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Personal Property Tax Reform in Michigan

The Fiscal and Economic Impact of SB 1065-SB 1072

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I. Executive Summary

The Michigan Personal Property Tax (PPT) has attracted consistent criticism from Michigan's business community because it discourages business investment in equipment and presents a particularly high compliance burden. An 8-bill package to significantly reform the personal property tax was introduced in the Senate on April 17, 2012.

REPORT PURPOSE

Anderson Economic Group, LLC, was commissioned by the Michigan Manufacturers Association to analyze the 8-bill package for PPT reform proposed in the Senate on April 17, 2012 (SB 1065-SB 1072). The following report contains background information on the PPT, a description of the proposed reform, an analysis of its effect on companies within various industries, and the projected economic and fiscal impacts of the reforms in combination with the new corporate income tax (CIT) law. We also describe the likely implications of these reforms for Michigan's business climate, economy, and fiscal condition.

Personal property taxes, which accounts for $1.0 billion of local government revenues in the state of Michigan, are taxes which are paid exclusively by businesses on items such as machines, equipment, furniture, fixtures, and tools. Personal property is taxed, like real property, based on taxable value, which is 50% of the property's cash value. Cash value, for purposes of personal property taxation, is the acquisition cost adjusted for depreciation.

OVERVIEW OF APPROACH

Throughout this report, we use publicly available data to describe and, when appropriate, quantify the impacts of the PPT in Michigan in its current form. We also estimate the long-term economic and fiscal impacts of the new CIT law and proposed PPT reforms. To do this, we use estimates from the Senate and House Fiscal Agency regarding short-term state government revenue and the projected costs of the CIT, as well as estimates from the Treasury on the impacts of the proposed PPT reforms. We also use our own estimates, informed by public economic data, for the trajectory of business and individual economic activity in the state, and how that activity interacts with other economic parameters. (See "Appendix A. Data and Methodology" on page A-1 for a more detailed account of our methods.)

SUMMARY OF FINDINGS

1. *The proposed reforms to the personal property tax would exempt around 60% of commercial and industrial parcels from the personal property tax starting in 2013. All eligible manufacturing personal property would be exempt by the year 2022.*

Senate Bill 1070 calls for the exemption of all industrial and commercial personal property where the owner owns or controls less than $40,000 worth of personal property, in terms of taxable value, in a local taxing unit, starting December 31, 2012. According to Treasury estimates, this accounts for over

60% of all commercial and industrial parcels in the state. Since these firms are smaller by definition, they only account for 18% of commercial personal property taxable value and 1% of industrial personal property taxable value in the state.

Senate Bill 1069 requires that all *new* manufacturing[1] personal property (new as of the beginning of 2012), will be exempted from the personal property tax starting in the year 2016. In addition, SB 1071 removes all manufacturing personal property that is at least ten years old from the property tax rolls, starting in 2016. The result of these two bills will be that all manufacturing personal property will be exempt from personal property taxes by the year 2022. This includes 22% of personal property currently classified as commercial, and virtually all personal property currently classified as industrial in the state. See "The PPT Reform Package (SB 1065-SB 1072)" on page 17 for a description of the 8-bill package.

2. The industrial sector in Michigan is capital-intensive and becoming more so, resulting in higher PPT burdens on industry.

Personal property includes machinery, equipment, and tools, resulting in a particularly high concentration of personal property in the manufacturing sector. Because of this, taxes on personal property are a burden particularly for manufacturing firms. In Michigan, the industrial sector requires 3 times more personal property than the commercial sector to generate one dollar of output (GDP). In addition, marketplace demands are requiring further investments in capital as a share of total expenditures. The capital-labor ratio in manufacturing in the United States has risen steadily over the past decade, and it has risen even faster among manufacturing firms in Michigan, illustrating the need for continued investment in capital. See Figure 3 on page 12.

3. Among all states bordering the Great Lakes, Michigan is the only state other than Indiana that continues to tax manufacturing equipment, putting the state at a competitive disadvantage.

Since they do not necessarily need to locate near consumers, manufacturers are mobile. They make site selection decisions based in part on the costs that they expect to face ina given region, including the taxes they expect to bear. The personal property tax is a disadvantage for Michigan when it comes to attracting manufacturing investment in the state. Of the states that border the Great Lakes, Illinois, New York, and Pennsylvania have no personal property tax at all. In Minnesota, Ohio, and Wisconsin, there is a personal property tax, but manufacturing equipment is exempted. Though Indiana still taxes manufacturing equipment, it taxes it at a considerably lower rate than in Michigan and allows for it

1. Manufacturing personal property that is eligible for this exemption is not exactly the same as industrial personal property, as previously defined. Eligible manufacturing personal property, which will be phased out of the personal property tax base, is defined as personal property located on a parcel that has over half of its personal property dedicated to industrial processing or in support of industrial processing.

to depreciate completely. See “The Personal Property Tax in Competing States” on page 14.

4. PPT reform, along with tax changes that went into effect this year, could result in a 1.5%-3.5% increase in investment and consumption by businesses and 20,000 to 45,000 additional jobs in the state.

Reductions in the business tax burden due to CIT and PPT reform would encourage a notable increase in business activity. Though the CIT reforms entailed increases in individual income tax, which on their own would result in lower consumption, we estimate that this effect will be partially offset by greater employment, greater investment in the state, and higher income for business owners. (See Table 1, which shows high and low estimates for increased economic activity due to these various tax reforms.)

TABLE 1. Impact of Tax Reforms on Various Economic Activities

			Impact of Reform			
Tax Reform	**Direct Impact**	**Activity Effected**	**Worst Case**		**Best Case**	
Corporate Income Tax (CIT)	~$2 billion reduction in business taxes	Business Fixed Investment	+1.1%	+$400m	+2.5%	+$960m
		Business Consumption	+1.1%	+$910m	+2.5%	+$2.1b
		Employment	+0.3%	+13,000	+0.6%	+31,000
		Pass-through Income to Business Owners[a]	+3.2%	+$1.0b	+3.2%	+$1.0b
		Personal Consumption	+0.2%	+$470m	+0.2%	+$470m
Individual Income Tax (IIT) Changes	~$2 billion increase in individual taxes	Personal Income[b]	-0.4%	-$1.3b	-0.1%	-$400m
		Personal Consumption[b]	-0.4%	-$1.0b	+0.03%	+$100m
Personal Property Tax (PPT) Reforms	~$500 million reduction in business taxes	Business Fixed Investment	+0.5%	+$190m	+1.2%	+$450m
		Business Consumption	+0.5%	+$430m	+1.2%	+$1.0b
		Employment	+0.1%	+6,000	+0.3%	+15,000
		Pass-through Income to Business Owners[a]	+0.3%	+$100m	+0.3%	+$100m
		Personal Consumption	+0.01%	+$40m	+0.01%	+$40m

Sources: Michigan Department of Treasury, Senate Fiscal Agency, House Fiscal Agency, Bureau of Economic Analysis, U.S. Census, Bureau of Labor Statistics, Internal Revenue Service Statistics of Income, AEG Estimates
Analysis: Anderson Economic Group, LLC

a. The percentage increase shown here is based on AEG estimates of the profits accrued by S corporations, partnerships, and sole proprietorships in Michigan.

b. This accounts for increased income due to increased employment from effects of other reforms on businesses.

We estimate that, over the next five years, CIT reforms will result in a reduction in tax burden on businesses of approximately 8%, and the reduction would grow to 11% if PPT reform is enacted. (See “Dynamic Economic Impact” on page A-

4 in Appendix A for information about the assumptions made and the data used in this calculation.)

5. The overall combined fiscal impact on state and local governments of PPT reform, combined with business and individual income tax changes that went into effect this year, is approximately neutral when accounting for economic growth.

Under a static analysis of these combined business tax reforms, our long-term estimate of total revenue losses for local governments is approximately $320 million, after accounting for transfers from the state. The direct fiscal impact due to combined CIT and PPT reforms could be negative $500 million or more for the state government. We expect these direct impacts will be offset, to a large extent. By the time reforms have fully phased in, the additional state and local government revenues from increased business investment and consumption alone will range from $310 million to $720 million. Accounting for this revenue and other economic activity, we anticipate that a negative fiscal impact is just a bit more likely than a positive fiscal impact. The direct and dynamic effects of the CIT, IIT, and PPT reforms are outlined in Table 2 below. (See "Dynamic Fiscal Impact" on page A-6 in Appendix A for important information about the assumptions made and the data used in this calculation.)

TABLE 2. Fiscal Impact of the CIT, Income Tax, and PPT Reforms on State and Local Governments

(millions, parentheses reflect a negative impact)

		2015	2020	2025
Direct Fiscal Impact of the CIT and IIT Changes	State	($132.5)	($61.1)	($179.4)
	Local[a]	n/a	n/a	n/a
Direct Fiscal Impact of Proposed PPT Reforms	State	($10.4)	($208.0)	($266.7)
	Local	($68.7)	($346.9)	($324.7)
	TOTAL	($211.6)	($616.0)	($770.8)
Additional Revenue due to Dynamic Effects (extra business activity, etc.)	*Worst Case*	*$112.3*	*$269.7*	*$386.4*
	Best Case	*$366.9*	*$740.6*	*$999.2*
Fiscal Impact w/ Dynamic Effects State & Local Combined	Worst Case	($99.3)	($346.3)	($384.4)
	Best Case	$155.3	$124.6	$228.4

Sources: Michigan Department of Treasury, Senate Fiscal Agency, House Fiscal Agency, Bureau of Economic Analysis, U.S. Census, Bureau of Labor Statistics, Internal Revenue Service Statistics of Income, AEG Estimates
Analysis: Anderson Economic Group, LLC

a. CIT and IIT reforms affect local governments indirectly through their fiscal impacts on the state's School Aid Fund. In the analysis shown here, however, we include all fiscal impacts on the School Aid Fund in the fiscal impact for the state.

