

Price Interventions: Applying lessons learned from tobacco control to promote healthy eating

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Vermont Attorney General's Office, Obesity Initiative, May 5, 2010



- Brief review of the evidence on the impact of tobacco taxes on tobacco use and its consequences
- Prices and weight outcomes
- Potential for using taxes to promote healthy eating and reduce obesity

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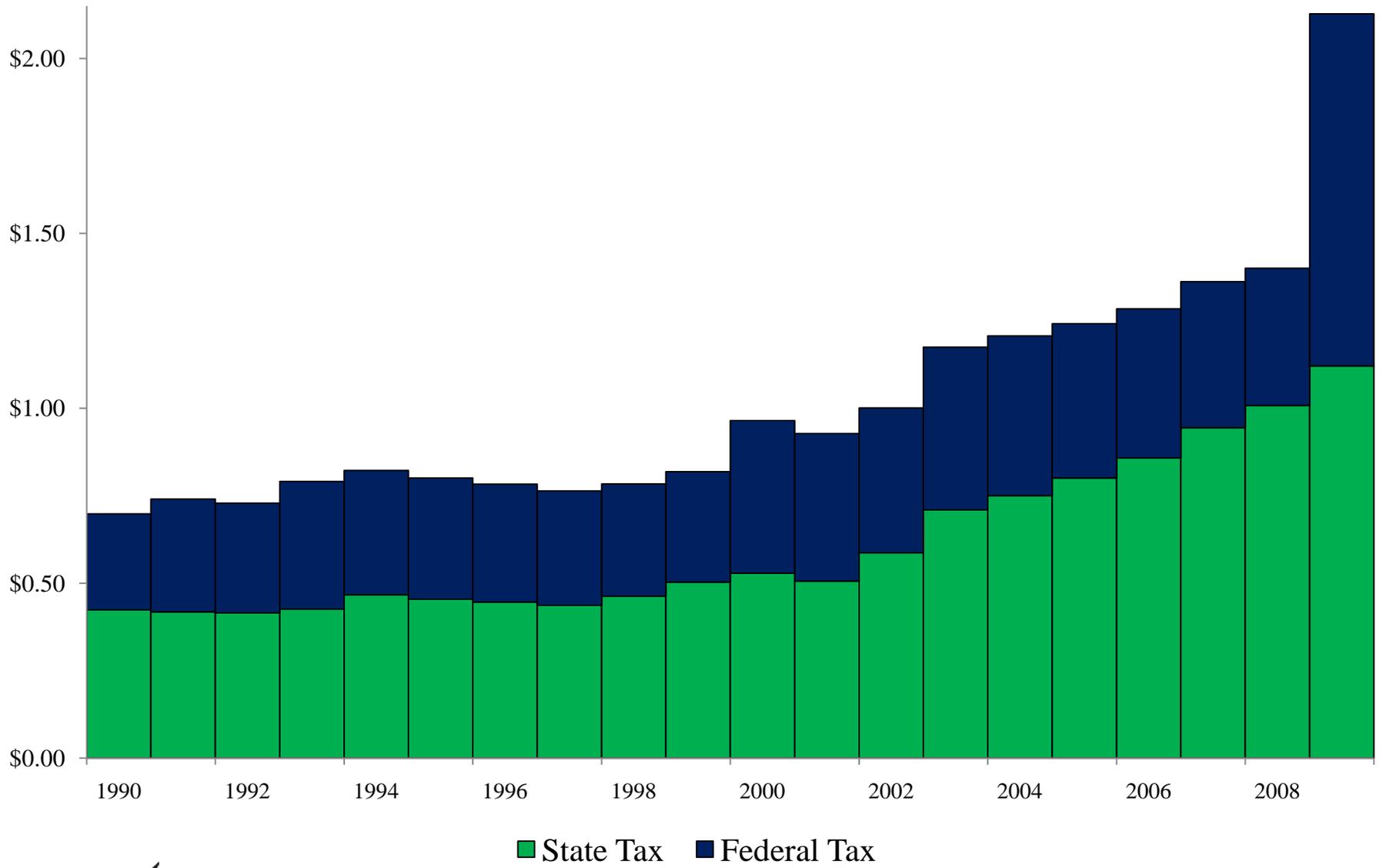
Jidong Huang

and many others.....

