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Research Informing Policies & Practices
for Healthy Youth

Public Health & Revenue Implications of a Sugar Sweetened Beverage Tax in Vermont

Vermont House Ways and Means Committee

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Overview

- **Economic rationales for SSB taxation**
- **Experiences with tobacco taxation**
- **Impact of food taxes/prices on consumption and consequences**
- **Sugar-sweetened beverage taxation**
- **Oppositional arguments – myths & facts**

Rationale for SSB Tax

- **Efficient revenue generation**
 - Considerable revenue potential
 - US Estimates suggest that 1¢ per ounce tax on SSBs would generate nearly \$13.5 billion nationally
- **Promote public health**
 - Growing evidence that raising price of unhealthy foods/beverages would reduce consumption, promote healthier eating, and improve weight outcomes
- **Cover the external costs of obesity**
 - In US, health care costs from treating obesity estimated at \$147-210 billion, with about half covered by public insurance programs

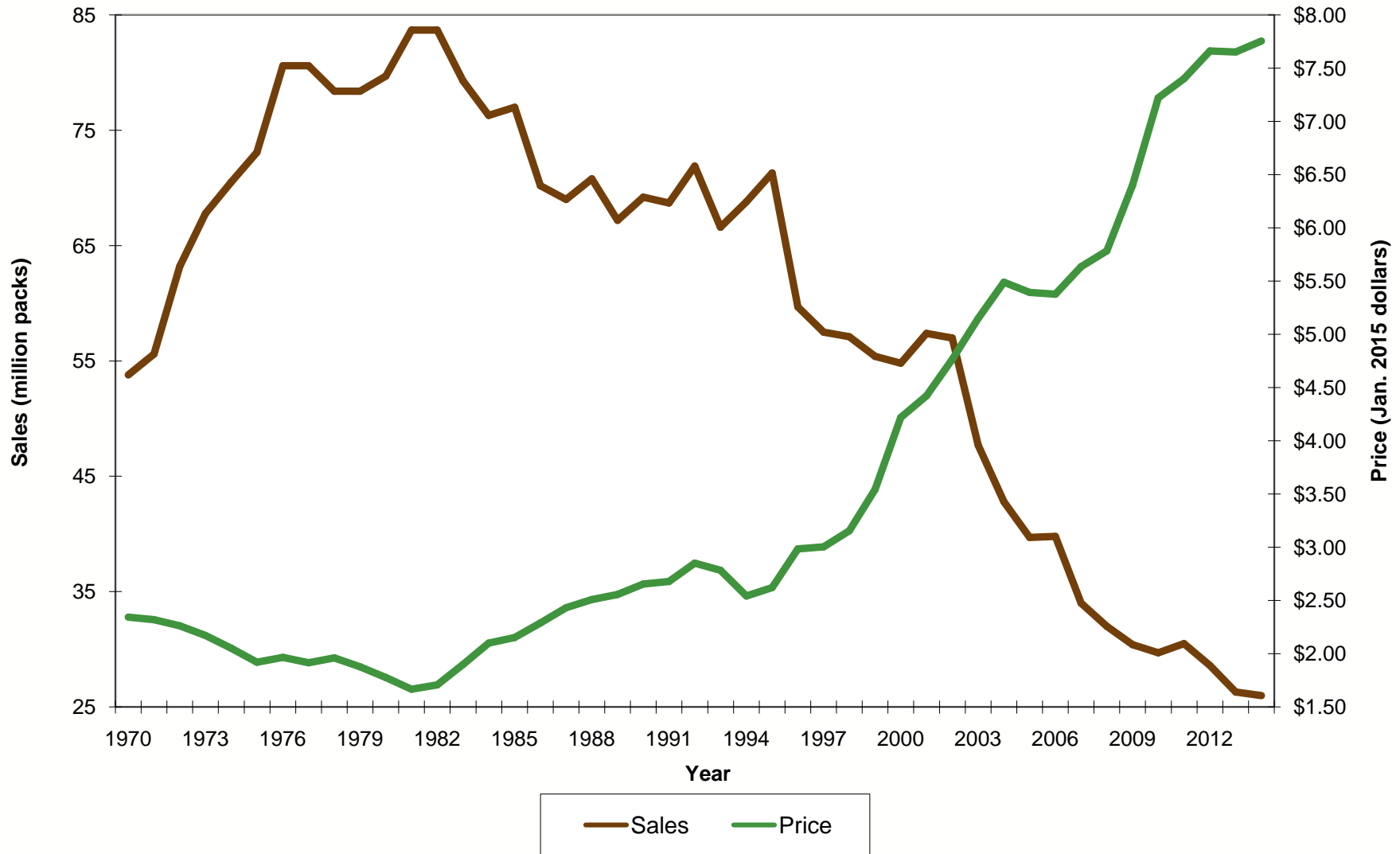
Impact of Taxes & Prices on Tobacco Use



Prices and Tobacco Use

- **Increases in tobacco product prices:**
 - Induce current users to try to quit
 - Many will be successful in long term
 - Keep former users from restarting
 - Prevent potential users from starting
 - Particularly effective in preventing transition from experimentation to regular use
 - Reduce consumption among those who continue to use