6. *To offset reductions in tax revenues for local units of government, the proposed PPT reforms would entail annual state appropriations into a state fund for local governments. Starting in 2016 and increasing each year afterward, the bills call for state appropriations to local governments that would exceed $200 million by the year 2022.*

The Personal Property Tax Exemption Reimbursement Act (SB 1072) establishes a fund which will be used to reimburse local governments for foregone revenue. Starting in 2016, the Treasury will add up a designated amount for each local unit of government equal to the revenue lost that year due to the above exemptions, to the extent that the amount exceeds 2% of total government revenues for that local government (1% for distressed local governments). The Treasury will inform the Legislature to appropriate that amount into the fund each year. That amount will be allocated among local governments in a way determined by future law or the appropriations process. These appropriations will be funded by anticipated reductions in tax expenditures due to the expiration of tax credits previously provided under the MBT.

ABOUT ANDERSON ECONOMIC GROUP

Anderson Economic Group, LLC is research and consulting firm specializing in economics, public policy, finance and business valuation, and market and industry analysis. The firm has offices in Chicago, Illinois and East Lansing, Michigan. AEG has conducted economic and fiscal impact studies for private, public, and non-profit clients across the United States. For more information, please visit www.AndersonEconomicGroup.com.

II. About Michigan's Personal Property Tax

Michigan's personal property tax was instituted with the General Property Tax Act of 1893. "Personal property" essentially includes all property that is not land or buildings—all property that is "movable," including items such as machines, equipment, furniture, fixtures, and tools. Personal property is taxed, like real property, using taxable value, which is 50% of the property's cash value.[2] Cash value, for purposes of personal property taxation, is the acquisition cost adjusted for depreciation.

Notable exemptions from personal property taxes include some nonprofit property, government property, most household personal property including motor vehicles, agricultural personal property, inventories, pollution control equipment, and certain manufacturing tools.[3] Property taxes are collected at the local level, and revenues from these taxes (with some exceptions, described below) are routed to local governments, including to cities, counties, townships, and school districts, to pay for operations and debts. Within certain constraints, these separate entities determine millage rates separately.

HISTORY OF MICHIGAN'S PERSONAL PROPERTY TAX

In addition to the exemptions listed above, some forms of personal property are taxed as special cases, under separate laws from those determining general ad valorem taxation. Article IX, Sec. 3 of the Michigan Constitution allows that the "legislature may provide for alternative means of taxation of designated real and tangible personal property in lieu of general ad valorem taxation." There are quite a few ways in which the Michigan state legislature has done this regarding personal property over the years. The following are the major changes to personal property taxation in Michigan.

- **Utility Property Tax.** PA 282 of 1905 exempted all property of telephone companies, all property of railroad companies, and privately-owned freight cars from general property taxes and, instead, imposed a statewide "utility property tax" on this property. Railroad tracks, freight cars, telephone wires, and other related property are all personal property subject to this tax. The rate of the utility property tax is uniform statewide, and adjusted every year to equal the average property tax rate on businesses in the previous year. Tax credits are available that nearly eliminate the tax for railroad property and cut the tax on telecommunications property by a third. Tax revenues from the utility property tax go to the state's General Fund.
- **PA 198 and the Industrial Facilities Tax.** In 1974, the state established the "industrial facilities" tax under PA 198. Upon constructing, renovating, or

2. Taxable value is actually *at most* 50% of the fair cash value, because there are limits on how quickly taxable value can grow from one year to the next. For personal property, however, there are few instances where taxable value falls below 50%.
3. Citizens Research Council of Michigan, *Outline of the Michigan Tax System,* "General Property Tax," January 2011.

replacing a facility, industrial firms may apply to local governments for an industrial facilities exemption or reduced rate in lieu of general property taxes. The industrial facilities tax freezes the taxable value of newly improved industrial sites at the pre-improvement level for up to twelve years following changes, and offers a 50% rate reduction for new facilities. Revenues from the IFT from the non-school millage portion of the tax go to local governments. Some part of the IFT revenue from the local and state school millage is sent to the state's School Aid Fund and the rest to local school districts.

- **State Education Tax.** In 1993, the state passed PA 331, which became part of the "Proposal A" school finance system after voters adopted that constitutional amendment in 1994. The state education tax is a uniform 6-mill tax levy on real and personal property statewide. Revenues from this tax are routed to the state's School Aid Fund.
- **PA 328 and the New Personal Property Exemption.** In 1998, the state legislature passed PA 328, which exempted from taxation new personal property for specific businesses located in eligible distressed communities in the state. The relevant local unit of government determines the number of years for which the new property may remain exempt. Eligible businesses include manufacturing, mining, research and development, and wholesale trade, among others. Eligible distressed communities include renaissance zones, enterprise zones, brownfield redevelopment zones, empowerment zones, and downtown development districts, among others.
- **Michigan Business Tax (MBT).** In 2006, Michigan voters petitioned to repeal the Single Business Tax (SBT), which would later be replaced by the Michigan Business Tax (MBT). The MBT included a tax credit worth 35% of the total tax payment on all personal property classified as industrial. This tax credit is not contained in the new CIT reforms that went into effect at the beginning of this calendar year, resulting in a roughly $150 million increase in statewide net PPT liability for industrial firms.
- **PA 37 and PA 38.** In 2007, PA 37 and 38 were passed in concert with the MBT. These acts exempted all personal property classified as industrial from up to 18 mills of local school levies as well as the state education tax described above. Similarly, PA 37 exempted commercial personal property from up to 12 mills of local school levies.[4]

REVENUE FROM THE PPT IN MICHIGAN

In 2010, state and local governments collected a combined $1.13 billion in general ad valorem personal property taxes, not accounting for credits or alternative forms of taxation such as the utility property tax and the industrial facilities tax.[5] In addition, the state collected $53 million from the utility property tax on personal property and local governments collected $94 million through the industrial facilities tax on personal property. Tax credits on personal property liability totaled $145 million in 2010. Once accounting for all of these components to the tax, we estimate that the average effective tax rate on all business

4. State Tax Commission, "Michigan Business Tax Bulletin No. 7," October 2, 2007.

personal property subject to the personal property tax was 40.5 mills in 2010.[6] (See Figure 1 on page 13 for the effective PPT rate on various types of businesses.)

TABLE 3. PPT Revenue Compared to Resources of Local Units of Government, 2010

Taxing Entity and Use	Total Revenue From All Sources (millions)	ALL SECTORS: Personal Property Tax Levy (millions)	ALL SECTORS: PPT as Share of Total Revenue	ALL SECTORS: PPT, Shown as Equivalent Statewide Tax on Real Property	INDUSTRIAL: Personal Property Tax Levy (millions)	INDUSTRIAL: PPT as Share of Total Revenue	INDUSTRIAL: PPT, Shown as Equivalent Statewide Tax on Real Property
Local governments - All Uses, excluding School Districts	$27,713.8	$515.3	1.86%	1.67 mills	$308.4	1.11%	1.00 mills
School District - Operating	$16,013.7[a]	$368.1	2.30%	1.19 mills	$65.1	0.41%	0.21 mills
School District - Debt & Capital	$3,269.0[a]	$143.6	4.39%	0.47 mills	$51.7	1.58%	0.17 mills
State - School Aid Fund[b]	$12,540.2	$197.8	1.58%	0.64 mills	$0.0	0.0%	0.00 mills
Total		$1,224.8		3.97 mills	$425.2		1.38 mills

Source: Michigan Dept. of Education 2009-10 Bulletin 1011, Michigan Comprehensive Annual Financial Report FY2010, Michigan Senate Fiscal Agency, U.S. Census Bureau State & Local Government Finances, 2010 Michigan State Equalized Value & Taxable Value Report, AEG Estimates
Analysis: Anderson Economic Group, LLC
Note: Local governments receive levies worth $94.0 million from the industrial facilities tax on personal property. The remainder ($1,130.8 billion) comes from ad valorem property taxes on the personal property base. $53 million in revenues from the utility property tax are not included because revenues go to the state's General Fund. We do not account for the 35% PPT credit because that is administered as a refundable tax credit by the state.
Total revenues are not additive because some school district operating revenues come from the school aid fund.
School district values shown here include independent school districts and community college districts.

a. We use 2010 total expenditures as a proxy for aggregate revenue.
b. The School Aid Fund receives PPT revenues from the State Education Tax.

As shown in Table 3 above, revenues from the PPT are spread among non-school local government units, school districts, and the state's School Aid Fund. Revenues from the utility property tax, totaling $53 million, go to the state's General Fund, and they are not shown in the table. Using AEG estimates for local government revenues in 2010, the $515 million in personal property tax revenues that went to non-school local governments accounted for 1.9% of their revenues. In 2010, school districts collected $368 million in personal property

5. Much of this section and the following section draw on our recent report on the PPT:
Patrick L. Anderson and Jason Horwitz, "The Michigan Personal Property Tax: Effects of Repeal on Michigan's Economy and Tax Revenues," Anderson Economic Group White Paper 2011-02, November 17, 2011.
2010 estimates for personal property tax revenues are from:
David Zin, "The State and Local Impact of Property Taxes Levied on Michigan Personal Property (Revised)," Senate Fiscal Agency, Issue Paper, September 2011.
6. In determining the effective tax rate, we use taxable value as the denominator, which is roughly 50% of the depreciated acquisition value for personal property.

taxes for operating purposes and \$144 million in personal property taxes for payment of debts. These amounts accounted for 2.3% and 4.4% of operating and debt costs in 2010, respectively. Finally, the state collected approximately \$198 million for the School Aid Fund from personal property taxes, accounting for 1.6% of total revenues to the Fund in 2010.

One might look at these numbers, particularly in light of the recent decline in real property values, and assume that the effects of PPT reform would be modest. Indeed, over half of the state's municipalities and townships derived less than 6% of their taxable property value from personal property in FY 2010. In addition, approximately two-thirds of townships and cities derived less than 1% of their taxable property value from *industrial* personal property; however, these statewide numbers fail to capture the geographic variation in the concentration of personal property tax in the state. There are a few municipalities that would lose a substantial portion of their revenues if they lost their industrial PPT base.

