

# The Economics of Tobacco Taxation

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# Overview

- History/description of cigarette and other tobacco taxes in the US and states
- Review of evidence on the impact of taxes on prices and tobacco use
  - Consumption, Prevalence, Cessation, Initiation
- Brief review of evidence on the impact of earmarked tobacco taxes
- Brief discussion of “Myths and Facts” about the “economic costs” of tobacco taxation and tobacco control
  - More in breakout sessions

# **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...."

Philip Morris, "Smoking and Health Initiatives", 1985

# Tobacco Taxation in the U.S.

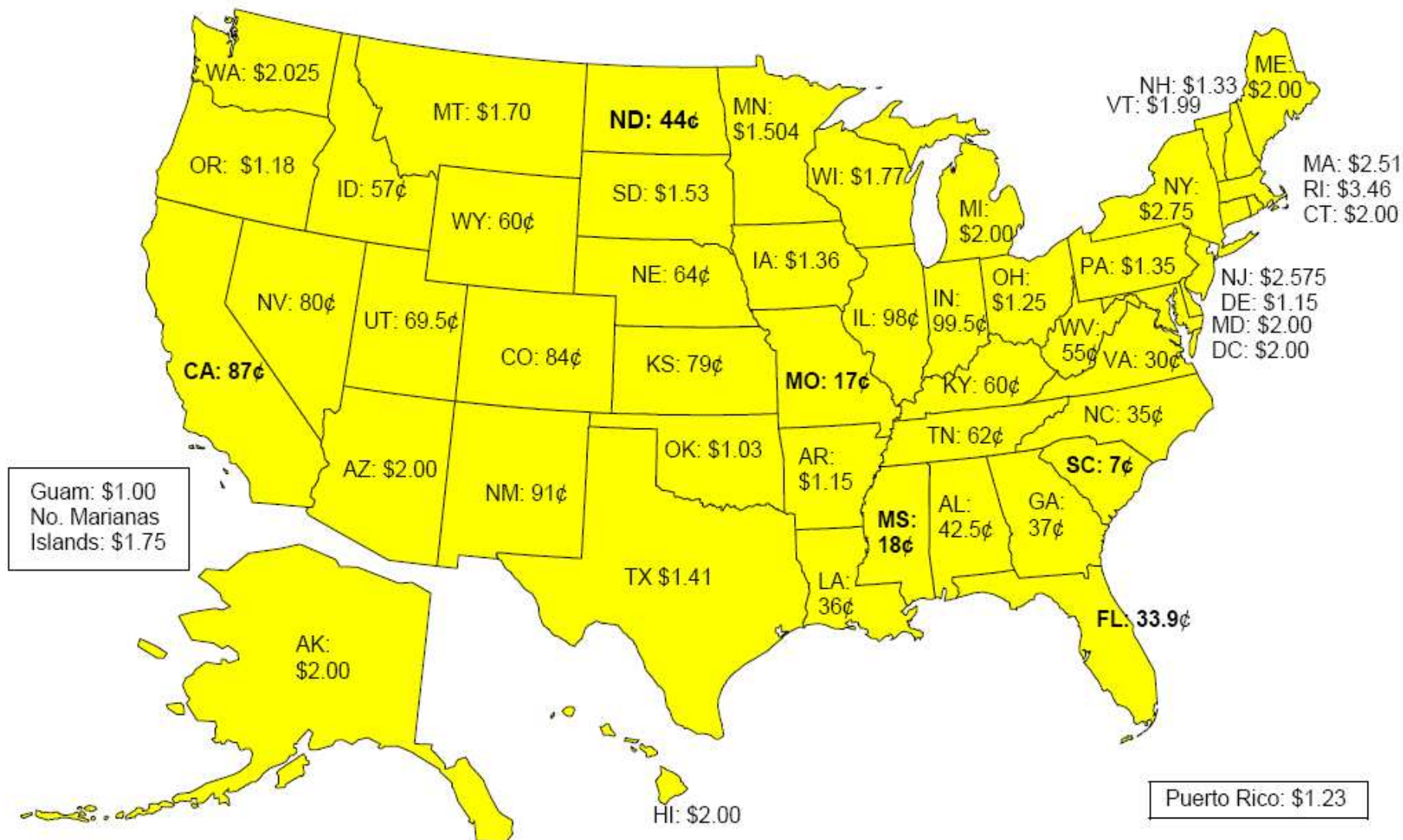
- Federal cigarette tax
  - Specific (per unit) excise tax
  - initially adopted in 1864
  - Raised during war time/lowered during peace time
  - Set at 8 cents per pack in 1951
  - Doubled to 16 cents per pack in 1983
  - Eventually raised to 39 cents per pack in 2002
    - Less than 60% of inflation adjusted value of 1951 tax
  - Significant increase – 61.66 cents – April 1
    - Earmarked for S-CHIP expansion

# Tobacco Taxation in the U.S.

- Specific federal excise taxes on most other tobacco products, including
  - cigars: \$1.0066 per pack on small cigars; 52.75% of price for low priced cigars; cap of 40.26 cents per cigar for high priced cigars
  - pipe tobacco: 17.7 cents per ounce
  - chewing tobacco: 3.1 cents per ounce
  - moist snuff: \$1.51 per pound
  - roll-your-own tobacco \$24.78 per pound
  - rolling papers: 1.26 cents per pack
- Until latest increases, most were lower than cigarette tax; more equivalent now
- Similar infrequent increases in taxes

# Tobacco Taxation in the U.S.

- State cigarette taxes
  - First adopted by IA in 1921; NC last to adopt in 1969
  - Specific excise tax in all states
  - Currently: 7.0 cents/pack (SC) to \$3.46/pack (RI)
    - Numerous state tax increases over past 5 years
  - Average \$1.23 per pack (38.5 cents in tobacco growing states; \$1.34 in other states)
    - Several proposing additional increases
  - Alaska at \$2.00 per pack (tied for 6<sup>th</sup> highest)
  - Most states tax other tobacco products
    - Almost always an *ad valorem* tax (% of price)
    - Alaska: 75% of wholesale price
  - Sales tax applied to tobacco products in most states



Source: Tobacco-Free Kids, 2009; includes taxes to take effect by 6/30/09

# Tobacco Taxation in the U.S.

## – Local Taxes

- Many localities add additional tax
  - Typically a few cents/pack, with some exceptions:
    - » \$1.50 in New York City
    - » \$2.68 in Chicago/Cook county
- Alaska:
  - 6 communities apply local taxes, up from 3 a few years ago
    - » Anchorage: \$1.402, adjusted annually for inflation
    - » Barrow: \$1.00
    - » Juneau: \$0.30
    - » Fairbanks (City and Borough): \$0.20
    - » Mat-Su Valley: \$1.00

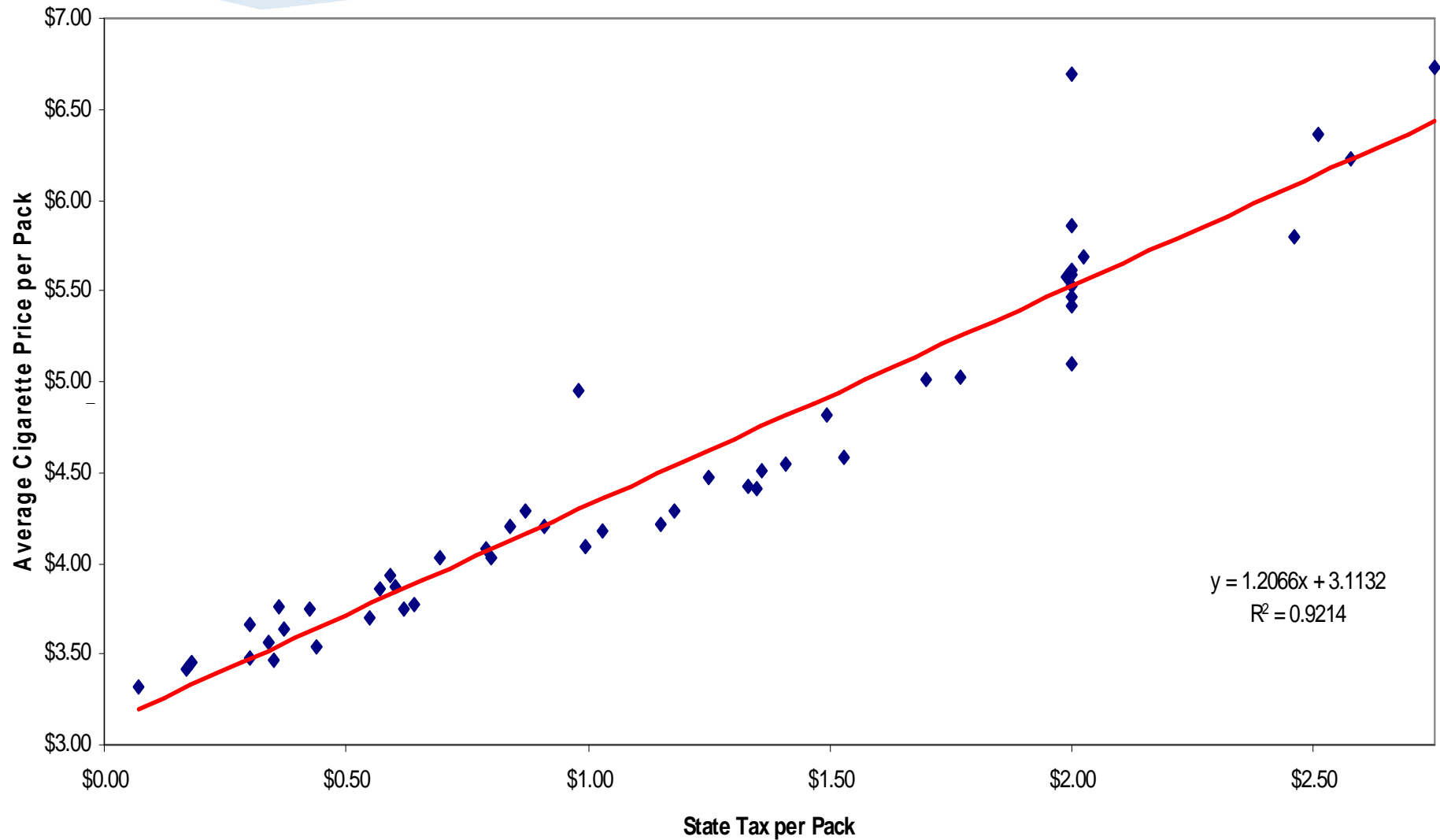
» Sitka: \$1.00

A hair follicle test is a type of drug test performed to find out if someone has used drugs within the previous 90 days. Comparatively to other tests like blood and urine, hair follicle analysis is not a standard procedure.  
<https://www.impactteen.org/hair-follicle-drug-test>



