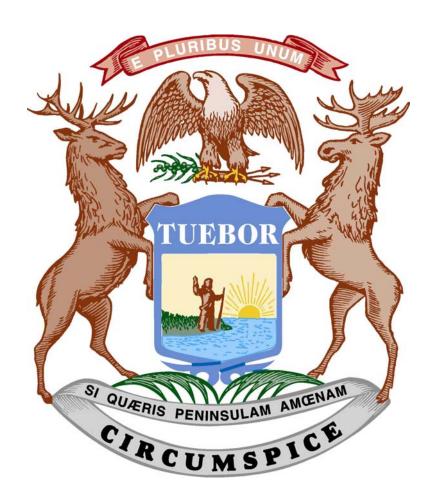
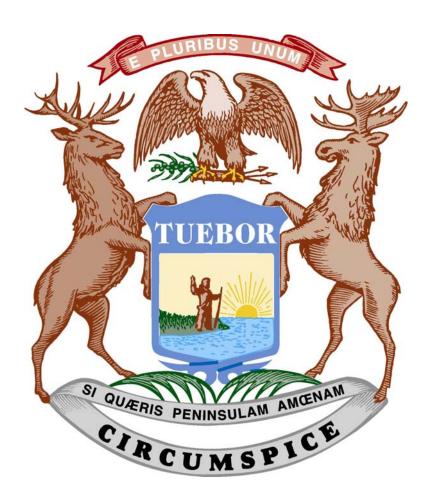
MICHIGAN'S SALES AND USE TAXES 2012



Tax Analysis Division
Office of Revenue and Tax Analysis
Michigan Department of Treasury
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I. EXECUTIVE SUMMARY

- Michigan sales and use tax revenue totaled \$8.384 billion in Fiscal Year (FY) 2012, an increase of 1.5 percent from FY 2011. The combined growth rate was 3.5 percent if the use tax on health maintenance organizations covering Medicaid services were excluded. FY 2012 sales tax revenue was \$6.955 billion and FY 2012 use tax revenue was \$1.428 billion. The increase in sales tax revenue (3.6 percent) reflected growth in retail automotive sales and sales of lumber and building materials, reflecting continued growth in car and truck sales and some recovery in the housing sector.
- Most Michigan sales tax revenue is dedicated to the state School Aid Fund (73.3 percent) and local government revenue sharing (24.2 percent). Michigan use tax revenue is dedicated to the General Fund (66.7 percent) and School Aid Fund (33.3 percent).
- Exemptions and other tax expenditures reduced sales and use tax collections by an estimated \$14.5 billion in FY 2012. Untaxed services remain the largest single source of tax expenditures.
- The automotive retail sector remits the largest share of sales tax revenue at \$2.16 billion. The telecommunications sector provides the largest share of use tax revenue at \$204.5 million.
- The sales and use tax revenue base is being eroded by rapidly growing remote sales (mail order and Internet). Michigan's tax revenue losses from consumer remote sales are estimated at \$424 million in FY 2012. The estimated revenue losses are projected to grow to \$508 million in FY 2015.
- Louisiana has the highest average effective combined state and local sales tax rate at 9.32 percent. However, the highest combined state and local statutory sales tax rate is 13.725 percent, levied in Tuba City, Arizona. With an effective rate of 6.0 percent, Michigan and five other states rank 8th lowest among the 45 states with a sales tax.
- Washington has the highest amount of general sales tax revenue as a percent of personal income at 4.43 percent. Michigan ranks 18th highest at 2.68 percent, above the national average of 2.38 percent. Michigan's ranking was affected by the inclusion of a portion of the Michigan Business Tax collections under "Sales and Gross Receipts Taxes" in the data on state and local government finance published by the Census Bureau. Based on collections from the sales and use taxes alone, Michigan collected 2.33 percent of state personal income through the sales and use taxes, below the national average.

II. INTRODUCTION

This report provides a brief history of the Michigan sales and use taxes and examines data on sales and use tax revenue. The impact of remote sales on sales and use tax revenue is also discussed.

History

The first sales tax in the United States was enacted by the state of Mississippi in 1932. Michigan followed the next year by enacting Public Act 167 of 1933, which levied a three percent tax on all retail sales of personal property. Initially, the only exemptions from the Michigan sales tax were sales to federal and state governments and sales of goods for later resale. Eight other states also enacted a sales tax in 1933. Currently, 45 states and the District of Columbia levy a sales tax. Alaska, Delaware, Montana, New Hampshire, and Oregon do not levy a sales tax. Additionally, most states allow local governmental units (municipalities, school districts, and counties) to levy a sales tax. Michigan does not allow any local sales taxes. Although local sales taxes are not expressly prohibited by the Michigan Constitution, the Michigan Attorney General has interpreted the Constitution as effectively prohibiting them. The maximum sales tax rate under the Constitution is 6 percent, the current tax rate levied by the state.

In 1933, the Michigan sales tax rate was 3 percent, and was limited by the Michigan Constitution. A 1960 constitutional amendment increased the maximum sales tax rate to 4 percent effective January 1, 1961. A constitutional amendment was passed in 1994 that raised the maximum sales tax rate to 6 percent, as a partial revenue replacement for property and income tax reductions.

In 1937, Michigan enacted Public Act 94 that created the use tax to correspond with the Michigan sales tax. The purpose of the use tax was to prevent Michigan residents and businesses from avoiding the sales tax by purchasing taxable items in another state or country. The use tax applies to the use, storage, or consumption of tangible personal property. The use tax applies to items that are rented, leased, or purchased from outside Michigan for use in Michigan. The Michigan use tax rate has always been the same as the sales tax rate.

Interstate Comparisons

Sales and use tax rates vary widely among the states. Indiana, Mississippi, New Jersey, Rhode Island, and Tennessee have the highest state sales tax rate at 7 percent, although California has a state rate of 6.5 percent plus a state-administered local tax rate of 1 percent levied throughout the state. Of states with a sales tax, Colorado has the lowest state sales tax rate at 2.9 percent. Thirty-six states have local units that levy a sales tax. The highest combined state and local sales

tax rate that is levied within at least one jurisdiction in a state is 13.725 percent, levied in Tuba City, Arizona¹.

Revenue

Sales and use taxes are the largest source of tax revenue for the State of Michigan. In Fiscal Year (FY) 2012, sales and use taxes totaled \$8.38 billion, or 35.6 percent of Michigan tax revenue. The personal income tax, by comparison, accounted for 29.4 percent of tax revenue. Before the passage of school-finance reform in 1994, Michigan sales and use taxes made up approximately 29 percent of total state tax revenue and the income tax provided approximately 35 percent of the total.

The sales tax generated \$6,955.2 million in FY 2012, an increase of \$244.3 million (3.6 percent) from FY 2011. Revenue in FY 2011 and FY 2012 recovered much of the ground lost during FY 2009 and FY 2010. Sales tax revenue accounted for 29.5 percent of total state taxes in FY 2012, the highest share of total state taxes since 2003. Continued moderate growth of the Michigan and U.S. economies accounted for much of the gain in sales tax revenue in FY 2012.

The use tax generated \$1,428.3 million in FY 2012, a decrease of \$120.6 million (7.8 percent) from FY 2011. The decline was due to the mid-year elimination of the use tax on Medicaid contracted health plans and Medicaid managed care organizations (Public Act 141 of 2011). Use tax revenue grew 2.8 percent if the effect of the repeal of the Medicaid portion of the use tax is excluded. The use tax accounted for 6.1 percent of total state tax revenue in FY 2012. Exhibits 3, 4, and 5 provide a history of sales and use tax revenue and the percentage of total state taxes each tax comprises.

Distribution

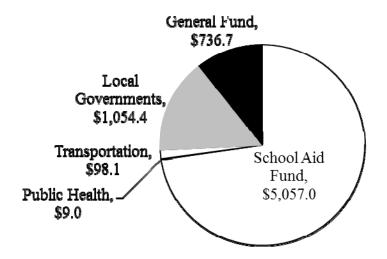
Michigan sales and use taxes are levied similarly, but the revenue from the two taxes is distributed differently. Two-thirds of use tax revenue is deposited in the General Fund, while one-third is deposited in the School Aid Fund (SAF). Sales tax revenue is constitutionally and statutorily earmarked to several funds. The Michigan Legislature passed the Sales Tax Diversion Amendment in 1946, which provided a formula for the distribution of sales tax revenue to schools, local governments, and the General Fund. School-finance reform enacted in 1994 earmarked all the revenue from the 2 percent increase in the sales and use tax rates to the SAF. Also, legislation enacted in 1996 made the sales tax the only source of funding for local revenue sharing which had previously received funds from four different taxes.

As stated previously, the 2 percent increase in the sales tax rate enacted in 1994 is constitutionally dedicated to the SAF, along with 60 percent of the tax generated by the sales tax at the 4 percent rate. Of the remaining revenue generated by the sales tax at the 4 percent rate, 15 percent is constitutionally earmarked to revenue sharing for local governments on a per capita basis, with another 21.3 percent earmarked to local governments based on a statutory allocation.

¹ Tax Foundation, "State and Local Sales Tax Rates in 2013", February 11, 2013.

The statutory earmarking is subject to legislative appropriation. The remaining 3.7 percent of sales tax revenue raised by the 4 percent rate is deposited into the General Fund, except that 27.9 percent of one percent generated from automotive-related sales is deposited into the Comprehensive Transportation Fund (CTF). Additionally, an amount equal to the sales tax on sales of computer software must be deposited into a fund for the Michigan Public Health Initiative. The amount earmarked to the Public Health Initiative is required by law to be at least \$9 million and no more than \$12 million each year. The General Fund has received an increased share of sales tax collections in recent years due to reductions in the amount of statutory revenue sharing appropriated by the Legislature, and to the temporary elimination of revenue sharing payments to counties as part of the acceleration of county property tax collections into the summer. The shift of county tax collections allowed counties to gradually draw down the accelerated collections as a replacement for revenue sharing. Some counties have begun receiving revenue sharing payments again, resulting in larger appropriations for revenue sharing and a smaller portion of sales tax collections available to the General Fund. In FY 2012, approximately 34 percent of the statutory revenue sharing earmark was actually appropriated for revenue sharing. The distribution of sales tax revenue for FY 2012 is shown in Exhibit 1.

Exhibit 1
Sales Tax Revenue Distribution
Fiscal Year 2012



Source: Office of Revenue and Tax Analysis, Michigan Department of Treasury.

Exemptions

The Michigan sales and use tax bases have become narrower since the inception of these taxes due to exemptions. A chronology of the major legislative changes to the sales and use tax is shown in Exhibit 2. The narrowing of the tax bases results in a large loss of potential revenue to the state.

Exhibit 2 Chronology of the Michigan Sales and Use Tax Changes in Statute

- 1933 The Michigan sales tax is enacted under Public Act 167 of 1933. Exempts only sales to federal and state governments and sales of goods that would be resold. Services are generally exempt.
- 1935 Exempts sales of tangible personal property for use in industrial processing or agricultural production along with sales to nonprofit organizations.
- 1937 The Michigan use tax is enacted under Public Act 94 of 1937. The use tax base exempts property already subject to the Michigan sales tax, property exempt under state or federal law, and property that is temporarily brought into the state by a nonresident. Does not tax services.
- 1939 Exempts transactions involving commercial vessels.
- 1946 The Michigan Legislature passes the Sales Tax Diversion Amendment. This amendment to the Michigan Constitution established a formula for allocating sales tax revenue between the General Fund, school districts, and local governments.
- 1950 Exempts newspapers and periodicals from the sales tax base.
- 1952 Exempts sales to operators of commercial radio and television stations.
- Exempts sales of artificial limbs and eyes, sales of new motor vehicles to be used outside of the state, and purchases of water in bulk.
- 1958 Exempts sales of used motor vehicles to be used outside of the state.
- 1959 Imposes use tax on intrastate telephone, telegraph, and leased wire communications, as well as rental charges for hotel and motel rooms. Also imposes use tax on purchases by contractors working for the state of Michigan.
- 1961 Increases sales and use tax rates from 3 percent to 4 percent.
- 1974 Exempts sales of food and prescription drugs.
- 1978 Exempts components of air and water pollution control facilities. Also exempts sales of hearing aids, contact lenses, eyeglasses, and equipment to substitute for part of the human body or to assist the disabled.
- Amends the use tax to increase the tax on personal property modified and affixed to real estate by construction contractors.

