



*A Policy Research Partnership
to Reduce Youth Substance Use*

Supported by
The Robert Wood Johnson Foundation

Economic Issues in Tobacco Control: Taxation, Programs, and Myths

Frank J. Chaloupka

Director, ImpactTeen, University of Illinois at Chicago

www.uic.edu/~fjc

www.impactteen.org

www.tobaccoevidence.net

*Funding provided by The Robert Wood Johnson Foundation,
The Centers for Disease Control and Prevention,
and the National Cancer Institute*

Overview

Taxation

- Overview
- Impact on Smoking Behavior
- Impact on High Risk Populations

Comprehensive Programs

- Overview
- State Case Studies
- New Econometric Research

Myths and Reality

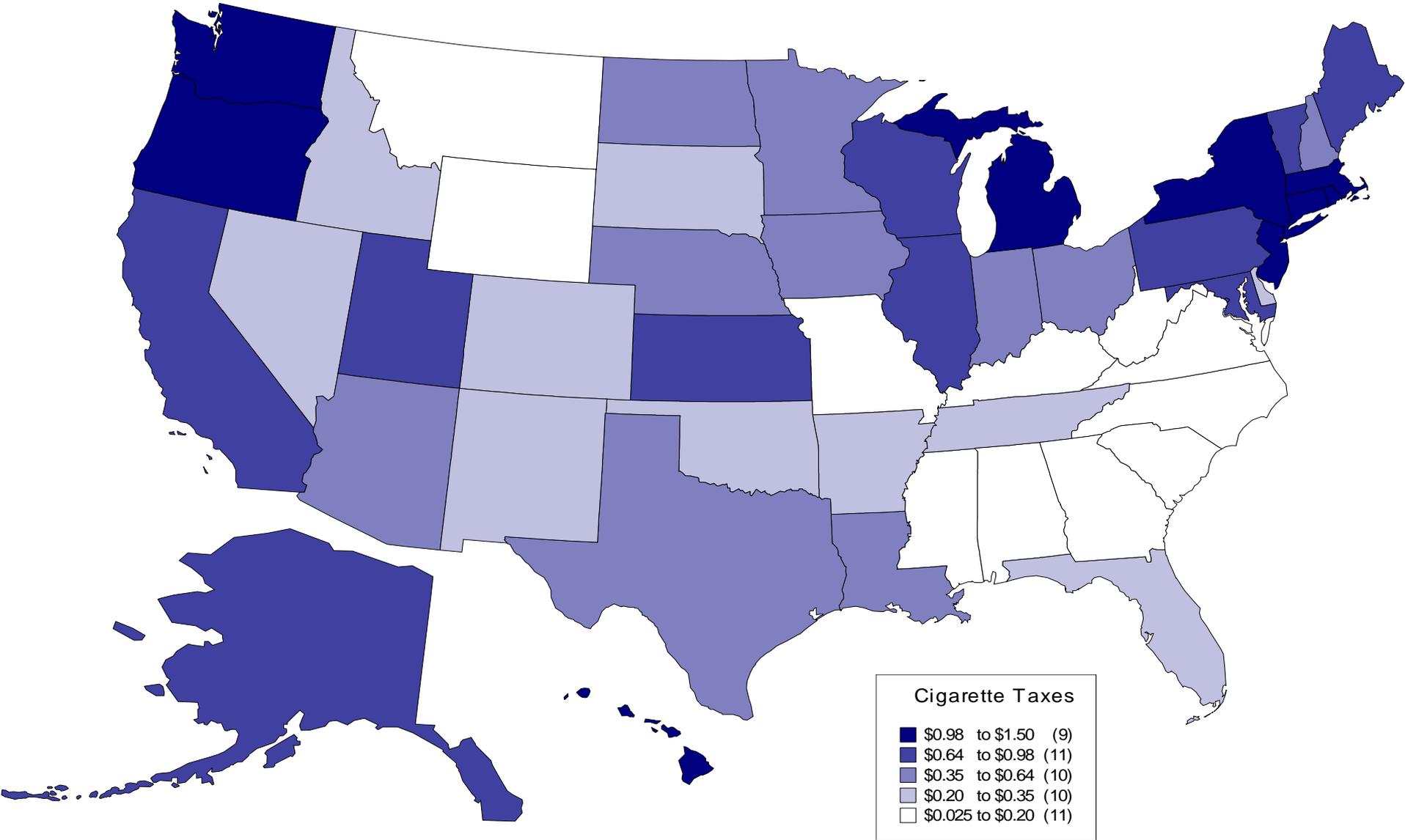
- Revenues
- Employment
- Tax Evasion
- Regressivity

Tobacco industry clearly understands the impact of tobacco taxation

"With regard to taxation, it is clear that in the US, and in most countries in which we operate, tax is becoming a major threat to our existence."

"Of all the concerns, there is one - taxation - that alarms us the most. While marketing restrictions and public and passive smoking (restrictions) do depress volume, in our experience taxation depresses it much more severely. Our concern for taxation is, therefore, central to our thinking...."

State Cigarette Excise Taxes



Tax rates currently in effect or scheduled to take effect in 2002

Tobacco Taxation

- Federal cigarette tax initially adopted in 1864
 - Raised during war time/lowered during peace time
 - Set at 8 cents per pack in 1951
 - Doubled to 16 cents per pack in 1983
 - Currently 39 cents per pack
 - About 70% of inflation adjusted value of 1951 tax
- State cigarette taxes
 - First adopted by IA in 1921; NC last to adopt in 1969
 - Currently: 2.5 cents/pack (VA) to \$1.51/pack (MA)
 - Average 61.1cents per pack (8.3 cents in tobacco growing states; 68.2 cents in other states)
 - Most tax other tobacco products