TOBACCO TAXES AND TOBACCO USE

State and Federal Cigarette Taxes

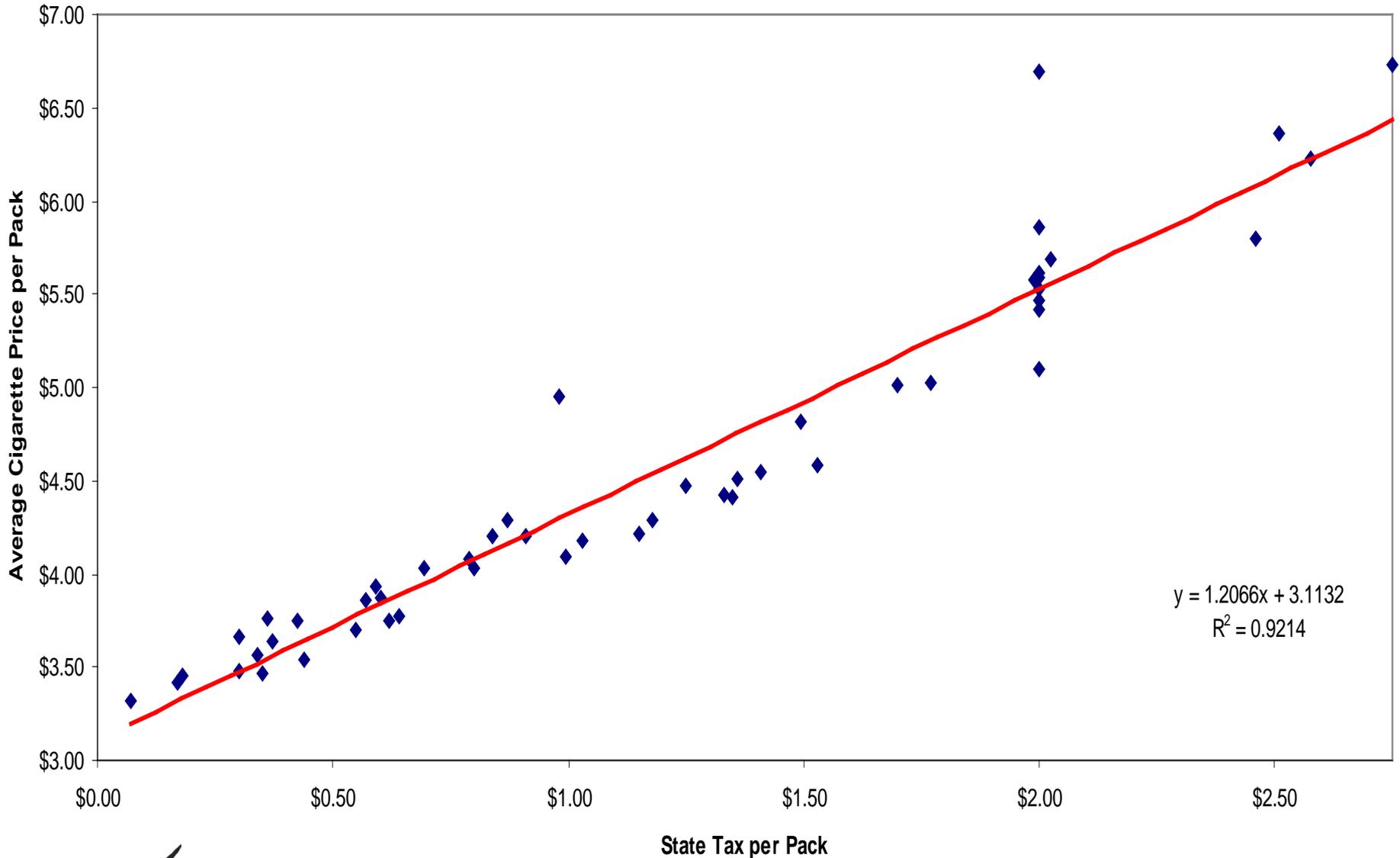
Inflation adjusted, 1990-2009



■ State Tax ■ Federal Tax

State Cigarette Taxes and Prices

November 1, 2008

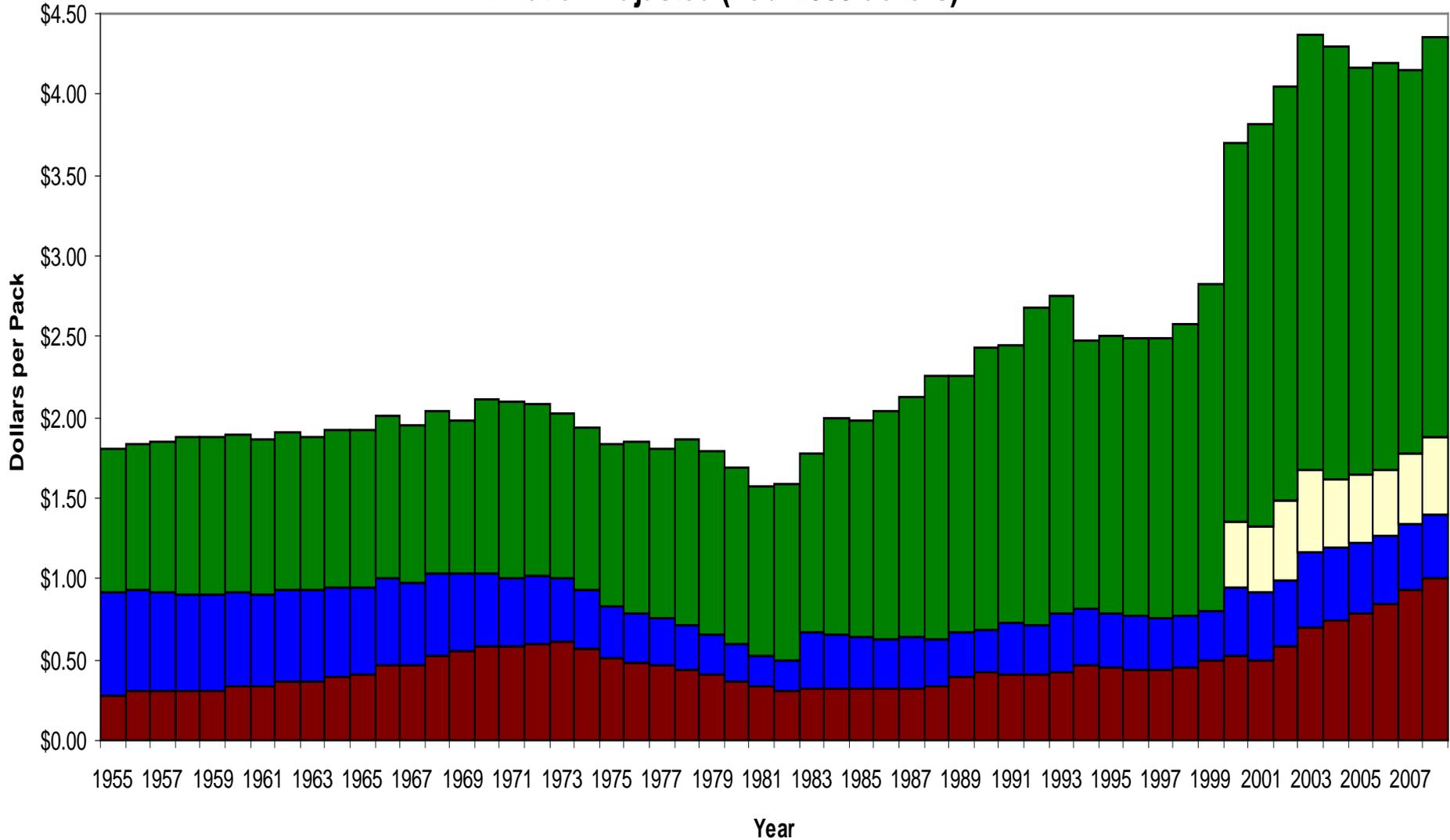


$y = 1.2066x + 3.1132$
 $R^2 = 0.9214$

Cigarette Taxes and Prices, 1976-2008



Inflation Adjusted (Feb. 2009 dollars)



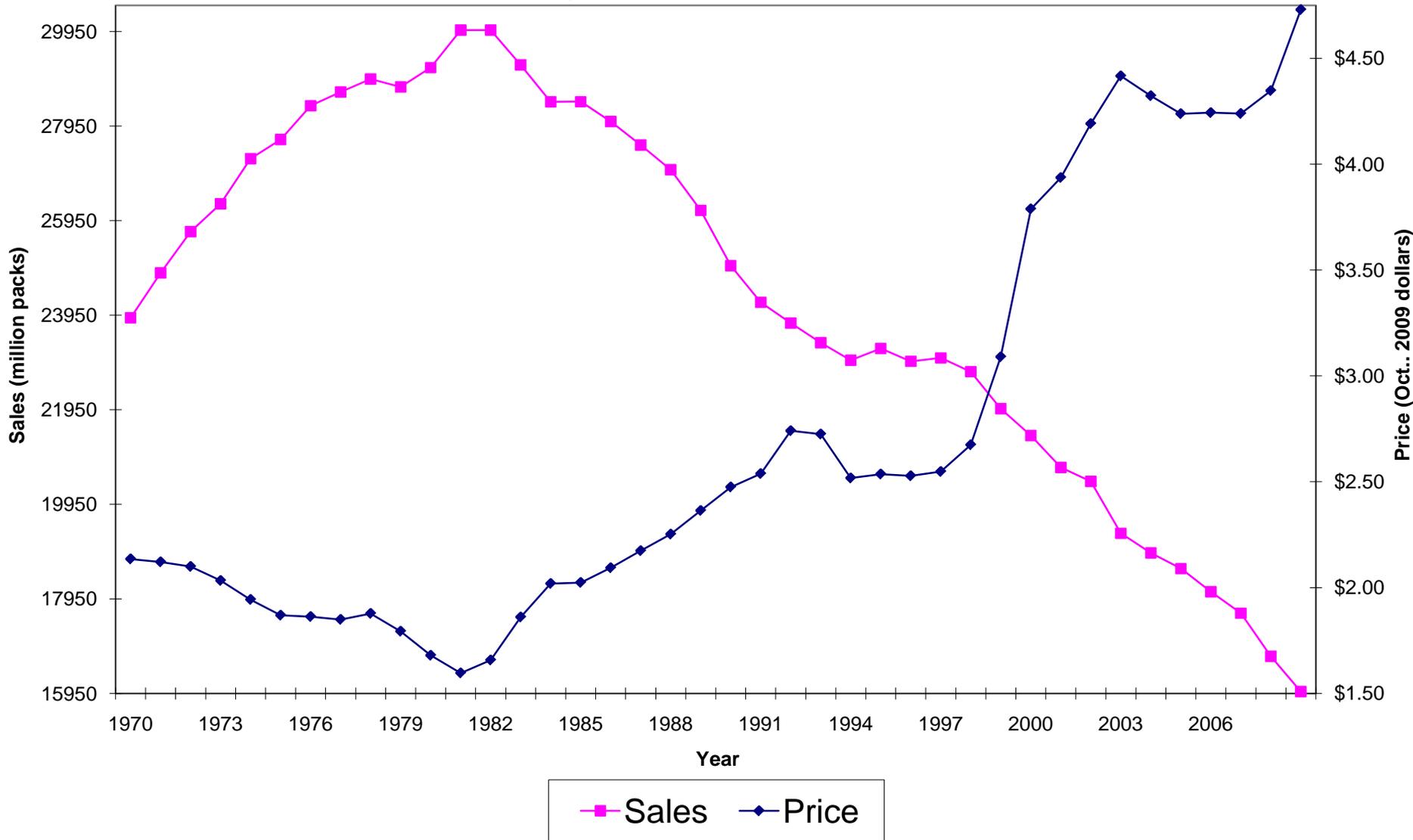
■ State Tax ■ Federal Tax ■ MSA Costs ■ Net Price

Higher taxes and prices:

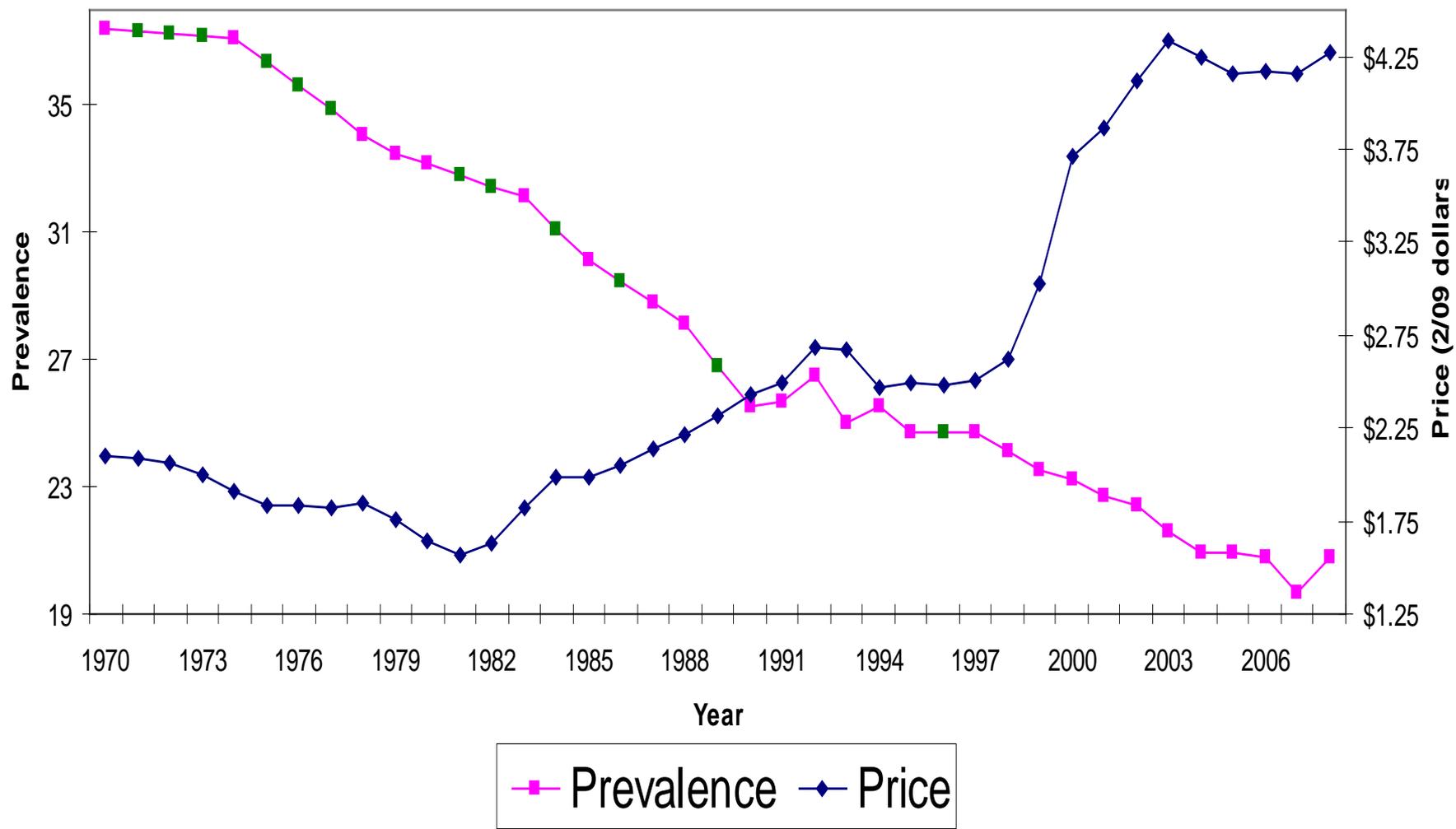
- lead current smokers to quit
 - prevent relapse
 - keep kids from taking up tobacco use
 - reduce consumption among continuing users
 - induce other changes in purchase and use behaviors
- Estimates from high-income countries indicate that 10% rise in price reduces overall cigarette consumption by about 4%
 - Most elasticity estimates in range from -0.25 to -0.5, clustered around -0.4



