




Examining State and Local Obesity-Related Policies as Part of the BTG Initiative

**Jamie F. Chriqui
University of Illinois at Chicago**

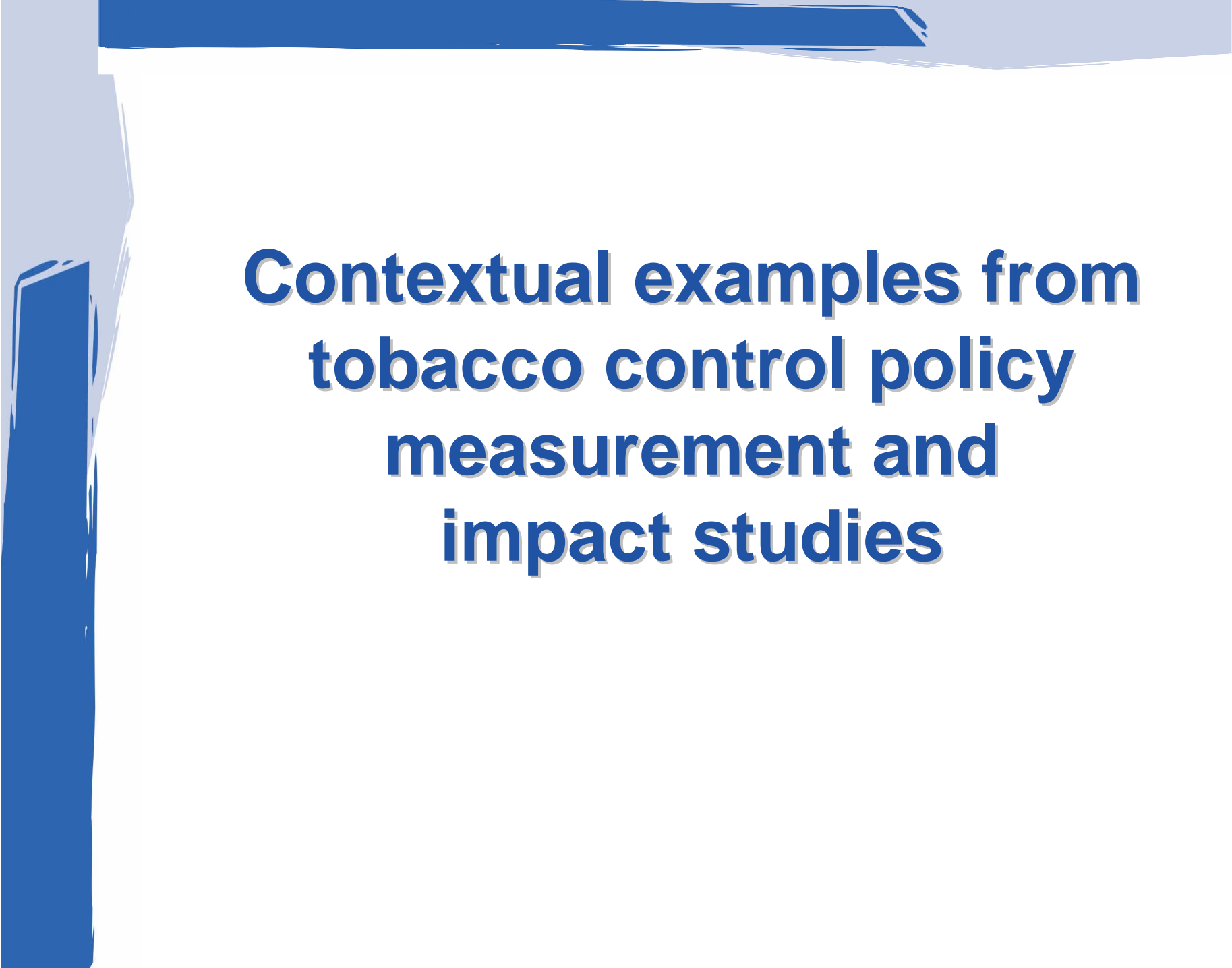
Active Living Research Conference
April 8, 2009
Washington, D.C





Overview

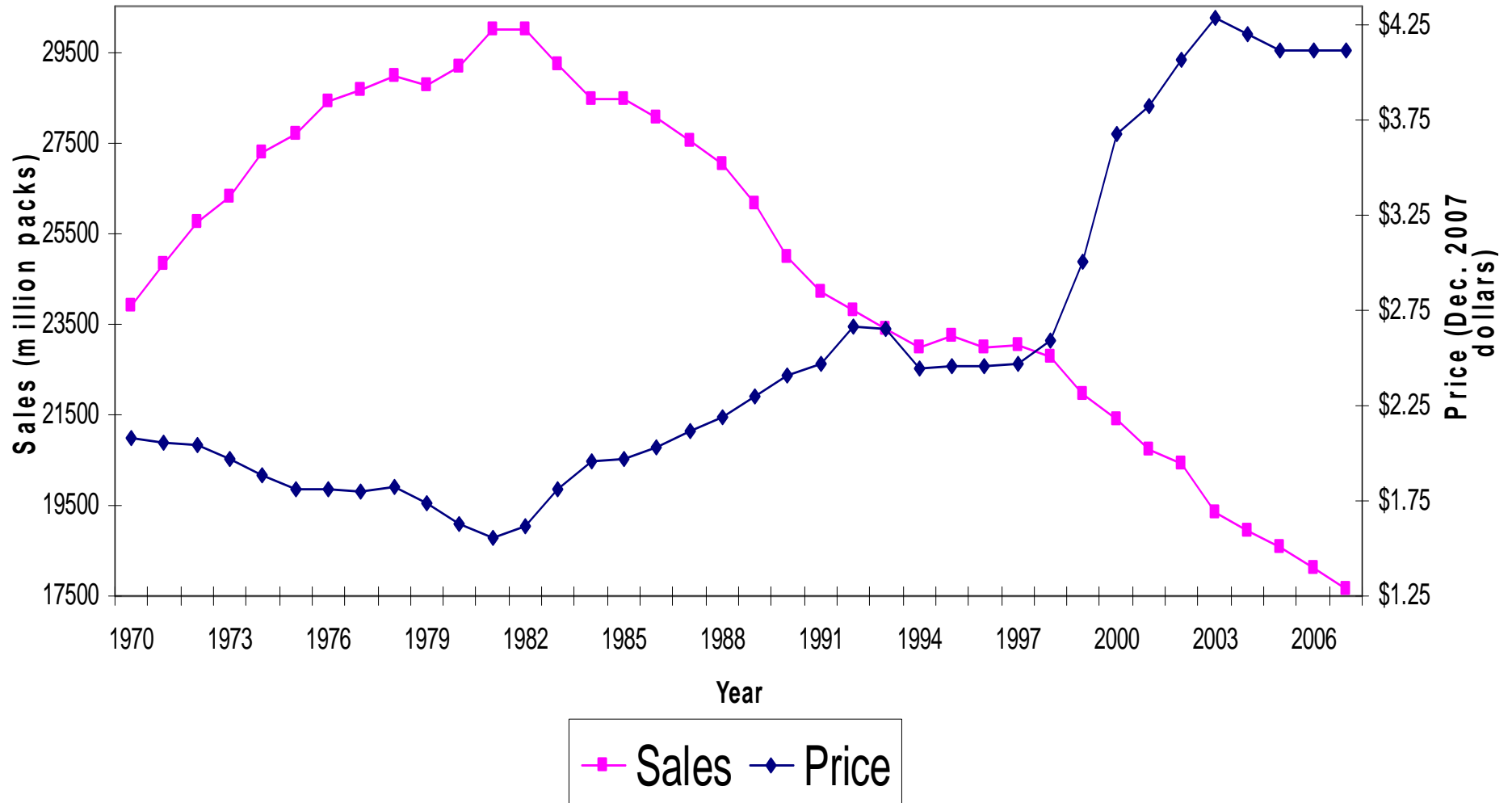
- Contextual examples from tobacco control leading to BTG work in the obesity research area
- Overview of BTG state obesity-related policy research and evaluation efforts
 - Examples of the utility of the data for policy analyses
- Overview of BTG local/school district-level policy identification and analysis efforts
- Planned analyses/future measurement efforts