Cigarette Prices and Cigarette Sales Vermont, FY1970-2014

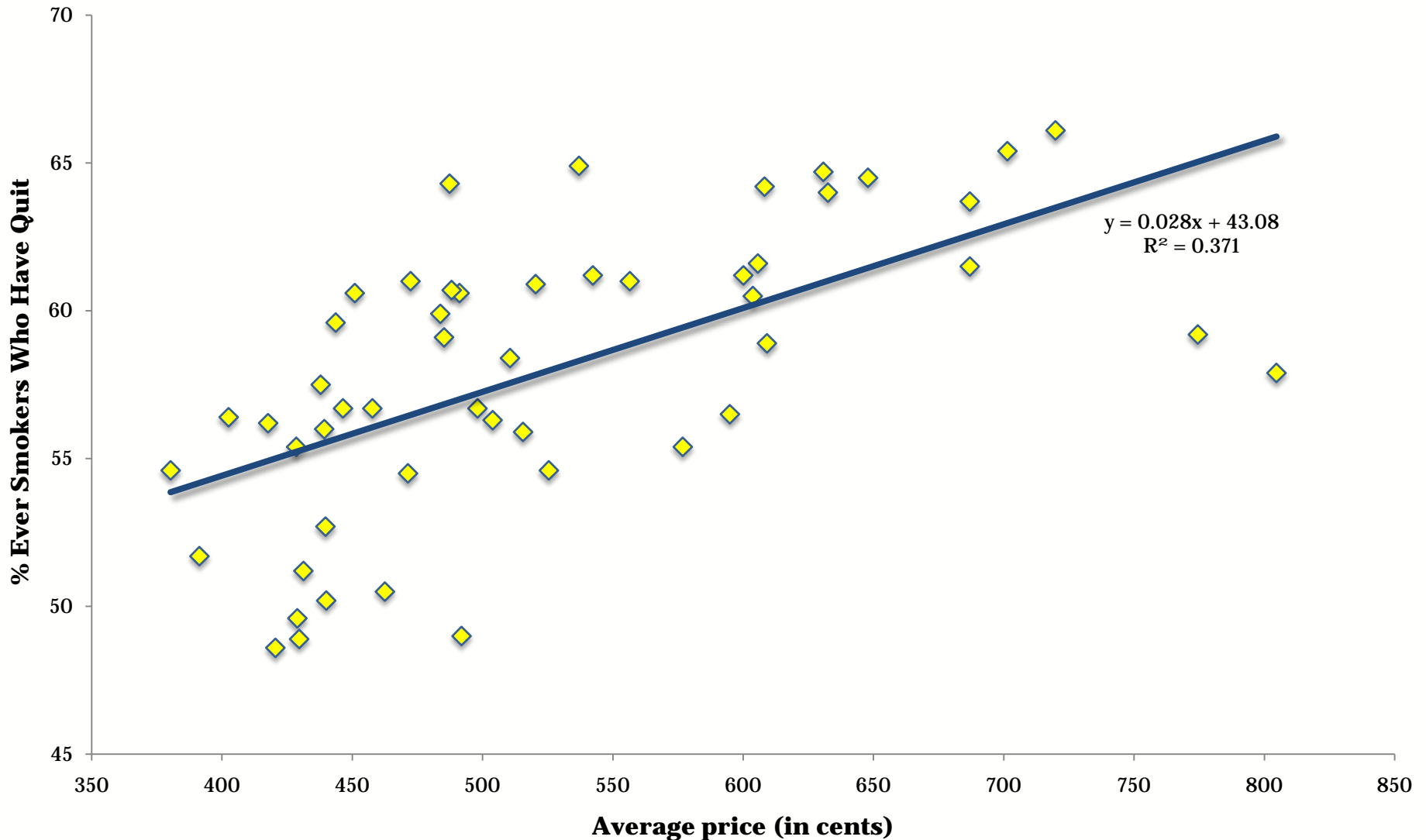


Cigarette Prices & Adult Smoking Prevalence Vermont, 1995-2010



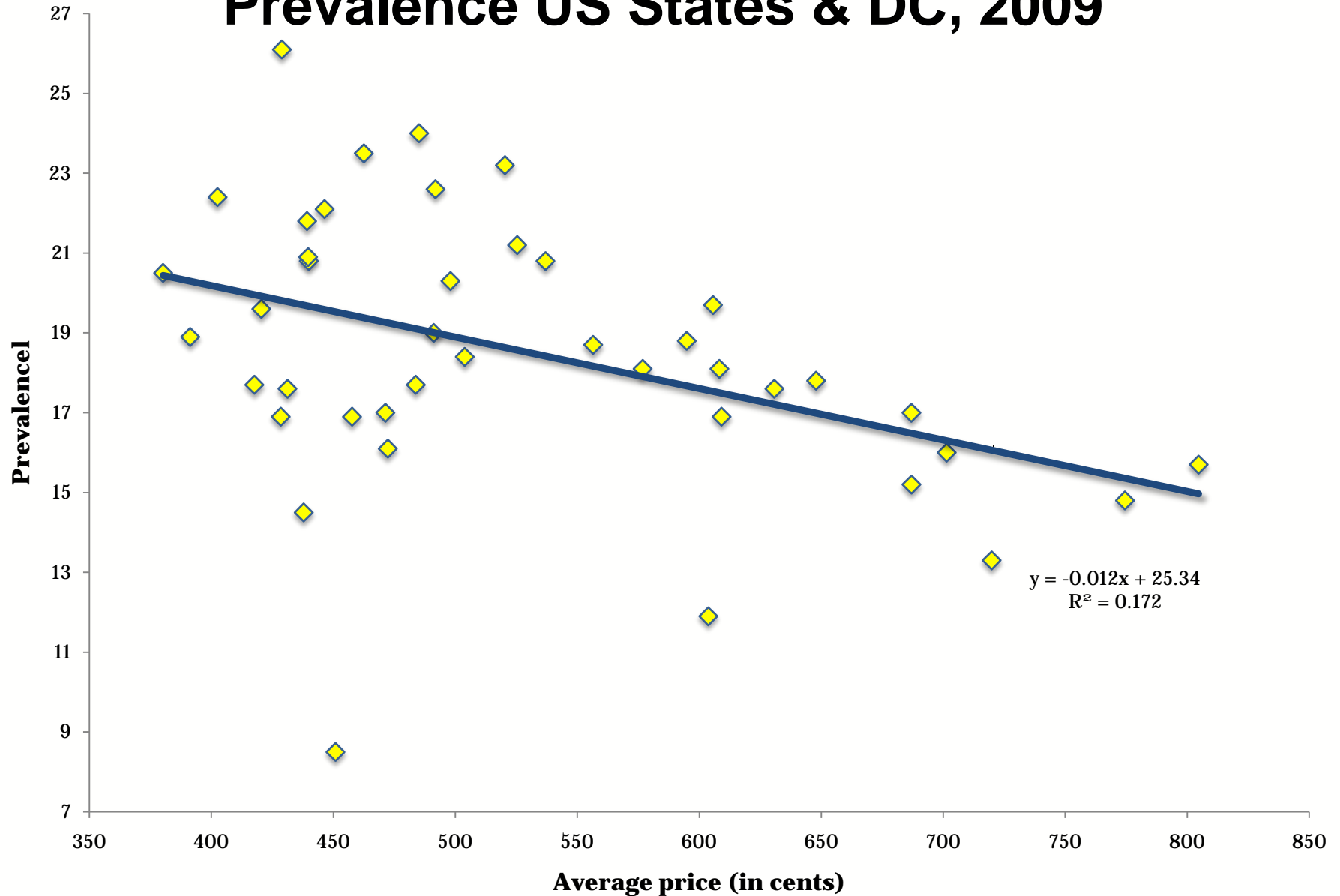
Source: *Tax Burden on Tobacco*, 2014, BRFSS, and author's calculations