- 1985 Exempts sales of computers used for industrial processing.
- 1986 Exempts sales of property used in a "qualified business activity" as defined in the Enterprise Zone Act and sales of property to a business engaged in a high technology activity located in a central city and subject to tax increment financing. These provisions are no longer effective, having expired or been repealed.
- 1987 Taxes computer software that is offered for sale to the public, or modified or adapted to the user's needs by the seller, but only if the software is available for sale as is or as an end product without modification.
- Exempts sales of property purchased by a licensed radio or television station and used to originate or integrate programs for radio or television transmission.
- Exempts from use tax the sale of parts and materials affixed in Michigan to commercial passenger or cargo aircraft.
- Increases the Michigan sales and use tax rate from 4 percent to 6 percent. This change was approved by the voters and became effective May 1, 1994. Sales tax on utilities for residential use remained at 4 percent. Imposes tax on interstate phone calls, excluding WATS and international calls.
- 1996 Michigan Legislature changes the earmarking of revenue to local governments by making the sales tax the only major tax source dedicated to revenue sharing.
- 1999 Codifies the practice of basing exemptions on the proportion of exempt versus total use. Expands the industrial processing exemption. Creates a bad debt deduction for the use tax. Eliminates the sunset on the use tax exemption for rolling stock (trucks) and expanded the exemption to the sales tax.
- 2000 Enacts an exemption for nonalcoholic vended beverages. Provides an exemption for meals given by restaurants to employees for free or at a reduced rate during working hours.
- Exempts from the sales and use taxes the sale of an aircraft to a person for the subsequent lease to a domestic air carrier for use in the regular transport of passengers.
- 2002 Codifies the long-standing method of taxing demonstration vehicles that exceed the number of vehicles a dealer may hold tax exempt. Eliminates the sales tax license fee. Allows taxpayers that lease the use of aircraft an extended deadline to make the required election whether to pay sales tax on the aircraft or use tax on lease payments. Exempts certain property sold to resident tribal members for use within a tribal agreement area. Subjects sales of diesel fuel to the use tax.

- 2003 Creates a presumed exemption for property purchased outside of Michigan and subsequently brought into the state. Enacts a two-year reduction in the earmarking of sales tax revenue from the sales of automotive-related products for public transportation.
- 2004 Brings Michigan into conformity with the Streamlined Sales Tax Project (SSTP). Creates exemptions for the transfer of vehicles to low-income individuals or families. Adjusts for FY 2005 the portion of sales tax collected on auto-related sales that is transferred to the Comprehensive Transportation Fund.
- 2006 Exempts aircraft and aircraft parts from sales and use taxes if aircraft is in the state temporarily for repair, pre-purchase inspection, or customization. Exempts delivery charges for delivery of direct mail from sales and use taxes. Creates a tax credit based on production spending in Michigan by a motion picture production company.
- 2007 Imposes the use tax on additional services. The expansion to the tax base was repealed as it took effect. Clarifies the definition of taxable use in response to litigation. Establishes a deduction for bad debts held by a third-party.
- 2008 Eliminates the credit for production expenditures by a motion picture production company. Exempts employee discounts on the sale of a motor vehicle. Subjects the use or consumption of medical services provided by Medicaid managed care organizations to the use tax. Expands the definition of extractive operations related to timber extraction. Exempts materials purchased for use in the renovation of Cobo Hall in Detroit from the sales and use taxes.
- 2009 Expands the exemption from sales and use taxes for aircraft temporarily in the state to include maintenance, improvement, and sale of the aircraft.
- 2010 Expands the exemption for industrial processing to include equipment used to unload logs and load lumber at sawmills. Allows a taxpayer to claim a refund for sales tax paid on a core charge for heavy earthmoving equipment.
- 2011 Eliminates the use tax on Medicaid contracted health plans and Medicaid managed care organizations, effective March 31, 2012.
- Alters the timing of payments for taxpayers required to pay on an accelerated basis, effective January 1, 2014. Eliminates the exemption for purchases made with scrip by an inmate of a penal or correctional institution. Creates earmarks for the State Trunkline and State Aeronautics Funds from sales tax at 4 percent on the sale of motor fuel and aviation fuel or aviation products, respectively, for fiscal year 2013 only. Divides the use tax into a state and a metropolitan areas component tax to reimburse local governments for the cost of personal property tax exemptions, subject to voter approval in August 2014. Exempts the sale of tangible personal property used in mineral production that is subject to a new specific tax. Requires prepayment of sales tax on diesel fuel. Extends the exemption for purchases by non-profit organizations to items used to raise funds.

Exhibit 3
Sales and Use Tax Revenue
as a Percent of Total State Tax Revenue
FY 1980 to FY 2012

	Sales Tax	Use Tax	Total State Tax	Sales Tax as a Percent	Use Tax as a Percent
Fiscal	Revenue	Revenue	Revenue	of Total	of Total
Year	(millions)	(millions)	(millions)	State Taxes	State Taxes
1980	\$1,504.0	\$232.9	\$6,126.4	24.5%	3.8%
1981	1,595.0	232.3	6,195.0	25.7%	3.8%
1982	1,570.6	247.4	6,371.2	24.7%	3.9%
1983	1,699.0	279.5	7,337.4	23.2%	3.8%
1984	1,925.0	317.3	8,405.7	22.9%	3.8%
1985	2,142.6	341.4	8,958.0	23.9%	3.8%
1986	2,283.1	390.8	9,270.8	24.6%	4.2%
1987	2,348.4	397.8	9,591.7	24.5%	4.1%
1988	2,475.0	419.0	10,285.5	24.1%	4.1%
1989	2,615.2	475.9	10,850.9	24.1%	4.4%
1990	2,671.3	473.9	11,062.4	24.1%	4.3%
1991	2,671.9	474.3	10,865.5	24.6%	4.4%
1992	2,738.1	480.0	11,267.5	24.3%	4.3%
1993	2,905.7	529.5	11,891.1	24.4%	4.5%
1994	3,775.3	725.1	14,014.8	26.9%	5.2%
1995	4,884.2	942.9	17,009.1	28.7%	5.5%
1996	5,171.6	1,034.9	18,090.5	28.6%	5.7%
1997	5,389.8	1,092.2	18,970.3	28.4%	5.8%
1998	5,617.3	1,159.3	20,149.0	27.9%	5.8%
1999	5,901.7	1,283.0	21,472.8	27.5%	6.0%
2000	6,277.5	1,355.4	22,363.4	28.1%	6.1%
2001	6,352.3	1,333.6	21,872.2	29.0%	6.1%
2002	6,439.9	1,306.4	21,448.6	30.0%	6.1%
2003	6,422.6	1,229.8	21,710.8	29.6%	5.7%
2004	6,473.5	1,316.5	22,089.5	29.3%	6.0%
2005	6,599.1	1,402.4	23,114.9	28.5%	6.1%
2006	6,638.1	1,413.8	23,358.9	28.4%	6.1%
2007	6,552.2	1,380.4	23,481.1	27.9%	5.9%
2008	6,773.3	1,377.1	25,138.2	26.9%	5.5%
2009	6,089.1	1,283.7	22,379.2	27.2%	5.7%
2010	6,176.8	1,573.7	21,817.9	28.3%	7.2%
2011	6,710.9	1,548.9	23,414.4	28.7%	6.6%
2012	6,955.2	1,428.3	23,538.6	29.5%	6.1%

Exhibit 4 Michigan Sales Tax as a Percent of Total State Taxes

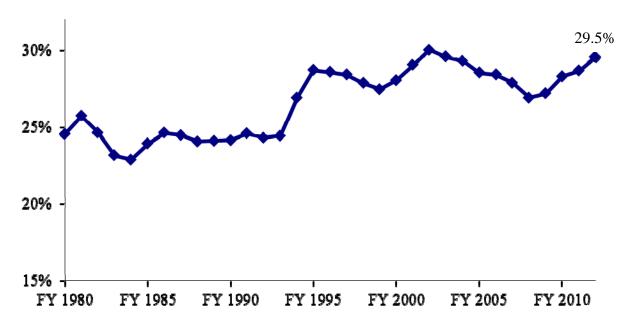


Exhibit 5 Michigan Use Tax as a Percent of Total State Taxes



III. ECONOMICS OF SALES TAXATION

The sales tax was enacted in 1933 to provide an additional revenue source for Michigan. As shown in Exhibit 3, the sales tax has been an important source of state revenue for funding schools and local governments. This section of the report briefly examines some of the issues in levying a sales tax.

Consumer Behavior

The imposition of a sales tax may change or affect the behavior of consumers and firms in three ways. First, if a sales tax does not apply to all goods equally, it may affect the types of goods consumers purchase. Second, it may influence a consumer's decision on whether or not to purchase a good at all, because the imposition of a sales tax often results in a higher final price. Finally, the sales tax will also cause a divergence between the price paid by consumers and the price received by the sellers of the product.

Not all goods sold in the State of Michigan are subject to sales tax. This may influence a consumer's decision on which goods to purchase. For example, suppose a consumer is faced with a choice of purchasing a \$5.00 magazine, which is not subject to sales tax, or a \$5.00 paperback novel, which is subject to the sales tax. The consumer's final cost of the magazine is \$5.00. The consumer's final cost of the novel is \$5.30: \$5.00 for the novel plus the \$0.30 sales tax. The price differential may influence the consumer to buy the magazine instead of the novel.

A retail sales tax also affects consumer decisions by reducing the amount each consumer may spend. Assuming that final retail prices increase to reflect the new sales tax, the imposition of a sales tax will make each consumer relatively poorer. The consumer can no longer buy as many goods after the tax is imposed as before. The consumer may be willing to buy a new car for \$20,000 before the tax is imposed, but may not be willing to pay \$21,200, the final cost of the car after the sales tax is imposed, given the consumer's other spending choices. In this case, the imposition of the sales tax may prevent a consumer from making a purchase he/she would have made if there were no sales tax.

A sales tax also creates a difference between the price offered to the buyer and the price received by the seller. In effect, a sales tax drives a wedge between the buyer's price and the seller's price. The difference between the price paid by the buyer and the price received by the seller will result in a reduction in economic activity, as some mutually beneficial trades no longer occur due to the sales tax. Consider the car example above. Without the sales tax, both the buyer and the seller were willing to participate in the transaction for \$20,000. With the imposition of a 6-percent sales tax, the transaction may not take place. The seller, formerly willing to accept \$20,000 for the car, now requires a larger payment (\$21,200). The buyer may now be unwilling to pay the higher price since the sales tax has resulted in higher prices for many goods he/she wants to buy.

Equity

Another important issue in taxation is the equity or fairness of the tax. One problem with analyzing this issue is that fairness cannot be objectively defined, as it involves moral judgments and, therefore, is open to dispute. The discussion here will focus on two basic types of equity of concern to economists: vertical and horizontal equity.

Horizontal equity requires individuals in the same situation to pay the same amount of tax. The measurement of an individual's situation is generally based on family size and either income, consumption level, or wealth. Imposing a sales tax that does not encompass all sales at the retail level may result in horizontal inequity. For example, the Michigan sales tax exempts the purchase of food to be consumed at home, while the purchase of meals at a restaurant is taxable. If Justin and Jeremy are both single and have similar incomes, we would ideally like them to pay approximately the same amount of tax in order to achieve horizontal equity. If Jeremy purchases all of his meals in restaurants, he will have to pay tax on all of his meals. Conversely, if Justin prefers to cook at home, there will not be any sales tax on these meals. This will lead to horizontal inequity because Jeremy will pay more tax than Justin, even though both are in similar situations with regard to income and marital status.

The principle of vertical equity means that tax burdens should be distributed fairly across individuals with different abilities to pay. While "fairness" and "ability to pay" are concepts that require value judgments about which reasonable individuals can disagree, vertical equity is often interpreted to mean the percentage of income paid in taxes rises with income. As might be expected, the saving rate increases with income. Consumers with lower incomes have lower rates of saving, and thus spend a higher share of their incomes on items subject to the sales tax. Since consumers with higher incomes save more, the amount of sales tax they pay is a smaller percentage of their incomes. This is the main reason the sales tax is believed to have less vertical equity than other taxes. Most states, including Michigan, exempt food and prescription drugs from the sales tax in an attempt to make the sales tax more equitable. These exemptions increase vertical equity because these items make up a larger portion of spending by low-income consumers.

Sales Tax Incidence

Incidence refers to who pays the sales tax. It is important to distinguish between statutory incidence and economic incidence. Statutory incidence refers to the individual or groups of individuals who are supposed to remit the tax under the law, while economic incidence refers to those who actually end up bearing the burden of the tax.

Under the Michigan sales tax, the statutory incidence of the sales tax is on retailers for the privilege of doing business in Michigan. Every Michigan retailer must file a sales tax return and remit the sales tax. However, retailers may shift the sales tax burden onto consumers. In most cases, it is believed that retailers simply add the tax to any consumer purchase of taxable items.

While the question of statutory incidence is fairly straightforward, the question of economic incidence is less clear. When a sales tax is imposed, firms can either increase their prices or accept less in payment for the goods they sell net of the new tax.² If firms choose to raise their prices, consumers (whose incomes do not rise along with the sales tax) are no longer able to buy as many goods and total consumer purchases decline. If firms opt to not raise their prices, then the amount the firms receive for the goods they sell after they pay the tax declines. With lower sales revenue after paying the tax, there is now less money to pay workers and less profit for the owners. This translates into lower incomes for consumers, since labor income (wages) and capital income (dividends from profits, interest, rent, etc.) are the main sources of income for consumers. If consumers have lower incomes, they have less to spend. So the economic incidence of a higher sales tax generally falls on consumers who are able to purchase fewer goods.