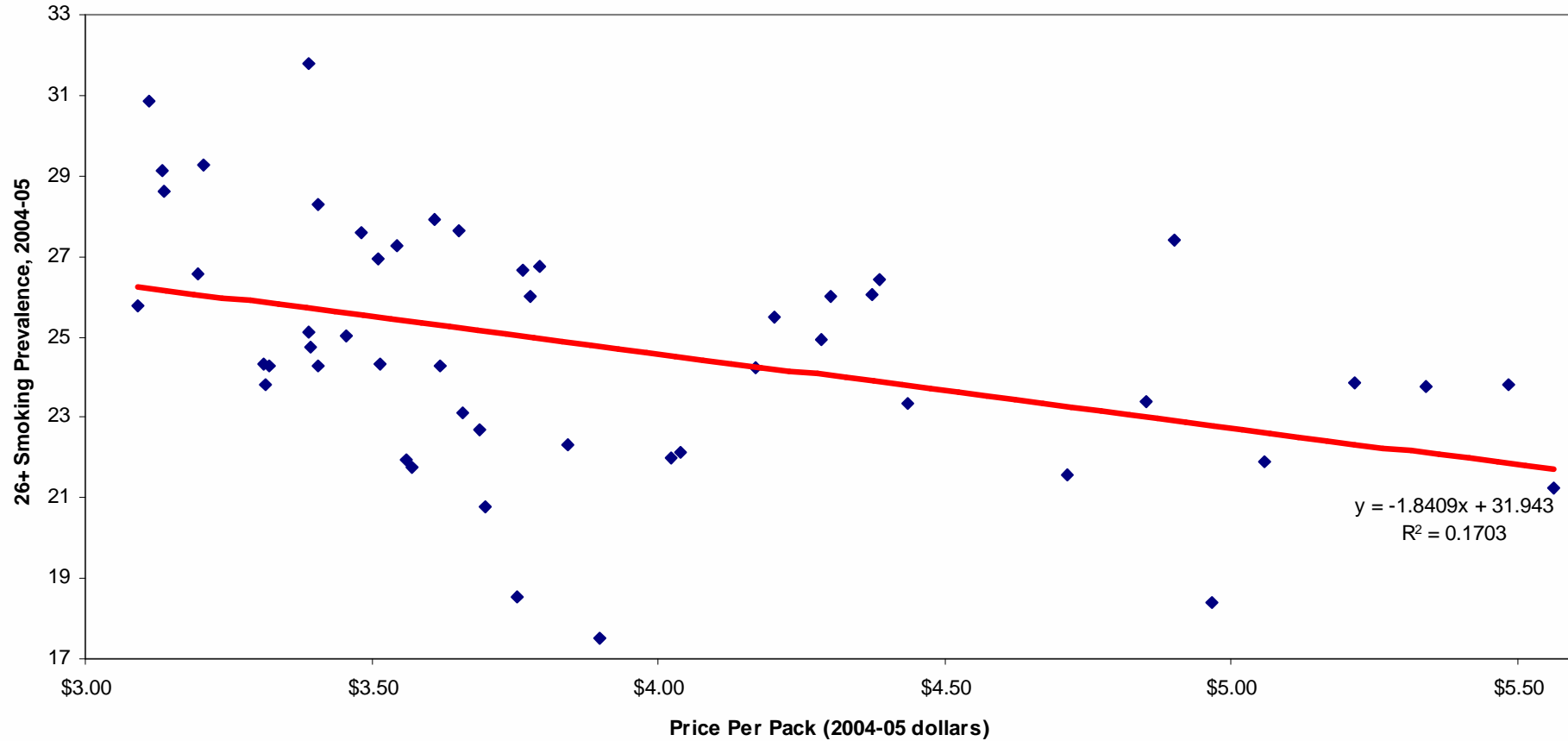
**Contextual examples from
tobacco control policy
measurement and
impact studies**