Table 4 below shows the top ten cities and townships, in terms of their share of taxable property value derived from industrial personal property. (We focus on industrial personal property because the bulk of the proposed PPT reform consists of exempting this base, in particular.) Three of these cities and townships have a share above 40%.

TABLE 4. Industrial Personal Property as Share of Taxable Value, Top 10 Michigan Communities, 2010

Name	Type	County Where Located	Industrial Personal Property Taxable Value (\$)	Total Taxable Value of All Property (\$)	Industrial Personal Property as Share of Total Taxable Value
Chandler	Township	Charlevoix	9,634,900	20,916,263	46.1%
Milan	City	Monroe	40,332,061	92,513,601	43.6%
Litchfield	City	Hillsdale	19,798,973	47,967,611	41.3%
Ecorse	City	Wayne	90,648,414	241,210,291	37.6%
Wells	Township	Delta	82,973,000	229,193,824	36.2%
River Rouge	City	Wayne	106,254,986	317,195,037	33.5%
Wakefield	Township	Gogebic	9,187,681	28,828,003	31.9%
Evart	City	Osceola	13,454,400	44,921,003	30.0%
Buena Vista	Township	Saginaw	69,825,600	243,479,617	28.7%
Richland	Township	Missaukee	18,996,100	67,885,460	28.0%

Source: Michigan Department of Treasury
Analysis: Anderson Economic Group, LLC

III. Impact of the PPT on Michigan Industry

The impact of the personal property tax varies by industry. Table 5 compares the value of the commercial, industrial, and utility sector's total output in 2008 with their PPT base. The comparison illustrates that inputs classified as personal property represent more important factors in industrial production than in the commercial sector. In addition, personal property represents a very important contribution to utility production (pipelines, generators, and power lines are all taxed as personal property). The industrial sector includes facilities dedicated to manufacturing, processing, and research and development. This sector has a large PPT base due to a large amount of machines and other types of equipment that are considered personal property.

TABLE 5. Michigan GDP and Personal Property Tax Base, by Sector, 2008

	Commercial	Industrial	Utility (Locally-Assessed)[a]
Sector GDP in Michigan (millions)	$194,189	$60,534	$7,916
Personal Property Tax Base in Michigan (millions)	$10,293	$11,102	$7,252
Memo: Personal Property Tax Base per Million Dollars of GDP	*$53,005*	*$183,401*	*$916,119*

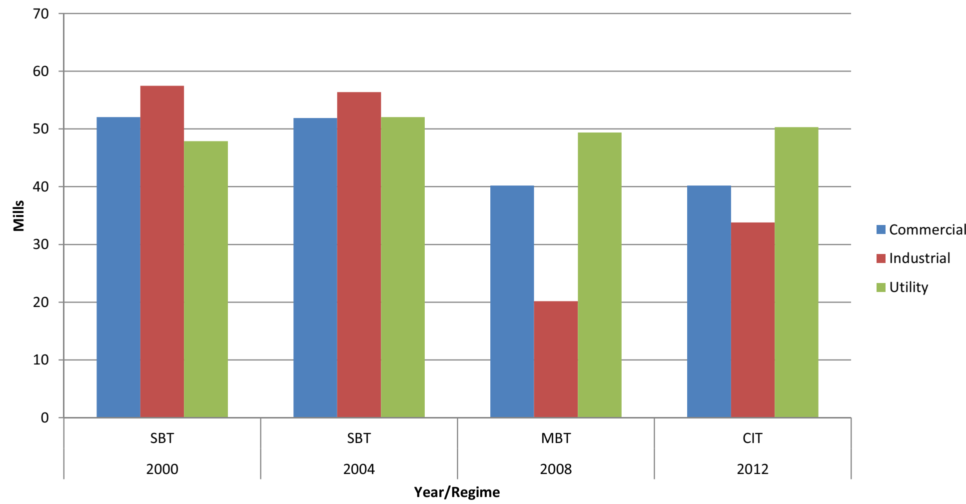
Sources: Bureau of Economic Analysis, Michigan Treasury Property Tax Real and Personal 2008 Statistical Update
Analysis: Anderson Economic Group, LLC
Note: Personal Property Tax Base is in terms of taxable value.

a. The tax base shown here for "utility" property includes only utility property assessed by local property assessors. It does not include personal property that is assessed for the state-wide utility property tax, which includes personal property of railroad and telecommunications firms.

THE PERSONAL PROPERTY TAX AND INDUSTRIAL FIRMS

To an extent, Michigan state law compensates for the high tax burden on industrial property through implementation of the industrial facilities tax, exemption from school levies, and, until this year, MBT credits for industrial personal property. Each of these statutes considerably lowers the effective tax rate that industrial firms pay on their personal property, relative to other firms. (See "History of Michigan's Personal Property Tax" on page 6 for a summary of PPT changes that lowered the rate on industrial firms.) The MBT credit for industrial personal property was eliminated at the beginning of 2012, causing the effective tax rate to rise by more than 50%, but our analysis suggests that the effective tax rate for industrial personal property will remain below the level it was prior to passage of the MBT in 2008.[7] See Figure 1 on page 11, showing how effective tax rates on personal property have changed over time for industrial, commercial, and utility firms, respectively.

FIGURE 1. Statewide Effective PPT Rates by Type of Property, 2000-2012



Sources: Michigan Treasury Office of Revenue and Tax Analysis. The Michigan Property Tax Real and Personal, 2002, and statistical updates, 2005, 2008; Treasurer's Annual Report, 2008-09. Analysis: Anderson Economic Group LLC
Note: Effective tax rate is calculated by dividing tax collections less credits for personal property by taxable value. The effective tax rate in 2012 is based on AEG projections.

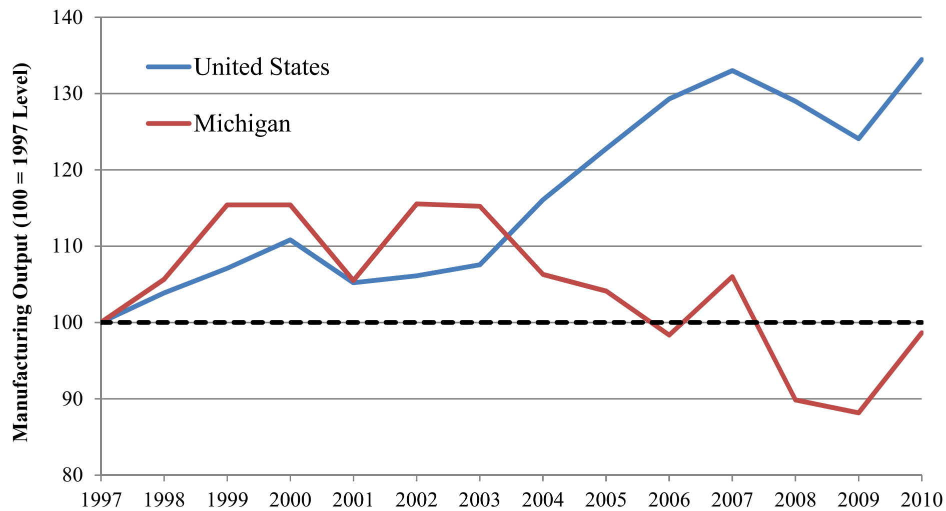
Due to compliance costs, the PPT is a burden for all businesses (see "Personal Property Tax Compliance Costs" on page 16), but its incidence on industrial firms is a particular problem for the state's economy. Industrial firms are important to Michigan's economy because they represent a large share of employment and some of the highest-paying jobs. In addition, since they do not necessarily need to locate near consumers, manufacturers are more mobile. They make site selection decisions based in part on the costs that they expect to face in a given region, including the taxes they expect to bear.

Part of the reason for the continued taxation of personal property in Michigan may be related to Michigan's former status as one of the premier locations in the world for manufacturing businesses. In the same way that states such as California and New York have elected high individual income taxes to gain revenue from their location-specific champion industries (finance in New York and electronics and IT in California's Silicon Valley), Michigan's imposition of a PPT may have been less damaging economically when firms wishing to produce cars and other manufactured goods gained an unmatchable advantage from locating near Michigan's cluster of thriving manufacturing businesses. Whatever the

7. There was a change to the SBT that allowed for a 15% tax credit for PPT liability starting in 2006, which is not shown here since it was replaced by the MBT in 2008. The 2012 effective tax rate remains below 2006 levels because the exemptions from State Education Tax and some school millages, passed under PA 37 and PA 38 in 2007, remain intact and have a greater impact than this tax credit did on effective PPT rates.

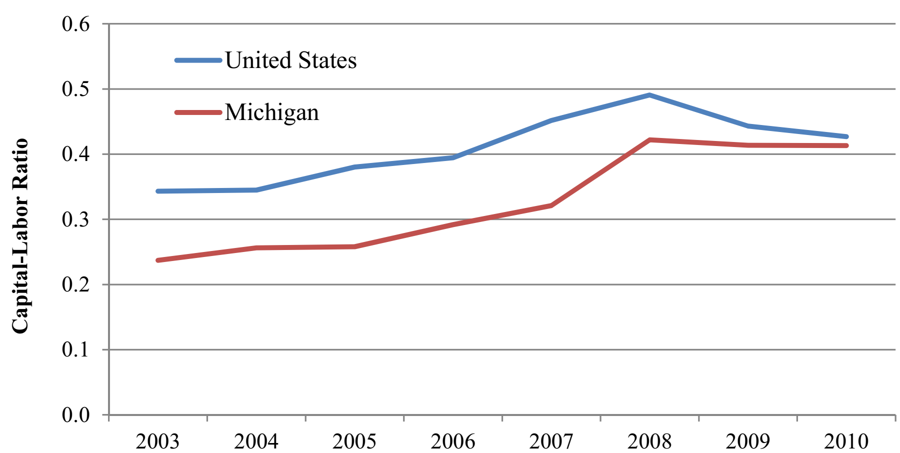
merits of this decision in the past, Michigan's competitive situation has radically changed, as shown in Figure 2 below.