To demonstrate that the assumption above (where the sales tax does not result in higher prices) is not critical to the eventual conclusion, consider what happens when firms raise their prices to recoup the sales tax. Workers and business owners have the same incomes, but now prices are higher. However, the higher prices are entirely due to higher taxes, so there is no additional amount to pay workers or increase profits. The income earned from labor and capital now buys fewer goods and services at the higher prices. As a result, spending falls and consumers, who finance their spending through labor and capital income, are able to purchase fewer goods after a sales tax is imposed.

A few notes are necessary regarding the above analysis. First, the analysis assumes that all goods are taxed at a uniform rate. The analysis becomes much more complex when exempt sectors are included, or when multiple tax rates are included. An extreme example of multiple tax rates is the variation between Washington (6.5 percent) and Oregon (zero). Second, the analysis does not attempt to separate the effects on different groups of consumers. The extent to which wage earners or capital owners face larger declines in their purchasing power will determine the segment of the population that bears the larger burden of the tax. The division of the tax burden between labor and capital income will determine exactly who (which particular groups of consumers) bears more of the burden of the sales tax.

Finally, the analysis above says nothing about how the government uses the additional tax revenue raised by the higher sales tax. To the extent the government uses the tax to make investments that improve future productivity the higher tax may provide long-term economic benefits. Examples of these types of expenditures include education or transportation infrastructure, such as roads, bridges, and airports.

It is possible to measure the amount of sales tax paid by different income groups. If the proportion of income paid in sales tax rises with income, the tax is progressive. If the proportion of income paid in sales tax falls as income rises, the tax is regressive. As discussed above, the principle of vertical equity would require that a tax not be regressive. Historically, sales taxes have been considered regressive for two reasons. First, on an annual basis, higher-income

² In competitive markets prices should rise by no more, and generally somewhat less, than the amount of the new tax. However, research by Besley and Rosen (1999) indicates that some prices actually increase by more than the amount of the tax, a sign that some retail markets do not completely fit the economic model of perfect competition.

individuals save more as a percentage of income. Second, lower-income individuals tend to spend a larger portion of their annual income on taxable items.

There is considerable debate among economists regarding the degree of vertical inequity that exists with the sales tax. Many studies analyzing the regressivity of the sales tax look only at annual data. Since annual data treat temporary fluctuations in income as permanent, a better measure of regressivity would look at permanent or lifetime income. Metcalf (1994) compared how the estimates of the incidence of sales taxes vary, based on whether an annual or lifetime measure of income is used. Metcalf computes the average sales tax burden for consumers ranked by income group, from lowest income to highest, for two years (1984 and 1989). Using annual income, the average sales tax burden was 2.7 times higher for the lowest income group in 1984, and 1.8 times higher in 1989. This would support the view that the sales tax is regressive. However, using annual consumption to proxy for lifetime income resulted in much lower ratios. For both 1984 and 1989, the average sales tax burden of the lowest income group was 0.6 times as high as for the highest income group using this measure of lifetime income. So when a longer-term view of income is considered, the sales tax is somewhat progressive.

The final issue under the heading of incidence is the exporting of the tax burden. Tax exporting occurs when the burden of a tax is shifted to another party outside the jurisdiction receiving the tax revenue. Michigan is able to export the sales tax when out-of-state visitors purchase taxable items in Michigan. States with large tourism industries, such as Florida, Hawaii, and Nevada, are estimated to export as much as 25 percent of the sales tax burden to out-of-state residents. Estimates indicate that approximately 3 percent to 7 percent of the sales tax burden for Michigan is exported.⁴

³For a fuller discussion, see Slemrod and Bakija (2000), pp. 175-177, or Browning and Browning (1994), pp. 420-422.

⁴See Blume (1982).

IV. SALES TAX BASE

Michigan's sales and use taxes are designed to tax retail sales within the state as well as the outof-state purchase of taxable products that are used within the state. The Michigan sales tax is referred to as a consumption or general sales tax, but in reality, it is neither.

A pure consumption tax would tax all uses of income with exclusions for savings and investments. The sales tax base would consist of all purchases of goods and services; it would also tax imputed consumption, such as consumption of owner-occupied housing. The Michigan sales tax base, along with the base of most other states, is much narrower in scope due to the numerous exemptions for items such as food and prescription drugs. However, the Michigan sales tax also taxes some items that would be excluded from a pure consumption tax base, such as business inputs that are not used directly in industrial processing.

Tax Expenditures

Tax exemptions, exclusions, deductions, credits, or preferential tax rates are called tax expenditures. Tax expenditures reduce revenue by providing preferential treatment for certain commodities, individuals, or industries. Tax expenditures have two main purposes: (1) to reduce the tax burden for certain individuals or firms by altering the incidence of a tax; and (2) to give an incentive for individuals or firms to change their behavior. An example of the first type of tax expenditure is the prescription-drug exemption, which was designed to reduce the incidence of the sales tax on low-income senior citizens. An example of the second type is the Enterprise Zone exemption, which encouraged economic development in poor areas by lowering the tax burden on investments in these areas. Exhibit 6 provides the revenue impact for sales and use tax expenditures for FY 2012.

Services are the largest single exclusion from the Michigan sales tax base. When the Michigan sales tax was enacted, the service sector of the economy was small relative to the goods sector of the economy. As the service sector has grown in economic importance, the cost of excluding services has increased relative to the existing base of the sales tax. The estimated loss of Michigan sales tax revenue due to the exemption of services was \$10.4 billion in FY 2012. Health care and social assistance services comprised the largest sector of service tax expenditures at \$3,334 million, or 32 percent. Professional, scientific, and technical services followed next at \$2,081 million, or 20 percent of total service tax expenditures. These estimates include all services consumed by businesses and individuals.

Exhibit 7 shows the general tax treatment of services by state. Attempts by states to extend sales taxes to services have been unsuccessful generally. Ohio is a notable exception, having enacted legislation in 2003 that expanded the sales tax base to include a number of services including storage facilities, satellite broadcasting, and certain personal care services. Public Act 93 of 2007 expanded the use tax to several services consumed in Michigan, effective December 1, 2007. The list of newly taxed services included several personal and business services, and the expanded tax base was sharply criticized. The expanded use tax was repealed as it was scheduled to take effect and the projected revenue was replaced by a business tax surcharge.

Exhibit 6 Michigan Sales and Use Tax Expenditures (Millions)

Tax Expenditure	FY 2012 Revenue <u>Impact</u>
Air and Water Pollution	\$57.0
Aircraft Parts	6.6
Bad Debts	60.9
Cargo Aircraft	23.6
Churches	6.8
Collection Fees	42.6
Commercial Domestic Aircraft	4.0
Communication and Telephone Exemption	37.0
Donated Vehicles	0.1
Driver Training	0.4
Employee Meals	17.6
Food	1,220.2
Food for Students	20.2
Government or Red Cross	182.9
Gratuities and Tips	61.6
Horticultural and Agricultural Products	260.1
Imported Property	1.6
Industrial Processing	920.0
Inmate Purchases	0.5
Interstate Telecommunications	10.0
Interstate Trucks and Trailers	25.0
Investment Coins	5.2
Military Post-Exchange Sales	0.7
Newspapers, Periodicals, and Films	95.1
Nonprofit Hospital or Housing Construction	1.3
Nonprofit Organizations	238.0
Ophthalmic and Orthopedic Products	54.0
Prescription Drugs	536.3
Radio and Television	4.4
Rail Rolling Stock	1.7
Residential Utilities	156.5
Returned Vehicles	1.1
Sale of Water	59.6
Services	10,357.2
Telephone Services	13.3
Vehicle and Aircraft Transfer	35.4
Vending Machines and Mobile Facilities	21.5
Total	\$14,539.9

Exhibit 7 **State Sales Taxation of Services**

State Sales Taxation of Services					
	General <u>Treatment</u>	Janitorial <u>Services</u>	Transportation <u>Services</u>	Repair <u>Services</u>	Customized Computer <u>Software</u>
Alabama	NT	E	E	Е	E
Alaska			No Sales Tax		
Arizona	SS	E	T	Е	E
Arkansas	SS	T	E	T	T
California	NT	E	E	E	E
Colorado	SS	E	E	E	E
Connecticut	SS	T	Е	T	T
Delaware			No Sales Tax		
District of Columbia	SS	T	Е	T	T
Florida	SS	T	E	E	E
Georgia	SS	Е	T	Е	E
Hawaii	GT	T	T	T	T
Idaho	SS	Е	T	Е	Е
Illinois	NT	Е	Е	Е	Е
Indiana	NT	Е	Е	Е	Е
Iowa	SS	T	E	$\overline{\mathrm{T}}$	Ē
Kansas	SS	Ē	Ē	Ť	Ē
Kentucky	SS	Ë	Ë	Ē	Ē
Louisiana	SS	Ť	Ë	Ť	Ē
Maine	SS	Ē	Ë	Ē	Ē
Maryland	SS	Ť	Ë	Ē	Ē
Massachusetts	SS	Ė	Ë	Ë	Ë
Michigan	SS	E	E	E	E
Minnesota	SS	$\frac{-\bar{T}}{T}$	E	E	E
Mississippi	SS	Ē	E	$\overline{\mathrm{T}}$	T
Missouri	SS	Е	T	Е	Е
Montana			No Sales Tax		
Nebraska	SS	T	E	T	T
Nevada	SS	Е	Е	Е	Е
New Hampshire			No Sales Tax		
New Jersey	SS	T	E	T	Е
New Mexico	GT	Ť	Ť	Ť	$\overline{\overline{\mathrm{T}}}$
New York	SS	Ť	Ť	Ť	Ē
North Carolina	SS	Ē	Ē	Ē	Ē
North Dakota	SS	Ē	Ë	Ē	Ē
Ohio	SS	Ť	Ť	Ť	Ť
Oklahoma	SS	Ė	Ť	Ē	Ē
Oregon	bb.	L	No Sales Tax	L	L
Pennsylvania	SS	T	E	T	Е
Rhode Island	SS	Ė	Ë	Ē	Ē
South Carolina	SS	Ē	Ë	Ē	Ť
South Caronna South Dakota	GT	Ť	T	Ť	Ť
Tennessee	SS	Ë	Ë	Ť	Ť
Texas	SS	T	E	Ť	T
Utah	SS	E	T	T	Ë
		E E	E	E	E E
Vermont	SS				
Virginia	SS	E	E	E	E
Washington	SS	E	E	T	E
West Virginia	GT	T	T	T	T
Wisconsin	SS	E	E	T	E
Wyoming	SS	Ε	T	T	E

Key:

Sources: State Tax Guide, Commerce Clearing House, Inc. and state Web sites.

SS = "specified services taxable"- law provides only specified services are taxable
GT = "generally taxable" - tax imposed generally on the provision of services although
certain services may be exempt.
NT = "generally not taxable" - services rarely taxed
T = "taxable" generally and E = "exempt" generally.

Food for home consumption is another major item excluded from most states' sales tax bases. The primary reason for excluding food from taxation is to reduce the short-term regressivity of the sales tax. According to the Consumer Expenditure Survey by the Bureau of Labor Statistics for the 3rd quarter of 2011 through the 2nd quarter of 2012, purchases of food for home consumption account for 11.1 percent of expenditures for consumers in the lowest 20 percent of income. In contrast, for consumers in the highest 20 percent of income, purchases of food for home consumption account for only 6.1 percent of expenditures. If food consumed at home were included in the tax base, low-income consumers would pay an even larger percentage of their incomes in sales tax relative to consumers with higher incomes. The tax expenditure loss in FY 2012 for exempting food consumed at home from the Michigan sales tax was \$1.2 billion. Exhibit 8 provides information on the sales tax treatment of food and meals by state.

Prescription drugs are exempt from the sales tax base. As in the case of the food exemption, exempting prescription drugs is intended to reduce the short-term regressivity of the Michigan sales tax. The cost of this exemption is estimated to be about \$536 million in FY 2012.

The exemptions for food and prescription drugs highlight several difficulties with exempting certain products from the sales tax. The exemptions may be expensive. The exemptions for food and prescription drugs together total approximately 1/4 of all sales tax revenue. Also, the exemptions are not limited to the targeted group, since all consumers receive the exemption. In fact, consumers with higher incomes receive the largest tax exemptions. The amount consumers in the highest 20 percent of the income distribution spend on food (\$5,926 on average) is more than double the amount spent by consumers in the lowest 20 percent of the income distribution (\$2,441). Using the difference in annual expenditure between the two groups implies that consumers with the highest income receive an additional \$209 per year in tax savings from the food exemption. Replacing the sales tax exemption on food with a transfer payment, perhaps in the form of a refundable income tax credit, to all families would also offset the burden of the sales tax on low-income families, but would allow the tax relief to be targeted more precisely to families in need.