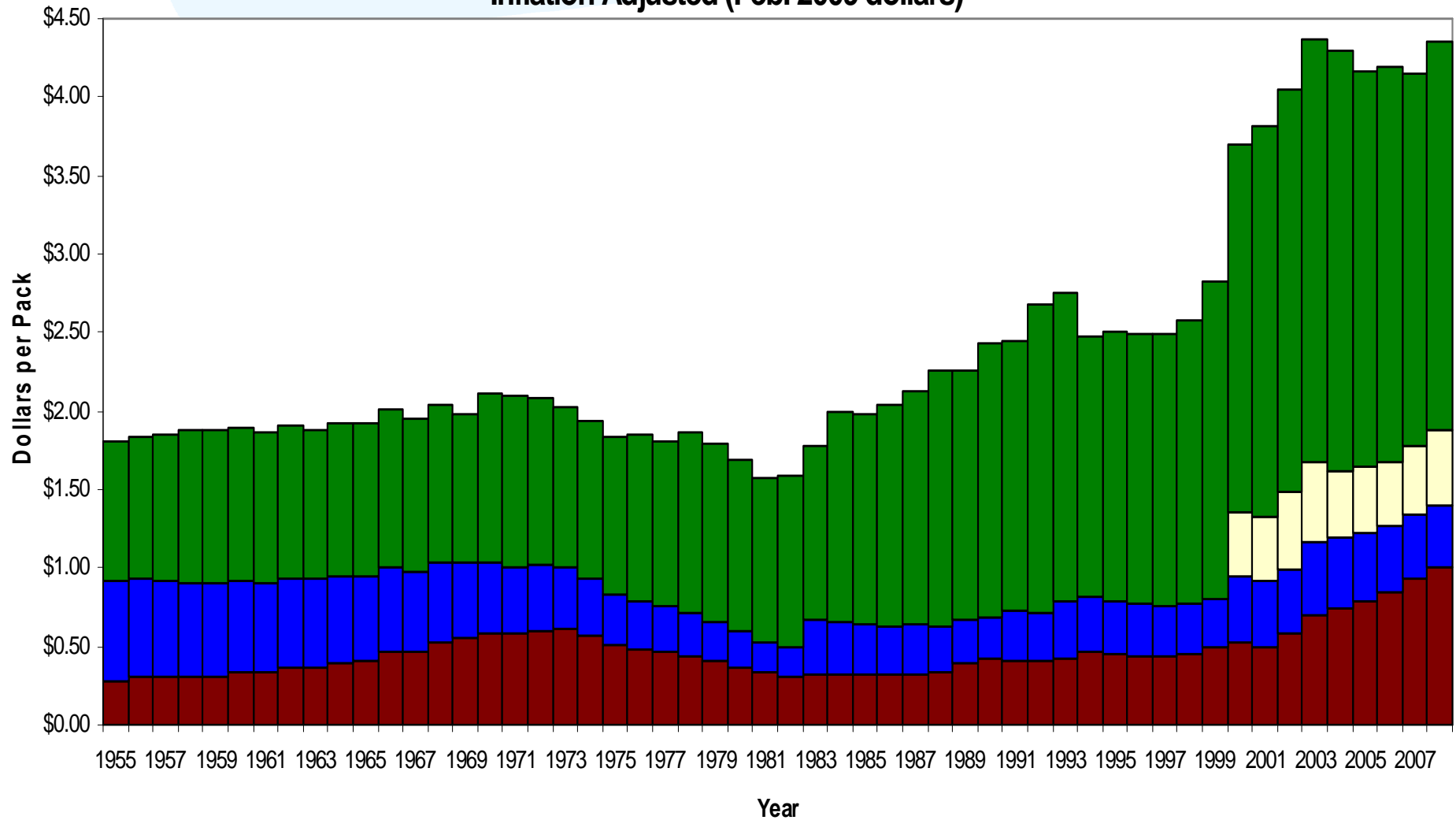
# State Cigarette Taxes and Prices

## November 1, 2008



# Cigarette Taxes and Prices, 1976-2008

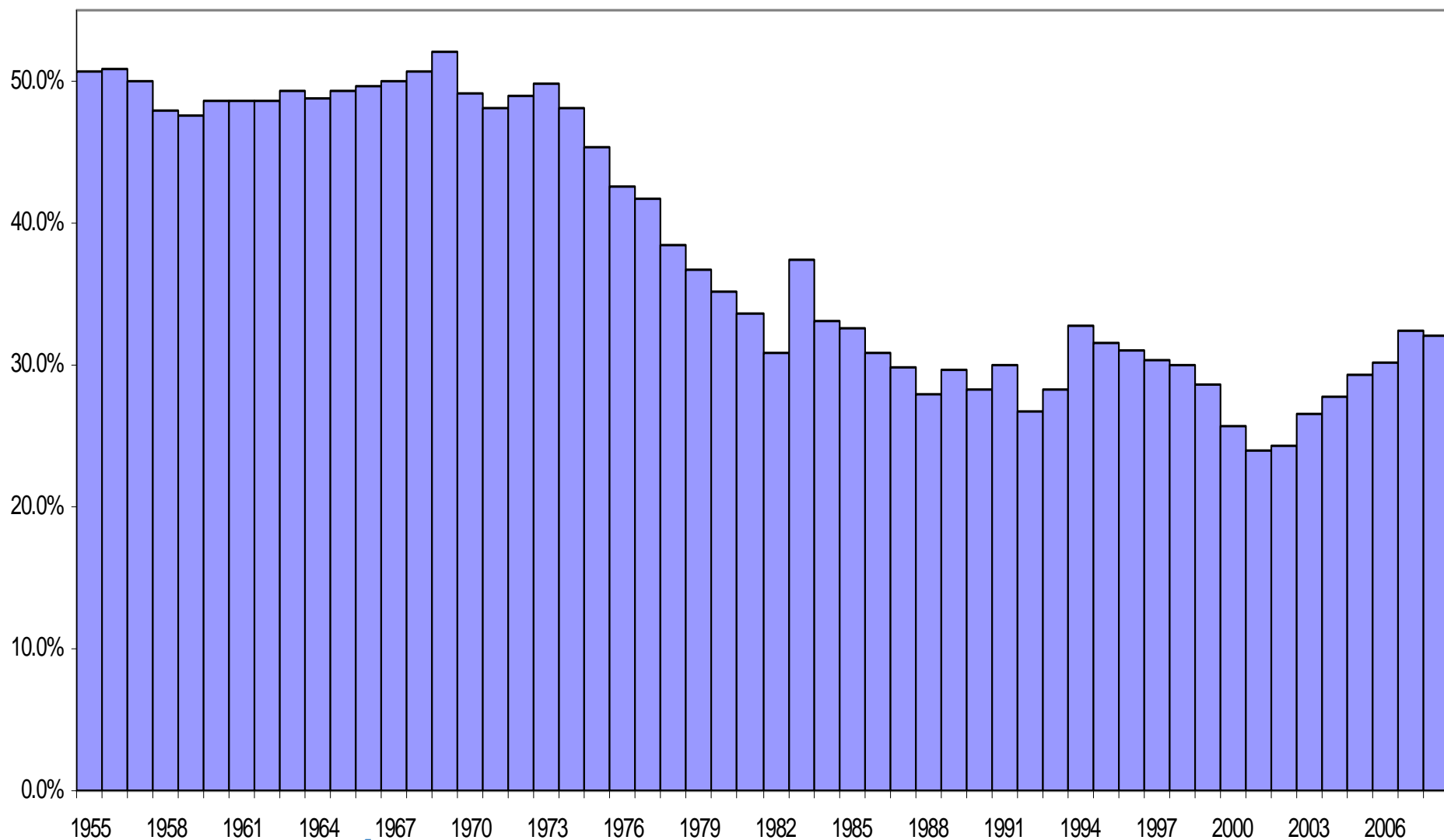
Inflation Adjusted (Feb. 2009 dollars)



State Tax Federal Tax MSA Costs Net Price

# Tax as Percent of Price

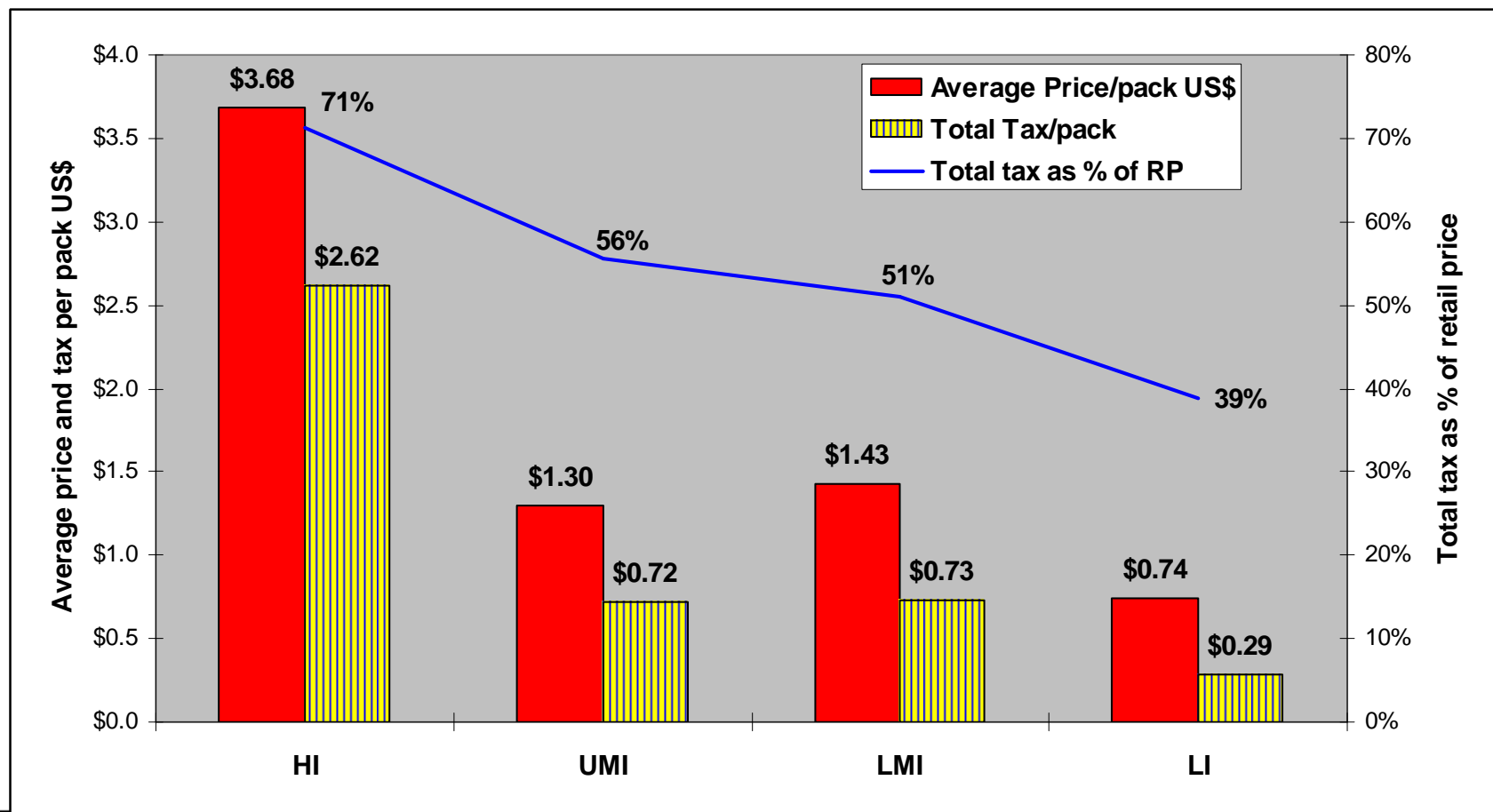
## United States, 1955-2008



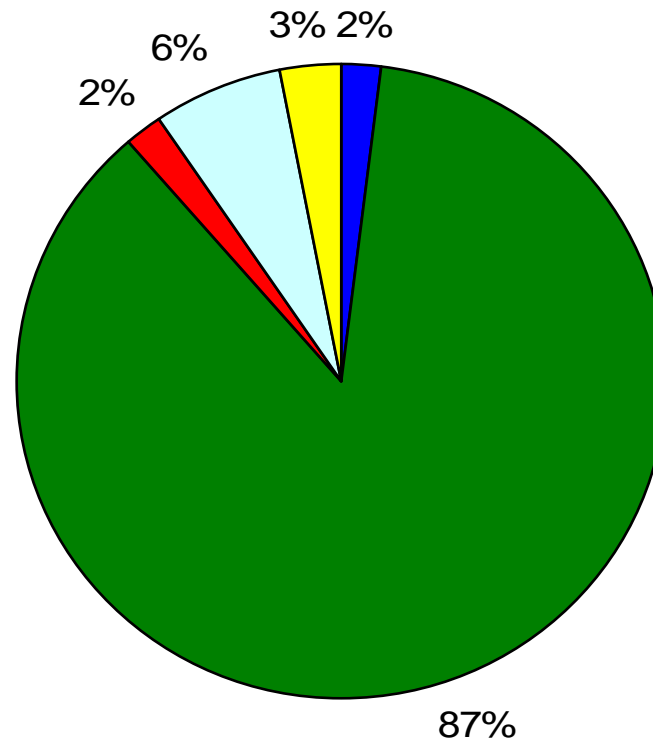
# Taxes and Tobacco Product Prices

- Tax levels and prices, vary widely across countries

Price and Tax by Income Level, 2004-05

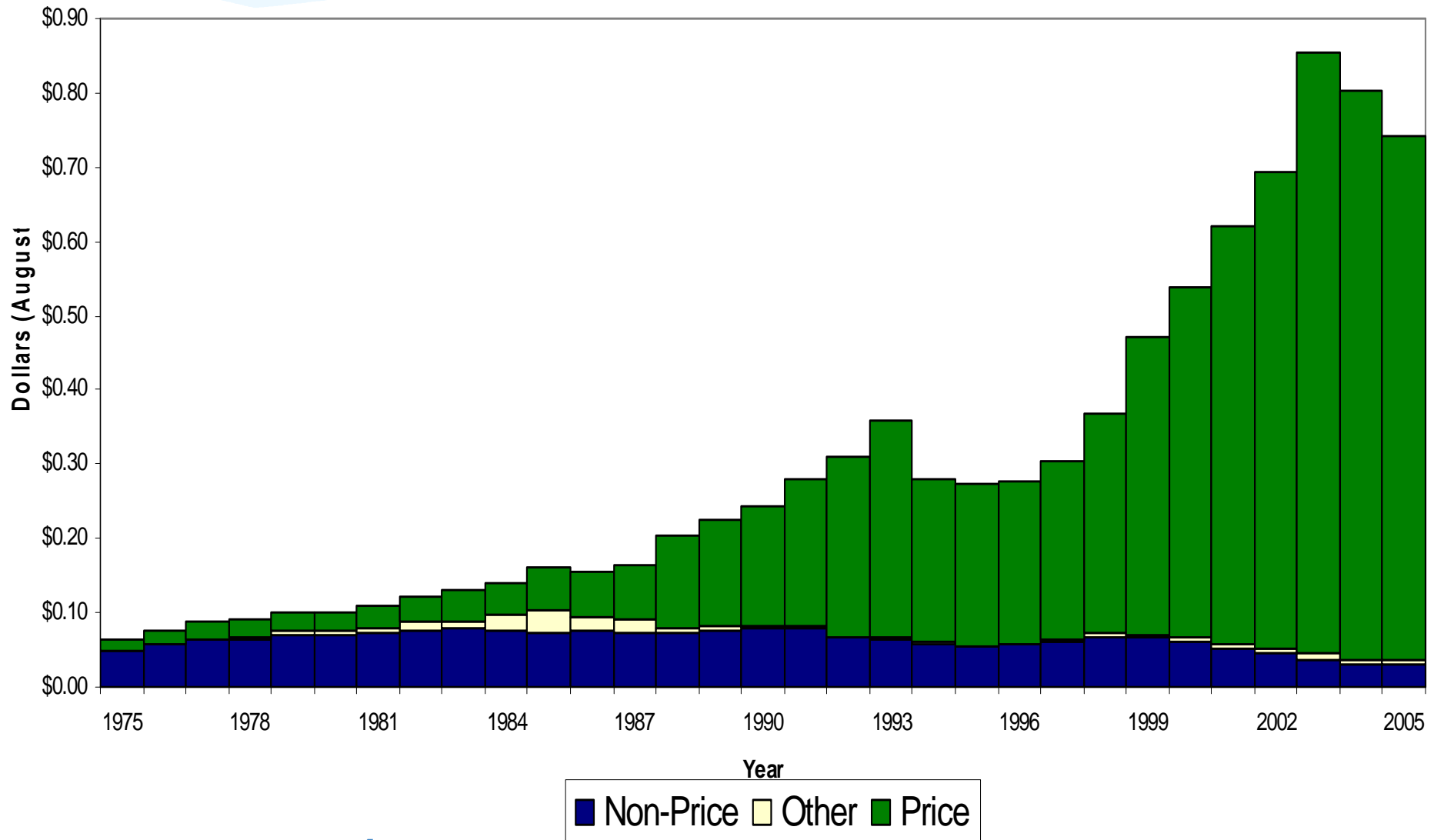


## 2005 Cigarette Marketing Expenditures by Category



■ image ■ price ■ merchandise ■ promotional allowances ■ other

# Cigarette Marketing Expenditures per Pack Inflation Adjusted, 1975-2005



# **Tobacco Industry Efforts to Offset Impact of Tax Increases**

- Federal Tax Increase: 61.66 cents per pack, April 1, 2009
- Philip Morris Price Increase: 71 cents per pack on “growth and support brands” and 78 cents per pack on “non-support brands”
  - weeks before FET increase went into effect
  - followed by Reynolds and Lorillard

# Tobacco Industry Efforts to Offset Impact of Tax Increases

On February 4th, 2009, the Federal Government enacted legislation to fund the expansion of the State Children's Health Insurance Program (SCHIP) that increases excise taxes on cigarettes by 158%.