FIGURE 2. Change in Manufacturing Output in Michigan and U.S., 1997-2010



Source: Bureau of Economic Analysis
Analysis: Anderson Economic Group, LLC

FIGURE 3. Manufacturing Capital-Labor Ratio in Michigan and U.S., 2003-2010



Source: U.S. Census Bureau Annual Survey of Manufacturers
Analysis: Anderson Economic Group, LLC
Note: For "capital-labor ratio," we use annual capital expenses divided by annual wages for productive workers.

Compounding this issue is the increasing reliance of manufacturing industries on capital investments, which Michigan taxes as personal property. Due to increasing market pressures, firms throughout the nation and in Michigan are starting to shift their expenses toward investment in capital and away from investment in labor, as shown in Figure 3. Barring a drop in capital investment due to the recession in 2009 and 2010, manufacturing's capital-to-labor ratio has increased considerably over the past 8 years. (Since total valuation of capital stock is not available, we use capital expenses divided by productive worker pay as a proxy for the capital-to-labor ratio.) Michigan's capital-to-labor ratio was well below that of the nation a decade ago, but pressures on local industries have resulted in an accelerated increase, bringing the state's investment in capital relative to labor much closer to that of the nation. New and retained manufacturing equipment investments are required to maintain the continued viability of a manufacturing plant and to ensure the continued retention and creation of manufacturing jobs.

Finally, manufacturing industries provide some of the most lucrative jobs in the state. Despite the stagnating economy, the average wages for workers in manufacturing in the state remain above the average wages for workers in virtually every other major sector of Michigan's private economy, as shown in Table 6.

TABLE 6. Average Weekly Wages by Selected Industries, 2008-2010

Industry	**Annual Average Weekly Wage ($)**		
	2008	**2009**	**2010**
All Industries, Public and Private	*851*	*839*	*855*
Manufacturing	1,150	1,128	1,149
Service Providing	773	765	778
Information	1,104	1,069	1,096
Financial Activities	1,020	1,024	1,052
Professional and Business Services	1,088	1,064	1,061
Education and Health Services	792	809	815
Leisure and Hospitality	303	305	311
Other Services	523	513	513

Source: BEA Quarterly Census of Employment and Wages
Analysis: Anderson Economic Group, LLC

UTILITIES AND THE PERSONAL PROPERTY TAX

Utilities have large amounts of pipelines, generators, and transmission equipment, all of which are locally taxed as personal property. The plant and equipment of most utilities are stationary by nature, and are largely financed by rates charged to users of the utility. Therefore, taxing the personal property of utilities does not have the same negative incentive effects as personal property taxes levied on plant and equipment that may be relocated out of state.

That said, there are some drawbacks to the personal property tax on utilities, because utility prices (such as the cost of electricity) affect some location decisions. Taxes on utilities that are passed through to purchasers will be reflected in energy prices for businesses and consumers throughout the state. In addition, compliance to local taxation can be particularly burdensome for utilities since they have to document the full extent of their personal property ownership in each of sometimes hundreds of distinct municipalities.

THE PERSONAL PROPERTY TAX IN COMPETING STATES

Michigan competes for investment with other states and countries, especially states that border the Great Lakes or have a similar manufacturing base. A particularly intense competitive battle for employers involves capital-intensive businesses, such as manufacturers, who are mobile and might find the personal property tax of Michigan burdensome. Such firms on occasion threaten to relocate in other nearby locations where the tax burdens are lower, and some probably have moved for this reason.

Indeed, one of the reasons for the effectiveness of Michigan's PA 198 industrial facilities tax law is the widespread use of it to reduce tax burdens among manufacturers, including personal property tax burdens.[8] Of course, businesses consider a range of factors (including taxes, labor costs, proximity to markets, workforce, and preferences of the managers and investors); we do not attempt here to decompose the weight which they ascribe to personal property taxes alone.

The Great Lakes states include Illinois, Indiana, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. Of these states, three have no tax on personal property at all and others have phased out their personal property tax in various ways.[9] Of Great Lakes states, only Michigan and Indiana continue to tax personal property used in manufacturing.

- **Illinois.** No tax on personal property.
- **Indiana.** Has a personal property tax with exemptions similar to those in Michigan. Taxable valuation is complex, based on acquisition year, but can be as low as 30% of the cash value of personal property and can be depreciated to zero. Michigan's taxable value is 50% of the cash value of personal property and machinery or equipment in Michigan can only be depreciated to 23% of its acquisition price.[10]

8. Patrick L. Anderson, Theodore R. Bolema, and Alex L. Rosaen, "Effectiveness of Michigan's Key Business Tax Incentives," Commissioned by the Michigan Education Association and National Education Association, Anderson Economic Group, March 4, 2010.
This report also discussed the effectiveness of PA 328, among other tax incentives. PA 328 is much less widely used than PA 198, and the report found that it was effective at increasing jobs but resulted in a net loss of government revenue.
9. Most of the information on personal property is from *2011 State Tax Handbook*, CCH Editorial Staff Publication, 2010. In this comparison, we do not include personal property taxes levied on automobiles, which are often called "registration fees" or "registration taxes." Michigan is one of many states that levies a (registration) personal property tax on autos.
10. Michigan Dept. of Treasury, Tax Form 632, 2012 Personal Property Statement.

- **Minnesota.** Most personal property tax eliminated in the 1970s. Current personal property tax applies almost exclusively to utility property.[11]
- **New York.** No tax on personal property.
- **Ohio.** Recently phased out personal property taxes on business inventory, machinery, furniture, and fixtures, as well as personal property owned by telephone and telecommunications companies.
- **Pennsylvania.** No tax on personal property.
- **Wisconsin.** Has a personal property tax with a tax base broader than in Michigan (fewer exemptions), but machinery and equipment used for manufacturing *are* exempt.[12]

Michigan also competes with some Southern states that have built up their manufacturing bases to an impressive extent over the past few decades. Some of the states that represent a threat to Michigan's competitiveness in manufacturing include Alabama, Georgia, and Tennessee. Though they all have personal property taxes on manufacturing property, property tax rates tend to be lower in these states and taxable value is a smaller share of the property's market value.

- **Alabama.** Has a broader personal property tax base than Michigan, exempting mainly homestead, pollution control equipment, and raw materials and inventories. Assessed values are 20% of fair market value.
- **Georgia.** The first $7,500 in tangible personal property is exempt and tools for manual laborers are exempt up to $2,500. Otherwise, the tax base is quite broad and most personal property is assessed at 40% of fair market value.
- **Tennessee.** There is a broad-based personal property tax, with few explicit exemptions beyond those for charitable, religious, or educational organizations. Business personal property is assessed at 30% of fair market value.

AEG performs a study each year on the tax burden placed on businesses in each state. According to our latest results (which have not yet been released), Michigan ranks 25th in tax burden. Our projections suggest that the CIT reform alone would improve Michigan's ranking to 11th within two years, barring any movement by other states. The additional impact of PPT reform, once fully phased in, would make Michigan a "Top Ten" state in terms of business taxation, boosting Michigan's position in the rankings to 8th. These ranking changes take into account only changes in tax burden, and do not consider any improvements in the state's economy. Overall, the tax burden for businesses (all taxes paid divided by total profits earned) would decrease from 19% to 16% under these reforms.

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11. Minnesota Chamber of Commerce, "Personal Property Tax Background," retrieved from http://www.mnchamber.com, December 2011.
12. Wisconsin Dept. of Revenue, Division of State and Local Finance, Bureau of Property Tax, "Guide to Wisconsin Manufacturing Property Assessment," retrieved from http://www.revenue.wi.gov, January 2012.

PERSONAL PROPERTY TAX COMPLIANCE COSTS

Due to the itemization, accounting, and auditing requirement of complying with the personal property tax, it is a particularly costly tax for businesses and governments alike. Each firm currently has to document all personal property of value (from furniture to computers to wall-hangings) and determine its current value based on state-specific depreciation tables (which differ from those used to comply with federal accounting rules and vary by type of asset). It is up to local governments to ensure that each item is being accounted for appropriately, and that businesses are assessed the correct tax.

A 1998 paper from Anderson Economic Group roughly estimated the compliance costs of the personal property tax in Michigan.[13] If compliance costs have grown at the rate of inflation since 1998, then companies with personal property worth $35,000 or less at acquisition are probably spending more on compliance than the value of their tax liability. In that same study, it was estimated that the private sector incurs compliance costs equal to 37% of total revenue from the PPT, on average, while the cost of government administration of the tax is 4-5% of total PPT revenue.

13. Patrick L. Anderson, "The Personal Property Tax in Michigan: Abolish or Reform?" Prepared for the Michigan Chamber of Commerce, Anderson Economic Group, 1998.

IV. The PPT Reform Package (SB 1065-SB 1072)

SUMMARY OF BILLS

In brief, the package of bills before the legislature calls primarily for 3 major changes to personal property tax law in the state.

- Exemption of all commercial and industrial personal property at businesses holding less than $40,000 of personal property, in terms of taxable value.
- Exemption of eligible manufacturing personal property by the year 2022.
- Establishment of a state fund that will reimburse local governments for a share of their lost revenues due to the smaller personal property tax base.

The following is a summary of the 8 bills in the personal property tax reform package, as introduced in the Senate on April 17, 2012.

LOW-TAXABLE VALUE PERSONAL PROPERTY EXEMPTION

SB 1070 calls for the exemption of all industrial and commercial personal property at firms that own or control less than $40,000 worth of personal property, in terms of taxable value, starting December 31, 2012.

This $40,000 aggregate is determined by local taxing unit, meaning that if one entity owns over $40,000 in personal property taxable value across multiple parcels within the same city or township, then the entire set of personal property is subject to taxation. This will prevent owners from avoiding the tax by spreading their personal property out across multiple parcels. In order to claim this exemption, the owner will need to file an affidavit with the local taxing unit (city or township) once a year.

Having a strict cutoff of $40,000 for the exemption could be problematic because it creates a very large incentive for companies to stay below that amount. This will be a significant disincentive for capital investment for commercial firms that have close to $40,000 in taxable value of personal property.