Cigarette Prices and Cigarette Sales

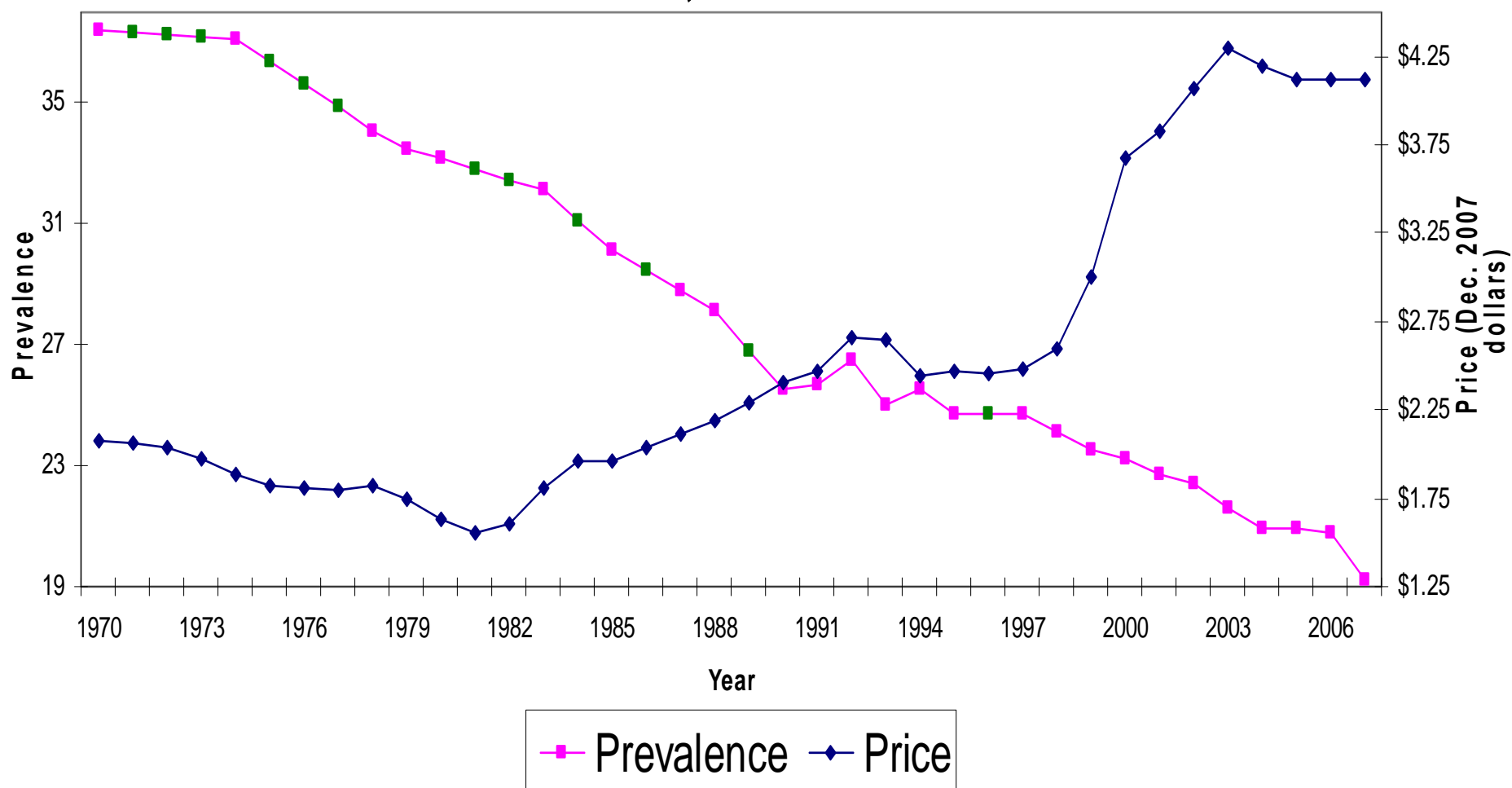
United States, 1970-2007



Cigarette Prices and Adult (26+) Smoking Prevalence US State-Level Data, 2004-05



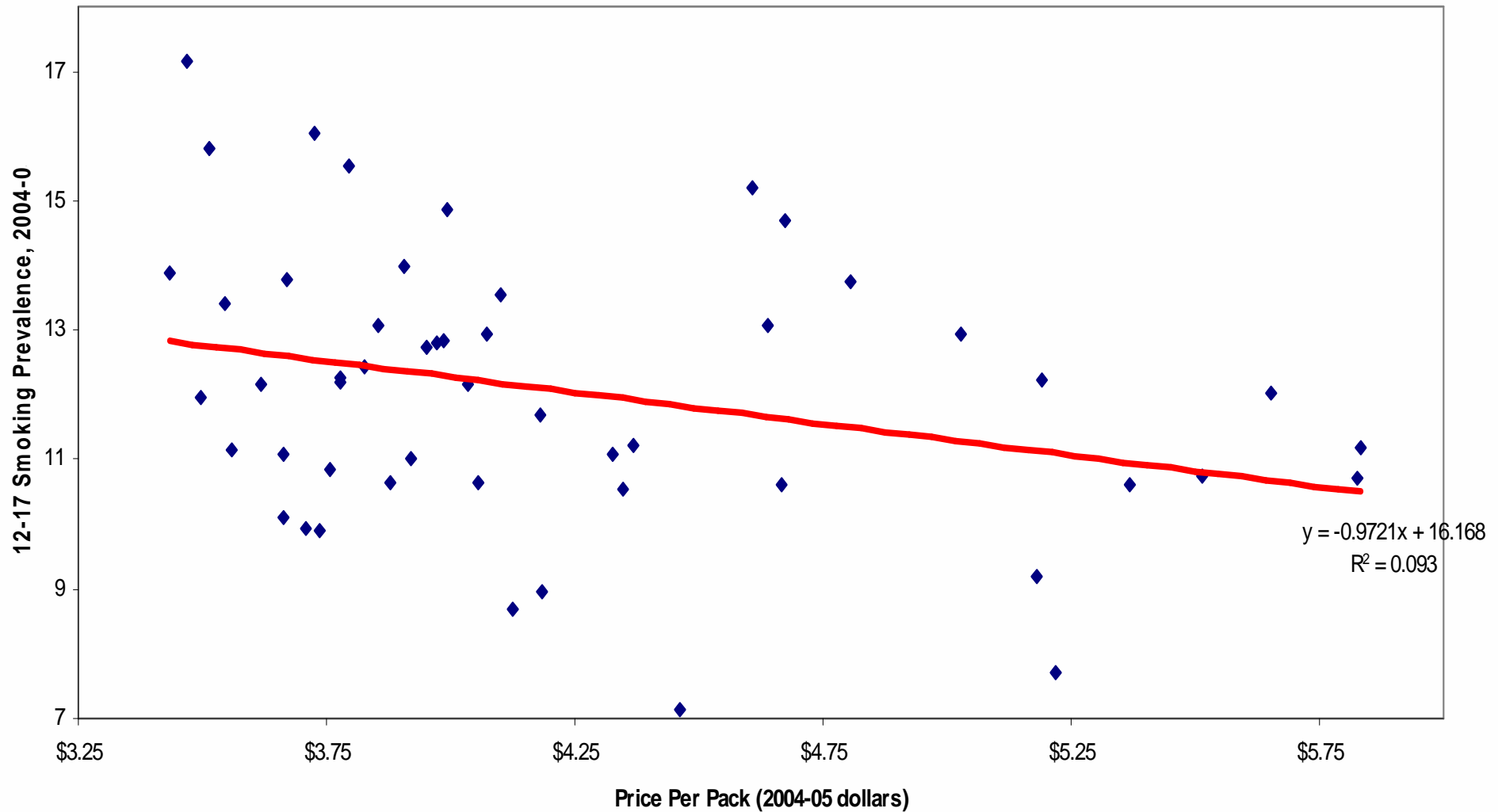
Cigarette Prices and Adult Smoking Prevalence, United States, 1970-2007



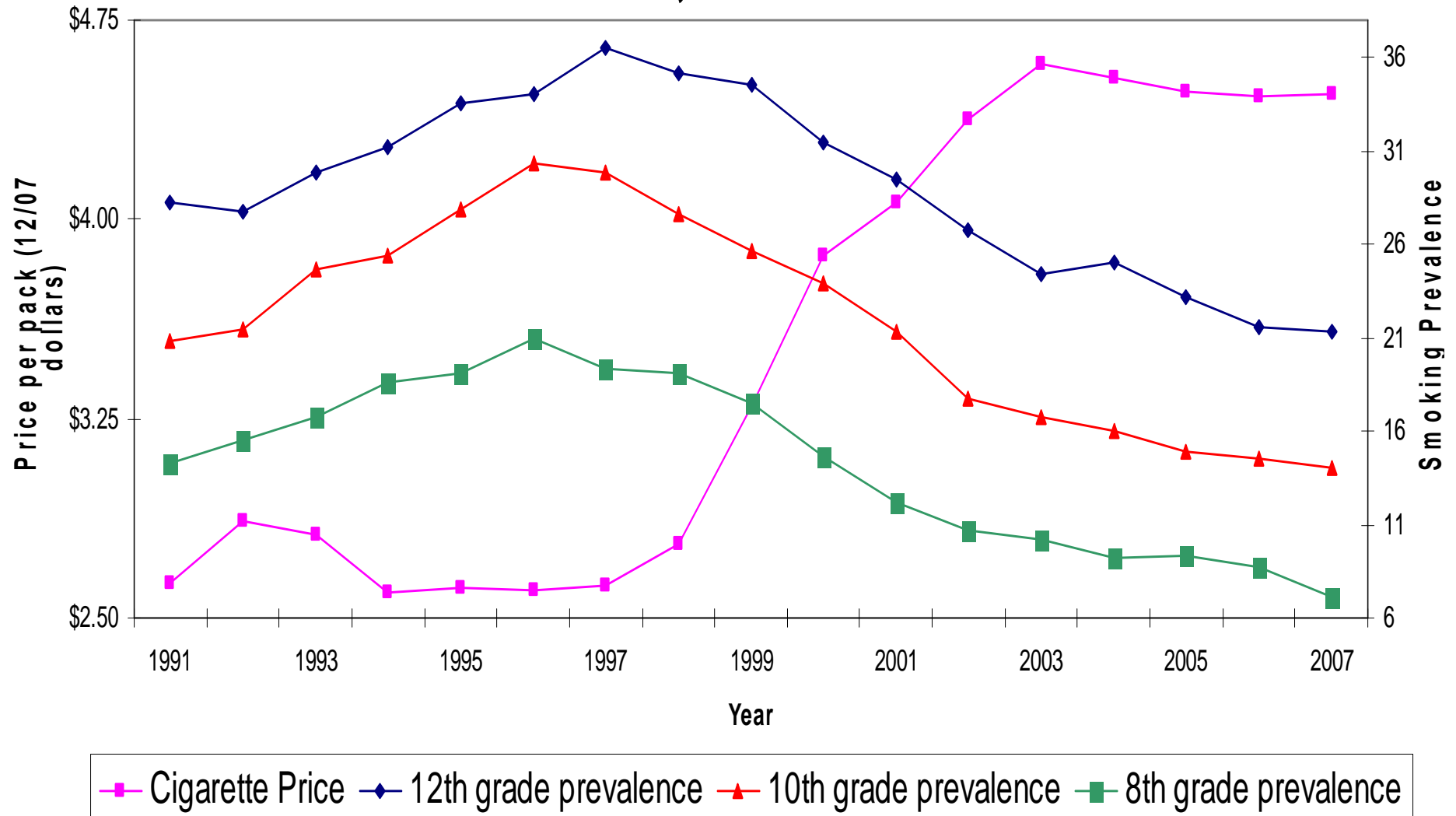
Source: NHIS, *Tax Burden on Tobacco, 2007*, and author's calculations

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

Cigarette Prices and Smoking Prevalence Ages 12-17, State-Level Data, 2004-05



Cigarette Price and Youth Smoking Prevalence, United States, 1991-2007



Source: MTF, *Tax Burden on Tobacco*, 2007, and author's calculations

Major Smoke-Free Air Legislation in the 50 States and the District of Columbia - 1991-2006

