- Business tax cuts of: -\$653.8 Billion
- International tax increases of: +\$324.4 Billion
- Net tax change -\$1,456.0 Billion

This implies an annual average reduction in federal revenues of -\$145.6 billion/year. Table 2.10 displays the major (over \$80 billion for 10 years or \$8 billion/year) provisions abstracted from the Conference Report.

Table 2. 16 Year and Average Annual Estimated Revenue Effects of Major Provisions of the Federal Tax Cuts and Jobs Act of 2017

Provision	Section	Provisions Changing 10 Year Revenues by \$80 billion or more	10 Year Amount	Annual Average Amount
		Grand Total	-\$1,456.0	-\$145.6
I		Individual Tax Reform Total	-\$1,126.6	-\$112.7
	A	1. Bracket Changes	-\$1,214.2	-\$121.4
	A	2. Modified Standard Deductions	-\$720.4	-\$72.0
	A	3. Repeal of personal exemptions	\$1,211.5	\$121.2
	A	4. Change in Inflation Measure	\$133.5	\$13.4
	B	1. 20% Deduction of Business Income on Personal Return	-\$414.5	-\$41.5
	B	2. Disallow active passthrough losses > \$.5Million	\$149.7	\$15.0
	C	1.Changes to Childcare Credit	-\$573.4	-\$57.3
	D	1. Repeal of Itemized Deductions	\$668.4	\$66.8
	F	Double Estate and Gift Exemptions	-\$83.0	-\$8.3
	G	Increase AMT Exemptions, Index	-\$637.1	-\$63.7
	H.	Reduce ACA Shared Responsibility (eliminate federal subsidy)	\$314.1	\$31.4
II		Business Tax Reform Total	-\$653.8	-\$65.4
	B	21% Corporate Tax Rate	-\$1,348.5	-\$134.9
	D	1. Depreciation Expensing and Phaseout	-\$86.3	-\$8.6
	D	2. Limit net interest Deductions to 30% of Adjusted Taxable Income	\$253.4	\$25.3
	D	6. Modification of Net Operating Loss Deduction	\$201.1	\$20.1
	D	9. Changes to Amortization of R & D Rules	\$119.7	\$12.0
	E	1. Repeal of Deduction for Domestic Production Activities	\$98.0	\$9.8
III		International Business Tax Reform Total	\$324.4	\$32.4
	A	1. Deductions for Dividends Received from Foreign Subsidiaries	-\$223.6	-\$22.4
	A	3.Treatment of Deferred Foreign Income of Subsidiaries at lower Rates	\$338.8	\$33.9
	B	1. Current Year Inclusion of Foreign Source Intangible Income	\$112.4	\$11.2
	F.	1. Base Erosion and Anti-abuse Tax	\$149.6	\$15.0
		Source: Conference Report of HR1, Estimated Budget Effects of Tax Cuts and Jobs Act of 2017pp. 1-8		

To put these estimated changes in perspective, about \$137B in annual tax reduction for individuals, ignoring gift and estate tax changes, should be compared to recent net federal individual income tax collections of about \$1.8 Trillion. This implies in broad terms an annual average tax reduction over the 10 year period of about -7.6%. When we turn to domestic business tax law changes, we see a 10 year total

reduction of -\$653.8 B which is offset by a 10 year increase in international business taxes of \$324.4 billion for a net 10 year reduction of business taxes of \$329.4 billion. This averages \$32.9/year over the 10 year budget window. The federal corporate net income tax brings in around \$350 billion/year so the business tax reductions from HR1, both domestic and international, at a net of -\$32.9B/year amounts to -9.4%/year business tax reduction.

Among the federal changes in the individual income tax, most will not impact Pennsylvania directly, since most of Pennsylvania's PIT is not directly dependent on federal definitions. Unlike some states, Pennsylvania's starting point for taxing individuals does *not* begin with Adjusted Gross Income. Should provision IIB induce larger reporting on federal returns of business income, due to induced repatriation, this will *increase* PIT revenues because such income is separately stated. Item II D1, more generous depreciation to 100% expensing and then phased out, will *increase* on federal corporate returns; however, on January 9, 2018, the Pennsylvania Department of Revenue issued guidance to the effect that such bonus depreciation would not be available on the CNI. Both federal provision IID2 and IIDE will broaden both the federal corporate tax base and also Pennsylvania's, since interest deductions occurred above line 28 on the federal corporate tax return, as did the deduction for Domestic Production Activities.

How the International Business Tax Reform provisions will impact Pennsylvania depends on how the four items in III above are structured viz a viz Line 28. From a national perspective these are large amounts and how they impact Pennsylvania corporates no doubt will be a subject of active discussion this Spring. Given Pennsylvania's separate accounting approach to measuring business net income, it is possible that monies earned overseas may not return directly to Pennsylvania, but either may be recharacterized for state reporting purposes as dividends, or go to entities in other states so that any subsequent repatriation will benefit from Pennsylvania's 100% exclusion of dividends received by Pennsylvania corporations.

Among the federal changes in domestic and international taxation of business, again most will not impact Pennsylvania directly, since most of Pennsylvania's CNI is not directly dependent on federal definitions. This is especially true for the definition of the filing unit. Pennsylvania's CNI does, however,

2.4.3 Federal Itemization *per se*

Table 2.17 displays the fraction of federal taxpayers in each state who itemized deductions in 2015¹³, itemized state and local taxes in 2015 (the most recent year for which there is data), and the fraction who itemized their property taxes. Table 2.18 shows the same data for Pennsylvania's neighboring states. Of immediate interest is that fully 46% of Maryland's federal taxpayers chose to itemize their deductions in 2015, 43.1% took deductions for state and local taxes, and 36.4 % itemized their property taxes. In 2015 28% of Pennsylvania's federal taxpayers itemized their returns, 25% took state and local tax deductions, and 26% took property tax deductions. New Jersey's federal taxpayers in 2015 itemized 41% of the time, 43% took the state and local tax deduction, and 36% took deductions for property taxes paid. The fact that federal taxpayers in neighboring states will no longer be able to itemize suggests that these states will be closely reviewing their own tax structures this Spring and Summer.

¹³ Data on itemization on federal tax returns is from IRS Tax Stats at IRS.gov.

Table 2.17 Federal Itemizers By State	% Federal Returns Itemizing In 2015	% Federal Returns with SALT	% Federal Returns with Property Tax Deduction	Rank by % Federal Returns Itemizing	STATE	% Federal Returns itemizing	% Federal Returns with SALT	% Federal Returns with Property Tax Deduction
AK	22.3%	5.7%	19.9%	1	MD	45.9%	43.1%	36.4%
AL	25.9%	21.0%	20.9%	2	CT	41.4%	37.6%	37.4%
AR	22.3%	18.8%	18.4%	3	NJ	41.3%	34.8%	35.7%
AZ	28.5%	21.5%	24.9%	4	DC	39.9%	37.8%	25.2%
CA	34.5%	28.2%	27.1%	5	VA	37.4%	34.6%	32.4%
CO	32.6%	29.0%	28.9%	6	MA	36.9%	34.6%	32.9%
CT	41.4%	37.6%	37.4%	7	OR	36.3%	34.0%	32.0%
DC	39.9%	37.8%	25.2%	8	UT	35.4%	32.1%	31.8%
DE	31.9%	30.0%	28.3%	9	MN	34.8%	32.4%	31.8%
FL	23.3%	1.7%	18.5%	10	NY	34.6%	30.4%	24.9%
GA	33.0%	29.2%	26.9%	11	CA	34.5%	28.2%	27.1%
HI	29.2%	24.9%	22.5%	12	GA	33.0%	29.2%	26.9%
IA	29.6%	26.3%	26.5%	13	RI	32.9%	30.8%	30.1%
ID	28.1%	23.3%	25.3%	14	CO	32.6%	29.0%	28.9%
IL	31.3%	26.3%	27.9%	15	DE	31.9%	30.0%	28.3%
IN	22.8%	21.6%	20.4%	16	IL	31.3%	26.3%	27.9%
KS	25.5%	19.8%	22.9%	17	NH	31.3%	13.6%	29.4%
KY	26.0%	23.0%	23.0%	18	WI	31.1%	28.2%	28.5%
LA	23.1%	19.3%	16.5%	19	WA	30.3%	2.2%	27.7%
MA	36.9%	34.6%	32.9%	20	US	29.8%	22.0%	25.1%
MD	45.9%	43.1%	36.4%	21	IA	29.6%	26.3%	26.5%
ME	27.7%	25.1%	25.7%	22	HI	29.2%	24.9%	22.5%
MI	26.6%	23.5%	24.2%	23	NC	29.1%	26.1%	25.6%
MN	34.8%	32.4%	31.8%	24	PA	28.7%	25.3%	25.7%
MO	26.2%	23.0%	23.3%	25	AZ	28.5%	21.5%	24.9%
MS	23.4%	17.6%	17.6%	26	MT	28.5%	26.5%	25.3%
MT	28.5%	26.5%	25.3%	27	ID	28.1%	23.3%	25.3%
NC	29.1%	26.1%	25.6%	28	ME	27.7%	25.1%	25.7%
ND	18.6%	13.6%	14.8%	29	NE	27.7%	24.8%	24.4%
NE	27.7%	24.8%	24.4%	30	SC	27.4%	23.9%	24.2%
NH	31.3%	13.6%	29.4%	31	VT	27.3%	25.3%	25.5%
NJ	41.3%	34.8%	35.7%	32	MI	26.6%	23.5%	24.2%
NM	22.6%	19.1%	19.4%	33	MO	26.2%	23.0%	23.3%
NV	25.0%	2.0%	20.1%	34	OH	26.1%	23.5%	23.1%
NY	34.6%	30.4%	24.9%	35	KY	26.0%	23.0%	23.0%
OH	26.1%	23.5%	23.1%	36	AL	25.9%	21.0%	20.9%
OK	24.1%	20.2%	20.0%	37	KS	25.5%	19.8%	22.9%
OR	36.3%	34.0%	32.0%	38	NV	25.0%	2.0%	20.1%