As a result, you will see the price of all cigarettes, including ours, increase in retail stores.

We know times are tough, so we'd like to help. We invite you to register at [Marlboro.com](http://Marlboro.com) to become eligible for cigarette coupons and special offers using this code: **MAR1558**

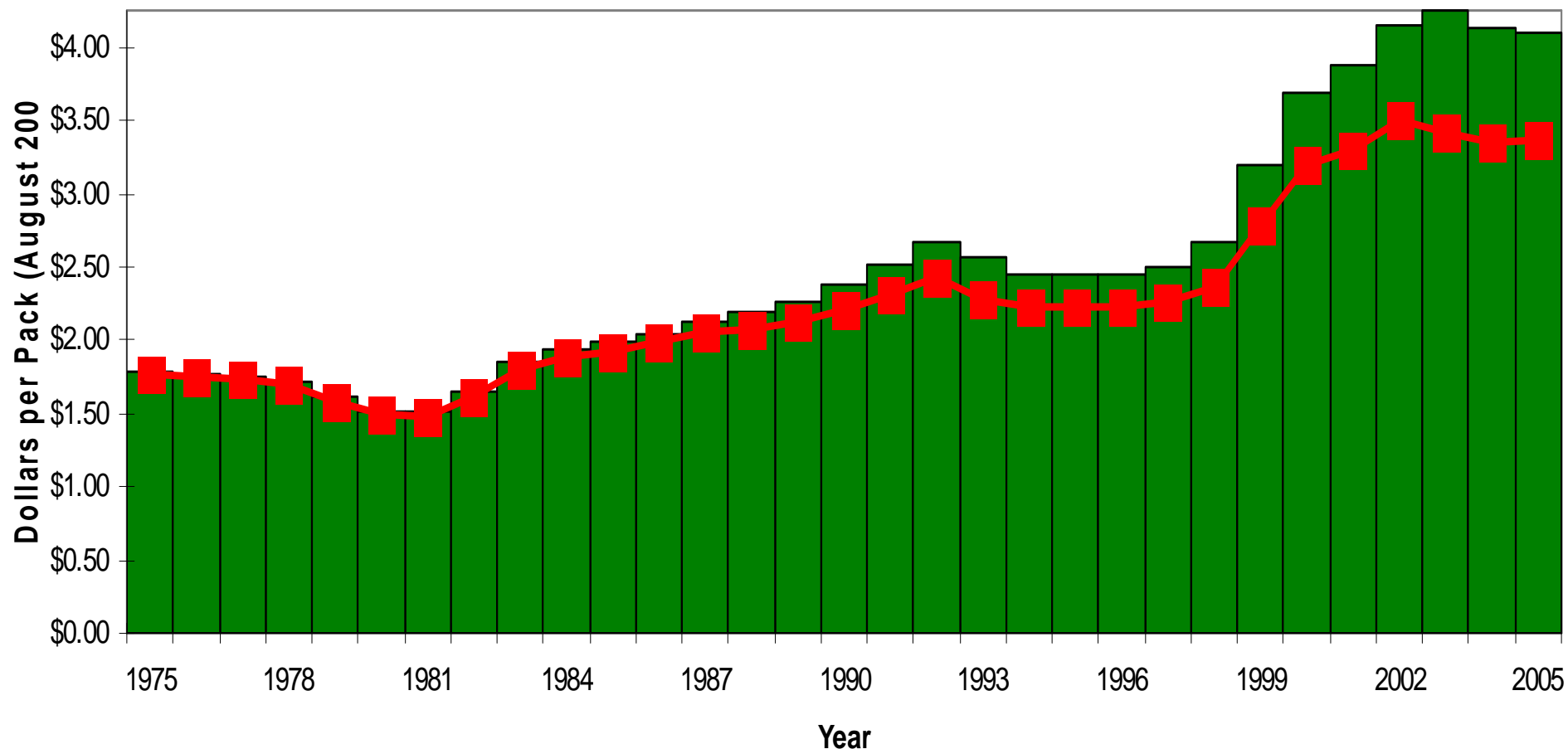
Thank You,

Philip Morris USA



# Average Cigarette Prices, 1975-2005

## Inflation Adjusted



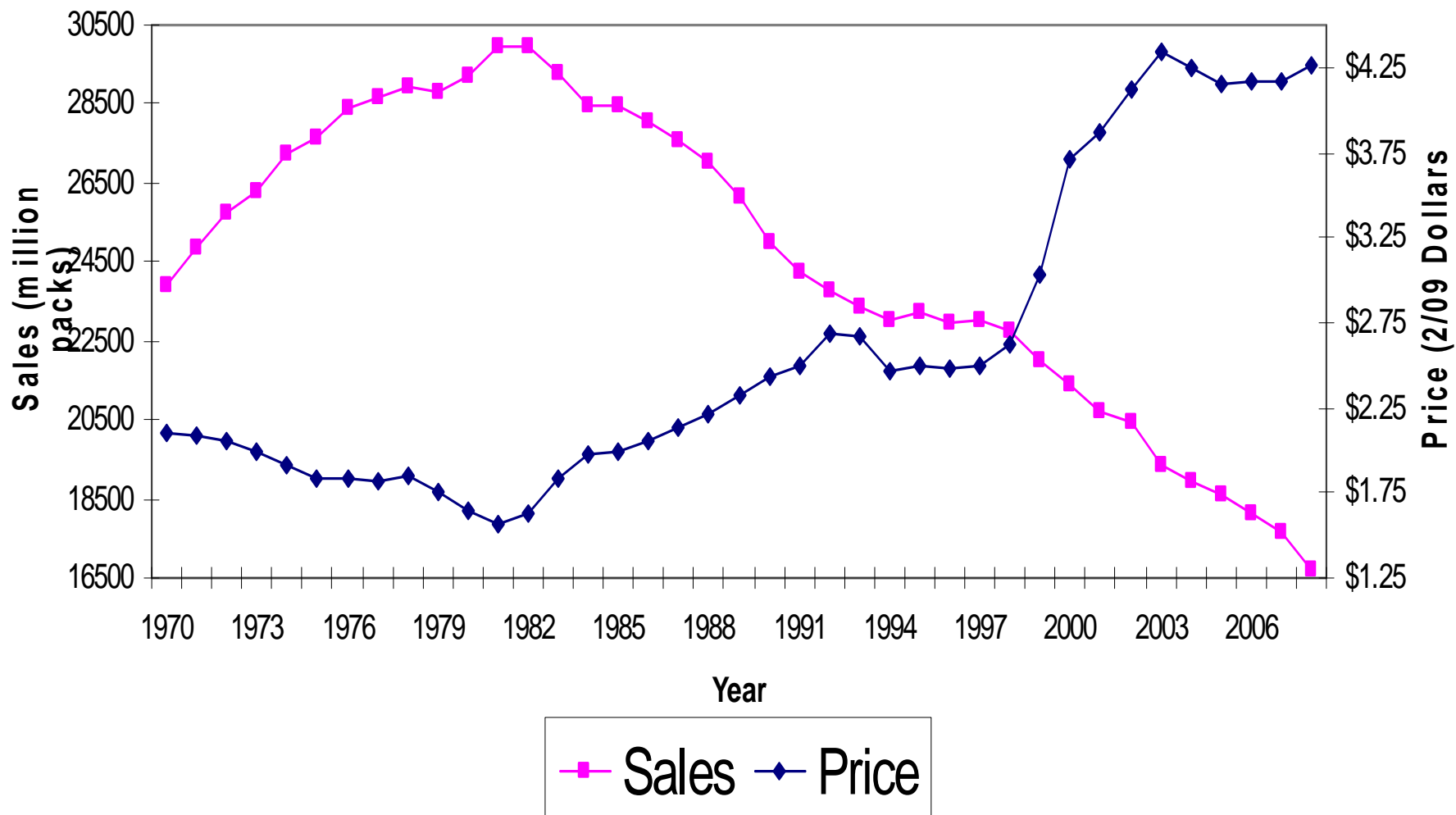
Price Price-Price Related Marketing

# 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%
  - price elasticity of demand: percentage reduction in consumption resulting from one percent increase in price
  - Most elasticity estimates in range from -0.25 to -0.5, clustered around -0.4