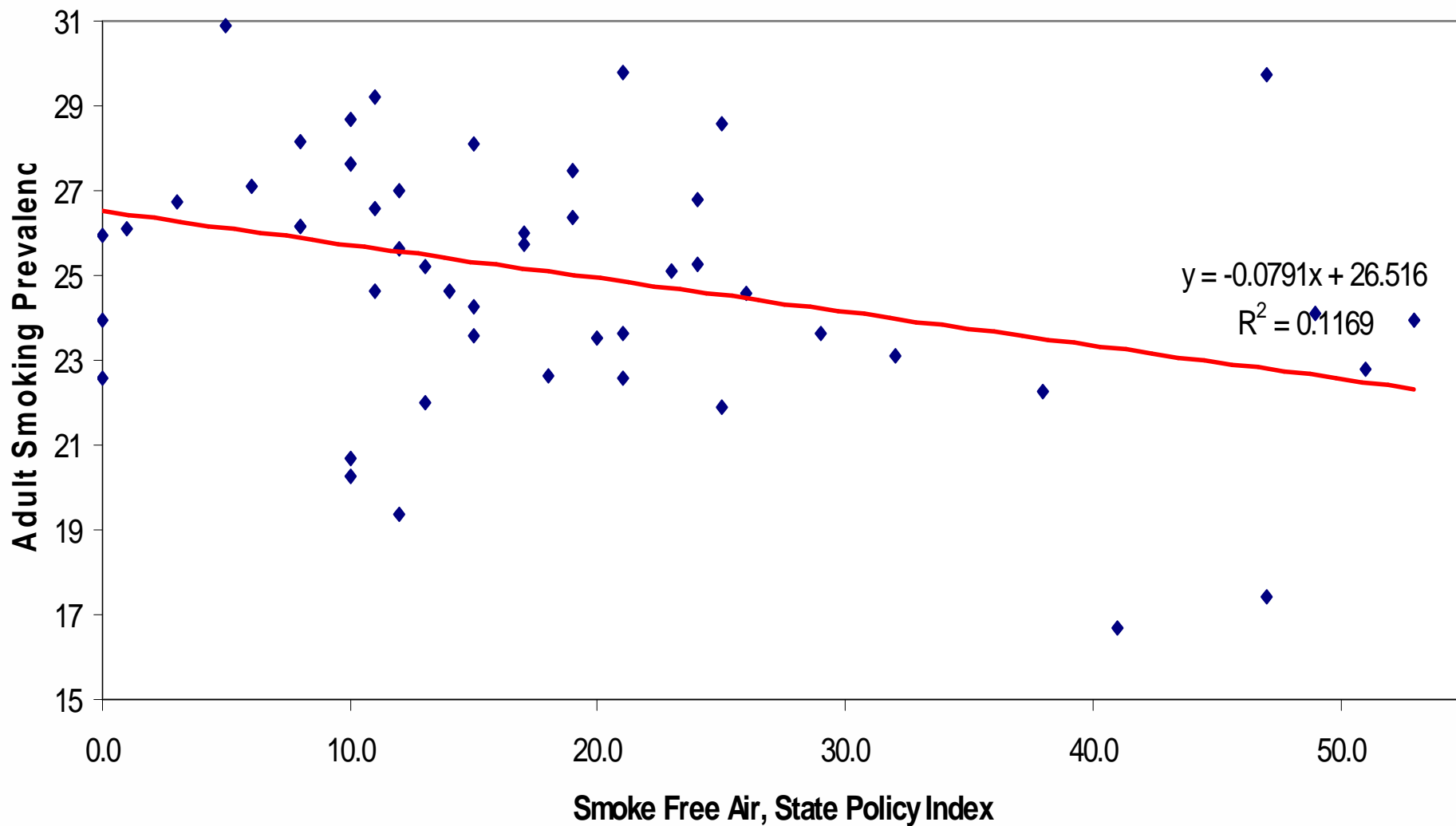
impacTEEN



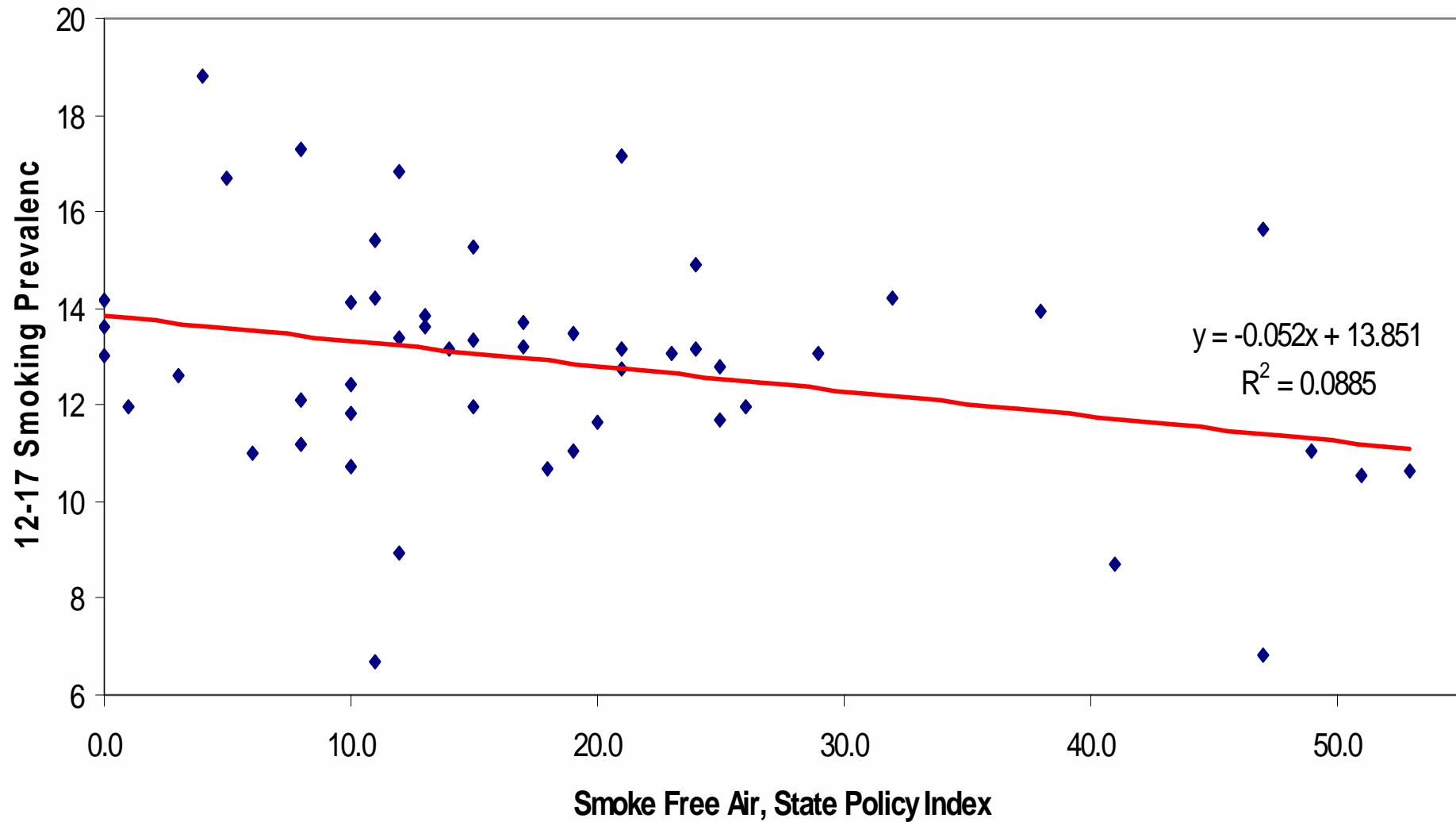
Source: The MayaTech Corporation and the Roswell Park Cancer Institute; includes laws effective July 1, 2006.



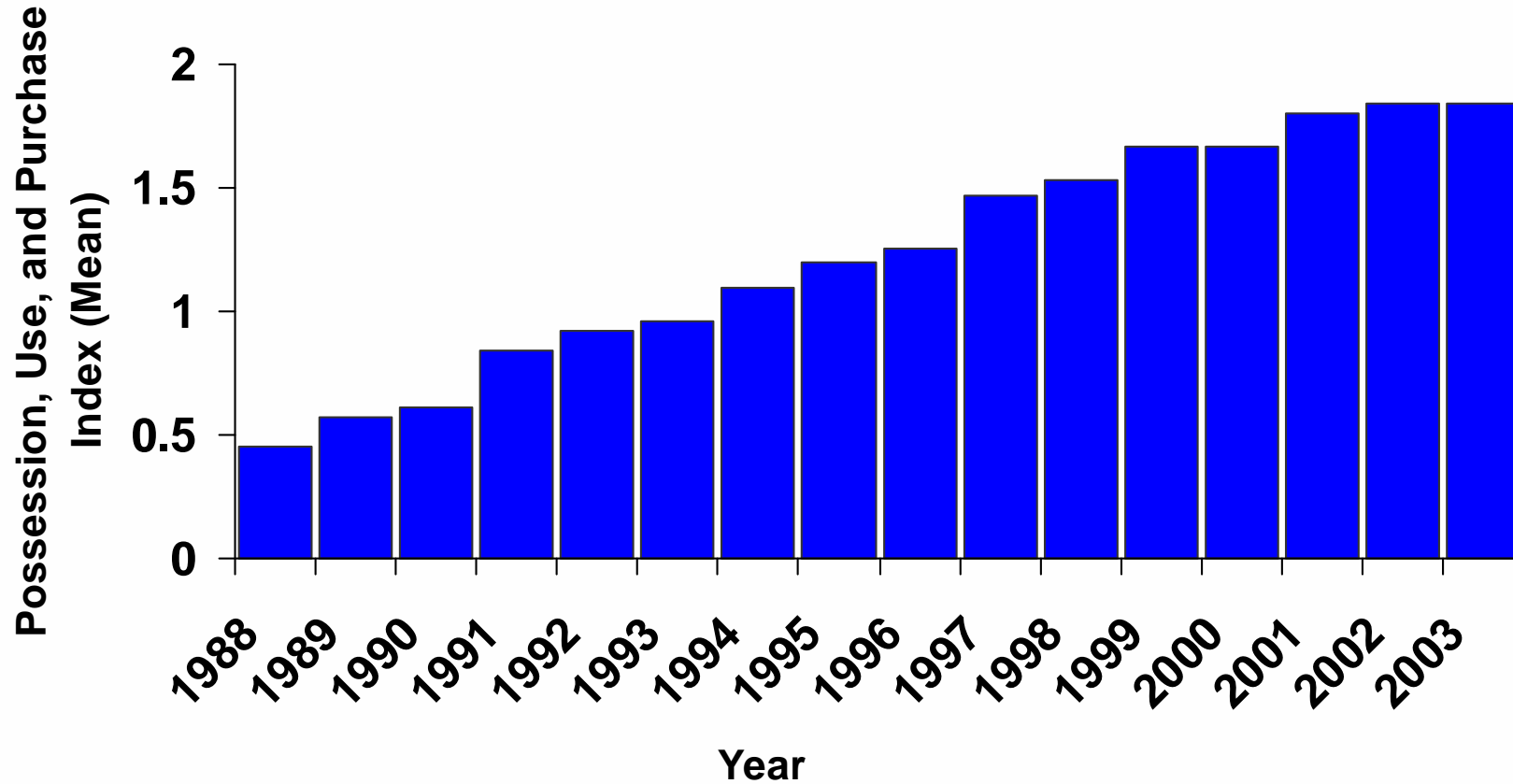
Smoke Free Air Policies and Adult Smoking Prevalence, 2003-04