<u>PA</u>	<u>28.7%</u>	<u>25.3%</u>	<u>25.7%</u>	39	OK	24.1%	20.2%	20.0%
RI	32.9%	30.8%	30.1%	40	TX	23.6%	1.1%	19.1%
SC	27.4%	23.9%	24.2%	41	MS	23.4%	17.6%	17.6%
SD	17.2%	1.7%	14.5%	42	FL	23.3%	1.7%	18.5%
TN	19.8%	1.9%	17.0%	43	LA	23.1%	19.3%	16.5%
TX	23.6%	1.1%	19.1%	44	IN	22.8%	21.6%	20.4%
US	29.8%	22.0%	25.1%	45	NM	22.6%	19.1%	19.4%
UT	35.4%	32.1%	31.8%	46	AK	22.3%	5.7%	19.9%
VA	37.4%	34.6%	32.4%	47	AR	22.3%	18.8%	18.4%
VT	27.3%	25.3%	25.5%	48	WY	21.9%	2.3%	19.3%
WA	30.3%	2.2%	27.7%	49	TN	19.8%	1.9%	17.0%
WI	31.1%	28.2%	28.5%	50	ND	18.6%	13.6%	14.8%
WV	17.0%	16.0%	14.8%	51	SD	17.2%	1.7%	14.5%
WY	21.9%	2.3%	19.3%	52	WV	17.0%	16.0%	14.8%

Table 2.18 Federal Itemizing of PA Neighbors	2015 Fed Returns % Itemizer	2015 Fed Returns % Returns with SALT	2015 Fed Returns % with Property Tax Deduction	Rank by % Itemizing
MD	45.9%	43.1%	36.4%	1
NJ	41.3%	34.8%	35.7%	2
NY	34.6%	30.4%	24.9%	3
DE	31.9%	30.0%	28.3%	4
<u>PA</u>	<u>28.7%</u>	<u>25.3%</u>	<u>25.7%</u>	5
OH	26.1%	23.5%	23.1%	6
WV	17.0%	16.0%	14.8%	7

3. SIX POINTS ABOUT PENNSYLVANIA'S STATE AND LOCAL TAX SYSTEM

Below, I make six points about our system of state and local taxes. First, I remind the reader about the implications of the constitutional setting and especially of the Uniformity Clause, Second, I review the evolution of tax rates for the major state level tax bases over the period 1880-2017. Third, I review the tax expenditures in our state budget in order to get an idea of what is happening to our overall state tax base. Fourth, I present earlier research findings about the tax expenditures for the elderly and their juxtaposition against spending for the elderly from the General Fund and off-budget. Fifth, I examine over time the role of the real estate tax in the composition of our local tax structure, and, sixth, I review, through new empirical research, the nature and quality of the local real estate assessment process.

3.1 The Constitutional Setting for Thinking about Pennsylvania's State and Local Tax Structure

Because of the 19th century Uniformity Clause that remains unchanged in Pennsylvania's constitutions¹⁴, Pennsylvania's state and local tax receipts can only grow proportionately with the size of any tax base. There have been well over a dozen failed attempts to change this part of the Pennsylvania Constitution.¹⁵ Upon reflection, I have grown to respect and endorse the current Uniformity Clause, and suggest you do not try to change it in the name of modernization or reform. During periods of economic growth and prosperity, a progressive rate schedule applied to the personal income tax base can generate revenues faster than the growth in overall personal income. This allows the spending side of the state budget to expand and be adequately financed. However, during periods of slower than average economic growth or actual economic recession, both individual and business taxpayers fall into lower tax rate brackets, and revenues decline faster than the personal or business income tax bases. It is true that with foresight, one can create adequate reserves to address these downside risks; however, should reserves not be adequately provided for, there is the distinct, and very uncomfortable possibility that reserves will be exhausted, and monies may not be available to pay for promised state services. Whether or not capital markets will enable Pennsylvania to borrow the difference then becomes a crucial matter.

The second aspect of the constitutional setting that I would like to call your attention to is the fact that Pennsylvania is self-proclaimed as a Commonwealth, and this has been viewed by many as an impediment to the General Assembly telling local governments (counties, school districts, municipalities, and public authorities) through statutes what to do, and/or how they may conduct themselves. While I have heard this argument over the decades, I must confess that, since local governments are the constitutional and/or statutory creations of the General Assembly, the argument does not (at least to me) seem to be that compelling. After all, were local receipt of monies or taxing powers distributed by the General Assembly, conditioned upon local agreement that the associated reporting, limitations, and conditions on the use of received monies, were contractual in nature, it would seem to me that local arguments about the constitutionality of these reporting, limitations and conditions of use would be moot. Certainly the US Congress has successfully engaged in transactional federalism with both states and localities for many, many years, without constitutional challenges, and I do not see the counter-part mechanism of encouraging local governments, even in a Commonwealth, to get in line to be particular difficult as a constitutional matter. It is imaginable that your constitutional and statutory local government creations may not like being offered

¹⁴ Pennsylvania's uniformity clause dates back to Article IX, Section 1 of the Pennsylvania Constitution of 1874. Article VIII Section 1 of the Pennsylvania's current constitution, which repeats the earlier constitutional provision, states: "All taxes shall be uniform, upon the same class of subjects, within the territorial limits of the authority levying the tax, and shall be levied and collected under general laws. "

¹⁵ See McKenna (1960) for a rather interesting review of the evolution of Pennsylvania's faculty, occupation and income taxes.

bargains or mandates of various sorts, and it is imaginable that they will complain, bicker and perhaps even bicker about terms and conditions. But these become political rather than constitutional matters.

3.2 A Long View of Pennsylvania's Fisc and State Tax Rates: 1880-2017

Historically, to meet spending needs, new tax bases have been established, and similarly, tax rates have gone up over time and occasionally gone down during better economic times. Pennsylvania had faculty (1782) and then occupation taxes measured by income in the 18th Century, and as late as 1951 enabled local governments to apply occupation taxes measured by the presumed value of an occupation as determined by a local assessor. Between 1830 and 1840, the cost of state government in Pennsylvania rose from \$6.3 million to \$7.3 million, and in August, 1843, Pennsylvania defaulted on its bonds after delaying payments twice, and was finally forced to pay its bonds in script. During this period, 2/3 of the outstanding indebtedness of \$36 million was held by foreign (overseas) investors. In 1841, a 2% tax on salaries was enacted along with a 1% tax rate on profits from various professions and trades. The 1841 provisions included a flat tax exemption and withholding for state employees.¹⁶

Both the Union and Confederate governments imposed progressive rate personal income taxes as did a number of states. In 1860, Pennsylvania's state budget was \$3.6 million, and the Commonwealth floated a \$3 million bond for its costs of the Civil War. In 1864, a corporate tax was imposed and devoted to paying off that bond. The basis of the tax was a tax on freight whose rate of tax varied from \$.02 to \$.05/ton of freight. Such taxes on transportation would be later hotly contested before the US Supreme Court. Pennsylvania's Civil War corporate tax provisions also imposed a 3% tax on corporate and unincorporated businesses with a presence in Pennsylvania. Pennsylvania also had a corporate net income tax in 1864.

By 1874, the Pennsylvania corporate tax was repealed as it had paid off the \$3 million bond floated in 1860. However, the tax on business wealth as measured by the balance sheet capitalization of corporations was an early and continuing feature of Pennsylvania finance.

Below, three graphs display by year the nominal tax rates of major state level taxes: Figure 1:1880-1925, Figure 2:1926-1971, and Figure 3: 1972-2017. In the first period, 1880-1925, Pennsylvania utilized the Capital Stock and Franchise tax at an initial rate of 3 mils of taxable value, and then raised it to 5 mils in 1891; the increase occurred during the national recession of 1889-1891. During the national recession of 1923/4, Pennsylvania enacted a temporary, emergency Corporate Profits tax in 1923 at a rate of .5% (not shown on Figure 2); it expired in 1925. During the Great Depression, the Capital Stock and Franchise tax rate remained at 5 mils; however, in 1935, revenue needs resulted in the re-imposition of a corporate profits tax in 1935 at a rate of 6% that increased later to 7% in 1937, and in 1943 to 4%. Pennsylvania also enacted a graduated or progressive rate personal income tax in the same emergency legislation of 1935; however, it was found by the Supreme Court of Pennsylvania to be unconstitutional in *Kelly v. Kalonder* later in 1935.

In 1961, the corporate net income tax rate was raised from 4% to 5%. It is clear that during periods of economic downturns, the corporate net income tax rate was adjusted to meet revenue exigencies. In 1972, the corporate net income tax rate was raised to over 12%, and has hovered at 9.99% in more recent times. In 1972, after another adverse ruling by the Pennsylvania Supreme Court on the issue of a graduated, personal income tax, a flat rate personal income tax became a permanent feature of Pennsylvania's state tax structure. It was initially enacted at 2%, with some increases and decreases during the business cycle, and has remained at 3.07% for a number of years. Pennsylvania's Sales Tax, enacted initially to fund public education, has remained at 6% since the 1960's.

Figures 2-4 show a pattern of adoption of new tax bases, and then raising their tax rates, largely during periods of revenue necessity, and sometimes tax rate reductions during periods of economic prosperity. Some may characterize the targeting of specific kinds of economic activity during periods of revenue exigencies as a kind of "searchlight effect"; it appears that in Pennsylvania, the searchlight has focused more on income taxes than other

¹⁶ McKenna (1960), pp. 292-293.

kinds of tax bases. Importantly, Pennsylvania decided and accomplished the systematic reduction of the Capital Stock and Franchise Tax from a peak rate in 1991 of over 12 mils to its elimination in 2016. Similarly, as we shall see below, Pennsylvania has been able to eliminate some of the worst local taxes (taxes on local gross receipts, occupations, and the personal property tax) by freezing adoption, freezing the tax rate, and/or limiting maximum payment amounts, or outright elimination.