Cigarette Prices and Cigarette Sales, United States, 1970-2009



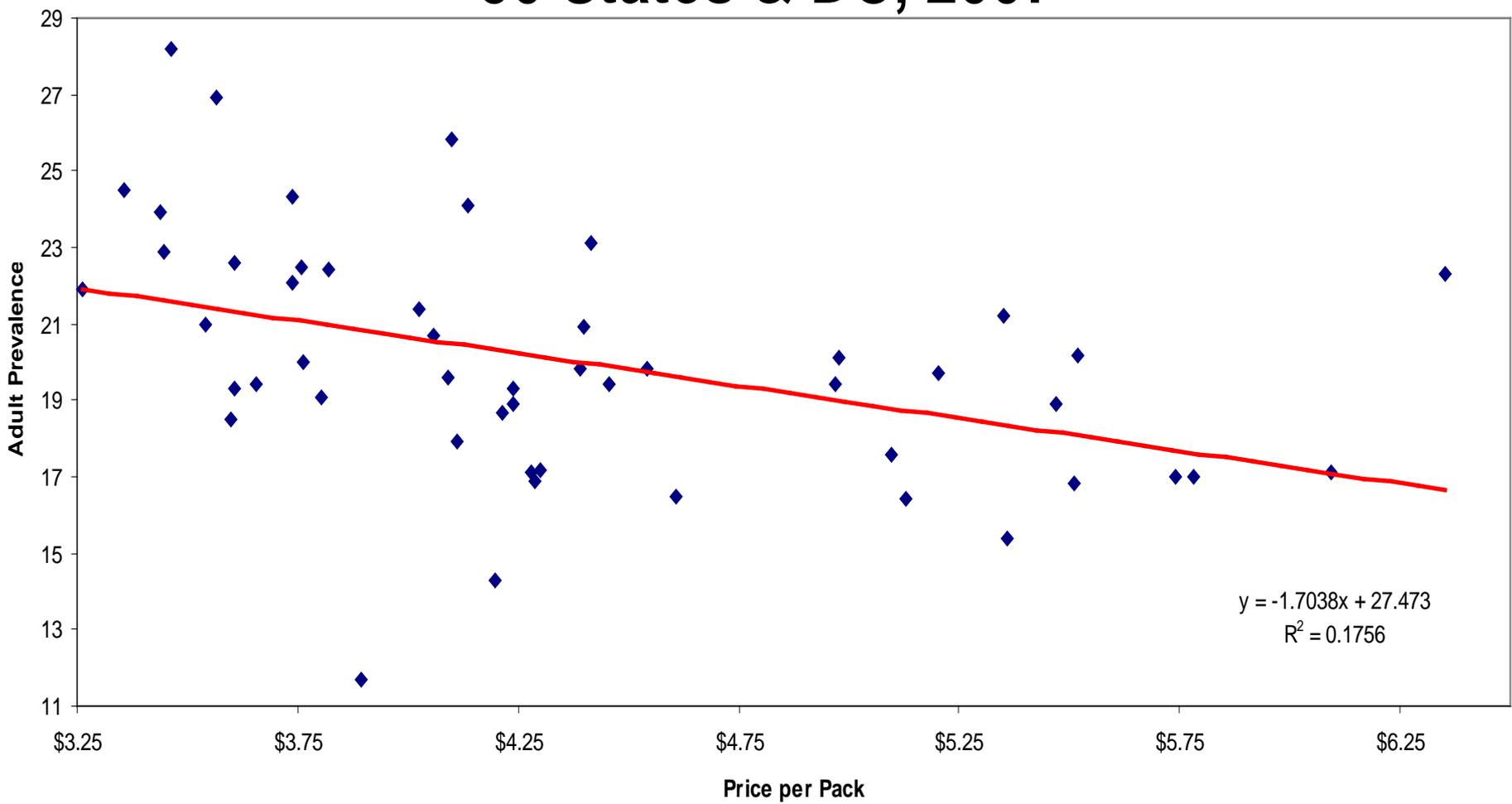
Cigarette Prices and Adult Smoking Prevalence, United States, 1970-2008



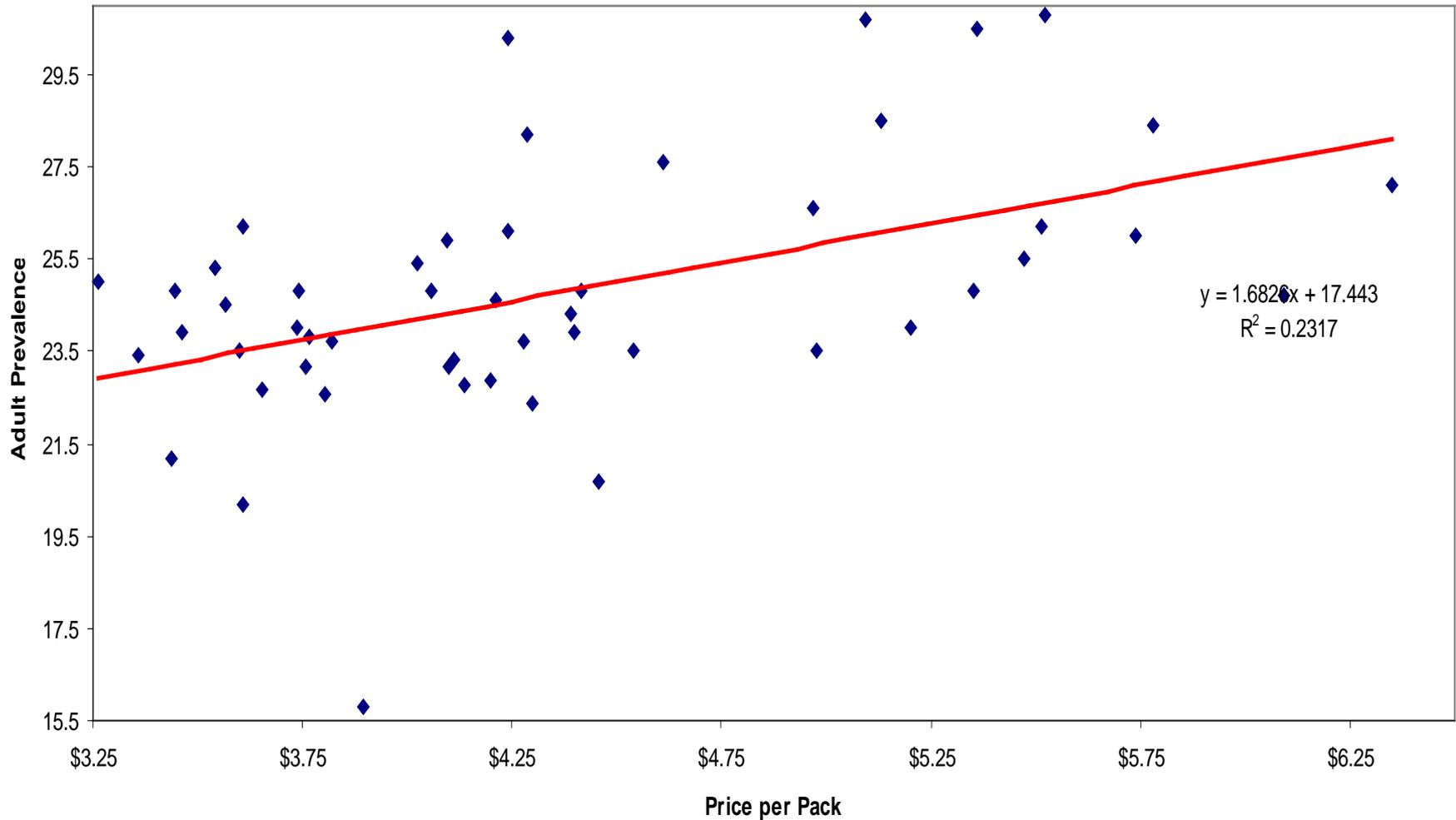
Source: NHIS, *Tax Burden on Tobacco*, 2009, and author's calculations

Note: green data points for prevalence are interpolated assuming linear trend

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



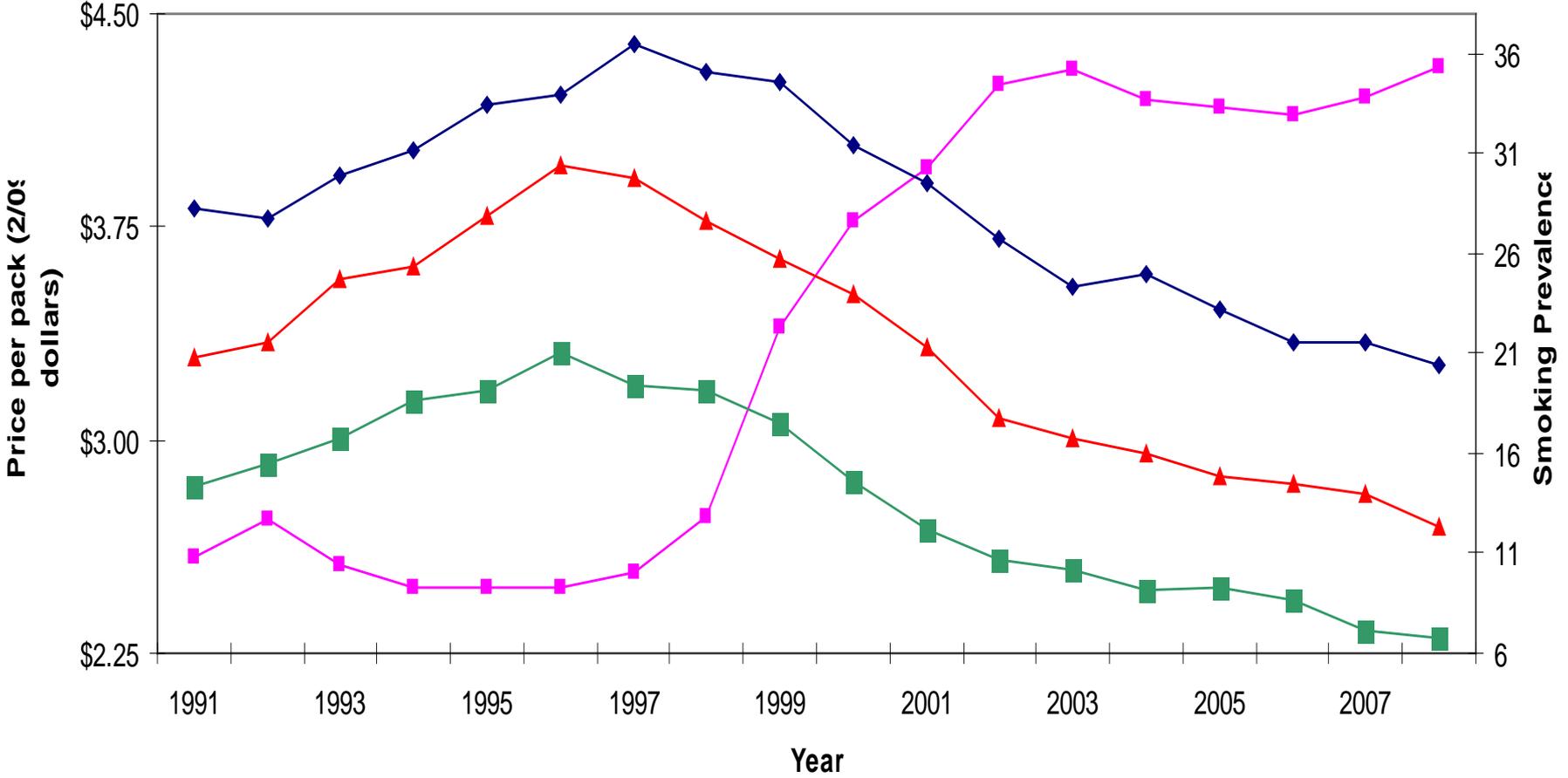
Cigarette Prices and Former Smoking Rates, 50 States & DC, 2007