Smoke Free Air Policies and Youth Smoking Prevalence, 2003-04



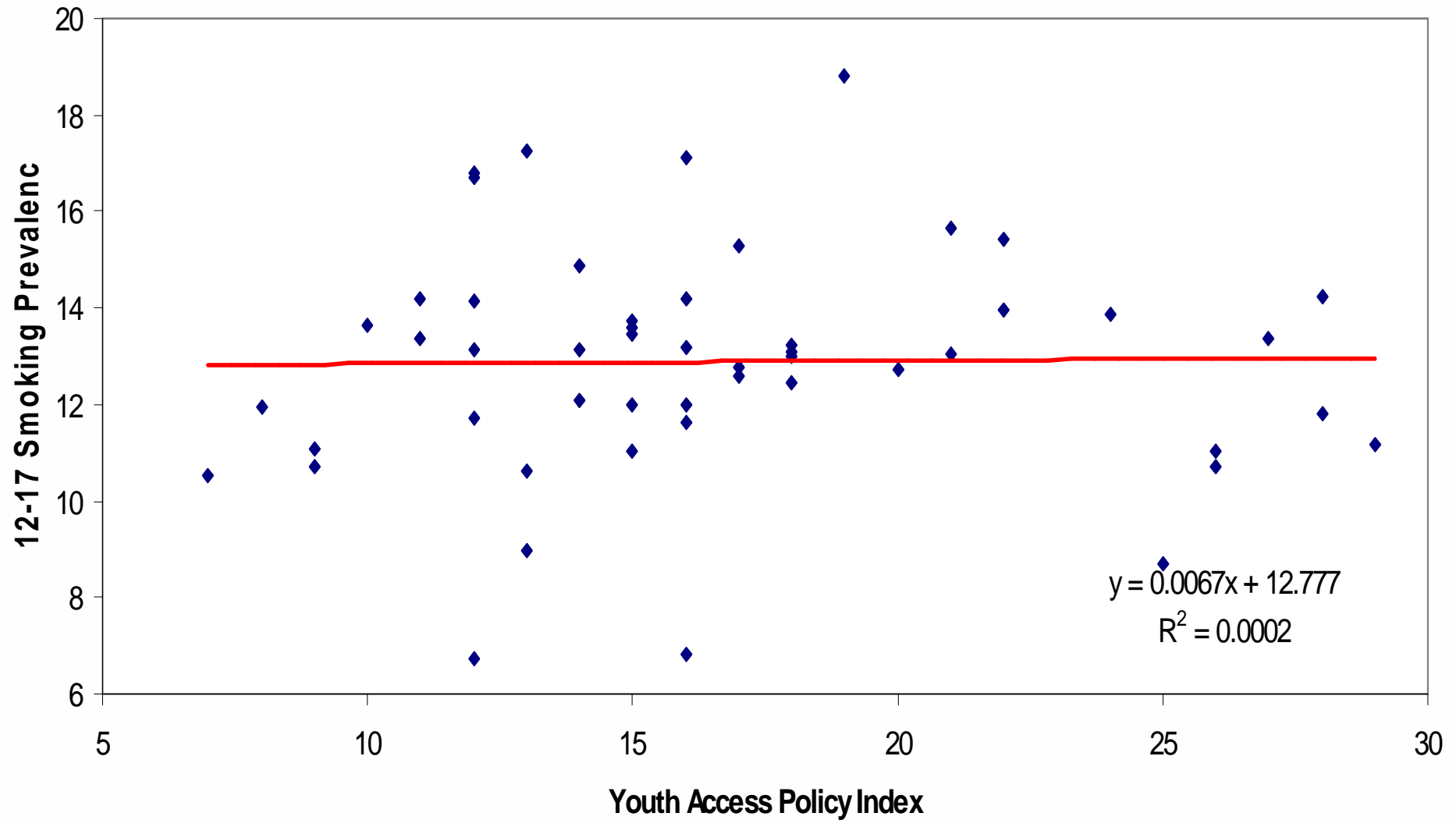
Mean Number of Possession, Use, and Purchase Laws per State* -- United States, 1988-2003**



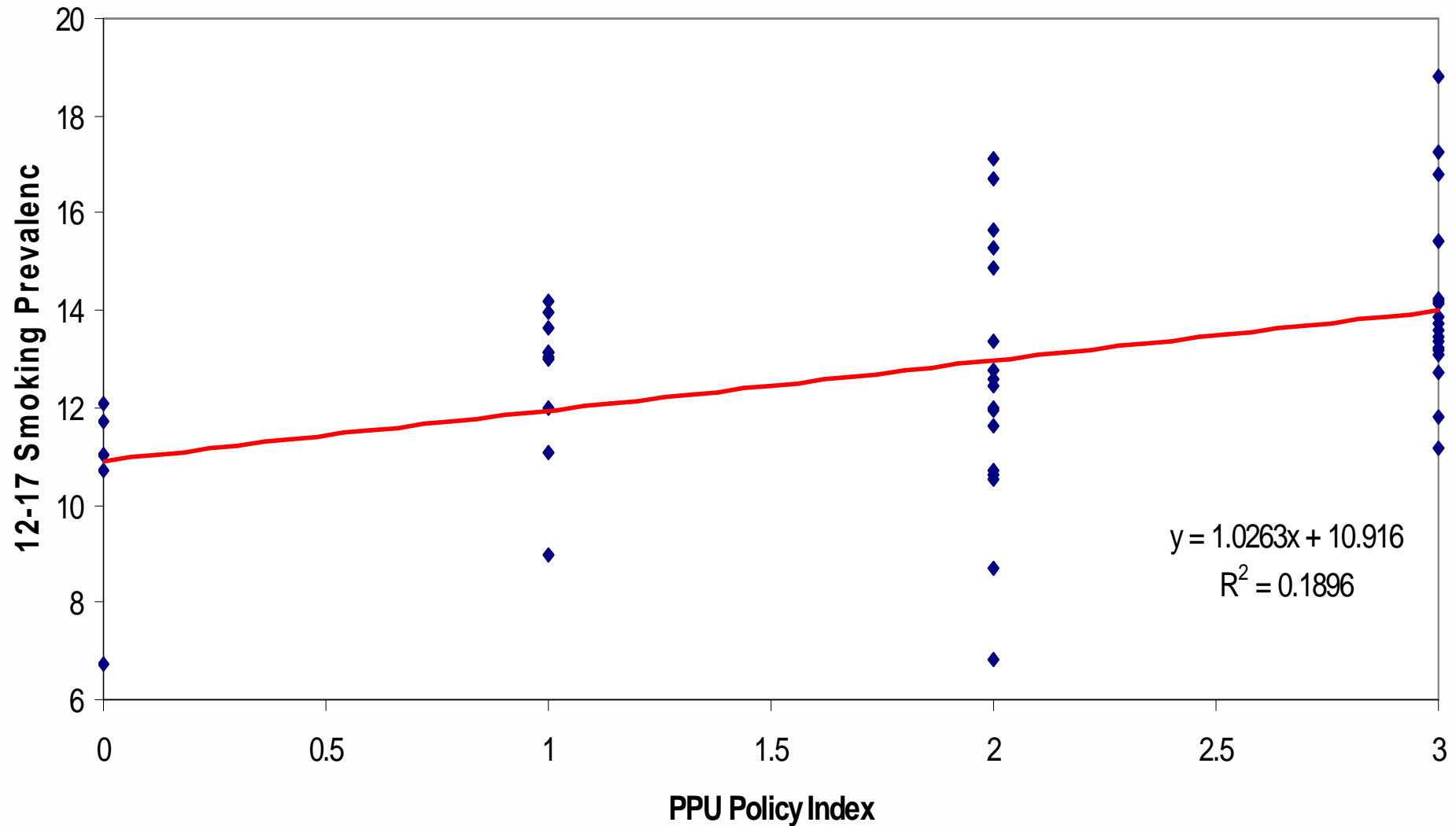
*Includes the District of Columbia; Theoretical Range = 0-3; Includes 1st quarter of 2003 only.

