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States Moving Away From Taxes on Tangible Personal Property

By
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Introduction

Property has been taxed in many states since colonial times. In most states, the property tax is the largest source of local government revenue and is one of the most transparent and visible taxes (and therefore often disliked the most by voters).[1]

Property tax is an "*ad valorem*" tax, meaning that it is taxed according to the value of the property. A higher-valued property pays a higher property tax than a lower-valued property. Homeowners are quite familiar with the property tax on "real property," that is, land, structures on the land, and fixtures attached to the structures. But property taxes can also include taxes on *intangible property* (such as stocks, bonds, mortgages, copyrights, and patents) and *tangible personal property*.[2]

Key Findings

- *While governments in every U.S. state impose a tax on real property (land and structures), fewer states impose a tax on "tangible personal property" (TPP). TPP is property that can be touched and moved, such as equipment and furniture.*
- *TPP taxes are now largely invisible to individuals but can be a significant tax expense for businesses.*
- *Seven states have entirely eliminated TPP taxation, and four states have eliminated most TPP taxes. Per capita collections from TPP taxes dropped 20 percent between 2000 and 2009.*
- *Options exist for states to phase out or minimize reliance on TPP taxes. Doing so can reduce economic distortions and encourage greater economic growth.*
- *Two states, Florida and Arizona, have initiatives on the November 2012 ballot to increase the minimum exemption from TPP tax.*
- *State should not replace TPP taxes with a revenue source that is as harmful to capital accumulation and economic growth.*

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1 Tax Foundation polls from 1972 to 2005 found that the property tax is perceived as the "least fair" state and local tax. See e.g., Vito Tanzi, Taxpayer Choices in Future Tax Shifts, Tax Foundation Tax Review (Nov. 1972), http://taxfoundation.org/sites/taxfoundation.org/files/docs/taxreview-1972-11.pdf; Tax Foundation, Annual Survey of U.S. Attitudes on Tax and Wealth (2005), http://taxfoundation.org/article/2005-annual-survey-us-attitudes-tax-and-wealth.

2 For more on taxes on intangible property, *see* Mark Robyn, *2012 State Business Tax Climate Index*, Tax Foundation Background Paper No. 62 (Jan. 25, 2012), http://taxfoundation.org/article/2012-state-business-tax-climate-index.

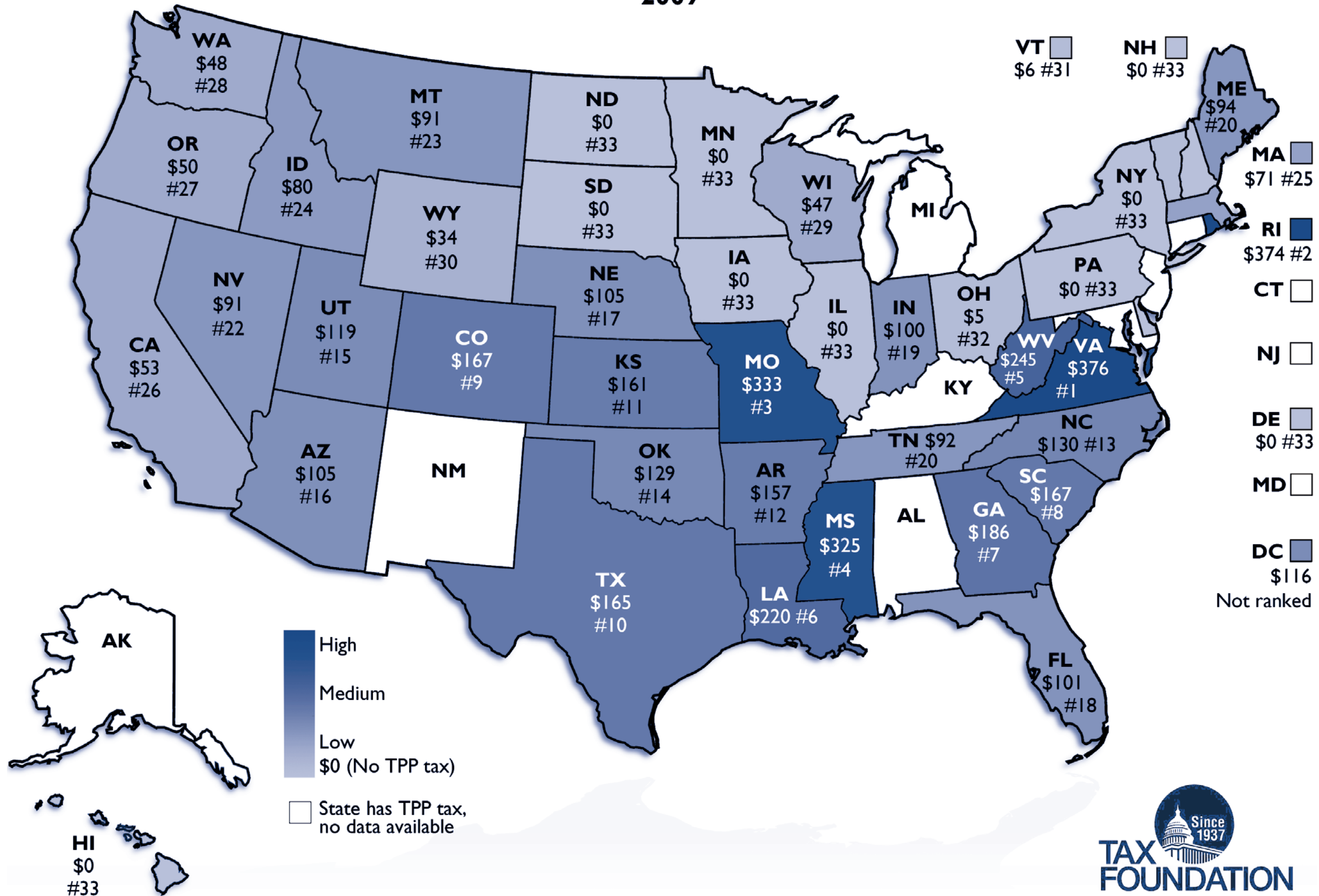
Tangible personal property (TPP) is property that can be touched and moved, such as equipment, furniture, and other possessions. All states except Oklahoma have exempted from their TPP tax goods that are not used for the production of income, such as household items like furniture and jewelry[3]. (Even in Oklahoma, only six of the 77 counties in the state levy this tax on household property.[4]) Many states do continue to tax large household items like motor vehicles and personal watercraft, while other states opt to tax these items with separate excise taxes instead.

With household goods exempt, state and local TPP taxes apply primarily to business equipment. While the tax is often labeled a tax on *personal property* to distinguish it from taxes on *real property*, because most states have exempted personal property used for personal reasons, most citizens are not aware that the tax on personal property exists. TPP tax is invisible to most individuals, although it is a significant expense for businesses.

Compared to real property, personal property typically comprises a relatively small share of total state and local assessed property values. For example, tangible personal property in cities in Texas accounted for 11 percent of all assessed property statewide in 2009. The value of TPP varies from zero percent of total property assessed in some Texas cities to as much as 85 percent of total assessed property (real and personal) values in others.[5] This wide range of personal property as a percent of total property seems to be typical of all states, with average statewide personal property values existing somewhere between 5% to 15% of

Figure 1.

Tangible Personal Property Tax Collections Per Capita
2009



Source: Tax Foundation & Foundation for Government Accountability calculations from U.S. Census Bureau data. See Table 2 for data.

3 Such taxes used to be relatively widespread. In the movie *My Summer Story* (MGM 1994), set in 1940s Indiana, the family learns that the TPP tax assessor is en route. The whole neighborhood erupts into a flurry of activity, using wheelbarrows to move dressers out of sight and strapping couches to the roofs of their cars, scrambling to hide anything of value before the assessor arrived.

4 Personal correspondence with Teresa Strawther, Senior Assessment & Equalization Analyst at the Oklahoma Tax Commission. Virginia permits taxation of household goods, but we found no jurisdiction in Virginia that continues to tax these personal items.