EXEMPTION OF MANUFACTURING PERSONAL PROPERTY

For the purposes of SB 1069 and SB 1071, eligible manufacturing personal property is defined differently from “industrial property.” Manufacturing personal property eligible for this exemption is defined as all personal property that is located on a parcel where 50% or more of the personal property is used in industrial processing or in direct support of industrial processing. Direct support includes research and development, testing, quality control, engineering, and warehousing. This use-based, arguably more precise definition of eligible property prevents business owners from attempting to gain exemptions for non-manufacturing property by simply placing it on a real property parcel that might be classified as “industrial.”

We should note that the data is not available to determine the impact that this definition will have on the exemption with great certainty. For the analysis presented in this report, we use Treasury's rough estimate that 22% of personal property that is now classified as commercial will qualify as eligible manufacturing property.[14] It is also possible that some property is classified as industrial personal property today, but will not qualify for this exemption. We expect this latter amount to be negligible.

SB 1069 exempts eligible new manufacturing personal property beginning on December 31, 2015. New manufacturing personal property is any manufacturing personal property not in use inside or outside of the state prior to January 1, 2012. In order to claim the exemption for this property, an owner only needs to file an affidavit once, in the year 2016, with the local taxing authority where property is located.

SB 1071 exempts all eligible manufacturing personal property that has been in use inside or outside of the state for at least ten years, starting after December 31, 2015. Each year, starting in 2016, manufacturers will provide an affidavit claiming an exemption for equipment that is ten years old or older. They only need to claim the exemption for each item once, when it reaches ten years of age. In combination with SB 1069, the result will be that all eligible manufacturing personal property is exempt by the year 2022, regardless of where it has been purchased.

PERSONAL PROPERTY TAX EXEMPTION REIMBURSEMENT ACT

SB 1072, the "Personal Property Tax Exemption Reimbursement Act," establishes a fund at the state Treasury that will be used to partially reimburse local governments for revenue lost due to personal property tax exemptions. Starting in 2016, the amount of money going into the fund each year will be equal to or greater than the amount of revenue lost due to PPT exemptions in excess of 2% of governmental revenue for each local government entity (1% for distressed local governments).[15] Distressed local governments will be those that have entered a consent agreement with the state, have an emergency manager, have a projected deficit greater than 5% of general fund revenue, have declining taxable value, or are otherwise designated as distressed by the Treasury. Money equivalent to 100% of foregone revenue for debts and for tax incremental financing (TIF) obligations will also be set aside for the fund.

14. The following types of personal property that are often classified as commercial may qualify as eligible manufacturing property: leased personal property used in manufacturing; personal property used in engineering, testing, and quality control; most warehousing personal property; and some other personal property in support of industrial processing.

15. School operating mills are not included in this estimate of lost revenue because the state is already required to fund any school operating costs up to a required level per student through the School Aid Fund.

Each type of local government entity will be grouped and have its own pool of funds, including counties, townships, cities, villages, authorities (including TIF authorities), local school districts, intermediate school districts, community college districts, and library districts. The amount of money appropriated each year for distribution to each type of local government must equal the aggregate amount of revenue for that type of government, as outlined in the previous paragraph. The formula for distribution to local governments will be determined by the appropriations process or by future legislation.[16]

At the end of the 2012 fiscal year, all local government entities will be required to submit to the Treasury their revenue from taxes on commercial and industrial personal property, as well as their total governmental revenue for fiscal year 2012. For each year thereafter, they will be required to submit the amount of revenue from taxes on commercial and industrial property. For each local unit, the legislature is required to pay an amount into the fund equal to the extent to which the difference between current-year revenue from industrial and commercial PPT and 2012 revenue from industrial and commercial PPT exceeds 2% of 2012 total government revenues of that unit (1% for distressed local governments).

To illustrate, assume a county receives $1 million from personal property taxes and total governmental revenues of $20 million in FY 2012. That means that 2% of their revenues in 2012 are $400,000. Now assume that, in fiscal year 2016, that county's personal property tax revenue drops to $300,000 because of the new exemptions in this reform package. Since the county has lost $700,000 of its revenue due to PPT changes, and $400,000 is 2% of its FY 2012 revenues, the Treasury would call for $300,000 to be set aside into the reimbursement fund. The Treasury repeats this exercise for every county to determine the total amount to be distributed to counties in FY 2016. Note that the bill has not defined how these funds will be allocated, so it does not necessarily follow that this particular county will actually receive $300,000 in FY 2016.

This bill states the legislature's intention that the amount appropriated into the fund each year will be available through decreased tax expenditures from the expiration of credits that were provided under the MBT. According to our estimates, the amount of funds that will be allocated to reimbursement of local governments do in fact fall below the amount of revenue that the state will retain due to expiring MBT credits, even if we assume that the legislature will continue to appropriate $100 million annually for grants and loans through the

16. The bill clearly states that "the legislature shall appropriate to the personal property tax reimbursement fund" at least the amount described here to the fund in the year 2016 and each year thereafter; however, constitutionally, no legislature can require that a future legislature appropriate a set amount of funds.

Michigan Economic Development Corporation. Data from the Treasury Department confirms this analysis.

PERSONAL PROPERTY ALREADY SUBJECT TO SPECIAL STATUS

Senate Bills 1065 through 1068 deal with personal property that is already exempt from ad valorem taxation, and is being taxed under a separate law. Personal property that was subject to the following taxes or exemptions as of December 31, 2011, will continue to be subject to these taxes or exemptions at least until their expiration:

- Industrial facilities tax (SB 1065)
- Technology park facilities exemption (SB 1066)
- Enterprize zone status (SB 1068)
- New personal property exemption (SB 1067)

Once the certificate or designation allowing the special tax status expires, rather than returning to an ad valorem taxation rate, that personal property will maintain its special tax status until it is exempted from the personal property tax, if it qualifies for the exemptions for eligible property outlined elsewhere in the legislative package. (See "History of Michigan's Personal Property Tax" on page 6 for an explanation of the industrial facilities tax and the new personal property exemption.)

V. The Economic Impact of Income Tax and Personal Property Tax Reforms

Since he took office at the beginning of 2011, Governor Snyder and his administration have taken several steps to reform the tax system to improve the business environment in Michigan. In May 2011, he signed legislation that overhauled business taxes in Michigan and made significant changes to the individual income tax. This legislation replaced the Michigan Business Tax (MBT) with the corporate income tax (CIT), consisting of a flat 6% rate on income for all C corporations and exemption of all businesses not registered as C corporations from direct state income taxation.

The introduction of the CIT this year will have a significant effect on the tax burden of most Michigan companies, lowering their taxes by an aggregate 7.2%. (This percentage is based on the change in *total* tax burden on businesses in the state, including MBT/CIT, individual income taxes on pass-thru business income, sales taxes paid by business, and taxes on fuel, among others.[17])

CIT reforms will have little effect on the *personal property tax* burdens for commercial and utility companies, however, and will significantly *increase* the PPT burdens for industrial firms because CIT reforms eliminate PPT credits for industrial personal property. The MBT contained a credit worth 35% of a firm's tax payments on all industrial personal property. The credit's repeal will result in an increase in the PPT burden of over 50% for industrial firms, starting this year.[18] As shown in Figure 1 on page 11, the effective tax rate on industrial personal property in 2011 was approximately 20 mills, after accounting for this credit. We project that the average effective tax rate for industrial personal property in 2012, after the credit is removed, will be 34 mills.

There are two main elements to the PPT reform proposal affecting taxation of commercial and industrial property. The first element is that owners of less than $40,000 in taxable value of personal property within a given taxing unit will no longer be subject to the PPT starting in 2013. The second element is that eligible manufacturing personal property will be totally exempt from personal property taxation by 2022, with this exemption phasing in for existing personal property starting in the year 2016.

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17. Our estimate of total business tax burden in the state is based on our own analysis. The current estimate that we use here has not yet been published, but the most recent published estimate is presented in:
Patrick L. Anderson and Caroline M. Sallee, "2008 State Business Tax Burden Rankings," Anderson Economic Group, March 2009.

18. To illustrate, a taxpayer that had an industrial personal property tax bill of $1,000 received $350 back in MBT credits in 2011. In 2012, that firm's net PPT costs will increase from $650 to $1,000, which is an increase of 54%.

EFFECT OF SMALL BUSINESS EXEMPTION

According to the Michigan Treasury, approximately 62% of commercial and industrial parcels will no longer be subject to personal property tax starting in 2013 under this proposal. There are two consequences for Michigan's business climate that stem from excluding this tax base. The direct effect is that the tax burden for these businesses would be considerably lower. Approximately 18% of total revenues from commercial personal property come from parcels owned by businesses with taxable value below $40,000 in the respective taxing unit. The effect for industrial firms is much less significant, with only 1% of total revenues from industrial personal property coming from parcels owned by businesses with taxable value below $40,000 in the respective taxing unit.

The second effect of eliminating parcels with less than $40,000 in personal property from the tax base is a drastic reduction in compliance costs. We estimate that, starting in 2013, commercial firms that are no longer required to determine their tax burden because they are confident of their exemption will save a combined $28 million annually in compliance costs. State and local governments will save over $12 million in compliance costs because they no longer have to perform record-keeping and track property tax collections for firms that fall below the $40,000 threshold. Industrial firms will not realize much of a drop in compliance costs until 2022 because few of them fall below $40,000 in total taxable value of personal property. In addition, even during the phase-out period, industrial firms will still be required to determine their taxable value, which represents the bulk of the cost of compliance.