**Sources: ALA's SLATI, CDC's STATE system, and Roswell Park Cancer Institute

Youth Access Policies and Youth Smoking Prevalence 2003-04



Purchase, Possession and Use Policies and Youth Smoking Prevalence, 2003-04





BTG State Obesity Policy Measurement Efforts

Context for BTG State Policy Efforts

- Build on existing work primarily conducted by the National Cancer Institute
 - http://dccps.nci.nih.gov/hprb/data_systems.html
 - Focus on state-level policies affecting the school environment
 - Physical education policies
 - School-based nutrition policies
 - Developed by NCI and The MayaTech Corporation based on input from expert advisors and consultants
 - “Policies” defined to include state statutory and administrative laws
 - public policies that have the full force of law;
 - laws developed by state legislatures and regulations developed by executive agencies

BTG State Policy Methods

- Identifying topics to complement existing efforts of NCI and others
 - Topics where policies already exist and potential for analyses linked with outcome data are readily possible or anticipated
 - Topics where there is some scientific basis or precedent from other public health areas (e.g., taxation and smoking consumption)
- Focus on developing policy data sets for use in policy impact studies
 - Different than simple policy tracking efforts
 - Emphasize variation in policy provisions
 - Focus on surveillance of policy changes over time
- Currently emphasizing enacted/adopted codified law
 - Not examining “guidelines”, pending laws, model laws, etc. as they are not requirements



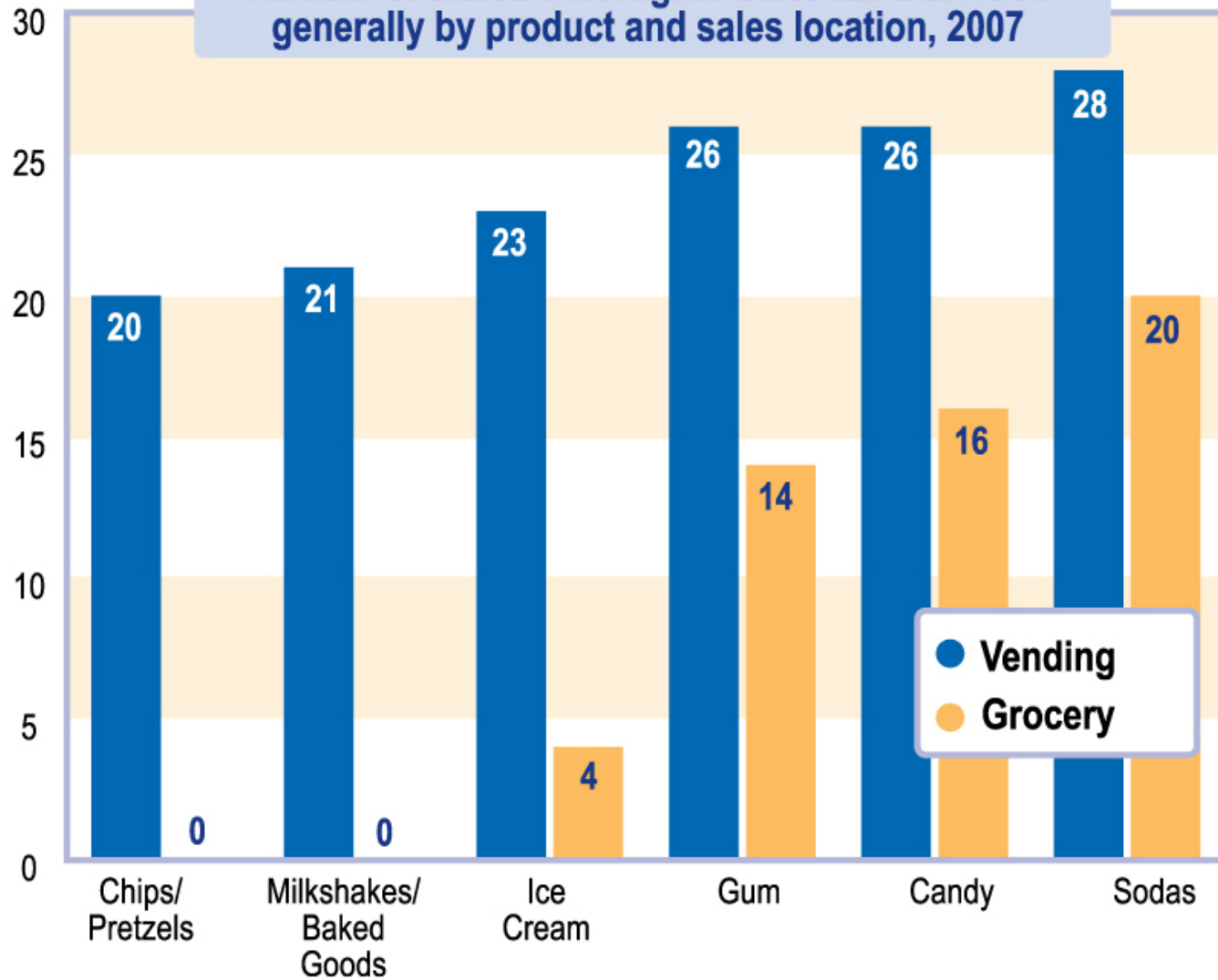
BTG State Policy Methods cont.

- Rely on secondary sources for verification of complete policy capture
 - National Association for Sport and Physical Education
 - Action for Healthy Kids
 - Center for Science in the Public Interest
 - Trust for America's Health
 - School Nutrition Association