5 The figure of 85% comes from the small portion of San Marcos, Texas which falls in Caldwell County.

the total assessed property values but with great variation within each state. Moreover, in 2009, revenues from TPP taxes comprised only 2.25% of total state and local tax collections.[6]

In November 2012, voters in Florida and Arizona will go to the polls to decide whether to increase the minimum amount of TPP that businesses must possess before they are required to file and pay TPP tax. In both states, legislatures voted overwhelmingly to increase the exemption and send the tax reduction measures to voters. These initiatives, along with other national trends, indicate that TPP will comprise an ever-smaller share of state and local tax revenues in the future.

This decline in TPP tax revenues represents a positive trend in eliminating a tax which imposes significant economic distortions compared to alternatives. Here we review recommendations and pathways to reduce state and local reliance on TPP taxes while preventing steep, irreplaceable declines in local tax revenues.

Common Features of a Tangible Personal Property Tax

The TPP tax in many states is complicated with exclusions, exemptions, valuation rules, assessment ratios, different tax rates for different types of property, credits, refunds, abatements, and statutory and constitutional limitations on property tax rates. Tax owed is generally determined by subtracting any exempt property, calculating fair market value, multiplying any applicable assessment ratio, multiplying by the tax rate, and then reducing the taxable amount by available credit or abatement.

Exclusions

A TPP tax regime begins by first defining TPP. Any items of TPP that do not fall within the definition of TPP are excluded from taxation. Most states define TPP as property that can be touched or moved, which broadly encompasses both personal use property and property held for business or production of income. However, some states narrowly define TPP to include only property that is held or used for business or production of income. In those states, personal use property is excluded from TPP tax.

Exemptions

After determining what is included in the TPP tax regime, the amount of TPP that is initially subject to tax is reduced by any exemptions. Most states have long lists of property types that are exempt from taxation. Household goods and property held by government and nonprofit entities are the most common exemptions, while other specific exemptions reflect the political power of particular interest groups and legislative policy to encourage particular enterprises. Extensive exemptions for TPP used in agriculture are typical. More exemptions have developed over time in many states for the benefit of manufacturing, pollution control, renewable energy, and high tech industries.

Inventory is the most common business TPP exemption. Seven states (Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Texas, and West Virginia) still tax most inventory. In Alaska, Maryland, Vermont, and Virginia, inventory is taxed by some local jurisdictions. In Massachusetts, inventory of a sole proprietorship and some LLCs has not been exempted from the TPP tax.

Valuation

Once excluded and exempted items have been removed from the TPP base, the value of the remaining TPP must be established. Most states start with a definition of value that reflects fair market value. For real property, value is usually defined as what a willing buyer would pay to a willing seller, a standard that is also used for TPP in many states. However, some states more mechanically calculate value by adjusting the cost of the TPP with a depreciation schedule reflecting age and useful life. Many of these states' taxing agencies recommend or require using the same depreciation tables statewide, but depreciation tables used by local assessors may vary within a state. Depreciated values calculated for property tax purposes differ from depreciation values shown on income tax returns.[7]

Assessment Ratios

In some states, only a portion of the TPP value is taxed. An assessment ratio is a percentage that is applied against fair market value to determine taxable value of property. An assessment ratio has the effect of reducing the market value to arrive at taxable value. For example, an assessment ratio of 50% means that only half of the market value constitutes the taxable value.

6 Authors' calculations, based on those states that separately report TPP from real property tax.

7 We found no state where TPP tax value is the same as the depreciated value for federal income tax purposes.

Fifteen states adjust fair market value of TPP by an assessment ratio to arrive at taxable value. Three of those states (Michigan, Nevada, and New Mexico) apply the same ratio to all property. For example, New Mexico multiplies full value of all property by 0.33 to calculate taxable value.[8] In the twelve remaining states, the assessment ratios differ based on the type of property being taxed. In these states, the differing assessment ratios have the effect of taxing TPP and other business property at a higher rate than comparable residential property. Tennessee, for example, has four assessment ratios for real property, and three assessment ratios for TPP. The ratios include rates of 0.25 of value for residential and farm real property, 0.30 for most business TPP, 0.40 for most business real property, and 0.55 for utility property.[9] Business assessment ratios can be less generous than residential assessment ratios, leading to business bearing a disproportionate tax burden relative to its market valuation.

Changing assessment ratios for classes of property other than homesteads has little direct impact on most voters. However, increasing the assessment ratio for non-homestead property increases the taxable value of the property and represents a tax increase for businesses and utilities. As a result, differing assessment ratios can be used to facilitate tax increases that are invisible to most taxpayers.

Tax Rates

After the taxable value of the TPP in question has finally been determined, one must then determine which tax rate applies. Seven states and the District of Columbia impose different tax rates or permit local jurisdictions to impose different tax rates on TPP than on other types of property.[10] Different tax rates for different types of property have an effect that can be similar to the effect of assessment ratios. Assessment ratios often increase the tax on business TPP by multiplying the value of the TPP by a fraction that is larger than the fraction applied for residential property. Tax rates can also increase the tax on business TPP by multiplying the taxable value of business TPP by a higher tax rate than the rate used for residential property.

Montana is an extreme example of a state that imposes different rates on different types of property. It has 14 classes of property. Most business TPP is taxed at 2% for the first $2 million of value and 3% for TPP in excess of $2 million, compared with a rate of 0.31% of forest productivity value for forest land and a rate of 12% for centrally assessed electric utility property.[11] The effect of Montana's different tax rates is that electric utility property owners must pay 4 to 6 times as much property tax as owners of general business TPP for property of equal value.

As with assessment ratios, differing tax rates for different types of property make it relatively easy for legislators to increase taxes on non-homestead property and to favor particular taxpayers while having little direct impact on most voters, thereby reducing the political risk of a property tax increase.

Credits, Abatements, and Refunds

Finally, the calculated tax may be reduced by credits, abatements, and refunds. Credits are calculated after the tentative tax has been determined, before the tax has been formally assessed. Abatements are credited after the tax has been assessed and before it has been paid. Refunds are granted after the taxes have been assessed and paid.

An example of a refund provision is the qualified target business provision in Florida law. Qualified target businesses in Florida may receive tax refunds if they apply for government approval and meet extensive requirements for job creation and economic benefits.[12] Municipalities in Connecticut have the option to abate taxes for information technology personal property, and real and personal property of communications establishments.[13] Louisiana statutes contain an unusual example of a tax credit; property taxes paid for inventory in the state are credited against the taxpayer's income and franchise taxes.[14]

Tax Rate Limitations

Some states cap property tax rates, so local jurisdictions that set property tax rates must comply with these legislative or constitutional limits.

8 N.M. Stat. Ann. § 7-37-3 (2012).

9 Tenn. Code Ann. §§ 67-5-801 to -901 (2012).

10 District of Columbia, Kentucky, Maryland, Michigan, Montana, Rhode Island, Virginia, and West Virginia. Alaska statutes permit municipalities to impose a flat tax on TPP in lieu of ad valorem taxes. *See* Alaska Stat. § 29.45.055 (2011). Different tax rates on utility or railroad TPP are not unusual. Preferences for homestead property also are common. These two types of discrimination are not included in this discussion.

11 Mont. Code Ann. §§ 15-6-131 to -159 (2012).

12 Fla. Stat. § 288.106 (2011).

13 Conn. Gen. Stat. §§ 12-81t and 12-81u (2011).

14 La. Rev. Stat. Ann. § 47:6006 (2001).

Calculation of the impact of these limitations can be very complicated because of a variety of rules for taxes imposed by different taxing authorities on different types of property and to support different types of expenditures. For example, New Mexico statutes provide that tax rates on residential and nonresidential property should be identical, but because of the operation of statutory tax rate increase limitations, the tax rates may in fact be different.[15]

Other Factors

Because the tangible personal property tax is levied mostly by local governments but is regulated by state governments, there are about as many ways to administer TPP taxation as there are local governments.[16] In the textbook version of local government financial management, local governments set their general property tax rates by: 1) choosing the level of expenditures, 2) subtracting intergovernmental transfers and other revenues from expenditures, leaving the total levy to be generated from the property tax, 3) summing the total value of all of the property in the jurisdiction,[17] and 4) setting a property tax levy and rate to raise the appropriate levy.