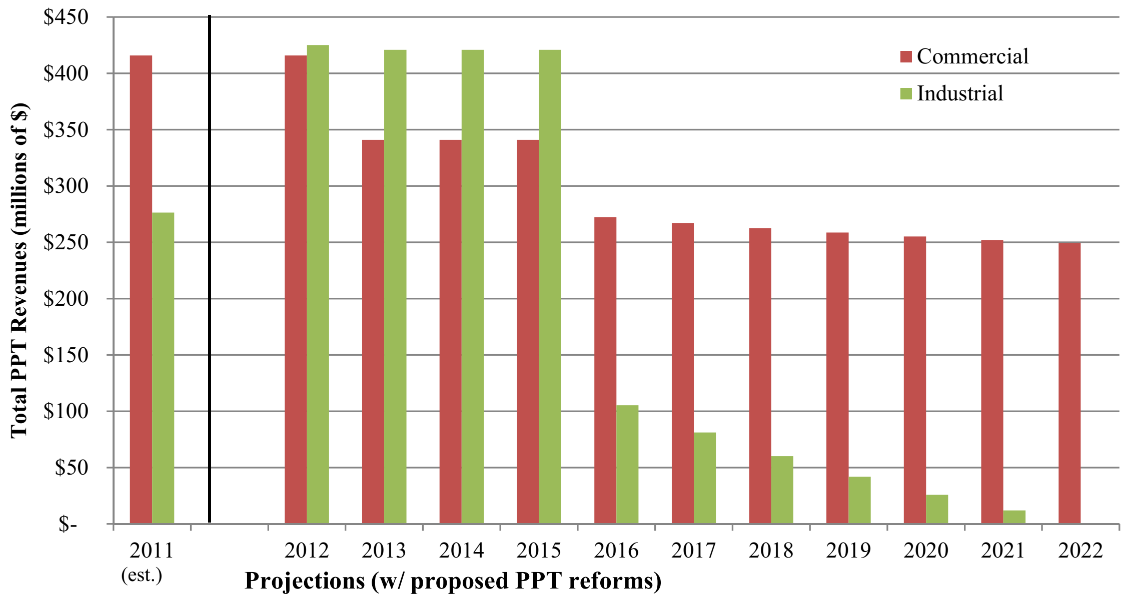
EFFECT OF EXEMPTING ELIGIBLE MANUFACTURING PROPERTY

As stated in "The Personal Property Tax and Industrial Firms" on page 10, industrial firms are particularly negatively affected by personal property taxes. For this reason, the goal of PPT reform is to remove manufacturing and industrial processing equipment from the tax base altogether. Under the PPT reform proposal, existing eligible manufacturing personal property will be exempted from the tax base by 2022. In addition, *new* eligible manufacturing personal property will be exempt from tax starting in 2016 (new as of 2012).

The result of these changes will be that approximately 75% of eligible manufacturing personal property will be exempt from taxes starting in the year 2016, according to Treasury estimates. As increasing amounts of the existing base are exempted from the tax, the tax revenues from industrial and commercial property qualifying as eligible manufacturing property will decline over the next few years until it is completely eliminated in 2022. See Figure 4 below for our projections of commercial and industrial personal property tax revenue under the PPT reform proposal. Note that the tax burden on industrial personal property increased dramatically at the beginning of 2012 due to elimination of the MBT credit, and would only very slightly decrease in 2013 due to the exemption of firms with taxable value below $40,000. Very nearly all of the personal property classified as industrial will be eligible manufacturing property, and therefore will be exempt by 2022. In addition, approximately 40% of personal property currently classified as commercial will be exempt, as well, once eligible manufacturing property is fully phased out (18% due to the $40,000 exemption and 22% due to the exemption of eligible manufacturing property).

Starting in 2022, we estimate that firms holding eligible manufacturing will save over $180 million annually in compliance costs due to the exemption of that property.[19] Also starting in 2022, because local and state governments will no longer be required to track personal property or assess payments of personal property taxes from those firms, they will save an additional $20 million, in aggregate, according to our estimates.

FIGURE 4. Commercial and Industrial Personal Property Tax Projections, FY2012-FY2022



Source: Michigan Dept. of Treasury, AEG Estimates
Analysis: Anderson Economic Group, LLC

DYNAMIC ECONOMIC IMPACT OF BUSINESS TAX REFORMS ON BUSINESS ACTIVITY

In previous research, Anderson Economic Group has investigated the impact that state and local taxes have on business investment and other types of economic activity. This economic research has found the following to be a conservative estimate of the impact of state taxes on business investment in the state: For every 10% decrease in business tax burden, there is approximately a 1.5% to 3.5% increase in business activity.[20] Using these parameters, we estimate that the reduction in taxes on businesses due to the CIT alone will result in a medium-term and long-term increase of 1.1% to 2.5% in consumption and fixed

19. This estimate for compliance cost savings is based on previous research, cited in "Personal Property Tax Compliance Costs" on page 16, that revealed that compliance costs represented just over a third of total tax revenue collected for the personal property tax.

investment by businesses. In addition, we predict that the PPT reductions that kick in starting in 2016 would result in a long-term increase of 0.5% to 1.2% in consumption and fixed investment by businesses. (See Table 7 on page 26 for a summary of these and other economic effects, and their approximate scale in dollars.)

This increased investment will result in more employment in the state of Michigan. Recent trends suggest that employment growth occurs at about a quarter the rate of growth in business fixed investment, in general. This implies that medium- and long-term increases in employment due to the CIT reforms will be approximately 0.3% to 0.6%, and long-term increase in employment due to the PPT reforms will be an additional 0.1% to 0.3%. The combined effects of these reforms could mean an additional 19,000 to 45,000 private sector jobs in the state, once they are fully phased in.

A further effect of CIT reforms will be that owners of businesses that are not C corporations will no longer be subject to direct business taxes on income. The owners of these businesses will not only be able to increase business investment and consumption, but they will also bring home more income as individuals. Based on AEG estimates, the individual income of sole proprietors and owners of S corporations in the state will increase by over 3% under the CIT reforms, or nearly $1.0 billion. We also find that approximately a quarter of PPT reductions will benefit S corporations, sole proprietors, and partnerships, resulting in just over $100 million in additional individual income.[21] This total increase in individual income will result in a considerable increase in consumption, as well.

20. The report in which we describe this research is proprietary, and draws upon an array of research on business activity, tax burdens, and economic growth. As observed elsewhere in this report, the incentive and signalling effects of tax policy changes depend heavily on the actual changes in costs to businesses and investors, as well as the credibility employers assign to commitments to maintain future policies. Furthermore, national economic conditions, policy changes in other states, and broad societal conditions (such as immigration and technology) also affect relative growth of states.

    Some such research on tax policy changes and economic growth is described in Patrick L. Anderson & Caroline Sallee, *Benchmarking for Success: A Comparison of State Business Taxes,* Michigan House of Representatives, August 2006.

21. We do not consider the effect of changes in business income at C corporations because much of C corporation ownership is likely to be outside the state of Michigan, and the relationship between business income and individual income for large corporations is less direct. (For example, increases in business income for a publicly-traded company will not be reflected in the income of its owners unless dividends are issued or the owners sell their shares in the company.)

ECONOMIC IMPACT OF BUSINESS TAX REFORMS ON INDIVIDUALS

To offset a reduction in tax revenues from businesses, the combination of CIT and individual income tax reforms enacted last year will eliminate many exemptions in the individual income tax and forestall planned future reductions in the individual income tax rate. We anticipate that tax revenues from personal income will be $2 billion greater than they would otherwise be within ten years due to these reforms, before taking into account dynamic effects.

Despite an increase of $2 billion in government revenue from individual income taxes, we expect that individual disposable income is likely to increase due to these combined reforms. Firstly, as described at the end of the last section, there will be an increase in individual income among owners of S corporations, partnerships, and sole proprietorships in Michigan because they no longer have to pay business taxes on income. This results in an increase of approximately $1.0 billion in individual income in the state, annually.

In addition, new investment and consumption by businesses will result in higher individual income for Michigan residents. We expect that the additional hiring that coincides with greater investment in the state will increase disposable incomes by $400 million to $1.0 billion. By the time the PPT reform has been fully phased in, we expect that disposable income due to increased business investment will be $900 million to $2.1 billion higher. (The range is wider in later years due to uncertainty.)

When we take all of these factors into account (greater pass-thru income, increased business investment, and direct increases in individual income taxes), the combined effect of CIT and PPT reforms on disposable incomes range from breaking even to an increase of approximately $1.4 billion. Table 7 on page 26 summarizes these impacts.

TABLE 7. Impact of Tax Reforms on Various Economic Activities

Tax Reform	Direct Impact	Activity Effected	Impact of Reform			
			Worst Case		Best Case	
Corporate Income Tax (CIT)	~$2 billion reduction in business taxes	Business Fixed Investment	+1.1%	+$400m	+2.5%	+$960m
		Business Consumption	+1.1%	+$910m	+2.5%	+$2.1b
		Employment	+0.3%	+13,000	+0.6%	+31,000
		Pass-through Income to Business Owners[a]	+3.2%	+$1.0b	+3.2%	+$1.0b
		Personal Consumption	+0.2%	+$470m	+0.2%	+$470m
Individual Income Tax (IIT) Changes	~$2 billion increase in individual taxes	Personal Income[b]	-0.4%	-$1.3b	-0.1%	-$400m
		Personal Consumption[b]	-0.4%	-$1.0b	+0.03%	+$100m
Personal Property Tax (PPT) Reforms	~$500 million reduction in business taxes	Business Fixed Investment	+0.5%	+$190m	+1.2%	+$450m
		Business Consumption	+0.5%	+$430m	+1.2%	+$1.0b
		Employment	+0.1%	+6,000	+0.3%	+15,000
		Pass-through Income to Business Owners[a]	+0.3%	+$100m	+0.3%	+$100m
		Personal Consumption	+0.01%	+$40m	+0.01%	+$40m

Sources: Michigan Department of Treasury, Senate Fiscal Agency, House Fiscal Agency, Bureau of Economic Analysis, U.S. Census, Bureau of Labor Statistics, Internal Revenue Service Statistics of Income, AEG Estimates
Analysis: Anderson Economic Group, LLC

a. The percentage increase shown here is based on AEG estimates of the profits accrued by S corporations, partnerships, and sole proprietorships in Michigan.

b. This accounts for increased income due to increased employment from effects of other reforms on businesses.