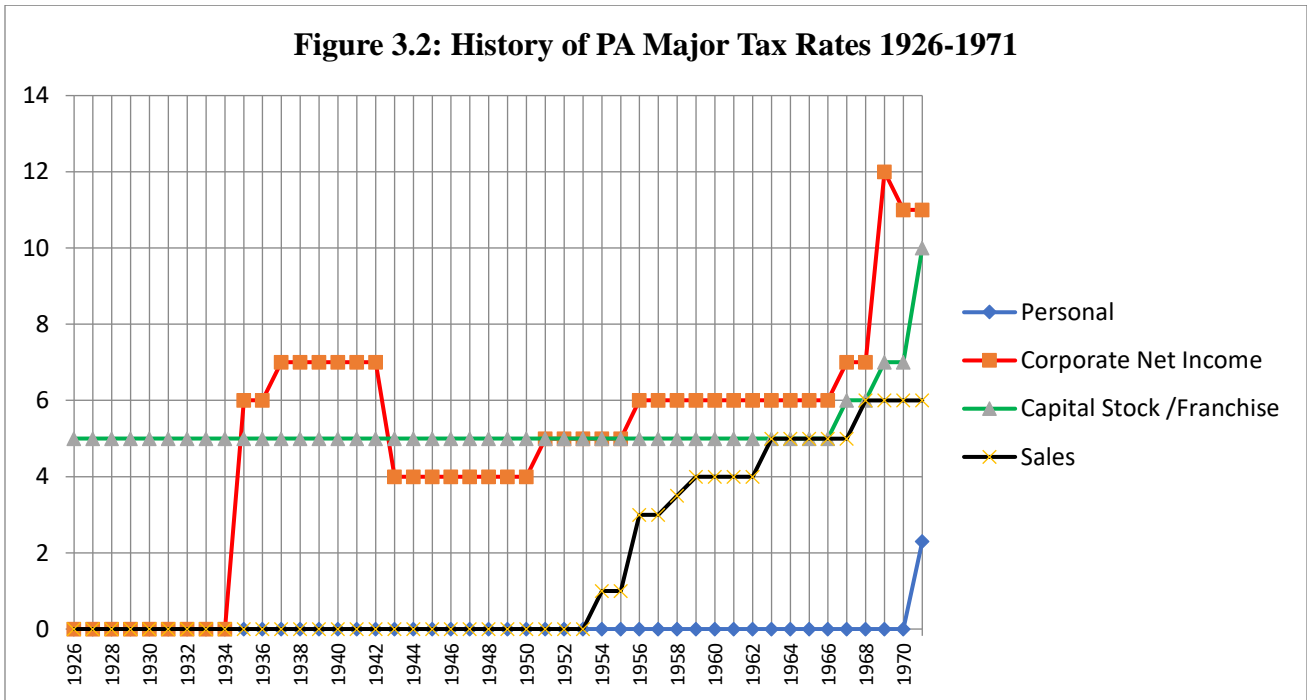
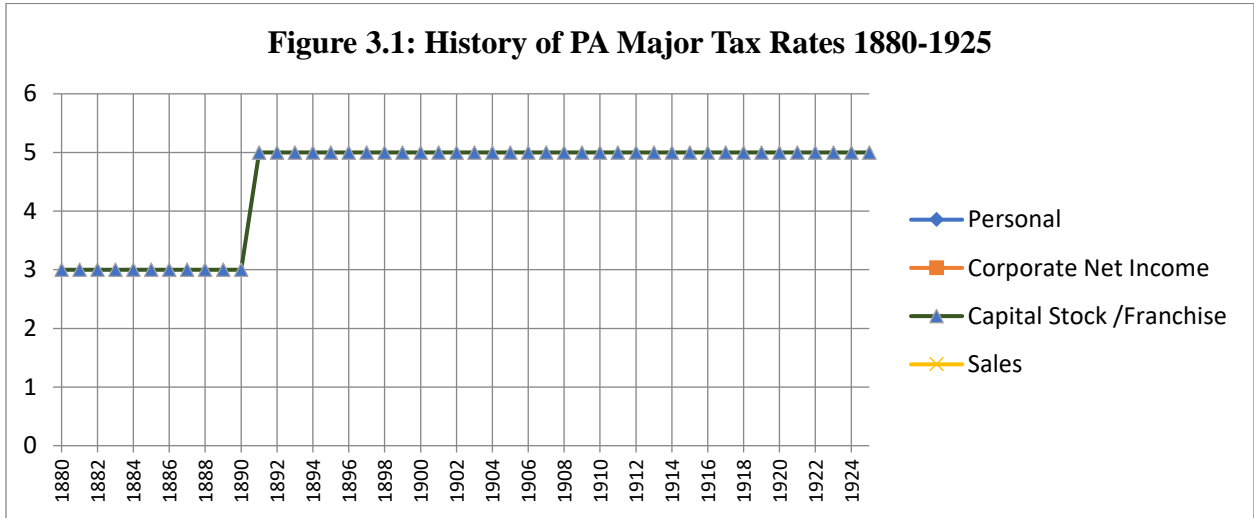
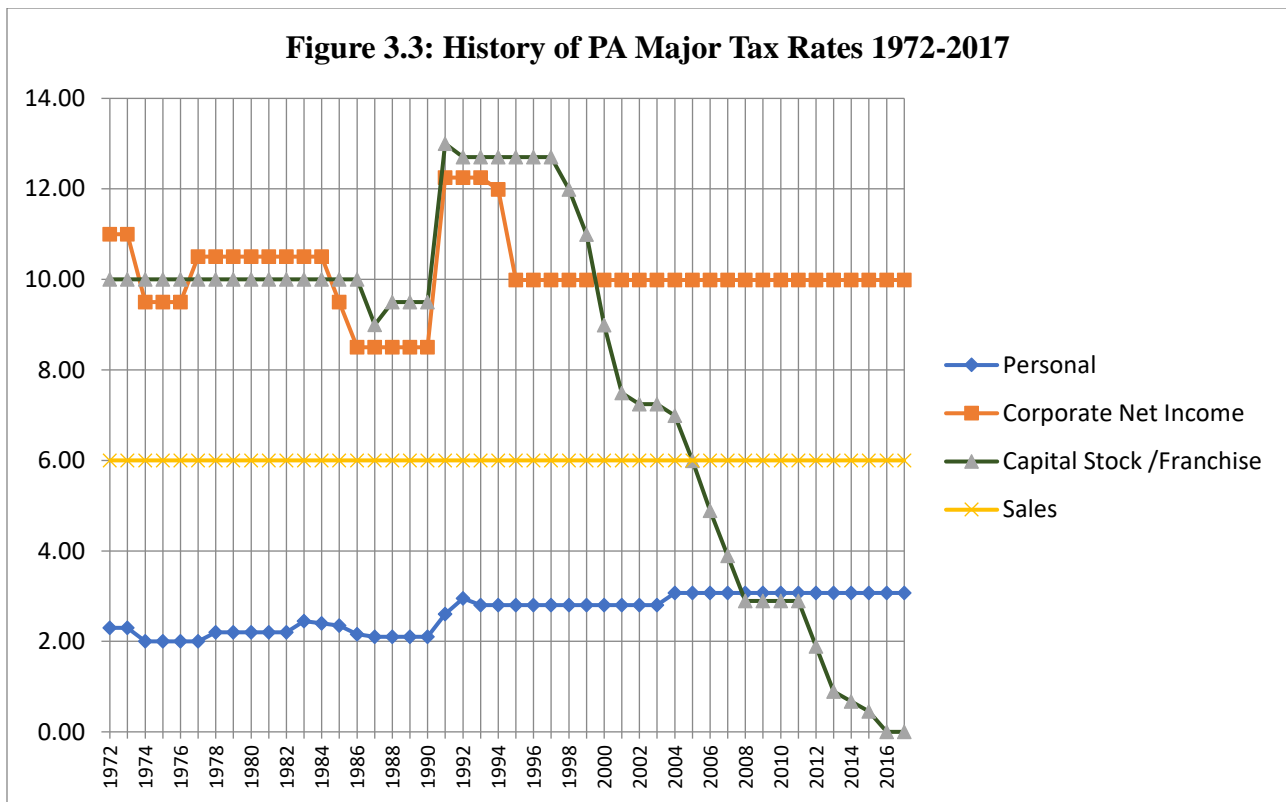


Figure 3.3: History of PA Major Tax Rates 1972-2017



3.3 The Importance of Tax Expenditures in Pennsylvania’s State Tax Bases: 1994/5, 2015/6, 2021/2

Each year, the executive submittal of the governor’s budget contains an estimate of tax expenditures in the General Fund, and other funds such as the Motor License Fund. A tax expenditure is defined as “...indirect expenditures that occur through special treatment within the tax structure.” These are composed of “Various tax credits, deductions, exemptions, and exclusions ...which result in reductions in revenues that would otherwise be received by the Commonwealth at current tax rates. In 1992, estimates of tax expenditures were required to be revised and updated every two years. The presentation of tax expenditures in the Executive Budget states that the estimates do not reflect possible behavioral reactions to the elimination of any or many, related tax expenditures, and that the estimates are not always based on tax return information, but reflect use of other, available data. Finally, the reader is reminded in the introduction to the Tax Expenditures in the budget that they should not be viewed necessarily as being strictly additive. Nonetheless, the Tax Expenditures reported in the state budget do indicate where special tax provisions exist, and what their individual likely amounts are.

To get some idea of what has been happening to the tax bases of Pennsylvania’s state tax structure, as a parallel examination to the earlier discussion of the evolution of state tax rates, I examined the approximately 80 pages of reported tax expenditures for 3 years: 1994/5 as reported in the 1995/6 Executive Budget, and 2015/6 as reported in the 2017/8 Executive Budget, and projected tax expenditures for 2021/2. My first interest was in the general overall level that the various credits, exemptions, deductions and exclusions amount to across the major state level taxes¹⁷. What we see is that overall tax expenditures, with the above caveats in mind, have grown numerically

¹⁷ More specifically, I only accumulated tax expenditures which were more than \$1 million in any of the years examined.

over time, and as a proportion of actual or projected amounts in the General Fund and Motor License Fund, they have become a larger proportion.