There are many complications to this simplistic story, such as exemptions for primary homesteads and circuit breakers for elderly residents, as well as the state property tax caps noted earlier. In addition, recent research suggests that local governments do not set their levies based on local need alone, rather they raise revenue according to the ability to increase revenues; jurisdictions with many renters tend to have higher property tax rates because renters may not be aware that they are paying property tax included in the price of rent (a concept called renters illusion).[18] Additionally, local governments have also used mass reassessments as a way to increase the levy (revenue from the property tax) without substantially altering the rate.[19]

Tangible Personal Property Tax Administration and Compliance

TPP taxation is "taxpayer active," meaning that individuals and businesses must fill out tax forms listing all of their taxable personal property, adding a compliance cost to the total cost of administering personal property tax. This is in contrast to real property taxation, which is "taxpayer passive": a statement valuing the land, improvements, and property tax owed is sent to property owners, alleviating compliance costs while adding some cost for government to administer the tax.

For TPP, businesses must file forms detailing relevant attributes of their property, including (but not limited to) a physical description, year of purchase, purchase price, and any identifying information (e.g., serial numbers) that are included on the property. Local government assessors then take the information provided from businesses and use depreciation tables to estimate how much that equipment would cost if purchased on the market.[20] Others require businesses to use published tables to calculate this value themselves. Twenty-six states have uniform TPP rendition forms (see Table 1) while the remainder have forms which vary by county.

Personal property rendition forms can be quite complex and time consuming. Kentucky's form, for instance, spans 24 pages. While there is insufficient empirical data on how much time businesses spend filling out personal property forms, it is a burden that weighs most heavily on new businesses that must find and detail this information for the first time.[21]

No state publishes how frequently it audits TPP tax returns. It is generally accepted that low audit rates are associated with higher rates of tax evasion, all else being equal.[22] Utah provides a short guidance document on personal property

15 N.M. Stat. Ann. §§ 7-37-7, -7.1 (2012).

16 For a primer on property taxes in general, *see* Glenn W. Fisher, The worst tax?: a history of the property tax in America (University of Kansas Press 2006).

17 Calculating the value of property is generally conducted using three methods: the market approach, the cost approach, or the income approach.

18 Wallace E. Oates, *Property taxation and local public spending: the renter effect*, 57 J. of Urban Econ. 419 (2005).

19 Justin M. Ross & Wenli Yan, *Fiscal Illusion from Property Reassessment? An Empirical Test of the Residual View* (Indiana University, Bloomington, School of Public & Environmental Affairs Research Paper No. 2011-12-01, 2011), *available at* http://ssrn.com/abstract=1969015.

20 In other cases, depreciation tables can be used to shift market values forward to reduce the long-term disincentive for accumulating capital. Each state publishes its own depreciation table and that choice is implicit in depreciation rates.

21 In many states new businesses are given preferential rates, which may somewhat alleviate this problem. See the state-by-state legal data section of the paper for information on how your state treats new businesses.

22 James Alm, Betty R. Jackson, & Michael McKee, *Estimating the Determinants of Taxpayer Compliance with Experimental Data*, 45 Nat'l. Tax J. 107 (1992).

audits, which outlines that audits may be conducted as late as September for a property snapshot of January 1 and that businesses generally receive about two weeks of lead time between a notice of an audit and an actual audit.[23]

Nevada seeks to minimize the cost of TPP tax compliance by exempting businesses that can

Table 1: Tangible Personal Property Tax Base and Compliance Details

	Different rate or assessment ratio for personal compared to Real Property?	TPP applies to Inventory?	TPP applies to Non-Agricultural Equipment & Machinery?	State Uniform Personal Property Declaration Form?	Local Option to reduce TPP tax?	Economic Development Exemption?
Alabama	No	No	Yes	Yes	Yes	Yes
Alaska	No	Partial	Yes	No	Yes	Yes
Arizona	No	No	Yes	No	No	No
Arkansas	No	Yes	Yes	Yes	No	Yes
California	No	No	Yes	No	Yes	Yes
Colorado	No	No	Yes	Yes	No	No
Connecticut	No	No	Yes	Yes	Yes	Yes
Delaware	-	-	-	-	-	-
Florida	No	No	Yes	Yes	Yes	Yes
Georgia	No	No	Yes	Yes	Yes	Yes
Hawaii	-	-	-	-	-	-
Idaho	No	No	Yes	Yes	Yes	Yes
Illinois	-	-	-	-	-	-
Indiana	No	No	Yes	Yes	Yes	Yes
Iowa	-	-	-	-	-	-
Kansas	No	No	Yes	Yes	Yes	Yes
Kentucky	Yes	Yes	Yes	Yes	Yes	No
Louisiana	Yes	Yes	Yes	Yes	Yes	Yes
Maine	No	No	Yes	No	No	Yes
Maryland	Yes	Partial	Yes	Yes	Yes	Yes
Massachusetts	No	Partial	Yes	Yes	Yes	Yes
Michigan	No	No	Yes	Yes	Yes	Yes
Minnesota	No	N/A	Partial	N/A	No	Yes
Mississippi	No	Yes	Yes	Yes	Yes	Yes
Missouri	Yes	No	Yes	No	No	No
Montana	Yes	No	Yes	Yes	No	Yes
Nebraska	No	No	Yes	Yes	No	Yes
Nevada	No	No	Yes	No	Yes	Yes
New Hampshire	-	-	-	-	-	-
New Jersey	No	No	Partial	Yes	No	Yes
New Mexico	No	No	Yes	No	Yes	Yes
New York	-	-	-	-	-	-
North Carolina	No	No	Yes	Yes	No	No
North Dakota	No	No	Partial	Yes	No	Yes
Ohio	-	-	-	-	-	-
Oklahoma	Yes	Yes	Yes	Yes	No	Yes
Oregon	No	No	Yes	Yes	Yes	Yes
Pennsylvania	-	-	-	-	-	-
Rhode Island	Yes	No	Yes	No	Yes	Yes
South Carolina	Yes	No	Yes	Yes	Yes	Yes
South Dakota	No	No	Partial	Yes	No	Yes
Tennessee	Yes	No	Yes	No	No	No
Texas	No	Yes	Yes	No	No	No
Utah	No	No	Yes	Yes	No	No
Vermont	No	Partial	Yes	No	Yes	Yes
Virginia	Yes	Partial	Yes	No	Yes	Yes
Washington	No	No	Yes	No	No	Yes
West Virginia	Yes	Yes	Yes	Yes	No	No
Wisconsin	No	No	Yes	Yes	No	Yes
Wyoming	No	No	Yes	Yes	No	Yes
District of Columbia	Yes	No	Yes	N/A	N/A	Yes
Total "Yes"	13	6	39	26	22	32

Source: Tax Foundation & Foundation for Government Accountability compilation.
Notes: "-" indicates that TPP not levied in that state. The online version of this paper is accompanied by TPP Tax Statutory References to laws concerning the TPP tax provisions described in this table.

23 Utah State Tax Commission, Property Tax Division, *Business Personal Property Audits* (2011) http://tax.utah.gov/forms/pubs/pub-19.pdf.

show that any tax it might pay would be less than the cost of collecting it (which it estimates to be an average of $10.19 per return, including postage and mailers, printing, collection, utilities, and manpower).[24]

Disadvantages and Economic Distortions of Tangible Personal Property Taxes

Taxes on tangible personal property are distortionary because they apply to some business inputs but not others. All else equal, a tax on machinery and mechanical property disincents the use and accumulation of additional capital because TPP taxes make it more expensive relative to labor.