VI. The Fiscal Impact of Income Tax and Personal Property Tax Reforms

There are two components to consider when determining the impacts of changes to the tax code. There is the *direct* effect (or static effect), which provides an estimate of how much revenue is lost or gained, assuming that the economic behavior of those who are taxed does not change. There is also the *dynamic* effect of a tax change, which accounts for the probability that, for example, economic activity might increase when people or businesses have more disposable income due to tax changes. This increase in economic activity would, in turn, result in greater revenues to state and local governments.

Dynamic effects are important to account for here because one of the primary motivations for lowering taxes on businesses or individuals is that these dynamic effects occur. We consider a broad range of effects to account for their inherent uncertainty. We present the direct and the dynamic effects separately in the analysis below.

DIRECT EFFECTS OF REFORMS

Before taking into account expanded investment and economic activity due to these reforms, we estimate that the net fiscal impact of CIT and PPT reform for state and local governments is a combined loss of $620 million per year in revenue by the year 2020.

These lost collections would be split between state and local governments, with the state government incurring a net loss of $270 million and local governments experiencing a net loss of approximately $350 million compared to what they would have gotten without the CIT and PPT reforms. Direct effects on revenue at the local level are exclusively due to changes in PPT, and the estimate here is net of anticipated reimbursements from the state. (Note that our CIT estimates vary greatly depending on projections of growth in business income, which is volatile.)

As time goes by and the personal property tax exemptions are fully phased in, the state will continue to incur losses due to these reforms, in large part due to foregone revenue collections. Our long-term estimate of combined revenue losses for local governments is approximately $320 million, after accounting for transfers from the state. The direct state losses in revenue due to combined CIT and PPT reforms could be up to $500 million or more. About $250 million of this negative fiscal impact at the state level is due to the obligation to transfer funds to local governments.

ACCOUNTING FOR DYNAMIC EFFECTS

After accounting for dynamic effects, the fiscal impact of these reforms is likely to be only slightly negative, though there is significant uncertainty. That is, in the long run, we estimate that a positive fiscal impact is a bit less likely than a negative fiscal impact, once we account for heightened economic activity due to the reforms.

The negative direct fiscal impacts discussed above will be at least partially offset by the improved economy of the state. By the time reforms have fully phased in, the additional state and local government revenues from increased business investment and consumption alone will have increased to a range of $310 million to $720 million. Though additional taxes on individual incomes will lower consumption and therefore decrease sales tax revenue by just over $100 million annually within ten years, we predict that increases in income taxes due to greater employment and pass-through income for business owners will more than offset this loss. Our estimates for the direct and dynamic effects of the CIT, IIT, and proposed PPT reforms are outlined in Table 8 below.

TABLE 8. Fiscal Impact of the CIT, Income Tax, and PPT Reforms on State and Local Governments

(millions, parentheses reflect a negative impact)

		2015	2020	2025
Direct Fiscal Impact of the CIT and IIT Changes	State	($132.5)	($61.1)	($179.4)
	Local[a]	n/a	n/a	n/a
Direct Fiscal Impact of Proposed PPT Reforms	State	($10.4)	($208.0)	($266.7)
	Local	($68.7)	($346.9)	($324.7)
	TOTAL	($211.6)	($616.0)	($770.8)
Additional Revenue due to Dynamic Effects (extra business activity, etc.)	*Worst Case*	*$112.3*	*$269.7*	*$386.4*
	Best Case	*$366.9*	*$740.6*	*$999.2*
Fiscal Impact w/ Dynamic Effects State & Local Combined	Worst Case	($99.3)	($346.3)	($384.4)
	Best Case	$155.3	$124.6	$228.4

Sources: Michigan Department of Treasury, Senate Fiscal Agency, House Fiscal Agency, Bureau of Economic Analysis, U.S. Census, Bureau of Labor Statistics, Internal Revenue Service Statistics of Income, AEG Estimates
Analysis: Anderson Economic Group, LLC

a. CIT and IIT reforms affect local governments indirectly through their fiscal impacts on the state's School Aid Fund. In the analysis shown here, however, we include all fiscal impacts to the School Aid Fund in the state's fiscal impact.

Appendix A. Data and Methodology

In this section, we outline the steps we took for a variety of analyses that we present in the preceding report. These include the following estimates:

- The effective personal property tax rate over since 2000;
- The projected change in PPT revenues over time due to the proposed reforms;
- The static fiscal impact of the CIT, changes to the IIT, and proposed PPT reforms;
- The economic impacts of the CIT, the IIT, and proposed PPT reforms;
- The dynamic fiscal impact of the CIT, changes to the IIT, and proposed PPT reforms;

ESTIMATING EFFECTIVE RATES

To estimate the "effective" PPT rates, we divided the net tax levied on businesses (subtracting tax credits for PPT liability) by the total personal property tax base. Specifically, we took the following steps:

- To determine the effective tax rate for industrial personal property, we added the share of the industrial facilities tax that is for personal property to the ad valorem tax levy on industrial personal property. We then subtracted the total amount of MBT credit for industrial personal property.[1] This results in an estimate of the total tax collections on industrial personal property. We then divided this amount by the taxable value of industrial personal property to determine an effective rate.[2] See Table A on page A-2.
- For commercial personal property, we divided the tax levy on commercial personal property by the taxable value of that property.
- For utility personal property, we added the revenue collected from the statewide utility property tax to the levy on utility personal property, and then subtracted the small credit for utility property contained in the MBT (or the SBT, for previous years). Then, we divided by the total taxable value of utility personal property under the general property tax plus our estimate for the total taxable value of property subject to the statewide utility property tax. As no estimate for the taxable value of property subject to the statewide utility property tax was available from Treasury documents, we estimated it by dividing tax collections by the previous year's average property tax rate for businesses. Note that including the statewide utility property tax introduces some real property to both the numerator and denominator of the effective PPT rate calculation.[3]

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1. Total amount of the MBT credit on industrial personal property is based on the "Executive Budget Appendix on Tax Credits, Deductions, and Exemptions," published annually by the State of Michigan. Our estimate for 2008 is greater than the published figure because the MBT credit was only in force for part of the year. For purposes of comparison, we have projected a total for the entire year.
2. Taxable value State Equalized Value (SEV) for personal property not significantly different. In 2008 the aggregate amount of taxable value for all personal property in Michigan was 99.8% of the aggregate amount of SEV. See Michigan Department of Treasury, "Michigan Property Tax Real and Personal 2008 Statistical Update."

- In making our estimate for the effective tax rate in the year 2012, we assumed that there will be no other major changes to the personal property tax other than the elimination of MBT credits for personal property. Our estimate for the effective tax rate on industrial personal property in 2012 consists of simply adding back the money that was provided to businesses through MBT credits on personal property liability. In doing so, we assume that the ratio of future collections to taxable value will be the same as in 2008. (We also add back some collections for utilities due to elimination of a credit worth $8 million in 2008.)

TABLE A. Calculating Effective Personal Property Tax Rates, Industrial

Tax	2004	2008	2012 (est.)[a]
Ad Valorem Tax Levy, Industrial Personal Property	$571.4	$333.9	$333.9
Industrial Facilities Tax[b]	$54.3	$41.5	$41.5
MBT Credits, Industrial Personal Property	$0	($151.4)	$0
Estimated PPT Collections, Industrial Property	$625.7	$224.0	$375.4
Total Taxable Value, Industrial Personal Property	*$11,095.5*	*$11,102.3*	*$11,102.3*
Effective Tax Rate on Industrial Personal Property	***56.4 mills***	***20.2 mills***	***33.8 mills***

Sources: Michigan Property Tax Real and Personal 2008 Statistical Update; 2007-08 Annual Report of the State Treasurer; Executive Budget Appendix on Tax Credits, Deductions, and Exemptions, FY2008; AEG Estimates
Analysis: Anderson Economic Group, LLC

a. For our 2012 estimate, note that we do not project a distinct levy or size of the tax base. We merely use the values from 2008, while removing the credits from the MBT that will no longer be in effect. We assume that this provides a good proxy for the effective tax rate on personal property in 2012 for the purposes of comparing it to the effective rate under the state's policies in 2008.

b. This line shows only the tax collected on personal property, estimated by assuming that the proportion of all property that was personal property was the same for facilities covered by the industrial facilities tax as for the broader industrial base.

- As the purpose of our estimate was to compare the tax burden change as a share of value over time, we chose the consistent base of taxable value. There are, however, some differences between taxable value and State Equalized Value.

CHANGE IN PPT REVENUES

In Figure 4 on page 23, we show our estimates for the trajectory of PPT revenue from commercial and industrial sources under the proposed PPT reforms. To estimate projected PPT revenues under the proposed reforms, we first assumed a baseline where the amount of PPT revenue remains essentially unchanged over the next 10 years. This is based on recent historical trends. Though PPT

3. Since the telecommunications and rail businesses subject to the statewide utility tax are likely very capital intensive, we chose to include this tax to capture the effect of property taxation on the investment decisions of firms in these industries rather than not including them at all.

revenue has fluctuated, it is at approximately the same level as it was ten years ago.

For commercial personal property, we subtract 18% of the revenues starting in 2013 and leave it unchanged until the year 2016. This reflects the Treasury estimates that 18% of taxable value for commercial personal property is on parcels which will qualify for the $40,000 exemption. For industrial personal property, we subtract 1% of the revenues starting in 2013 for the same reason.

The phase-out of eligible manufacturing personal property occurs by exempting all industrial personal property that is at least ten years old, starting in the year 2016. All new property, purchased in 2012 or later, is also exempted in that year. In 2016, then, the only eligible manufacturing personal property subject to taxation will be that which has been in use for at least five but less than ten years. Similarly, in 2017, the eligible manufacturing property subject to tax will be that which has been in use for at least *six* but less than ten years. We assume that all industrial personal property and 22% of commercial personal property will be eligible manufacturing property, in line with Treasury estimates.