Even if the estimates in Table 1 double count the “true” tax expenditures by a factor of 3, e.g the amounts should be divided by 3 to get the proper total, their level and importance when juxtaposed to the amounts appropriated out of the General Fund and Motor License Fund are striking and large. What this suggests to me is that when thinking about how to modernize and reform our state and local tax system, considerable focus should be placed on what the tax base is defined to be, and time and effort should be spent revisiting the justifications for particular tax exemptions, exclusions, credits, deductions etc.

Table 3.1: Total Tax Expenditures as Reported in the Executive Budgets, Selected Years

Year	Amount of Tax Expenditure in current Billions	As % of General Fund
1994/5	\$20.70 B	107%
2015/6	\$33.60 B	105%
2021/2	\$54.30 B	134%

Source: Author’s tabulations of Section D Tax Expenditures reported in Executive Budget of Commonwealth of Pennsylvania for 1994/5,2015/6 and 2021/2 (projected).

Having put together the summary table above from the detailed tables, it may be of interest to display major tax expenditures for major state taxes for 2015/6 and 2021/2. Table 3 below shows some major tax expenditures across major state taxes. Note that each panel of Table 2 is sorted from largest to smallest tax expenditure in 2015/6. Table 2.1 indicates that total tax expenditures for the Corporate Net Income (CNI) tax were about \$2.5 billion in 2015/6 and 2021/2. The largest tax expenditure in the CNI, around \$800 million/year, was due to allowing small corporations in Pennsylvania to be treated as Subchapter S corporations per the Internal Revenue Code. Whether or not this is a desired tax policy design, we see that over \$800 million was foregone by treating small corporations differently than large ones. The second largest CNI tax expenditure, allowing the use of just the sales factor apportionment formula, was about \$600 million in revenues foregone in 2015/6. Allowing businesses to be treated for tax purposes as Limited Liability Corporations rather than regular corporations and allowing Net Operating Carry-back, Carry-forward, was about a \$.5 billion/year in foregone taxes to the General Fund.

Table 3.2: Selected Tax Expenditures in Corporate Net Income Tax Base

	2015/6	2021/2
Total Tax Expenditures for CNI (millions)	\$ 2,514.8	\$ 2,521.6
PENNSYLVANIA S CORPORATIONS	\$ 845.2	\$ 827.9
SALES FACTOR APPORTIONMENT WEIGHT	\$ 663.1	\$ 590.6
LIMITED LIABILITY COMPANIES (LLCs)	\$ 553.7	\$ 554.2
NET OPERATING LOSS CARRYFORWARD	\$ 389.5	\$ 479.3
NONPROFIT CORPORATIONS	\$ 60.5	\$ 66.4
FICA TAX ON TIPS	\$ 2.8	\$ 3.2

Table 3.2 indicates that total tax expenditures in Pennsylvania’s Sales and use Tax were \$3.6 billion in 2015/6. Under current sales and use tax law, exempting certain items of food reduced sales and use tax collections entailed revenue foregone of about\$1.4 billion in 2015/6, while exempting prescription drugs and orthopedic equipment reduced revenues by \$840 million/year, and exempting some clothing and footwear \$783 millions/year. There is

some evidence that taxing remaining clothing and footwear would actually increase the progression of the sales and use tax.

Mikesell (2017) reports that, on a standardized basis, Pennsylvania’s Per-capita Retail Sales Tax Collections per 1% of statutory rate was \$133.26 in FY 2016 compared to a national mean of \$176.14, and compared to a national median of \$160.99. The minimum among states levying a sales and use tax was \$110 per-capita. Thus, among states levying a sales and use tax, Pennsylvania has one of the narrowest sales and use tax bases.

Table 3. 3 Major Tax Expenditures in Sales and Use Tax Base for 2015/6 (\$millions)

	2015/6	2021/2
Total Tax Expenditures for Sales and Use Tax (millions)	\$ 3,580.0	\$ 4,574.5
FOOD Exemption	\$1,410.1	\$1,643.6
PRESCRIPTION DRUGS AND ORTHOPEDIC EQUIPMENT	\$ 842.4	\$1,313.6
CLOTHING AND FOOTWEAR	\$783.7	\$ 894.9
LIQUOR OR MALT BEVERAGE PURCHASED FROM RETAIL	\$141.7	\$192.6
NON-PRESCRIPTION DRUGS	\$116.0	\$183.3
GRATUITIES	\$97.4	\$ 127.3
CANDY AND GUM	\$65.6	\$76.4
PERSONAL HYGIENE PRODUCTS	\$48.4	\$58.4
CASKETS AND BURIAL VAULTS	\$19.5	\$25.0
NEWSPAPERS	\$16.3	\$15.5
TEXTBOOKS	\$12.3	\$11.4
CHARGES FOR RETURNABLE CONTAINERS	\$10.6	\$13.2
FOOD STAMP PURCHASES	\$8.2	\$10.8
MAGAZINES	\$6.3	\$6.7
Flags	\$1.5	\$1.8

Pennsylvania’s manufacturing heritage is reflected in the favorable tax treatment of certain manufacturing activities. Table 2.3 indicates that \$1.4 billion in tax revenues was foregone by the manufacturing exemption.

Table 3.4: Major Tax Expenditures for Manufacturing Activity (\$ millions)

	2015/6	2021/2
Total Tax Expenditures for Production Activities (millions)	\$1,388.5	\$1,638.3
MANUFACTURING EXEMPTION (Manufacture and Processing)	\$1,206.1	\$1,430.0
MANUFACTURING EXEMPTION (Public Utility)	\$96.4	\$102.8
CONTRACT FARMING	\$47.9	\$62.3
MANUFACTURING EXEMPTION (Agriculture)	\$35.9	\$40.6
MANUFACTURING EXEMPTION (Foundations for Machinery and Equipment)	\$2.2	\$2.6

The largest tax expenditure in the personal income tax in 2015/6 was due to the exclusion of retirement income of nearly \$3.0 billion in 2015/6; this is projected by the Department of Revenue to grow to \$4.3 billion in 2021/2. This increase clearly reflects the changing demographics of the state.

Table 3.5: Major Tax Expenditures in Personal Income Tax (\$millions)

	2015-16	2021-22
<i>Total Tax Expenditures for PERSONAL INCOME TAX</i>	\$ 8,491.6	\$ 11,305.2
RETIREMENT INCOME	\$ 2,983.6	\$ 4,341.1
BUSINESS INCOME DEDUCTIONS Other	\$ 1,979.0	\$ 2,566.3
EMPLOYEE BENEFIT PROGRAM EMPLOYER CONTRIBUTIONS	\$ 1,240.3	\$ 1,566.7
RETIREMENT CONTRIBUTIONS BY EMPLOYERS	\$ 1,106.4	\$ 1,448.8
BUSINESS INCOME DEDUCTIONS Depreciation	\$ 157.8	\$ 204.6
SALE OF A PRINCIPAL RESIDENCE	\$ 151.7	\$ 174.2
SCHOLARSHIPS, GRANTS, FELLOWSHIPS, AND STIPENDS	\$ 150.8	\$ 197.4
LIFE INSURANCE PROCEEDS	\$ 141.2	\$ 166.5
COMPENSATION FOR MILITARY SERVICE	\$ 129.4	\$ 150.1
CAFETERIA PLANS	\$ 93.7	\$ 122.7
WORKERS' COMPENSATION	\$ 92.5	\$ 99.0
REIMBURSEMENTS FOR ACTUAL EXPENSES	\$ 74.3	\$ 72.2
UNREIMBURSED EXPENSES	\$ 74.3	\$ 72.2
UNEMPLOYMENT AND SUPPLEMENTAL UNEMPLOYMENT COM	\$ 65.0	\$ 62.0
NONQUALIFIED DEFERRED COMPENSATION	\$ 32.7	\$ 39.1
HEALTH SAVINGS ACCOUNTS/ARCHER MEDICAL SAVINGS AC	\$ 13.2	\$ 16.6
PUBLIC ASSISTANCE	\$ 5.7	\$ 5.7

3.4 State Spending on Pennsylvania's Elderly and their Contribution to the Fisc

State spending pressures reflect differential cost pressures. For example, health care inflation has historically been faster than wage and salary or capital income growth. Thus, if our population requires relatively greater outlays for health care, which reflects the changing composition of our population (e.g. we are getting older with a stagnant population), this will mean that revenues, at current tax rates and tax base definitions, probably will be unable to keep up with spending pressures. My guess is that this is something the General Assembly is already aware of.

In 2000, 15.8% of Pennsylvania's population were over age 65, whereas in 2030 2.9 million or 22.8% are projected by the US Bureau of the Census¹⁸ to be 65 years of age or older.

In 2014 I developed and gave a paper with a former Heinz student, Ms. Yunni Deng, for the Lehigh Symposium on The Crisis in State and Local Government Finance. Table 3 (below) from the published version of the paper¹⁹ shows the actual 2013 and predicted 2025 spending on the elderly from the state's budget along with the tax expenditure due to the exclusion of private and public retirement income from the state personal income tax base as well as its exclusion from the local earned income tax base. It should be noted that data on Pennsylvania's spending on the elderly for the elderly is rather difficult to obtain; however, state budget experts were kind enough to provide their estimates from the General Fund and elsewhere about how such services are financed.