Inputs used in agricultural and industrial production are exempt from the Michigan sales tax. Commonly known as the industrial processing exemption, the main purpose of this exemption is to avoid the double taxation of goods. By exempting inputs, only the final product is taxed and not each sale of an intermediate good used in the production process. In order for a good to qualify for this exemption, a product must be directly used in the production process.

The Michigan sales tax base is further reduced by the exemptions for certain purchases and sales by nonprofit organizations, and federal, state, and local government purchases. The exemption for purchases made by the federal government is required by the U.S. Constitution. Imposing a sales tax on purchases made by the State of Michigan would not raise any revenue, since the state would both pay and receive the tax.

In total, exemptions in Michigan's sales tax base reduced state revenue by \$14.5 billion in FY 2012. Eliminating all of these exemptions (assuming such a reform were possible or desirable) would increase Michigan's sales tax revenue by approximately 170 percent, allowing the tax rate to drop to around 2.25 percent while maintaining current revenue.

Exhibit 8 **State Sales Taxation of Food and Meals**

	Grocery <u>Food</u>	Meals	Sales by <u>Caterers</u>
Alabama	T	T	T
Alaska	1	No Sales Tax	1
Arizona	Е	T	T
Arkansas*	Ť	Ť	Ť
California	Ė	Ť	Ť
Colorado	Ë	Ť	Ť
Connecticut	Ë	Ť	Ť
Delaware	L	No Sales Tax	1
District of Columbia	Е	T	T
Florida	Ë	Ť	Ť
Georgia	E	Ť	Ť
Hawaii	Ť	Ť	Ť
Idaho	Ť	T	Ť
Illinois*	T	T	Ť
Indiana	E	Ť	Ť
_	E	T	T
Iowa Kansas	T T	T	T
	E E		
Kentucky	_	T	T
Louisiana	E	T	T
Maine	E	T	T
Maryland	E	T	T
Massachusetts	Е	T 	T
Minnesota	E E	<u>1</u> T	T
Mississippi	T	T	T
Missouri*	T	T	T
Montana	1	No Sales Tax	1
	Е	T T	Т
Nebraska	E	T	T
Nevada	E	_	1
New Hampshire	Е	No Sales Tax	T
New Jersey New Mexico	E E	T T	T
	E E	T	T
New York	E E	T	T
North Carolina	E E	T	T
North Dakota	E	T	T
Ohio	T	T T	T
Oklahoma	1	_	1
Oregon	E	No Sales Tax	T
Pennsylvania	E	T	T
Rhode Island	E	T	T
South Carolina	E	T	T
South Dakota	T	T	T
Tennessee*	T	T	T
Texas	E	T	T
Utah*	T	T	T
Vermont**	E T	E T	E T
Virginia*	E E	T T	T
Washington			
West Virginia*	T	T	T
Wyoming	E	T	T
Wyoming	Е	T	T

$$\label{eq:Key:T} \begin{split} \text{Key:} &\quad T = \text{"taxable" - designation is for a general nature.} \\ &\quad E = \text{"exempt" - designation is for a general nature.} \\ \text{*Groceries are taxed at a reduced rate} \end{split}$$

**Subject to meals and rooms tax Source: *State Tax Guide*, Commerce Clearing House, Inc.

V. SALES AND USE TAX REVENUE

Sales Tax Revenue

Michigan's sales tax revenue in FY 2012 was \$6,955.2 million, up \$244.3 million (3.6 percent) from FY 2011. The 1994 increase in the sales tax rate from 4 percent to 6 percent resulted in the sales tax generating an increased share of total state revenue (see Exhibit 3). The shrinking sales tax base, as well as other emerging issues (for example, the taxation of Internet purchases), will affect Michigan's ability to rely on sales tax revenue to finance government expenditures.

During the early 1990s, sales tax revenue totaled approximately 24 percent of total state tax revenue. In FY 1995, sales tax revenue was 28.7 percent of total state tax revenue, the highest amount since the 1970s, before the food and prescription drug exemptions were enacted. Sales tax revenue represented 29.5 percent of total state taxes in FY 2012 (see Exhibits 3 and 4).

Nominal sales tax revenue in FY 2012 was 42.4 percent higher than in FY 1995, the first full fiscal year with a sales tax rate of 6 percent. However, sales tax revenue adjusted for inflation has shrunk over time. Real sales tax revenue was lower in 2009 through 2012 than at any time since the tax rate was raised to 6 percent in 1994. Real sales tax revenue for FY 2012 was more than \$1.0 billion below real tax revenue in FY 2000. The economic decline Michigan has experienced over the past decade, shifting consumer spending, and revenue lost to remote sales are the primary reasons real sales tax revenue has fallen.

One way to measure the effective burden of the sales tax is to compare tax revenue with personal income. Sales tax revenue had generally accounted for 2 percent or more of Michigan personal income since tax reform was enacted in 1994 up until 2007. The economic recession that followed further depressed economic activity and, as a consequence, sales tax collections. In FY 2012, sales tax revenue as a percent of personal income was 1.90 percent; the same percentage as in FY 2011 and up a small amount from FY 2009 and FY 2010 (see Exhibit 11).

The automotive sector provides the largest share of sales tax revenue, with total sales tax revenue of \$2,157.6 million in FY 2012 (see Exhibit 12). Collections in the automotive sector for 2012 increased by \$180 million. Taxable sales in the automotive sector accounted for 31.2 percent of total sales tax revenue in 2012. The food sector was responsible for \$1,007.9 million of sales tax revenue or 14.6 percent in FY 2012, mostly from sales in restaurants and taxable items sold at grocery stores. General merchandise stores accounted for \$646.5 million, or 9.3 percent of total sales tax revenue.

Over the past 10 years, the distribution of sales tax revenue by retail sector has remained fairly stable (see Exhibit 13). Since 2002, the automotive sector has captured an increased share of sales tax revenue. The increase in the share of sales tax revenue coming from building, lumber, and hardware observed during the 1990s disappeared between 2006 and 2009, due to the contraction in residential construction. All sectors except general merchandise saw an increase in collections for FY 2012.

Exhibit 9 Michigan Sales Tax Revenue FY 1980 to FY 2012

	Fiscal Year Personal	Sales Tax	Sales Tax Revenue	Fiscal Year Detroit Consumer	Real Sales Tax Revenue
Fiscal	Income	Revenue	as a Percent	Price Index	in 2012 \$
<u>Year</u>	(millions)	(millions)	of Income	(1982-84=100)	(millions)
1980	\$93,122	\$1,504.0	1.62%	82.3	3,929.9
1981	101,008	1,595.0	1.58%	92.1	3,724.2
1982	104,320	1,570.6	1.51%	95.8	3,525.8
1983	108,939	1,699.0	1.56%	99.4	3,675.8
1984	120,052	1,925.0	1.60%	102.4	4,042.7
1985	130,580	2,142.6	1.64%	105.8	4,355.2
1986	140,210	2,283.1	1.63%	108.1	4,542.0
1987	145,279	2,348.4	1.62%	110.7	4,562.2
1988	153,112	2,475.0	1.62%	114.8	4,636.3
1989	164,688	2,615.2	1.59%	120.7	4,659.5
1990	172,839	2,671.3	1.55%	126.8	4,530.5
1991	177,981	2,671.9	1.50%	132.4	4,339.8
1992	187,694	2,738.1	1.46%	135.1	4,358.6
1993	198,362	2,905.7	1.46%	138.6	4,508.4
1994	212,778	3,775.3	1.77%	142.9	5,681.4
1995	225,215	4,884.2	2.17%	147.5	7,121.1
1996	233,651	5,171.6	2.21%	151.5	7,341.0
1997	246,004	5,389.8	2.19%	155.4	7,458.7
1998	260,440	5,617.3	2.16%	158.9	7,602.4
1999	272,711	5,901.7	2.16%	162.8	7,795.9
2000	290,085	6,277.5	2.16%	168.3	8,021.3
2001	298,194	6,352.3	2.13%	173.8	7,860.0
2002	301,496	6,439.9	2.14%	177.5	7,802.3
2003	310,689	6,422.6	2.07%	182.0	7,589.0
2004	318,669	6,473.5	2.03%	184.4	7,549.6
2005	324,576	6,599.1	2.03%	189.0	7,508.8
2006	332,698	6,638.1	2.00%	195.9	7,287.1
2007	342,003	6,552.2	1.92%	199.0	7,080.6
2008	350,844	6,773.3	1.93%	204.6	7,119.4
2009	333,463	6,089.1	1.83%	202.8	6,457.7
2010	335,078	6,176.8	1.84%	204.7	6,489.9
2011	353,814	6,710.9	1.90%	210.0	6,872.9
2012	367,012	6,955.2	1.90%	215.1	6,955.2

Bureau of Labor Statistics, U.S. Department of Labor.

Bureau of Economic Analysis, U.S. Department of Commerce.

Exhibit 10 Michigan Sales Tax Nominal and Real Revenue

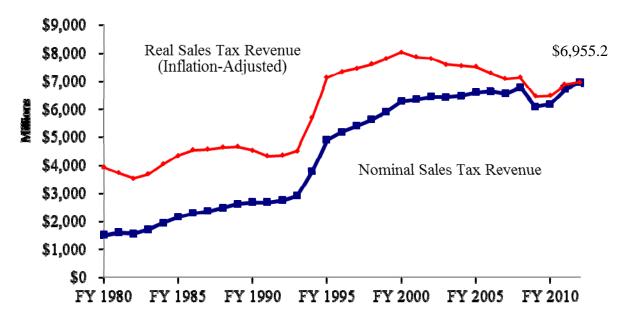


Exhibit 11 Sales Tax Revenue as a Percent of Personal Income

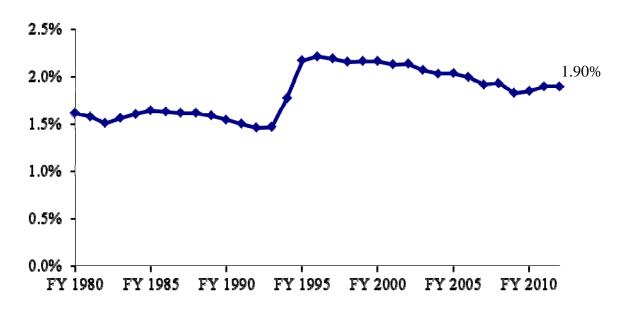


Exhibit 12 Michigan Sales Tax Revenue by Retail Sector FY 2002 to FY 2012

Fiscal Year	Auto	Percent Change	Food	Percent <u>Change</u>	General <u>Merchandise</u>	Percent <u>Change</u>
· <u></u>	·		<u></u>			
2002	\$1,763.9	6.3%	\$907.8	2.5%	\$641.7	5.0%
2003	1,778.5	0.8%	903.5	-0.5%	622.7	-3.0%
2004	1,693.6	-4.8%	936.2	3.6%	638.4	2.5%
2005	1,741.0	2.8%	916.7	-2.1%	696.3	9.1%
2006	1,723.9	-1.0%	919.5	0.3%	686.5	-1.4%
2007	1,735.5	0.7%	941.4	2.4%	716.2	4.3%
2008	1,924.9	10.9%	970.5	3.1%	705.0	-1.6%
2009	1,822.0	-5.3%	894.7	-7.8%	601.9	-14.6%
2010	1,811.2	-0.6%	927.7	3.7%	640.6	6.4%
2011	1,977.9	9.2%	961.4	3.6%	654.4	2.1%
2012	2,157.6	9.1%	1,007.9	4.8%	646.5	-1.2%
	Building					
Fiscal	Lumber &	Percent		Percent		Percent
<u>Year</u>	Hardware	Change	Furniture	Change	Apparel	Change
2002	\$534.5	4.8%	\$240.0	-1.5%	\$221.5	-1.3%
2003	532.7	-0.3%	235.6	-1.8%	222.6	0.5%
2004	591.5	11.0%	239.9	1.8%	231.7	4.1%
2005	610.7	3.2%	236.8	-1.3%	232.9	0.5%
2006	575.5	-5.8%	224.9	-5.0%	231.0	-0.8%
2007	511.0	-11.2%	221.9	-1.3%	240.7	4.2%
2008	488.8	-4.3%	208.7	-5.9%	235.8	-2.0%
2009	415.2	-15.1%	163.9	-21.5%	212.9	-9.7%
2010	382.2	-7.9%	181.5	10.7%	221.5	4.0%
2011	412.2	7.8%	189.6	4.5%	233.7	5.5%
2012	471.8	14.5%	200.1	5.5%	240.2	2.8%
Fiscal	Miscellaneous	Percent		Percent		Percent
<u>Year</u>	<u>Retail</u>	Change	Non-Retail	Change	<u>Total</u>	Change
2002	\$645.4	-5.5%	\$1,469.5	-3.4%	\$6,424.3	1.4%
2003	649.5	0.6%	1,457.9	-0.8%	6,402.9	-0.3%
2004	656.8	1.1%	1,461.9	0.3%	6,450.0	0.7%
2005	648.7	-1.2%	1,513.2	3.5%	6,596.3	2.3%
2006	641.6	-1.1%	1,513.6	0.0%	6,516.6	-1.2%
2007	641.1	-0.1%	1,518.2	0.3%	6,526.1	0.1%
2008	660.7	3.1%	1,537.7	1.3%	6,732.1	3.2%
2009	610.2	-7.6%	1,456.2	-5.3%	6,177.0	-8.2%
2010	647.1	6.0%	1,337.5	-8.2%	6,149.2	-0.5%
2011	699.8	8.2%	1,515.9	13.3%	6,645.0	8.1%
2012	714.2	2.1%	1,476.9	-2.6%	6,915.2	4.1%

Note: Figures do not include use tax.