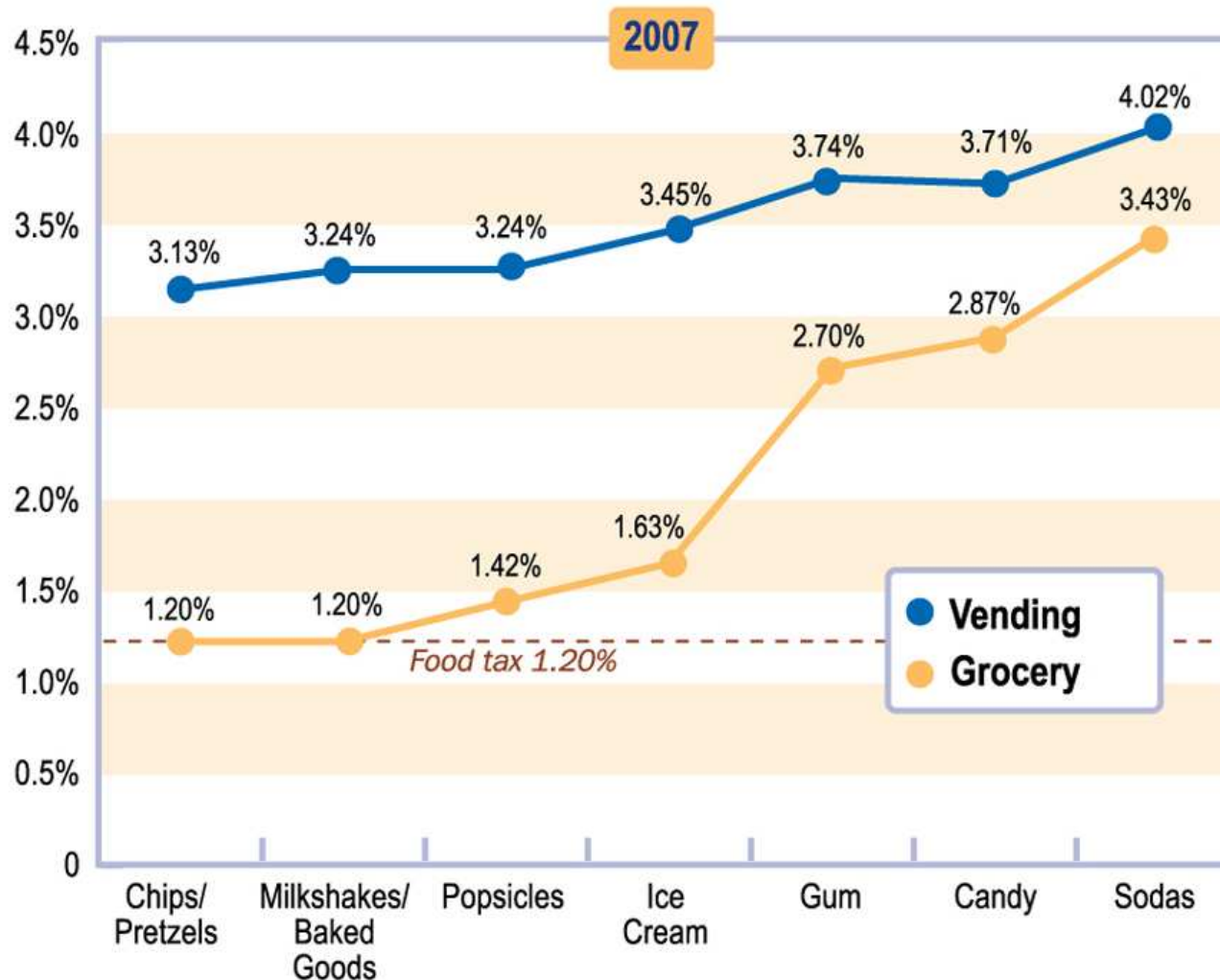
BTG State Policy Topics

- New state-level policy data being compiled by UIC and MayaTech to complement NCI state PE and school-based nutrition policy data
 - State sales tax rates for snacks and sodas sold through grocery stores and vending machines
 - Annual data compiled for 1/1/97 through 1/1/07
 - Descriptive manuscript regarding the 2007 data in press at *Journal of Public Health Policy*
- Work in progress (1/1/07 initial reference date)
 - State sales tax rates for restaurants, fast food/carryout
 - State level laws regarding safe routes to school
 - Statutory/administrative law mandates/frameworks for local wellness policies (different from model policies/guidelines)
 - Baselines likely to vary depending on policy domain

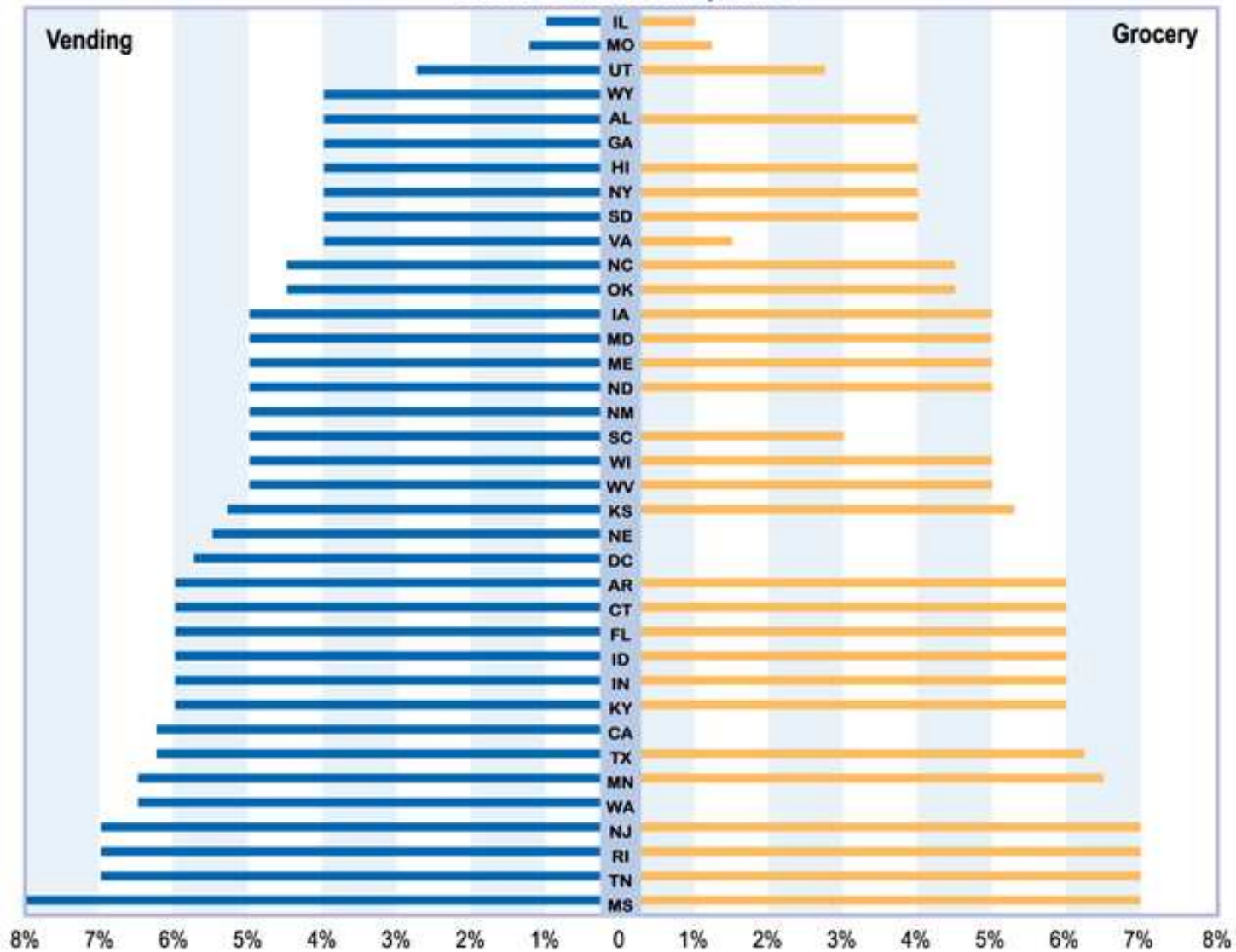
Number of states with higher sales tax than food generally by product and sales location, 2007