For example, if a bank is faced with a decision between building an ATM at a cost of $20,000 per year and hiring a bank teller at $20,500 per year, they should choose to build the ATM. But if that ATM is subject to a tangible personal property tax in excess of $500; the bank will choose to employ the bank teller instead, even though doing so is economically wasteful and that bank teller could provide more value elsewhere in the economy.

Year after year tax costs will encourage business owners to choose labor inputs over technological advances. This can have sizeable impacts on determining the optimal scale and makeup of firms, which has implications for long term growth.

But does taxing personal property produce more economic distortion than taxing real property? The answer is very likely "yes," based on the two competing views about who pays the property tax. First, some scholars see the property tax as essentially a user fee for local government services. This "benefit view" of the property tax assumes that local zoning ordinances prevent individuals from free riding on local government services. The second view, or "capital tax" view, argues that the property tax is an economically distortionary tax with mobile capital flowing out of high-tax areas and into low-tax areas.[25]

In practice, taxation of real property may have elements of both the benefit view and capital tax view, depending on the location. Residential communities with strict zoning, for instance, may adhere more closely to the benefit view. Other areas, such as rural areas and cities, may adhere more closely to the capital view and seek to attract large business investments with favorable tax policies. The capital tax on real property still requires the assumption that capital is mobile, which is somewhat unrealistic for pre-existing capital (though tax increases do create disincentives for new construction).

While real property may not respond quickly to changes in property tax rates, personal property, which is a mobile segment of the tax base, will respond more quickly to tax rate changes. This will cause mobile capital to flow out of jurisdictions with high tax rates into jurisdictions with lower tax rates. As a result, ad valorem taxation of personal property is the more distortionary cousin to real property taxation.[26] Because TPP is more likely to adhere to the distortionary capital tax view of property taxation, in the next section, we highlight how taxation of tangible personal property is less desirable than alternative revenues.

TPP and Principles of Sound Taxation

There are four well-recognized principles of sound tax policy: simplicity, transparency, economic neutrality, and stability.[27] The administration of tangible personal property tax, when examined separately from real property, can violate a number of these principles:

Simplicity. The various assessment ratios, tax rates, and depreciation schedules inherent in TPP taxation make it difficult for business owners to estimate how much tax they will owe on different types of capital investments, such as computers, business equipment, heavy equipment, motorized vehicles, and inventory.[28] With taxpayers obligated to calculate value and tax for their property, TPP taxation has higher compliance costs than real property tax and many other taxes.

24 Nevada Department of Taxation, *Collection Costs For Personal Property Tax Bills 2012-2013*, http://tax.state.nv.us/DOAS%20Locally%20Assessed%20%20New%20Proposed.html.

25 For a more comprehensive summary of these competing views, *see* George R. Zodrow, *The property tax as a capital tax: a room with three views*, 54 Nat'l. Tax J. 1 (2001).

26 George R. Zodrow & Peter Mieszkowski, *Pigou, Tiebout, property taxation, and the underprovision of local public goods*, 19 J. of Urban Econ. 356 (1986).

27 Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, Book V, Chapter II, PART II (1776); Tax Foundation, The Principles of Sound Tax Policy, http://taxfoundation.org/article/principles-sound-tax-policy.

28 This contrasts with a sales and use tax which is paid just once at the point of purchase or transfer into the state.

Table 2: Tangible Personal Property Tax Collections Per Capita, by State (Constant 2010 Dollars)

	2000	2005	2009	% change, first year available to 2009
Alabama	N/A	N/A	N/A	
Alaska	N/A	N/A	N/A	
Arizona	$172	$128	$105	-39%
Arkansas	N/A	$139	$157	12%
California	$54	$48	$53	-2%
Colorado	$166	$156	$167	0%
Connecticut	N/A	N/A	N/A	
Delaware	-	-	-	
Florida	$112	$121	$101	-10%
Georgia	N/A	$186	$186	0%
Hawaii	-	-	-	
Idaho	$111	$116	$80	-28%
Illinois	-	-	-	
Indiana	$327	$200	$100	-69%
Iowa	-	-	-	
Kansas	$158	$181	$161	2%
Kentucky	N/A	N/A	N/A	
Louisiana	$156	$165	$220	41%
Maine	N/A	$124	$94	-24%
Maryland	N/A	N/A	N/A	
Massachusetts	$69	$66	$71	3%
Michigan	N/A	N/A	N/A	
Minnesota	-	-	-	
Mississippi	N/A	$314	$325	3%
Missouri	N/A	$379	$333	-12%
Montana	$73	$79	$91	25%
Nebraska	$96	$89	$105	10%
Nevada	$93	$82	$91	-2%
New Hampshire	-	-	-	
New Jersey	N/A	N/A	N/A	
New Mexico	N/A	N/A	N/A	
New York	-	-	-	
North Carolina	$160	$143	$130	-19%
North Dakota	-	-	-	
Ohio	$189	$164	$5	-97%
Oklahoma	$93	$102	$129	39%
Oregon	$53	$51	$50	-6%
Pennsylvania	-	-	-	
Rhode Island	$317	$459	$374	18%
South Carolina	$232	$234	$167	-28%
South Dakota	-	-	-	
Tennessee	N/A	$104	$92	-12%
Texas	$163	$174	$165	1%
Utah	$141	$133	$119	-16%
Vermont	$17	$8	$6	-64%
Virginia	$446	$398	$376	-16%
Washington	$70	$53	$48	-32%
West Virginia	$206	$210	$245	19%
Wisconsin	$53	$43	$47	-11%
Wyoming	$30	$33	$34	13%
District of Columbia	$181	$142	$116	-36%

Source: Tax Foundation & Foundation for Government Accountability calculations from U.S. Census Bureau data.
Notes: "-" indicates that TPP not levied in that state, thus collections are zero. "N/A" indicates that the state did not respond to requests or the data they collect is insufficient to generate an estimate of personal property collections.

Transparency. TPP tax is a business expense that must be offset by business revenues in order for the business to be profitable. The tax therefore is at least partly passed on to consumers through higher product and service prices, but this additional cost cannot be shown on receipts, such as with a retail sales tax. As a result, the impact of these non-transparent TPP taxes is hidden to most consumers and an invisible issue to most voters.

Neutrality. Fifteen states tax real property differently than tangible personal property, encouraging businesses to make equipment purchase decisions based in part on tax policy and not business needs. Businesses are discouraged from investing in new equipment, or to affix certain property to the land, so as to avoid TPP taxes. This in turn can discourage capital accumulation, business expansion, and growth.

TPP tax also encourages tax avoidance behavior. Most jurisdictions tax TPP as of one particular date each year. Businesses consequently are encouraged to defer an investment until after this snapshot date and to dispose of property before. These activities are advantageous for businesses only for the purpose of legally avoiding taxes; they do not benefit consumers. This also violates economic neutrality.

Stability. In its favor, taxation of tangible personal property as part of the general property tax likely results in a relatively stable source of government revenues, though no research we are aware of examines the stability of TPP taxation separately from the stability of real property taxation.