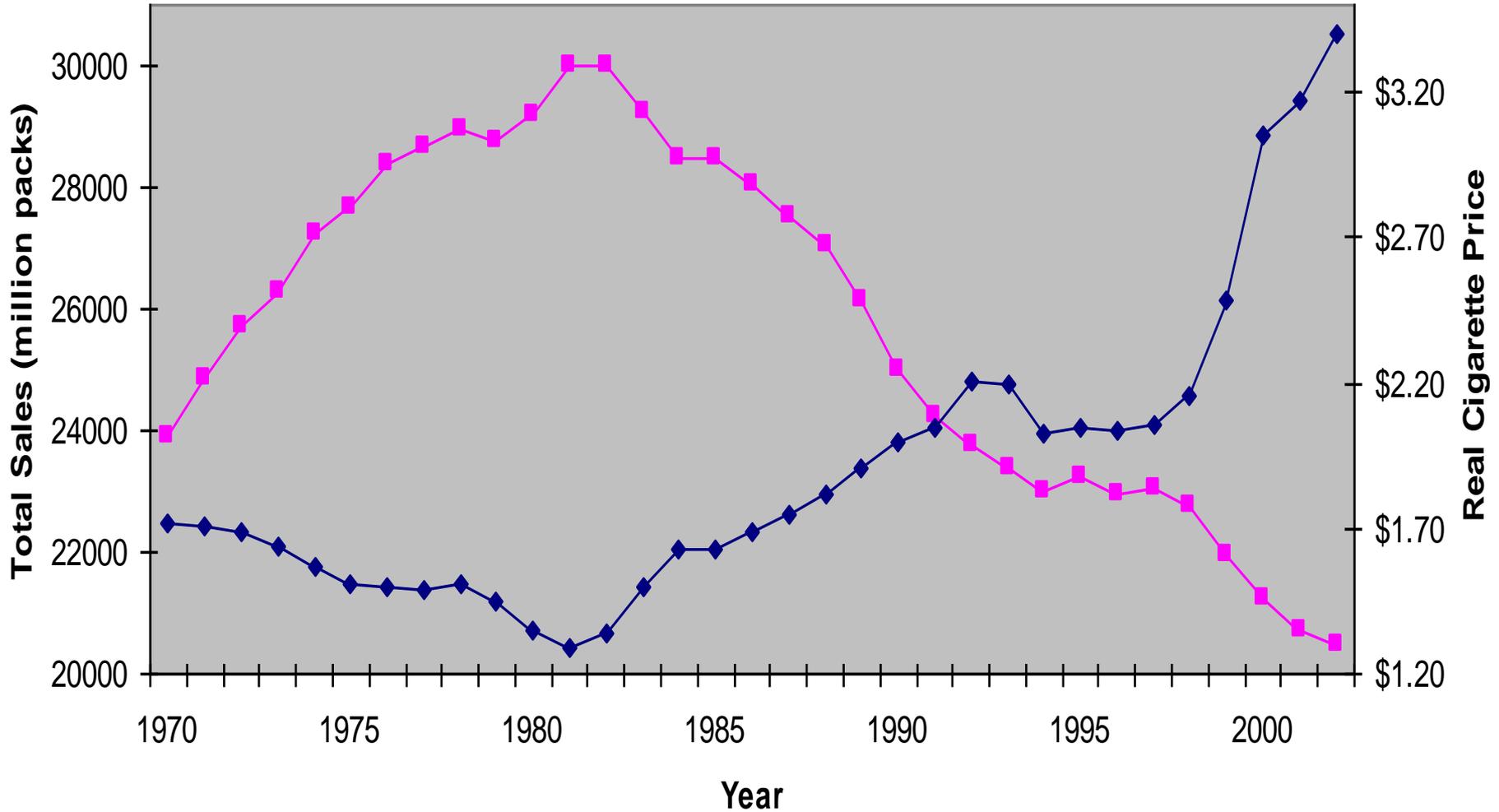
Local Taxes

- Many localities add additional tax
 - Typically small
 - \$1.50 in New York City is major exception

Tobacco Taxes and Tobacco Use

- Higher taxes induce quitting, prevent relapse, reduce consumption and prevent starting.
- Estimates from high-income countries indicate that 10% rise in price reduces overall cigarette consumption by about 4%
 - About half of impact of price increases is on smoking prevalence; remainder is on average cigarette consumption among smokers
 - Some evidence of substitution among tobacco products in response to relative price changes

Total Cigarette Sales and Cigarette Prices, U.S., 1970-2002



—■— Cigarette Sales (million packs) —◆— Real Cigarette Price



Cigarette Prices and Smoking Cessation

- Growing evidence that higher cigarette prices Induce smoking cessation
 - 10% price increase reduces duration of smoking by about 10%
 - 10% price increase raises probability of cessation attempt by 10-12%
 - 10% price increase raises probability of successful cessation by 1-2%

Lower SES populations are more price responsive

- Growing international evidence shows that cigarette smoking is most price responsive in lowest income countries
- Evidence from U.S. and U.K. shows that cigarette price increases have greatest impact on smoking among lowest income and least educated populations
 - In U.S., for example, estimates indicate that smoking in households below median income level about 70% more responsive to price than those above median income level

Implies tax increases may be progressive

YOUNG PEOPLE MORE RESPONSIVE TO PRICE INCREASES

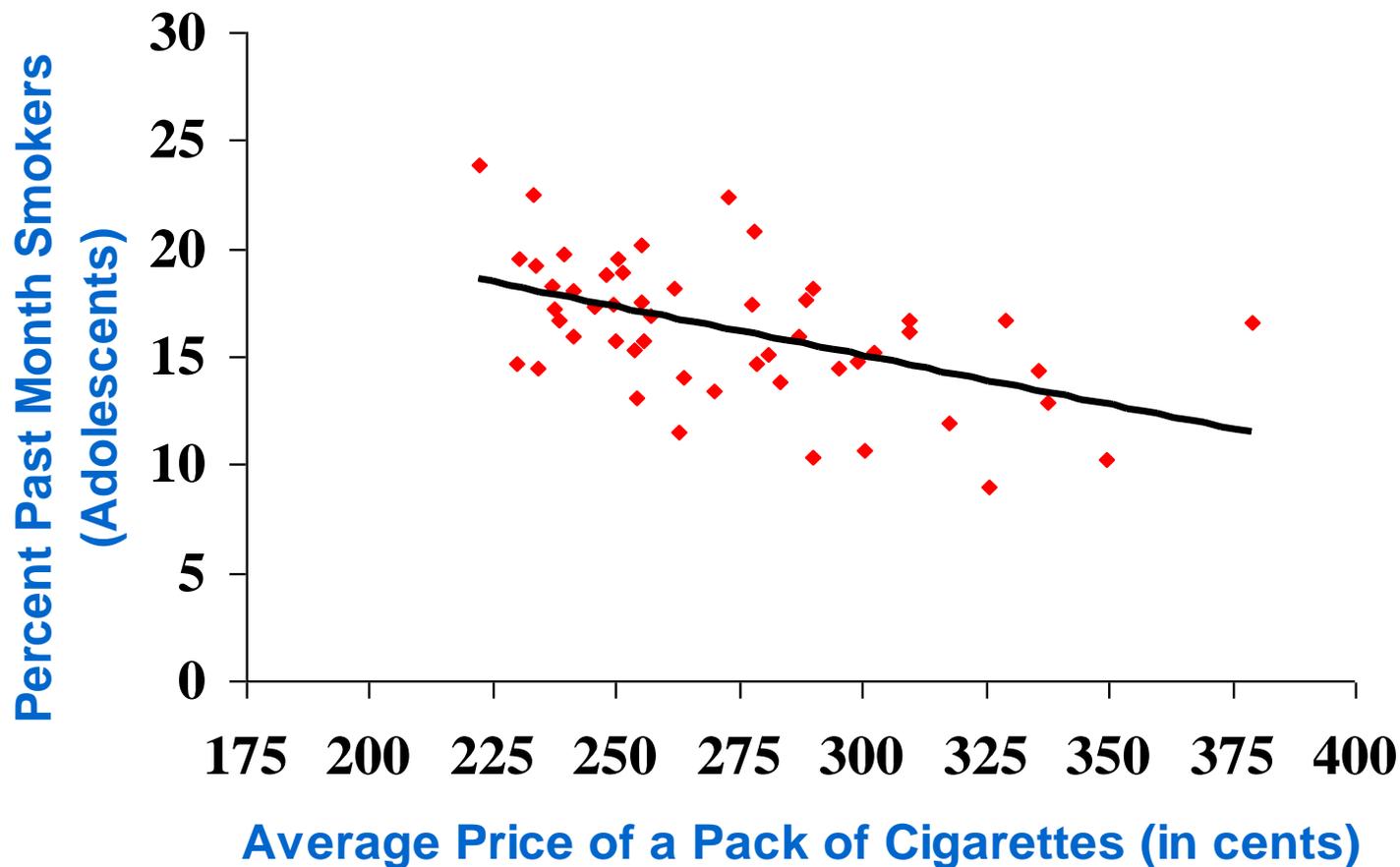
- Proportion of disposable income youth spends on cigarettes likely to exceed that for adults
- Peer influences much more important for young smokers than for adult smokers
- Young smokers less addicted than adult smokers
 - Young people tend to discount the future more heavily than adults