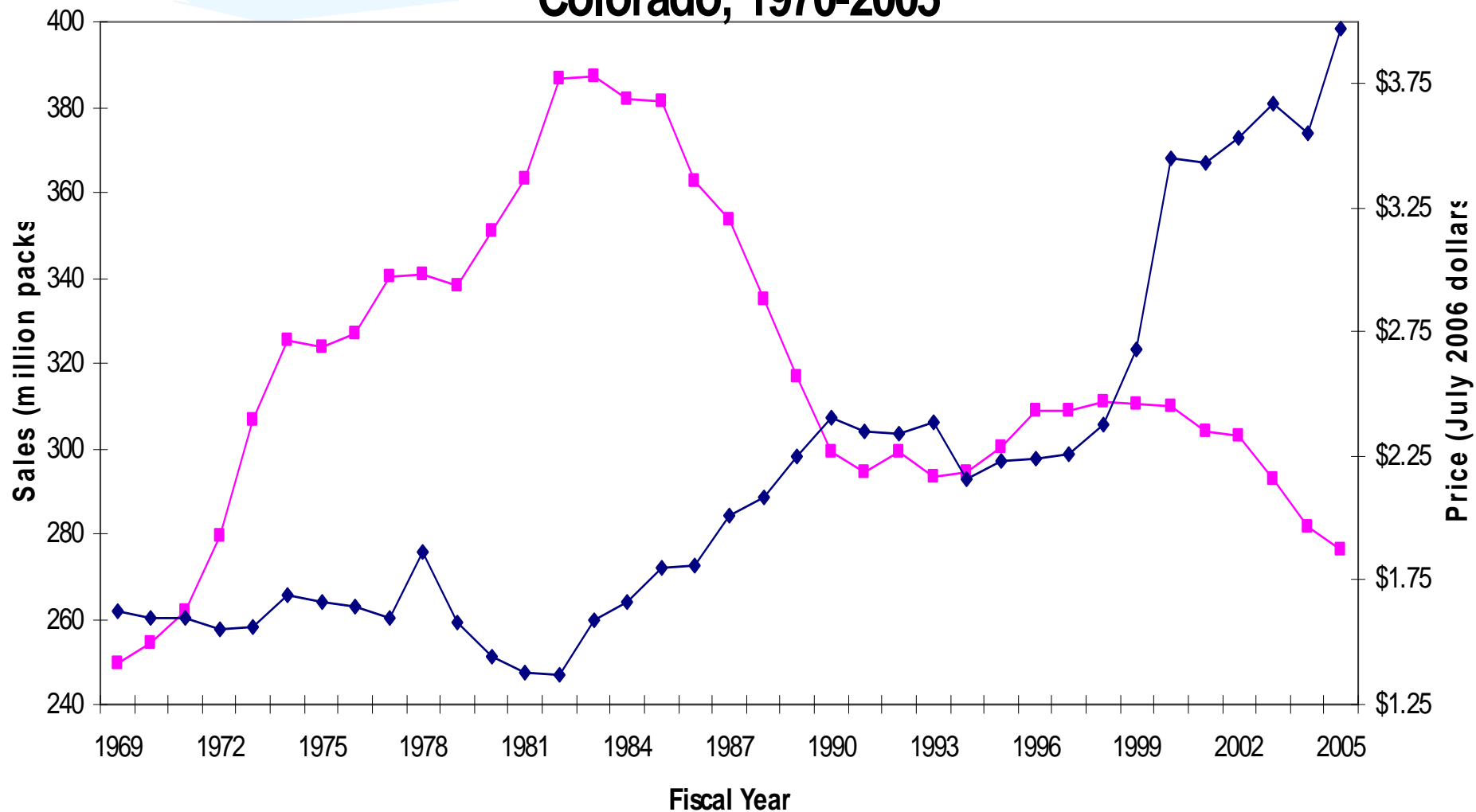
# Cigarette Prices and Cigarette Sales

## United States, 1970-2008



# Cigarette Prices and Sales

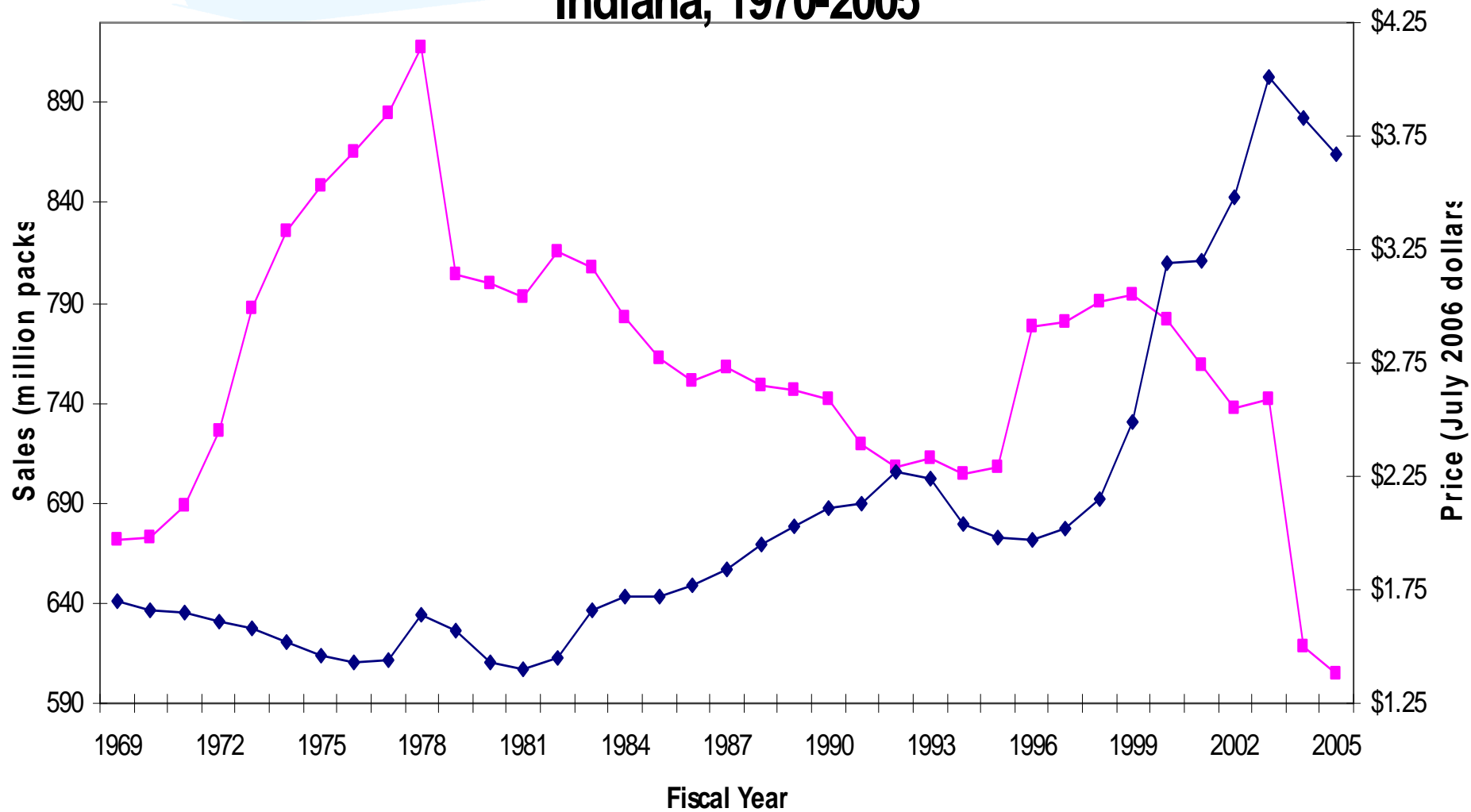
## Colorado, 1970-2005



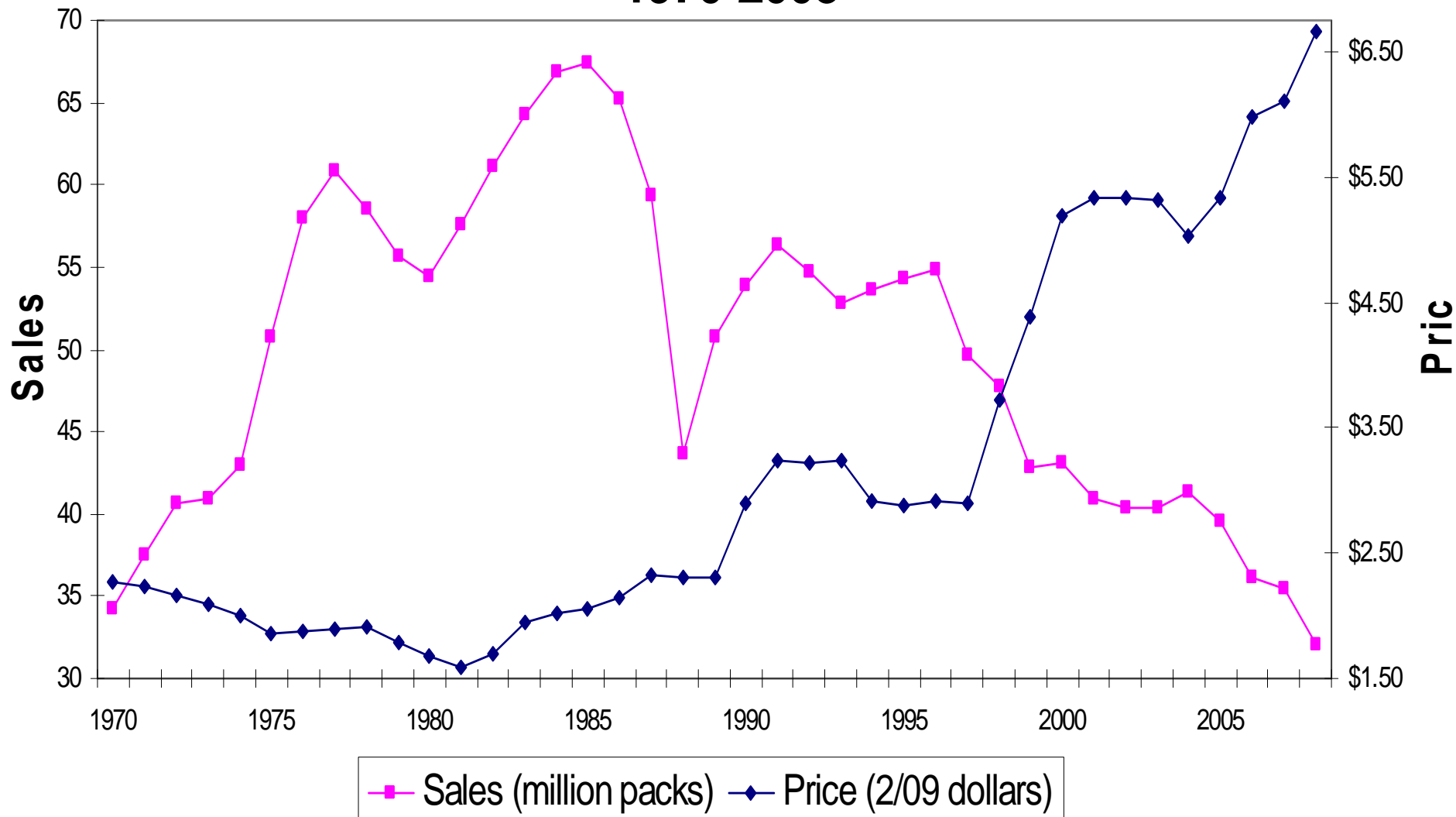
—■— Sales —◆— Price

# Cigarette Prices and Sales

## Indiana, 1970-2005



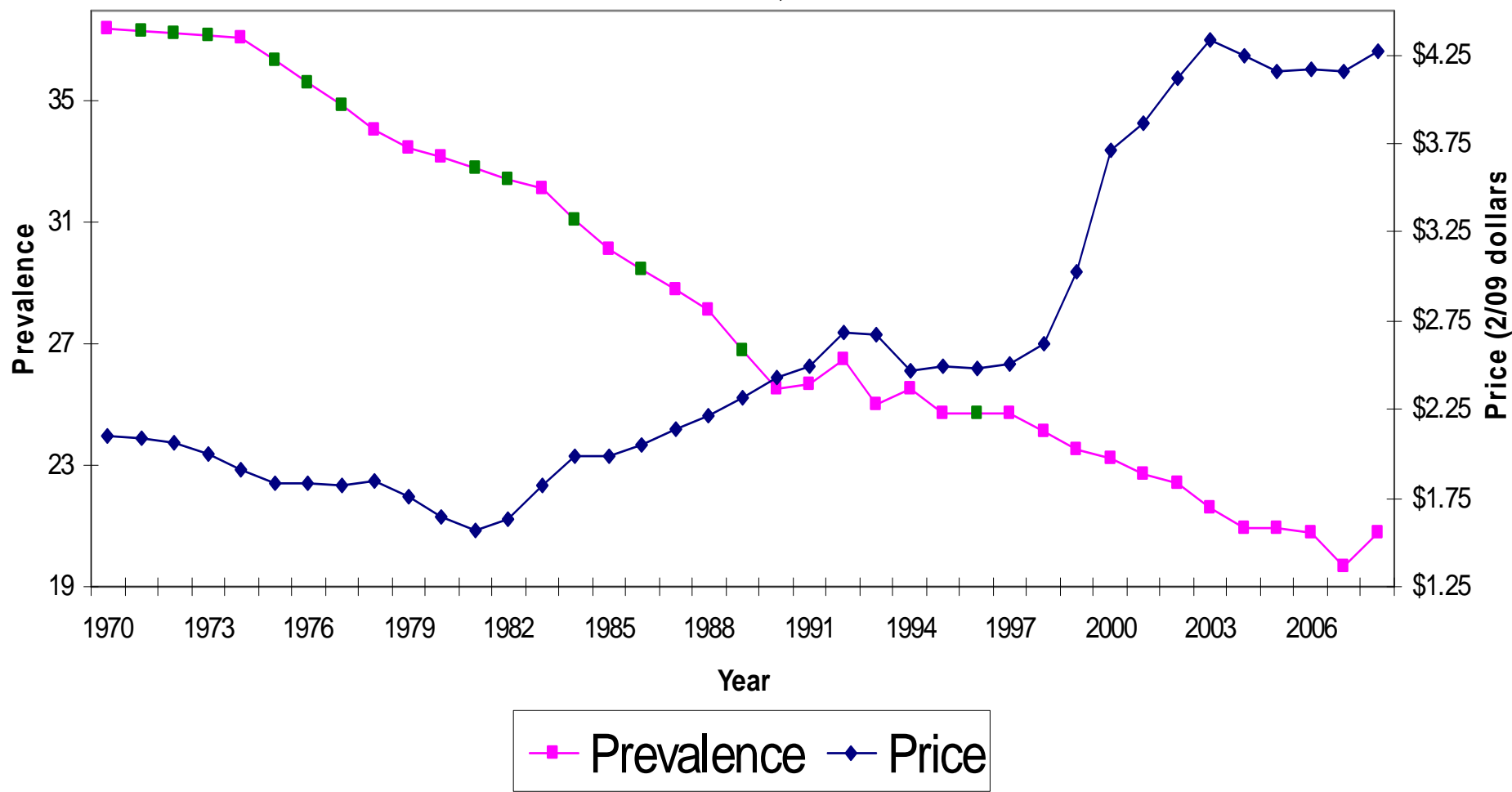
# Cigarette Prices and Cigarette Sales, Alaska 1970-2008



# Tobacco Taxes and Tobacco Use

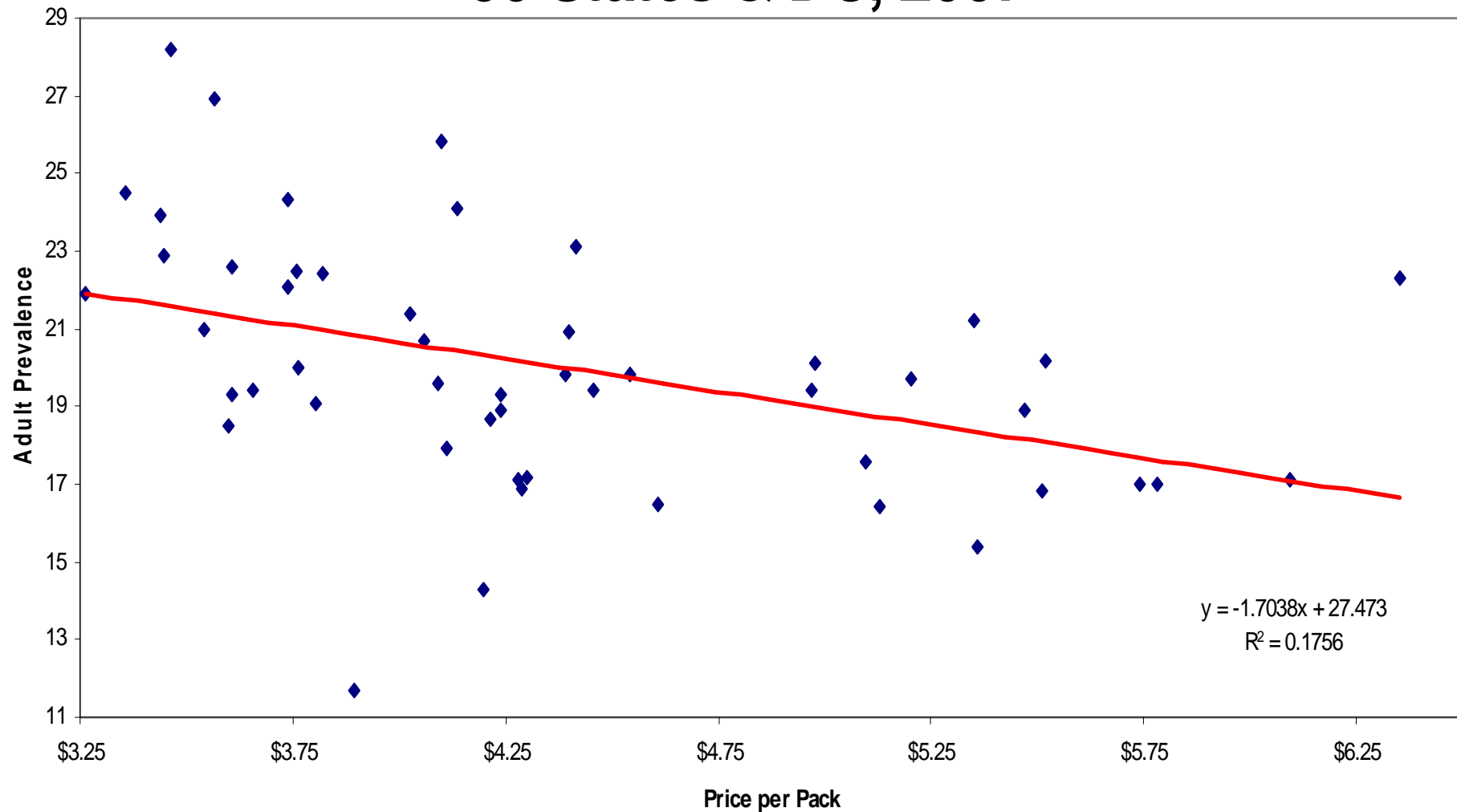
- Higher taxes induce quitting, prevent relapse, reduce consumption and prevent starting.
- Estimates from high-income countries indicate that 10% rise in price reduces overall cigarette consumption by about 4%
- **About half of impact of price increases is on smoking prevalence; remainder is on average cigarette consumption among smokers**
  - **10% rise in price reduces prevalence by about 2%**