Trends in TPP Taxation

Tax revenues from tangible personal property comprised just 2.25% of own-source state and local tax revenue (state and local tax revenue, excluding federal and state aid) in 2009, a 29% decrease in TPP tax levies over the previous ten years.[29]

Ad valorem taxation of TPP has become a smaller portion of state revenues for a number of reasons. Ohio, for example, has completely phased out TPP taxation, replacing it with other sources of revenue.[30] Some states have eliminated entire categories of TPP from the tax, such as inventory. Other states, such as Maine, have eliminated TPP tax for a broad category of new business property.[31] Vermont has adopted local options to reduce

29 2009 is the most recent year in which we have data for all states and data from the US census on total state and local own-source revenue. Of the 41 states who levied personal property tax in 2009, we have data for 33 states, and for 8 states data was not available (largely) because states do not collect sufficient information to disaggregate personal property taxes from real property taxes. 41 states levied personal property taxes in 2009, which is greater than the 40 states who levy the personal property tax in 2012 as Ohio has phased out TPP taxation since 2009.

or repeal TPP taxes.[32] Florida and Arizona are seeking to increase exemptions from the TPP tax with ballot initiatives in November 2012, functionally excluding many small businesses from the tax. It is also probable that general property tax caps, such as the 1%/2%/3% cap in Indiana, are indirectly limiting personal property taxation.[33]

Table 2 shows the **TPP tax burden per capita** of all states. This metric, which divides TPP tax collections by population, is appropriate as it accounts for variations in valuation, exemptions, and assessment ratios to create an equivalent comparison between states. Relatively low TPP taxes exist in Ohio ($5) and Vermont ($6), while at the other end are states like Missouri ($333) and Virginia ($376).

Due to data limitations, ten states include motor vehicle property taxes, increasing the per capita levy figure by $90 on average.

Nationally, a population-weighted average of personal property tax levies shows that TPP revenues have decreased $28 per person from 2000 to 2009 in real terms, and $17 per capita between 2005 and 2009. (See Table 3.) This represents a significant 20% real decline in TPP levies over the nine-year period.

Table 4 shows TPP tax collections as a percent of own-source state and local revenues. This metric controls for the size of state governments as well as control for federal formula programs which provide matching or other aid to states. As a percent of state and local revenues, TPP levies tell a qualitatively similar story to per capita levies: 28 states have decreased their reliance on TPP revenues while only four states have increased their reliance on TPP taxes between 2000 and 2009: Arkansas, Louisiana, Montana, and Oklahoma.[34] This list is smaller than the number of states that saw increases in per capita expenditures. This evidence, as shown by the national totals in Table 5, suggests that even though total state and local revenues are increasing, governments are choosing to increase taxes on activities other than owning tangible personal property (and perhaps real property as well).

The methodology explaining these calculations, along with TPP tax collections by state, can be found in the Appendix.[35]

Recommendations for Reducing Reliance on TPP Tax

Ad valorem TPP taxation is less desirable than other taxes due to their complexity, non-transparency, economic distortions, and harm to economic growth. Many states are recognizing this undesirability, as evidenced by reductions in per capita tax burdens at a time when overall tax burdens have increased in many states. State and local governments seeking to reduce economic distortions and improve competitiveness through the tax code should reduce (or eliminate) TPP taxation. Steps taken by other states can provide a roadmap.

Enact Exemptions

Inventory

Most states have exempted inventory from TPP taxes, adhering to the adage that "if you tax something, you will get less of it." (For taxation of business inventory, this has meant that you will have less business inventory *on the snapshot assessment date*.) Table 1 highlights that only seven states include inventory in their TPP base, with five more offering partial (usually local) exemptions. Most states have moved away from

Table 3: Tangible Personal Property Tax Collections Per Capita, Nationally (Constant 2010 Dollars)

	2000	2005	2009	% change, first year available to 2009
Simple Average, 2000 - 2010	$146	$140	$124	-15%
Weighted Average, 2000 - 2010	$140	$131	$112	-20%
Simple Average, 2005 - 2010		$152	$138	-10%
Weighted average, 2005 - 2010		$142	$125	-12%

Source: Tax Foundation & Foundation for Government Accountability calculations from U.S. Census Bureau data.

30 Ohio adopted a gross receipts tax which is, arguably, a more economically distortionary tax on business decisions than taxation of tangible personal property.

31 Me. Rev. Stat. Ann. tit. 36, §§ 692, 693.

32 Vt. Stat. Ann. tit. 32, §§ 3848, 3849.

33 State of Indiana, Office of the Governor, Governor signs property tax relief and reform bill (Mar. 19, 2007), http://www.in.gov/gov/files/031908_Governor_signs_property_tax_relief_and_reform_bill.pdf.

34 Georgia also had a small positive uptick in TPP levies as a percent of own-source revenues, but it is essentially unchanged.

35 We considered and then discarded a few other possible data points on TPP collections. First, effective tax rates would also have been a useful metric, but the increased data unavailability as compared to levies data (due to exemptions, deductions, and abatements, as well as changes in the definition of the base) made this metric difficult to collect. Second, personal property taxes as a percent of real and personal property was somewhat misleading due to preexisting statewide variation on property tax reliance. Finally, the ratio of assessed values of personal to real property would omit differences in tax rates (which occurs in some states), providing a misleading metric on the reliance of personal property levies.

Table 4: Tangible Personal Property Tax Collections as a Percent of Revenue, by State

State and Local "Own Source" Revenue

	2000	2005	2009	% change, first year available to 2009
Alabama	N/A	N/A	N/A	
Alaska	N/A	N/A	N/A	
Arizona	3.86%	2.65%	2.18%	-43%
Arkansas	N/A	2.99%	3.27%	9%
California	0.87%	0.71%	0.77%	-11%
Colorado	2.92%	2.65%	2.70%	-7%
Connecticut	N/A	N/A	N/A	
Delaware	-	-	-	
Florida	2.25%	2.15%	1.70%	-24%
Georgia	N/A	3.77%	3.78%	0%
Hawaii	-	-	-	
Idaho	2.33%	2.32%	1.66%	-29%
Illinois	-	-	-	
Indiana	6.48%	3.50%	1.75%	-73%
Iowa	-	-	-	
Kansas	3.12%	3.30%	2.56%	-18%
Kentucky	N/A	N/A	N/A	
Louisiana	3.24%	3.09%	3.68%	14%
Maine	N/A	2.01%	1.57%	-22%
Maryland	N/A	N/A	N/A	
Massachusetts	1.09%	0.94%	0.99%	-10%
Michigan	N/A	N/A	N/A	
Minnesota	-	-	-	
Mississippi	N/A	6.98%	6.44%	-8%
Missouri	N/A	7.79%	6.80%	-13%
Montana	1.48%	1.57%	1.60%	8%
Nebraska	1.79%	1.47%	1.72%	-4%
Nevada	1.79%	1.37%	1.60%	-11%
New Hampshire	-	-	-	
New Jersey	N/A	N/A	N/A	
New Mexico	N/A	N/A	N/A	
New York	-	-	-	
North Carolina	3.23%	2.82%	2.50%	-23%
North Dakota	-	-	-	
Ohio	3.58%	2.83%	0.08%	-98%
Oklahoma	2.04%	2.14%	2.46%	20%
Oregon	0.93%	0.92%	0.90%	-3%
Pennsylvania	-	-	-	
Rhode Island	5.84%	7.32%	5.75%	-2%
South Carolina	4.86%	4.39%	3.10%	-36%
South Dakota	-	-	-	
Tennessee	N/A	2.18%	1.98%	-9%
Texas	3.55%	3.47%	3.14%	-11%
Utah	2.80%	2.49%	2.23%	-20%
Vermont	0.31%	0.13%	0.09%	-71%
Virginia	8.32%	6.70%	6.22%	-25%
Washington	1.20%	0.88%	0.75%	-37%
West Virginia	4.53%	3.99%	4.47%	-1%
Wisconsin	0.89%	0.72%	0.76%	-15%
Wyoming	0.45%	0.36%	0.30%	-33%
District of Columbia	2.07%	1.32%	1.08%	-48%

Source: Tax Foundation & Foundation for Government Accountability calculations from U.S. Census Bureau data.

Notes: "Own-source" revenues are defined as the total revenues of the state government plus all local governments with federal and state transfers netted out, leaving only revenues which are collected by state and local governments. "-" indicates that TPP not levied in that state, thus collections are zero. "N/A" indicates that either the state did not respond to requests or that data they collect is insufficient to generate an estimate of personal property collections.

inventory taxation over the past 50 years.[36] Removing inventory from the TPP base is a simple method for states to eliminate an unnecessary distortion of the TPP tax.