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



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

Based on our estimates, the recent \$0.6167 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
- Prevent almost 720,000 premature deaths caused by smoking
- Generate significant reductions in spending on health care to treat diseases caused by smoking

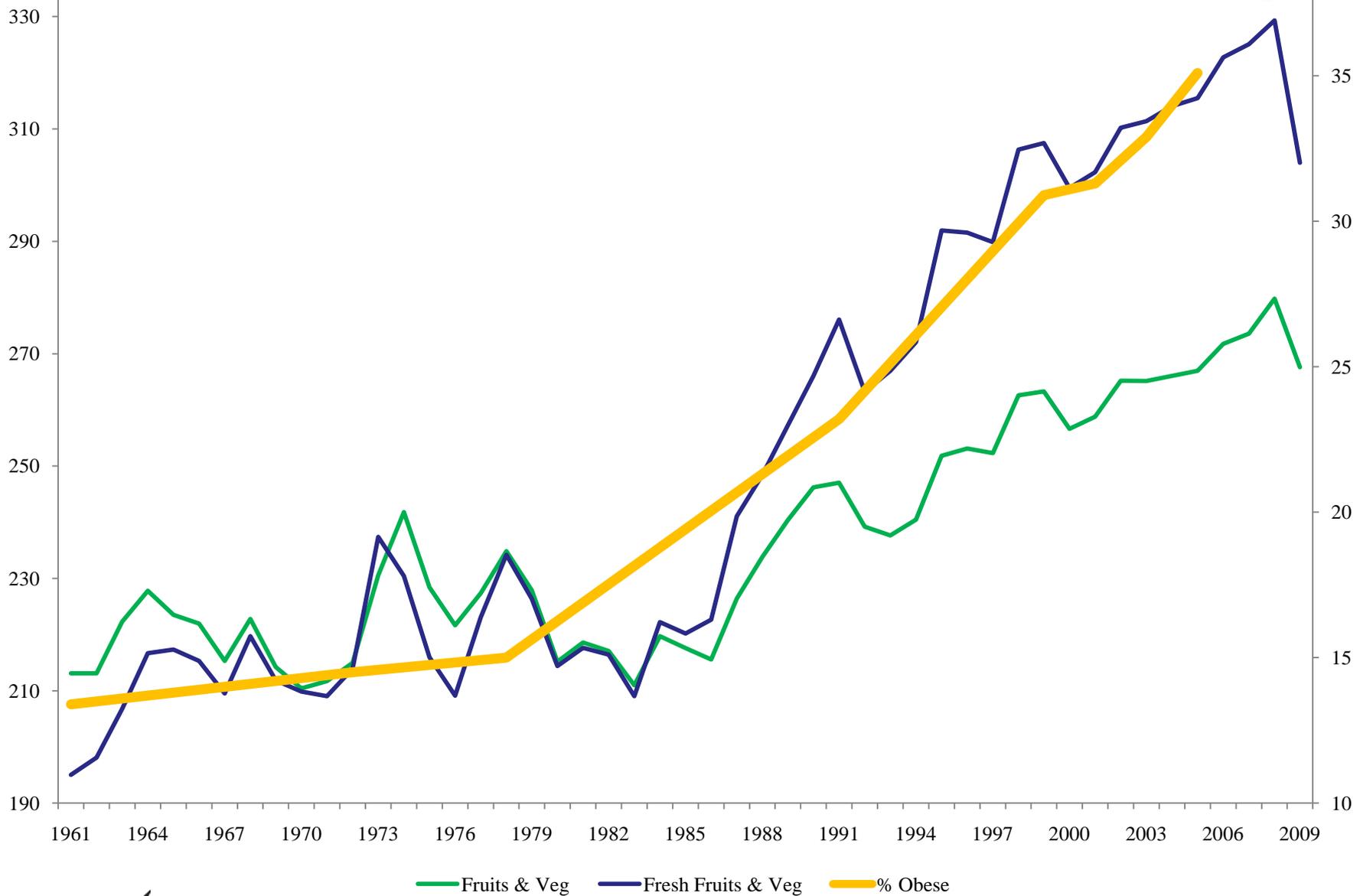


FOOD PRICES, OBESITY TRENDS AND POLICY OPTIONS

Selected Food Price Trends, 1961-2009

Inflation Adjusted

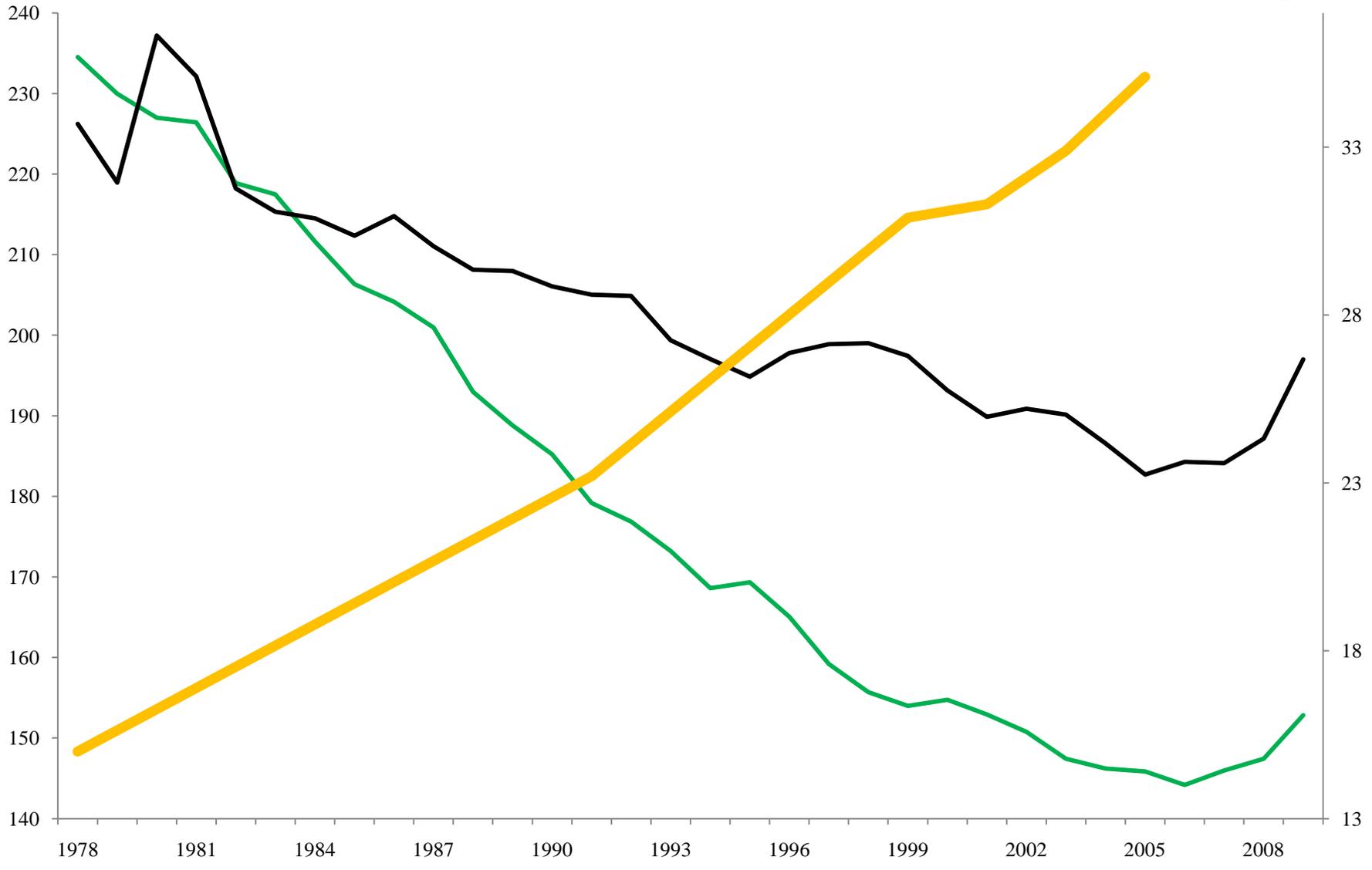
impact **TEEN**



Selected Food Price Trends, 1978-2009



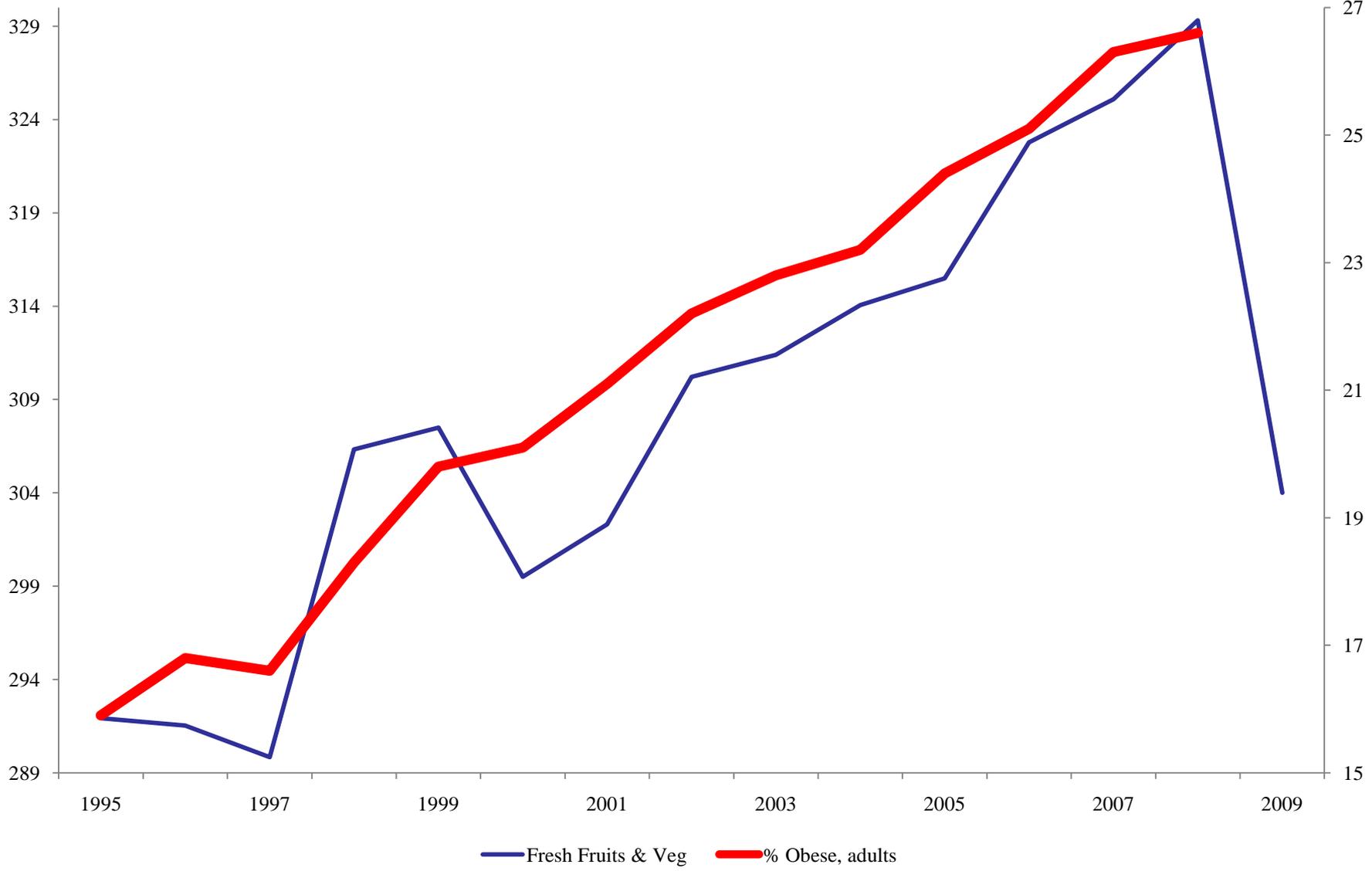
Inflation Adjusted



— Carb. Bev. — Sweets — % Obese

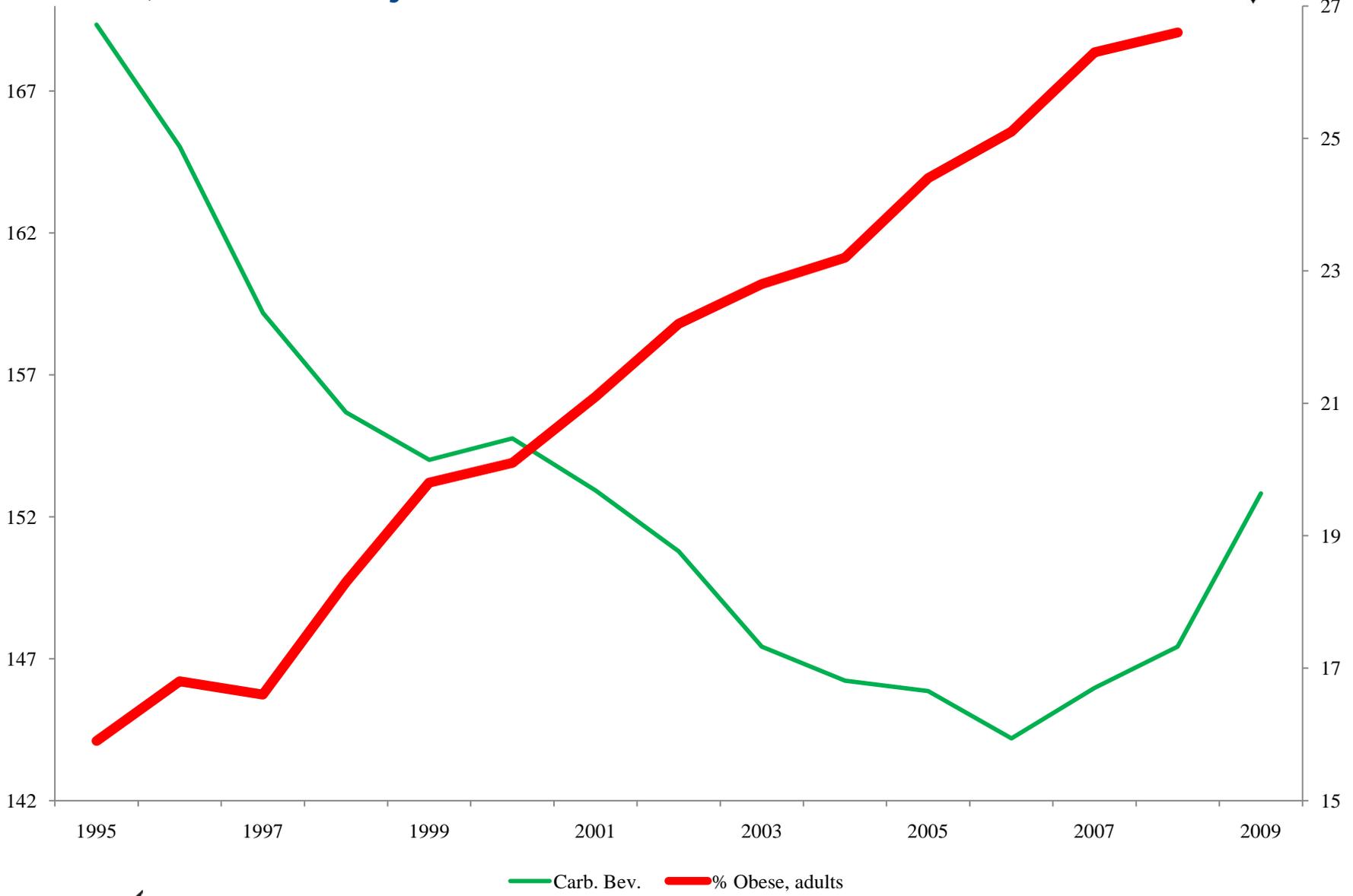
Food Prices and Obesity Prevalence

1995-2009, Inflation Adjusted



Food Prices and Obesity Prevalence

1995-2009, Inflation Adjusted



Extensive economic research on the impact of food and beverage prices on consumption of various products; estimates suggest 10% own-price increase would reduce:

- Cereal consumption by 5.2%
- Fruit consumption by 7.0%
- Vegetable consumption by 5.9%
- Soft drink consumption by 7.8%
- Sweets consumption by 3.5%
- Food away from home consumption by 8.1%



Relatively limited research to date on impact of food and beverage prices and weight outcomes:

- Higher prices for sugary foods would significantly reduce prevalence of overweight and obesity among adults (Miljkovic et al., 2008)
- 10% increase in fast food prices would reduce prevalence of adolescent obesity by almost 6% (Powell, et al., 2007)
- Weight outcomes among low-income populations and those with higher BMI more responsive to prices
 - BMI of kids in families below poverty level about 50% more responsive to F&V prices
 - BMI for kids at unhealthy weight levels 39% more responsive to F&V prices
 - BMI of adolescents at unhealthy weight levels about 4 times more responsive to F&V and fast food prices.