# Cigarette Prices and Adult Smoking Prevalence, United States, 1970-2008

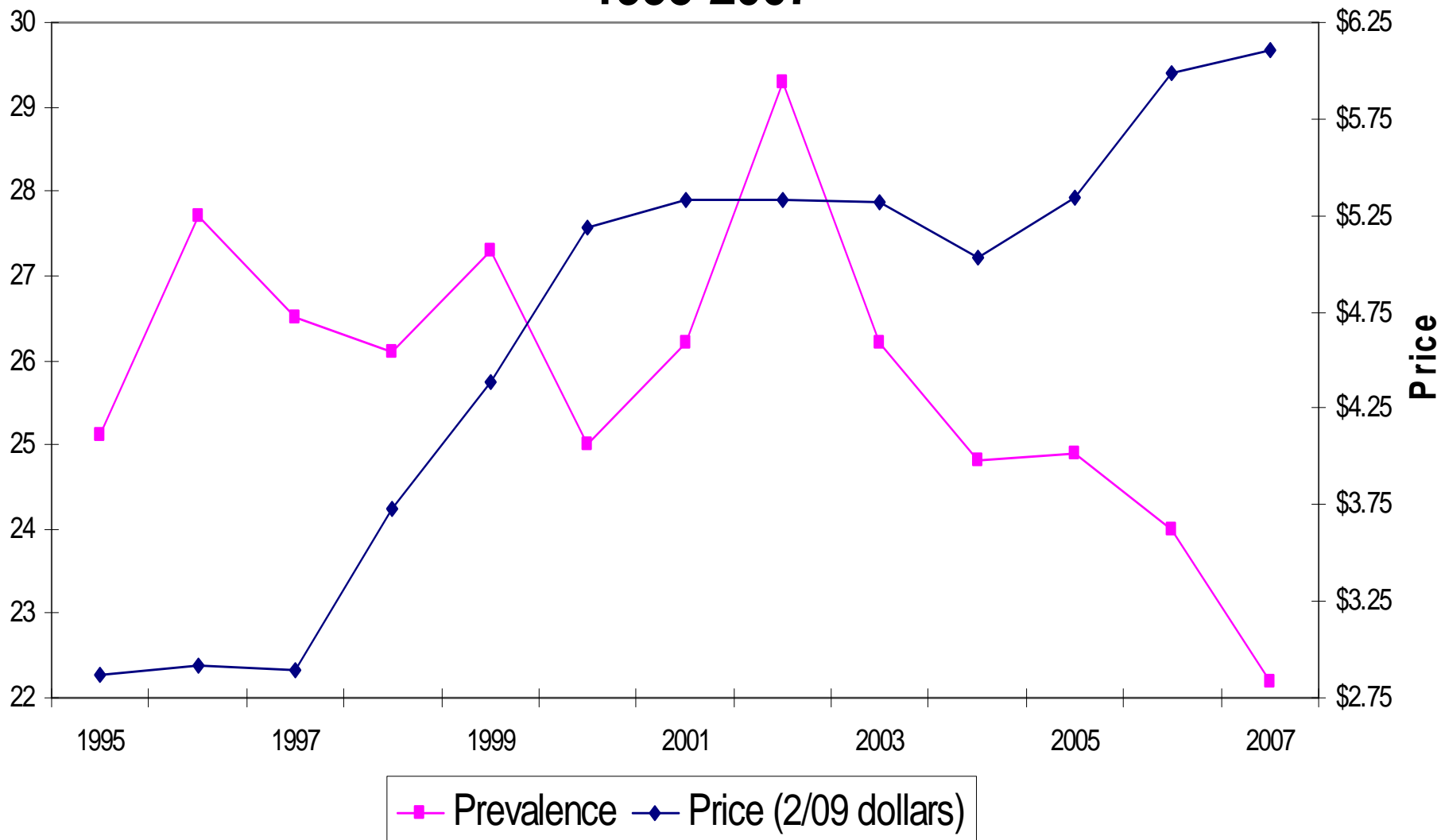




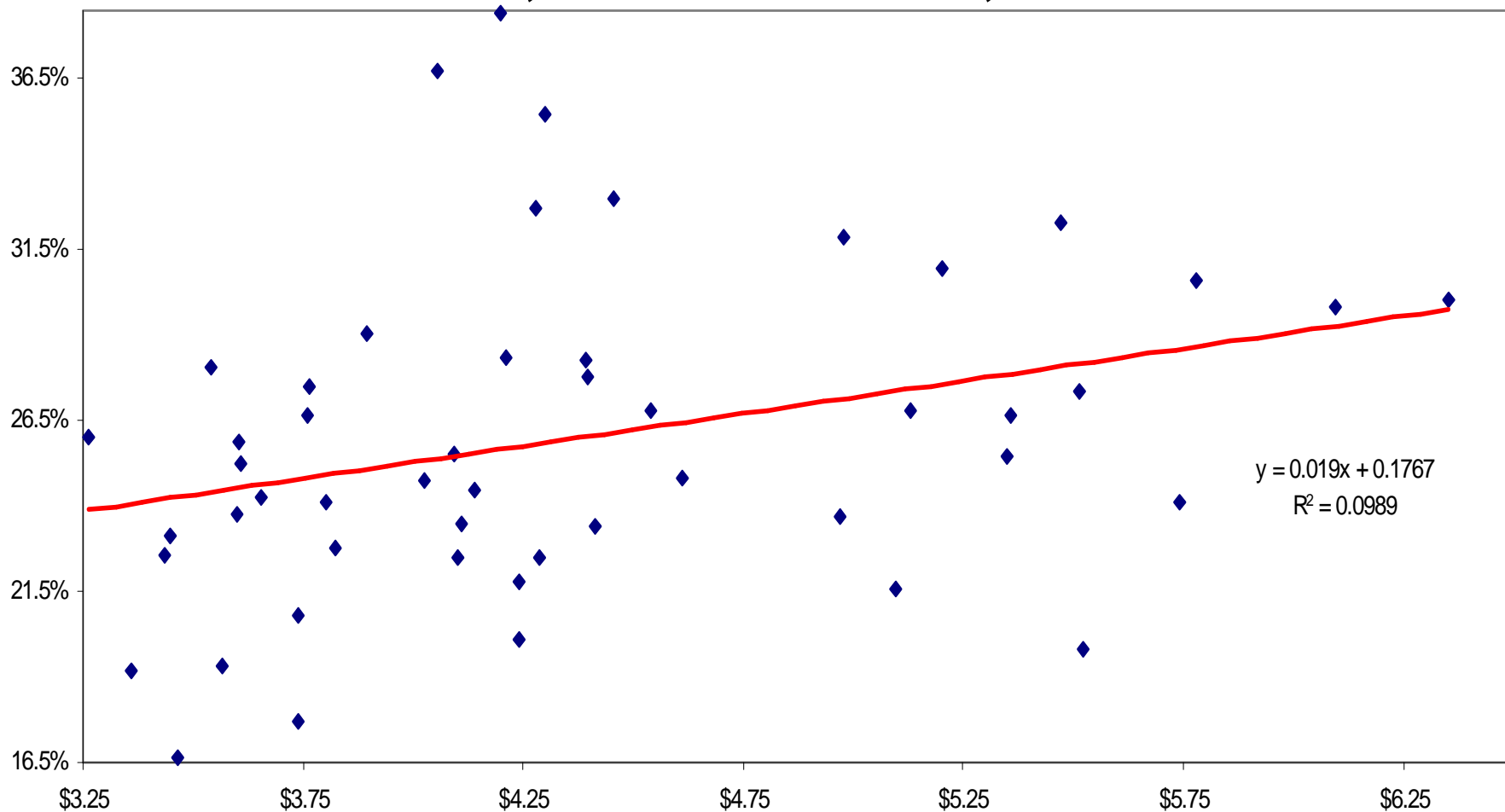
# Cigarette Prices and Adult Prevalence, 50 States & DC, 2007



# Cigarette Prices and Adult Prevalence, Alaska, 1995-2007



# Cigarette Prices and Non-Daily Smoking Rates, 50 States & DC, 2007



# 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**
  - **Comparable increases across all products minimize potential for substitution and maximize revenue impact**

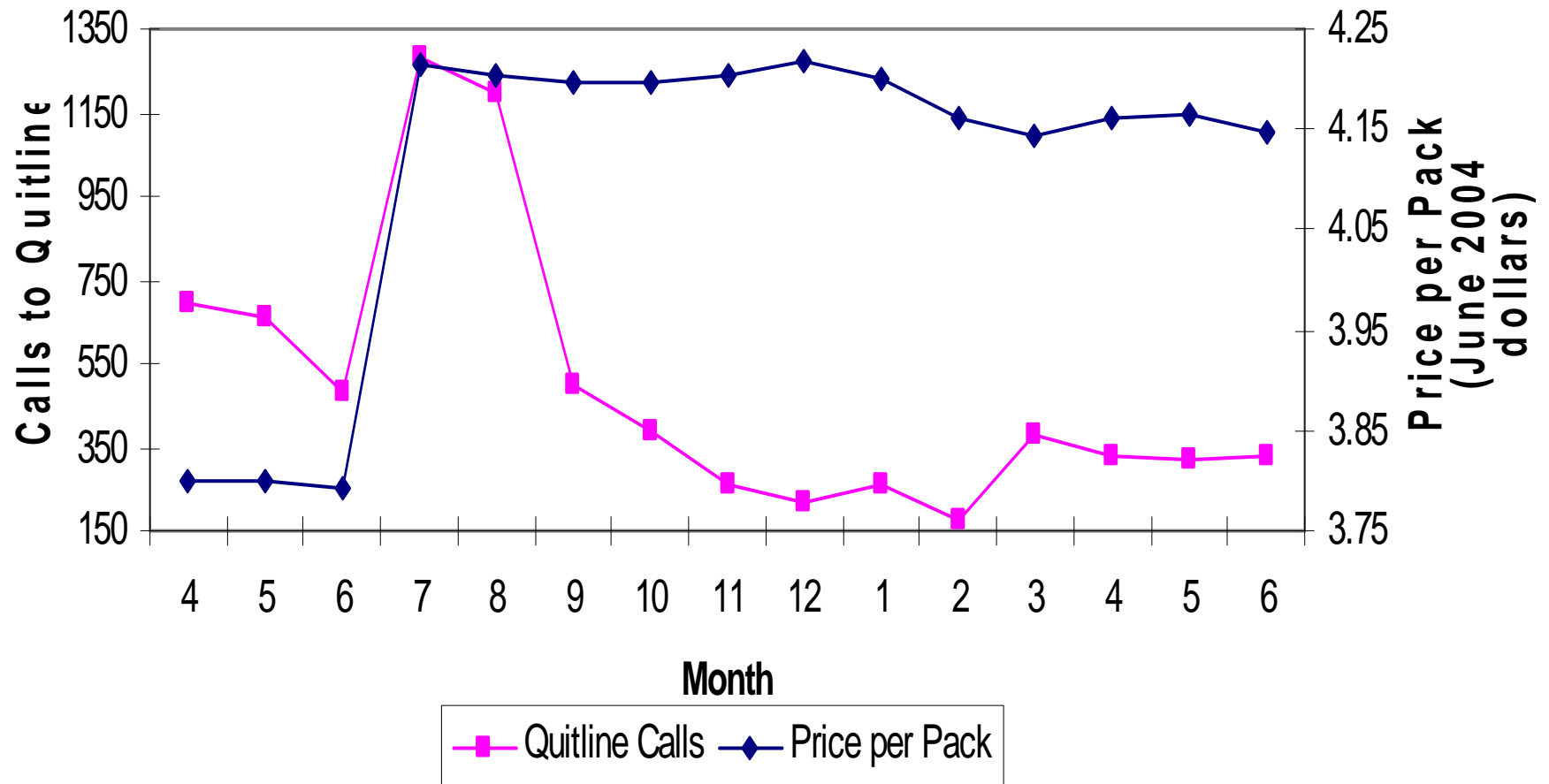
# Tobacco Taxes and Tobacco Use

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- About half of impact of price increases is on smoking prevalence; remainder on consumption by smokers
- Some evidence of substitution among tobacco products in response to relative price changes
- **Long run impact of sustained price increases about double the short run impact**