Because kids are highly sensitive to price, and given that 90 percent of smokers start when they are 18 or younger, an increase in excise taxes is one of the best ways to achieve long run reductions in overall smoking

Cigarette Prices And Kids

- A 10% increase in price reduces smoking prevalence among youth by nearly 7%
- A 10% increase in price reduces conditional demand among youth by over 6%
- Higher cigarette prices significantly reduce teens' probability of becoming daily, addicted smokers; prevent moving to later stages of uptake.
- 10% price increase reduces probability of any initiation by about 3%, but reduces probability of daily smoking by nearly 9% and reduces probability of heavy daily smoking by over 10%

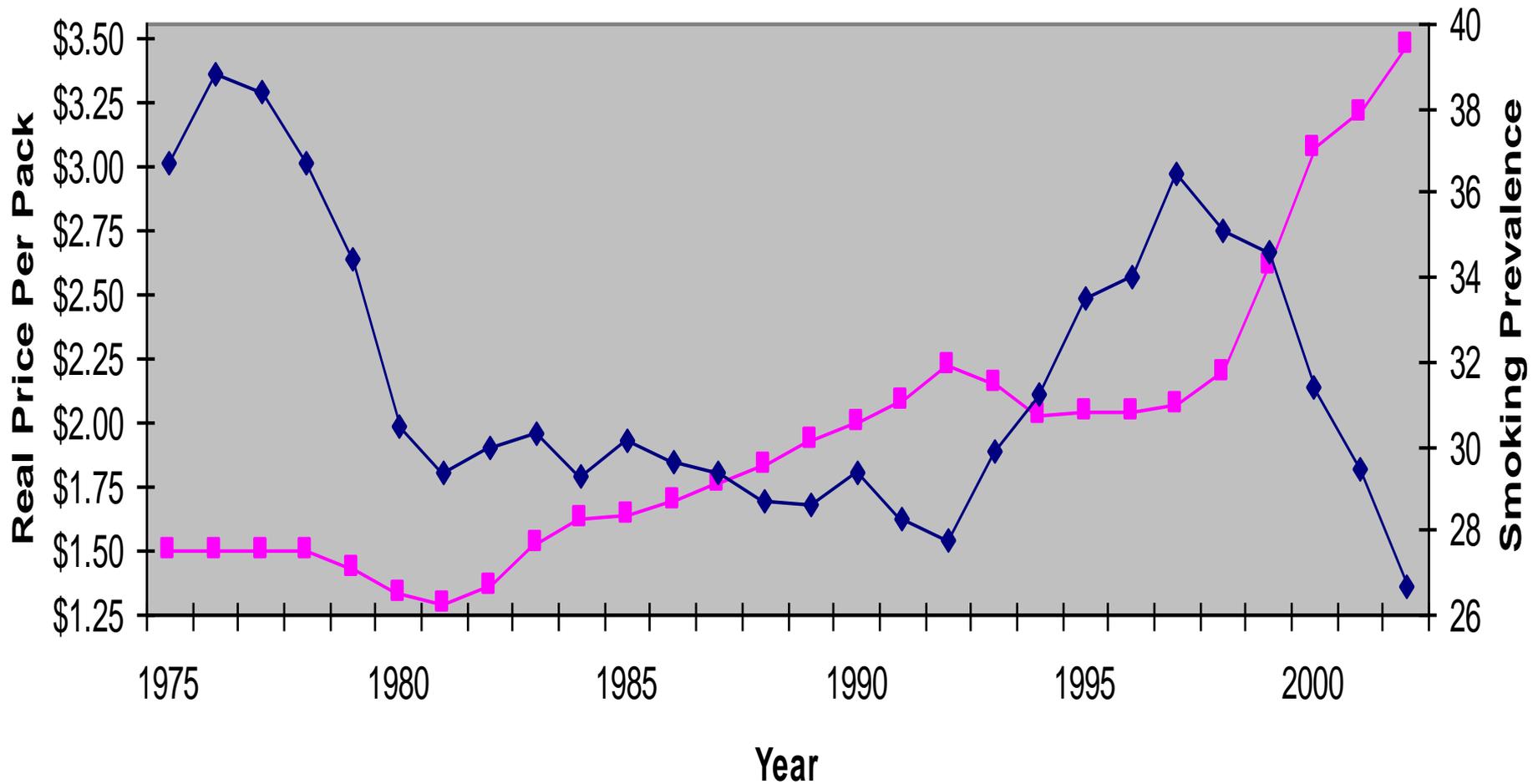
Cigarette Smoking Among Youth by the Average Price of a Pack of Cigarettes in 50 States and the District of Columbia, 1999



Data: 1999 NHSDA (12-17 year olds); 1999 *Tax Burden On Tobacco*

Source: *Giovino, et al., 2001*

12th Grade 30 Day Smoking Prevalence and Price



—■— Cigarette Price —◆— 30 Day Smoking Prevalence

Impact of Federal Tax Increase

Based on these estimate, a \$2.00 per pack increase in the Federal cigarette tax would:

- Reduce cigarette sales by over 4.2 billion packs per year
- Generate nearly \$30 billion in new revenues
- Lead almost 4.7 million current smokers to quit
 - Prevent over 6 million youth from taking up smoking
 - Prevent nearly 3 million premature deaths caused by smoking

NEW YORK: \$1.11 Per Pack

Preliminary Findings on the Impact of March 2000 55-Cent Increase in Cigarette Excise Tax

- **Cigarette Price Increases**

NY: Marlboro- \$1.00 (30.7%); Newport - \$1.00 (31.0%)

US: Marlboro - 33 cents (11.5%); Newport 31 cents (10.2%)

- **Cigarette Sales**

Sales have dropped about 20 percent since the increase.

