

MICHIGAN'S CIGARETTE AND TOBACCO TAXES 2001



Office of Revenue and Tax Analysis
Michigan Department of Treasury
July 2002

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TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY.....	1
CHAPTER 1: INTRODUCTION.....	2
Report Data	3
Report Layout.....	4
CHAPTER 2: CIGARETTE TAX REVENUES AND SALES HISTORY	5
Distribution of Cigarette Tax Revenues.....	5
Cigarette Tax Revenue Trends	6
Cigarette Sales Trends.....	9
CHAPTER 3: STATE COMPARISONS.....	14
National Cigarette Tax Trends	14
State Cigarette Tax Trends	14
Cigarette Sales Prices	20
Other Tobacco Products	21
CHAPTER 4: THE ECONOMICS OF CIGARETTE TAXATION	27
Incidence of the Cigarette Tax: Who Pays?	27
Health Issues.....	36
CHAPTER 5: CIGARETTE STAMPING.....	38
The Apparent Smuggling Problem.....	38
The Policy Response – Stamping.....	41
Success of the New Stamping Program	41
CHAPTER 6: LITIGATION AND THE TOBACCO SETTLEMENT	45
Summary of Tobacco Litigation.....	45
Where to Spend All That Money?.....	46

LIST OF EXHIBITS

<u>Exhibit</u>		<u>Page</u>
1	Cigarette Tax Revenues	8
2	Michigan Cigarette Tax Collections	11
3	Michigan Cigarette Tax Revenue as Share of Total State Tax Revenue	11
4	Cigarette Packs Sold Taxed.....	12
5	Annual Packs Sold Taxed	13
6	Sales of Exempt Cigarettes	13
7	National Cigarette Tax Trends	15
8	State Cigarette Tax Rate Trends.....	16
9	State Comparisons, 2002 Cigarette Tax.....	17
10	2002 State Cigarette Tax Rates	18
11	Taxed Cigarette Consumption Trends.....	19
12	2001 Cigarette Prices and Sales, Ranking by Tax Rate	22
13	2001 Weighted Average Retail Price, Selected States	23
14	Composition of Price of Cigarettes in Michigan 1990-2001	24
15	Federal and State Cigarette Taxes as Percentage of Michigan Retail Price.....	25
16	Price of Cigarettes in Michigan Net of Taxes	25
17	Other Tobacco Products Tax Revenue, FY 2001.....	26
18	Cigarette Smoking Rates Among Adults, 2000	29
19	Percentage of Adults Smoking Cigarettes by Race, 1999-2000.....	30
20	Percentage of Adults Smoking Cigarettes by Education Level, 2000.....	31
21	Smoking Rates by Race, 1999-2000	32

<u>Exhibit</u>		<u>Page</u>
22	Smoking Rates by Education Level, 2000	32
23	Smoking Rates by Age Group, 2000.....	34
24	Smoking Rates by Income Level, 2000.....	35
25	Effects of Higher Tax Rate and Cigarette Stamping.....	39
26	Regression Results Using Data Through Fourth Quarter 2001.....	44
27	Tobacco Settlement Appropriations.....	48

EXECUTIVE SUMMARY

Michigan has levied an excise tax on cigarettes since 1947. In May 1994 the tax was increased to 75 cents per pack of 20 cigarettes. Almost 2/3 of the revenue from this tax is earmarked to the School Aid Fund (63.4 percent). The Michigan tax is in addition to the 2002 federal cigarette tax of 39 cents per pack, up from 34 cents in 2000 and 2001. There is also a state tax on tobacco products (other than cigarettes) equal to 16 percent of the wholesale price.

In fiscal year 2001, the cigarette tax raised \$596.1 million or 2.7 percent of total tax revenues. This represented a 1.3-percent decline in cigarette tax revenues below fiscal year 2000. Taxable cigarette sales decreased in fiscal year 2001 by 1.5 percent to 782.6 million packs sold taxed. The 34-cent federal cigarette tax raised \$7.1 billion in the year ending June 2001, up from \$6.2 billion in the preceding year. The increase in federal tax revenue was the result of a 10-cent increase in the federal cigarette tax. National cigarette consumption declined from 2000 by 0.4 percent.¹

States continue to use cigarette taxes as a method to raise revenue and to reduce smoking, especially among teenagers. Thirty-six states have increased their cigarette tax rate since 1990. Michigan had the highest tax rate in the nation in May 1994 at 75 cents per pack. By 2002, Michigan had fallen to 12th highest. Michigan's cigarette tax will rise to \$1.25 per pack on August 1, 2002. The retail price of cigarettes in Michigan was the 11th highest in the nation in 2001. Higher cigarette prices predominantly reflect higher state cigarette taxes. Increased cigarette taxes, along with the high costs of litigation for the cigarette industry, have resulted in large price increases in recent years.

Cigarette-smoking trends in Michigan generally mirror those in the remainder of the nation. Men are more likely to smoke than women. Younger adults are more likely to smoke than older adults. Smoking rates decline among adults with higher incomes and higher educational attainment. However, minorities in Michigan are more likely to smoke compared with national rates.

In response to sharp sales and tax revenue declines due to smuggling, Michigan enacted a cigarette stamping law in 1998. The new stamping law and increased enforcement contributed to the 9.2 percent increase in cigarette tax revenues for fiscal year 2001 compared with fiscal year 1997, the last year without cigarette stamping.

Growing concerns over the impact of smoking on public health expenditures resulted in states filing lawsuits against the major tobacco companies to recover the costs of treating sick smokers. In November 1998, a settlement was reached between most of the states and the major tobacco companies. The settlement provides for payments to cover public costs that are attributable to smoking. The payments will continue in perpetuity, and total more than \$206 billion for the first 25 years. Under the settlement, Michigan is scheduled to receive more than \$8.5 billion between 1999 and 2025. As of May 2002, Michigan had received \$941.1 million, or approximately \$300 million per year since payments began in December 1999. A large portion of the settlement Michigan will receive will be used to fund the Michigan Merit Award Scholarships.

¹*The Tax Burden on Tobacco*, Vol. 36, 2001, Orzechowski and Walker.

CHAPTER 1

INTRODUCTION

On May 1, 1994, Michigan began to levy the highest cigarette tax in the nation as the state tax on a pack of cigarettes was increased from 25 to 75 cents. Since that time, 11 states have surpassed Michigan's tax rate. As a result of the higher tax rate, taxes now comprise approximately 35 percent of the final cost of a typical pack of cigarettes purchased in Michigan. For example, if the final cost (after all taxes) of a pack of cigarettes is \$3.75, then taxes comprise \$1.35 (\$0.75 state excise, \$0.39 federal excise and \$0.21 state sales tax) or 36 percent of the final price to the consumer. Michigan also levies a tax on other tobacco products equal to 16 percent of the wholesale price. Effective August 1, 2002, both the excise tax on cigarettes and the tax on other tobacco products will increase.

Cigarettes have been subject to taxation in Michigan for many years. Beginning July 1, 1947, Public Act 265 of 1947 specified a tax of 3 cents per pack to be levied on the privilege of selling and distributing cigarettes. Firms that buy, sell, or transport cigarettes to customers pay the cigarette tax. These firms, with the exception of most retailers, must acquire a tobacco-products-tax license from the Michigan Department of Treasury to conduct business within the state. Reports are then filed with the Department on or before the 20th of each month. These reports detail the volume of cigarettes or the wholesale prices of tobacco products other than cigarettes (cigars, smokeless tobacco, and non-cigarette smoking tobacco) acquired or disbursed during the prior month. To offset the administrative costs associated with collecting and remitting the cigarette tax, licensees are allowed to retain a collection fee equal to one percent of the tax collected. Effective April 15, 1998, the collection fee was increased to 1.25 percent of the tax collected on cigarettes to offset the increased administrative costs of stamping. The 2002 legislation that raised tobacco taxes also increased the collection for cigarette taxes to 1.50 percent of the tax collected, effective August 1, 2002.

Sales to military bases are exempt from tax, although exempt sales must be reported to the Department of Treasury in monthly reports. Cigarettes sold to American Indian tribal members are exempt from the Michigan tobacco tax if the member is a resident member of the tribe and the sales transaction takes place within the tribe's Indian Country.

Currently, all states levy some type of tax on cigarettes, and most states are increasing their reliance on tobacco taxes as a source of revenue. Since 1990, 36 states have increased their cigarette tax rates. This trend towards higher cigarette taxation seems likely to continue. Some reasons include:

1. The taxation of cigarettes faces less political opposition because it does not affect the majority of taxpayers.
2. The cigarette tax is relatively easy to levy and administer. The system is already in place and few exclusions or deductions are permitted. However, as the tax rate rises, opportunities for tax avoidance and evasion become more lucrative. Potentially, this will lead to an increase in the administrative cost of collecting cigarette taxes.

3. Higher cigarette taxes are thought to decrease future health care costs to taxpayers. The higher price should discourage smoking and reduce future state costs for medical treatments associated with smoking.
4. Some proponents of higher cigarette taxes claim that higher taxation compels smokers to take into account at least some of the effects their smoking may have on others. Higher tax rates may cause smokers to recognize monetarily the costs imposed on society through secondhand smoke and increased demand for public health resources.
5. Higher cigarette taxes may reduce teenage smoking. Studies have found that younger smokers are the most sensitive to price increases. Approximately 80 to 90 percent of regular smokers start smoking by the age of 18.² Higher prices that result from increased cigarette taxes may prevent adolescents from starting to smoke.

However, there are also arguments against the trend towards increased cigarette taxation. The typical smoker tends to have a lower income than the average citizen. Raising taxes paid by smokers will shift more of the overall tax burden onto low-income taxpayers. Since only cigarette smokers pay the cigarette tax, raising this tax will increase the overall tax burden on a relatively poor subset of the population. If cigarette and tobacco taxes provide an increasing share of total state-tax revenue, the tax burden becomes more concentrated on the subset of the population that chooses to smoke.

Report Data

Data for this report were compiled using seven primary data sources. The first source is the *Comprehensive Annual Financial Report* issued by the State of Michigan. This report contains annual cigarette tax collections. The second source is data provided by the Customer Contact Division, Special Taxes, Tobacco Unit, Michigan Department of Treasury, aggregating the monthly reports filed by cigarette wholesalers. These reports also provide detail on exempt sales to military bases and Indian reservations, and collection fees retained by wholesalers.

Data for interstate comparisons are from *The Tax Burden on Tobacco* published by Orzechowski and Walker (2001). The survey data on the characteristics of smokers are from *Tobacco Control State Highlights 2002: Impact and Opportunity*, issued by the Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Additional data regarding the characteristics of Michigan smokers are from *Health Risk Behaviors 2000*, issued by the Michigan Department of Community Health. Specific sources are noted in the footnotes to the exhibits.

Unless otherwise noted, figures associated with particular years represent fiscal years ending September 30. However, in a number of exhibits, particularly those involving interstate comparisons, a fiscal year ending June 30 or calendar year is used. These instances are noted in the column headings or footnotes of the tables.

²MacKenzie, Bartecchi, and Schrier, "The Human Costs of Tobacco Use," *The New England Journal of Medicine*, Vol. 330, No. 14, April 7, 1994, p. 979.

Report Layout

Chapter 2 provides a history of cigarette tax collections and cigarette tax rates over the past 20 years in Michigan. It details the number of cigarette packs sold that were taxed or exempt over time. Also provided are per capita sales, average prices, and recent sales to military bases and Indian reservations.

Chapter 3 provides a comparison of Michigan cigarette sales, tax rates, and tax revenues to other states, as well as to national trends. These exhibits also present statistics on per capita sales and taxes on other tobacco products (OTP).

Issues directly linked to tobacco use that may be affected by the tax rate (e.g., health issues, smoking by minors, the regressivity of the cigarette tax) are discussed in Chapter 4. It considers the factors that favor the taxation of cigarettes and discusses the characteristics of the typical smoker (e.g., age, gender, race, education, and income).

Chapter 5 examines the impact of cigarette stamping on cigarette tax revenues. Many officials expressed concern that black market activities had increased since Michigan implemented the higher tax rate in 1994. In response, the Legislature enacted legislation that required all cigarettes sold in Michigan after August 1998 to carry a stamp certifying that the full 75-cent cigarette tax had been paid. This Chapter analyzes the impact stamping has had on tax revenues. Regression analysis confirms that stamping is associated with significant increases in cigarette tax revenues.

Finally, Chapter 6 presents an overview of Michigan's use of the state's proceeds from the Master Settlement Agreement reached between the major tobacco companies and representatives of 46 states, including Michigan. The overview is based on periodic reports published by the Michigan Senate Fiscal Agency of state appropriations related to tobacco settlement proceeds. The Senate Fiscal Agency's reports are available at www.senate.state.mi.us/sfa/Publications/.

CHAPTER 2

CIGARETTE TAX REVENUES AND SALES HISTORY

Michigan initially enacted a tax on cigarettes in 1947, at the rate of 3 cents per pack. No tax was levied on other tobacco products, such as chewing tobacco or cigars, until 1994 (except in 1960). Since 1947, the tax on cigarettes has been adjusted on nine occasions, including the 2002 increase.

<u>Year</u>	<u>Rate (Cents/Pack)</u>	<u>Date Changed</u>	<u>Other Tobacco Products</u>
1947	3	7/1/47	Not Taxed
1957	5	8/1/57	Not Taxed
1960	6	2/1/60	20 Percent Tax
1961	5	7/1/61	Not Taxed
1962	7	7/1/62	Not Taxed
1970	11	4/1/70	Not Taxed
1982	21	5/1/82	Not Taxed
1988	25	1/1/88	Not Taxed
1994	75	5/1/94	16 Percent Tax
2002	125	8/1/02	20 Percent Tax

This report analyzes rate changes and their impact between 1976 and 2001.

Distribution of Cigarette Tax Revenues

On May 1, 1994, the tax rate on a pack of cigarettes increased from 25 to 75 cents. The higher cigarette tax rate was part of a package known as Proposal A, which shifted funding for schools away from local property taxes. Local property taxes were replaced in large part with increases in certain statewide consumption taxes, including the taxes on cigarettes and other tobacco products. Ninety percent of the 50-cent increase in the cigarette tax was earmarked for the School Aid Fund (SAF). Prior to ratification of the package, cigarette tax revenues were disbursed as follows:

<u>Before May 1, 1994</u>	<u>Tax (Cents)</u>	<u>Percent of Revenues</u>	<u>FY 1993 Revenue (Millions)</u>
General Fund	19.0	76.0%	\$185.1
School Aid Fund	2.0	8.0%	19.5
Health and Safety Fund	<u>4.0</u>	<u>16.0%</u>	<u>39.0</u>
Total	25.0	100.0%	\$243.6

Included in the Health and Safety Fund are distributions to hospitals, Wayne County, local health departments, public safety and other unallocated health program funding. As a result of school finance reform, cigarette tax revenues are currently disbursed using the following allocation scheme:

<u>After May 1, 1994</u>	<u>Tax (Cents)</u>	<u>Percent of Revenues</u>	<u>FY 2001 Revenue (Millions)</u>
General Fund	19.0	25.3%	\$146.7
School Aid Fund	47.5	63.4%	366.8
Healthy Michigan Fund	4.5	6.0%	34.8
Health and Safety Fund	<u>4.0</u>	<u>5.3%</u>	<u>30.9</u>
Total	75.0	100.0%	\$579.2

This breakdown does not include approximately \$16.9 million in tax revenue from other tobacco products. These revenues are distributed as follows: 94 percent to the School Aid Fund and 6 percent to the Healthy Michigan Fund. The Healthy Michigan Fund promotes awareness of the dangers of tobacco use. It is also used to improve the general health care of Michigan residents.

The additional tax enacted in 2002 will be distributed by a different formula. Of the 50-cent increase in the cigarette tax, 20.2 cents will be earmarked to the School Aid Fund. A total of 7.6 cents will be earmarked to health-related expenditures, with 3 cents going to the Healthy Michigan Fund, 3.7 cents going to the Medicaid Benefits Trust Fund, and 0.9 cents earmarked for indigent health care in Wayne County. The remaining 22.2 cents is earmarked to the general fund. However, for fiscal years 2005 through 2007, the general fund portion will be earmarked to the Budget Stabilization Fund (BSF). This earmarking is designed to replenish some of the funds removed from the BSF during the economic downturn associated with the economic recession of 2001.