What we see in Table 3 below is that seniors received between \$4.2 and \$4.7 billion in benefits out of various state funds in 2013, and, were seniors' retirement income to have been taxed in 2013, another \$2.5 billion would have been raised. Another way to think about this is to see that other forms of state taxes had to pick up \$2.5B/\$4.5B or about ½ of spending on the elderly that they, as a group, were not contributing to. By 2025, we see that, due to the demographic changes likely to occur (we are getting considerably older, both in total and as a proportion of total population) that spending on seniors will rise to between \$4.2 to \$4.7 billion, and foregone taxes on retirement income will be between \$5.4 and \$7.1 billion.²⁰

Pennsylvania, along with Mississippi and New Hampshire, entirely excludes private retirement income from its individual income tax base and also entirely excludes public retirement income along with 6 other states. Of the 43 states and the District of Columbia with some form of personal income taxation, 16 states entirely tax private retirement income and 11 entirely tax state and local retirement income while 19 states partially tax private

¹⁸ This projection is based on the Census Bureau's 2025 project made in 2014, and was more pessimistic than that used by Pennsylvania's Independent Fiscal Office in 2013. Pennsylvania's estimated 2017 population from the American Community Survey showed a slight, *absolute* decline in population compared to the prior year. This decline is likely within the standard error of estimate from the sample used by Census to estimate the population. Given the impact of the retirement population on health and long-term care, there is merit in the General Assembly reviewing and making public the range of annual estimates of the elderly population and actual elderly enrollees in various publicly supported programs.

¹⁹ See Strauss and Deng (2015), online at: http://www.andrew.cmu.edu/user/rs9f/final_rpstrauss_ydeng_state_tax_notes_1_19_2015.pdf .

²⁰ Periodically, several of my older colleagues complain to me about the possibility of the Commonwealth imposing income taxes on their retirement incomes. Several observations are in order. First, there is no constitutional impediment to this being done, as the Pennsylvania Constitution allows for exemption or special classification of individuals by age and poverty. Admittedly, imposing a 3.07% tax on existing retirees' retirement income might be an unpleasant surprise and conflict with financial planning undertaken while earlier working. On the other hand, one can imagine phasing in such taxation so that in the first year there would be a 95% exclusion of retirement income, in the second year impose a 90% exclusion of retirement income from the PIT tax with the percentage dropping to an ultimate level of 50%. Alternatively, one might fashion an elderly exemption amount in the Personal Income Tax that would ensure that only those well off would be subject to income taxation.

retirement income and 20 partially tax state and local retirement income. Exclusion of employer pension contributions and exclusion of actual employee receipt of pension income is, in effect, a life-time tax expenditure.

Table 3.6: Actual and Projected State Spending on Elderly vs. State Tax Expenditures on Retirement Income from Strauss and Deng (2015)

Year	Service Outlays For Elderly from General Fund and Off Budget	Tax Expenditures for Elderly Retirement Income (Private and Public) (\$B)
2013 (actual)	\$4.2B to \$4.7B	\$2.5B
2025 (projected)	\$5.8B to \$7.8B	\$5.4B to \$7.1B

3.5 Pennsylvania’s Local Tax Structure: Reliance on the Real Estate Taxes 1977-2015

Pennsylvania’s financing of school districts, county governments, and plethora of municipal forms of local, general governments continues to be dependent on transfers and fees of various sorts. Table 4 indicates reliance on local real estate taxes appears to be declining for most municipal forms between 2000 and 2015. For example, county governments relied on local taxes for 35% of revenues in 1977, and only 25% in 2000. On the other hand, school districts dependence on the local property tax rose from 76.4% of all local taxes in 1977 to 84.7% of all local taxes in 2000, and then down to 80.5% in 2015/6. (See Table 4 below.)

Over time, various aspects of local taxing authority have been rationalized. The City of Pittsburgh was required to eliminate its mercantile and business privilege tax after 2010 in exchange for a payroll preparation tax and to reduce the parking tax rate. Also, Pittsburgh's amusement tax was reduced from 10% to 5% when the county sales tax was enacted in 1993. The 5% rate is consistent with other municipalities that levy the tax. School districts are prohibited from levying the tax if it was not in place as of 1997. School districts that levy the tax may not increase the rate and must reduce the rate should collections exceed what was collected in 1996/97 school year.

Some progress in the taxation of commuters occurred when the occupation privilege tax that increased from \$10/year to \$52/year with school districts keeping \$5 and municipalities the remaining \$47 paid by individuals to the municipality where they work effective in 2009. There is a \$12,000 low income exemption for people who earn below that amount who do not have to pay the tax. The definition of compensation has been expanded to be consistent with the PA Department of Revenue definition effective in 2003 except that investment income is still not taxed at the local level.

Act 24 of 2001 dealing with the occupational assessment tax in which school districts of the second through fourth class may by referendum eliminate the tax in favor of a higher local earned income tax to replace revenue lost from its elimination. In addition, the mercantile/business privilege tax is frozen as a gross receipts tax from the failed local tax reform referendum of 1989 that no local government or school district may levy the tax after November 30, 1988 if it was not already in place. A flat rate tax maybe levied.

Philadelphia’s tax structure and problems are different than the rest of the state, and trying to fix the self-inflicted tax problems resulting from a very high commuter tax rate from Harrisburg is not an easy

matter. As is evident from Table 4, Philadelphia has chosen not to rely on the local real estate tax compared to all of the rest of the local governments in Pennsylvania, and Philadelphia’s reliance on the local property tax, compared to other revenue sources, has declined over time. Philadelphia has accomplished some reforms by itself; in July, 2016, it reduced its tax on commuters earnings to 3.4741%, and lowered its resident tax on earned income to 3.9004%. In the late 1980’s the tax rate on commuter earnings was 4.3125% and the tax rate on resident earnings was 4.96%. Recently, Philadelphia went through a major revaluation of its property tax base. While there was considerable complaining in Philadelphia about the property reappraisal, there were not the tax riots of the 1790’s when 500 very angry farmers/distillers in South West Pennsylvania stormed the residence of the federal tax collector over the newly enacted federal excise on distilled spirits. The Whiskey Rebellion of South West Pennsylvania in 1794 included the tar and feathering of federal tax collector General John Neville. President Washington personally led 13,000 troops to quell the rebellion.

Table 3.7: Importance of Local Real Estate Tax in Pennsylvania Local Governments: 1977, 2000 and 2015

Year	(1)	(2)	(3)	(4)	(5)	(6)
	1977 1/	2000 2/	2015 3/	1977 1/	2000 /2	2015/6 3/
Local Jurisdiction	All Local Taxes as % of Total Revenues	All Local Taxes as % of Total Revenues	All Local Taxes as % of Total Revenues	Real Estate Taxes as % of All Local Taxes	Real Estate Taxes as % of All Local Taxes	Real Estate Taxes as % of All Local Taxes
All Public School Districts (excludes Intermediate Units, Charters, Career and Technical Schools none of which has taxing authority)	51.9%	54.9%	56.6%	76.4%	84.7%	80.5%
County Governments	35.8%	25.3%	40.2%	93.4%	96.7%	84.9%
All Municipalities (excluding Philadelphia and Pittsburgh)	46.6%	38.3%	41.5%	54.2%	44.9%	46.6%
Philadelphia	48.9%	41.4%	41.7%	26.0%	16.5%	15.8%
Pittsburgh	51.8%	52.8%	62.4%	51.4%	44.5%	32.1%
2A and 3rd Class Cities	37.5%	32.4%	33.2%	59.6%	58.5%	53.2%
Boroughs	39.5%	33.0%	35.7%	55.3%	49.9%	55.7%
1st Class Townships	56.4%	43.3%	47.1%	67.1%	52.2%	53.1%
2nd Class Townships	48.3%	39.7%	48.1%	39.6%	31.9%	35.6%

Sources: 1/ Final Report of the Pennsylvania Tax Commission, March, 1981, Tables II.10, II.11,II.12

2/ Pennsylvania Department of Community Affairs, *Taxation Manual*, 8th Edition, 2004, page 3.

3/Author’s tabulations of DCED and PDE online, electronic databases for 2015/6

3.6 Some Evidence on the Tax Equalization Board’s Efforts to Measure Assessed Value to Sales Price Ratios (AV/P) and the Quality of Local Assessment Practices

As is well known, there are four allowable forms of property assessment in Pennsylvania: the sales approach, the original cost less depreciation approach, the income capitalization approach, and the base-year approach. The use of the base-year system of property assessment means that new construction and properties that transact run the

risk of “welcome neighbor” or spot assessments.²¹ Similarly, the ability of local jurisdictions to appeal county assessments means that spot assessments can be a recurring problem for new purchasers of real estate. Jurisdictions in base-year assessing counties are forced to raise their millage rates and/or try to get greater state funding. Raising local millage may run afoul of state limitations on local millage, and voting to raise millage rates can be very politically difficult to achieve.

Under current Pennsylvania real estate assessment law, the Pennsylvania Tax Equalization Board is tasked with the responsibility of measuring and reporting the level of assessment in each county and the City of Philadelphia. Each county and the City of Philadelphia is required to provide to TED data on arms length sales prices by type of property. Data on these sales prices was obtained from TED, and tabulated. The information that TED develops by county has historically been used to administer the state school aid formula, and continues to be used in the appeals of assessments by property owners, and also for appeals by local governments. Table 5 indicates that for 2015, TED received information on 321,190 transactions which were accepted as arms length or “approved” sales prices for TED use in measuring the level of assessment in each county. Statewide, only 76% of the sales prices were over \$100. In 14 of Pennsylvania’s 67 counties more than 40% or more of data used by TED to compute the Common Level Ratio were composed of sales prices of \$0.0 or \$1.0.²²

Table 3.8: Statewide distribution of 2015 property sales prices across Pennsylvania.

Amount of Approved 2015 Sales Price	Number of 2015 Sales Approved by TED	% Distribution
Total sales	321,190	100.0%
Sales with Price=\$0.00	12,976	4.0%
Sales with Price=\$1.00	59,954	18.7%
\$2.00 < Price < \$100.00	3,490	1.1%
Price>\$100.00	244,770	76.2%

In the Fall of 2016, I taught a project course with 5 Heinz College masters students; the project sought to ascertain the statewide, annual costs of property assessments for the 66 counties and the City of Philadelphia. The students developed an online survey in conjunction with a panel of experts, and the Pennsylvania Association of Assessing Officers. The project found that there were 6.4 million parcels in 2015. Also, normal spending by the 66 county assessment offices and Philadelphia²³ totaled about \$70 million or about \$11/parcel. This is about ½ the

²¹ While Pennsylvania assessment law precludes spot assessment, and there are court decisions upholding this prohibition, there is widespread complaint about its continued practice.