Total sales tax differs slightly due to differences between accrual and cash accounting methods.

Exhibit 13 Share of Sales Tax Revenue by Retail Sector FY 2002 to FY 2012

				Building
Fiscal			General	Lumber &
Year	Auto	Food	Merchandise	Hardware
2002	27.5%	14.1%	10.0%	8.3%
2003	27.8%	14.1%	9.7%	8.3%
2004	26.3%	14.5%	9.9%	9.2%
2005	26.4%	13.9%	10.6%	9.3%
2006	26.5%	14.1%	10.5%	8.8%
2007	26.6%	14.4%	11.0%	7.8%
2008	28.6%	14.4%	10.5%	7.3%
2009	29.5%	14.5%	9.7%	6.7%
2010	29.5%	15.1%	10.4%	6.2%
2011	29.8%	14.5%	9.8%	6.2%
2012	31.2%	14.6%	9.3%	6.8%

Fiscal <u>Year</u>	<u>Furniture</u>	<u>Apparel</u>	Miscellaneous <u>Retail</u>	Non-Retail
2002	3.7%	3.4%	10.0%	22.9%
2003	3.7%	3.5%	10.1%	22.8%
2004	3.7%	3.6%	10.2%	22.7%
2005	3.6%	3.5%	9.8%	22.9%
2006	3.5%	3.5%	9.8%	23.2%
2007	3.4%	3.7%	9.8%	23.3%
2008	3.1%	3.5%	9.8%	22.8%
2009	2.7%	3.4%	9.9%	23.6%
2010	3.0%	3.6%	10.5%	21.8%
2011	2.9%	3.5%	10.5%	22.8%
2012	2.9%	3.5%	10.3%	21.4%

Note: Figures do not include use tax. May not total 100% due to rounding.

Use Tax Revenue

Michigan use tax revenue totaled \$1,428.3 million in FY 2012, down \$120.6 million (7.8 percent) from FY 2011. In FY 2012, use tax revenue accounted for 6.1 percent of total state tax revenue, 5.3 percent excluding the \$191 million in revenue from the tax on Medicaid HMOs. Note that the use tax on Medicaid HMOs was repealed effective March 31, 2012.

When nominal use tax revenue is adjusted for inflation, the pattern looks very similar to the pattern for sales tax revenue. Following the rate increase in 1994, inflation-adjusted revenue grew through FY 2000 and then began to decline. The expansion in the use tax base to Medicaid HMOs raised revenue for FY 2009 through FY 2011 (see Exhibits 14 and 15).

The effective burden of the use tax can be measured by comparing Michigan use tax revenue to Michigan personal income. From FY 1980 until the tax rate increased to 6 percent, use tax revenue as a percent of personal income ranged from 0.23 percent to 0.29 percent. Without the expanded tax on Medicaid HMOs, use tax revenue as a percent of personal income was 0.34 percent in FY 2012, the same percentage as in FY 2011 and the lowest level since FY 1993. Exhibit 16 shows use tax revenue as a percent of personal income both with and without the tax on Medicaid HMOs.

Different sectors of the economy remit use tax compared to the sales tax. Excluding the use tax from Medicaid HMOs, the telecommunications sector provided the largest share of use tax revenue with tax payments of \$204.5 million in FY 2012 (see Exhibit 17). This accounts for 18.1 percent of total use tax revenue, with most of these payments collected from telephone bills. Collections from the telecommunications sector have been falling as changes in the way people consume telecommunications services (for example, cellular telephones with one price for a block of minutes and voice communications using the Internet) reduce the volume of taxable services. The automotive sector was responsible for \$197.8 million of use tax revenue, or 17.5 percent, in FY 2012, generally from leasing and private sales of motor vehicles. Use tax collections from hotels and motels are an indicator of tourism activity in Michigan, which has been the subject of active debate in the State Legislature, specifically over the Pure Michigan advertising campaign. Collections from hotels and motels were \$74.5 million in FY 2012, up 9.6 percent from FY 2011 and 19.4 percent from FY 2009.

Between 2002 and 2012, the distribution of use tax revenue shifted away from the telecommunications and transportation manufacturing sectors and toward other business sectors (see Exhibit 18). The economic recovery has led to a recovery in use tax collections from automobile sales and hotel and motel lodging. Many businesses also owe use tax on purchases made from outside Michigan, and this has been a growing part of use tax collections.

While the use tax is generally paid by businesses, individuals may incur a use tax liability on mail order or Internet purchases since the retailer may not collect Michigan sales tax. Beginning in tax year 1999, a line was added to the Michigan income tax form to aid taxpayers in meeting their use tax liability. The taxation of remote sales is discussed in greater detail in Chapter VI.

Exhibit 14 Michigan Use Tax Revenue FY 1980 to FY 2012

				Fiscal Year	Real
	Fiscal Year		Use Tax	Detroit	Use Tax
	Personal	Use Tax	Revenue	Consumer	Revenue
Fiscal	Income	Revenue	as a Percent	Price Index	in 2012 \$
Year	(millions)	(millions)	of Income	(1982-84=100)	(millions)
1980	\$93,122	\$232.9	0.25%	82.3	608.6
1981	101,008	232.3	0.23%	92.1	542.5
1982	104,320	247.4	0.24%	95.8	555.3
1983	108,939	279.5	0.26%	99.4	604.7
1984	120,052	317.3	0.26%	102.4	666.4
1985	130,580	341.4	0.26%	105.8	693.9
1986	140,210	390.8	0.28%	108.1	777.5
1987	145,279	397.8	0.27%	110.7	772.8
1988	153,112	419.0	0.27%	114.8	784.8
1989	164,688	475.9	0.29%	120.7	847.8
1990	172,839	473.9	0.27%	126.8	803.8
1991	177,981	474.3	0.27%	132.4	770.4
1992	187,694	480.0	0.26%	135.1	764.0
1993	198,362	529.5	0.27%	138.6	821.6
1994	212,778	725.1	0.34%	142.9	1,091.2
1995	225,215	942.9	0.42%	147.5	1,374.7
1996	233,651	1,034.9	0.44%	151.5	1,469.0
1997	246,004	1,092.2	0.44%	155.4	1,511.5
1998	260,440	1,159.3	0.45%	158.9	1,568.9
1999	272,711	1,283.0	0.47%	162.8	1,694.8
2000	290,085	1,355.4	0.47%	168.3	1,731.9
2001	298,194	1,333.6	0.45%	173.8	1,650.1
2002	301,496	1,306.4	0.43%	177.5	1,582.7
2003	310,689	1,229.8	0.40%	182.0	1,453.2
2004	318,669	1,316.5	0.41%	184.4	1,535.3
2005	324,576	1,402.4	0.43%	189.0	1,595.7
2006	332,698	1,413.8	0.42%	195.9	1,552.0
2007	342,003	1,380.4	0.40%	199.0	1,491.7
2008	350,844	1,377.1	0.39%	204.6	1,447.5
2009	333,463	1,283.7	0.38%	202.8	1,361.4
2010	335,078	1,573.7	0.47%	204.7	1,653.4
2011	353,814	1,548.9	0.44%	210.0	1,586.3
2012	367,012	1,428.3	0.39%	215.1	1,428.3

Bureau of Labor Statistics, U.S. Department of Labor.

Bureau of Economic Analysis, U.S. Department of Commerce.

Exhibit 15 Michigan Use Tax Nominal and Real Revenue

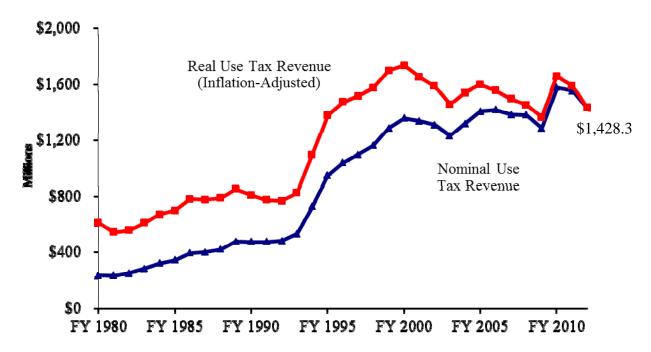


Exhibit 16 Use Tax Revenue as a Percent of Personal Income

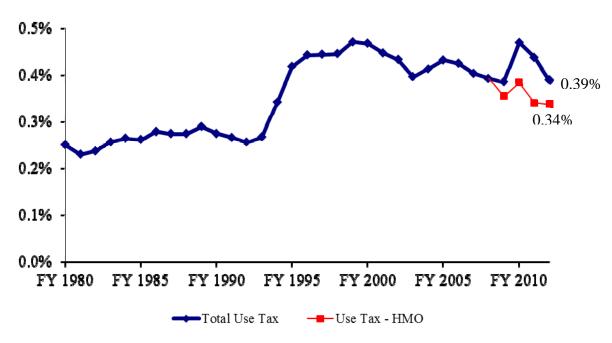


Exhibit 17 Michigan Use Tax Revenue by Various Sectors FY 2002 to FY 2012 (Millions)

Fiscal <u>Year</u>	Telephone & Communication	Percent <u>Change</u>	<u>Auto</u>	Percent Change	Business Services	Percent <u>Change</u>
2002	\$289.5	0.2%	\$236.4	20.5%	\$199.1	3.6%
2003	261.9	-9.5%	216.9	-8.3%	165.3	-17.0%
2004	299.5	14.4%	225.5	4.0%	152.9	-7.5%
2005	298.1	-0.5%	221.2	-1.9%	180.6	18.2%
2006	283.0	-5.1%	216.7	-2.0%	151.5	-16.1%
2007	276.8	-2.2%	207.2	-4.4%	153.6	1.4%
2008	254.1	-8.2%	203.8	-1.6%	160.1	4.2%
2009	245.2	-3.5%	141.7	-30.5%	162.2	1.3%
2010	250.5	2.1%	159.4	12.5%	132.0	-18.6%
2011	213.2	-14.9%	183.7	15.3%	150.1	13.7%
2012	204.5	-4.1%	197.8	7.7%	147.1	-2.0%
Fiscal <u>Year</u>	Hotels & <u>Motels</u>	Percent Change	Transportation Manufacturing	Percent Change	General <u>Merchandise</u>	Percent Change
2002	\$59.3	-7.3%	\$69.7	-0.1%	\$30.7	-4.3%
2003	58.4	-1.5%	66.4	-4.8%	28.0	-8.8%
2004	61.0	4.4%	71.2	7.2%	31.5	12.3%
2005	61.9	1.6%	52.4	-26.4%	46.2	46.7%
2006	66.8	7.8%	44.1	-15.8%	49.9	8.1%
2007	67.1	0.6%	32.2	-26.9%	40.5	-18.9%
2008	69.2	3.1%	8.2	-74.6%	40.3	-0.4%
2009	62.4	-9.8%	-36.1	N/A	37.2	-7.7%
2010	64.7	3.7%	24.4	N/A	42.9	15.1%
2011	68.0	5.1%	40.4	65.6%	46.5	8.4%
2012	74.5	9.5%	28.6	-29.2%	52.2	12.4%
Fiscal <u>Year</u>	<u>Machinery</u>	Percent Change	<u>Other</u>	Percent Change	<u>Total</u>	Percent Change
2002	\$24.1	-19.0%	\$410.7	-15.8%	\$1,319.6	-3.0%
2003	25.2	4.2%	431.4	5.0%	1,253.3	-5.0%
2004	22.5	-10.5%	450.9	4.5%	1,314.8	4.9%
2005	22.2	-1.4%	533.8	18.4%	1,416.4	7.7%
2006	25.7	15.5%	568.1	6.4%	1,405.7	-0.8%
2007	25.0	-2.5%	621.1	9.3%	1,423.6	1.3%
2008	28.5	13.9%	681.7	9.7%	1,445.9	1.6%
2009	22.8	-19.8%	538.9	-21.0%	1,174.3	-18.8%
2010	28.8	25.9%	573.4	6.4%	1,276.0	8.7%
2011	36.6	27.2%	447.2	-22.0%	1,185.5	-7.1%
2012	29.3	-19.8%	393.3	-12.1%	1,127.2	-4.9%

Note: Total use tax differs slightly due to differences between accrual and cash accounting methods. Excludes HMO use tax (FY 2009 - FY 2012).