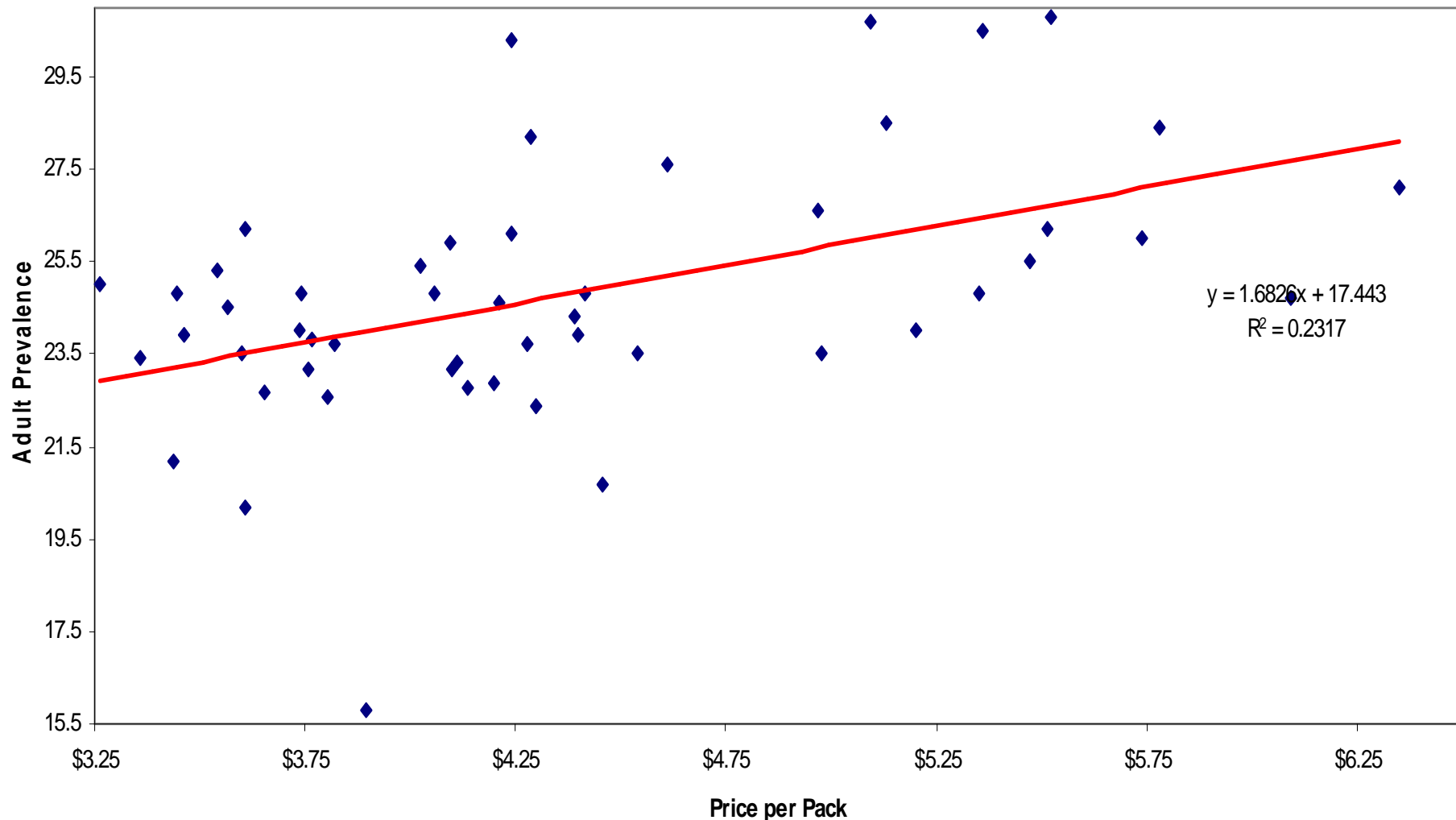
# Cigarette Prices and Smoking Cessation

- 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%
  - Higher cigarette taxes/prices increase demand for NRT and cessation services

# Cigarette Price and Quitline Calls - Illinois, 2002-2003



# Cigarette Prices and Former Smoking Rates, 50 States & DC, 2007





# Lower SES populations are more price responsive

- Economic theory implies greater response to price by lower income persons
- Growing international evidence shows that 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 four times more responsive to price than those above median income level

*Implies tax increases may be progressive*

# Cigarette Prices and Smoking among Pregnant Women

- Several studies find that higher taxes and prices significantly reduce smoking among pregnant women
  - 10% price rise reduces prevalence by 5-7%
  - Higher cigarette prices significantly reduce prevalence of low birth-weight births and other pregnancy complications caused by smoking
  - Improved birth outcomes result in substantial reductions in health care costs

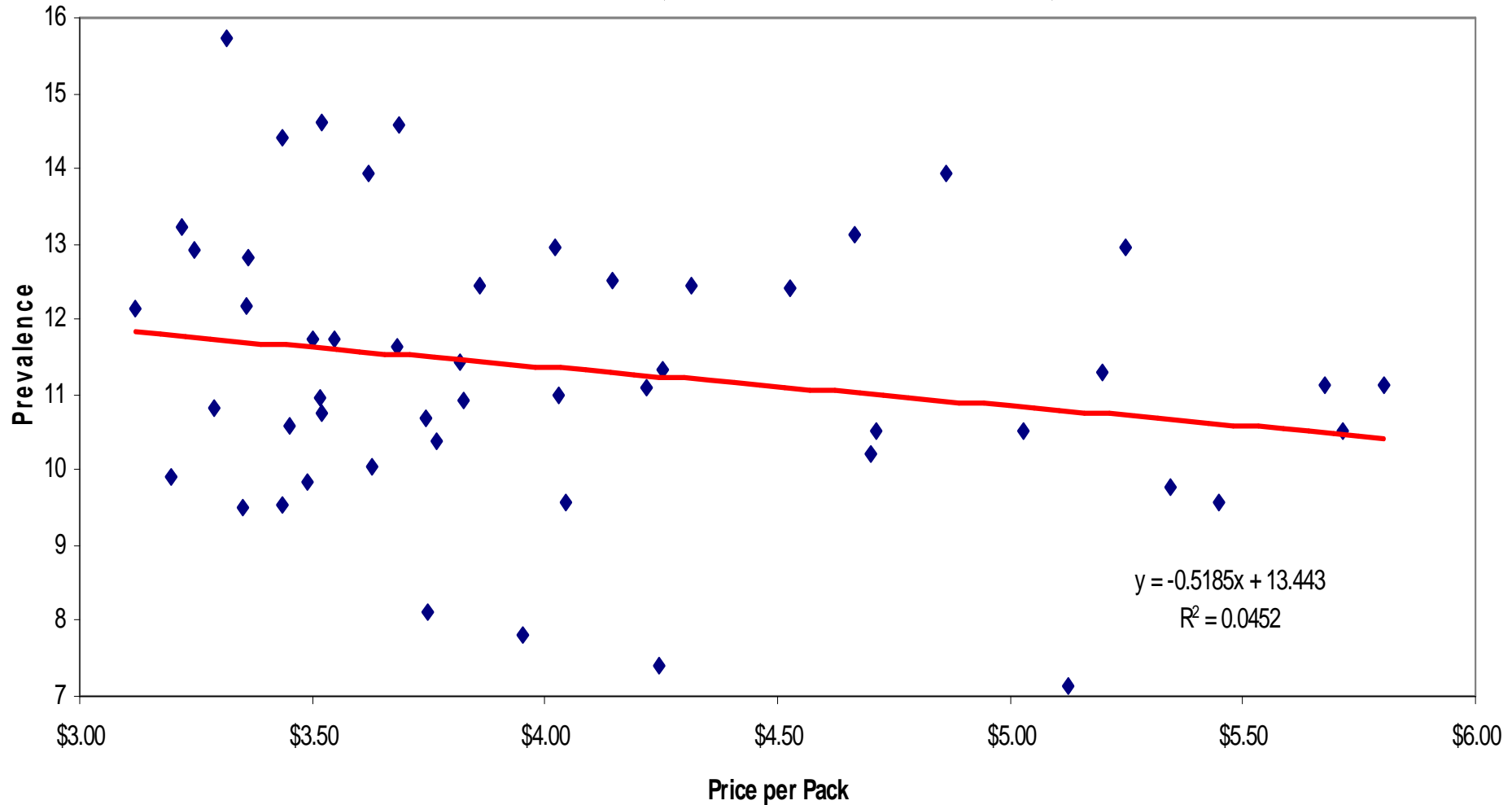
# Young People More Responsive to Price Increases

- 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
  - recent estimates indicate about 1/3 of overall impact of price on youth accounted for by indirect impact through peers
- Young smokers less addicted than adult smokers
- Young people tend to discount the future more heavily than adults
- Other spillover effects
  - for example, through parental smoking

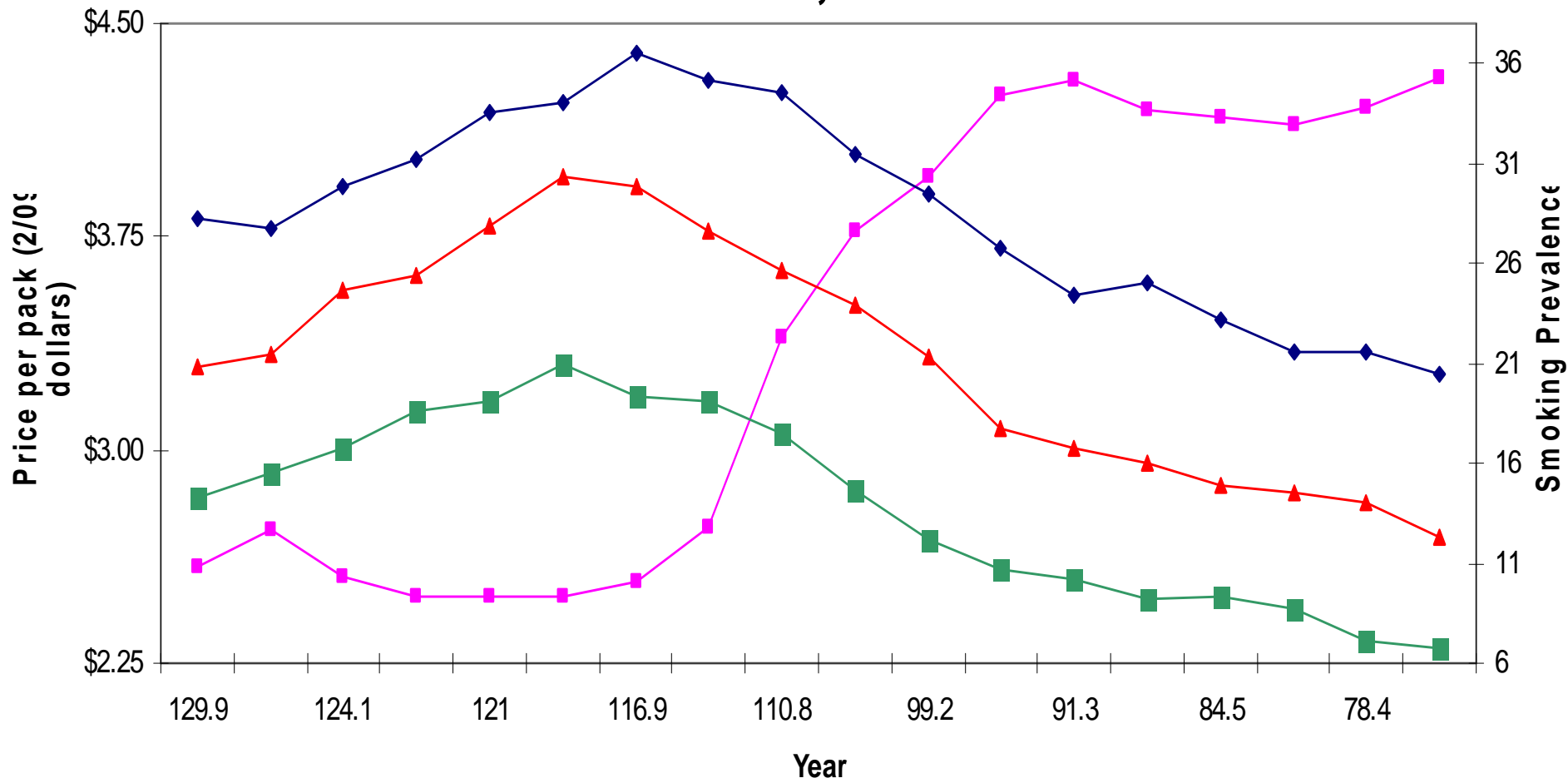
# Cigarette Prices And Youth

- A 10% increase in price reduces smoking prevalence among youth by nearly 7%
- A 10% increase in price reduces average cigarette consumption among young smokers 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 Prices and 12-17 Year Old Smoking Prevalence Rates, 50 States & DC, 2005/06