²² Cameron 48.3%, Clarion 46.6%, Clinton 49%, Columbia 40.9%, Crawford, 40.6%, Greene 43.5%, Huntington 41.2%, Jefferson 47.3%, Juniata 45.0%, Susquehanna 56.5%, Tioga 42.6%, Venango 43.1%, Washington 42.5%, and Wyoming 51.4%. See Appendix Table II.2 for the complete list of counties’ sales price distributions.

²³ “Normal spending” for real property assessment purposes entails the *exclusion* of costs of a reassessment, especially a complete canvas and inspection, but includes the salary and capital costs of running a property assessment office. Those counties which had undergone a reassessment or complete canvas reported per parcel costs ranging from \$10/parcel to as much as \$40/parcel. The latter figure typically involved the costs of constructing for the first time an electronic database with

national average expenditure per parcel, and may explain why measuring the central tendency of sales ratios is so variable in most of Pennsylvania’s counties and the City of Philadelphia.

The coefficient of dispersion measures the deviation of historical assessed values (AV) to observed arms-length sales prices (P) by comparing the ratio (AV/P) to the median value of (AV/P) in each the assessing jurisdiction²⁴. If an assessor were doing a perfect job, then the assessed value he/she predicted for each property would be identical to the arms length sales price that transacted. If assessments were set at 100% of market value, then each ratio, AV/P, would be identical and equal to 1.0; there would be no variability in the distribution of the ratios. The calculated coefficient of dispersion in this case would be 0.0. As assessed values are different from the arms length prices of properties that transact, it follows that the coefficient of dispersion or COD rises.

As is well known, the International Association of Assessing Officers, the international standard setting organization for best assessment practices, recommends that assessors achieve a coefficient of dispersion (COD) of 20% or less when measuring the variability of sales ratios within an assessing jurisdiction. This is the gold standard. Below 20% is more golden, above 20% is less golden.

Using typical best practice statistical procedures²⁵ with existing 2015 TED sales data, I calculated and found the statewide COD to be 99.4%, or about 4.5 worse than the gold standard. Deleting the bottom 10% and top 10% of sales ratios reduced the COD statewide to 59.4% or 3 times worse than the gold standard. Appendix I displays the complete county by count results of this analysis of 2015 property sales in Pennsylvania. It is evident that there is an extreme range in the quality of property assessments in Pennsylvania, and that poor assessment quality is often associated with relatively few real property transactions.

Table 3.9: Pennsylvania statewide 2015 Coefficient of Dispersion under two different strategies for trimming outlying sales ratios

Experiment	Number of Pennsylvania Real Estate Sales Used in Experiment	Statewide Coefficient of Dispersion
IAAO Gold Standard	n/a	20.0%
Experiment 1: Trim top/bottom 5% of AV/P	213,507	99.4%
Experiment 1: Trim top/bottom 10% of AV/P	189,731	59.4%

County by county results for the analysis of the quality of real estate assessment can be found in Appendix I, Table I.3.

confirmed property characteristics such as nature of construction, number of bathrooms, garage spaces, amenities of the location as well as the typical land area and area of living space.

²⁴ In statistics, the usual measure of the relative variability of a variable is the coefficient of variation which compares the standard deviation of the variable to its mean. In assessment or appraisal of real property, the median rather than the mean is used as a reference point because one outlier in the AV/P ratio can cause very large gyrations in the standard deviation. Use of the median as a reference point reduces the impact of outliers on the overall characterization of the distribution of AV/P.

²⁵ For 2015, there were 313,578 “approved” sales in the TED database; however, restricting the analysis to P>\$100.00 and AV/P > 0.0 reduced the number of sales to be analyzed to 237,340, or a reduction of 24%. Only sales with prices over \$100 were used. Two further trimming experiments were performed: 1) drop the top and bottom 1% of sales ratios, and 2) drop the top and bottom 10% of sales ratios. While there were

4.0 SUMMARY: PAST AS PROLOGUE?

The long view about Pennsylvania's system of state and local taxes shows one of adoption of new tax bases during times of fiscal exigency, and then raising tax rates to meet immediate needs. Sometimes during periods of economic prosperity tax rates are then reduced. This is unremarkable, and the pattern in most states.

Whether or not the resulting system of state and local taxes in Pennsylvania is up to date or as up to date as might be possible remains a matter of political choice. Several of the important recommendations of the 1981 Pennsylvania Tax Commission were adopted by the General Assembly over time. The base of the Capital Stock and Franchise tax was substantially clarified, and over time, the tax was finally eliminated. Various local nuisance taxes have been eliminated or frozen, and school districts and municipalities have been accorded more of the state personal income tax base. Movement to one assessment law was finally achieved, and local collection of what is now the local earned income tax has been materially improved. On the other hand, diversifying the tax base of counties to more naturally reflect their human services responsibilities has not occurred outside of Philadelphia and Allegheny Counties through their access to the state sales and use tax, and much work remains to put the financing of municipalities and school districts on a sound and equitable basis.

Whether or not our fiscal glass is now half full or half empty remains a matter of taste and perception. However, I surmise the difficulties of accomplishing a state budget in a timely manner do not reflect there being an excess of revenues to deal with. Rather, in my view, there is a need to revisit the nature of our state tax bases, to match the nature of it going forward with the nature of our population, and to improve local tax administration of the local real estate assessment system.

The review of Pennsylvania's personal, corporate, and sales and use tax rates indicates that the personal and sales and use tax rates are unremarkable compared to neighboring states and other industrial states; on the other hand, the CNI tax rate at 9.99% is second highest in the US. When we compare tax *bases* the comparative position of Pennsylvania is somewhat different. Our personal income tax is at a low, flat rate, and neither a standard deduction nor personal exemptions are accorded under the PIT. Also, capital gains is taxed as ordinary income, and losses can offset positive income from other sources. The exclusion of private and public retirement income is about ¼ of PIT collections, and given the rapidly aging of Pennsylvania's population, I rather doubt that the exclusion can be sustained. For example, Medicaid expenditures have grown at 10%/year which dwarfs annual growth in the PIT base.

While there is a great deal of excitement about the demise of the deduction for state and local taxes at the federal level effective in 2018, it is unclear what states with personal income taxes should do. Pennsylvania's PIT is largely decoupled with its federal counterpart. Only if there is a swelling of capital gains and dividend payments in 2018 might one expect any positive, material impact on Pennsylvania's PIT receipts. In the business tax area, because the starting point for the CNI is line 28 of the federal corporate tax return, it is possible that some federal changes to business taxation may impact CNI revenues positively; I have in mind here the elimination of the federal deduction for domestic production activities, and the new, 30% limitation on interest deductions which will impact heavily leveraged entities. Whether or not changes in deferral will impact the CNI, or changes in various, complex international federal tax law changes will matter to Pennsylvania is difficult to analyze, because Pennsylvania's separate entity filing requirement may not result in any of these federal corporate tax increases to increase Pennsylvania's business tax base.

As an educator, I like to give grades that encourage more attention and effort to move towards excellence. Right now, the best grade I can give Pennsylvania for the history and likely trajectory of our state and local tax structure is an "I" or Incomplete. That is, there is work to be done. Repeating the recent and distant past in terms of tax policy in the Commonwealth may simply result in keeping our tax policy glass barely half full. Given the more competitive nature of our national economy it is possible that at this level, I fear more will continue to talk with their feet.

Finally, let me briefly comment on the possible effect of the ballot initiative on the property tax that just passed in November. Should the General Assembly now choose to enact the complete or optional exemption of residential property from the local property tax base, in recognition of the results of the ballot initiative last week, it is imaginable that business property owners may start thinking harder about the wisdom of expanding or doing business in Pennsylvania. After all, if the residential property tax were to disappear in a local community, all that would remain would be the business portion of the local property tax. Property tax rates would have to go up dramatically in communities that chose to eliminate the residential property tax to finance desired/needed local services. It may now be advisable for the General Assembly to study the possible direct and indirect effects of moving the local property tax in this new, direction, and publicly disclose just what the new business and agricultural property tax rates would have to be, as well as to disclose what state tax rates would have to rise to were the state to choose to finance the lost local residential property taxes. My best guess is that when the dust settles on this matter and one looks clearly at what local non-residential property tax rates would have to be, or what state income and sales tax rates would have to become, current law will look like the most reasonable place to be in the midst of ongoing, state budget and pension problems.

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APPENDIX I DETAILED TABLES

Table I. 1: Distribution of Approved 2015 Sales Prices by Tax Equalization Board by Pennsylvania County

County	TEB Approved Sales Price in 2015				% Distribution of Approved 2015 Sales Prices				
	P= \$0.00	P= \$1.00	P> \$1.00	Total	P= \$0.00	P= \$1.00	P <=1	P>\$1.00	Total
Adams	228	715	2,050	2,993	7.6%	23.9%	31.5%	68.5%	100.0%
Allegheny	1,330	6,571	26,040	33,941	3.9%	19.4%	23.3%	76.7%	100.0%
Armstrong	153	-	1,088	1,241	12.3%	0.0%	12.3%	87.7%	100.0%
Beaver	4	110	2,940	3,054	0.1%	3.6%	3.7%	96.3%	100.0%
Bedford	-	669	872	1,541	0.0%	43.4%	43.4%	56.6%	100.0%
Berks	2,014	1,130	8,164	11,308	17.8%	10.0%	27.8%	72.2%	100.0%
Blair	14	1,057	2,411	3,482	0.4%	30.4%	30.8%	69.2%	100.0%
Bradford	-	-	932	932	0.0%	0.0%	0.0%	100.0%	100.0%
Bucks	382	3,254	11,259	14,895	2.6%	21.8%	24.4%	75.6%	100.0%
Butler	-	-	4,382	4,382	0.0%	0.0%	0.0%	100.0%	100.0%
Cambria	149	1,424	2,672	4,245	3.5%	33.5%	37.1%	62.9%	100.0%
Cameron	34	81	123	238	14.3%	34.0%	48.3%	51.7%	100.0%
Carbon	-	403	1,719	2,122	0.0%	19.0%	19.0%	81.0%	100.0%
Centre	2	1,096	2,327	3,425	0.1%	32.0%	32.1%	67.9%	100.0%
Chester	-	-	8,785	8,785	0.0%	0.0%	0.0%	100.0%	100.0%
Clarion	20	670	791	1,481	1.4%	45.2%	46.6%	53.4%	100.0%
Clearfield	26	873	1,639	2,538	1.0%	34.4%	35.4%	64.6%	100.0%
Clinton	156	481	662	1,299	12.0%	37.0%	49.0%	51.0%	100.0%
Columbia	-	799	1,156	1,955	0.0%	40.9%	40.9%	59.1%	100.0%
Crawford	328	1,010	1,956	3,294	10.0%	30.7%	40.6%	59.4%	100.0%
Cumberland	69	1,817	4,929	6,815	1.0%	26.7%	27.7%	72.3%	100.0%
Dauphin	-	-	5,893	5,893	0.0%	0.0%	0.0%	100.0%	100.0%
Delaware	-	-	9,695	9,695	0.0%	0.0%	0.0%	100.0%	100.0%
Elk	-	-	558	558	0.0%	0.0%	0.0%	100.0%	100.0%