After the increase in the tax on other tobacco products, from 16 percent to 20 percent of the wholesale price, revenue from the tax on these products will be earmarked 75.6 percent to the School Aid Fund, 6 percent to the Healthy Michigan Fund, and 18.4 percent to the general fund. The general fund portion will be directed to the BSF for fiscal years 2005 through 2007. These changes are effective on August 1, 2002.

Cigarette Tax Revenue Trends

Not surprisingly, higher tax rates have had a substantial impact on revenues from the cigarette tax (see Exhibits 1 and 2). In 1976, a tax of 11 cents per pack raised nominal revenues (unadjusted for inflation) of \$139.6 million (see footnote in Exhibit 1). The tax rate did not change until 1982, when the rate was increased to 21 cents per pack. Nominal revenues grew to \$242.1 million in 1983, the first full year of the higher tax rate. However, revenues soon began to taper off as sales declined over time. In 1988, the rate was increased to 25 cents per pack, with revenue from the 4-cent

increase earmarked to the Health and Safety Fund. In response, cigarette-tax revenues increased to \$264.5 million. Once again, revenues began to slowly decline until the rate was increased to 75 cents per pack in 1994. By 1995, the first full year of the higher tax rate, tobacco-tax revenues (including approximately \$10 million in revenue from other tobacco products such as cigars and chewing tobacco) peaked at \$619.4 million.

Revenues for fiscal years 1996 and 1997 declined 6.2 and 6.0 percent, respectively, with fiscal-year 1997 revenues \$73.4 million below 1995 revenues. This sharp decline in revenues exceeded the long-term trend of declining cigarette sales by approximately fourfold, and was not supported by a similar decline in smoking rates. Beginning in September 1998, all cigarette packages sold in Michigan were required to have a stamp attached, certifying that the cigarette tax had been paid. By fiscal year 1999, tax revenues had returned to \$615.1 million, only \$4.3 million below the revenue collected in fiscal year 1995. This sharp reversal in revenue collections is consistent with cigarette stamps reducing a substantial black market in cigarettes. More information on cigarette stamping is presented in Chapter 5. By 2001, cigarette-tax revenues had declined to \$596.1 million, a 3.1-percent decline from the 1999 total. This decline is much closer to the 25-year trend of -2 percent shown in Exhibit 4.

This brief history of cigarette tax collections underscores a characteristic of excise taxes. An excise tax, like the 75-cent cigarette tax, charges the consumer a flat fee per unit of product. This fee does not depend on the price of the good and, therefore, total collections are solely determined by the quantity of the good that is sold and taxed. Revenues tend to fall after tax increases as consumers respond to the higher tax (and price) by reducing their purchases.

If an ad valorem tax had been used instead, then part of the decline in revenues would have been offset by rising prices. Ad valorem taxes are levied as a percentage of the final price of a good. The general sales tax is a popular example. Cigarettes, like most other products, tend to increase in price over time. If the percentage increase in price is greater than the percentage decrease in sales, the revenues from an ad valorem tax will increase over time, at least in nominal terms.

Cigarette tax revenues have exhibited a downward trend for the past 20 years, except for years when rate increases took effect (see Exhibits 1 and 2). This trend is more apparent when examining real revenues, which are adjusted for inflation. The column labeled "Real Cigarette Tax Revenue" in Exhibit 1 has been adjusted to reflect the purchasing power of cigarette tax revenues in 1983-84 dollars. For example, using Exhibit 1, 1976 cigarette tax revenues could purchase \$245.8 million worth of 1983-84 goods when the tax rate was 11 cents per pack. In 1983, cigarette tax revenues could purchase \$242.5 million worth of goods, approximately the same amount, yet the rate had been substantially increased to 21 cents per pack. By 2001, cigarette tax revenues could purchase \$341.8 million worth of 1983-84 goods at a rate of 75 cents per pack.

Exhibit 1
Cigarette Tax Revenues
(thousands)

Fiscal Year	Rate (Cents)	Nominal Tax Revenue	Total Tax Revenue	Revenue Per Penny of Tax	Inflation Adjusted Revenue⁽¹⁾	Tax as Percent of Total Taxes
1976	11	\$139,647 ⁽²⁾	\$4,907,922	\$12,695	\$245,858	2.85
1977	11	140,261	4,760,007	12,751	231,072	2.95
1978	11	140,739	5,389,620	12,794	215,527	2.61
1979	11	140,364	6,044,023	12,760	190,712	2.32
1980	11	141,205	6,126,400	12,837	165,539	2.30
1981	11	152,827	6,195,020	13,893	163,977	2.47
1982	11/21	188,003 ⁽³⁾	6,371,191	12,396	193,818	2.95
1983	21	242,068	7,337,434	11,527	242,553	3.30
1984	21	240,957	8,405,736	11,474	233,485	2.87
1985	21	241,037	8,958,027	11,478	225,690	2.69
1986	21	236,489	9,270,805	11,261	218,365	2.55
1987	21	237,382	9,591,731	11,304	212,517	2.47
1988	21/25	264,496 ⁽³⁾	10,285,540	11,021	227,817	2.57
1989	25	267,016	10,850,896	10,681	218,329	2.46
1990	25	255,339	11,062,400	10,214	198,553	2.31
1991	25	259,160	11,722,260	10,366	194,711	2.21
1992	25	246,005	12,232,192	9,840	181,019	2.01
1993	25	243,648	12,866,305	9,746	174,533	1.89
1994	25/75	395,715 ⁽³⁾	15,082,510	8,634	274,802	2.62
1995	75	619,401	17,468,714	8,259	416,824	3.55
1996	75	580,772	18,520,076	7,744	380,834	3.14
1997	75	546,026	19,440,316	7,280	349,345	2.81
1998	75	566,046	20,626,025	7,547	354,222	2.74
1999	75	615,129	21,958,875	8,202	375,308	2.80
2000	75	604,212	22,865,469	8,056	355,837	2.64
2001	75	596,082	22,405,023	7,948	341,790	2.66

⁽¹⁾ Adjusted for inflation to 1983-84 dollars.

⁽²⁾ Actual revenues listed at \$174.5 million due to extended fiscal year. Figure was deflated by 20 percent as an adjustment. After 1994 figures include tax from other tobacco products.

⁽³⁾ Includes approximately \$11 million collected from temporary inventory tax in 1982, \$5 million in 1988 and \$22 million in 1994.

Sources: Comprehensive Annual Financial Report and U.S. Bureau of Labor Statistics.

This simple comparison illustrates that, although the current cigarette tax rate is much higher than before, the tax generates a modest amount of additional purchasing power. Between 1976 and 2001, the state tax per pack of cigarettes increased 581.8 percent, from 11 to 75 cents per pack. Over the same time period, the purchasing power of cigarette tax revenues increased only 39.0 percent. This disparity is attributable to the fact that cigarette sales have steadily declined over the time period, while the consumer price index has increased steadily. As a result, periodic increases in the cigarette tax are needed to maintain the purchasing power of these revenues. Had an ad valorem tax been used, the purchasing power of cigarette tax revenues would not have eroded as quickly. Rather, revenues would increase along with rising prices.

The deteriorating purchasing power of cigarette tax revenues may have important implications. Tobacco tax revenues are now a larger source of total Michigan tax revenue than they were at the beginning of the 1990s. In 1993, cigarette taxes comprised only 1.9 percent of total state tax revenues (see Exhibits 1 and 3). By 1995 when the 75-cent tax rate had been in place for a full year, tobacco tax revenues comprised 3.6 percent of state tax revenues and 6.2 percent of the SAF revenues (excluding inter-fund transfers). While tobacco tax revenues as a percentage of total tax revenues have declined since 1995, collections remained approximately twice as high in 2001 as they were in 1993, both in nominal and inflation-adjusted terms.

Cigarette Sales Trends

Since 1976, the total quantity of cigarettes sold and taxed in Michigan (referred to as packs sold taxed) has trended downward (see Exhibits 4 and 5). Higher relative prices and a greater awareness of the potential dangers of smoking have contributed to this decline. In 1976, the average (nominal) retail price of a pack of cigarettes in Michigan (including generics) was 48 cents, and the number of calculated packs sold that were taxed was 1,282.3 million. In 2001, it is estimated that the average retail price increased to \$3.79, while the number of packs sold that were taxed decreased to 782.6 million. This represents a 689.6 percent increase in the average retail price and a 39.0 percent decline in the number of packs sold taxed.

Lower cigarette consumption is also reflected in the declining number of packs that are sold per capita (see Exhibit 4). The per capita packs figure represents the average number of packs of cigarettes every man, woman, and child in the state would have to consume to equal the total number of packs sold taxed during the given year. Between 1976 and 2001, sales per capita fell 44.3 percent, from 140.5 in 1976 to 78.3 in 2001.

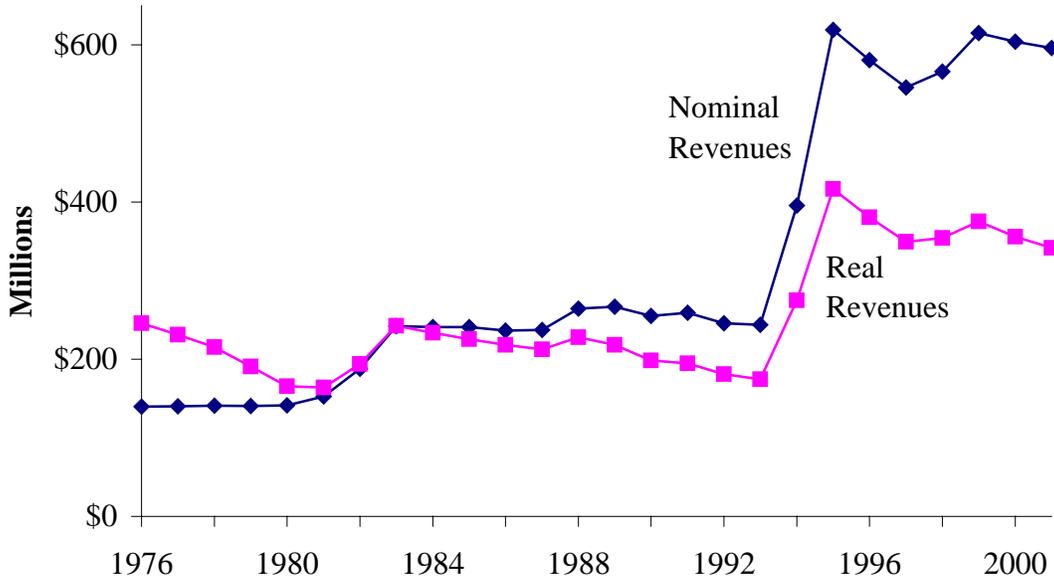
Some of the recent decline in the sales of taxable packs may be due to smokers who have shifted their consumption away from taxed cigarettes towards cigarettes not taxed by Michigan. If true, at least a portion of their consumption is not captured by statistics measuring the number of packs sold taxed. There are basically four ways consumers avoid paying Michigan taxes on cigarettes. Consumers may: (1) purchase cigarettes in other states, (2) purchase cigarettes from Michigan retailers who buy large quantities of smuggled cigarettes (and are able to offer lower prices), (3) purchase cigarettes directly from independent smugglers or middlemen, or (4) purchase cigarettes without paying the tax in Michigan at military post-exchanges, Indian reservations, or through sellers located outside of Michigan who advertise in print or on the Internet. It should be noted that only

military sales and certain sales to American Indians are tax exempt (described below). Cigarettes obtained by the other means described above violate the Michigan Tobacco Products Act.

Tax avoidance was unlikely to have a major impact on taxable sales before 1994. Prior to 1994, the differential in tax rates between most states was probably too small to permit large-scale smuggling operations to be profitable, given the distances needed to bridge the two markets. However, the incentive to avoid taxation in Michigan became much stronger following the tax increase in 1994. The 2002 tax increase will add to the financial incentives to avoid paying Michigan's cigarette tax and may result in greater tax avoidance and evasion.

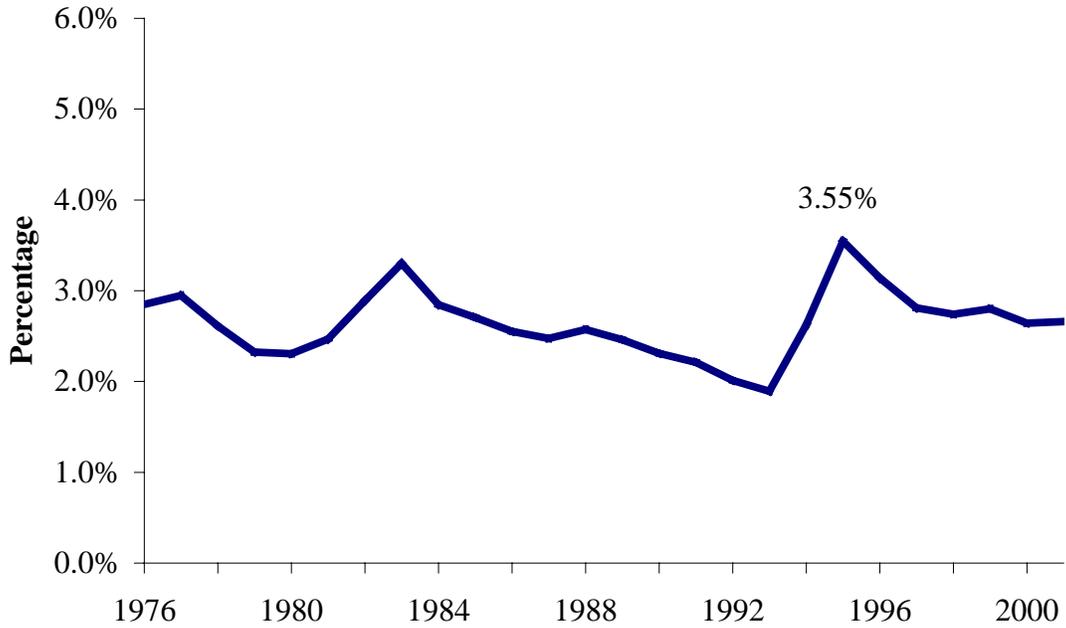
Recent evidence demonstrates that sales of tax-exempt cigarettes by wholesalers to military posts have leveled off and then declined after steep increases immediately following the tax increase (see Exhibit 6). Sales to Indian Country fell sharply following the tax increase, but rose from 1998 through 2000. During 2000, cigarette sales to certain Indian tribes, which had been exempted under state-Tribal tax agreements, ceased to be tax-exempt due to the termination of those agreements. A refund of the cigarette tax is available to retail vendors located within Indian Country for sales to resident tribal members within their tribe's Indian Country. Overall, exempt sales continue to account for less than two percent of all cigarette sales.

**Exhibit 2
Michigan Cigarette Tax Collections**



Source: Comprehensive Annual Financial Report, State of Michigan.

**Exhibit 3
Michigan Cigarette Tax Revenue as Share
of Total State Tax Revenue**



Source: Comprehensive Annual Financial Report, State of Michigan.