Exhibit 18 Share of Use Tax Revenue by Various Sectors FY 2002 to FY 2012

Fiscal <u>Year</u>	Telephone & <u>Communication</u>	<u>Auto</u>	Business <u>Services</u>	Hotels & Motels
2002	21.9%	17.9%	15.1%	4.5%
2003	20.9%	17.3%	13.2%	4.7%
2004	22.8%	17.1%	11.6%	4.6%
2005	21.0%	15.6%	12.8%	4.4%
2006	20.1%	15.4%	10.8%	4.7%
2007	19.4%	14.6%	10.8%	4.7%
2008	17.6%	14.1%	11.1%	4.8%
2009	20.9%	12.1%	13.8%	5.3%
2010	19.6%	12.5%	10.3%	5.1%
2011	18.0%	15.5%	12.7%	5.7%
2012	18.1%	17.6%	13.0%	6.6%

Fiscal <u>Year</u>	Transportation Manufacturing	General <u>Merchandise</u>	Machinery	<u>Other</u>
2002	5.3%	2.3%	1.8%	31.1%
2003	5.3%	2.2%	2.0%	34.4%
2004	5.4%	2.4%	1.7%	34.3%
2005	3.7%	3.3%	1.6%	37.7%
2006	3.1%	3.6%	1.8%	40.4%
2007	2.3%	2.8%	1.8%	43.6%
2008	0.6%	2.8%	2.0%	47.1%
2009	N/A	3.2%	1.9%	45.9%
2010	1.9%	3.4%	2.3%	44.9%
2011	3.4%	3.9%	3.1%	37.7%
2012	2.5%	4.6%	2.6%	34.9%

VI. REMOTE SALES TAXATION

Currently, mail order and Internet (e-commerce) firms that do not have nexus within a state are not required to collect sales taxes on purchases from consumers within that state. Nexus is defined as a minimum physical presence or link to a state that would allow a business to be subject to a state's tax system, and be required to collect and remit taxes.

Some businesses voluntarily collect sales taxes on remote sales. Others will only collect if there is an act of Congress or a ruling by the U.S. Supreme Court requiring collection.

Increasingly, sales and use tax revenue is being eroded by remote sales (mail order and Internet or e-commerce). In part, many multi-state businesses seek to avoid collecting sales and use taxes because of the burden of complying with the thousands of different administrative requirements in the more than 7,500 state and local sales tax jurisdictions. However, businesses with nexus in a state, and thus collecting sales tax, are forced to compete with firms without nexus who do not collect the tax. With the continuing increase in e-commerce, the issue of remote sales is becoming a more serious fiscal matter for businesses and state and local governments. In response, state governments working with major retailers have entered into the Streamlined Sales and Use Tax Agreement to simplify state sales taxes and to encourage Congress to enact laws allowing the collection of sales taxes by firms making remote sales.

Current Law

The issue of taxation on mail order sales goes back decades. Mail order firms that did not have nexus within a state would not collect sales taxes on mail order purchases. States, on the other hand, felt that the contact mail order firms made through sending catalogs and delivering merchandise through the mail established nexus. An important court decision that helped define nexus for mail order firms was a ruling by the U.S. Supreme Court in 1967 (*Bellas Hess v Illinois*). This ruling established that taxing mail order firms whose only connection was shipping flyers and catalogs, and delivering merchandise through a common carrier or the U.S. Postal Service, would violate the Due Process Clause and the Commerce Clause. Physical presence, not just an economic presence, was necessary for nexus. The Due Process Clause was violated because the tax was not related to benefits received from the state. Taxation of mail order sales violated the Commerce Clause because of the undue burden on commerce that would result from collecting sales taxes on mail order purchases.

In a more recent court case (*North Dakota v Quill, 1992*), the Due Process Clause barrier for the taxation of mail order sales was removed. Quill Corporation also sent catalogs and shipped goods by common carrier to customers. North Dakota felt that this economic presence was enough to establish nexus because sales were over \$1 million. North Dakota also argued that since Quill offered a "money-back" guarantee, Quill had established a physical presence in the state. The U.S. Supreme Court ruled that economic presence did satisfy the Due Process Clause because sales were of a sufficient magnitude and the tax was related to benefits received by Quill. Businesses that do not exceed contact by common carrier with the taxing state lack the

substantial nexus required to compel the collection of use tax. However, once a business establishes a physical presence through a small sales force, plant or office in the taxing state, the substantial nexus requirement has been met. The Court noted that multiple state rates, unique exemptions and administrative requirements by thousands of sales tax jurisdictions in the U.S. unduly burdened interstate commerce. With the *Quill* ruling, Congress could pass legislation removing the Commerce Clause barrier and require the collection of sales/use taxes by all businesses engaging in remote sales.

The same nexus standards that apply to mail order firms also apply to e-commerce firms. To further restrict the taxation of Internet firms, Congress passed the Internet Tax Freedom Act (ITFA) in 1998. The ITFA barred any state and local taxes on Internet access and any discriminatory taxes on the Internet for a three-year period ending October 1, 2001. Taxes levied on Internet access before ITFA were still allowed. The ITFA did not affect the legal status of state and local sales and use taxes. Sales and use taxes were still allowed on products sold through the Internet. The distinction that Internet-based retail sales are subject to taxation while Internet access is not has caused much confusion. The ITFA was subsequently extended through November 1, 2014.

Rapid growth of e-commerce is a threat to the viability of the sales tax. As computer technology becomes more prevalent in everyday life, shopping through the Internet is growing rapidly. The erosion of the sales tax base threatens the ability of states to raise revenue with a sales/use tax. In an effort to reduce the compliance burden of the sales tax and remove the Commerce Clause barrier, the Streamlined Sales Tax Project was formed.

Streamlined Sales Tax Project

Created by state governments with the full participation of local governments and the business sector, the Streamlined Sales and Use Tax Agreement (SSUTA or Agreement) is designed to simplify and standardize sales and use tax administration and collection procedures nationwide. The concept is a win-win approach where traditional retailers, remote sellers, and state and local tax administrators all benefit. Business taxpayers' registration to collect and remit tax under the Agreement is voluntary.

Key provisions of the Agreement are state level administration of sales and use taxes, uniform definitions, rate simplification, uniform sourcing and audit procedures, simplified exemption administration, and a reduction in the financial burden on sellers registering under the Agreement. To facilitate the collection of sales taxes, technological models have been developed to aid all businesses, especially remote sellers. These models include certified service providers able to perform all sales tax functions for a seller, and software systems that will make remittance and audit procedures simpler. The cost of implementing these new technological models will be at least partially underwritten by the participating states through compensation programs based on a percentage of the tax collected.

On November 12, 2002 delegates from thirty states and the District of Columbia approved the Agreement. The approval of the Agreement did not modify the laws of any state. The

determination as to whether and how to implement the terms of the Agreement rests with each state. The Agreement took effect on October 1, 2005, when at least 10 states comprising at least 20 percent of the overall population of all states with a sales tax were deemed to be in compliance with the Agreement. Currently 22 states, including Michigan, are full members of the Agreement and another 2 states are associate members.

In June 2004, Michigan enacted the Streamlined Sales and Use Tax Administration Act as well as several changes to the Sales Tax and Use Tax Acts in order to comply with the Agreement. The administration act allows Michigan to appoint a four-member delegation to represent the State at meetings of the governing board of the SSUTA. Also included in the administration act are provisions that allow sellers to register under the Agreement, describe how different technological models of collecting and remitting use tax to member states will be established, and protect personal information obtained during the administration of taxes under the Agreement. Michigan may withdraw from the Agreement by decision of the State Treasurer or by resolution of the State Legislature.

Additional information on the Agreement can be found at www.streamlinedsalestax.org.

Remote Sales Revenue Impact

Estimates of the loss of tax revenue from remote sales vary widely. This is due to the fast growth of e-commerce. There are two types of e-commerce to consider when estimating the revenue loss: business-to-business e-commerce and business-to-consumer e-commerce. The tax revenue loss estimates presented in this report are only for business-to-consumer remote sales. Because of business tax audits, direct tax payment agreements between Michigan businesses and the State of Michigan, voluntary compliance with tax laws, and tax exemptions for business production inputs (industrial processing), the current revenue loss from business-to-business remote sales is small. However, due to the high volume of business-to-business transactions compared to business-to-consumer purchases over the Internet predicted for the future, small losses now could lead to greater losses if use tax law is not strongly enforced.

Michigan's use tax revenue losses from consumer remote sales are estimated to be \$424 million in FY 2012. This loss will grow to \$508 million in FY 2015, primarily due to the growth of e-commerce (see Exhibit 19). Over this period, the revenue loss from traditional mail order sales is expected to increase from \$197 million to \$217 million (see Exhibit 20 and Exhibit 21). This estimate assumes that mail order retailers collect Michigan sales tax on one-third of sales to Michigan residents. Due to the rapid rate of growth of e-commerce, the expected revenue loss will also increase for Michigan. The revenue loss due to consumer e-commerce is expected to increase from \$227 million in FY 2012 to \$291 million in FY 2015 (see Exhibit 20 and Exhibit 21).

Various studies have attempted to estimate the tax loss for remote sales. One study by the Center for Business and Economic Research at the University of Tennessee forecasted the sales and use

tax loss due to e-commerce sales for the entire U.S. at over \$14 billion in 2003.⁵ An update of this study was prepared in 2009.⁶ However, some alternative estimates have produced much smaller revenue losses.⁷

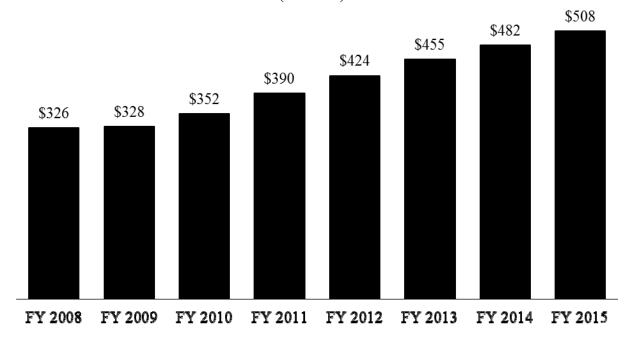
Beginning with tax year 1999, Michigan added a line on the personal income tax form for taxpayers to include use tax due on remote sales to make it easier for Michigan income tax filers to pay any use tax that they owe. Taxpayers have the option of reporting actual use tax due or using a table provided in the income tax form that estimates use tax liability based on income. For any single purchase over \$1,000, the actual use tax due must be reported. For tax returns processed during 2012, approximately 109,400 taxpayers reported \$6.16 million of use tax due on their Michigan income tax returns. This amount is approximately 1.5 percent of the estimated tax liability that goes uncollected on remote sales. State officials hope that as more taxpayers become educated on their use tax responsibility, compliance will increase.

⁵ See "State and Local Sales Tax Revenue Losses from E-Commerce: Updated Estimates" by Donald Bruce and William F. Fox, University of Tennessee, September 2001.

⁶ See "State and Local Government Sales Tax Revenue Losses from Electronic Commerce" by Donald Bruce, William F. Fox, and LeAnn Luna, University of Tennessee, April 13, 2009.

⁷ See "A Current Calculation of Uncollected Sales Tax Arising from Internet Growth" by Peter A. Johnson, Direct Marketing Association, March 2003.

Exhibit 19 Michigan Consumer Remote Sales and Use Tax Loss Impact (Millions)



Source: U.S. Census Bureau. Compiled by the Office of Revenue and Tax Analysis, Michigan Department of Treasury.

Exhibit 20

Michigan Revenue Loss Impact
Consumer Mail Order and E-Commerce

\$495

\$400

\$300

E-Commerce

\$295

\$200

Mail Order

\$200

Source: U.S. Census Bureau. Compiled by the Office of Revenue and Tax Analysis, Michigan Department of Treasury.

FY 2010 FY 2011 FY 2012 FY 2013 FY 2014 FY 2015

FY 2008

FY 2009

Exhibit 21 Michigan Use Tax Revenue Loss From Consumer Remote Sales (Millions)

Revenue Impact

Fiscal <u>Year</u>	Traditional <u>Mail Order</u>	Percent <u>Change</u>	E-Commerce	Percent <u>Change</u>	Total Remote <u>Sales</u>	Percent <u>Change</u>
2007	\$176.4	-2.7%	\$147.0	16.2%	\$323.4	5.1%
2008	171.3	-2.9%	154.3	5.0%	325.6	0.7%
2009	171.6	0.1%	156.1	1.2%	327.6	0.6%
2010	176.5	2.9%	175.3	12.3%	351.8	7.4%
2011	188.1	6.6%	202.1	15.3%	390.3	10.9%
2012	197.2	4.8%	227.0	12.3%	424.2	8.7%
2013	204.4	3.6%	250.5	10.3%	454.8	7.2%
2014	210.8	3.1%	271.7	8.5%	482.4	6.1%
2015	217.1	3.0%	291.3	7.2%	508.4	5.4%

Source: U.S. Census Bureau. Compiled by the Office of Revenue and Tax Analysis, Michigan Department of Treasury.