De Minimis Exemptions

Ten states (Arizona, Colorado, Florida, Idaho, Kansas, Montana, Oregon, Texas, Utah, and Washington) and the District of Columbia have *de minimis* exemptions, setting a minimum threshold of property that a business must have before tax is owed. *De minimis* exemptions range from $500 in Texas and Washington to $225,000 in the District of Columbia. These exemptions have the advantages of eliminating small businesses from the TPP tax rolls, thereby reducing administrative and compliance costs.

In Florida, $25,000 of TPP is exempt. The Florida legislature voted overwhelmingly to place a constitutional amendment on the November 2012 ballot to raise the TPP tax filing threshold to $50,000 and to give local jurisdictions authority to reduce or repeal TPP taxes. It has been estimated that a $50,000 filing threshold in Florida would reduce the number of TPP taxpayers by roughly half, a significant reduction in paperwork burden.[37]

In Arizona, $68,079 of TPP is exempt. Proposition 116 on the November 2012 ballot would exempt TPP acquired after 2013 in an amount equal to the annual earnings of 50 Arizona employees, adjusted annually. This would be an exemption of approximately $2.4 million, according to supporters.[38]

New Property

Exempting new property has the effect of a gradual repeal of the TPP tax: as the years pass, old equipment that was taxable is replaced with new equipment that is exempt from the TPP tax. Gradual elimination avoids a steep and sudden reduction in tax revenues, which can be absorbed by real property taxes over time without large rate increases.

Maine has exempted most industrial machinery and equipment, but not furniture and TPP of a retail business, acquired after April 1, 2008.[39] Kansas has exempted most machinery and equipment acquired after June 30, 2006.[40] In 2006, TPP represented 16.4% of total assessed property values in Kansas, a percentage that is now steadily dropping: 14.4% in 2007, 14% in 2008, 13% in 2009 and 11% in 2010.[41] In Kansas, average countywide property tax rates increased by 1.4

percent in 2007, by 1.6 percent in 2008, by 2.9 percent in 2009, and by 3.3 percent in 2010, the first years after new TPP was exempted from property taxes.[42] For tax years 2007 and 2008, the state also disbursed roughly $25 million to counties to partially offset reductions in property tax assessments caused by the exemption of new TPP.[43]

Other Exemptions

Massachusetts has exempted most corporate TPP, except machinery, from ad valorem taxation.[44] Other states have adopted narrow exemptions designed to attract specific taxpayers or specific industries to a state. For example, Washington has an exemption for machinery and equipment in a semiconductor facility of more than $1 billion.[45] While reducing tax burdens for some firms, such narrow exemptions are not neutral and do not reduce the complexity and tax burden for firms that cannot take advantage of the targeted tax break.

Eliminate TPP Tax

Seven states (Delaware, Hawaii, Iowa, Illinois, New York, Ohio, and Pennsylvania) have eliminated TPP taxation. Four additional states (Minnesota, New Jersey, North Dakota, and South Dakota) tax very little TPP.

Ohio is the most recent state to repeal its TPP tax, in 2005.[46] Ohio phased in its repeal of the TPP tax in three steps. First, it exempted new manufacturing equipment acquired on or after January 1, 2005. Second, it reduced the assessment ratio for general business TPP over four years, thereby reducing TPP taxes by 25% in each of four years, ending with a zero taxable value for 2009. Third, it more slowly phased in the tax reduction for telecommunications property, ending with zero tax for telecommunications TPP in 2011. The six-year phase out of TPP tax smoothed the impact of the loss of TPP tax revenues. Much of the lost revenue was replaced with state tax revenues (including, unfortunately, a problematic new gross receipts tax).

Vermont repealed its TPP tax for school taxes (school taxes represent more than 70% of all ad valorem taxes in Vermont) when it adopted a statewide property tax for education in 1997. This repeal of the majority of TPP tax was part of major tax legislation that increased taxes imposed at the state level.[47]

Because of state constitutional limitations on the enactment of property tax exemptions, Maine and Louisiana have reduced TPP taxes by implementing reimbursement or credit provisions. Maine's constitution requires the state to reimburse municipalities for half of property tax revenue lost as a result of property tax exemptions or credits enacted after 1978. When the state exempted new equipment (other than office furniture and retail business TPP) purchased after April 1, 2008 from TPP tax, the state therefore provided a reimbursement of 50% of the lost revenues to local jurisdictions.[48]

Louisiana's constitution prohibits the legislature from passing a "local or special law" exempting property from taxation. Louisiana has functionally exempted inventory from property tax, without amending the state constitution, by providing for a refundable credit against income

Table 5: Tangible Personal Property Tax Collections as a Percent of Revenue, Nationally

State and Local "Own Source" Revenue

	2000	2005	2009	% change, first year available to 2009
Simple Average, 2000 - 2010	2.68%	2.32%	1.99%	-26%
Weighted Average, 2000 - 2010	2.74%	2.34%	1.95%	-29%
Simple Average, 2005 - 2010		2.76%	2.42%	-12%
Weighted Average, 2005 - 2010		2.63%	2.25%	-15%

Source: Tax Foundation & Foundation for Government Accountability calculations from U.S. Census Bureau data.

36 John Mikesell, *The Impact of Property Tax Abatement in Indiana: Does the Abatement Scheme Provide a Substitute for a Dual Rate System* (Research grant with Lincoln Institute of Land Policy, July 1, 2001-June 30, 2002).

37 Amy Keller, *Florida Amendment 10 - Small Business Tax Break,* Florida Trend, http://www.floridatrend.com/article/14565/amendment-10--small-business-tax-break

38 NFIB/Arizona, Farrell Quinlan, *Yes on Proposition 116*, www.nfib.com/arizona/nfib-in-my-state-content?cmsid=60172.

39 Me. Rev. Stat. Ann. tit. 36, §§ 691, 692.

40 Kan. Stat. Ann. § 79-223.

41 2007 through 2011 Annual Reports of the Kansas Department of Revenue, *available at* http://ksrevenue.org/annualreport.html.

42 Calculations based on state average countywide property tax rates reported in 2007 through 2011 Annual Reports of the Kansas Department of Revenue, *available at* http://ksrevenue.org/annualreport.html.

43 2011 State of Kansas Statistical Report of Property Assessment and Taxation. http://www.ksrevenue.org/pdf/2011statbinderall.pdf.

44 Mass. Gen. Laws ch. 59, § 5, cl. 16.

45 Wash. Rev. Code § 84.36.645.

46 Ohio Rev. Code Ann. § 5711.22.

47 Vt. Stat. Ann. tit. 16, § 1 et seq. (2007).

48 Me. Const. art. IV, pt. 3, § 23. *See also* Me. Rev. Stat. Ann. tit. 36, §§ 661, 694, 700-B.

Table 6: Real Tangible Personal Property Tax Levies (in Thousands of 2010 Dollars) and Calculation Method Details