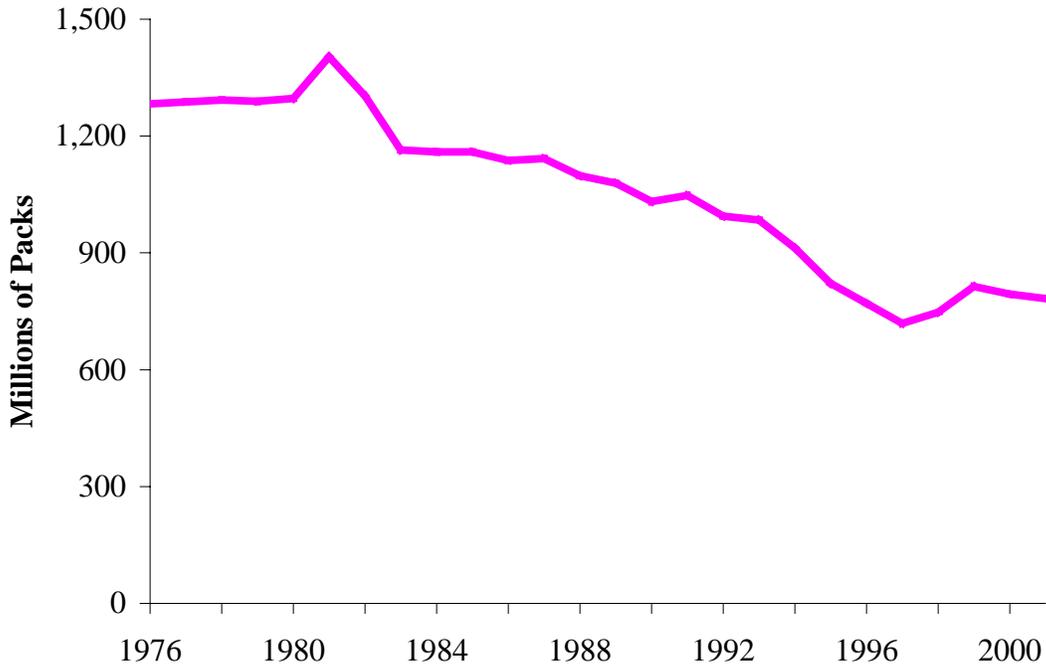
Exhibit 4
Cigarette Packs Sold Taxed

<u>Year</u>	<u>Average Retail Price</u>	<u>Percentage Change</u>	<u>Calculated Packs Sold Taxed (000s)</u>	<u>Percentage Change</u>	<u>Calculated Per Capita Packs Sold Taxed</u>	<u>Percentage Change</u>
1976	\$0.48	NA	1,282,342	NA	140.5	NA
1977	0.54	12.5	1,287,980	0.4	140.4	0.0
1978	0.57	5.6	1,292,369	0.3	140.2	-0.2
1979	0.60	5.3	1,288,926	-0.3	139.1	-0.8
1980	0.62	3.3	1,296,648	0.6	140.0	0.6
1981	0.68	9.7	1,403,370	8.2	152.4	8.9
1982	0.88	29.4	1,302,866	-7.2	142.9	-6.2
1983	0.97	10.2	1,164,348	-10.6	128.7	-10.0
1984	1.01	4.1	1,159,004	-0.5	128.1	-0.5
1985	1.06	5.0	1,159,389	0.0	127.7	-0.3
1986	1.11	4.7	1,137,513	-1.9	124.6	-2.4
1987	1.22	9.9	1,141,809	0.4	124.3	-0.3
1988	1.33	9.0	1,098,387	-3.8	119.1	-4.1
1989	1.44	8.3	1,078,853	-1.8	116.6	-2.1
1990	1.45	0.7	1,031,673	-4.4	111.0	-4.8
1991	1.77	22.1	1,047,111	1.5	111.5	0.5
1992	1.85	4.5	993,960	-5.1	105.0	-5.8
1993	1.63	-11.9	984,436	-1.0	103.4	-1.6
1994	2.24	37.4	912,267	-7.3	95.2	-7.9
1995	2.29	2.2	820,601	-10.0	84.9	-10.8
1996	2.34	2.2	766,580	-6.6	78.8	-7.3
1997	2.43	3.8	719,355	-6.2	73.6	-6.6
1998	2.61	7.5	745,417	3.6	75.9	3.2
1999	3.34	27.7	810,939	8.8	82.2	8.3
2000	3.46	3.5	794,464	-2.0	79.8	-2.9
2001	3.79	9.8	782,589	-1.5	78.3	-1.9
Annual Average Change 1976 - 2001		8.6%		-2.0%		-2.3%

Note: Average retail price are from Orzechowski and Walker and are based on a fiscal year ending June 30.

Source: Office of Revenue and Tax Analysis, Michigan Department of Treasury.
Population data are from U.S. Census Bureau.

**Exhibit 5
Annual Packs Sold Taxed**



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

**Exhibit 6
Sales of Exempt Cigarettes**

<u>Fiscal Year</u>	<u>Packs Sold to Military Bases</u>	<u>Packs Sold within Indian Reservations</u>	<u>Exempt Packs as % of Total Packs Sold</u>
1993	7,491,501	1,403,640	0.90
1994	8,694,980	1,502,142	1.1
1995	13,683,644	327,621	1.68
1996	12,418,214	367,470	1.63
1997	10,595,660	427,599	1.51
1998	7,427,600	2,758,591	1.34
1999	4,279,952	5,566,747	1.21
2000	2,972,757	**5,615,612	1.08
2001	2,672,872	**2,040,752	0.60

** Sales to retailers within Indian Country are no longer made before tax. Refunds of the cigarette tax may be claimed for sales to resident tribal members purchasing cigarettes within their tribe's Indian County. The figures above are provided for comparison purposes only.

CHAPTER 3

STATE COMPARISONS

National Cigarette Tax Trends

Effective January 1, 2002, the federal excise tax on cigarettes increased to 39 cents on each pack of cigarettes. In 2001, the federal excise tax on cigarettes raised (at 34 cents per pack) approximately \$7.1 billion (see Exhibit 7). Since 1976, national cigarette consumption has trended downward at an average annual rate of 1.5 percent per year, for an overall decline of 31.4 percent. However, nominal revenues increased by 190.4 percent over the same time period due to four tax increases. As discussed in Chapter 2, Michigan statistics tend to mirror these national trends of reduced consumption and higher tax collections.

State Cigarette Tax Trends

Tobacco taxes have become a popular source of revenue for many states. Most states (36) have increased their cigarette tax rate since 1990 and nearly all (44) have increased the tax since 1980 (see Exhibit 8). Many of these changes were substantial: 24 states have at least doubled their rates since 1990; and 15 states more than tripled their rates. The six states that did not increase their rates since 1980 are in the tobacco-producing region of the southeastern U.S.: Georgia, Kentucky, South Carolina, Tennessee, Virginia, and West Virginia. North Carolina, another large tobacco producer, increased its rate from 2 cents to 5 cents per pack.

By August 2002, Michigan will have the 5th highest cigarette excise tax in the nation. Exhibit 9 ranks the states by their 2002 cigarette tax rate and shows 2001 tax revenues in each state. Exhibit 10 presents a graphical presentation of 2002 rates. Michigan was third in the nation in cigarette tax collections (\$583.0 million at 75 cents per pack) for the 12-month period ending in June 2001. Only New York (\$1,002.4 million, at \$1.11 per pack), and California (\$1,110.7 million, at 87 cents per pack), raised more revenue from cigarette taxes. Both states have populations nearly double the size of Michigan's population.

Not surprisingly, higher cigarette taxes have resulted in a decline in taxed-cigarette sales in most states (see Exhibit 11). Between 1990 and 2001, the number of packs sold taxed aggregated over all states fell from 24.9 to 20.7 billion, a total reduction of 17.1 percent and an average annual decline of 1.7 percent per year.

Exhibit 7
National Cigarette Tax Trends

Year	Federal Tax Rate Per Pack (Cents)	Federal Revenues (Millions)⁽¹⁾	Consumption (Millions of Packs)	Percent Change in Consumption
1976	8.0	\$ 2,434.8	30,955.9	NA
1977	8.0	2,279.2	29,812.8	-3.7
1978	8.0	2,374.1	30,477.3	2.2
1979	8.0	2,356.1	30,755.9	0.9
1980	8.0	2,604.4	30,288.3	-1.5
1981	8.0	2,488.2	31,666.4	4.6
1982	8.0	2,496.1	31,611.8	-0.2
1983	8.0/16.0 ⁽²⁾	3,424.4	29,991.1	-5.1
1984	16.0	4,749.2	29,837.0	-0.5
1985	16.0	4,442.5	29,770.9	-0.2
1986	16.0	4,430.8	29,051.2	-2.4
1987	16.0	4,752.3	28,965.5	-0.3
1988	16.0	4,466.5	27,790.8	-4.1
1989	16.0	4,237.8	26,487.5	-4.7
1990	16.0	4,069.8	25,436.5	-4.0
1991	16.0/20.0 ⁽²⁾	4,754.6	25,376.5	-0.2
1992	20.0	5,043.0	25,215.7	-0.6
1993	20.0/24.0 ⁽²⁾	5,528.0	24,730.1	-1.9
1994	24.0	5,599.5	23,350.0	-5.6
1995	24.0	5,716.8	23,818.0	2.0
1996	24.0	5,679.1	23,660.0	-0.7
1997	24.0	5,743.4	23,929.2	1.1
1998	24.0	5,559.2	23,163.4	-3.2
1999	24.0	5,193.1	21,637.9	-6.6
2000	24.0/34.0 ⁽²⁾	6,230.3	21,325.0	-1.4
2001	34.0	7,071.8	21,250.0	-0.4
2002	39.0	NA	NA	NA
Annual Average Change 1976 - 2001		4.4%	-1.5%	

⁽¹⁾ Based on year ending June 30.

⁽²⁾ Rate changed during year.

Source: Orzechowski and Walker.

Exhibit 8
State Cigarette Tax Rate Trends

State	Tax Rate (Cents)			Change, 1980 - 2002	
	1980	1990	2002	Actual	Percent
Alabama	12.0	16.5	16.5	4.5	37.5
Alaska	8.0	29.0	100.0	92.0	1,150.0
Arizona	13.0	18.0	58.0	45.0	346.2
Arkansas	17.8	21.0	34.0	16.3	91.5
California	10.0	35.0	87.0	77.0	770.0
Colorado	10.0	20.0	20.0	10.0	100.0
Connecticut	21.0	40.0	111.0	90.0	428.6
Delaware	14.0	14.0	24.0	10.0	71.4
Florida	21.0	24.0	33.9	12.9	61.4
Georgia	12.0	12.0	12.0	0.0	0.0
Hawaii	14.0	42.0	100.0	86.0	614.3
Idaho	9.1	18.0	28.0	18.9	207.7
Illinois	12.0	30.0	98.0	86.0	716.7
Indiana	10.5	15.5	55.5	45.0	428.6
Iowa	13.0	31.0	36.0	23.0	176.9
Kansas	11.0	24.0	70.0	59.0	536.4
Kentucky	3.0	3.0	3.0	0.0	0.0
Louisiana	11.0	20.0	36.0	25.0	227.3
Maine	16.0	31.0	100.0	84.0	525.0
Maryland	10.0	13.0	100.0	90.0	900.0
Massachusetts	21.0	26.0	76.0	55.0	261.9
Michigan	11.0	25.0	125.0	114.0	1,036.4
Minnesota	18.0	38.0	48.0	30.0	166.7
Mississippi	11.0	18.0	18.0	7.0	63.6
Missouri	9.0	13.0	17.0	8.0	88.9
Montana	12.0	18.0	18.0	6.0	50.0
Nebraska	13.0	27.0	34.0	21.0	161.5
Nevada	10.0	35.0	35.0	25.0	250.0
New Hampshire	12.0	25.0	52.0	40.0	333.3
New Jersey	19.0	40.0	150.0	131.0	689.5
New Mexico	12.0	15.0	21.0	9.0	75.0
New York	15.0	39.0	150.0	135.0	900.0
North Carolina	2.0	2.0	5.0	3.0	150.0
North Dakota	12.0	30.0	44.0	32.0	266.7
Ohio	15.0	18.0	55.0	40.0	266.7
Oklahoma	18.0	23.0	23.0	5.0	27.8
Oregon	9.0	28.0	68.0	59.0	655.6
Pennsylvania	18.0	18.0	100.0	82.0	455.6
Rhode Island	18.0	37.0	132.0	114.0	633.3
South Carolina	7.0	7.0	7.0	0.0	0.0
South Dakota	14.0	23.0	33.0	19.0	135.7
Tennessee	13.0	13.0	13.0	0.0	0.0
Texas	18.5	41.0	41.0	22.5	121.6
Utah	10.0	23.0	69.5	59.5	595.0
Vermont	12.0	17.0	93.0	81.0	675.0
Virginia	2.5	2.5	2.5	0.0	0.0
Washington	16.0	34.0	142.5	126.5	790.6
West Virginia	17.0	17.0	17.0	0.0	0.0
Wisconsin	16.0	30.0	77.0	61.0	381.3
Wyoming	8.0	12.0	12.0	4.0	50.0
Average	12.7	23.0	56.0	43.3	339.5
Federal Tax	8.0	16.0	39.0	31.0	387.5

Sources: Orzechowski and Walker and Federation of Tax Administrators.

Exhibit 9
State Comparisons, 2002 Cigarette Tax

State	Tax Rate (Cents)⁽¹⁾	Rank	Revenues (Thousands)⁽²⁾
New Jersey	150.0	1	\$386,013
New York	150.0	1	1,002,382
Washington	142.5	3	236,705
Rhode Island	132.0	4	58,405
Michigan	125.0	5	583,023
Connecticut	111.0	6	115,057
Alaska	100.0	7	\$40,894
Hawaii	100.0	7	51,825
Maine	100.0	7	74,400
Maryland	100.0	7	197,729
Pennsylvania	100.0	7	320,872
Illinois	98.0	12	470,213
Vermont	93.0	13	24,574
California	87.0	14	1,110,692
Wisconsin	77.0	15	243,512
Massachusetts	76.0	16	263,926
Kansas	70.0	17	48,816
Utah	69.5	18	42,689
Oregon	68.0	19	157,910
Arizona	58.0	20	157,599
Indiana	55.5	21	109,982
Ohio	55.0	22	262,785
New Hampshire	52.0	23	87,461
Minnesota	48.0	24	172,522
North Dakota	44.0	25	19,774
Texas	41.0	26	480,842
Iowa	36.0	27	89,410
Louisiana	36.0	27	78,554
Nevada	35.0	29	61,181
Arkansas	34.0	30	82,485
Nebraska	34.0	30	39,227
Florida	33.9	32	419,705
South Dakota	33.0	33	18,587
Idaho	28.0	34	23,336
Delaware	24.0	35	26,358
Oklahoma	23.0	36	61,149
New Mexico	21.0	37	19,986
Colorado	20.0	38	58,145
Mississippi	18.0	39	44,970
Montana	18.0	39	11,750
Missouri	17.0	41	99,428
West Virginia	17.0	41	32,140
Alabama	16.5	43	62,504
Tennessee	13.0	44	74,197
Georgia	12.0	45	81,763
Wyoming	12.0	45	5,467
South Carolina	7.0	47	24,871
North Carolina	5.0	48	38,759
Kentucky	3.0	49	16,822
Virginia	2.5	50	15,093
Average/Total	56.0		\$8,206,489

(1) Includes enacted tax law changes through August 1, 2002.

(2) For fiscal year ending June 30, 2001.

Source: Orzechowski and Walker and Federation of Tax Administrators.