Cigarette tax revenues up sharply

- **Youth Smoking Prevalence**

(NY matched schools, after 4/1; US all schools after 4/1)

8th Grade - NY: -17.8%; US: - 11.2%

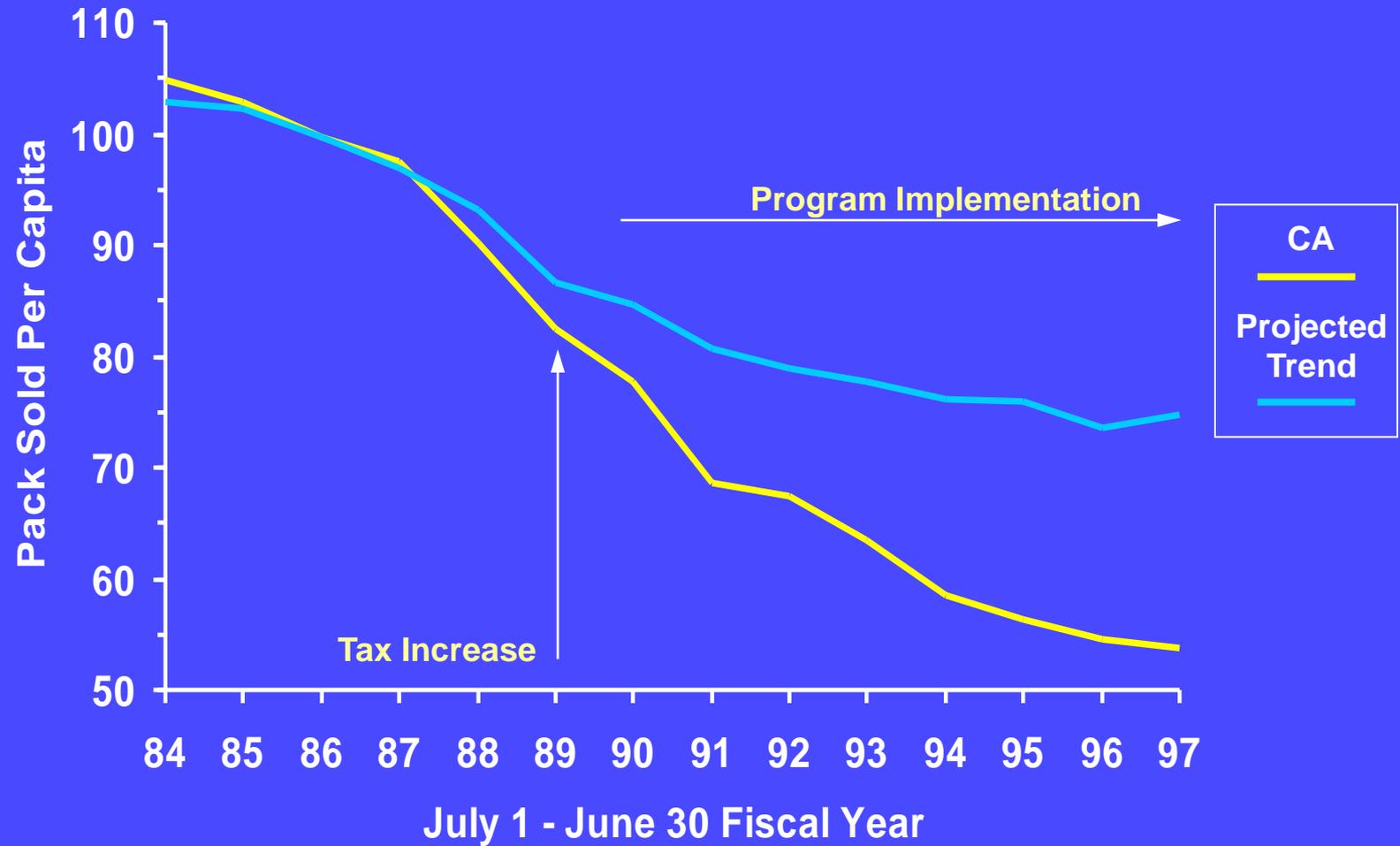
10th Grade - NY: -18.9%; US: -1.0%



CALIFORNIA: 87-Cents Per Pack

- Two voter initiatives raised tax by 25 cents (1989) and 50 cents (1999) per pack; some revenues used to support comprehensive tobacco control program
- Nearly 58 percent decline in per capita cigarette consumption from 1988 to 2001
- Nearly 25 percent decline in adult smoking prevalence
- 48% reduction in youth smoking prevalence between 1995 and 1999
 - Due to length of time program in effect, see declines in smoking attributable cancer and other death rates
 - Estimate that every \$1.00 spent on program saved \$3.62 in medical care costs from 1990 to 1998