Cigarette Prices and Cessation US States & DC, 2009

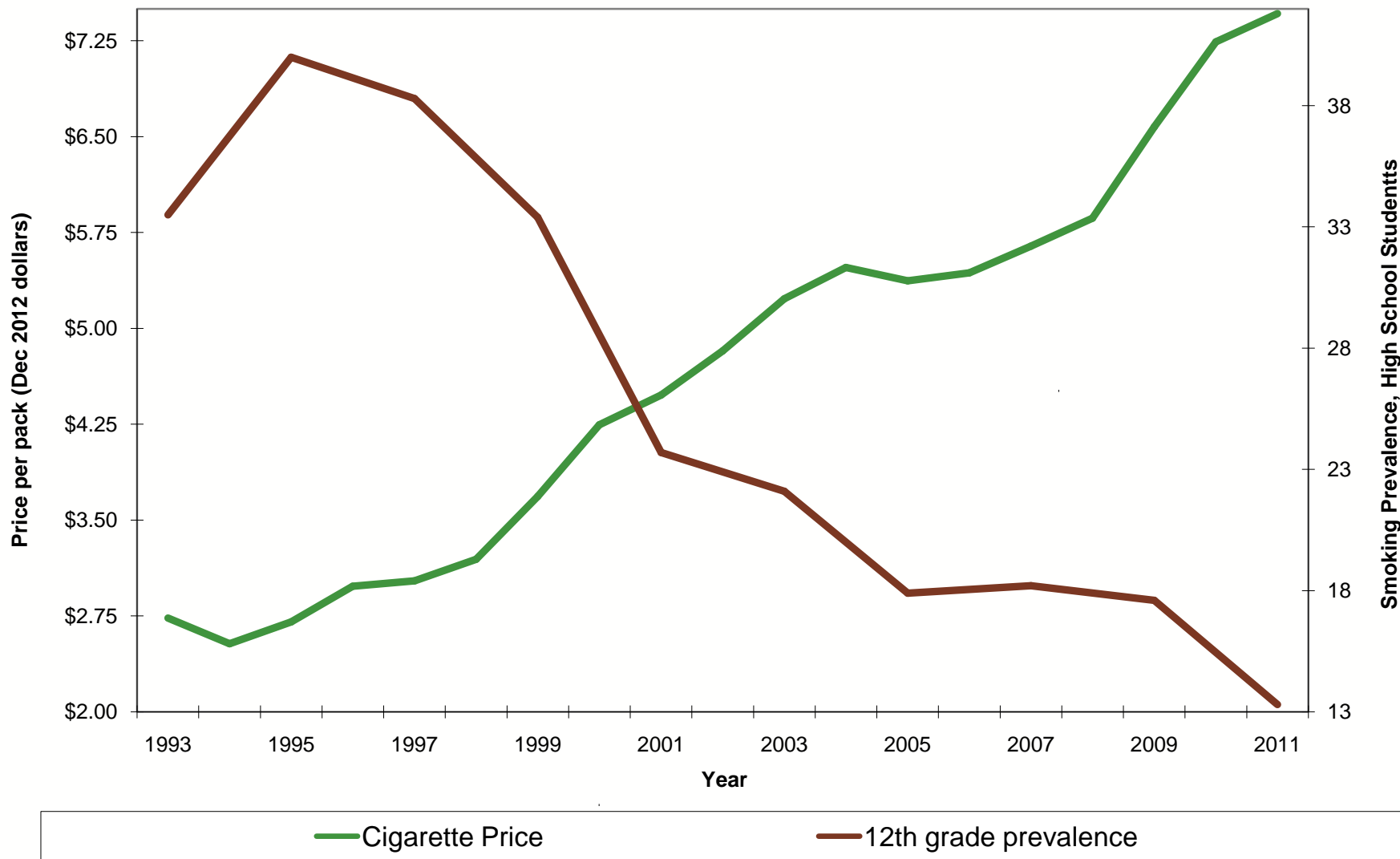


Source: BRFSS, *Tax Burden on Tobacco*, 2010, and author's calculations

Cigarette Prices and Youth Smoking Prevalence US States & DC, 2009



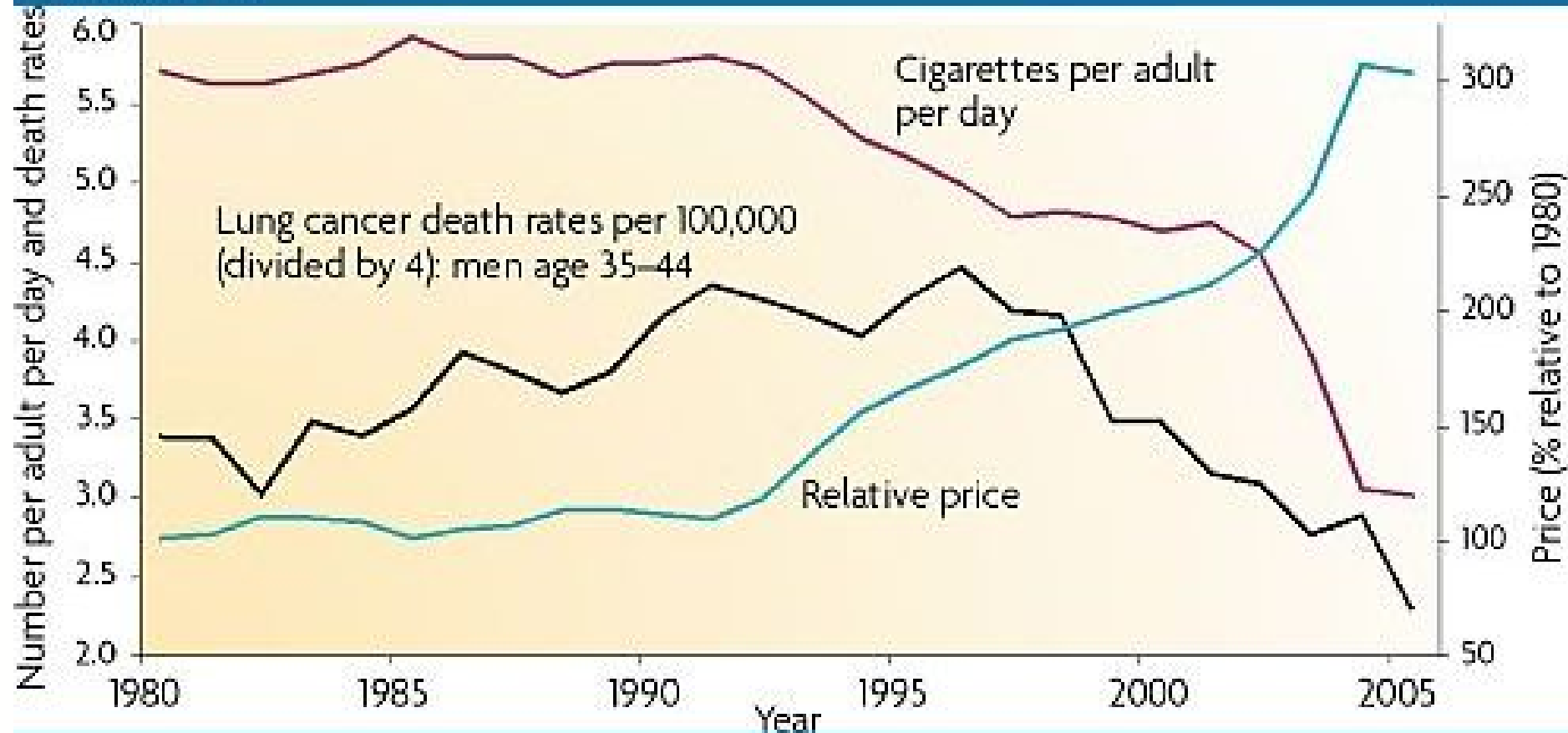
Cigarette Price & Youth Smoking Prevalence Vermont, 1993-2011