Exhibit 10
2002 State Cigarette Tax Rates (Cents Per Pack)*

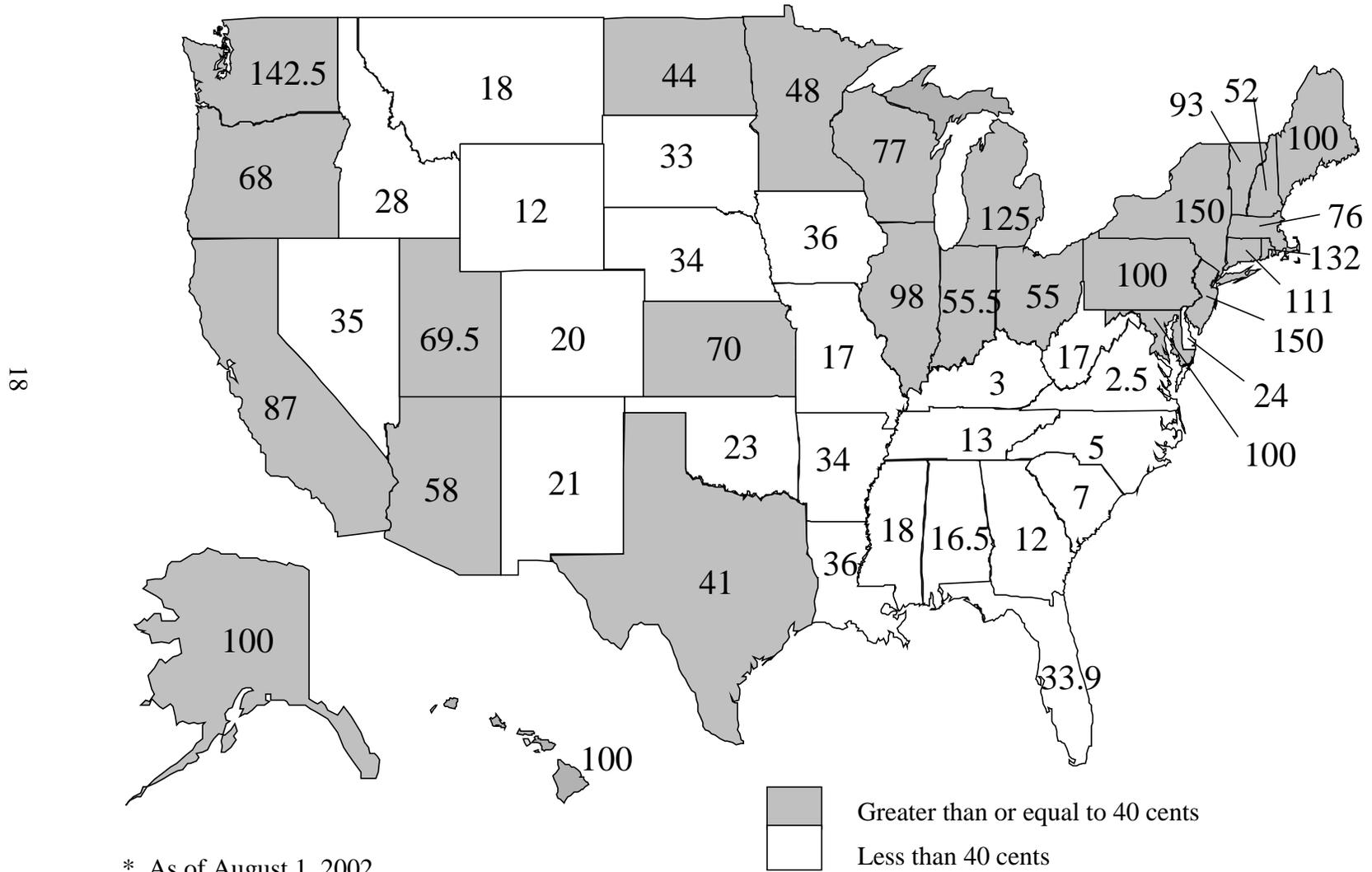


Exhibit 11
Taxed Cigarette Consumption Trends (Millions)

<u>State</u>	<u>1990 Packs Sold Taxed</u>	<u>2001 Packs Sold Taxed</u>	<u>Percent Change</u>
New York	1,689.9	910.7	-46.1
California	2,222.3	1,287.6	-42.1
Massachusetts	587.1	347.8	-40.8
New Jersey	763.9	485.8	-36.4
Maryland	479.6	307.8	-35.8
Maine	141.5	103.6	-26.8
Michigan	1,068.3	787.0	-26.3
Alaska	53.9	40.9	-24.1
Illinois	1,098.9	833.9	-24.1
Washington	385.9	295.8	-23.3
Connecticut	298.7	234.0	-21.7
Louisiana	453.3	371.5	-18.0
Rhode Island	101.1	83.3	-17.6
Nebraska	144.7	119.4	-17.5
Vermont	69.2	57.4	-17.1
Oregon	282.4	234.6	-16.9
North Dakota	52.9	45.0	-14.9
Pennsylvania	1,219.8	1,065.4	-12.7
Arizona	315.7	277.4	-12.1
Kansas	236.8	209.9	-11.4
Alabama	452.4	402.3	-11.1
Texas	1,449.0	1,294.7	-10.6
Kentucky	688.6	616.8	-10.4
New Mexico	108.8	97.7	-10.2
Ohio	1,258.3	1,135.8	-9.7
Wisconsin	463.2	419.4	-9.5
Florida	1,376.6	1,255.8	-8.8
North Carolina	876.1	806.1	-8.0
South Dakota	63.8	58.9	-7.7
Virginia	719.2	666.3	-7.4
Minnesota	392.5	365.0	-7.0
South Carolina	416.3	387.6	-6.9
Iowa	271.5	253.0	-6.8
Idaho	92.4	86.3	-6.6
Utah	91.7	86.3	-5.9
Hawaii	54.0	51.8	-4.1
Georgia	732.9	703.6	-4.0
Wyoming	47.5	45.9	-3.4
Montana	69.5	67.5	-2.9
Missouri	620.1	603.0	-2.8
Tennessee	602.6	588.9	-2.3
New Hampshire	171.7	168.2	-2.0
Mississippi	271.6	267.0	-1.7
Arkansas	275.5	271.8	-1.3
West Virginia	199.8	197.9	-1.0
Indiana	718.7	737.9	2.7
Colorado	294.5	302.9	2.9
Nevada	146.9	180.9	23.1
Oklahoma	293.3	373.0	27.2
Delaware	83.2	110.8	33.2
Total	24,968.1	20,701.9	-17.1

Source: Data from Orzechowski and Walker. Figures correspond to years ending June 30.

Cigarette Sales Prices

Due to the relatively high cigarette tax rate, the retail price of a pack of cigarettes in Michigan is also higher than average. In 2001, the average weighted retail price (including generics) of a pack of cigarettes in Michigan was \$3.79, 11th highest in the nation (see Exhibit 12). All of the 10 states with higher average retail prices have higher tax rates than Michigan. Conversely, states with the lowest tax rates tended to have the lowest prices (bottom of Exhibit 12). This simple comparison provides some evidence that most excise taxes on cigarette are passed on to the final consumer in the form of higher prices.

Lower tax rates also tended to be associated with higher per capita cigarette consumption. In 2001, Michigan ranked 25th in the nation in per capita consumption of taxed packs with an average of 79.2 packs consumed per year for every man, woman, and child in the state. As recently as 1994, consumption of taxed packs per capita was as high as 112.9 packs per year, and Michigan ranked 8th in consumption per capita. (Per capita figures are from Orzechowski and Walker to allow a comparison across states.)

The legal settlement reached between the major tobacco companies and 46 state attorneys general in November 1998 resulted in large and immediate increases in the price of cigarettes. The Consumer Price Index (CPI) for cigarettes, published by the U.S. Bureau of Labor Statistics, increased by almost 19 percent between November and December 1998. By December 1999, the index had increased by 32.5 percent. As discussed in Chapter 4, it appears this large increase in the price of cigarettes may have led to a decline in the prevalence of smoking.

Exhibit 13 presents the effect state excise taxes have on cigarette prices. The group of states to the left of the exhibit represents states with the highest prices, while the group to the right represents states with the lowest prices. This graph shows that state taxes are an important force behind the differences in cigarette prices between states, with the other components resulting in only minimal interstate variation. This provides additional support for the assumption that taxes on cigarettes are passed on to the final consumer.

Exhibit 14 presents the composition of the final retail price of a pack of cigarettes in Michigan throughout the 1990s. Two-thirds of the 99-cent price increase that occurred between 1990 and 1997 was due to state and federal tax increases. The large price increase in 1999 followed immediately after the tobacco settlement in November 1998. The change in price due to the tobacco settlement was estimated by dividing the payment that Michigan received during the year by the number of taxable packs that were sold in Michigan. This provides additional evidence that cigarette tax increases, and legal settlements for product liability, are passed on to the consumer in the form of higher prices.

From the early 1970s, taxes have generally comprised a declining portion of the retail price of cigarettes, as shown in Exhibit 15. As recently as 1967, taxes comprised 50 percent of the retail price for a pack of cigarettes in Michigan. Throughout the 1970s and 1980s, taxes, as a percentage of the retail price, have declined consistently, reaching a low of 24.4 percent in 1993. The trend for the U.S. as a whole follows a similar path as Michigan. Factors other than taxes (for example,

production costs, litigation and regulatory expenses, or profits) have comprised an increasing share of the final retail price. With the passage of Proposal A in 1994 and the subsequent increase in the cigarette tax, taxes made-up more than 40 percent of the retail price of cigarettes once again. The downward trend resumed after 1994. This increase the non-tax component of the retail is shown in Exhibit 16.

The rapid increase in non-tax payments as a percentage of the retail price from 1998 through 2001 may be misleading. The tobacco settlement resulted in large price increases that, while not formally a tax increase, were the result of lawsuits filed by state governments. The cost of this litigation includes the actual payments made by the tobacco companies to the states, as well as other costs necessary to comply with the provisions of the agreement that are not as easy to quantify. However, even after excluding the impact of tax increases and the explicit payments required by the tobacco settlement.

The price of cigarettes not including taxes, but including any price increase associated with the tobacco settlement, increased from about \$1.17 in 1995 to \$2.49 per pack in 2001 (112.1 percent). During this same period, inflation as measured by the Detroit CPI increased 17.4 percent.

Other Tobacco Products

In addition to taxing cigarettes, most states also tax other tobacco products (see Exhibit 17). Other tobacco products include cigars, chewing tobacco, snuff, and tobacco sold separately for rolling cigarettes. However, instead of levying an excise tax, the tax is typically levied as a percentage of the wholesale price. Revenues from taxes on other tobacco products rarely account for more than 10 percent of total tobacco taxes in any state. Michigan is no exception. For 2001, other tobacco revenues totaled approximately \$16.1 million and accounted for 2.7 percent of total Michigan tobacco tax revenues, 7th lowest among states taxing other tobacco products.

The Michigan tax on other tobacco products will increase from 16 percent of the wholesale price to 20 percent, effective August 1, 2002. The increase in the tax rate for other tobacco products (25 percent) is less than the increase in the cigarette tax (67 percent). Consequently, revenues from the tax on other tobacco products will remain very small in comparison to the revenues raised by the cigarette tax.

Exhibit 17 also provides smokeless tobacco usage rates for both men and women over the age of 18. For all states, men use smokeless tobacco at a rate roughly 10 times that of women. For Michigan, the difference is even greater: approximately 2.8 percent of men use smokeless tobacco, while only 0.1 percent of women use it.

Exhibit 12
2001 Cigarette Prices and Sales, Ranking by Tax Rate

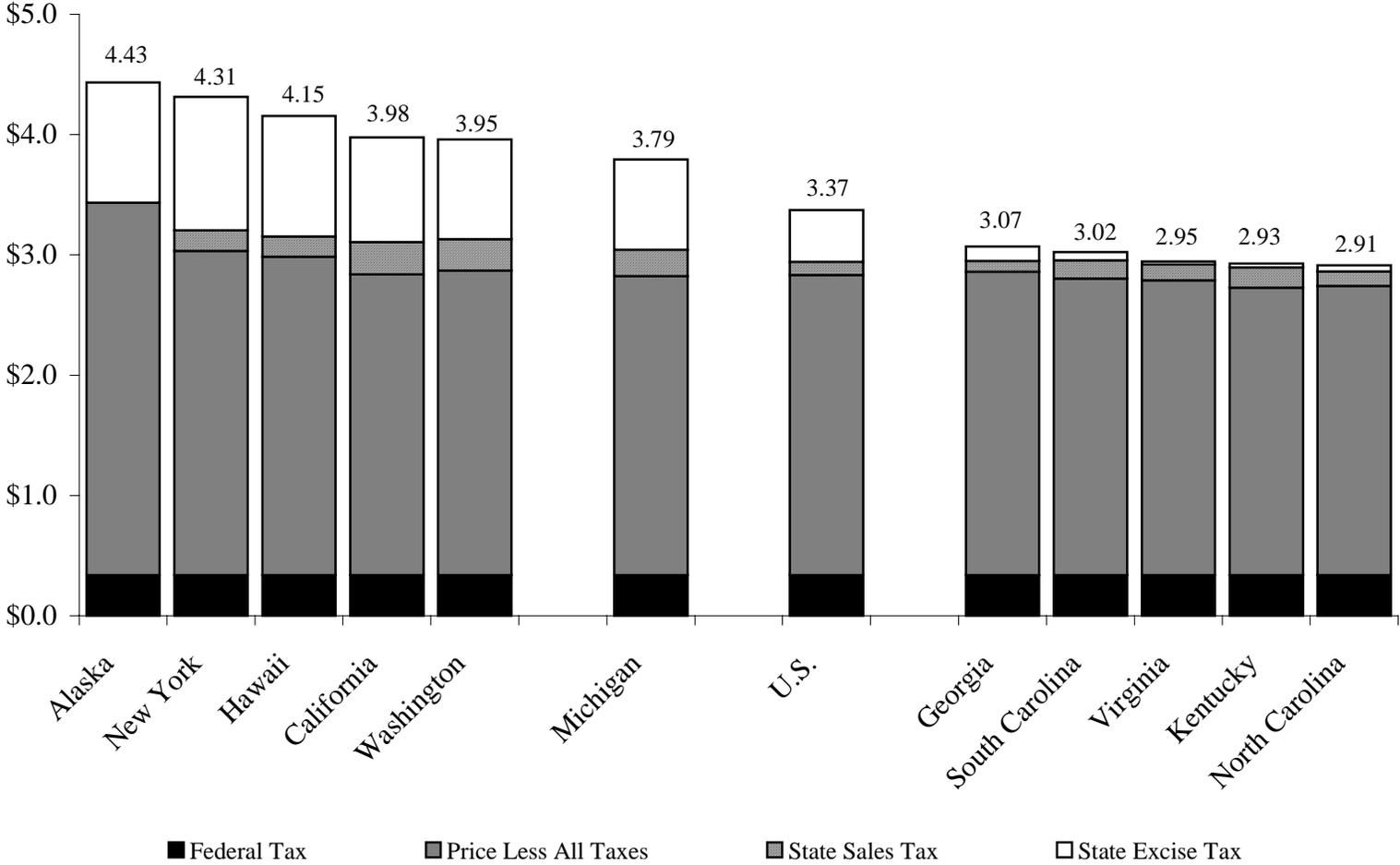
<u>State</u>	<u>2002 State Excise Tax</u>	<u>Weighted Avg. Retail Price⁽¹⁾</u>	<u>Rank by Price</u>	<u>Per Capita Sales (Packs)⁽²⁾</u>	<u>Rank by Per Capita Sales</u>
New Jersey	\$1.50	3.80	10	57.7	42
New York	1.50	4.31	2	48.0	47
Washington	1.43	3.95	6	50.2	46
Rhode Island	1.32	3.87	8	79.5	24
Michigan	1.25	3.79	11	79.2	25
Connecticut	1.11	3.55	16	68.7	35
Alaska	1.00	4.43	1	65.2	39
Hawaii	1.00	4.15	3	42.8	48
Maine	1.00	3.93	7	81.2	23
Maryland	1.00	3.70	12	58.1	41
Pennsylvania	1.00	3.20	30	86.8	19
Illinois	0.98	3.49	18	67.1	37
Vermont	0.93	3.55	15	94.3	13
California	0.87	3.98	5	38.0	50
Wisconsin	0.77	3.85	9	78.2	27
Massachusetts	0.76	3.99	4	54.8	43
Kansas	0.70	3.00	46	78.1	28
Utah	0.70	3.36	21	38.7	49
Oregon	0.68	3.62	13	68.6	36
Arizona	0.58	3.61	14	54.1	44
Indiana	0.56	3.02	45	121.4	4
Ohio	0.55	3.10	36	100.0	11
New Hampshire	0.52	3.53	17	136.1	3
Minnesota	0.48	3.48	19	74.2	31
North Dakota	0.44	3.38	20	70.1	33
Texas	0.41	3.27	26	62.1	40
Iowa	0.36	3.20	30	86.5	20
Louisiana	0.36	3.12	34	83.1	22
Nevada	0.35	3.22	28	90.5	17
Arkansas	0.34	3.30	23	101.7	9
Nebraska	0.34	3.28	24	69.8	34
Florida	0.34	3.32	22	78.6	26
South Dakota	0.33	3.28	25	78.1	28
Idaho	0.28	3.05	42	66.7	38
Delaware	0.24	3.17	32	141.4	2
Oklahoma	0.23	3.14	33	108.1	6
New Mexico	0.21	3.20	29	53.7	45
Colorado	0.20	3.06	41	70.4	32
Mississippi	0.18	3.09	38	93.9	15
Montana	0.18	3.09	37	74.8	30
Missouri	0.17	3.04	43	107.8	7
West Virginia	0.17	2.94	48	109.4	5
Alabama	0.17	3.23	27	90.5	17
Tennessee	0.13	3.07	39	103.5	8
Georgia	0.12	3.07	40	85.9	21
Wyoming	0.12	3.10	35	92.9	16
South Carolina	0.07	3.02	44	96.6	12
North Carolina	0.05	2.91	50	100.1	10
Kentucky	0.03	2.93	49	152.6	1
Virginia	0.03	2.95	47	94.1	14
US Average	\$0.35	\$3.37		81.8	

⁽¹⁾ As of November 1, 2001, and includes generic brands.