Per Capita Consumption Trends California versus Projected Trend, 1984-1997

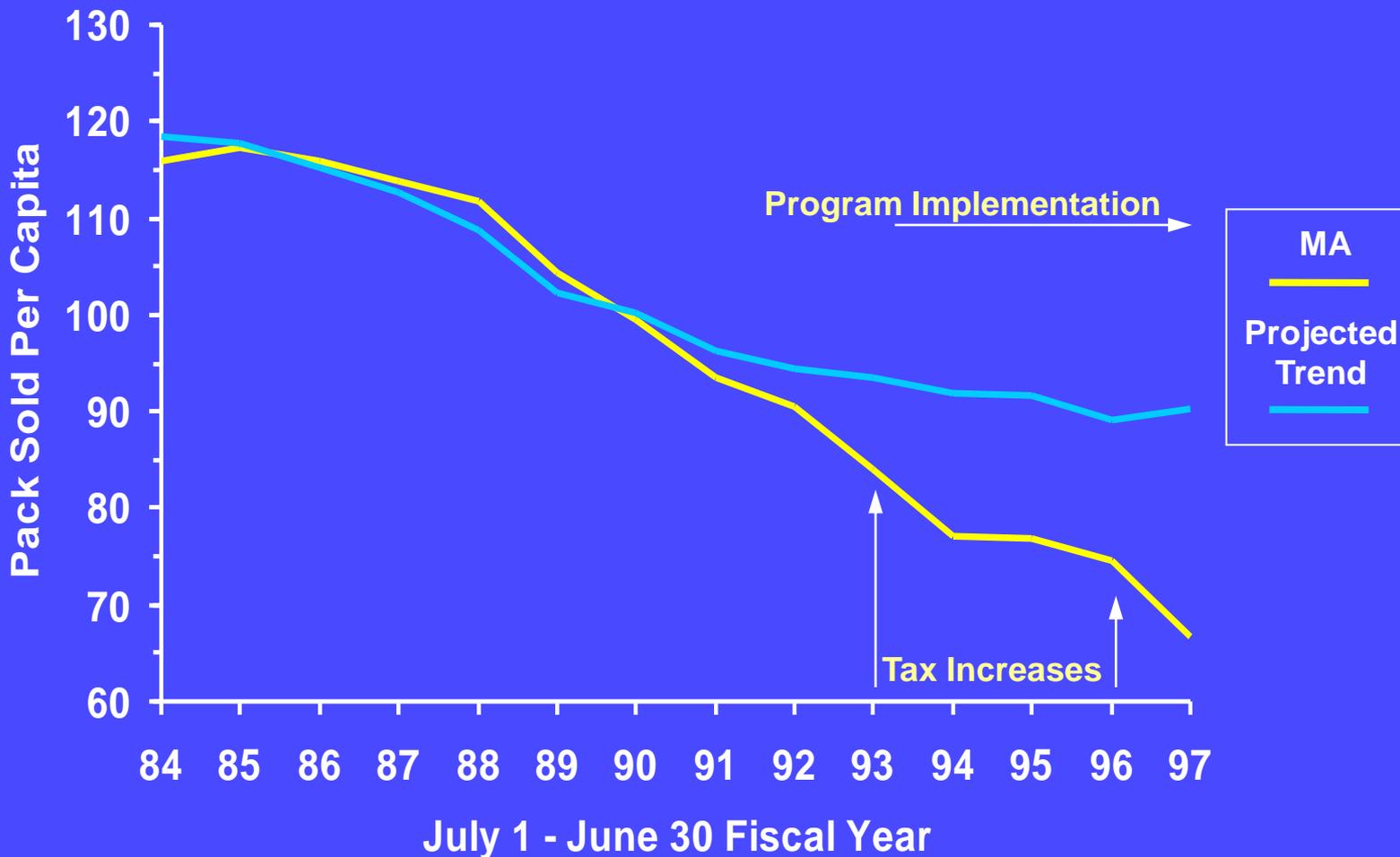


Source: CDC

Massachusetts: 76-Cents Per Pack

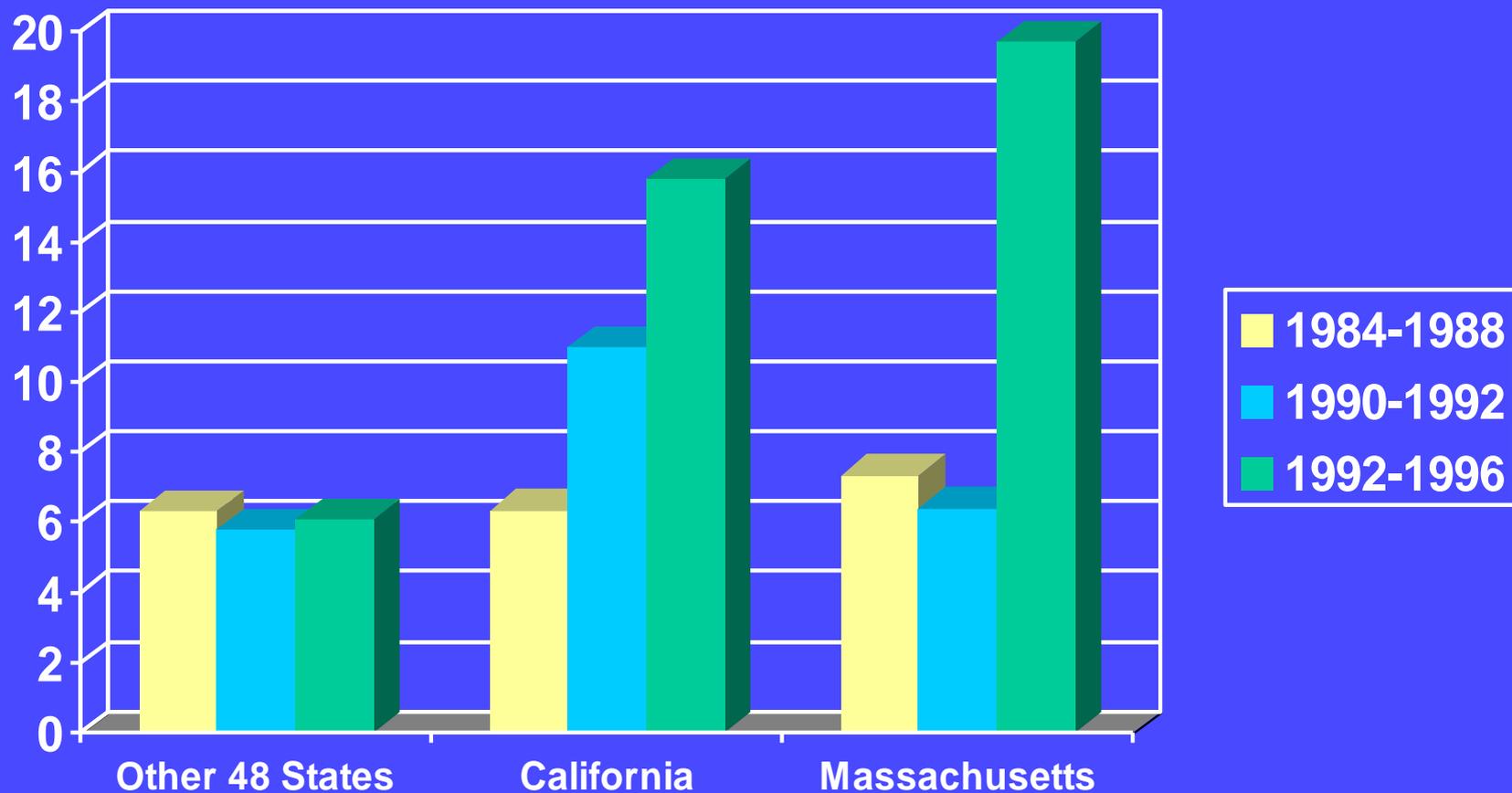
- voter initiative raised tax by 25 cents (1993); second 25 cent legislated tax increase (1996); some revenues used to support comprehensive tobacco control program
- Almost 40 percent decline in per capita cigarette consumption from 1992 to 2001
- Significant decline in adult smoking prevalence
- Larger declines in youth smoking prevalence than in rest of the US
 - Smoking among pregnant women nearly halved between 1990 and 1996
 - Program funding eliminated in late 2002; tax increased by 75 cents per pack