Taxes, Prices and Health

US, 1980-2005

Medscape

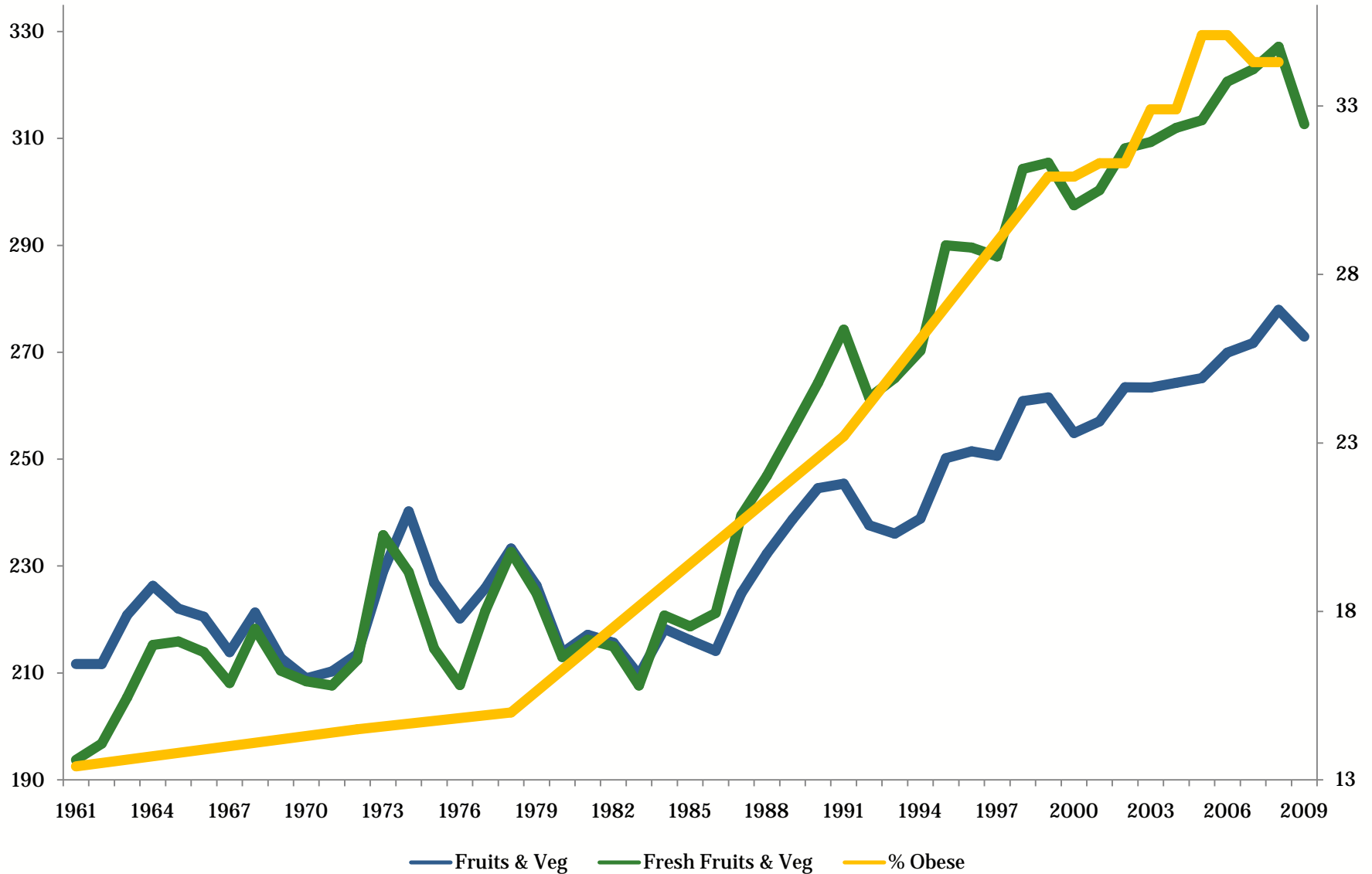


Source: Nat Rev Cancer © 2009 Nature Publishing Group

Impact of Food Prices on Diet and Weight

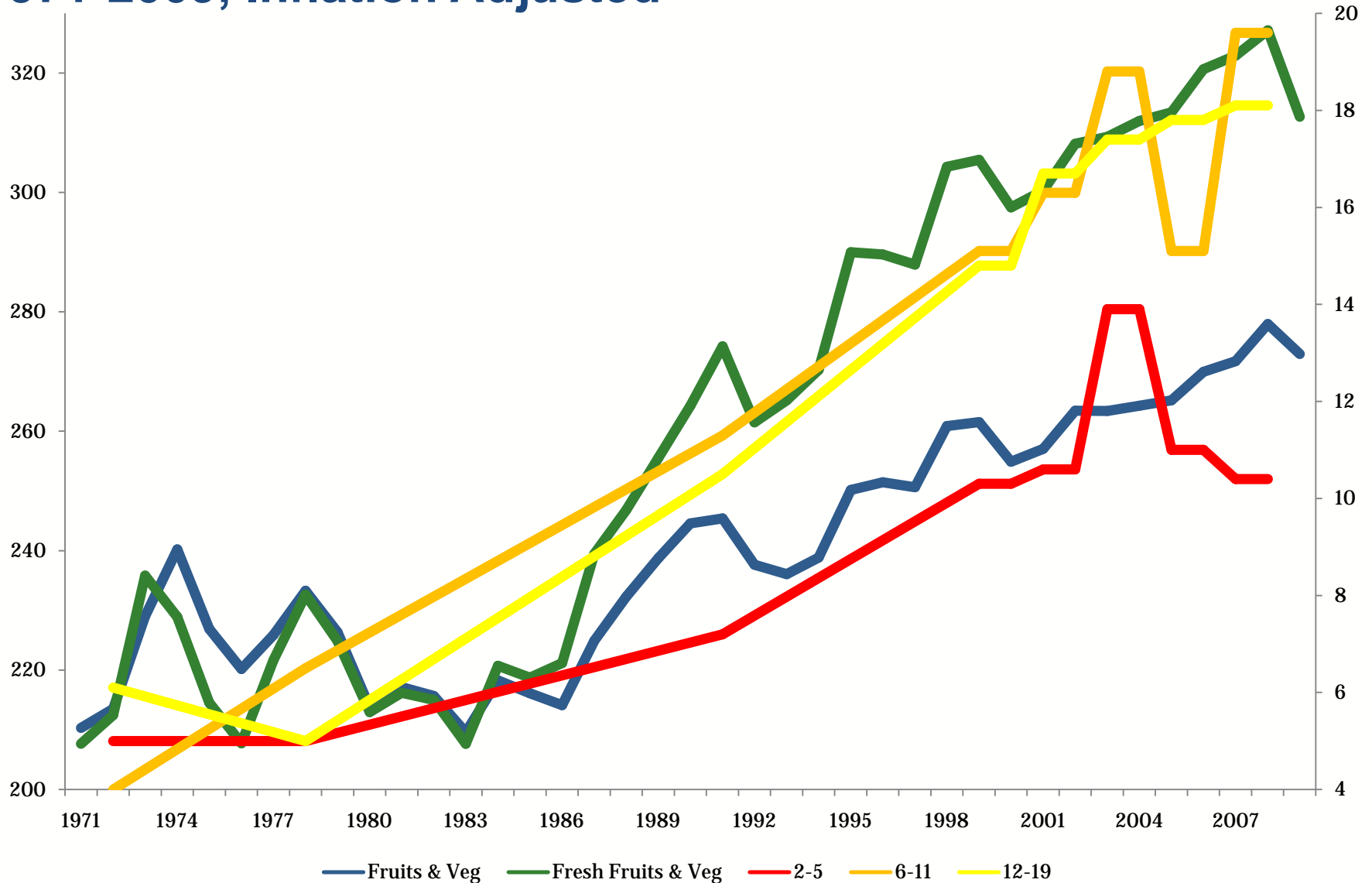


Selected Food Price & Adult Weight Trends 1961-2009, Inflation Adjusted

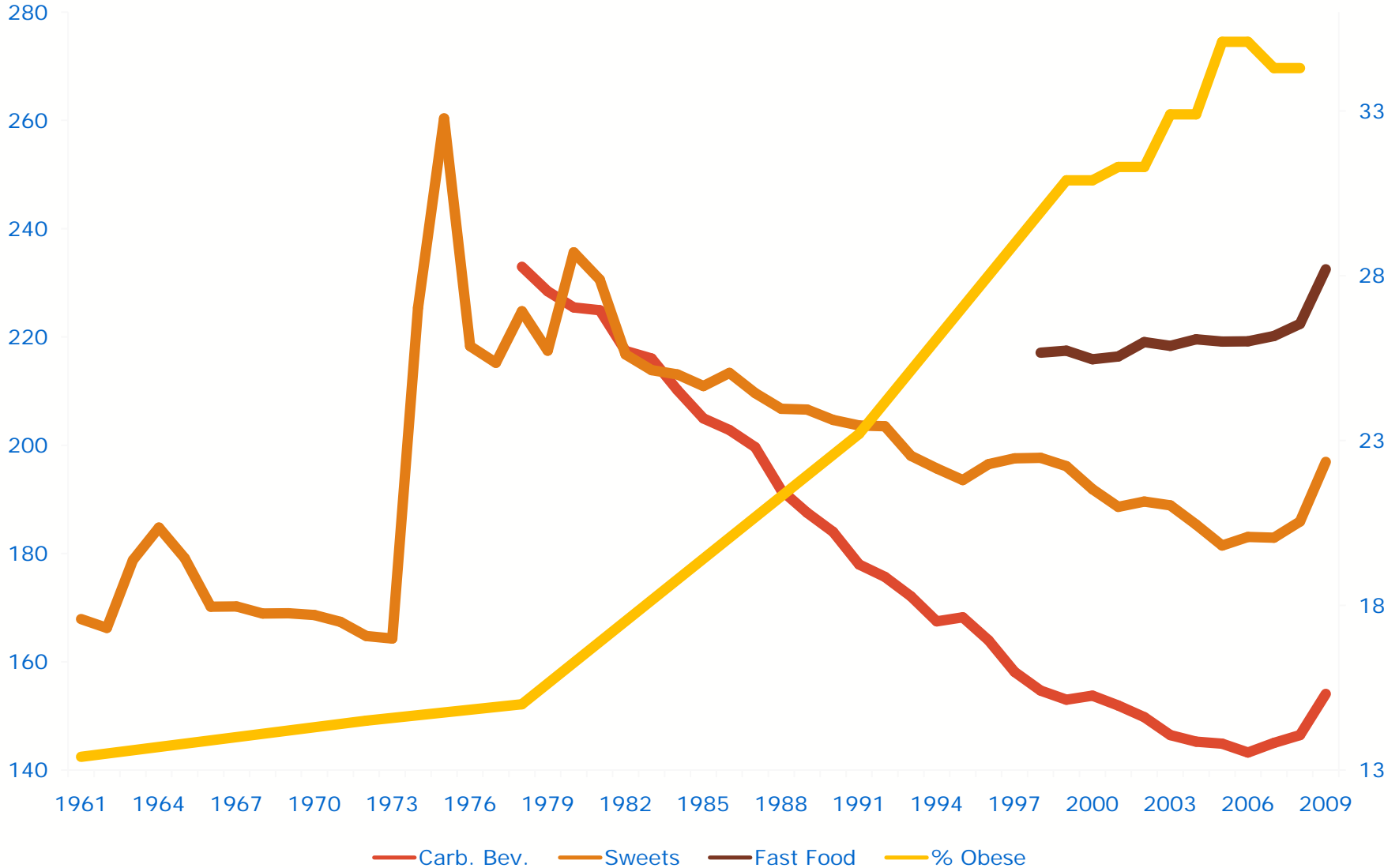


Selected Food Price & Youth Weight Trends