⁽²⁾ Per capita sales are as of June 30, 2001.

Source: Orzechowski and Walker.

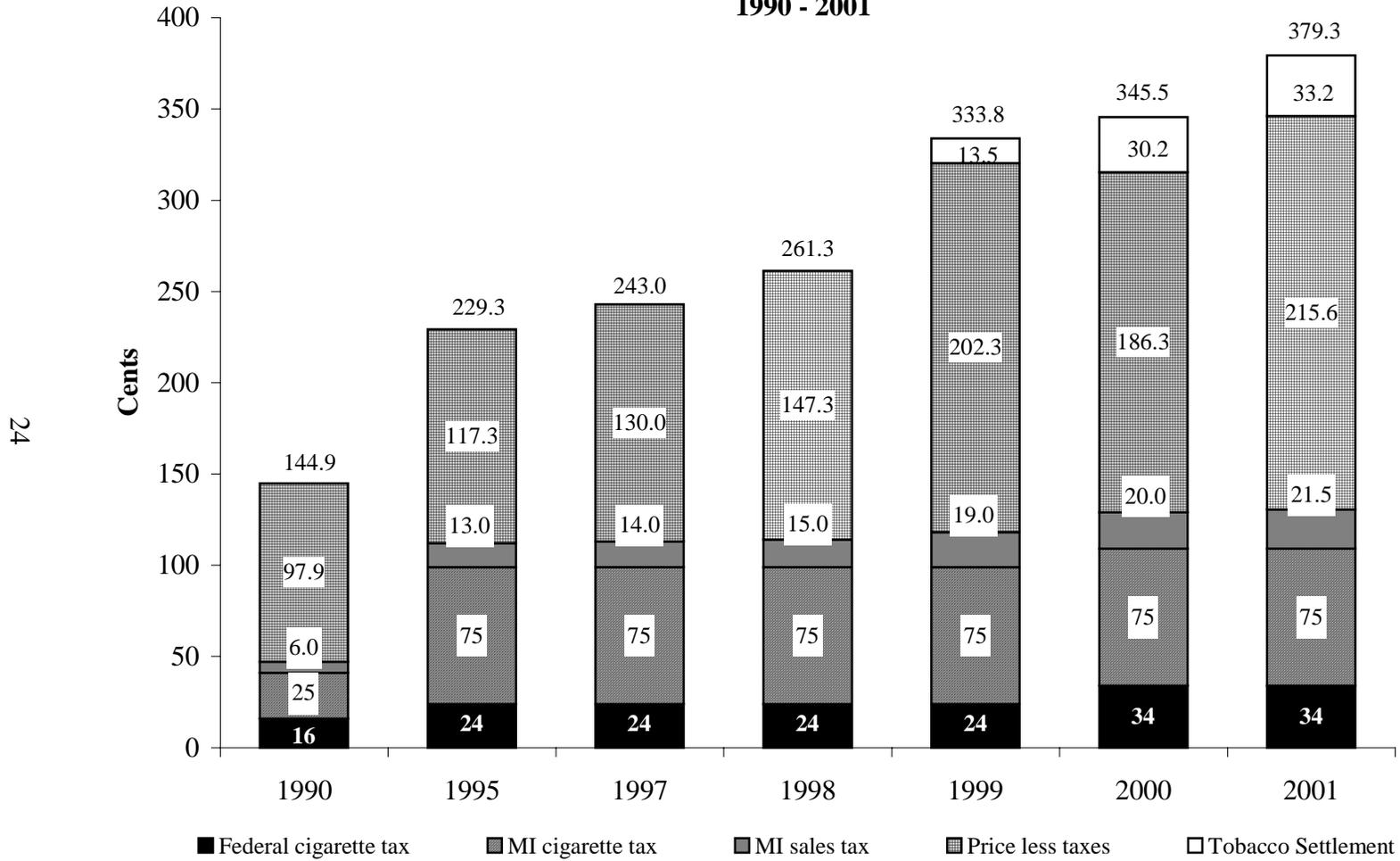
Exhibit 13
2001 Weighted Average Retail Price, Selected States



23

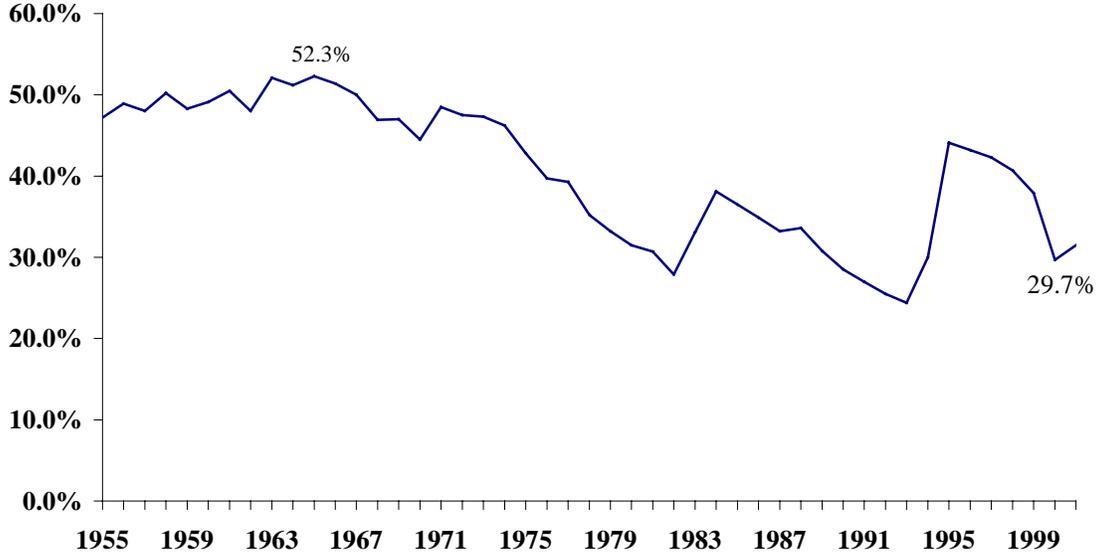
Source: Orzechowski and Walker.

Exhibit 14
Composition of Price of Cigarettes in Michigan
1990 - 2001



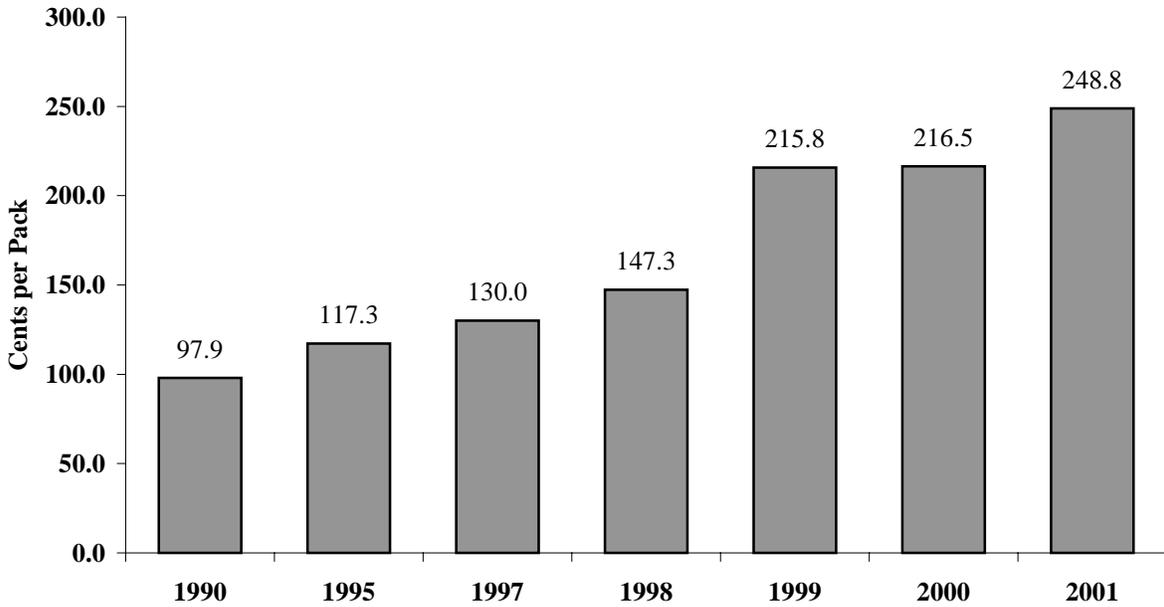
Source: Orzechowski and Walker.

Exhibit 15
Federal and State Cigarette Taxes
as Percentage of Michigan Retail Price



Source: Orzechowski and Walker.

Exhibit 16
Price of Cigarettes in Michigan
Net of Taxes



Derived from data published by Orzechowski and Walker.

Exhibit 17
Other Tobacco Products Tax Revenue, FY 2001

State	Net Collections (000's)	Percent of Tobacco Taxes From OTP	Smokeless Tobacco Tax Rate	Smokeless Tobacco Use	
				Men Over 18	Women Over 18
Alabama	\$2,590.1	3.8	0.75 cents/oz. ⁽¹⁾	7.3	1.4
Alaska	5,454.5	11.8	75.0 %	5.5	0.4
Arizona	3,480.1	2.1	6.5 cents/oz. ⁽¹⁾	3.3	0.1
Arkansas	13,094.0	13.3	23.0 %	10.4	1.4
California	51,306.2	4.4	52.7 %	1.4	0.1
Colorado	9,746.6	13.9	20.0 %	4.9	0.1
Connecticut	4,464.8	3.7	20.0 %	0.9	0.1
Delaware	949.9	3.4	15.0 %	1.7	0.1
Florida	22,527.3	5.2	25.0 %	2.1	0.1
Georgia	5,349.2	6.0	NA	6.2	1.8
Hawaii	3,118.4	5.7	40.0 %	0.5	0.0
Idaho	4,643.2	16.1	40.0 %	6.8	0.2
Illinois	17,217.0	3.5	18.0 %	1.9	0.1
Indiana	12,258.6	9.8	15.0 %	4.0	0.0
Iowa	6,658.9	6.8	22.0 %	5.1	0.1
Kansas	3,869.6	7.2	10.0 %	8.0	0.1
Kentucky	NA	NA	NA	7.9	0.5
Louisiana	13,649.9	14.0	NA	7.1	0.6
Maine	3,140.0	4.0	62.0 %	2.4	0.0
Maryland	4,983.1	2.4	15.0 %	1.7	0.0
Massachusetts	6,585.9	2.4	75.0 %	0.5	0.0
Michigan	16,120.0	2.7	16.0 %	2.8	0.1
Minnesota	16,134.1	8.4	35.0 %	4.7	0.2
Mississippi	10,645.7	18.1	15.0 %	8.2	1.0
Missouri	8,723.6	7.8	10.0 %	4.2	0.2
Montana	2,082.9	14.6	12.5 %	12.1	0.1
Nebraska	3,161.4	7.2	NA	4.6	0.3
Nevada	5,602.8	8.1	30.0 %	2.4	0.2
New Hampshire	499.0	0.6	16.5 %	1.6	0.0
New Jersey	14,106.7	3.5	48.0 %	0.7	0.1
New Mexico	3,931.0	16.1	25.0 %	5.7	0.5
New York	21,085.0	2.0	20.0 %	0.9	0.0
North Carolina	3,521.6	8.3	2.0 %	6.4	2.0
North Dakota	2,057.4	9.4	16 cents/oz. ⁽¹⁾	7.7	0.3
Ohio	23,385.4	8.1	17.0 %	4.1	0.2
Oklahoma	13,517.0	17.5	30.0 %	8.6	0.3
Oregon	20,930.1	11.6	65.0 %	5.7	0.1
Pennsylvania	NA	NA	NA	3.9	0.1
Rhode Island	1,240.4	2.1	30.0 %	0.3	0.0
South Carolina	3,231.2	11.1	5.0 %	3.8	0.5
South Dakota	1,180.0	5.7	10.0 %	6.6	0.3
Tennessee	7,084.8	8.5	6.0 %	8.2	1.0
Texas	55,551.3	10.1	35.2 %	5.6	0.3
Utah	4,640.5	9.4	35.0 %	3.8	0.0
Vermont	2,153.2	7.9	41.0 %	2.9	0.0
Virginia	NA	NA	NA	4.6	0.2
Washington	25,689.5	9.7	129.4 %	4.3	0.0
West Virginia	NA	NA	7.0 %	15.6	0.6
Wisconsin	11,356.5	4.4	25.0 %	3.7	0.1
Wyoming	1,411.1	20.4	12.0 %	12.8	0.3
Total/National	\$474,129.6	5.6	19.5 cents/lb.⁽¹⁾	4.5	0.1

⁽¹⁾ Chewing tobacco.

Sources: Orzechowski & Walker; Bureau of Alcohol, Tobacco, and Firearms; and the Centers for Disease Control and Prevention.

CHAPTER 4

THE ECONOMICS OF CIGARETTE TAXATION

When cigarettes and tobacco products are taxed, smokers most likely “bear the burden” of the tax, i.e., they ultimately pay most of the tax. This is referred to as the incidence of taxation. In the case of cigarettes, wholesalers must technically pay or remit the tax to the state, but consumers bear most of the cigarette tax burden through higher prices. Undoubtedly, some of the burden of cigarette taxes is borne by cigarette producers (tobacco farmers, cigarette manufacturers, and sales agents). As higher prices reduce cigarette sales, the profits of those involved in cigarette production decline. However, the small decline in cigarette consumption, when compared with recent price increases, point to the consumer bearing much of the burden of the tax.

Given that smokers pay most of the cigarette tax, a number of interesting questions arise. Who is the typical smoker in both Michigan and the United States? How does the cigarette tax burden change with education and income levels? Answers to these and related questions are addressed in this chapter.

Incidence of the Cigarette Tax: Who Pays?

Statistics used in this section are derived from two basic sources. The primary source is *State Tobacco Control State Highlights 2002: Impact and Opportunity*, published by the Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services. The data for this publication are obtained using the 2000 Behavioral Risk Factor Surveillance System, a random national survey. A smoker is defined as people who have smoked at least 100 cigarettes during their lifetimes and who currently smoke at least some days.

The second source is *Health Risk Behaviors, 2000* (referred to as the Michigan Survey) compiled by the Michigan Department of Community Health. In general, data from the Michigan Survey support the data released by the U.S. Department of Health and, in certain instances, are able to provide greater detail on the demographic characteristics of smokers. Both sources are used to identify the demographic groups with higher probabilities of smoking.

Smoking and Gender

National and state data show that the prevalence of smoking is higher among males. For the entire U.S. in 2000, it was estimated that approximately 23.3 percent of all adults were current smokers (see Exhibit 18). Nationally, adult men tended to smoke at higher rates (24.5 percent) than women (21.2 percent).

The data illustrate that Michigan residents, especially males, are more likely to smoke than the average U.S. resident. For 2000, the Michigan data from the CDC indicate that approximately 24.2

percent of Michigan adults were current smokers. Again, men smoked at a higher rate (26.0 percent) than women (22.5 percent). The results of the Michigan Survey are similar. The survey found the male smoking rate was 26.4 percent and the female rate was 21.9 percent.

Smoking and Race

According to the CDC, there is no significant difference nationally in smoking rates by race (see Exhibits 19 and 21). For 2000, the median smoking rate for the entire U.S. was between 23.0 and 23.3 percent across racial groups. Though not shown in the table, the smoking rate for Asian/Pacific Islanders (13.4 percent) was the lowest while the rate for American Indian/Alaska Natives (34.5 percent) was the highest.