Per Capita Consumption Trends Massachusetts versus Projected Trend, 1984-1997



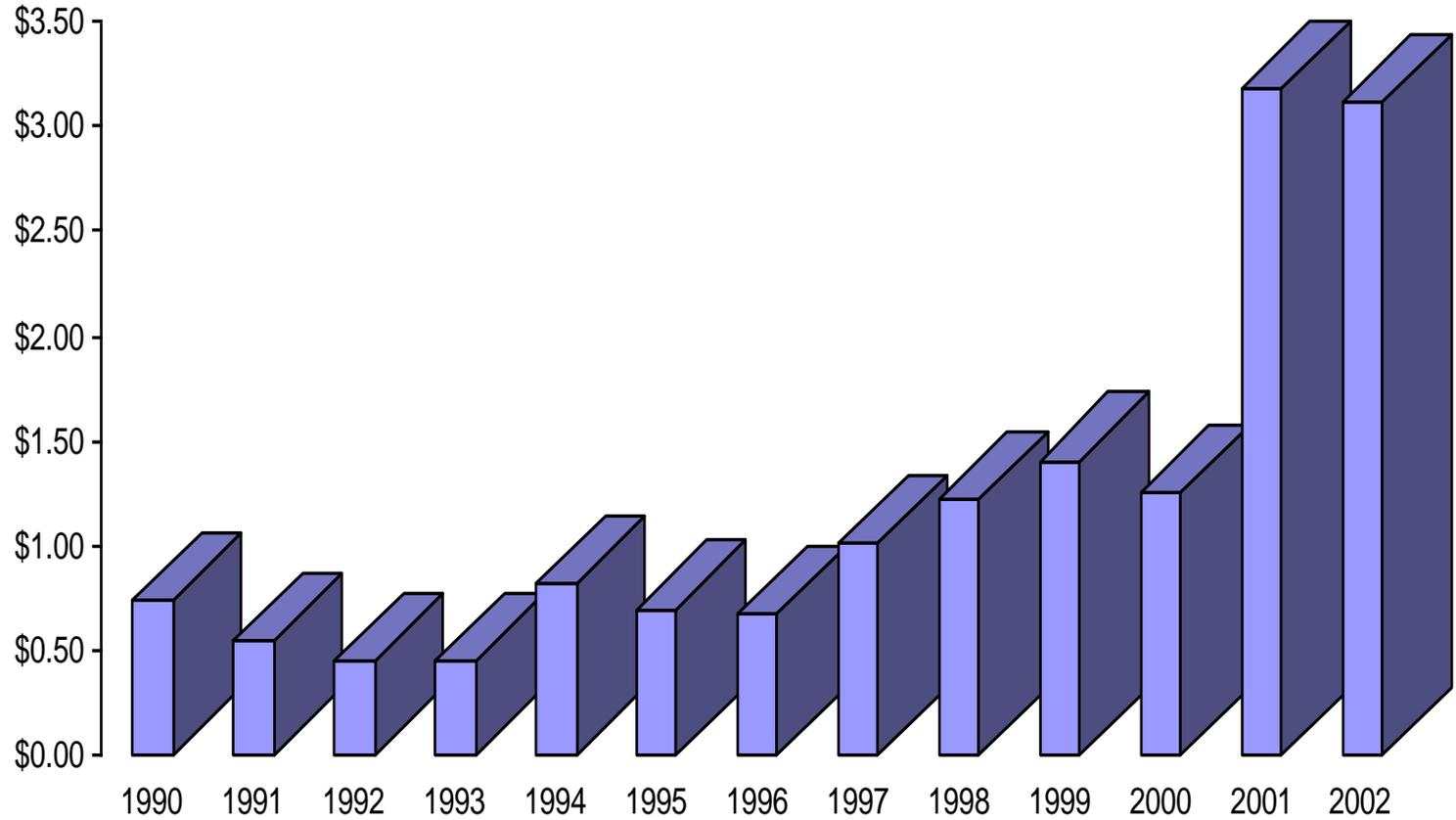
Source: CDC

Change in Per Capita Cigarette Consumption Before and After an Excise Tax Increase and an Antismoking Campaign California & Massachusetts versus Other 48 States, 1986 to 1996



Source: CDC

Per Capita Tobacco Control Funding



Year

Per capita spending figures in July 2001 dollars

New Econometric Research – Comprehensive State Programs

- Data on expenditures on various tobacco control programs, including: NCI's ASSIST program, CDC's IMPACT program, RWJF's SmokeLess States program, and state programs funded by earmarked tobacco taxes or tobacco settlement funds
- Data on overall smoking patterns based on tax paid state-level cigarette sales per capita
- Data on youth smoking prevalence and consumption from Monitoring the Future Surveys of 8th, 10th, and 12th grade students, 1991-1998, and CDC's National Youth Risk Behavior Surveys, 1991-1999

*Sources: Farrelly, et al. 2001; Chaloupka et al. 2001;
Farrelly et al. 2001; Liang et. al 2001*

Research Findings – Comprehensive Programs and State Cigarette Sales

- **Higher spending on tobacco control efforts significantly reduces overall cigarette consumption**
Elasticity estimates for current year spending center on -0.006 ; estimate for cumulative spending: -0.025
- **Marginal impact of tobacco control spending greater in states with higher levels of cigarette sales per capita; average impact significantly higher in states with larger programs**
- **Disaggregated program spending suggests that impact of spending on programs focusing on policy change is greater than spending on other programs**

Research Findings – Comprehensive Programs and Youth Smoking

- **Higher spending on tobacco control efforts significantly reduces youth smoking prevalence and cigarette consumption among young smokers**

Elasticity estimate for youth smoking prevalence: -0.011;
estimate for conditional demand: -0.012 (MTF data)

- **Estimated impact of spending at CDC recommended levels: minimum: 8-9% reduction in youth smoking prevalence; maximum: over 20% reduction**
- **Estimates based on YRBS data suggest that greatest impact of spending on tobacco control programs is on earlier stages of youth smoking uptake**