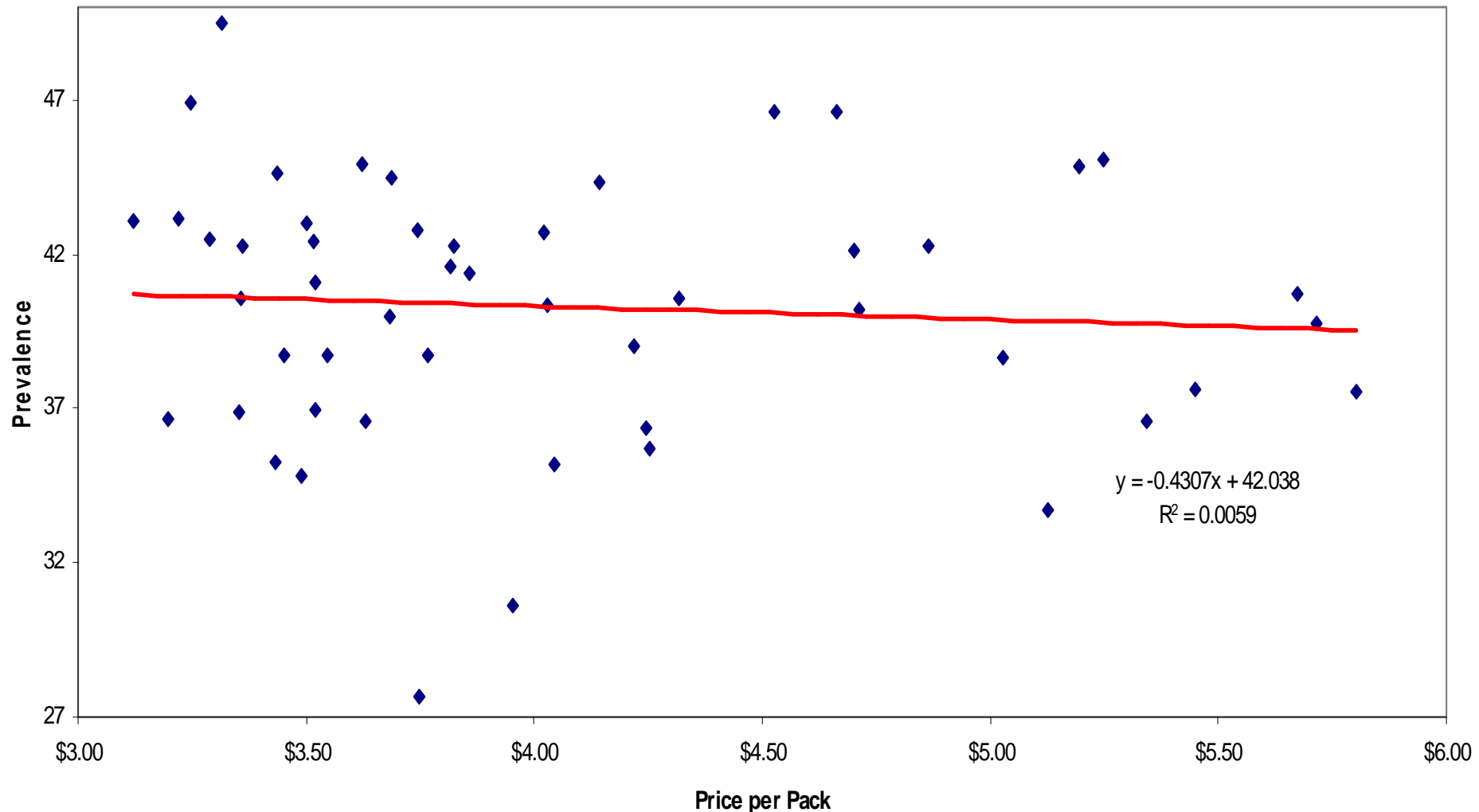


# Cigarette Price and Youth Smoking Prevalence, United States, 1991-2008



■ Cigarette Price 
 ◆ 12th grade prevalence 
 ▲ 10th grade prevalence 
 ■ 8th grade prevalence

# Cigarette Prices and 18-25 Year Old Smoking Prevalence Rates, 50 States & DC, 2005/06



# Support for Tobacco Tax Increases

- Generally consistent support among voters for tobacco tax increases
  - recent polls: 71% of SC voters; 73% of FL voters
  - about 2 to 1 support among voters for tax increase
- Greater support when revenues dedicated to tobacco control efforts or other health-related activities
  - NJ poll found 57% supported 50 cent increase with revenue for deficit reduction and tobacco prevention program vs. 29% support for 40 cent increase for budget deficit reduction only
- Bipartisan support
  - VT: 83% of Democrats and 76% of Republicans supported 67 cent increase



# Support for Tobacco Tax Increases

- Greater support for tobacco tax increases than for other revenue generating measures
  - IA: for deficit reduction, 69% supported cigarette tax increase vs. 37% for sales tax and 24% for gas tax
- Support tends to be consistent across demographic and socioeconomic groups
- Amount of increase generally makes little difference in support and strong support even in states where taxes have increased recently
- Significant numbers of smokers support tax increases
  - Average of 37% of smokers supported in 45 polls

# Impact of Recent Federal Cigarette Tax Increase

Based on these estimates, the \$0.61666 per pack increase in the Federal cigarette tax will:

- Reduce cigarette sales by over 900 million packs
- Generate almost \$9 billion in new revenues
- Lead over 1.15 million current smokers to quit
- Prevent over 1.45 million youth from taking up smoking

# Impact of Recent Federal Cigarette Tax Increase

Based on these estimates, the \$0.61666 per pack increase in the Federal cigarette tax will:

- Increased cessation and reduced initiation would prevent almost 720,000 premature deaths caused by smoking
- Generate significant reductions in spending on health care to treat diseases caused by smoking
- Reduce state excise tax and MSA revenues, but could be easily offset with portion of federal revenues

# Impact of Recent Federal Cigarette Tax Increase in Alaska

- Reduce cigarette sales by 1.2 million packs
- Reduce excise tax revenues by \$2.4 million
  - Additional losses of MSA revenues (\$2.8 million) and local excise tax revenues
- Lead almost 2,000 current smokers to quit
- Prevent almost 3,000 youth from taking up smoking
- Reduce future deaths from smoking by almost 1,400

# Earmarked Tobacco Taxes

- Many states earmark tobacco tax revenues for comprehensive tobacco control programs
  - CA – 1989 and 1999 ballot initiatives
  - MA – 1993 ballot initiative
  - Several others since
- Others devote portion of MSA or other settlement revenues to comprehensive programs
- Alaska dedicates portion of MSA and excise tax revenues to comprehensive program

# Earmarked Tobacco Taxes

- Comprehensive programs support a variety of activities:
  - Anti-smoking advertising
  - Quitlines and other cessation support
  - School based prevention programs
  - Community-based cessation and prevention efforts
  - Much more
- These activities add to the impact of tax increases in promoting cessation and preventing initiation

# Funding for Tobacco Prevention, FY2009



Source: Tobacco Free Kids, 2008

# Research Findings – Comprehensive Programs and State Cigarette Sales

- Higher spending on tobacco control efforts significantly reduces cigarette consumption and adult smoking prevalence
- 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 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
  - estimated effects about 3 times those for adults
- Estimated impact of spending at CDC recommended levels: minimum: 8-9% reduction in youth smoking prevalence; maximum: over 20% reduction
- Estimates suggest that greatest impact is on earlier stages of youth smoking uptake

# Myths About Economic Impact of Tobacco Taxation and Tobacco Control

- Impact on Revenues?
- Impact on Jobs?
- Impact on Tax Evasion/Avoidance?
- Impact on the poor?

*Reality is that tobacco control is one of the “best buys” among health and public health interventions*

# Myths About Economic Impact of Tobacco Taxation and Tobacco Control

- Impact on Revenues?

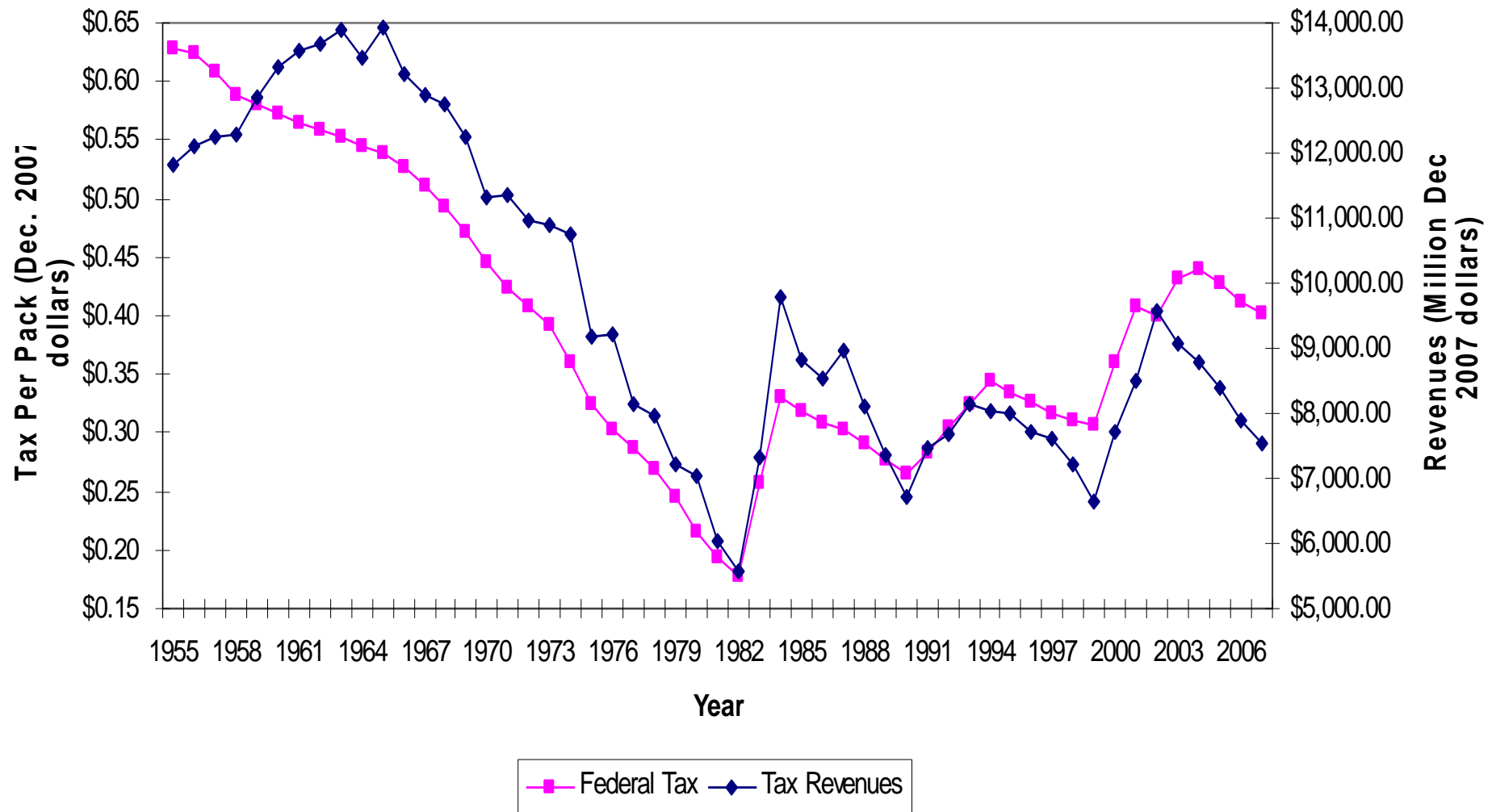
*Myth: Government revenues will fall as cigarette taxes rise, since people buy fewer cigarettes*

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

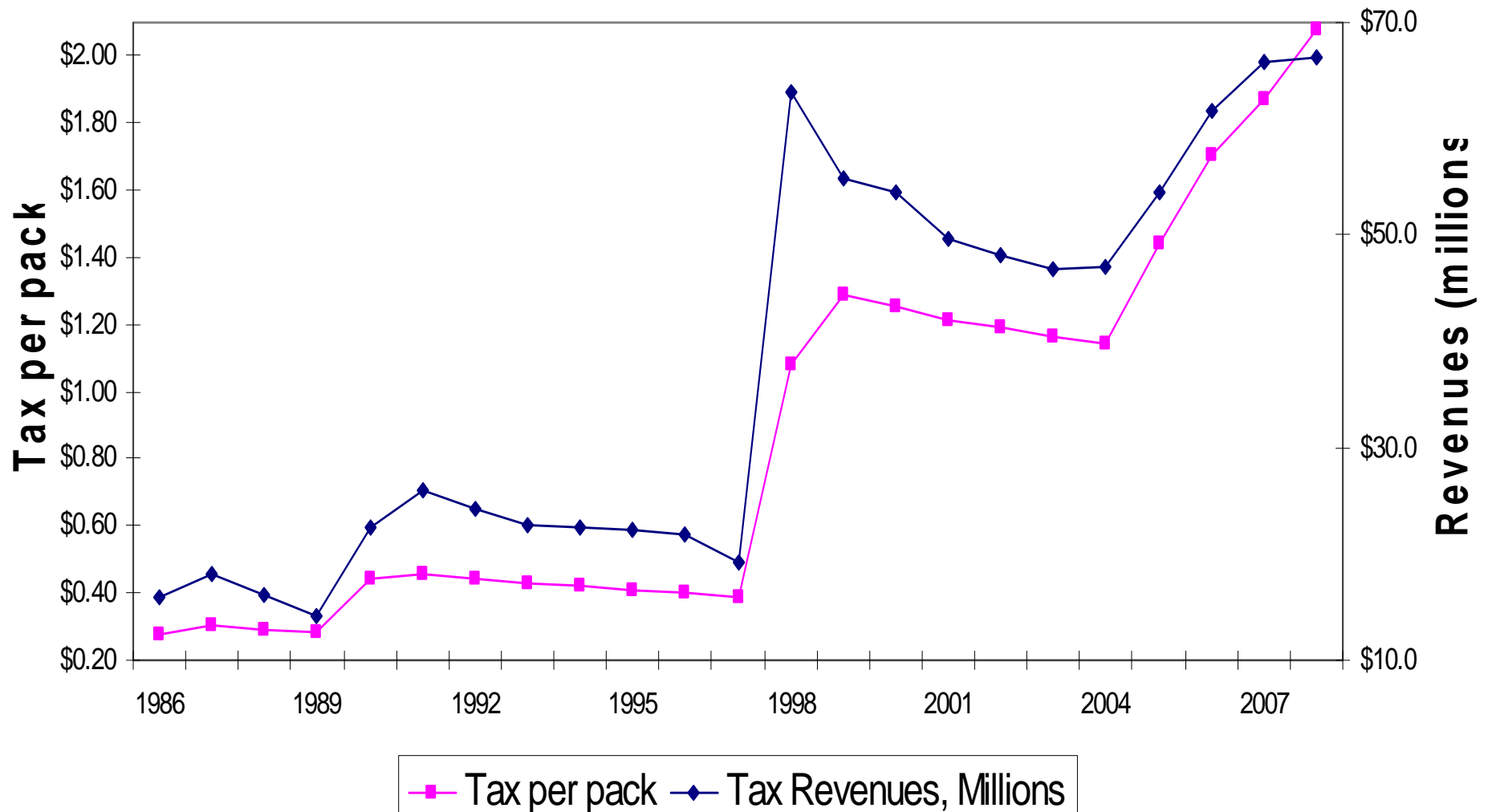
- With one exception, every significant increase in federal and state cigarette taxes has resulted in a significant increase in cigarette tax revenues