Michigan's rates were higher than the national averages for all races. For 2000, smoking rates among Michigan adults also varied across racial groups. Blacks were the racial group with the highest smoking rate, at 29.5 percent. Hispanics were next at 26.4 percent, with 23.8 percent of whites reported as current smokers. The Michigan Survey found that 22.8 percent of whites, and 30.9 percent of blacks were smokers in 2000. These estimates are similar to the Michigan estimates from the CDC for these two groups.

Smoking and Education Levels

In general, there is a negative correlation between education levels and smoking rates (see Exhibits 20 and 22). Americans with more than 12 years of education, i.e., attended at least some college, are less likely to smoke (17.5 percent) than those with less than 12 years of education (30.1 percent). The average smoking rates for Americans who obtain a high school diploma (complete 12 years of education) is 26.6 percent, also lower than the rates for those who never finished high school.

The CDC data for Michigan show that, for residents who did not finish high school, approximately 37.4 percent were considered current smokers in 2000. This estimate is 7.3 percentage points above the national average for this group. For residents with 12 years of education, 27.8 percent were current smokers. This is much closer to the national average than the rate for Michigan residents who did not finish high school. Again, there was a decline in smoking rates for those whose education went beyond the high-school level. Only 18.1 percent of residents with more than 12 years of education were current smokers in 2000.

For 2000, the Michigan Survey found that college graduates were far less likely to smoke (10.8 percent) than their counterparts who started college and did not finish (25.3 percent). High school graduates were also less likely to smoke (30.0 percent) compared to Michigan residents who did not finish high school (35.8 percent). Although there is some variation between the national data for Michigan and the Michigan Survey, both indicate that Michigan residents are more likely to smoke than the average U.S. resident. The difference between the U.S. and Michigan declines with higher levels of educational attainment.

Exhibit 18
Cigarette Smoking Rates Among Adults, 2000

<u>State</u>	<u>Overall</u>	<u>Rank</u>	<u>Men</u>	<u>Women</u>
Kentucky	30.5	1	33.4	27.9
Nevada	29.1	2	28.7	29.5
Missouri	27.2	3	30.1	24.6
Indiana	27.0	4	28.5	25.5
Ohio	26.3	5	26.7	26.0
North Carolina	26.1	6	28.4	24.1
West Virginia	26.1	6	27.8	24.7
Tennessee	25.7	8	27.7	23.8
New Hampshire	25.4	9	26.9	23.9
Alabama	25.3	10	29.0	22.0
Arkansas	25.2	11	26.2	24.2
Alaska	25.0	12	26.8	23.1
South Carolina	24.7	13	28.5	21.3
Pennsylvania	24.3	14	25.4	23.3
Michigan	24.2	15	26.0	22.5
Louisiana	24.1	16	26.7	21.8
Wisconsin	24.1	16	24.4	23.9
Maine	23.8	18	24.6	23.1
Wyoming	23.8	18	23.2	24.3
Georgia	23.6	20	26.5	21.0
New Mexico	23.6	20	26.2	21.2
Mississippi	23.5	22	25.3	21.9
Rhode Island	23.5	22	23.8	23.2
Iowa	23.3	24	25.9	20.9
North Dakota	23.3	24	25.9	20.7
Oklahoma	23.3	24	23.7	23.0
Florida	23.2	27	24.5	22.1
Delaware	23.0	28	25.8	20.3
Idaho	22.4	29	22.9	21.9
Illinois	22.3	30	24.9	20.0
South Dakota	22.0	31	22.6	21.4
Texas	22.0	31	25.3	18.8
New York	21.6	33	22.5	20.9
Vermont	21.5	34	21.8	21.2
Virginia	21.5	34	24.4	18.8
Nebraska	21.4	36	22.1	20.7
Kansas	21.1	37	24.2	18.2
New Jersey	21.0	38	23.5	18.6
Oregon	20.8	39	22.3	19.3
Washington	20.7	40	21.7	19.7
Maryland	20.6	41	22.0	19.2
Colorado	20.1	42	19.5	20.6
Connecticut	20.0	43	20.5	19.5
Massachusetts	20.0	43	20.2	19.8
Minnesota	19.8	45	20.7	18.9
Hawaii	19.7	46	22.9	16.5
Montana	18.9	47	18.0	19.7
Arizona	18.6	48	18.4	18.8
California	17.2	49	20.0	14.4
Utah	12.9	50	14.5	11.4
US Median	23.3		24.5	21.2

Source: *Tobacco Control State Highlights 2002: Impact and Opportunity*.
Centers for Disease Control and Prevention.

Exhibit 19
Percentage of Adults Smoking Cigarettes by Race, 1999 - 2000

<u>State</u>	<u>White</u>	<u>Black</u>	<u>Hispanic</u>
Alabama	25.4	18.1	36.1
Alaska	23.9	24.3	17.9
Arizona	21.8	19.6	12.7
Arkansas	26.5	21.3	25.2
California	18.4	23.4	16.8
Colorado	20.8	28.5	23.0
Connecticut	21.3	23.7	22.6
Delaware	23.8	24.9	23.1
Florida	23.7	16.8	17.1
Georgia	26.1	17.3	26.5
Hawaii	19.7	7.9	24.9
Idaho	21.5	NA	20.4
Illinois	24.2	22.1	20.5
Indiana	26.6	27.5	23.0
Iowa	22.7	30.5	38.3
Kansas	21.1	19.5	19.5
Kentucky	30.4	26.4	30.9
Louisiana	25.4	19.6	25.4
Maine	23.0	NA	21.9
Maryland	20.7	21.5	17.9
Massachusetts	19.6	22.8	20.3
Michigan	23.8	29.5	26.4
Minnesota	19.2	15.9	23.5
Mississippi	24.7	18.5	28.0
Missouri	27.0	27.1	34.3
Montana	18.2	NA	27.8
Nebraska	21.6	23.6	21.7
Nevada	29.6	34.6	27.2
New Hampshire	23.5	NA	30.2
New Jersey	21.0	23.2	20.6
New Mexico	23.7	32.8	23.3
New York	22.6	22.2	18.9
North Carolina	25.8	24.1	35.3
North Dakota	21.9	NA	NA
Ohio	27.0	25.6	29.2
Oklahoma	24.3	18.3	28.5
Oregon	20.6	39.0	19.5
Pennsylvania	23.4	26.9	26.5
Rhode Island	23.2	27.5	19.6
South Carolina	26.3	18.7	21.2
South Dakota	21.0	NA	32.8
Tennessee	26.0	21.0	20.2
Texas	23.0	20.9	20.8
Utah	13.0	NA	17.1
Vermont	21.3	NA	23.0
Virginia	21.4	22.5	20.0
Washington	21.4	23.4	22.8
West Virginia	26.6	29.7	26.6
Wisconsin	23.3	27.3	28.6
Wyoming	23.3	NA	26.8
US Median	23.2	23.3	23.0

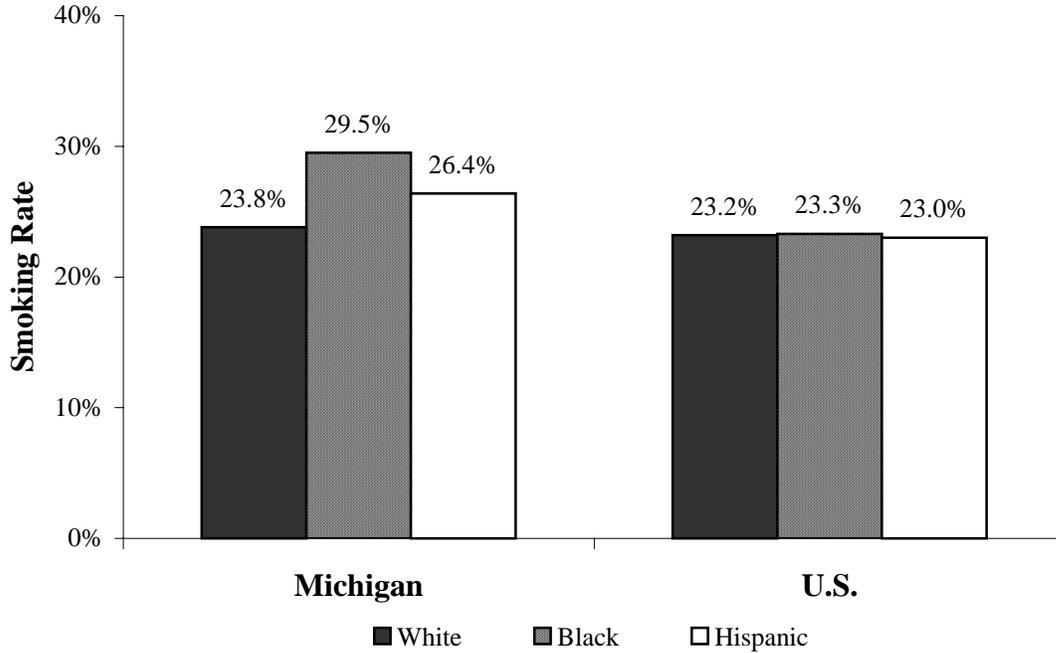
Source: *Tobacco Control State Highlights 2002: Impact and Opportunity*.
Centers for Disease Control and Prevention.

Exhibit 20
Percentage of Adults Smoking Cigarettes by Education Level, 2000

<u>State</u>	<u>Less Than 12 Years</u>	<u>12 Years</u>	<u>More Than 12 Years</u>
Alabama	33.4	24.8	20.2
Alaska	49.5	31.7	17.6
Arizona	22.2	24.9	13.8
Arkansas	29.2	27.8	20.5
California	19.3	22.9	14.0
Colorado	33.7	25.5	14.8
Connecticut	26.2	25.3	14.0
Delaware	41.9	28.5	15.7
Florida	30.1	27.1	18.7
Georgia	29.5	29.5	16.1
Hawaii	21.4	26.2	14.9
Idaho	38.2	28.2	15.8
Illinois	30.1	25.6	17.5
Indiana	40.7	28.6	20.0
Iowa	34.8	24.3	16.8
Kansas	32.4	25.5	16.0
Kentucky	35.6	32.4	24.0
Louisiana	28.3	26.6	18.7
Maine	29.0	28.8	16.2
Maryland	30.4	28.1	14.6
Massachusetts	27.5	24.9	15.2
Michigan	37.4	27.8	18.1
Minnesota	15.9	25.9	15.1
Mississippi	29.7	22.4	18.8
Missouri	34.3	32.2	20.3
Montana	31.2	23.6	15.0
Nebraska	26.2	21.7	16.6
Nevada	45.6	30.9	23.0
New Hampshire	40.2	31.2	17.9
New Jersey	24.6	26.2	16.9
New Mexico	28.4	26.3	19.4
New York	22.5	24.5	17.5
North Carolina	29.9	29.6	19.2
North Dakota	19.4	27.8	18.1
Ohio	37.4	31.0	18.2
Oklahoma	28.1	26.3	18.6
Oregon	31.5	25.5	15.4
Pennsylvania	28.0	28.3	17.9
Rhode Island	27.2	25.7	18.6
South Carolina	30.7	26.0	20.6
South Dakota	24.7	25.3	17.2
Tennessee	29.8	29.4	19.5
Texas	24.8	26.1	17.6
Utah	31.0	19.4	7.7
Vermont	28.4	24.9	14.1
Virginia	28.9	27.2	15.9
Washington	31.9	29.0	15.1
West Virginia	33.4	29.8	17.5
Wisconsin	32.1	27.2	17.0
Wyoming	37.7	27.7	18.6
US Median	30.1	26.6	17.5

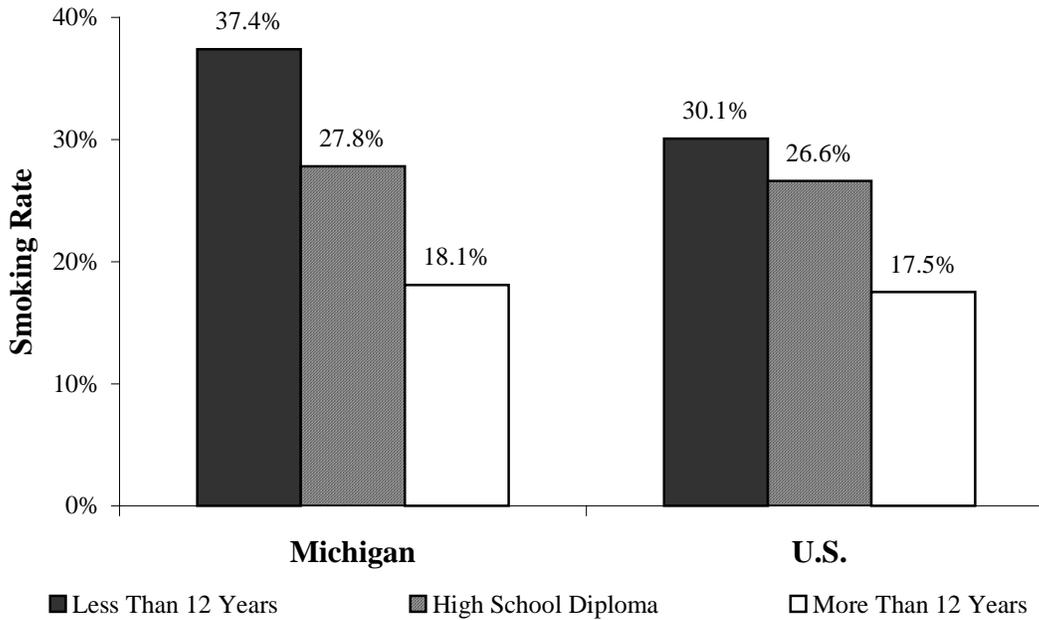
Source: *Tobacco Control State Highlights 2002: Impact and Opportunity*.
Centers for Disease Control and Prevention.

Exhibit 21
Smoking Rates by Race, 1999 – 2000



Source: *Tobacco Control State Highlights 2002*, CDC.

Exhibit 22
Smoking Rates by Education Level, 2000



Source: *Tobacco Control State Highlights 2002*, CDC.

Smoking and Age

Not surprisingly, smoking rates also vary by age group (see Exhibit 23). The following estimates from the CDC show the percentage of current smokers for both the U.S. and Michigan by age group:

<u>Age Group</u>	<u>United States (2000)</u>	<u>Michigan (2000)</u>
18 - 24 years of age	31.1%	30.0%
25 - 44 years of age	27.1	29.9
45 - 64 years of age	22.4	22.5
Older than 65 years	9.8	9.6

The differences between Michigan and the U.S. occur in the 18-25 and 25-44 age groups. The percentage of younger adults (18-24) who smoke is smaller in Michigan. However, the Michigan percentage remains unchanged as Michigan residents move into middle age (25-44), while the national number declines significantly.

Once more, the Michigan Survey tends to corroborate these findings. For 2000, the Michigan Survey found the following smoking rates for Michigan residents: 28.7 percent for 18 to 24 year olds, 28.9 percent for 25 to 34 year olds, 30.3 percent for 35 to 44 year olds, 24.2 percent for 45 to 54 year olds, 19.7 percent for 55 to 64 year olds, 12.4 percent for 65 to 74 year olds, and 6.4 percent for residents over 75 years of age.