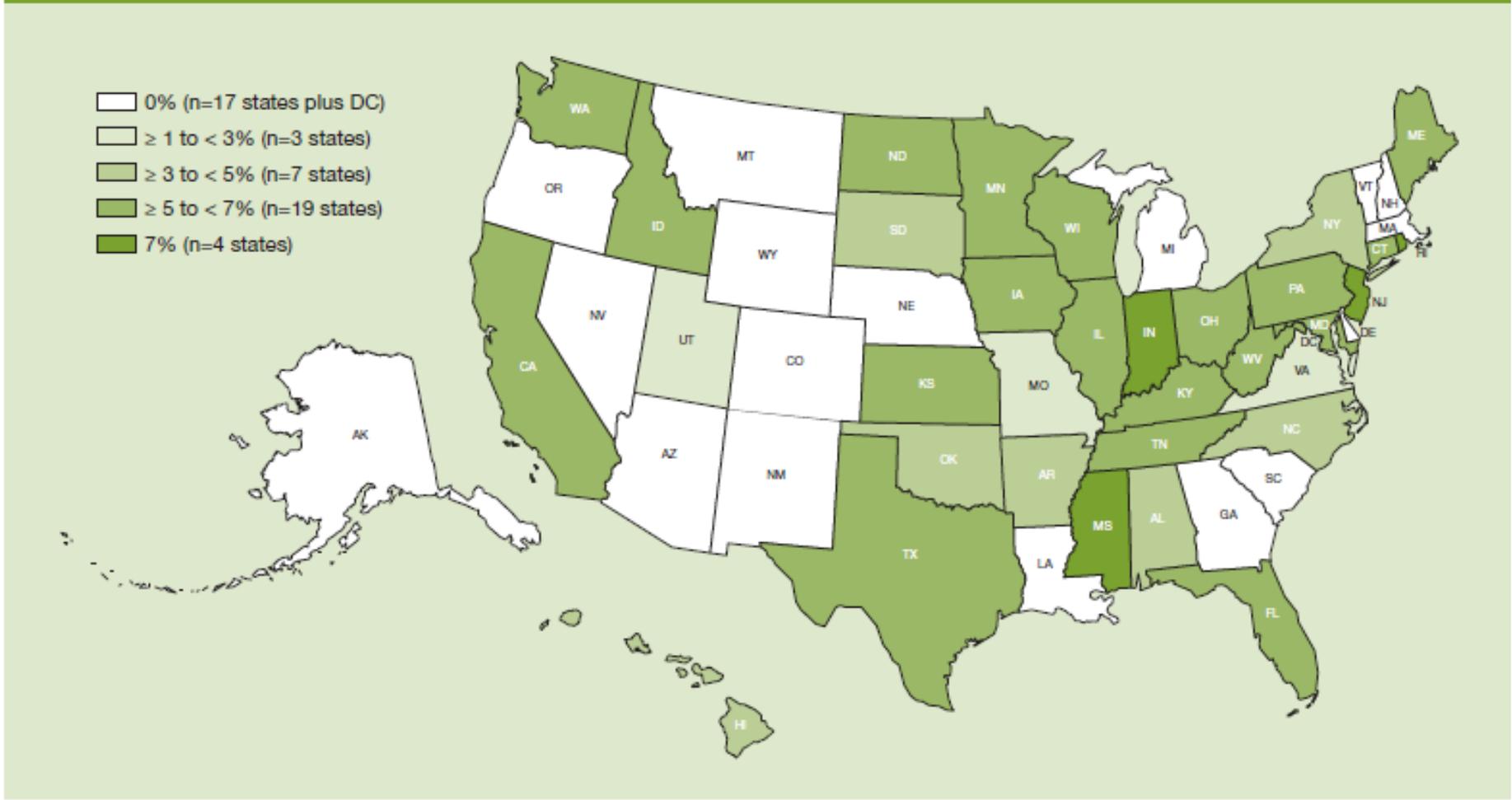


Emerging evidence on prices suggests that significant changes in relative prices of healthy and unhealthy foods could reduce BMI and likelihood of obesity

- Increases in prices of less healthy foods and beverages
 - taxes
 - elimination of corn subsidies
 - disallow purchases under food assistance programs (e.g. recently introduced WI bill)
- Reductions in prices of more healthy foods and beverages
 - subsidies
 - expanded or favored treatment under food assistance programs

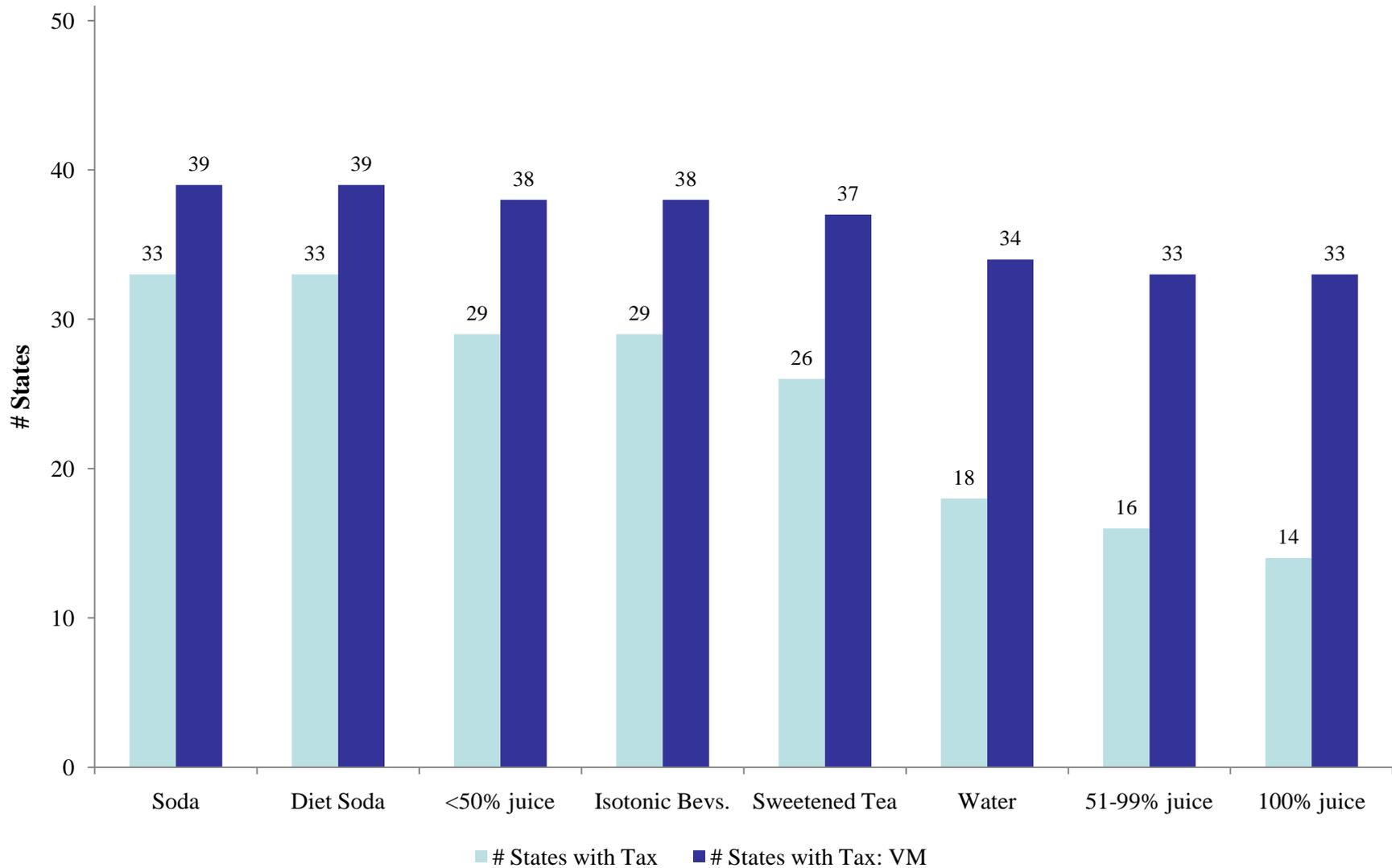
Policy Options: Sugar Sweetened Beverage Taxes

State Soda Sales Tax Rates (as of January 1, 2009)



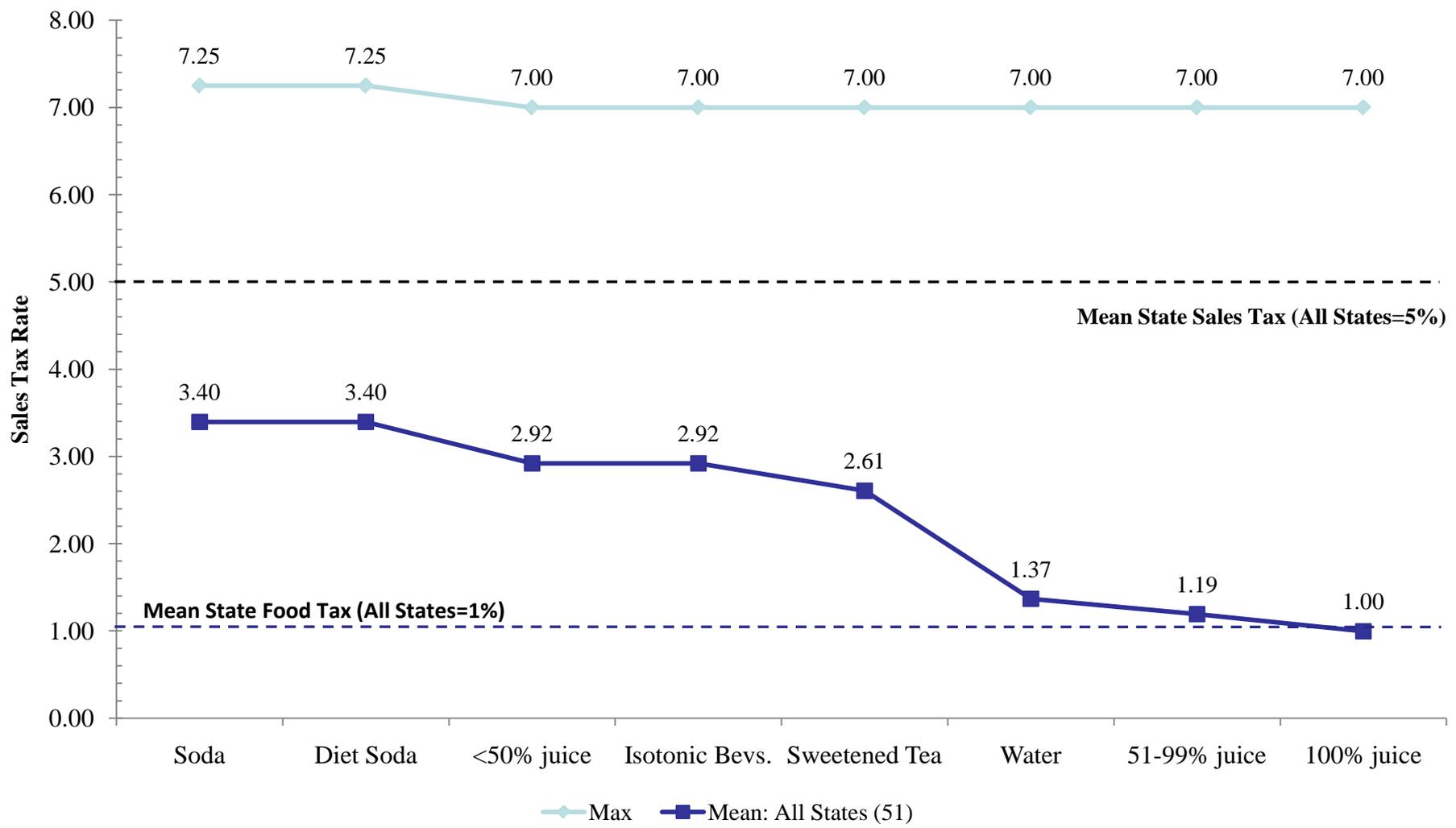
Source: Bridging the Gap Program, Health Policy Center, University of Illinois at Chicago with data compiled by The MayaTech Corporation. In addition to sales taxes, the following states currently apply excise taxes to bottles, syrups, and/or powders/mixes at the manufacturer, distributor or retail level: Alabama, Arkansas, Rhode Island, Tennessee, Virginia, Washington, and West Virginia.