County	TEB Approved Sales Price in 2015				% Distribution of Approved 2015 Sales Prices				
	P= \$0.00	P= \$1.00	P> \$1.00	Total	P= \$0.00	P= \$1.00	P <=1	P>\$1.00	Total
Erie	2,232	1	4,120	6,353	35.1%	0.0%	35.1%	64.9%	100.0%
Fayette	-	-	984	984	0.0%	0.0%	0.0%	100.0%	100.0%
Forest	12	276	315	603	2.0%	45.8%	47.8%	52.2%	100.0%
Franklin	1,064	20	2,583	3,667	29.0%	0.5%	29.6%	70.4%	100.0%
Fulton	24	247	261	532	4.5%	46.4%	50.9%	49.1%	100.0%
Greene	554	1	722	1,277	43.4%	0.1%	43.5%	56.5%	100.0%
Huntingdon	-	593	847	1,440	0.0%	41.2%	41.2%	58.8%	100.0%
Indiana	299	85	607	991	30.2%	8.6%	38.7%	61.3%	100.0%
Jefferson	-	864	964	1,828	0.0%	47.3%	47.3%	52.7%	100.0%
Juniata	3	334	412	749	0.4%	44.6%	45.0%	55.0%	100.0%
Lackawanna	25	1,972	3,585	5,582	0.4%	35.3%	35.8%	64.2%	100.0%
Lancaster	-	-	9,344	9,344	0.0%	0.0%	0.0%	100.0%	100.0%
Lawrence	275	834	2,046	3,155	8.7%	26.4%	35.2%	64.8%	100.0%
Lebanon	141	864	2,798	3,803	3.7%	22.7%	26.4%	73.6%	100.0%
Lehigh	-	2,320	6,865	9,185	0.0%	25.3%	25.3%	74.7%	100.0%
Luzerne	85	3,083	6,931	10,099	0.8%	30.5%	31.4%	68.6%	100.0%
Lycoming	-	1,109	2,002	3,111	0.0%	35.6%	35.6%	64.4%	100.0%
Mckean	644	1	1,205	1,850	34.8%	0.1%	34.9%	65.1%	100.0%
Mercer	-	1,138	2,378	3,516	0.0%	32.4%	32.4%	67.6%	100.0%
Mifflin	571	7	1,043	1,621	35.2%	0.4%	35.7%	64.3%	100.0%
Monroe	97	1,609	6,428	8,134	1.2%	19.8%	21.0%	79.0%	100.0%
Montgomery	-	-	14,352	14,352	0.0%	0.0%	0.0%	100.0%	100.0%
Montour	5	133	335	473	1.1%	28.1%	29.2%	70.8%	100.0%
Northampton	-	-	5,944	5,944	0.0%	0.0%	0.0%	100.0%	100.0%
Northumberland	28	956	1,852	2,836	1.0%	33.7%	34.7%	65.3%	100.0%
Perry	61	466	830	1,357	4.5%	34.3%	38.8%	61.2%	100.0%
Philadelphia	3	6,560	28,243	34,806	0.0%	18.8%	18.9%	81.1%	100.0%

County	TEB Approved Sales Price in 2015				% Distribution of Approved 2015 Sales Prices				
	P= \$0.00	P= \$1.00	P> \$1.00	Total	P= \$0.00	P= \$1.00	P <=1	P>\$1.00	Total
Pike	95	1,203	2,710	4,008	2.4%	30.0%	32.4%	67.6%	100.0%
Potter	-	1	255	256	0.0%	0.4%	0.4%	99.6%	100.0%
Schuylkill	4	1,640	3,455	5,099	0.1%	32.2%	32.2%	67.8%	100.0%
Snyder	-	514	623	1,137	0.0%	45.2%	45.2%	54.8%	100.0%
Somerset	-	871	1,347	2,218	0.0%	39.3%	39.3%	60.7%	100.0%
Sullivan	-	-	224	224	0.0%	0.0%	0.0%	100.0%	100.0%
Susquehanna	244	796	800	1,840	13.3%	43.3%	56.5%	43.5%	100.0%
Tioga	-	654	882	1,536	0.0%	42.6%	42.6%	57.4%	100.0%
Union	-	-	645	645	0.0%	0.0%	0.0%	100.0%	100.0%
Venango	41	820	1,137	1,998	2.1%	41.0%	43.1%	56.9%	100.0%
Warren	-	515	783	1,298	0.0%	39.7%	39.7%	60.3%	100.0%
Washington	1,196	2,155	4,533	7,884	15.2%	27.3%	42.5%	57.5%	100.0%
Wayne	327	1,016	2,118	3,461	9.4%	29.4%	38.8%	61.2%	100.0%
Westmoreland	37	3,642	7,353	11,032	0.3%	33.0%	33.3%	66.7%	100.0%
Wyoming	-	494	467	961	0.0%	51.4%	51.4%	48.6%	100.0%
York	-	-	10,236	10,236	0.0%	0.0%	0.0%	100.0%	100.0%
Total	12,976	59,954	248,607	321,537	4.0%	18.6%	22.7%	77.3%	100.0%

Table I. 2: Pennsylvania Tax Equalization Board Common Level Ratios for 2015 Compared to Median Ratio of AV/P for Sales Prices over \$100

County	2015 Tax Equalization Board Common Level Ratio (CLR)	Number of 2015 Sales P > \$100 and ratio > 0	Median AV/P for 2015 with P > \$100 and ratio > 0	CLR - Median	% Diff TED vs Median
*Adams	116.0%	1,999	124.1%	-8.1%	-6.5%
*Allegheny	87.1%	24,832	85.0%	2.1%	2.5%
Armstrong	43.9%	982	30.8%	13.1%	42.3%
Beaver	27.8%	2,896	22.0%	5.9%	26.7%
*Bedford	96.6%	858	90.9%	5.7%	6.3%
*Berks	74.3%	7,371	73.0%	1.3%	1.7%
*Blair	10.8%	2,381	10.0%	0.8%	8.3%
Bradford	33.3%	926	26.9%	6.4%	23.8%
*Bucks	11.1%	10,758	10.2%	0.9%	9.0%
*Butler	10.9%	4,226	9.3%	1.6%	17.6%
*Cambria	24.7%	2,595	22.2%	2.5%	11.5%
Cameron	67.7%	116	57.9%	9.8%	16.9%
Carbon	52.8%	1,689	45.5%	7.3%	16.0%
Centre	28.0%	2,247	26.0%	2.0%	7.8%
*Chester	53.8%	8,784	52.6%	1.3%	2.4%
Clarion	37.7%	767	28.7%	9.0%	31.2%
Clearfield	14.7%	1,620	12.1%	2.6%	21.8%
*Clinton	88.4%	617	90.3%	-1.9%	-2.1%
Columbia	27.1%	1,112	23.5%	3.6%	15.4%
Crawford	37.8%	1,934	27.5%	10.3%	37.3%
*Cumberland	99.8%	4,880	101.0%	-1.2%	-1.2%
*Dauphin	73.2%	5,763	81.2%	-8.0%	-9.9%
*Delaware	65.0%	9,619	66.8%	-1.8%	-2.8%

County	2015 Tax Equalization Board Common Level Ratio (CLR)	Number of 2015 Sales P > \$100 and ratio > 0	Median AV/P for 2015 with P > \$100 and ratio>0	CLR - Median	% Diff TED vs Median
Elk	43.7%	338	41.2%	2.5%	6.2%
*Erie	95.3%	4,013	96.8%	-1.5%	-1.5%
*Fayette	72.5%	984	63.8%	8.7%	13.6%
Forest	23.7%	309	18.5%	5.2%	28.3%
*Franklin	14.0%	2,505	12.8%	1.2%	9.5%
*Fulton	38.8%	256	40.8%	-2.0%	-4.9%
*Greene	67.8%	583	40.8%	27.0%	66.3%
Huntingdon	24.3%	814	19.5%	4.8%	24.5%
*Indiana	19.8%	585	12.6%	7.3%	57.8%
*Jefferson	49.2%	924	32.8%	16.4%	50.0%
*Juniata	18.2%	408	13.2%	5.0%	38.1%
*Lackawanna	14.4%	3,490	13.2%	1.2%	8.9%
*Lancaster	75.5%	9,251	77.2%	-1.7%	-2.3%
*Lawrence	87.0%	1,991	88.1%	-1.1%	-1.3%
*Lebanon	106.5%	2,756	106.6%	-0.1%	-0.1%
* Lehigh	99.0%	6,490	98.4%	0.6%	0.6%
*Luzerne	103.8%	5,800	117.1%	-13.3%	-11.3%
*Lycoming	74.6%	1,970	75.4%	-0.8%	-1.0%
*McKean	93.8%	1,181	77.7%	16.1%	20.7%
Mercer	29.0%	1,841	20.2%	8.8%	43.6%
Mifflin	48.2%	1,035	47.5%	0.7%	1.5%
Monroe	22.4%	6,330	28.1%	-5.7%	-20.3%
*Montgomery	56.1%	13,799	54.9%	1.2%	2.2%
*Montour	77.0%	325	74.4%	2.6%	3.5%
Northampton	34.3%	5,810	33.9%	0.4%	1.3%