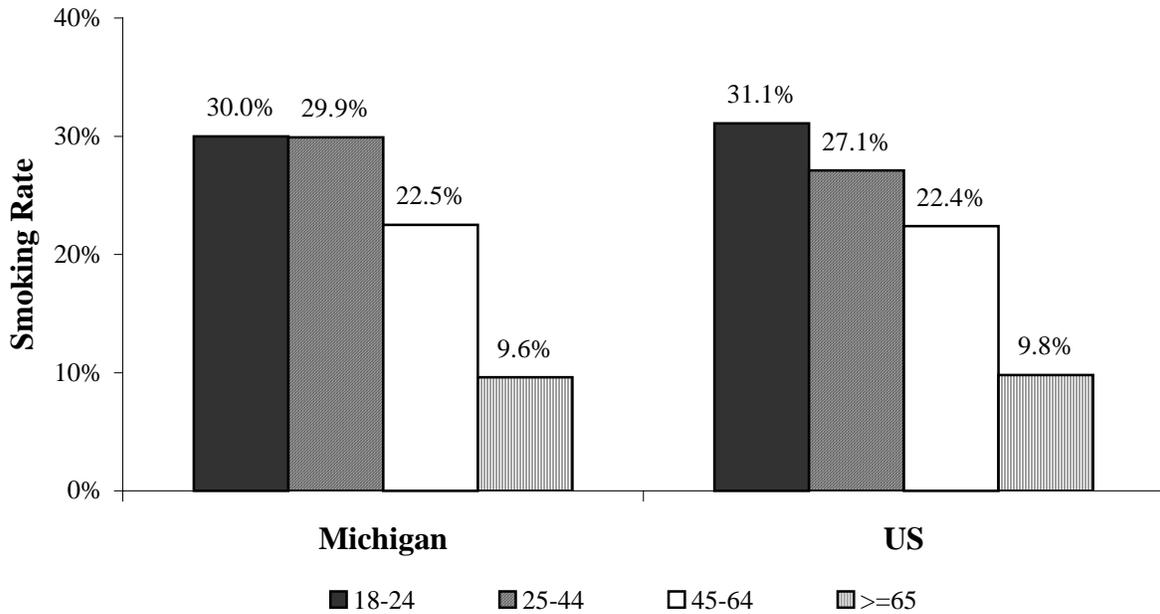
While they were not included in the statistics discussed above, younger smokers (below 18 years of age) have been the focus of considerable research. The CDC reports that for 2000, 28.0 percent of adolescents in grades 9-12 nationwide smoked cigarettes in the past month, while 34.5 percent report using any tobacco products. Michigan teenagers in grades 9-12 report slightly lower usage rates, with 27.6 percent smoking cigarettes in the past month, while 34.1 percent report using some tobacco product. Among high-school students nationwide, cigarette smoking rose during the early 1990s, appears to have peaked in 1997, and declined sharply by 2001.³ The steep price increases that have followed recent tax increases and the national tobacco settlement have likely contributed to this sharp decline.

Cigarette tax policy may have a greater impact on adolescents than adults. Teenagers have presumably smoked for a shorter period of time and have less disposable income to spend on cigarettes. As a result, they may be more responsive to price increases which use up a greater percentage of their income. However, younger smokers are also more likely to be influenced by non-

³Centers for Disease Control and Prevention. "Trends in Cigarette Smoking Among High School Students – United States, 1991 – 2001." *Morbidity and Mortality Weekly Report* 2002; 51: 409 – 412.

monetary considerations, e.g., peer pressure, advertising campaigns, and parental behavior, any or all of which may offset price considerations.

Exhibit 23
Smoking Rates by Age Group, 2000



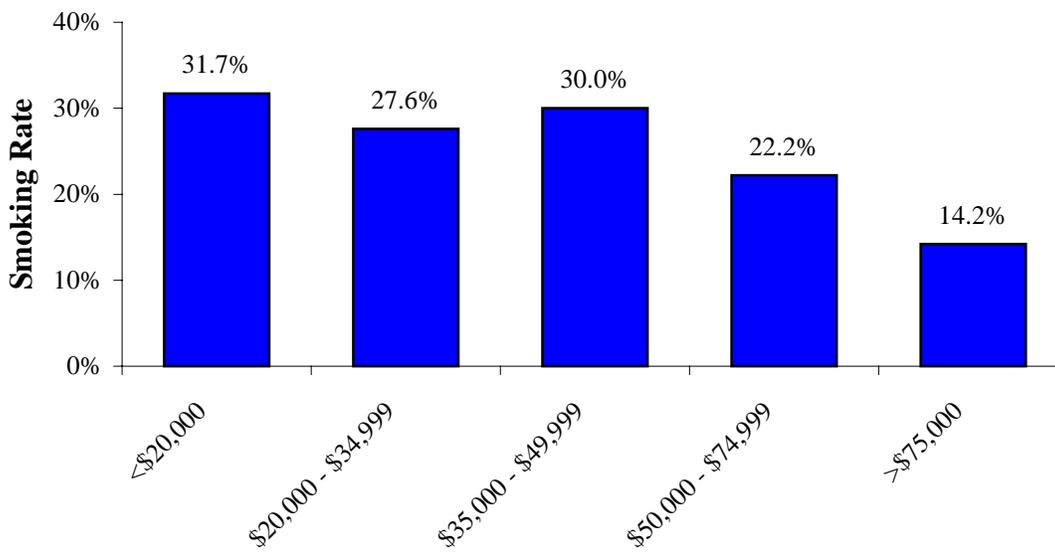
Source: *Tobacco Control State Highlights 2002*, CDC.

Smoking and Income Level

The Michigan Survey also identified smokers by income classification. The estimates for 2000 are presented in Exhibit 24. The probability that an individual adult in Michigan smokes cigarettes generally declines at higher levels of income. However, the smoking rates presented in Exhibit 24 for individuals earning below \$50,000 per year are similar among all three groups. The rate declines significantly for those with incomes between \$50,000 and \$75,000, and again for those with incomes above \$75,000.

The 2000 survey indicates that smoking rates have declined by a modest amount across income groups since the results presented in the 1999 version of this report. Smoking rates have declined in Michigan across all income groups since 1998, when the national tobacco settlement resulted in large increases in the price of cigarettes. As prices rose by almost 19 percent in one month, and more than 30 percent within one year, it appears fewer Michigan residents chose to smoke.

Exhibit 24
Smoking Rates by Income Level, 2000



Source: Health Risk Behaviors 2000, Michigan Department of Community Health.

Profile of the Typical Smoker

Given the gender, age, education, ethnicity and income characteristics discussed above, it is possible to derive a profile of a typical smoker for Michigan and the U.S. While this provides some insight into who bears more of the burden of the cigarette tax, it is *not* meant to identify a group that pays more cigarette taxes in absolute terms. Identifying a demographic group with a higher probability of smoking does not take into account how large a proportion that demographic group comprises of the total population. That is, a person from one income or age group may pay more cigarette taxes on average, yet the group as a whole may pay less overall simply because there are fewer of them.

The typical U.S. smoker is between the ages of 18 and 44, with a high school education or less. The typical Michigan smoker also tends to be between the ages of 18 and 44, is more likely to be black or Hispanic, and has an annual income below \$50,000 per year.

In general, residents with lower incomes pay more tobacco taxes because they tend to use tobacco products with a greater intensity. Specifically, lower-income individuals are more likely to smoke than higher-income individuals. In addition, lower-income smokers spend a higher percentage of their incomes on cigarettes and tobacco taxes than do higher-income smokers, when the number of cigarettes smoked is similar. For example, two individuals, each smoking one pack of cigarettes per day, will spend \$273.75 in Michigan cigarette taxes, \$142.35 in federal cigarette taxes and approximately \$78.48 in sales taxes during 2002 (assuming a final cost of \$3.80 per pack). The total taxes imposed on each smoker total \$494.58. If one smoker has an income of \$50,000, then this

smoker pays almost 1.0 percent of his or her income in cigarette taxes. If the other smoker has an income of \$20,000, then cigarette taxes are almost 2.5 percent of his or her income. This simple example demonstrates the potential regressivity of cigarette taxes. The example assumes that a higher income will not increase the number of cigarettes a smoker chooses to consume.

Health Issues

While taxes are generally unpopular, the taxation of cigarettes is sometimes thought to be more acceptable because it discourages smoking, an activity that increases health care costs for both smokers and nonsmokers. Research has demonstrated that smoking is linked to a number of cardiovascular diseases and cancers, the most prevalent being lung cancer. The CDC estimates that smoking causes approximately 20 percent of all deaths. The Michigan Department of Community Health reports that cigarette smoking is the leading preventable cause of death in Michigan.⁴

However, smoking not only imposes costs on those who choose to engage in the activity, but also on society in general. The CDC estimates that direct medical expenditures attributable to smoking totaled \$75.5 billion in 1998. This translates into \$7.18 per pack of cigarettes sold in 1998.⁵ For that same year, it is estimated that cigarette taxes averaged 28.2 percent of the sales price or 63 cents per pack.⁶ Given these figures, it appears that smokers do not directly pay for the additional health care they receive. Typically, nonsmokers pay part of these costs through higher health and life insurance premiums, and higher taxes to finance public health programs like Medicaid and Medicare.

Smoking is also associated with costs that are not related to long-term health care. These are the indirect costs that are more difficult to quantify. On average, smokers are absent from their jobs 6.5 more days and make roughly six more visits per year to health care facilities than nonsmokers.⁷ Employers must charge higher prices in order to cover these costs associated with additional absences, health care claims, benefits not related to health care, and decreased productivity. For 1998, the CDC estimates that health problems related to smoking cost the Michigan economy \$3.4 billion in lost economic activity. Nationwide, the estimated loss is \$81.9 billion.

It should be noted that estimating the total cost of smoking is inherently difficult and conflicting evidence exists. A report written by the Congressional Office of Technology Assessment found that smokers in 1993 paid \$13.3 billion in excise and sales taxes but cost governments only \$8.9 billion in health-care expenses (ignoring indirect costs).⁸

⁴Critical Health Indicators, 2002, Michigan Department of Community Health.

⁵Centers for Disease Control and Prevention. "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs – United States, 1995-1999." *Morbidity and Mortality Weekly Report* 2002; 51: 300 – 303.

⁶Orzechowski and Walker, *The Tax Burden on Tobacco*, Volume 36.

⁷MacKenzie, *et al.*, "The Human Costs of Tobacco Use." *The New England Journal of Medicine*, Vol. 330, No. 14, April 7, 1994, p. 975.

⁸"Does Tobacco Pay Its Way?" *Business Week*, February 19, 1996.

There is also controversy surrounding the measures to include in the cost calculation. For instance, because smokers tend to die younger than nonsmokers, some have argued that the reduced Social Security payments paid due to premature death should be counted as a net saving from smoking. Life expectancy for adult smokers is reduced by an estimated 13.2 years for males, and 14.5 years for females.⁹ Assuming that the average smoker lives up to the Social Security retirement age, the decline in life expectancy results in an average saving to the Social Security Trust Fund of \$133,769 for males, and \$146,943 for females. This is based on an average Social Security benefit of \$844.50 per month.¹⁰ This estimate does not include any potential benefits for surviving spouses.

⁹Centers for Disease Control and Prevention. "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs – United States, 1995-1999." *Morbidity and Mortality Weekly Report* 2002; 51: 300 – 303.

¹⁰*Social Security Bulletin, Annual Statistical Supplement 2001*, Social Security Administration.

CHAPTER 5

CIGARETTE STAMPING

The Apparent Smuggling Problem

The enactment of school finance reform culminated with the passage of Proposal A in 1994. As a result, Michigan's cigarette tax increased to \$0.75, the highest in the nation at that time. By April 2002, Michigan's tax rate had been surpassed by 11 other states. However, Michigan and Wisconsin (\$0.77) still have the highest tax rates in the upper Midwest region.

This report has documented that a large decline in taxable cigarette sales occurred in Michigan following the tax increase in 1994 (7.6 percent per year from 1994-1997). The long-term trend in cigarette sales had been approximately a 1.5-percent annual decline, due to health concerns primarily, but also influenced by rising prices and cigarette taxes.

The price elasticity for cigarettes permits analysts to estimate the reduction in cigarette sales that will accompany a change in the cigarette tax. Price elasticity is a measure of the responsiveness of consumers to a price change obtained by dividing the percentage change in sales by the percentage change in the price. The \$0.50 increase in the cigarette tax that accompanied the passage of Proposal A in 1994 raised cigarette prices in Michigan by approximately 30 percent. Using the best existing estimates of the price elasticity for cigarettes (between -0.30 and -0.40), the 50-cent tax increase implied a decrease in sales of between 9.3 and 12.4 percent.

Several factors may reduce the response to such a large tax increase, especially in the short-run. The physical addiction to nicotine that smokers experience may result in different responses to large price changes as compared with small changes. Reducing cigarette consumption by one-half pack per week is different than reducing by one-half pack per day. Also, elasticity is only theoretically viable under the strong assumption of *ceteris paribus*, i.e., all other factors influencing the consumption of cigarettes besides the price of cigarettes remaining unchanged. The passage of Proposal A imposed a new tax on other tobacco products (cigars, smokeless tobacco, and non-cigarette smoking tobacco) which can be substitutes for cigarettes. This new tax made substitution away from cigarettes more expensive, thus reducing the behavioral change. So it might have been expected that cigarette sales would decrease by less than would be predicted using the price elasticity.

However, the number of packs sold between 1993 and 1995 declined by even more than expected. Sales declined by 16.4 percent between 1993 and 1995. Sales further declined by 6.3 percent in 1996 and by 6.6 percent in 1997, substantially more than the long-term, downward trend of less than 2 percent, and more than can be explained by the price elasticity of demand. Declining sales resulted in reduced revenues, as shown in Exhibit 25.

Exhibit 25
Effects of Higher Tax Rate and Cigarette Stamping

<u>Fiscal Year</u>	<u>Tax Rate (cents)</u>	<u>Tax Revenue</u>	<u>Percentage Change</u>
1990	25	255,339	
1991	25	259,160	1.50
1992	25	246,005	-5.08
1993	25	243,648	-0.96
Tax increased to \$0.75 effective May 1, 1994			
1994	25/75	395,715	62.41
1995	75	619,401	56.53
1996	75	580,772	-6.24
1997	75	546,026	-5.98
Wholesale cigarette stamping effective May 1, 1998			
1998	75	566,046	3.67
1999	75	615,129	8.67
2000	75	604,212	-1.77
2001	75	596,082	-1.35

Source: State of Michigan Comprehensive Annual Financial Report.

This decline occurred while the percentage of smokers in Michigan was stable. The percentage of Michigan adults who smoke was estimated to be 25.2 percent in 1993, 26.1 percent in 1997, and 24.2 percent in 2000. Given that the prevalence of smoking in Michigan was similar across the years, why did cigarette sales decline so much?

State officials suspected cigarette smuggling might be increasing. There was additional evidence to support that conclusion. Sales in Michigan declined between fiscal year 1994 and fiscal year 1995 by 18 percent while overall sales of cigarettes in the U.S. increased by 2.1 percent. Sales in Indiana, Ohio, Kentucky, and West Virginia increased by more than double the U.S. average. All of these states had cigarette taxes less than one-third of the tax in Michigan. Weeks prior to Michigan's cigarette tax increase in 1994, North Carolina repealed its law requiring a state stamp be affixed to cigarettes sold in the state. North Carolina's cigarette tax is 5 cents per pack. Not surprisingly, North Carolina saw an increase of 15.7 percent in cigarette sales.

Part of this decline in taxable Michigan cigarette sales may have been attributable to consumers inadvertently or deliberately purchasing smuggled cigarettes. Smuggling occurs when cigarettes are purchased and transported from low-tax states into Michigan for resale. Due to their relatively low tax rate on cigarettes, North Carolina (5 cents per pack), Kentucky (3 cents per pack) and Indiana (15.5 cents per pack) are favored purchasing points for smugglers. Under federal law, individuals may legally purchase up to 300 cartons of cigarettes at a single location in any state without filing federal paperwork notifying the government of the purchase. Although North Carolina is further from the Michigan market and has a slightly higher tax rate than Kentucky, it remains a more popular point of origin for smuggled cigarettes, because North Carolina no longer affixes tax stamps to cigarette packages. Stamps are thought to make smuggling more difficult because they allow law enforcement officials to trace cigarettes to their point of origin.

There are numerous types of potential smuggling activity. Casual smuggling occurs when individuals buy small quantities of cigarettes out-of-state (for example Indiana or Ohio) and bring them back to Michigan, either for personal use or for use by friends and family.

Residents need not leave the state to legally or illegally avoid payment of cigarette taxes. Indian reservations and military bases became an attractive place to purchase cigarettes, not only because cigarettes were tax exempt, but also due to growth in the gambling industry within Indian Country as more smokers were visiting Indian gambling casinos. For a couple of years, tax-exempt sales on reservations rose sharply. In January 2000, the State of Michigan ended the sales of untaxed cigarettes to retailers within Indian Country. Cigarette retailers on a reservation must now buy stamped cigarettes, on which the cigarette tax has been paid, and may claim a refund of the cigarette tax on sales to a resident tribal member where the transaction takes place within their own Indian Country.