VII. MICHIGAN COUNTIES AND INTERSTATE COMPARISONS

This section estimates Michigan sales tax revenue by county and compares Michigan's sales tax structure to the sales tax in other states.

Michigan Counties

Estimates of the sales tax paid by residents of each Michigan county in 2011 are presented in Exhibit 22. These estimates are based on personal income by county, adjusted for the food and prescription drug exemptions and sales of residential utilities. Michigan has a single tax rate that is imposed statewide, unlike most states that also have local sales taxes. As a result of the single tax rate, businesses with multiple locations across the state (e.g., Meijer, Wal-Mart, and Target) may report all of their sales on one return filed from a single location. This centralized reporting, while perhaps more convenient for taxpayers, prevents the Department of Treasury from compiling sales tax payments by location.

The estimates of county sales tax payments range from a high of \$1,209.6 million in Wayne County to a low of \$1.5 million in Keweenaw County. Oakland County ranked first in sales tax payments per person at \$1,000, while Luce County ranked last with \$455 per-person sales tax payments.

Interstate Comparisons

A sales tax is levied by 45 states and the District of Columbia. Exhibit 23 compares current state and local sales tax rates. California levies the highest state tax rate at 7.5 percent (including the state-administered local tax), followed by Indiana, Mississippi, New Jersey, Rhode Island, and Tennessee at 7 percent. Of states with a sales tax, Colorado levied the lowest state sales tax at 2.9 percent. For 2012, Alaska, Delaware, Montana, New Hampshire, and Oregon do not levy a state sales tax, although Alaska allows local sales taxes.

In the 36 states that allow local sales taxes, the tax rate a consumer faces depends on the combined state and local tax rates. The local rates listed are the maximum tax rates effective in that state; therefore, some localities within a state may have a lower combined state and local sales tax rate. Currently, the highest state and local tax rate is 13.725 percent, which is levied in Tuba City, Arizona. The tax rate in Tuba City includes the Arizona state tax, a county tax, and a tribal tax. Exhibit 23 does not include the tribal tax in Tuba City, and as a result Alabama has the highest combined state and local tax rate. Arizona, Arkansas, Louisiana, and Oklahoma also have at least one jurisdiction that levies a combined state and local sales tax of at least 11.0 percent. A better indication of the actual local tax rate that consumers face in each state might be the average local tax rate reported by the Tax Foundation and listed in Exhibit 23. Louisiana has the highest average local tax rate. Variations in local tax rates and the specific locations to which those rates apply make cross-state comparisons of tax rates difficult.

One measure of the effective state and local sales tax rate in each state is the average combined state and local sales tax rate for each state. For states with local sales taxes, an effective state and local tax rate is calculated by dividing total sales tax revenue by state sales tax revenue and multiplying by the state sales tax rate. Exhibit 24 reveals Louisiana had the highest effective average state and local tax rate at 9.32 percent, based on data from 2011. Of the states with a sales tax, Michigan and five other states rank 8th lowest at 6.0 percent.

A second measure of the effective sales tax rate in each state is state and local sales tax revenue as a percentage of personal income. Washington has the highest percentage of sales tax revenue as a percent of personal income at 4.43 percent in FY 2011. Michigan ranked 18th highest for sales tax revenue as a percent of personal income at 2.68 percent (see Exhibit 24). The U.S. average for all states was 2.38 percent, while the average for states with at least some sales tax collections was 2.43 percent. Michigan's ranking was affected by the inclusion of 70 percent of the Michigan Business Tax collections under "Sales and Gross Receipts Taxes" in the data on state and local government finance published by the Census Bureau. Based on collections from the sales and use taxes alone, Michigan collected 2.33 percent of state personal income through the sales and use taxes, below the national average of 2.40 percent. Alaska, which only levies a local sales tax, was the lowest for states with a sales tax at 1.04 percent. One problem with this measure is that it assumes only residents in that state paid the sales tax. Because states with a large tourism industry, such as Hawaii, are able to export a high amount of sales tax revenue to residents of other states, the true effective rate will be overstated.

Exhibit 22
Estimated Michigan Sales Tax Revenue by County
2011

County	Population (thousands)	Personal Income (thousands)	Personal Income Per Person	Estimated Tax Revenue (thousands)	<u>Rank</u>	Tax Per Person	<u>Rank</u>
Alcona	10.8	\$315,458	\$29,209	\$5,667 \$4,408	75 79	\$525	63
Allegen	9.5 111.2	242,757	25,518	\$4,498 \$70,124	78 18	473 630	80 23
Allegan	29.4	3,733,618	33,565	\$70,124			
Alpena Antrim	23.3	987,716	33,612 32,587	\$18,281 \$14,024	47 57	622 601	28 33
	23.3 15.6	759,810 474,708	32,387	\$14,024 \$8,776	57 67	561	33 47
Arenac	8.8	228,509	25,943	\$4,252	79	483	47 79
Baraga	58.8	1,956,851	33,268	\$36,682	30	624	79 27
Barry	107.1	3,613,534	33,737	\$67,383	21	629	24
Bay Benzie	17.4	542,114	31,079	\$10,032	65	575	24 44
Berrien	156.9	5,623,209	35,830	\$104,872	12	668	17
Branch	45.2	1,269,932	28,098	\$23,749	42	525	62
Calhoun	135.5	4,544,449	33,541	\$84,973	17	627	25
Cass	52.0	1,820,995	35,027	\$34,104	32	656	18
Charlevoix	26.0	945,316	36,361	\$17,594	49	677	12
Cheboygan	25.9	765,446	29,533	\$14,132	56	545	53
Chippewa	38.8	1,046,632	26,977	\$19,581	45	505	75
Clare	31.0	878,145	28,297	\$16,249	53	524	64
Clinton	75.5	2,711,290	35,926	\$50,985	25	676	13
Crawford	14.0	385,399	27,501	\$7,130	71	509	69
Delta	37.1	1,193,854	32,175	\$22,121	44	596	37
Dickinson	26.2	984,402	37,594	\$18,222	48	696	8
Eaton	108.1	3,636,609	33,655	\$68,218	20	631	22
Emmet	32.8	1,308,723	39,842	\$24,383	39	742	7
Genesee	422.1	13,108,416	31,057	\$245,704	6	582	42
Gladwin	25.9	694,165	26,853	\$12,763	62	494	78
Gogebic	16.3	479,535	29,454	\$8,819	66	542	55
Grand Traverse	88.3	3,259,588	36,894	\$60,987	22	690	9
Gratiot	42.1	1,291,632	30,647	\$24,166	41	573	45
Hillsdale	46.5	1,324,743	28,481	\$24,727	38	532	58
Houghton	36.6	995,407	27,169	\$18,605	46	508	70
Huron	32.7	1,317,981	40,336	\$24,353	40	745	6
Ingham	281.6	9,701,487	34,450	\$182,838	7	649	19
Ionia	64.0	1,713,428	26,781	\$32,335	33	505	73
Iosco	25.5	721,408	28,245	\$13,170	61	516	66
Iron	11.8	389,290	33,002	\$7,132	70	605	32
Isabella	70.6	1,974,606	27,960	\$37,342	29	529	61
Jackson	159.7	5,015,497	31,396	\$93,953	16	588	40
Kalamazoo	252.1	9,057,879	35,933	\$170,197	8	675	14
Kalkaska	17.2	465,678	27,137	\$8,693	68	507	71
Kent	608.5	22,262,941	36,589	\$419,177	4	689	10
Keweenaw	2.2	80,154	36,886	\$1,475	83	679	11
Lake	11.5	319,262	27,668	\$5,879	74	510	68
Lapeer	88.1	2,803,219	31,825	\$52,659	24	598	36

Exhibit 22 (continued)
Estimated Michigan Sales Tax Revenue by County
2011

	Douglotion	Personal	Personal	Estimated Tax Revenue		Т Р	
County	Population (thousands)	Income (thousands)	Income Per Person	(thousands)	Rank	Tax Per Person	Rank
<u></u>							
Leelanau	21.5	\$943,714	\$43,978	\$17,487	50	\$815	20
Lenawee	99.4	3,242,795	32,611	\$60,660	23	610	30
Livingston	181.7	7,391,934	40,677	\$139,151	10	766	5
Luce	6.6	161,258	24,492	\$2,997	82	455	83
Mackinac	11.0	371,676	33,675	\$6,850	73	621	29
Macomb	842.1	30,079,004	35,717	\$563,231	3	669	16
Manistee	24.7	738,819	29,901	\$13,657	58	553	51
Marquette	67.7	2,203,746	32,555	\$41,227	27	609	31
Mason	28.7	907,924	31,659	\$16,810	52	586	41
Mecosta	43.3	1,183,304	27,328	\$22,124	43	511	67
Menominee	23.9	762,675	31,871	\$14,138	55	591	39
Midland	84.1	3,652,161	43,446	\$68,366	19	813	3
Missaukee	14.9	396,503	26,591	\$7,380	69	495	77
Monroe	151.6	5,402,726	35,647	\$101,380	13	669	15
Montcalm	63.2	1,589,745	25,160	\$29,801	34	472	81
Montmorency	9.7	270,214	27,993	\$4,886	76	506	72
Muskegon	171.3	5,099,031	29,766	\$95,569	15	558	50
Newaygo	48.4	1,371,772	28,371	\$25,652	36	531	59
Oakland	1,210.1	64,496,968	53,297	\$1,209,638	1	1,000	1
Oceana	26.5	844,387	31,836	\$15,742	54	594	38
Ogemaw	21.6	591,776	27,435	\$10,888	64	505	74
Ontonagon	6.6	194,731	29,514	\$3,534	81	536	57
Osceola	23.5	629,646	26,782	\$11,717	63	498	76
Oscoda	8.6	218,195	25,348	\$3,980	80	462	82
Otsego	24.1	723,063	30,030	\$13,464	59	559	48
Ottawa	266.3	8,994,921	33,777	\$169,329	9	636	21
Presque Isle	13.2	387,410	29,450	\$7,051	72	536	56
Roscommon	24.4	731,150	29,948	\$13,306	60	545	54
Saginaw	199.1	6,372,166	32,007	\$119,029	11	598	35
Sanilac	42.6	1,371,588	32,193	\$25,506	37	599	34
Schoolcraft	8.5	259,777	30,598	\$4,791	77	564	46
Shiawassee	69.8	2,054,877	29,422	\$38,461	28	551	52
St. Clair	161.6	5,408,369	33,459	\$101,205	14	626	26
St. Joseph	61.1	1,823,463	29,826	\$34,123	31	558	49
Tuscola	55.4	1,570,715	28,341	\$29,315	35	529	60
Van Buren	76.1	2,361,064	31,013	\$44,229	26	581	43
Washtenaw	348.0	14,204,286	40,821	\$267,828	5	770	4
Wayne	1,802.1	61,293,247	34,012	\$1,148,490	2	637	20
Wexford	32.7	905,000	27,661	\$16,883	51	516	65
Totals	9,876.2	358,151,592	\$36,264	\$6,710,882		\$680	

Source: Bureau of Economic Analysis. Calculated and compiled by Office of Revenue and Tax Analysis.