Myths About Economic Impact of Tobacco Taxation and Tobacco Control

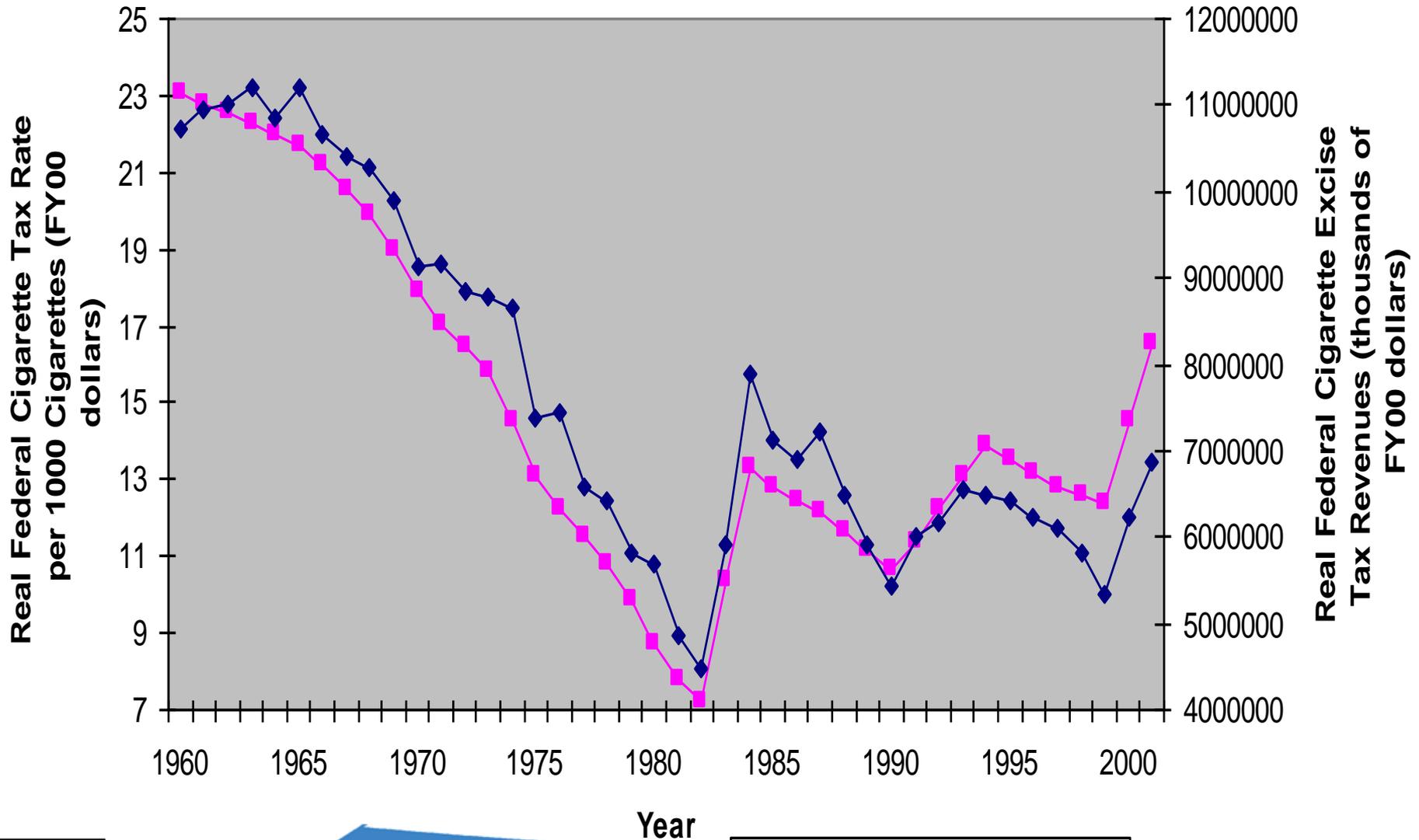
- Impact on Revenues?

Myth: Government revenues will fall as cigarette taxes rise, since people buy fewer cigarettes

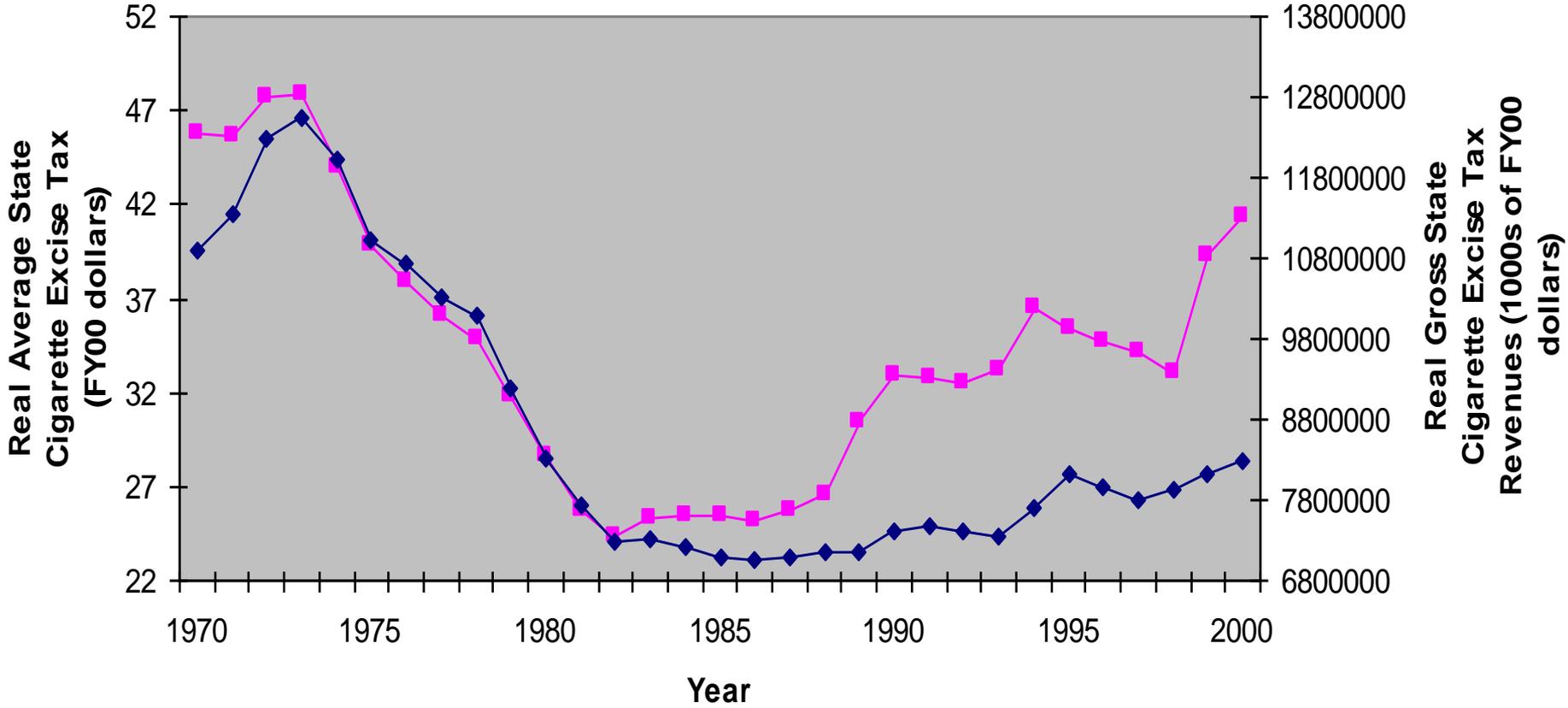
Truth: Cigarette tax revenues rise with cigarette tax rates, even as consumption declines