Sales of cigarettes on military bases are also tax exempt. Military personnel are limited to 10 cartons of cigarettes per trip, although there is no limit on the number of trips. Sales of tax-exempt cigarettes, which still account for a relatively small percentage of total cigarette sales, are discussed in more detail in Chapter 2.

A growing type of cigarette smuggling seems to occur through mail order and/or Internet sales. The seller obtains low-tax cigarettes, sells them to either a Michigan resident or business, and then ships the cigarettes to Michigan. The growth in the use of the Internet and e-commerce has led to growth in on-line cigarette sales. A number of web sites operated by Indian tribes advertise and sell “tax-free” cigarettes. While these operations seemed to be increasing in number, the magnitude of their current impact is unclear. A recent study found 88 Internet sellers operating in 23 states. Some industry analysts believe 20 percent of cigarette sales will be made over the Internet within 10 years.¹¹

A final type of smuggling is through organized networks delivering contraband cigarettes to Michigan from low-tax states. It appears much of this activity originated in North Carolina, Kentucky, and Indian reservations in upper New York State. A recent criminal case in North

¹¹“Web Poses New Problems for Tobacco Control.” CNN.com, December 10, 2001.

Carolina involved individuals convicted of smuggling cigarettes into Michigan and other states, and then using the proceeds to support an organization named as a terrorist group by the U.S. in 1997.¹²

The Policy Response – Stamping

Public Act 187 of 1997 was enacted to address the smuggling problem. The new law amended the Tobacco Products Tax Act to require that every pack of cigarettes sold to the general public have a tax stamp affixed, certifying that the \$0.75 per pack cigarette tax had been paid. The law took effect for cigarettes sold after August 31, 1998. Beginning on May 1, 1998, a cigarette wholesaler or other person importing cigarettes for eventual resale in Michigan would have to purchase tax stamps from the Michigan Department of Treasury and attach the stamps to all packs of cigarettes held for eventual sale in Michigan.

The stamping program had a large and immediate effect as shown in Exhibit 25. The decreases in cigarette-tax revenue experienced in 1996 and 1997 were reversed in 1998 and 1999. Revenues for 1999 were only \$4.3 million (0.7 percent) below the level of 1995, the first full year of the 75-cent tax rate. Revenues for 2000 and 2001 more closely mirror the long-term trend. This dramatic increase in revenues also occurred while cigarette prices were increasing dramatically in the wake of the national tobacco settlement.

Success of the New Stamping Program

In order to assess the impact of stamping on preventing smuggling, an econometric analysis was developed. Regression analysis is a statistical technique that allows for the identification of the impact of a policy or environmental change on specific dependent variable by controlling for other factors influencing the dependent variable. All of the independent variables are placed on the right-hand side of the equal sign while the dependent variable is on the left. This analysis attempts to measure the impact of stamping on cigarette tax revenue.

The reduced form of the simple cigarette tax model is slightly modified from the model used in the 1996 and 1999 versions of this report. The new functional form is:

$$\begin{aligned} \text{Taxable Cigarette Sales} = & \alpha + \beta_1(\text{Michigan Tax Rate}) + \beta_2(\text{Real Disposable Personal Income}) + \\ & \beta_3(\text{Relative Price}) + \beta_4(\text{Trend}) + \beta_5(\text{Quarterly Dummies}) + \beta_6(\text{Inventory Accumulation}) + \\ & \beta_7(\text{Inventory Depletion}) + \beta_8(\text{Proposal A}) + \beta_9(\text{Retail Stamp}) \end{aligned}$$

Some of the variables are self-explanatory but a few words of explanation are necessary. The dependent variable is the number of packs of cigarettes sold within Michigan that were subject to the cigarette tax. Real disposable personal income is a measure of Michigan income constructed from data collected by the Bureau of Economic Analysis. The relative price variable equals the U.S. Tobacco Consumer Price Index (CPI) divided by the Detroit CPI. The trend variable begins in the

¹²“Brothers Guilty in Charlotte Terror Trial.” CNN.com, June 25, 2002.

first quarter of 1976 and increases by one every quarter of the 26 years covered in this analysis. This variable is designed to capture the impact of health trends and changing consumer preferences. Seasonal dummies are used to control for seasonal changes in smoking. There is an observation-specific dummy for the fourth quarter of 1976 because that quarter is regarded as an outlier.

The inventory variables were included to control for tax collection policy for the quarters surrounding the passage of Proposal A in 1994. Wholesalers were allowed to pay the lower tax on inventory accumulated prior to February 1, 1994. As a result, wholesalers began to stockpile cigarettes, which artificially increased tax revenues in the early months of 1994 as wholesalers purchased cigarettes at the lower tax rate in anticipation of the tax increase. Wholesalers depleted these stockpiles immediately following the tax increase, which artificially reduced tax revenues.

The log transformation of the equation means the estimated coefficients can be thought of as elasticities. The regression results are presented in Exhibit 26. This would imply that a one percentage point increase in the relative price of cigarettes, with all other factors influencing cigarette purchases unchanged, will decrease cigarette consumption by -0.26 percentage points. This is similar to the estimate presented in the 1996 version of this report, and lower than the 1999 estimate.

The magnitudes of these estimates should be interpreted with caution, though. Price elasticity is conceptually defined for small changes in price. A number of the quarterly price changes in the sample period, e.g., the second quarter of 1994 (Proposal A) or the fourth quarter of 1998 (national tobacco lawsuit settlement), were not small. The 50-cent-per-pack tax increase that was implemented on May 1, 1994, as a part of Proposal A represented a 27.1 percent increase over the average retail price of a pack of cigarettes in 1993. In the fourth quarter of 1998 and the first quarter of 1999, the CPI for tobacco increased by 8.0 percent and 15.7 percent, respectively, following the tobacco settlement. Price increases of this magnitude make interpreting the elasticity estimates more uncertain. This is perhaps especially true of cigarettes since large price increases may induce significant numbers of smokers to quit, at least temporarily. However, as discussed in the previous chapter, there is little evidence to support this conclusion in the Michigan data.

All of the coefficients are of the expected sign. There is a downward trend in cigarette smoking that has been documented earlier in this report. The results in Exhibit 25 confirm that trend with an estimated coefficient of -0.002 , an estimate that is significant at all standard confidence levels. Since this estimate measures a quarterly trend, it implies a downward trend in sales of approximately 1 percent per year.

The implementation of the retail-stamping program in Michigan in 1998 is associated with significant increases in taxable cigarette sales resulting in an estimated coefficient of 0.169. Because of the structure of the stamping variable, the coefficient is an average of the estimated increase in taxable sales, and thus tax revenues, due to stamping. This estimate implies that revenues increased by approximately \$20 million per quarter following the enactment of stamping. Actual revenues for four quarters following the enactment of stamping increased \$78.9 million over the prior four quarters.

The above estimate of the impact of stamping may be biased downward because the enactment of stamping was within 3 months of the tobacco settlement. The financial payments required by the settlement resulted in large price increases for cigarettes (18 percent within one month) just after stamps were initially required on Michigan cigarettes. These almost coincident events are impossible to separately identify using quarterly dummy variables, so the estimate presented above is best interpreted as an average of the overall impact of both events. Assuming an estimated price elasticity of -0.3 , the price increases brought on by the tobacco settlement (discussed above) would imply sales declines of 2.4 percent and 4.7 percent in the fourth quarter of 1998 and the first quarter of 1999, respectively. Net revenue gains of 17.6 percent for those quarters imply that stamping, controlling for other factors, increased revenues by between 20 and 25 percent. This represents an annualized increase in revenue of between \$120 million and \$140 million.

The evidence from this section supports the conclusion that cigarette stamping has had a dramatic impact on cigarette revenues. This section does not prove Michigan had a cigarette smuggling problem, but the large increase in tax collections, in the wake of declining national cigarette sales, would support the conclusion that cigarette stamps increased compliance with Michigan's Tobacco Products Tax.

Exhibit 26
Regression Results Using Data Through Fourth Quarter 2001

<u>Variable</u>	<u>Coefficient</u>	<u>T-Statistic</u>
Relative Price (log)	-0.263	-4.05
Real Disposable Income (log)	0.209	1.86
State Tax Rate (log)	-0.044	-1.44
Seasonal Dummy 1	-0.063	-9.41
Seasonal Dummy 2	-0.013	-1.77
Seasonal Dummy 3	0.069	10.58
1976 Q4 Dummy	-0.202	-7.63
Inventory Accumulation	0.200	6.92
Inventory Depletion	-0.126	-8.43
Trend	-0.002	-3.00
Proposal A Dummy	-0.227	-7.10
Retail Stamping Dummy	0.169	6.88

CHAPTER 6

LITIGATION AND THE TOBACCO SETTLEMENT

Summary of Tobacco Litigation

In November 1998, 46 states, the District of Columbia, and several U.S. territories reached an agreement with five major tobacco companies to settle lawsuits relating to the public costs of treating smoking-related illnesses. This settlement was entitled the Master Settlement Agreement (MSA). Four states, Mississippi, Florida, Texas, and Minnesota, had reached separate agreements with the tobacco companies previously. The MSA provided for annual payments from the tobacco companies to the states continuing in perpetuity, with the payments totaling more than \$206 billion by 2025. Provisions limiting tobacco advertisements and other marketing activities were also contained within the MSA. The annual payments required under the MSA will result in an increase in the cost of an average pack of cigarettes of between 30 and 40 cents, based on U.S. cigarette consumption for 2000.

The \$206 billion amount depends on several contingencies. These payments may be reduced if a new federal cigarette tax is enacted, or if the participating tobacco companies experience a decline in market share of 2 percent or more due to the MSA. In addition, payments to the states are adjusted if the participating companies experience a change in their domestic shipping volume. Essentially, payments to the states would be reduced by a one-to-one ratio if sales decline. The payments are also adjusted annually for inflation. Payments will increase by 3 percent or the percentage increase in the CPI, whichever is greater.

The MSA stipulated that the payment of the settlement funds would begin once final approval was obtained. Final approval required two steps. First, a Michigan court had to grant final approval to Michigan's settlement and consent decree. This was called state-specific finality. The court of jurisdiction must grant final approval and all appeals must be exhausted. Michigan obtained state-specific finality on April 7, 1999.

The second requirement for final approval was that 80 percent of the states involved, including the U.S. territories signing the MSA, obtain state-specific finality, and that payments due to those states represent 80 percent of the total settlement payments. Final approval occurred in November 1999.

Michigan took additional steps to protect its share of the settlement. Public Act 244 of 1999 requires cigarette manufacturers that did not enter into the MSA to make annual deposits into an escrow account, based on the volume of cigarettes sold within Michigan. This provision was designed to protect the tobacco companies that are a party to the MSA from unfair price competition from manufacturers who are not a party to the settlement. States that do not enact legislation requiring escrow deposits from non-participating manufacturers are subject to potential reductions in the state's settlement payments.

Michigan received an initial payment of \$107.5 million on December 14, 1999. Payments of \$244.6 million in 2000, \$261.2 million in 2001, and \$328.1 million in 2002 have brought Michigan's total to \$941.4 million in settlement payments from 1999 through 2002. Annual payments will continue in perpetuity with Michigan scheduled to receive more than \$8.5 billion between 1998 and 2025. Before any adjustments, Michigan's annual payment will be approximately \$300 million for the foreseeable future.

Where to Spend All That Money?

States were given complete freedom under the MSA to appropriate their settlement proceeds. State legislatures used much of 1999 determining their priorities. Some argued that because the initial lawsuits were due to smoking and tobacco-related illness, the proceeds should be used to treat smoking illnesses, fund smoking-cessation programs, and create smoking-prevention initiatives.

Others argued the settlement payments were a reimbursement for past expenditures necessitated by the tobacco industry. Expenditures necessary to treat smoking-related illnesses drew funds away from other desirable spending in areas such as education, transportation, and natural resources. The reimbursements received from the tobacco companies allow states to pursue other important spending priorities.

Additional debate centered on time preference. Specifically, some argued for immediate expenditures to meet pressing needs such as repairing school buildings or to purchase health insurance for the uninsured. Others argued that some of the settlement monies should be set aside in trust funds to create investment income that could become a permanent source of funding.

Nationally, the initial indications were that states were spending more of the payments from the MSA on health-related programs than on any other area. The National Conference of State Legislatures reported that 46 percent of the proceeds received by the states from 1999 through 2001 was allocated to health care.¹³ This includes tobacco prevention, long-term care, and other health services. Significant portions of the payments were also allocated to education and budget reserve accounts.

For Michigan, a large portion of the settlement proceeds was directed to education. Public Act 94 of 1999, the Michigan Merit Award Scholarship Act, was signed by Governor Engler on June 30, 1999. The Act created the Michigan Merit Award Trust Fund. This fund received 30 percent of Michigan's tobacco settlement proceeds in fiscal year 1999-2000, 50 percent of the proceeds in fiscal year 2000-2001, and will receive 75 percent of the proceeds for fiscal years after 2000-2001. The Act also creates a scholarship available to all high school students who attain qualifying results on the Michigan Education Assessment Program subject area assessments in each of the subject areas of reading, writing, mathematics, and science. A student who did not receive qualifying results in 1 or 2 of the above subjects, but who scores high on a college entrance exam or job skills assessment test, can also qualify for a scholarship.

¹³“Health Programs Benefit from Tobacco Settlement.” News release from the National Conference of State Legislatures, August 11, 2001.

Chapter 4 discusses the inverse relationship that is observed between educational attainment and smoking. Individuals who have more schooling are less likely to smoke cigarettes. While there may be other reasons for this relationship, one possible explanation is that additional schooling provides an opportunity for students to become more familiar with the dangers of smoking. If this is correct, using the funds received from the tobacco settlement to expand the opportunities for students to attend colleges and universities may lead to a decline in the number of future smokers.

Public Act 489 of 2000 established the Michigan Tobacco Settlement Trust Fund. This trust fund received 70 percent of the proceeds from the MSA for fiscal year 1999-2000, 50 percent in fiscal year 2000-2001, and will receive 25 percent of the proceeds for fiscal years after 2000-2001. Expenditures from the Tobacco Settlement Trust Fund must be appropriated by public act.

As of April 2002, Michigan had received \$941.4 million as a result of the MSA. Of these funds, the Michigan Legislature had enacted appropriations from the Merit Award and Tobacco Settlement Trust Funds totaling \$913.0 million during fiscal years 2000 through 2002. The appropriations are summarized in Exhibit 27.

In addition to establishing the Merit Award Scholarships, numerous other initiatives were funded using the MSA proceeds. Technical education centers, a prescription-drug program for seniors, and the Life Sciences Research Corridor all received significant expenditures or appropriations. Overall, \$398.5 million (43.6 percent of the 3-year total) of the enacted appropriations was appropriated to the broad category of education. Health care and health research programs received appropriations of \$315.3 million (34.5 percent), including \$145 million appropriated to the Life Sciences Research Corridor. Over the three years from 2000 to 2002, an additional \$179.0 million was transferred from the trust funds to the general fund to finance other expenditures.

Exhibit 27
Tobacco Settlement Appropriations/Expenditures, FY 2000-2002
(\$ Millions)

<u>Expenditure Category</u>	<u>Merit Award Trust Fund</u>	<u>Tobacco Settlement Trust Fund</u>	<u>Total</u>
Education			
Michigan Merit Awards	\$283.9	\$0.0	\$283.9
Tuition Incentive Program	16.7	0.0	16.7
Michigan Education Assessment Program	32.9	12.0	44.9
Technical Education Centers	0.0	47.0	47.0
Other Education	<u>3.0</u>	<u>3.0</u>	<u>6.0</u>
Total Education-Related Appropriations	336.5	62.0	398.5
Health Care & Research			
Senior Prescription Drug Program	0.0	46.1	46.1
Medicaid Base Funding	0.0	50.0	50.0
Research/Life Sciences Corridor	0.0	145.0	145.0
Other Health	<u>0.0</u>	<u>74.2</u>	<u>74.2</u>
Total Health-Related Appropriations	0.0	315.3	315.3
Transfers to General Fund	131.5	47.5	179.0
Other Appropriations	<u>0.0</u>	<u>20.2</u>	<u>20.2</u>
Total Appropriations	\$468.0	\$445.0	\$913.0

Source: Senate Fiscal Agency Memorandum, April 23, 2002.