Exhibit 23 2013 State and Local Sales Tax Rates

<u>State</u>	State Sales Tax Rate	Maximum Local Tax <u>Rate</u>	Average Local Tax Rate	Maximum State & Local Tax Rate
		<u> </u>		· <u></u>
Alabama	4.00%	8.000%	4.450%	12.000%
Alaska	No Tax	7.500%	1.690%	7.500%
Arizona	6.60%	5.125%	2.560%	11.725%
Arkansas	6.00%	7.500%	2.610%	13.500%
California	7.50%	2.500%	0.880%	10.000%
Colorado	2.90%	7.500%	4.490%	10.400%
Connecticut	6.35%	None	None	6.350%
Delaware	No Tax	None	None	No Tax
Florida	6.00%	1.500%	0.620%	7.500%
Georgia	4.00%	4.000%	2.990%	8.000%
Hawaii	4.00%	0.500%	0.350%	4.500%
Idaho	6.00%	2.500%	0.020%	8.500%
Illinois	6.25%	3.250%	1.880%	9.500%
Indiana	7.00%	None	None	7.000%
Iowa	6.00%	3.250%	0.820%	9.250%
Kansas	6.30%	3.500%	1.950%	9.800%
Kentucky	6.00%	None	None	6.000%
Louisiana	4.00%	7.000%	4.870%	11.000%
Maine	5.00%	None	None	5.000%
Maryland	6.00%	None	None	6.000%
Massachusetts	6.25%	None	None	6.250%
Michigan	6.00%	None	None	6.000%
Minnesota	6.875%	1.000%	0.290%	7.875%
Mississippi	7.00%	0.250%	0.000%	7.250%
Missouri	4.225%	4.700%	3.230%	8.925%
Montana	No Tax	None	None	No Tax
Nebraska	5.50%	1.500%	1.280%	7.000%
Nevada	6.85%	1.250%	1.080%	8.100%
New Hampshire	No Tax	None	None	No Tax
New Jersey	7.00%	None	None	7.000%
New Mexico	5.125%	0.036%	2.130%	5.161%
New York	4.00%	4.875%	4.480%	8.875%
North Carolina	4.75%	2.500%	2.120%	7.250%
North Dakota	5.00%	0.030%	1.520%	5.030%
Ohio	5.50%	2.250%	1.300%	7.750%
Oklahoma	4.50%	6.500%	4.170%	11.000%
Oregon	No Tax	None	None	No Tax
Pennsylvania	6.00%	2.000%	0.340%	8.000%
Rhode Island	7.00%	None	None	7.000%
South Carolina	6.00%	3.000%	1.080%	9.000%
South Dakota	4.00%	2.000%	1.820%	6.000%
Tennessee	7.00%	2.750%	2.440%	9.750%
Texas	6.25%	2.000%	1.890%	8.250%
Utah	4.70%	3.250%	1.970%	7.950%
Vermont	6.00%	1.000%	0.140%	7.000%
Virginia	4.00%	1.000%	1.000%	5.000%
Washington	6.50%	3.000%	2.360%	9.500%
West Virginia	6.00%	1.000%	0.040%	6.000%
Wisconsin	5.00%	1.500%	0.430%	6.500%
Wyoming	4.00%	2.000%	1.340%	6.000%
vv youning	4.0070	2.00070	1.34070	0.00070

Sources: "State and Local Sales Tax Rates in 2013" by Tax Foundation. Also Federation of Tax Administrators. Rates as of January 1, 2013. Compiled by Office of Revenue and Tax Analysis.

Exhibit 24
Effective State and Local Sales Tax Rates and Revenue
FY 2011

	State & Local Taxes on Sales/ Gross Receipts (millions)	Personal Income (millions)	Sales Tax Revenue as % of <u>Income</u>	<u>Rank</u>	State <u>Tax Rate</u>	Effective State & Local Sales <u>Tax Rate</u>	<u>Rank</u>
Alabama	\$3,973.9	\$166,303.3	2.39%	25	4.0%	7.31%	16
Alaska	\$334.2	\$32,108.5	1.04%	46	No Tax	NA	46
Arizona	\$8,219.1	\$222,330.3	3.70%	7	6.6%	9.23%	2
Arkansas	\$3,650.4	\$97,184.5	3.76%	6	6.00%	8.00%	8
California	\$40,101.7	\$1,611,143.0	2.49%	20	6.25%	8.09%	7
Colorado	\$5,223.9	\$219,658.5	2.38%	26	2.9%	6.97%	23
Connecticut	\$3,252.1	\$204,073.8	1.59%	41	6.0%	6.00%	33
Delaware	\$0.0	\$36,752.5	0.00%	47	No Tax	NA	46
Florida	\$21,123.8	\$743,639.0	2.84%	14	6.0%	6.55%	28
Georgia	\$8,543.3	\$345,268.8	2.47%	22	4.0%	6.73%	26
Hawaii	\$2,495.8	\$57,506.0	4.34%	2	4.0%	4.00%	45
Idaho	\$1,187.1	\$51,009.3	2.33%	27	6.0%	6.00%	33
Illinois	\$9,089.9	\$554,259.3	1.64%	40	6.25%	7.66%	13
Indiana	\$6,269.7	\$227,107.8	2.76%	16	7.0%	7.00%	19
Iowa	\$2,902.0	\$120,963.8	2.40%	24	6.0%	7.80%	11
Kansas	\$3,285.0	\$114,081.5	2.88%	13	6.3%	8.32%	4
Kentucky	\$2,896.3	\$145,081.0	2.00%	36	6.0%	6.00%	33
Louisiana	\$6,555.2	\$173,341.5	3.78%	5	4.0%	9.32%	1
Maine	\$1,010.2	\$49,739.5	2.03%	33	5.0%	5.00%	43
Maryland	\$3,896.7	\$288,612.5	1.35%	43	6.0%	6.00%	33
Massachusetts	\$4,920.5	\$345,546.3	1.42%	42	6.3%	6.25%	30
Michigan	\$9,477.2	\$353,814.3	2.68%	18	6.0%	6.00%	33
Minnesota	\$4,762.4	\$233,440.8	2.04%	32	6.875%	7.03%	18
Mississippi	\$2,969.4	\$93,643.3	3.17%	11	7.0%	7.00%	19
Missouri	\$4,953.6	\$223,514.3	2.22%	30	4.225%	7.04%	17
Montana	\$0.0	\$35,066.5	0.00%	47	No Tax	NA	46
Nebraska	\$1,690.7	\$75,555.0	2.24%	28	5.5%	6.71%	27
Nevada	\$3,237.7	\$99,035.5	3.27%	9	6.9%	7.57%	15
New Hampshire	\$0.0	\$59,375.0	0.00%	47	No Tax	NA	46
New Jersey	\$8,144.4	\$453,367.5	1.80%	39	7.0%	7.00%	19
New Mexico	\$2,797.6	\$69,741.0	4.01%	3	5.1%	7.58%	14
New York	\$24,008.0	\$968,255.8	2.48%	21	4.00%	8.29%	5
North Carolina	\$8,277.3	\$339,519.8	2.44%	23	5.75%	7.70%	12
North Dakota	\$902.9	\$30,473.0	2.96%	12	5.0%	5.81%	39
Ohio	\$9,501.1	\$426,371.8	2.23%	29	5.5%	6.73%	25
Oklahoma	\$3,919.1	\$138,489.0	2.83%	15	4.5%	8.10%	6
Oregon	\$0.0	\$141,903.3	0.00%	47	No Tax	NA	46
Pennsylvania	\$9,586.7	\$528,033.8	1.82%	38	6.0%	6.43%	29
Rhode Island	\$824.5	\$45,314.0	1.82%	37	7.0%	7.00%	19
South Carolina	\$3,149.8	\$153,137.0	2.06%	31	6.0%	6.76%	24
South Dakota	\$1,097.4	\$34,569.5	3.17%	10	4.0%	5.43%	40
Tennessee	\$8,142.5	\$229,448.0	3.55%	8	7.0%	9.21%	3
Texas	\$27,251.8	\$1,013,067.9	2.69%	17	6.25%	7.82%	10
Utah	\$2,441.5	\$91,884.8	2.66%	19	4.70%	6.22%	31
Vermont	\$335.0	\$25,494.8	1.31%	44	6.0%	6.17%	32
Virginia	\$4,477.8	\$364,495.0	1.23%	45	4.0%	5.18%	42
Washington	\$12,914.5	\$291,495.5	4.43%	1	6.5%	7.93%	9
West Virginia	\$1,210.3	\$60,543.0	2.00%	34	6.0%	6.00%	33
Wisconsin	\$4,437.6	\$222,125.8	2.00%	35	5.0%	5.40%	41
Wyoming	\$1,047.6	\$26,590.5	3.94%	4	4.0%	4.86%	44
U.S. Average	\$300,488.9	\$12,633,475.2	2.38%				

Sources: Bureau of the Census & Bureau of Economic Analysis, U.S. Department of Commerce, and Federation of Tax Administrators . Compiled by Office of Revenue and Tax Analysis.

VIII. PUBLIC ACTS IN 2012 – SALES AND USE TAXES

Public Acts 117 and 118 of 2012 amended the Use Tax Act and the General Sales Tax Act, respectively, to change the timing of payments for taxpayers required to pay on an accelerated schedule, effective January 1, 2014. These Public Acts do not change the amount of tax due.

Public Act 126 of 2012 amended the General Sales Tax Act to eliminate the exemption for purchases of tangible personal property made by an inmate of a penal or correctional institution with scrip or an equivalent issued and redeemed by the institution. The new Act took effect for sales made on or after October 1, 2012.

Public Act 225 of 2012 amended the General Sales Tax Act to dedicate 18 percent of the sales tax at 4 percent levied on the sale of motor fuel to the State Trunkline Fund to match available federal highway funds, and then any remaining funds to county and local road funding. The overall amount of sales tax earmarked is limited to \$100 million and this earmarking only applies for fiscal year 2013.

Public Act 226 of 2012 amended the General Sales Tax Act to dedicate the sales tax at 4 percent collected on the sale of aviation fuel and aviation products to the State Aeronautics Fund for fiscal year 2013 only. The earmarking is limited to \$10 million.

Public Act 408 of 2012 amended the Use Tax Act to divide the 6 percent tax levied under the Act into a state component tax levied by the state and a metropolitan areas component tax levied by a Metropolitan Areas Metropolitan Authority, beginning October 1, 2015. The rate of the metropolitan areas component tax would be set at a rate sufficient to generate specific revenue amounts in fiscal years 2016 through 2023 with annual adjustments for years after 2023, used to reimburse local governments for the cost of the personal property tax exemptions provided by Public Acts 402 and 403 of 2012. Of the remaining state component tax, a portion of would be earmarked equal to any reduction in tax revenues under the state education tax or basic school operating mills due to the exemptions for personal property. The changes in the use tax composition and earmarking is subject to a statewide referendum to be held in August 2014.

Public Act 412 and 413 of 2012 amended the General Sales Tax Act and the Use Tax Act, respectively, to exempt the sale of tangible personal property for use as or at mineral-producing property that is subject to the specific tax under Public Act 410 of 2012. For property with both exempt and non-exempt uses, the exemption is proportional to the share of use that is exempt.

Public Acts 429 and 467 of 2012 amended the Use Tax Act and the General Sales Tax Act, respectively, to expand the definition of rolling stock to include property to be affixed to and directly used in the operation of a truck or trailer. Rolling stock, including large trucks, trailers, and parts, used in interstate commerce is already exempt from tax under the sales and use taxes.

Public Acts 458 and 585 of 2012 amended the General Sales Tax Act and the Use Tax Act, respectively, to allow taxpayers required to file and pay sales and use taxes on an accelerated basis to pay the lesser of 75 percent of the tax due for the previous month or 75 percent of the tax

due for same month in the previous year. These Public Acts do not affect the amount of tax liability due, but only the timing of payments.

Public Act 509 of 2012 amended the General Sales Tax Act to extend to diesel fuel the prepayment requirement applied to gasoline. The Department of Treasury would determine the prepayment rate monthly based on the average retail price.

Public Act 573 of 2012 amended the General Sales Tax Act to extend the exemption for purchases by a non-profit charitable organization to property used in fundraising. The exemption has a limit of \$5,000 on the sales price of any single item of property or vehicle.

IX. REFERENCES

Advisory Commission on Intergovernmental Relations, *Significant Features of Fiscal Federalism 1995*, Volume II, Washington, D.C., September 1995.

Besley, Timothy J. and Harvey S. Rosen, "Sales Taxes and Prices: An Empirical Analysis," in *National Tax Journal*, Vol. LII, No.2 (June 1999): pp. 157 - 178.

Blume, Lawrence E., "The Sales and Use Taxes," in *Michigan's Fiscal and Economic Structure*, edited by Harvey E. Brazer and Deborah S. Laren, The University of Michigan Press, Ann Arbor, 1982.

Browning, Edgar K. and Jacquelene M. Browning. *Public Finance and the Price System*, Prentice Hall, Englewood Cliffs, NJ, 1994.

Bruce, Donald, Fox, William F., and Luna, LeAnn, "State and Local Government Sales Tax Revenue Losses from Electronic Commerce," University of Tennessee, April 2009.

Fox, William F. and Bruce, Donald, "State and Local Sales Tax Revenue Losses from E-Commerce: Updated Estimates," Center for Business and Economic Research, University of Tennessee, February 2000.

Johnson, Peter A., "A Current Calculation of Uncollected Sales Tax Arising from Internet Growth," Direct Marketing Association, 2003.

Metcalf, Gilbert E., "The Lifetime Incidence of State and Local Taxes: Measuring Changes During the 1980s," in *Tax Progressivity and Income Inequality*, edited by Joel Slemrod, Cambridge University Press, Cambridge, UK, 1994.

Michigan Department of Management and Budget, *Michigan Comprehensive Annual Financial Report*, various years.

Michigan Department of Treasury, State of Michigan Executive Budget Tax Expenditure Appendix, FY 2011.

Michigan Department of Treasury, Tax Revenue Loss Estimates for Consumer Remote Sales, April 2001.

Musgrave, Richard A. and Musgrave, Peggy B., *Public Finance in Theory and Practice*, McGraw-Hill, New York, 1989.

Slemrod, Joel and Jon Bakija, *Taxing Ourselves: A Citizen's Guide to the Great Debate Over Tax Reform*, 2nd Edition, MIT Press, Cambridge, MA, 2000.

- U.S. Department of Commerce Bureau of the Census and Bureau of Economic Analysis.
- U.S. Department of Labor Bureau of Labor Statistics, *Consumer Expenditure Survey*, 2011, September 2012.