1971-2009, Inflation Adjusted

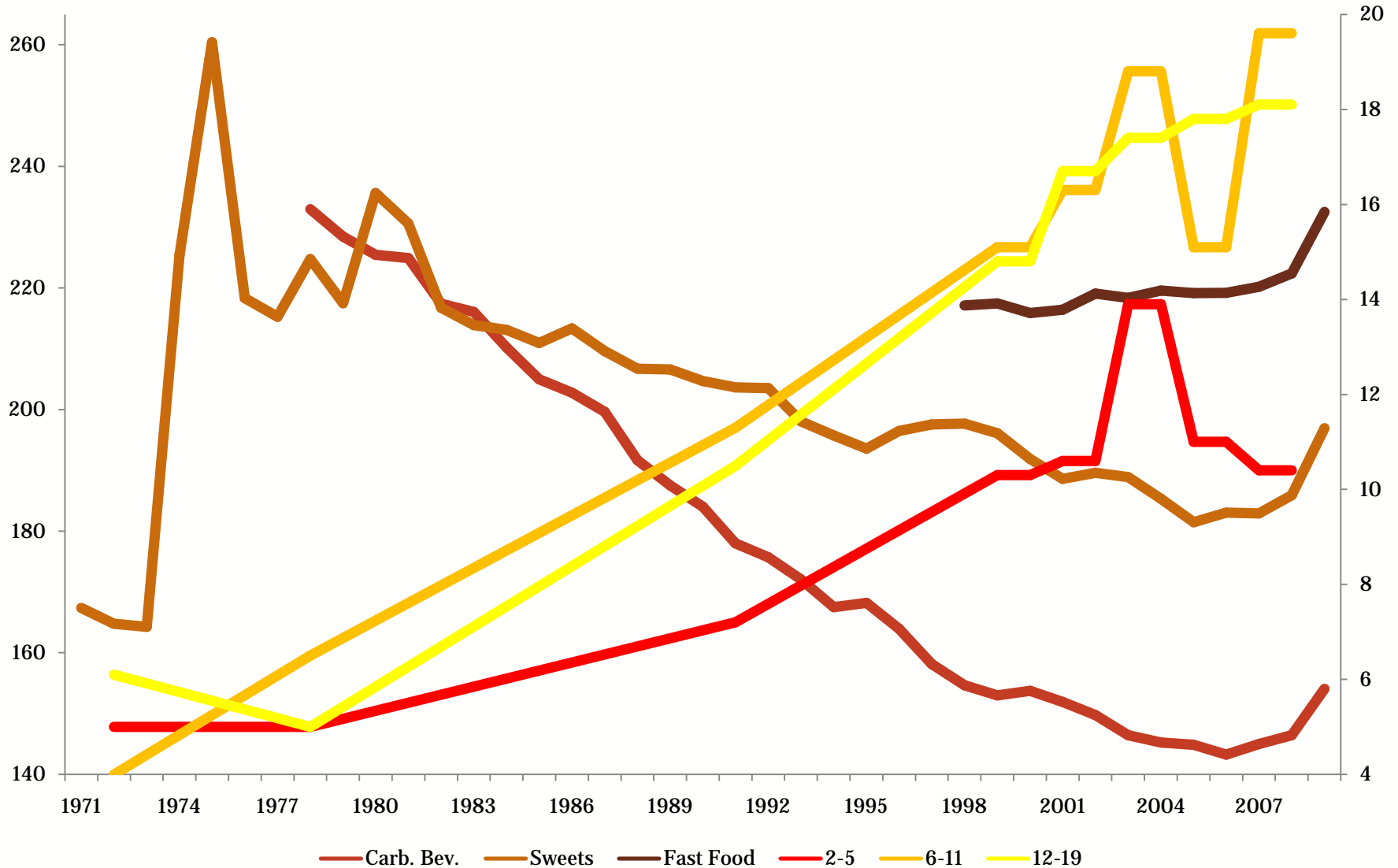


Selected Food Price & Adult Weight Trends 1961-2009, Inflation Adjusted



Selected Food Price & Youth Weight Trends 1971-2009, Inflation Adjusted

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Source: BLS; NHES-I 1960-62; NHANES, 1971-74, 1976-80, 1988-94, 1999-2000, 2001-02, 2003-04, 2005-06, 2007-08