# Federal Cigarette Tax and Tax Revenues

## Inflation Adjusted (Dec. 2007 dollars), 1955-2007



# Cigarette Tax and Tax Revenues, Alaska Inflation Adjusted (2/09 \$s), 1985-2008



# Sustainability of Cigarette Tax Revenues

Some suggest increases in revenues won't be sustained over time as consumption declines, tax evasion increases

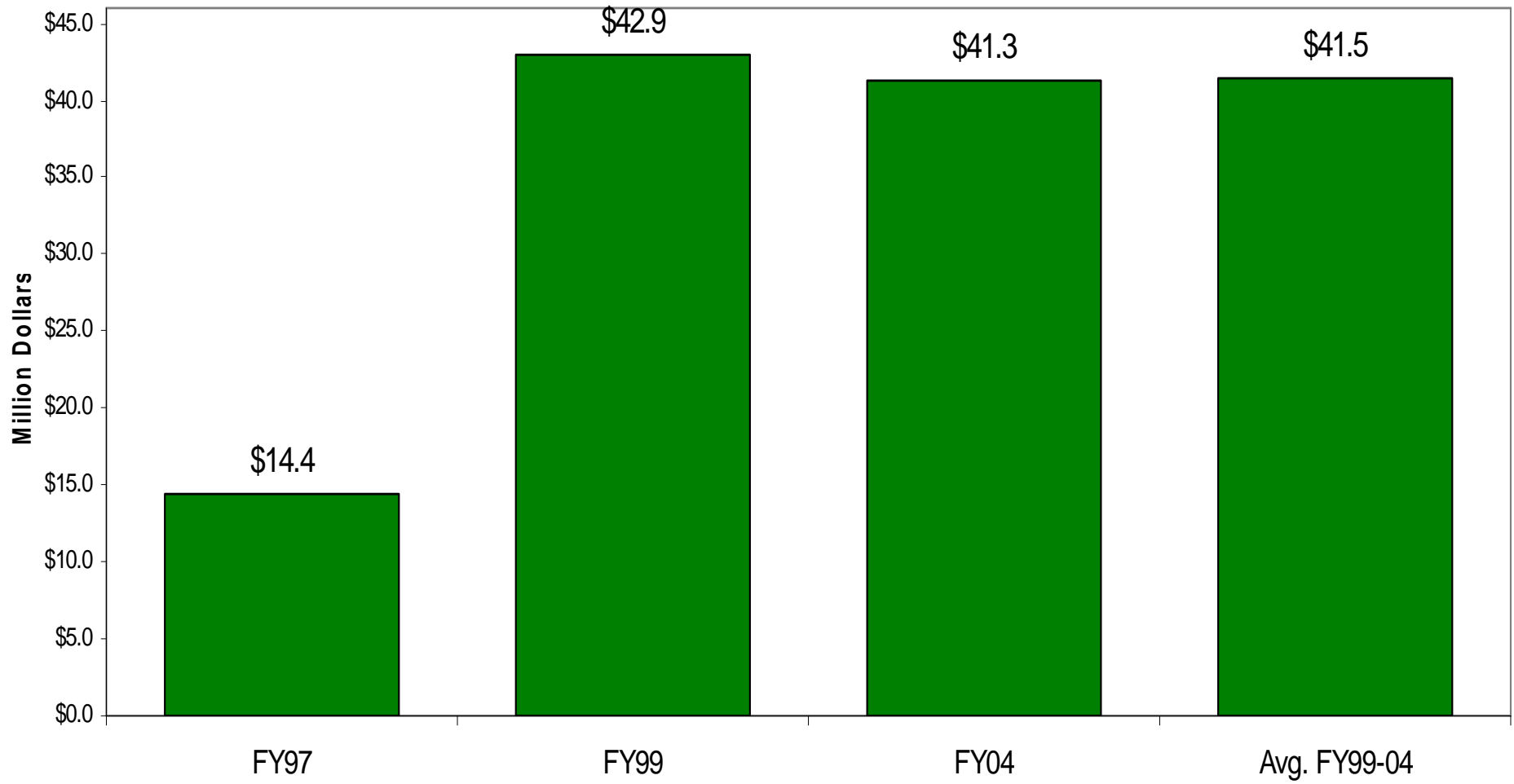
- Looked at significant state tax increases over past 20 years where increase was maintained for at least 5 years
  - Separately for states with major tobacco control programs

# Sustainability of Cigarette Tax Revenues

- *Conclusions:*

- All significant state tax increases resulted in significant increases in state tax revenues
  - Nominal increases in revenues sustained over time in states without tobacco control programs
  - Nominal revenues decline in states with tobacco control programs, but are significantly higher than before tax increase
    - Additional cost reductions due to declines in smoking
- Tobacco tax revenues more predictable than other revenues

# Cigarette Tax Revenues, Alaska, Various Years





# 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

- Presence does not imply dependence
- 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?

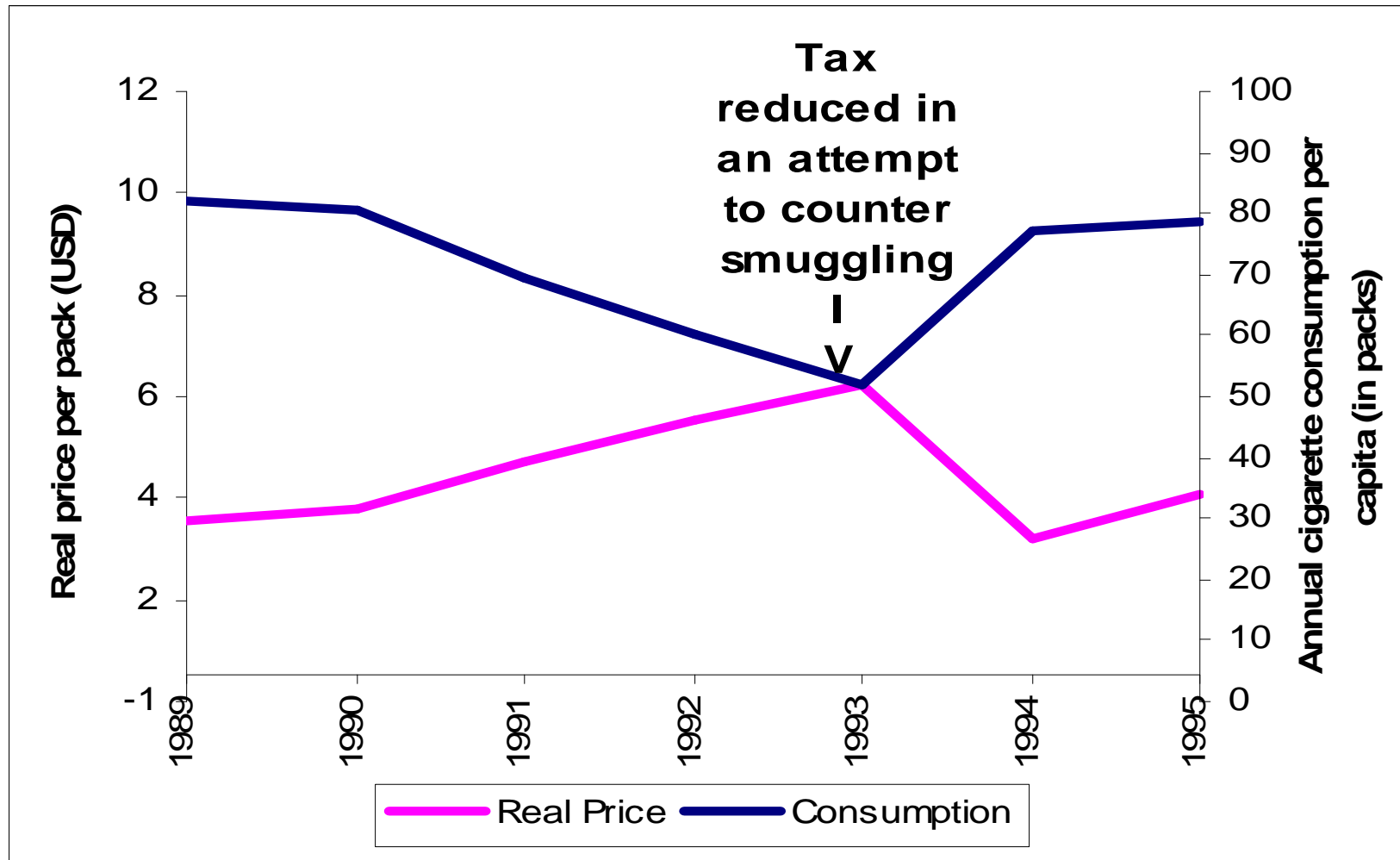
*Myth: Tax evasion negates the effects of increases in tobacco taxes*

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

- Extent of tax evasion often overstated
- 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

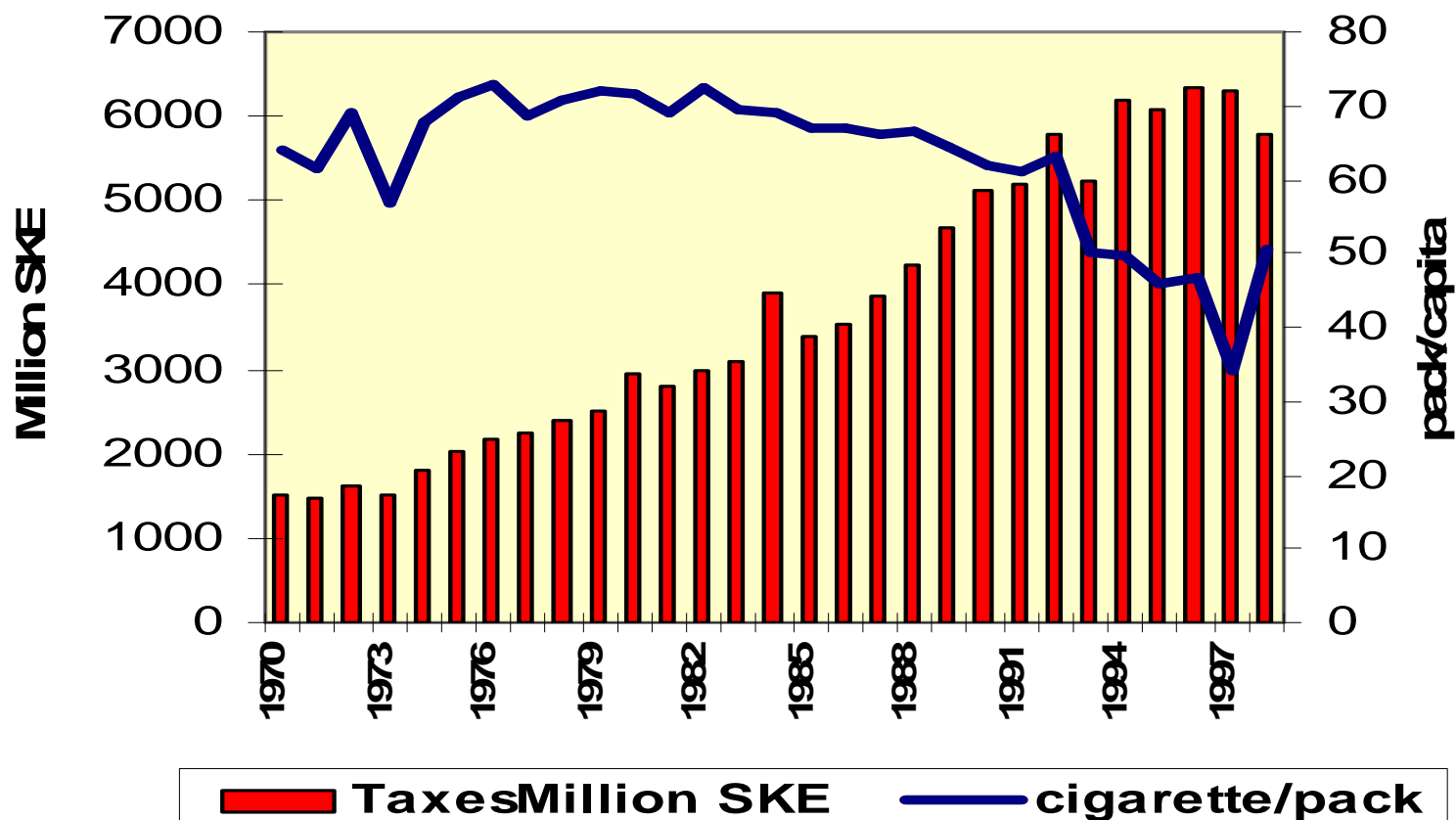
# Canada Sharply Reduced Taxes in 1993



Source: World Bank, 2003

# Sweden Reduced Cigarette Taxes by 17% in 1998

**Cigarette Tax Revenue and Consumption in Sweden, 1970-1998**



Source: World Bank, 2003

# 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 smokers bear disproportionate share of health consequences from smoking and are more responsive to price increases

- Should consider progressivity or regressivity of overall fiscal system
- Negative impact can be offset by use of new revenues to support programs targeting population or protect funding for current programs

# Conclusions

- Substantial 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.
- Arguments about economic consequences of tobacco control and tax increases misleading, overstated, or false

# **For more information:**

**<http://www.impactteen.org>**

**<http://www.tobaccoevidence.net>**

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

**fjc@uic.edu**