	2000	2005	2009	Levies Estimated by Authors? (b)	TPP Estimates include... (a) Motor Vehicles	State Assessed Property (c)	Aircraft & Watercraft
Alabama	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alaska	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arizona	567,545	604,909	651,342	No	No	Yes	No
Arkansas	N/A	314,781	443,908	No	Yes	No	No
California	1,176,806	1,381,751	1,918,990	Yes (d)	No	Yes	Yes
Colorado	460,088	588,077	810,828	Yes (e)	No	Yes	No
Connecticut	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Delaware	-	-	-	-	-	-	-
Florida	1,153,276	1,748,296	1,840,441	No	No	No	No
Georgia	N/A	1,346,675	1,750,721	Yes (e)	Yes	No	Yes
Hawaii	-	-	-	-	-	-	-
Idaho	91,759	134,023	121,439	No	No	Yes	Business Watercraft
Illinois	-	-	-	-	-	-	-
Indiana	1,273,885	1,020,739	630,826	Yes (f)	No	Yes	No
Iowa	-	-	-	-	-	-	-
Kansas	271,773	404,237	445,238	No	No	No	Aircraft
Kentucky (g)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Louisiana	447,141	613,652	967,569	Yes (e)	No	No	Yes
Maine	N/A	132,597	121,921	Yes (e)	No	Yes	No
Maryland	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Massachusetts	278,476	340,840	450,145	No	No	Yes	No
Michigan (h)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minnesota	-	-	-	-	-	-	-
Mississippi	N/A	741,230	938,819	Yes (d)	Yes	No	No
Missouri	N/A	1,779,603	1,940,560	Yes (d)	Yes	Yes	Yes
Montana	41,983	60,184	87,402	No	No	Yes	No
Nebraska	104,593	127,169	186,067	No	No	Yes	No
Nevada	119,851	162,135	239,618	Yes (f)	No	Mining Only	Aircraft
New Hampshire	-	-	-	-	-	-	-
New Jersey	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Mexico	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New York	-	-	-	-	-	-	-
North Carolina	828,576	1,013,320	1,197,243	Yes (d)	No	Yes	Business-owned
North Dakota	-	-	-	-	-	-	-
Ohio (i)	1,375,498	1,528,026	54,425	No	Yes	Yes	Yes
Oklahoma	204,449	293,968	468,477	No	No	Yes	No
Oregon	117,030	148,974	187,276	No	No	Yes	Watercraft
Pennsylvania	-	-	-	-	-	-	-
Rhode Island	212,405	398,190	384,777	No	No	Yes	No
South Carolina (j)	596,421	810,834	749,530	Yes (e)	Yes	Yes	Yes
South Dakota	-	-	-	-	-	-	-
Tennessee	N/A	506,876	565,701	Yes (d)	Yes	No	Yes
Texas	2,181,977	3,226,175	4,001,040	Yes (e)	Yes	No	No
Utah	202,039	264,646	316,506	No	Yes	No	No
Vermont	6,455	4,077	3,677	Yes (f)	No	Yes	No
Virginia	2,023,336	2,445,640	2,908,854	No	Yes	Yes	Yes
Washington	264,461	267,632	310,964	Yes (d)	No	No	Business Watercraft
West Virginia	237,795	310,322	442,227	No	Yes	No	Yes
Wisconsin	182,091	193,196	260,045	No	No	Yes	Watercraft only
Wyoming (k)	9,587	13,676	18,773	Yes (e)	No	No	No
District of Columbia	66,027	65,397	67,003	No	No	Yes	No

Source: Tax Foundation & Foundation for Government Accountability compilation from state or local government revenue departments.
Notes: Figures in thousands of constant 2010 dollars. "-" indcates that TPP not levied in that state. "Not available" indicates that either the state did not respond to requests or that data they collect is insufficient to generate an estimate of personal property collections.

(a) These three columns are not related to whether the state levies personal property taxes on these items, rather whether our calculations include them. For data on the personal property tax base, see Table 1.

(b) Some estimates of statewide levies are not directly calculated by state property tax divisions. In these situations, we have created an estimate of tangible personal property collections. See notes in this column for more details about the method used to estimate levies in each state.

(c) State assessed property includes property such as utilities, telecommunications mining, and minerals. Many states assess this class of property at the state level and then distribute value among local governments. Some states are unable to report personal property figures either because they use a method other than market valuation or because the data cannot be released for privacy concerns.

and franchise tax for property taxes paid for inventory.[49] This arrangement has a major disadvantage in that Louisiana retains the administrative and compliance costs of assessing and collecting taxes on inventory.

Enact Local Options for Exemption

Perhaps the most politically feasible method of reducing TPP taxes is for states to give local jurisdictions the option to reduce or eliminate TPP tax, especially with an option to exempt new TPP. The major advantage of a local option is maintaining local control over the property tax base.

In Florida, while TPP was 7.67% of total taxable property value in 2012, TPP tax ranged widely from 2.71% of taxable value in Monroe County to 51.24% of taxable value Hamilton County.[50] If TPP tax were eliminated in these counties and the revenues replaced with real property taxes, Monroe County officials would have to cover a loss of 2.71% of revenue, while Hamilton County officials would have to cover a loss of more than half of the property tax base. Obviously, doubling real property taxes would be politically costly. With immediate abolition of all TPP taxes in the state off the table, the Legislature opted for an approach that permits local jurisdictions to exempt TPP from property tax and design a property tax system that is workable for that jurisdiction.

Options for local jurisdictions to enact broad exemptions from TPP tax exist in Alaska, Maryland, Vermont, and Virginia. Vermont enacted legislation, effective in 1992, that permits cities and towns, with approval of voters in the municipality, to exempt inventory and business machinery and equipment from municipal property taxes. The statutes permit towns to either enact a repeal immediately or to phase in the exemptions over a time period of up to 10 years.[51] Currently, only 14 towns in Vermont tax inventory, and only 62 of 262 jurisdictions tax machinery and equipment.[52]

Localities that choose to exempt the TPP base, even in part, have an advantage over neighbors with regard to the location of business personal property due to their lower tax costs. This is especially important for local jurisdictions that border states that exempt tangible personal property.

Many states have authorized local jurisdictions to adopt partial exemptions of the tangible personal property tax for specific industries and companies. In general, what is sometimes called "targeted" tax relief is really a tax preference for favored industries and permits governments to pick winners and losers in the marketplace. In many cases, these exemptions are adopted through agreements with specific taxpayers, raising concerns about cronyism. Generally speaking, we find that providing local exemptions for some industries and businesses violates economic neutrality and should be shelved in favor of broad local exemptions for all industries and businesses.

Conclusion

The ad valorem tangible personal property tax is a component of one of the oldest taxes levied in the US. Compared to real property ad valorem taxation, TPP taxation creates greater economic distortions due to the inherent mobility of unattached property. TPP taxation also has other unfavorable aspects such as greater complexity and higher compliance costs as compared to real property taxation.

TPP tax levies have decreased nationwide in the past decade, according to data from 33 of the 43 states that levy the tax. The decrease is largely consistent across all states; in only a few states were local governments more reliant on TPP

Table 6 Notes (continued)

(d) This state's personal property tax levy was calculated using the value of personal property minus exemptions multiplied by the average tax rate *at the local level.*

(e) This state's personal property tax levy was calculated using the ratio of gross personal property value to total gross property value (to derive the percent of property attributable to personal property) multiplied by total property tax levy *at the local level.*

(f) This state's personal property tax levy was calculated using the ratio of gross personal property value to total gross property value (to derive the percent of property attributable to personal property) multiplied by total property tax levy *at the state level.* For Indiana, this is calculated at the local level for years 2006-2010. This "test" demonstrates that the aggregation bias of calculating this at the state rather than local level is about 2%.

(g) Does not collect data on personal property levies separated from real property from local governments nor sufficient information to estimate personal property levies.

(h) Recent changes in state legislation which provides a reduction in property tax levies for certain industries.

(i) Ohio is phasing out tangible personal property tax collections.

(j) The figures reported for South Carolina are actually tax collections, not statewide levies. Collections will deviate from levies by delinquencies both in the current year and collections of fines and interest from previous years.

(k) Over 70% of Wyoming's personal property is found in centrally assessed property (e.g. mining and minerals). However, due to confidentiality reasons, Wyoming did (k)not release this data to the authors. Therefore this figure is likely to be significantly underestimated.

49 La. Const. art. III, § 12. *See also* La. Rev. Stat. § 47:6006.

50 Calculations based on Florida Department of Revenue, *2012 Taxable Value Report*, *http://dor.myflorida.com/dor/property/resources/data.html*.

51 Vt. Stat. Ann. tit. 36, §§ 3848, 3849.

52 Vermont Division of Property, *Valuation and Review 2012 Annual Report*, http://www.leg.state.vt.us/reports/2012ExternalReports/274897.pdf.

as a percent of own-source revenues in 2009 as compared to 2000. Per capita TPP collections decreased by 20% from 2000 to 2009 in real terms, indicating that TPP collections were declining relative to other state and local revenues, which were rising.