Policy Options: States with Sales Taxes Selected Beverages, 2010



Policy Options: Sales Taxes

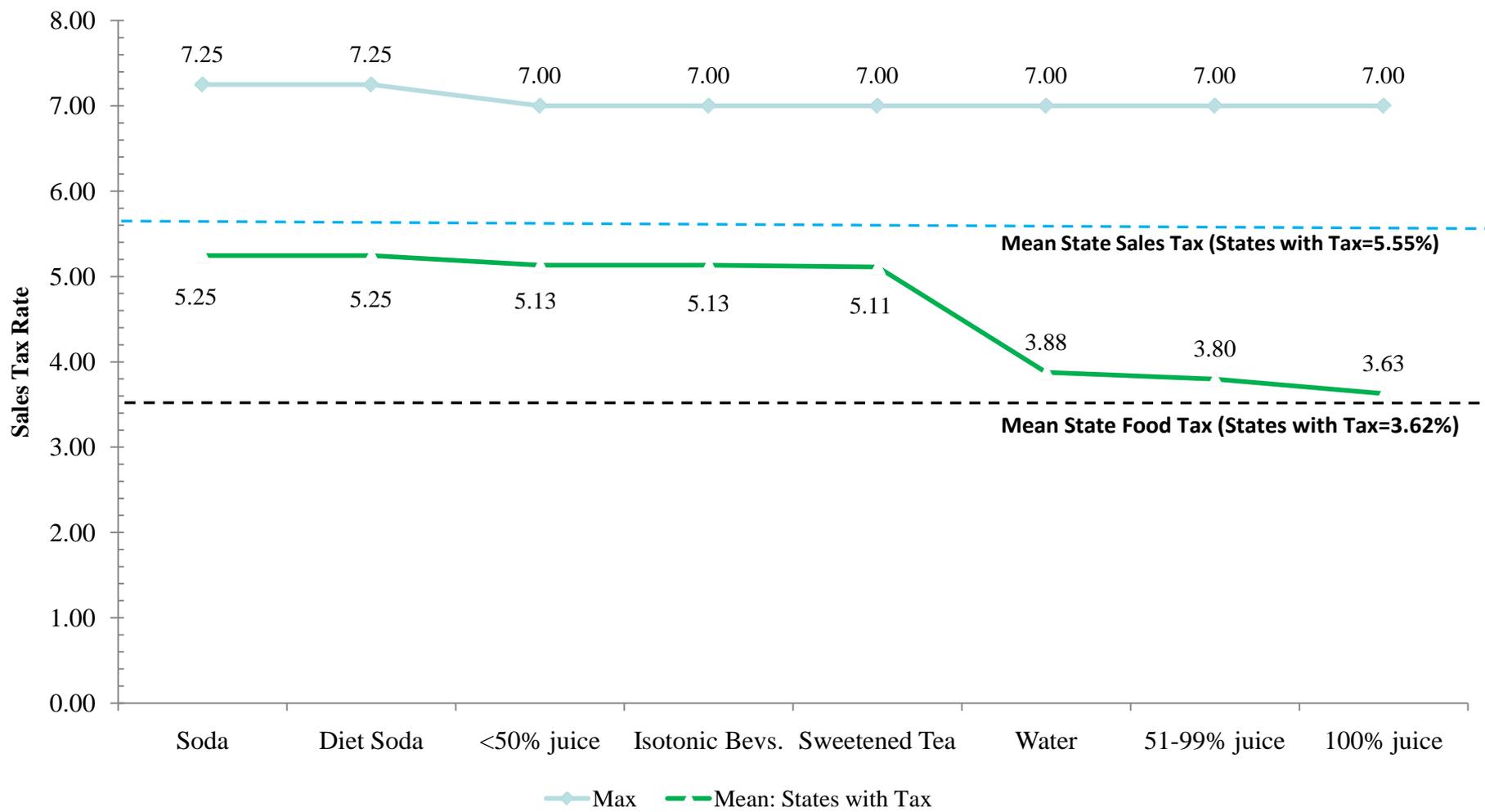
SSBs, All States, 2010



Note: Three states also impose a mandatory statewide local tax that is not reflected in the above data: CA (1%), UT (1.25%), VA (1%).

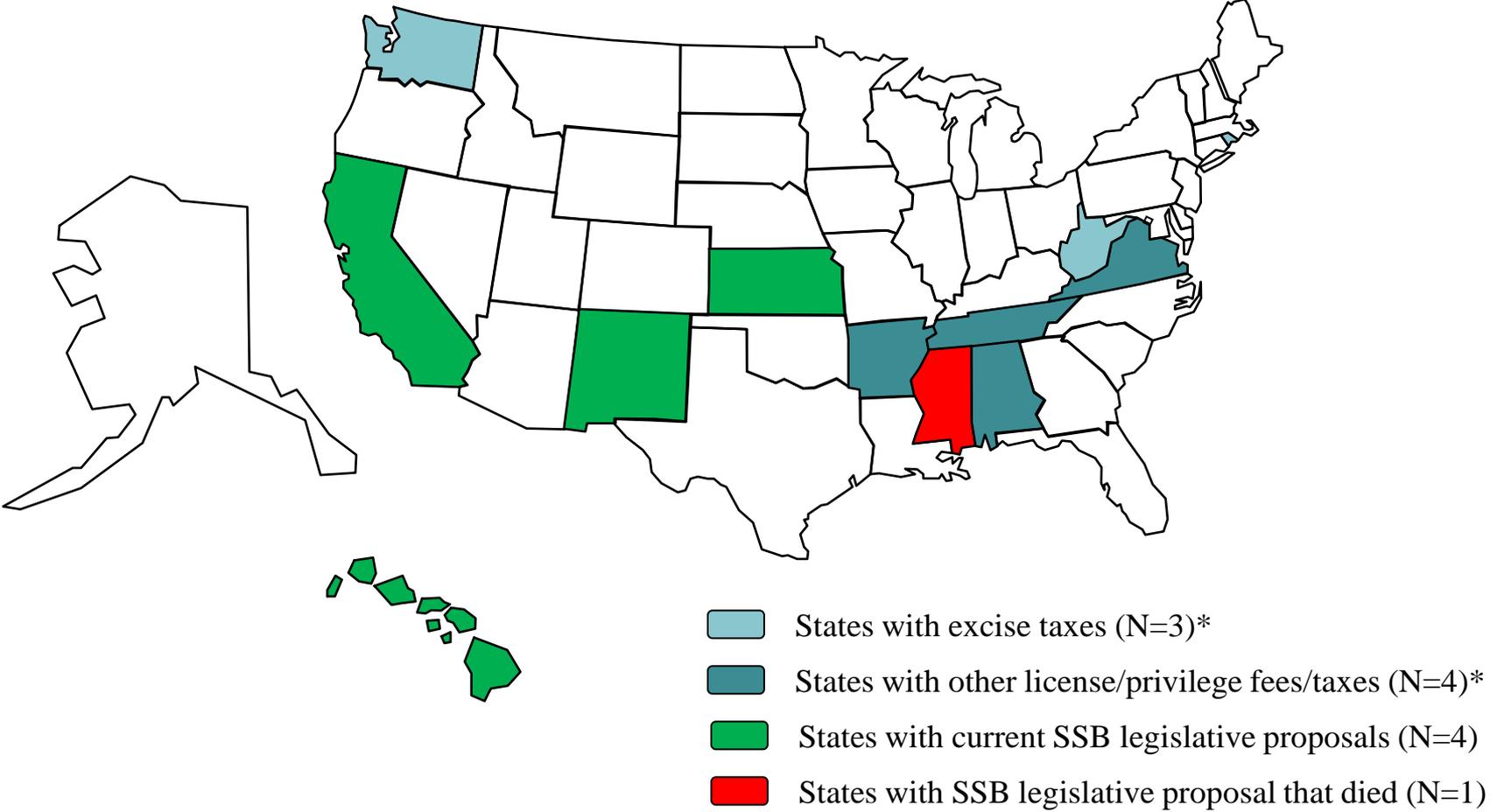
Policy Options: Sales Taxes

Selected Beverages, Taxing States, 2010



Note: Three states also impose a mandatory statewide local tax that is not reflected in the above data: CA (1%), UT (1.25%), VA (1%).

States with Non-Sales* Taxes on Selected Beverages (as of 1/1/10) or SSB-related Legislative Proposals in 2010



*Additional excise/ad valorem (non-sales) taxes may be applied at the manufacturer, distributor, wholesaler, retailer levels and are applied to bottles, syrup, powders and/or mixes. Taxes apply to regular and diet soda, isotonic, and sweetened tea in AL, RI, AR, TN, WV. Taxes apply only to regular and diet soda in VA & WA.