- Every significant increase in federal and state cigarette taxes has resulted in significant increase in revenues

Real Federal Cigarette Tax Rate and Tax Revenues, 1960-2001

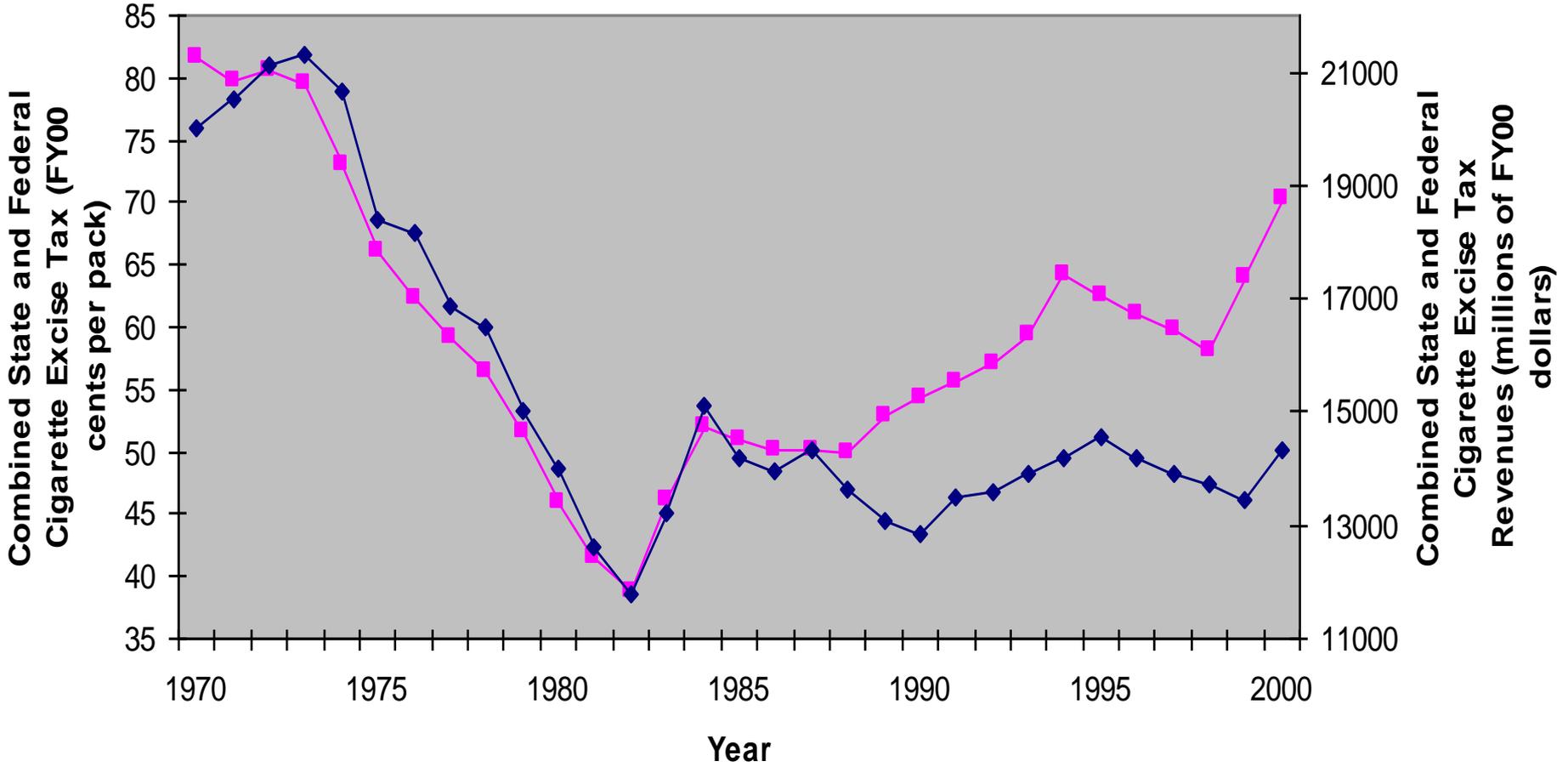


Real Average State Cigarette Excise Tax Rate and Real State Cigarette Tax Revenues



—■— Average Tax —◆— Tax Revenues

Real Average Cigarette Excise Tax and Real Cigarette Tax Revenues



Real Tax Real Revenues

Myths About Economic Impact of Tobacco Taxation and Tobacco Control

- Impact on Jobs?

Myth: Higher tobacco taxes and tobacco control generally will result in substantial job losses

Truth: Money not spent on tobacco will be spent on other goods and services, creating alternative employment

- Many countries/states will see net gains in employment as tobacco consumption falls

Myths About Economic Impact of Tobacco Taxation and Tobacco Control

- Impact on Tax Evasion?

Myth: Tax evasion negates the effects of increases in tobacco taxes

Truth: Even in the presence of tax evasion, tax increases reduce consumption and raise revenues

- Other factors important in explaining level of tax evasion
 - Effective policies exist to deter tax evasion

Sources: Joossens, *et al.*, 2000; Merriman, *et al.*, 2000

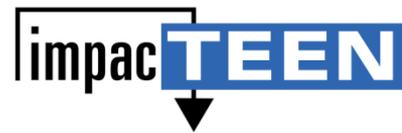
Myths About Economic Impact of Tobacco Taxation and Tobacco Control

- Regressivity?

Myth: Cigarette tax increases will negatively impact on the lowest income populations

Truth: Poor consumers are more responsive to price increases

- Should consider progressivity or regressivity of overall fiscal system
- Any negative impact can be offset by use of new tax revenues to support programs targeting lowest income population



*A Policy Research Partnership
to Reduce Youth Substance Use*

Supported by
The Robert Wood Johnson Foundation

Conclusions

Substantial increases in cigarette and other tobacco product prices, including those resulting from significant increases in tobacco excise taxes, lead to large reductions in tobacco use and, in the long run, reduce the public health toll caused by tobacco use.

Additional reductions in overall smoking and in the prevalence of youth smoking result when tax increases are coupled with comprehensive tobacco control efforts.

<http://www.impactteen.org>

<http://www.tobaccoevidence.net>

<http://www.uic.edu/~fjc>

fjc@uic.edu