There are avenues for states to address some of the uncompetitive aspects of tangible personal property ad valorem taxation. For the seven states that continue to tax inventory, exempting inventory is an essential first step to reducing economic distortions, compliance burdens, and competitive disadvantages with states with no inventory tax. Second, since TPP is usually taxed locally, offering localities the option to exempt all or new property will create incentives for other localities to reduce or eliminate their reliance. Finally, a number of states have successfully demonstrated that all or most TPP can be exempted from the property tax base.

Appendix: Methodology

Many states do not publish levies or collections from ad valorem tangible personal property taxes which are separated from real property. As a result, the authors calculated tangible personal property levies from published data on tax rates, assessed values, taxable values, and/or total levies of real and personal property. In Table 6, we indicate whether the TPP levy was estimated by the authors and note which method was used. Levies not estimated were provided directly by the state department responsible for personal property tax administration. In this report, we used three methods for estimating personal property tax levies based on available data. These methods are outlined in the next three sections.

Method #1: Average Tax Rates

The first method used to estimate personal property tax levies required gathering the assessed values of tangible personal property at the local level. Next we subtracted any exemptions which apply to tangible personal property to create the taxable value of this property. Finally, we multiplied the taxable value by the average tax rate in the taxing jurisdiction as published by the state. For example, in some cases we had data only at the county-level, but counties may have multiple overlapping school district jurisdictions. In these cases, the state published an average property tax rate in that county based on the percent of property which is located in each jurisdiction. This method was used in states like California, Missouri, and Montana.

We acknowledge that using the average rate at the county-level may create a small amount of bias because businesses may strategically locate their personal property at areas of low taxes *within* a county, for example, locating personal property outside of higher-tax municipalities. However, we are confident that the size of this bias is relatively small (see the third method for an estimate of the size of a similar aggregation bias).

Method #2: Assessed Values at the Local Level

The second method used to calculate tangible personal property levies was first to gather the total (gross) assessed value of tangible personal property, and second, to divide that value by the (gross) total real and personal property. This created a percent of total property which is attributable to tangible personal property, before applying exemptions and deductions. Finally, we multiplied this percentage by local levies and summed local values across all jurisdictions—school districts, municipalities, and counties—to arrive at a statewide estimate of TPP levies. Once again we acknowledge that this estimation method will include some bias because exemptions (typically) do not apply evenly to real and personal property; homestead exemptions, for example, tend to be large and apply only to residential real property. However, we are confident that this metric is reasonably accurate. Tests in two states (Georgia and Maine) that published both the taxable and gross values of personal and real property shows that this varies by only a few percent, usually biasing our results towards over-estimating personal property levies by less than 4%.

Method #3: Assessed Values at the State Level

Finally, we calculated the personal property collections using method #2, except multiplying the percent of gross assessed value by levies *at the state level*. In other words, we calculated the percent of total property which could be applied to real property at the state level, then multiplied this proportion by statewide real and personal property levies. This method contains the same small upward bias found in method #2 along with the bias found in method #1 where firms will locate in low tax areas. There are a couple of locations where we can test the magnitude and direction of this bias. In the state of Indiana, for example, data to calculate TPP levies from 2006-2010 is available at the local level as well as the state aggre-

gate.[53] Calculating this value at both the local level and summing across all jurisdictions versus at the state level illustrates that state aggregation does indeed overestimate TPP levies, but by less than 2% each year. Similar tests using Colorado, Georgia, and Louisiana demonstrates that this 2% upward bias is relatively stable across states. As a result, our estimates of real tangible personal property tax collections tend to be relatively close to the actual values using this method.

Other Differences Notable in State Estimations

In order to collect data which is useful for state policymakers, we have attempted, to the best of our abilities, to make the collections data as much of an apples-to-apples comparison between states as possible. However, each state defines its TPP base slightly differently, and those differences make TPP levies vary in each state for reasons other than assessment ratios and tax rates. Below are some common dilemmas we encountered and how we dealt with them in order to come up with an estimate of the personal property tax levies. Table 4 also highlights the differences in what we included when calculating the TPP base. Specific issues are outlined in the following sections.

Motor Vehicles

The taxation of motor vehicles (for the purposes of this report) is handled in one of two ways: they are either included in the TPP base and taxed as personal property, or they are taxed using a motor vehicle excise tax. The economic incidence of these two taxes is almost identical, but where they are included on state ledgers is not. As a result, some states in Table 4 are described as having levies from motor vehicles included in their personal property levies because they are included in their tangible personal property base.[54] Virginia is a notable example of this dilemma. Phasing out the motor vehicle tax was an important issue in the 1997 election[55] and including motor vehicles in the personal property levy estimate greatly increases collections in that state.[56] However, data Virginia publishes includes values for tangible personal property (which includes motor vehicles), machinery and tools, and merchants' capital. This makes extrication of taxes on motor vehicles impossible for this report.

The difference between the 11 states which include motor vehicles in estimates of the TPP base and those which do not is not trivial. In 2009, states which included motor vehicles in their base had average TPP levies of $197.16 (in 2010 dollars). States which did not include motor vehicles had average collections of $107.82, a difference of $89.34. Clearly, including motor vehicles in the calculated TPP levies makes a notable large difference in our report.

Aircraft and Watercraft

Similar to motor vehicles, aircraft and watercraft are not always included in the personal property tax base; some are taxed using an excise tax similar to motor vehicles and others are only taxed when they are used for business. The situation of aircraft and watercraft is not as problematic as motor vehicles simply because there are fewer of them. We have noted how aircraft and watercraft are treated or included in our calculation of personal property tax levies in Table 4.

State Assessed Properties

Owners of large property units which span multiple jurisdictions such as regulated utilities and mines and minerals are often assessed by the state. These entities are often called state assessed properties or centrally assessed properties. The taxable value of centrally assessed properties are typically distributed among the jurisdictions in which they reside. These large properties, like most businesses, operate using a mix of real property and personal property. Whether the state publishes personal property values depends on two choices: first, whether to publish data which may potentially identify the returns of private entities, and second, what kind of valuation method the state uses.

There are three general methods used to assess the value of property: the market method, the income method, and the cost method. Briefly, the market value method, which is used commonly among residential and even commercial properties, assesses the value of a property based on recent sales of similar property. The income approach uses the present value of the stream of

53 Because this bias was found to be quite small, data for Indiana in 2009 was calculated using the statewide method, method #3. This was done to make the figures from 2000, 2005, and 2009 directly comparable, rather than change the calculation method over time.

54 Note that just because motor vehicles are included in the estimation of TPP levies does not mean that they are part of the base; where possible we removed motor vehicles from the base.

55 Charles Bierbauer, *Car Tax Opposition Propels Gilmores Candidacy*, CNN.com (Oct. 31, 1997), http://articles.cnn.com/1997-10-31/politics/1997_10_31_gov.va_1_jim-gilmore-car-tax-democrat-beyer?_s=PM:ALLPOLITICS.

56 Virginia has the highest TPP levies per capita, according to our calculations. This is due largely to motor vehicles.

revenues to assess the value of the property. The cost approach requires calculating the cost of replacing all property and then depreciating the values.

Business personal property can often be assessed using the cost approach simply by using the original price and a depreciation table. States assess properties like as electrical utilities, rural cooperatives, and mineral and energy producers using a variety of approaches. The income method, in particular, makes assessing the value of personal property more difficult because it is difficult to differentiate whether income generated by the property is derived from the real property or the TPP (equipment and machinery). As a result, in situations in which the state only assesses properties using the income approach, personal property values are typically not reported. We have noted in Table 4 whether centrally assessed properties have been included in our calculations of TPP levies. States without centrally assessed properties will be systematically too low in our estimates of TPP levies, but there are no remedies for this problem. This problem is especially notable in Wyoming, where centrally assessed properties are 70% of all statewide assessed real and personal property values, but information on centrally assessed personal property is not available to the public.

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