State Approaches to SSB Taxation



Approach	Specific Tax/ Fee on Quantity of Sugar or Bev. Volume	Ad Valorem (% of price)	Upon Whom Tax Imposed	Where Tax Presented to Consumer
Non-Sales Taxes				
Tax all SSBs	X	X	Manufacturer Distributor Wholesaler Retailer	Shelf-price
Tax all Beverages (or selected including non-SSBs)	X	X	Manufacturer Distributor Wholesaler Retailer	Shelf-price
Sales Taxes				
Tax all SSBs		X	Consumer	Point of purchase
Tax all/selected Beverages		X	Consumer	Point of purchase



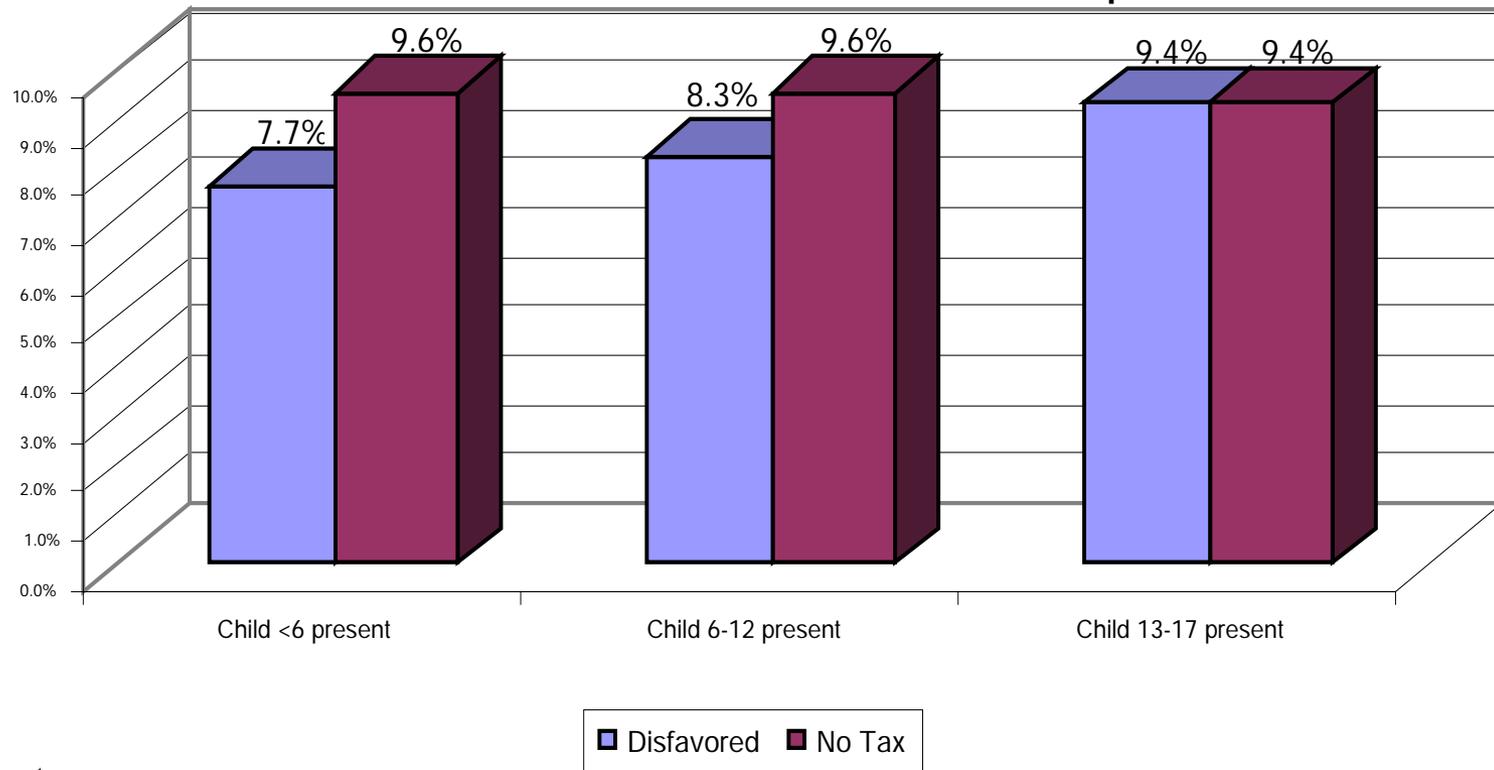
State SSB-related Legislative Activity, 2010 Legislative Session (includes carryover)

- Several states have introduced SSB-specific excise/privilege tax bills during the current legislative session:
 - California and Kansas (tax upon sweetened beverage manufacturers at a rate of \$0.01/teaspoon sugar in SSB/concentrate)
 - Washington – \$0.02 per 12 ounces, carbonated beverages (passed)
 - Hawaii (1% gross proceeds on sale of SSBs)
 - Mississippi (\$0.02/ounce or \$2.56/gallon produced from syrup)—**Died in Committee**
 - New Mexico (\$0.005/ounce imposed on distributors)
- City-level tax proposals
 - Philadelphia - \$0.02/ounce
 - RI bill would allow up to 20% local sales tax on SSBs



- Recent and ongoing research suggests
 - Household soda purchases lower in states where higher sales tax applies to sodas

Share of Soda in Household Food Expenditures



- Recent and ongoing research suggests
 - Some children's soda consumption lower where sales taxes are higher; specifically those who are:
 - already overweight, African American, and/or in low income families
 - Likelihood of obesity not associated with presence or level of tax
 - Weight gain not affected by presence/level of tax, except for:
 - already overweight, African American, and/or in low income families

Current taxes too low to significantly impact obesity



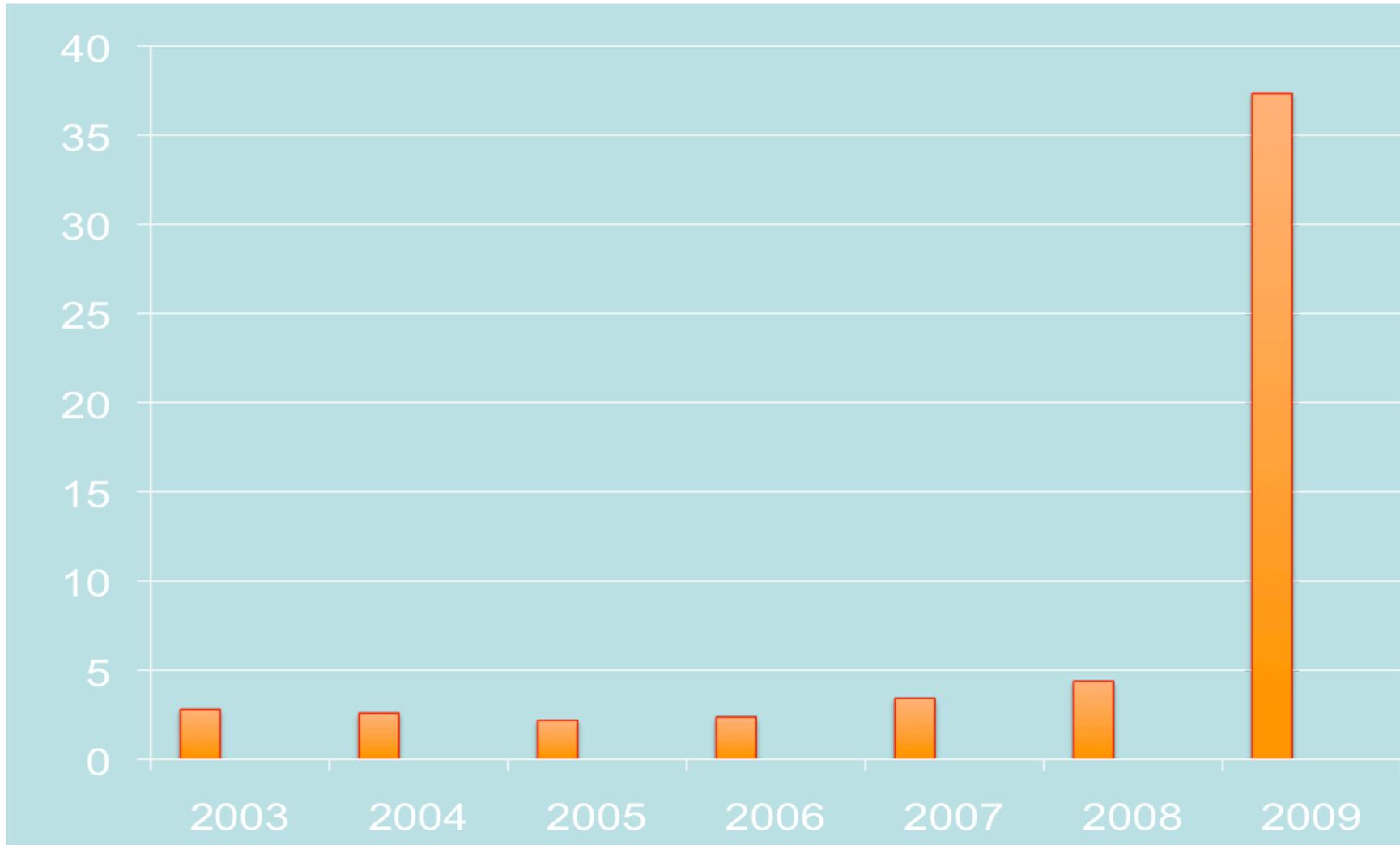
- Revenue generating potential of tax is considerable
 - SSB Tax calculator at:
<http://www.yaleruddcenter.org/sodatax.aspx>
 - Tax of one cent per ounce could generate:
 - \$14.9 billion nationally if on SSBs only
 - \$24.0 billion if diet included
 - \$31.4 million, \$50.7 million in VT
 - Tax of two cents per ounce:
 - \$21.0 billion nationally, SSBs only
 - \$39.0 billion if diet included
 - \$44.3 million, \$82.3 million in VT
- Earmarking tax revenues for obesity prevention efforts would add to impact of tax



- From a public health perspective, specific excise tax preferable to sales tax for several reasons:
 - More apparent to consumer
 - Easier administratively
 - Reduces incentives for switching to cheaper brands, larger quantities
 - Revenues more stable, not subject to industry price manipulation
 - Greater impact on consumption; more likely impact on weight outcomes
 - Disadvantage: need to be adjusted for inflation



Millions Spent Lobbying Coke, Pepsi & ABA



- Many of the same arguments used to oppose tobacco taxes
 - Won't generate expected revenues
 - Substitute to untaxed products
 - Cross-border shopping to avoid tax
 - Regressive
 - Will put many out of work
 - Won't affect obesity rates



- Increased tobacco taxes have been highly effective in reducing tobacco use and the death and disease it causes
 - Promote cessation, prevent initiation
- Food/beverage prices significantly affect consumption; emerging evidence that relative prices of healthy/less healthy products affects weight outcomes
 - Greater impact on young people, those on lower incomes, and those already at higher weight
 - Existing, small taxes have little impact on weight outcomes
 - Potential for larger taxes to significantly influence obesity rates

For more information:

www.bridgingthegapresearch.org

www.impactteen.org

www.yaleruddcenter.org/sodatax.aspx

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