To determine this amount, we consider the *half-life* of the value of personal property. That is, accounting for replacement and depreciation of remaining property, how long is it before the value of remaining property acquired in a certain year has been reduced by half? Considering all of the personal property put into use in the year 2000, for example, the half-life would tell us in which year the taxable value of property in use is half the taxable value of property that was purchased in the year 2000. Using Treasury figures as a reference, available depreciation tables, and our professional judgement, we determined five years to be a reasonable half-life. Once this half-life is defined, it is straightforward to estimate the share of taxable value of personal property in the state that was purchased a given number of years ago.

STATIC FISCAL IMPACT

In order to measure the static fiscal impact of the CIT, the IIT, and the proposed PPT reform, we first had to derive a baseline. That baseline estimates the amount of tax revenue that the state would have gotten in future years under the law as it stood before the CIT was adopted. The baseline was derived in three steps:

1. Determine the actual tax revenues, by source, to the state in the fiscal year 2011. For this, we used numbers released by the House Fiscal Agency in their November 2011 Revenue Review.
2. Project revenues under the status quo for the next two fiscal years. The Senate Fiscal Agency has provided an estimate of projected revenues for 2012 and 2013.
3. Project the growth in tax bases for various taxes over the next 15 years.

Once a baseline was determined, we used SFA projections and our own estimates to determine the impacts of the CIT and the IIT reforms. We assumed that the share of revenue foregone in the year 2013 due to each tax (again, using SFA estimates) would be the share of revenue foregone in future years in all cases except where there was a longer phase-in period, like with the pension exemption. In that case, we assumed the share of newly-attained revenue would increase somewhat compared to what SFA estimated, and then maintain a given share of the total tax base after several years.

For the proposed PPT reforms, we utilized our estimates for current distribution of revenues from industrial and commercial personal property to various entities (the School Aid Fund, school operating costs, school debt, and non-school local governments). These estimates were based on SFA estimates from 2010.[1] In addition, we used our estimates for the change in these revenues over time, as outlined in the previous section, "Change in PPT Revenues" on page 2. This allowed us to determine the amount of lost revenue for various local and state entities due to changes in the PPT.

For transfers from state to local governments, we used Treasury estimates of the amount of PPT revenue foregone by local entities that would exceed 2% of governmental funds, plus 100% of expected revenue foregone that would cover local debts and TIF obligations.

DYNAMIC ECONOMIC IMPACT

There were two main sources of direct economic impact due to these reforms: the aggregate tax savings by businesses (and business owners) due to CIT and proposed PPT reforms, and the aggregate additional cost to individuals of the reforms to the individual income tax.

Dynamic Effect for Businesses

In the past, Anderson Economic Group has investigated the impact that state and local taxes have on business investment and other types of economic activity. This economic research has found the following to be a conservative estimate of the impact of state taxes on business investment in the state: For every 10% decrease in business tax burden, there is approximately a 1.5% to 3.5% increase in business activity.[2] Using these parameters, we estimate that the reduction in taxes on businesses due to the CIT alone will result in a medium-term and long-term increase of 1.1% to 2.5% in consumption and fixed investment by businesses. In addition, we predict that the PPT reductions that kick in starting in 2016 would result in a long-term increase of 0.5% to 1.2% in consumption and fixed investment by businesses.

1. David Zin, "The State and Local Impact of Property Taxes Levied on Michigan Personal Property (Revised)," Senate Fiscal Agency, Issue Paper, September 2011.

These investments will result in more employment in the state of Michigan. Recent trends suggest that employment growth occurs at about a quarter the rate of growth in business fixed investment. This is based on a regression of private fixed investment against private employment using Bureau of Economic Analysis data from 2000 to 2010, which has a slope of 0.243. This implies that medium- and long-term increases in employment due to the CIT reforms will be approximately 0.3% to 0.6%, and long-term increase in employment due to the PPT reforms will be 0.1% to 0.3%. For these ranges of values, we calculated a worst-case scenario, where the lowest part of each range was applied, and a best-case scenario, where the highest part of each range was applied.

We assumed a given level of baseline growth for business income taxes and individual income taxes. This is why the size of the revenue foregone and gained due to CIT and IIT changes, respectively, increases over time in our projections. In addition, we phased in each of the effects over time. We project a long-term increase of 2.5% in business consumption, for example, due to the CIT. We phase this increase in over 5 years, starting in 2012. Therefore, in 2012, business consumption is 0.5% higher than it would otherwise be, in 2013 it is 1.0% higher, in 2014 it is 1.5% higher, etc. For 2016 and each year afterwards, business investment and consumption are 2.5% higher than they would otherwise be due to CIT reforms.

This same method was used for the effects of the PPT reform. With PPT reform, the effects were phased in over 8 years, starting in 2016, because that is the year in which most of the changes start to take effect. The PPT reforms take effect more gradually than the CIT and IIT changes.

Dynamic Effects for Individuals

Changes in after-tax income would be affected in two ways. First, we assumed that after-tax income would be lower due to higher taxes in the IIT reform package. In addition, incomes would be higher due to greater employment, as outlined above. We assumed an average income of $43,000 for each additional job, which is the current average wage among private industry in Michigan, according to the Bureau of Labor Statistics. We assumed a very modest nominal

2. The report in which we describe this research is proprietary, and draws upon an array of research on business activity, tax burdens, and economic growth. As observed elsewhere in this report, the incentive and signalling effects of tax policy changes depend heavily on the actual changes in costs to businesses and investors, as well as the credibility employers assign to commitments to maintain future policies. Furthermore, national economic conditions, policy changes in other states, and broad societal conditions (such as immigration and technology) also affect relative growth of states.

   Some such research on tax policy changes and economic growth is described in Patrick L. Anderson & Caroline Sallee, *Benchmarking for Success: A Comparison of State Business Taxes,* Michigan House of Representatives, August 2006.

growth rate of 2% in this average wage for future years. (This is in line with recent trends, where wage growth in Michigan has been stagnant, in real terms.)

Consumers spend approximately 90% of their disposable personal income, according to recent Bureau of Economic Analysis data. Therefore, we assumed that personal consumption would increase by about 90% for each increase in after-tax income.

Dynamic Effects for Business Owners

According to Treasury data made available to Anderson Economic Group prior to the passage of the CIT, companies that are not C corporations account for approximately 51% of the business income in the state of Michigan; however, these businesses will receive much more than this share of the tax savings from CIT reforms because they are exempted while C corporations continue to be taxed. To be conservative, we assume that business owners will only take a portion of their savings as income, resulting in pass-thru income of around $1.0 billion (out of a total decrease in business taxes of nearly $2.0 billion).

The savings rates for business owners are higher than for the average citizen, so we assumed that the effect of this increased income on consumption would be lower than for individuals in the previous section. We determined that 50% of pass-through income for business owners would be reflected in increased consumption in the state.

DYNAMIC FISCAL IMPACT

We estimated the fiscal impact of increased business consumption, increased business activity, and increased (or in the worst-case scenario, decreased) personal income on state and local governments.

Based on our estimates, approximately 40% of business consumption in the state is taxable (purchases of health care, rent, and financial and business services are exempt from taxation). We estimate the fiscal impact of increased personal consumption as 6% (the statewide tax rate) times 40% of consumption.

Fixed investment increases will largely be reflected in increasing returns to business income and other taxes on business. In order to estimate the increased fiscal impact of business activity, we determined the rate at which GDP in the state increases with fixed investment, and then considered the relationship between GDP increases and business taxes paid to state and local governments.

Using data from the Bureau of Economic Analysis, we determined that GDP tends to increase nationally by $7 for every dollar increase in fixed investment (based on a regression of data from the year 2000 to 2010). We used this estimate to convert the projected increase in business investment in each year into a given effect on GDP. AEG has its own estimates for total business taxes paid in Michigan each year reflecting that, in the state of Michigan, businesses pay approximately 4.5% worth of the state's gross domestic product in state and local taxes each year. Using these figures, we determined the increase in business taxes paid to the state by multiplying changes in business investment by 7 and then taking 4.5% of this product.

Previous research by Anderson Economic Group has revealed that for every $100 increase in personal income in the state, state and local governments get about $10.80 in additional tax revenue, through all forms of taxes. We assume in our analysis that changes to individual income, including for business owners on pass-thru income, will result in 10.8% additional revenue for state and local governments.

Appendix B. About the Authors

ANDERSON ECONOMIC GROUP

Anderson Economic Group, LLC is research and consulting firm specializing in economics, public policy, finance and business valuation, and market and industry analysis. The firm has offices in Chicago, Illinois and East Lansing, Michigan. AEG has conducted economic and fiscal impact studies for private, public, and non-profit clients across the United States. For more information please visit www.AndersonEconomicGroup.com.

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Recent projects he has contributed to include a cost-benefit analysis of funding and eligibility changes to Medicaid, an assessment of the effects of personal property tax reform in Michigan, and analyses of the fiscal condition and tax policies of Michigan's state and local governments.

Prior to joining AEG, Mr. Horwitz was the Coordinator of Distribution for the Community Center of St. Bernard near New Orleans, where he oversaw the distribution of donated food, clothes, and household supplies to low-income residents of St. Bernard Parish and New Orleans' Lower Ninth Ward.

Mr. Horwitz holds a Master of Public Policy degree from the Harris School of Public Policy at the University of Chicago and a Bachelor of Arts in Physics and Philosophy from Swarthmore College.

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Mr. Rosaen's recent work includes several economic and fiscal impact analyses, including of proposed real estate developments, power plants, and infrastructure projects; analysis of tax incentives; an analysis of the impact of federal tax incentives on the freight rail industry; and an analysis of the economic contribution that research universities make in the State of Michigan.

Prior to joining Anderson Economic Group, Mr. Rosaen worked for the Office of Retirement Services (part of the Michigan Department of Management and Budget) for the Benefit Plan Design group. He has also worked as a mechanical engineer for Williams International in Walled Lake, Michigan.

Mr. Rosaen holds a Masters in Public Policy from the Gerald R. Ford School of Public Policy at the University of Michigan. He also has a Masters of Science and a Bachelors of Science in mechanical engineering from the University of Michigan.