Food Prices and Consumption

- Estimates from recent economic research show significant effects of food & beverage prices on consumption
- 10% price increase reduces:
 - Sugar sweetened beverage consumption by 12.1%
 - Fast food consumption by 5.2%
 - Vegetable consumption by 4.8%
 - Fruit consumption by 4.9%

Food Prices and Weight Outcomes

Relatively limited research with increasingly strong findings to date on impact of food and beverage prices and weight outcomes:

- Higher sugary food prices reduce prevalence of overweight/ obesity among adults (Miljkovic et al., 2008)
- 10% higher fast food prices would reduce prevalence of adolescent obesity by almost 6% (Powell, et al., 2007)
- Higher soda sales taxes associated with reduced weight gain, particularly for overweight kids (Sturm, et al., 2010)
- Higher carbonated beverage prices significantly related to lower BMI in children (Wendt and Todd, 2011)

Food Prices and Weight Outcomes

The weight of the evidence increasingly indicates that changes in relative prices for healthier and less healthy foods will affect weight outcomes, with greater impact on:

- Lower income, less educated populations
- Younger populations
- Populations at greater risk for obesity

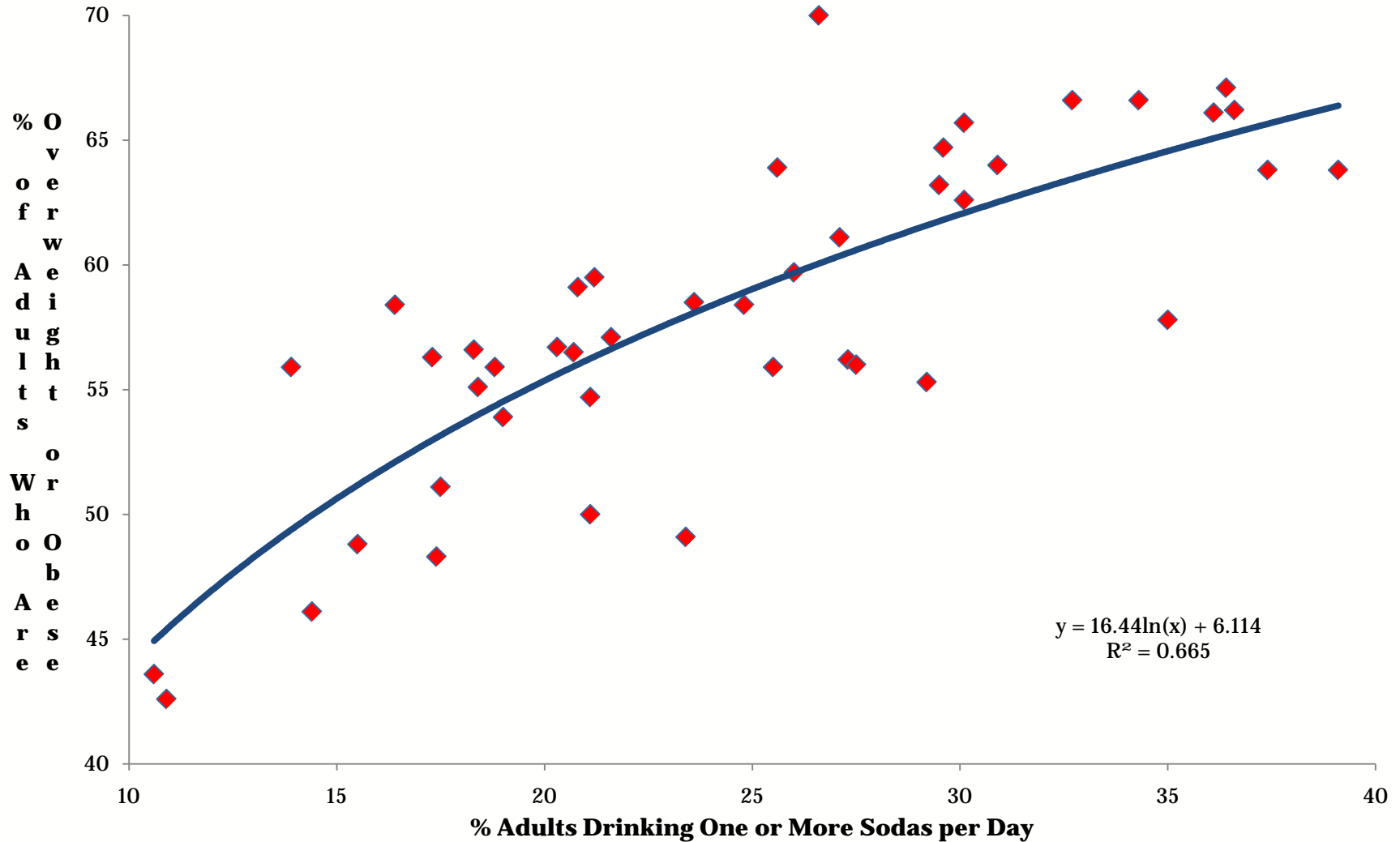
Sugar Sweetened Beverage Taxes



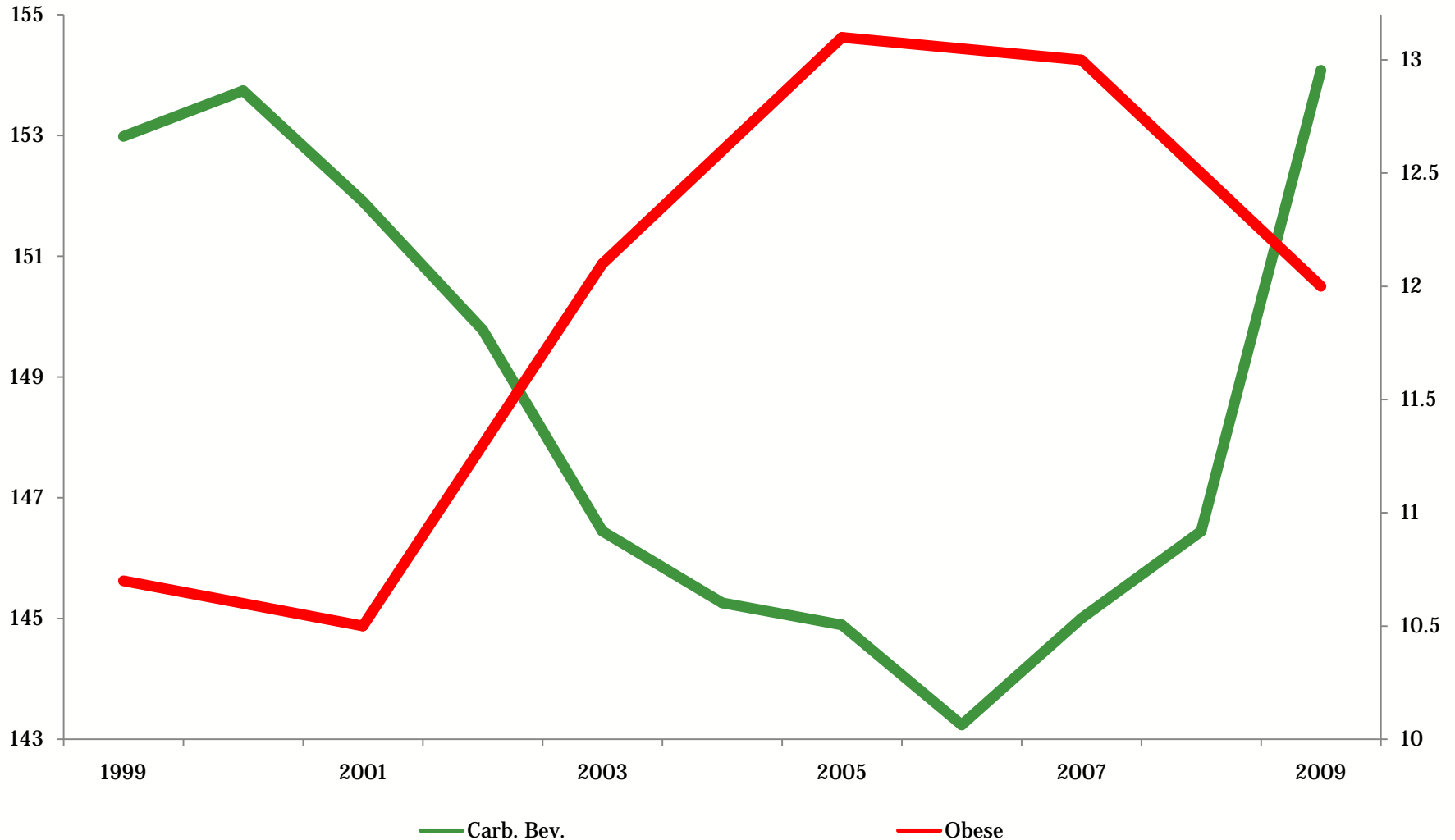
Why Sugar-Sweetened Beverage Taxes?

- **Link to obesity**
 - Several meta-analyses conclude that increased SSB consumption causes increased weight, obesity
 - Increased calories from SSBs not offset by reductions in calories from other sources
- **Other health consequences**
 - type 2 diabetes, lower bone density, dental problems, headaches, anxiety and sleep disorders

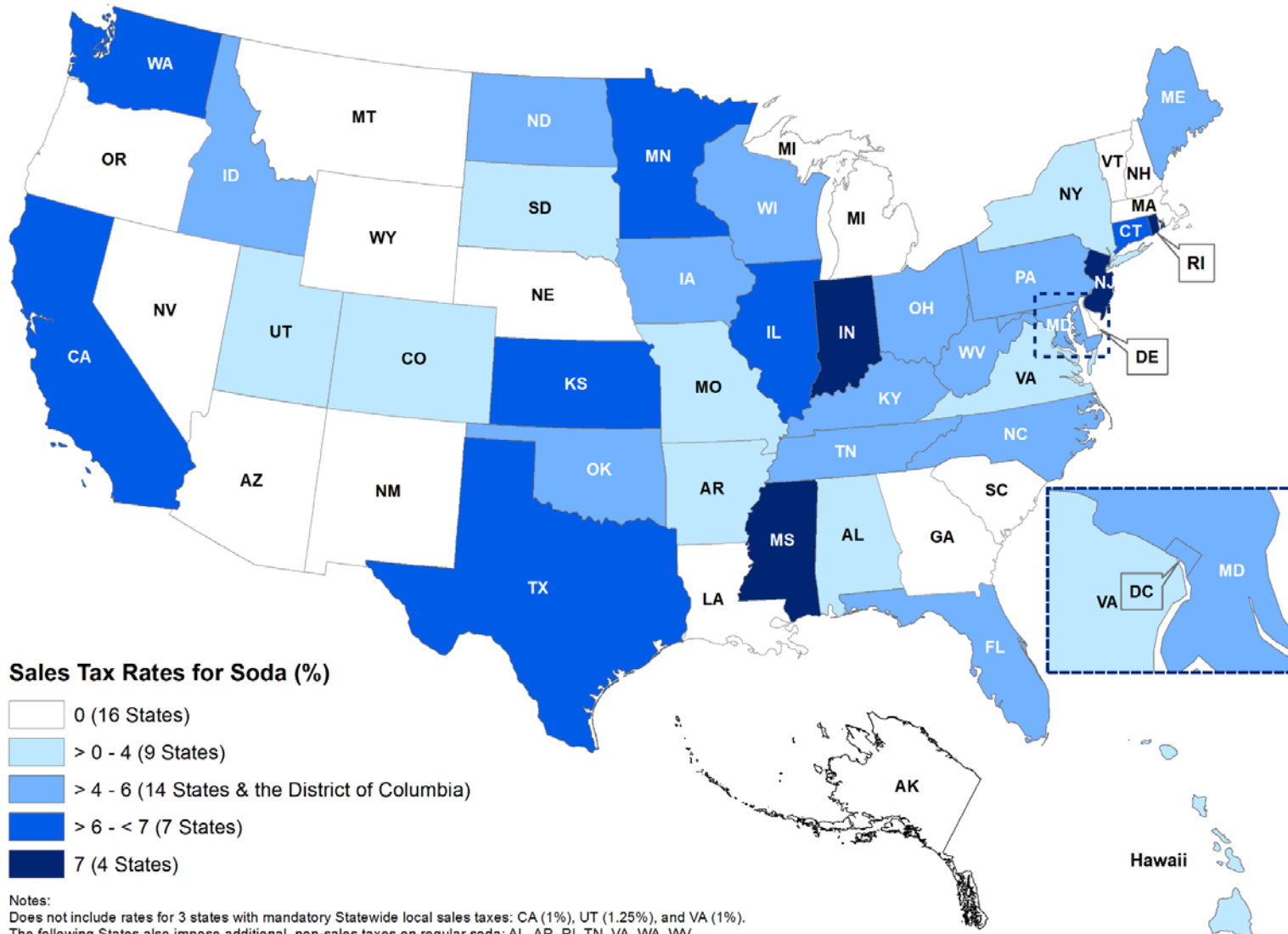
Soda Consumption & Obesity California Counties, 2005



Carbonated Beverage Prices & Youth Obesity 1995-2009, Inflation Adjusted



States with Sales Taxes on Regular Soda (as of January 1, 2014)



Data Source: Bridging the Gap Program, University of Illinois at Chicago, 2014

Best Practices in SSB Taxation

- From a public health perspective, specific excise tax on SSBs only preferable to sales tax or ad valorem excise tax or to a broader beverage tax that includes low/no-calorie options
 - 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