County	2015 Tax Equalization Board Common Level Ratio (CLR)	Number of 2015 Sales P > \$100 and ratio > 0	Median AV/P for 2015 with P > \$100 and ratio>0	CLR - Median	% Diff TED vs Median
*Northumberland	25.6%	1,787	18.1%	7.5%	41.6%
*Perry	97.5%	778	106.2%	-8.7%	-8.2%
*Philadelphia	98.3%	27,201	108.8%	-10.5%	-9.7%
Pike	24.7%	2,614	25.0%	-0.3%	-1.2%
*Potter	34.4%	244	26.8%	7.7%	28.6%
Schuylkill	45.9%	3,159	41.2%	4.7%	11.3%
*Snyder	17.1%	621	15.4%	1.7%	10.8%
Somerset	40.1%	1,236	29.4%	10.7%	36.2%
*Sullivan	70.4%	224	73.6%	-3.2%	-4.4%
Susquehanna	36.4%	685	29.0%	7.4%	25.7%
*Tioga	70.5%	790	60.4%	10.1%	16.6%
*Union	77.9%	645	73.3%	4.6%	6.3%
*Venango	84.4%	730	80.9%	3.5%	4.3%
Warren	33.1%	597	25.3%	7.8%	30.8%
Washington	10.7%	3,986	10.4%	0.3%	3.2%
*Wayne	90.6%	1,990	112.7%	-22.1%	-19.6%
*Westmoreland	17.3%	7,008	15.9%	1.4%	8.6%
Wyoming	18.3%	440	19.2%	-0.9%	-4.5%
*York	88.0%	9,845	91.9%	-3.9%	-4.3%

Table I. 3: Comparison of Common Level Ratio to Trimmed Median Sales Ratios and Coefficients of Dispersion

Table I.3 2015 Common Level Ratio, Median AV/P and COD	Trimming Rules: P>\$100, AV/P > 0 and Bottom and Top 5% of Ratios Dropped				Trimming Rules: P>\$100, AV/P > 0 and Bottom and Top 10% of Ratios Dropped		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
County	2015 Common Level Ratio	Trimmed 2015 Sales	Median 2015 AV/P	Coefficient of Dispersion	Trimmed 2015 Sales	Median 2015 AV/P	Coefficient of Dispersion
Statewide		213,507	67.5%	94.4%	189, 731	67.5	59.7%
1 : Adams	116.0%	1,799	124.1%	311.6%	1,599	124.1%	65.3%
2 : Allegheny	87.1%	22,348	85.0%	80.5%	19,864	85.0%	41.4%
3 : Armstrong	43.9%	882	30.8%	75.2%	784	30.8%	52.9%
4 : Beaver	27.8%	2,605	22.0%	86.2%	2,316	22.0%	52.6%
5 : Bedford	96.6%	772	90.9%	87.3%	686	90.9%	49.1%
6 : Berks	74.3%	6,632	73.0%	140.9%	5,895	73.0%	54.2%
7 : Blair	10.8%	2,140	10.0%	103.4%	1,903	10.0%	54.6%
8 : Bradford	33.3%	832	26.9%	55.8%	740	26.9%	38.3%
9 : Bucks	11.1%	9,680	10.2%	37.9%	8,602	10.2%	14.9%
10: Butler	10.9%	3,797	9.3%	52.6%	3,368	9.3%	37.9%
11: Cambria	24.7%	2,334	22.2%	231.3%	2,075	22.2%	110.6%
12: Cameron	67.7%	104	57.9%	198.8%	92	57.9%	106.4%
13: Carbon	52.8%	1,519	45.5%	136.9%	1,349	45.5%	60.7%
14: Centre	28.0%	2,021	26.0%	31.0%	1,797	26.0%	18.4%
15: Chester	53.8%	7,904	52.6%	17.6%	7,026	52.6%	12.5%
16: Clarion	37.7%	686	28.7%	88.5%	613	28.7%	62.4%
17: Clearfield	14.7%	1,454	12.1%	102.1%	1,293	12.1%	63.4%
18: Clinton	88.4%	555	90.3%	160.0%	493	90.3%	55.1%
19: Columbia	27.1%	1,000	23.5%	92.0%	888	23.5%	44.2%
20: Crawford	37.8%	1,740	27.5%	96.4%	1,545	27.5%	62.3%
21: Cumberland	99.8%	4,392	101.0%	17.5%	3,904	101.0%	11.5%

Table I.3 2015 Common Level Ratio, Median AV/P and COD	Trimming Rules: P>\$100, AV/P > 0 and Bottom and Top 5% of Ratios Dropped				Trimming Rules: P>\$100, AV/P > 0 and Bottom and Top 10% of Ratios Dropped		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
County	2015 Common Level Ratio	Trimmed 2015 Sales	Median 2015 AV/P	Coefficient of Dispersion	Trimmed 2015 Sales	Median 2015 AV/P	Coefficient of Dispersion
22: Dauphin	73.2%	5,185	81.2%	332.6%	4,609	81.2%	121.6%
23: Delaware	65.0%	8,656	66.8%	61.1%	7,695	66.8%	41.4%
24: Elk	43.7%	304	41.2%	147.4%	270	41.2%	87.0%
25: Erie	95.3%	3,611	96.8%	66.5%	3,209	96.8%	28.7%
26: Fayette	72.5%	884	63.8%	31.2%	786	63.8%	24.9%
27: Forest	23.7%	277	18.5%	91.1%	247	18.5%	61.7%
28: Franklin	14.0%	2,253	12.8%	228.2%	2,003	12.8%	28.6%
29: Fulton	38.8%	229	40.8%	60.7%	204	40.8%	39.0%
30: Greene	67.8%	521	40.8%	114.1%	465	40.8%	83.4%
31: Huntingdon	24.3%	732	19.5%	61.1%	650	19.5%	42.7%
32: Indiana	19.8%	525	12.6%	101.2%	463	12.6%	65.4%
33: Jefferson	49.2%	828	32.8%	79.5%	738	32.8%	61.7%
34: Juniata	18.2%	366	13.2%	52.6%	326	13.2%	40.6%
35: Lackawanna	14.4%	3,140	13.2%	292.1%	2,792	13.2%	135.9%
36: Lancaster	75.5%	8,325	77.2%	35.2%	7,399	77.2%	17.7%
37: Lawrence	87.0%	1,791	88.1%	134.4%	1,591	88.1%	73.3%
38: Lebanon	106.5%	2,480	106.6%	95.8%	2,204	106.6%	26.8%
39: Lehigh	99.0%	5,840	98.4%	98.4%	5,192	98.4%	29.9%
40: Luzerne	103.8%	5,218	117.1%	227.4%	4,639	117.1%	97.5%
41: Lycoming	74.6%	1,772	75.4%	52.3%	1,576	75.4%	29.8%
42: Mckean	93.8%	1,060	77.7%	100.6%	942	77.7%	64.8%
43: Mercer	29.0%	1,655	20.2%	141.0%	1,471	20.2%	80.9%
44: Mifflin	48.2%	930	47.5%	129.2%	827	47.5%	72.3%

Table I.3 2015 Common Level Ratio, Median AV/P and COD	Trimming Rules: P>\$100, AV/P > 0 and Bottom and Top 5% of Ratios Dropped				Trimming Rules: P>\$100, AV/P > 0 and Bottom and Top 10% of Ratios Dropped		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
County	2015 Common Level Ratio	Trimmed 2015 Sales	Median 2015 AV/P	Coefficient of Dispersion	Trimmed 2015 Sales	Median 2015 AV/P	Coefficient of Dispersion
45: Monroe	22.4%	5,694	28.1%	210.4%	5,064	28.1%	102.6%
46: Montgomery	56.1%	12,419	54.9%	74.8%	11,038	54.9%	20.7%
47: Montour	77.0%	291	74.4%	28.5%	259	74.4%	20.8%
48: Northampton	34.3%	5,228	33.9%	351.8%	4,648	33.9%	66.3%
49: Northumberland	25.6%	1,606	18.1%	252.7%	1,427	18.1%	147.5%
50: Perry	97.5%	699	106.2%	65.3%	622	106.2%	35.5%
51: Philadelphia	98.3%	24,479	108.8%	72.9%	21,757	108.8%	52.6%
52: Pike	24.7%	2,351	25.0%	682.1%	2,090	25.0%	303.6%
53: Potter	34.4%	218	26.8%	42.6%	194	26.8%	32.8%
54: Schuylkill	45.9%	2,843	41.2%	220.2%	2,524	41.2%	97.1%
55: Snyder	17.1%	557	15.4%	39.1%	495	15.4%	30.9%
56: Somerset	40.1%	1,112	29.4%	54.6%	988	29.4%	40.1%
57: Sullivan	70.4%	200	73.6%	60.4%	178	73.6%	37.1%
58: Susquehanna	36.4%	615	29.0%	143.4%	547	29.0%	66.0%
59: Tioga	70.5%	710	60.4%	109.5%	632	60.4%	56.2%
60: Union	77.9%	579	73.3%	33.2%	515	73.3%	24.0%
61: Venango	84.4%	656	80.9%	106.8%	584	80.9%	62.2%
62: Warren	33.1%	537	25.3%	98.5%	477	25.3%	61.8%
63: Washington	10.7%	3,585	10.4%	149.3%	3,187	10.4%	63.1%
64: Wayne	90.6%	1,790	112.7%	149.8%	1,591	112.7%	77.2%
65: Westmoreland	17.3%	6,305	15.9%	149.8%	5,557	15.9%	69.8%
66: Wyoming	18.3%	396	19.2%	145.3%	352	19.2%	49.3%
67: York	88.0%	8,859	91.9%	176.6%	7,875	91.9%	44.0%