SSB Taxation & Revenues

- Revenue generating potential of beverage tax is considerable
 - SSB Tax calculator at:
 - <http://www.yaleruddcenter.org/sodatax.aspx>
 - Tax of two cents per ounce could generate:
 - \$33.8 million in Vermont if on SSBs only
 - Earmarking tax revenues for obesity prevention efforts would add to impact of tax

Oppositional Arguments Myths & Facts



Impact on Jobs

- **SSB tax will lead to decreased consumption of beverages**
 - Small loss of jobs in beverage sector
- **Money not spent on beverages will be spent on other goods and services**
 - Gains in jobs in other sectors
- **Increase in tax revenues will be spent by government**
 - Additional job gains in other sectors
- **Small net increase in jobs likely**

Impact on Jobs

- **Our recent study (Powell et al., AJPH, 2014):**
 - Assessed impact of 20% SSB tax on employment in California and Illinois
 - Assumed tax fully passed on to consumers
- **California**
 - Net employment increase of 6,252 jobs
 - 0.03% increase in employment
- **Illinois**
 - Net employment increase of 4,509 jobs
 - 0.06% increase in employment
- **Similar small net increase in jobs likely in other states**

Impact on Businesses

- **Argument that SSB taxes will harm convenience stores**
- **Similar arguments made for tobacco taxes**
 - **Conducted analysis of convenience stores (convenience only, gas stations, both), by state, 1997-2009**
 - **State cigarette tax rates and smoke-free policies**
 - **Controlled for state economic conditions**
 - **Found that higher tobacco taxes associated with more convenience stores**
 - **Consumers buy other products**
 - **Overshifting of taxes**

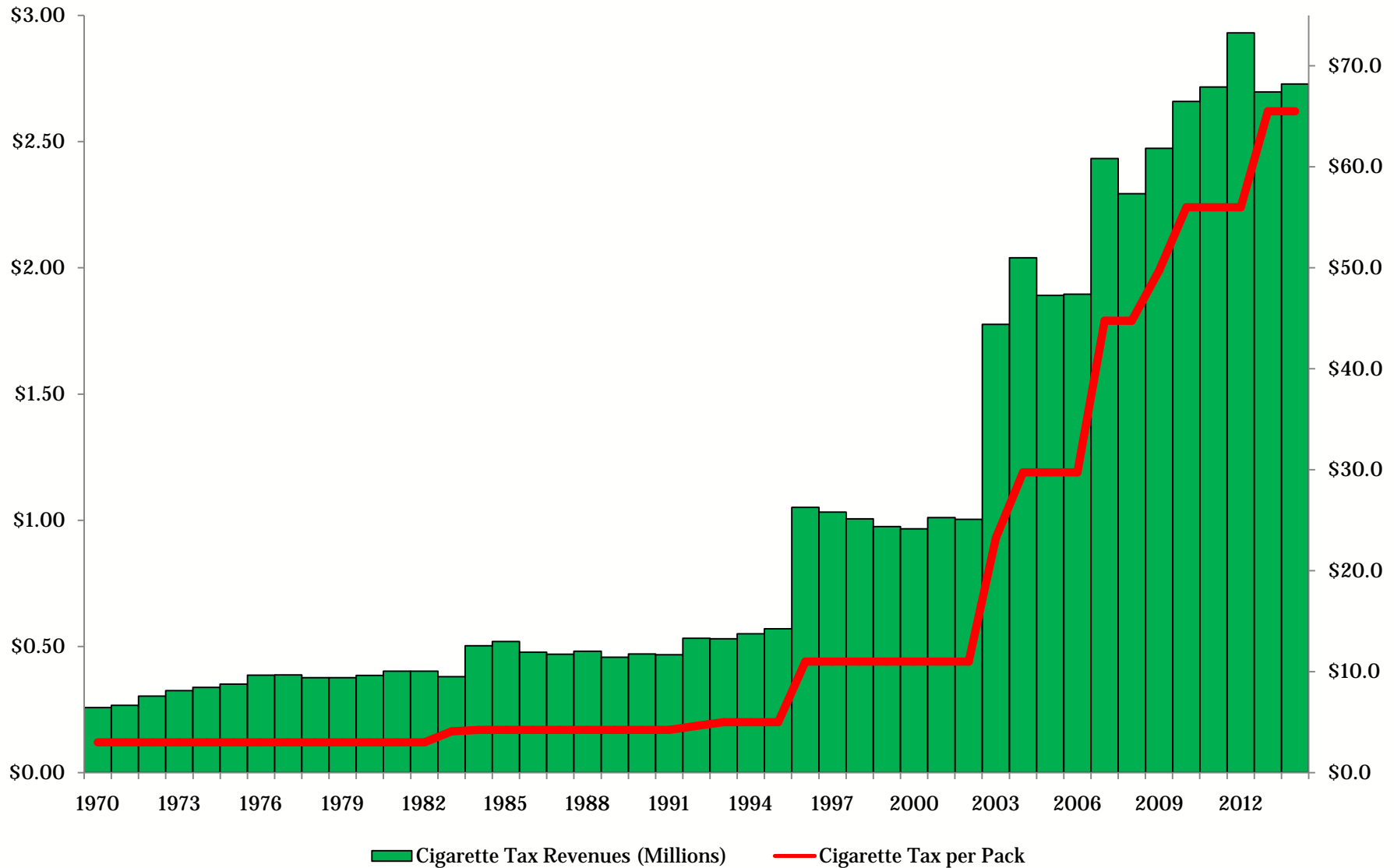
Impact on the Poor

- Greater price sensitivity of poor – relatively large reductions in consumption among lowest income populations, small reductions among higher income populations
- Health benefits that result from tax increase are progressive
- Use of tax revenues for obesity prevention, health promotion, and/or other programs targeting the poor offsets financial impact

Tax Avoidance

- **Some tax avoidance likely for consumers near border, but not enough to offset the public health and revenue impact of tax**
 - 2011 survey of Vermont adults found that none surveyed who buy SSBs at gas stations or convenience stores and who do not regularly shop in New Hampshire would cross the border to buy SSBs to avoid the tax.
- **Similar concerns about tobacco taxes greatly exaggerated**
 - Real reductions in tobacco use
 - Real increases in tobacco tax revenues

Cigarette Tax per Pack and Cigarette Tax Revenues Vermont, 1970-2014



Tax Avoidance

- Revenue impact:
 - Last Vermont tax increase with no change in New Hampshire tax for one year
 - Vermont - July 1, 2006, increase from \$1.19 to \$1.79 per pack
 - New Hampshire's tax of 80 cents per pack
 - In the year following the increase:
 - Cigarette tax revenues rose by \$13.4 million (28.3%) in Vermont
 - Cigarette tax revenues fell by \$3.4 million (-2.4%) in New Hampshire
 - Claims of cross-border shopping and other tax avoidance efforts clearly exaggerated
 - NH saw revenues fall after reducing cigarette tax in July 2011

Summary



Summary

- Tobacco tax increases have significantly reduced tobacco use and its consequences
- Similar potential for using sugar sweetened beverage taxes to promote healthier eating and curb obesity
 - While generating considerable revenue for obesity prevention and health programs
- Economic counterarguments false or greatly overstated

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