State sales tax rates for selected snacks and sodas by sales location, 2007

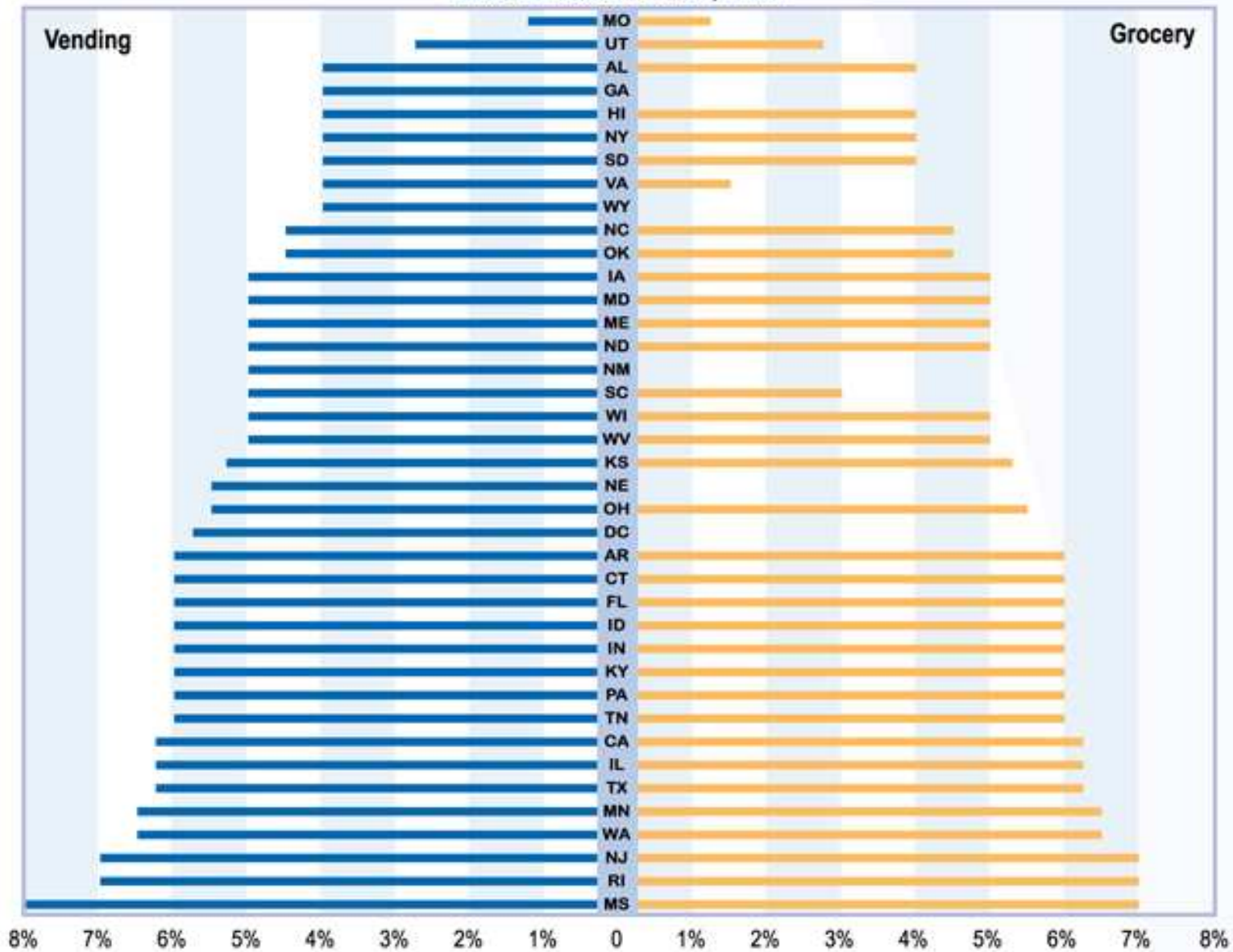


Sales tax rates for candy, 1/1/07



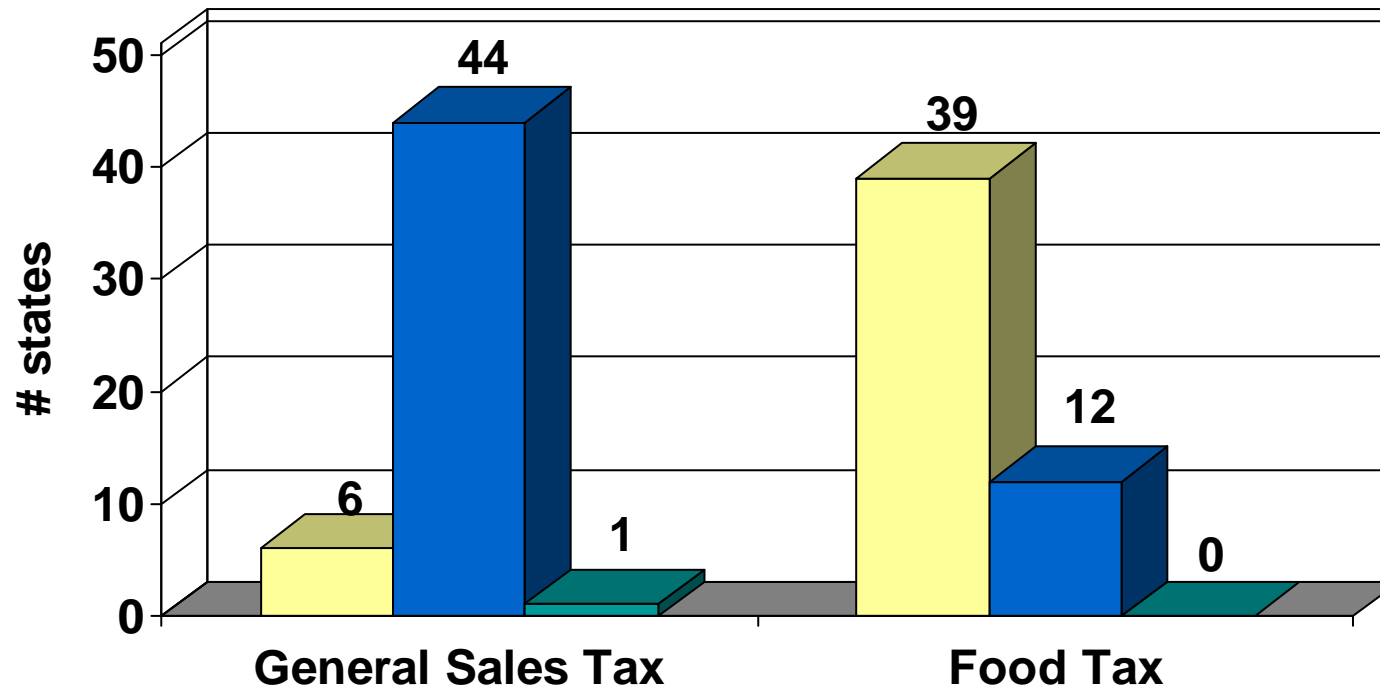
The following states do not impose a sales tax on candy for vending/grocery sales:
AK, AZ, CO, DE, LA, MA, MI, MT, NH, NV, OH, OR, and PA.

Sales tax rates for sodas, 1/1/07



The following states do not impose a sales tax on sodas for vending/grocery sales:
 AK, AZ, CO, DE, LA, MA, MI, MT, NH, NV, OR, and VT.

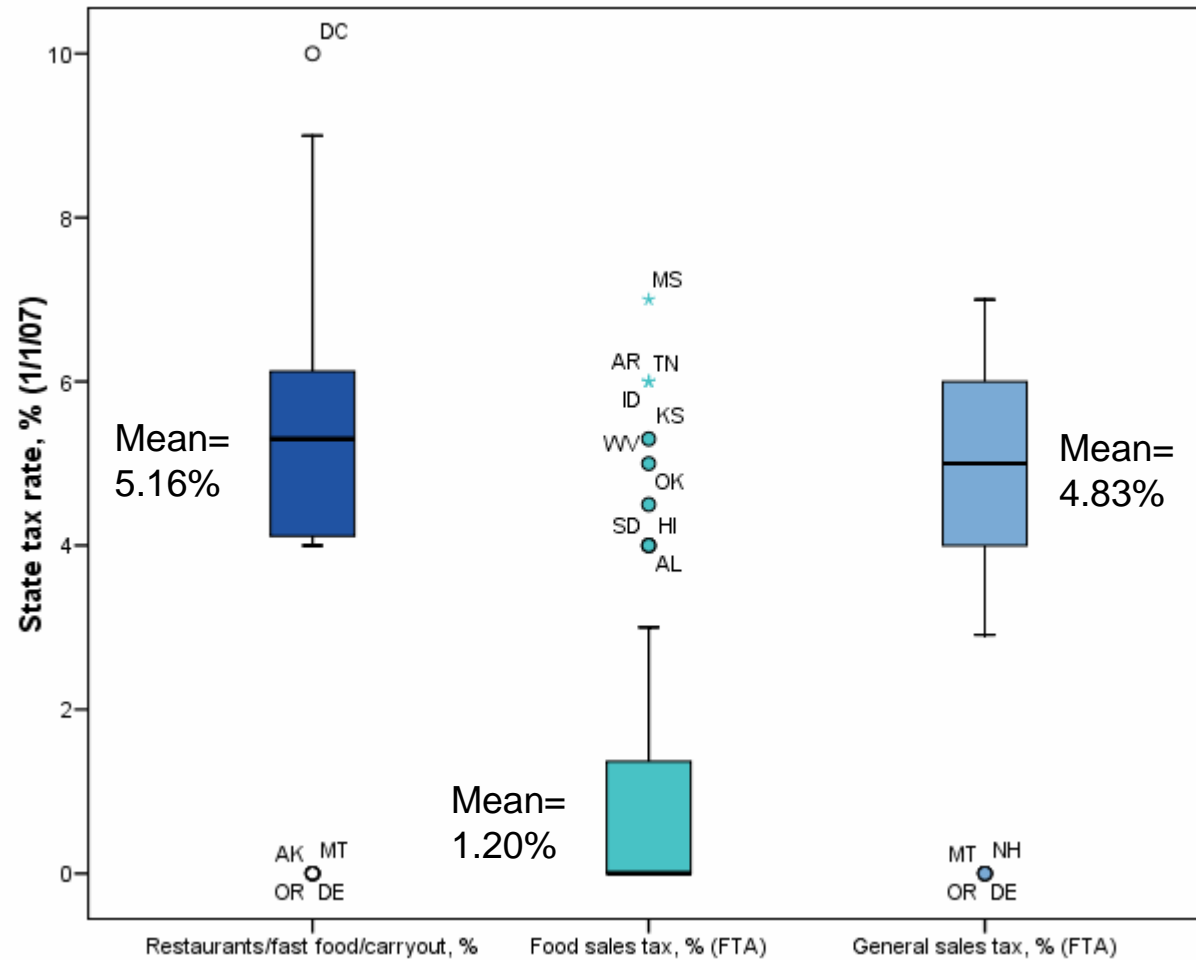
Restaurant Tax Data (as of 1/1/07)



Restaurant tax vs. general sales/food tax


Rest tax > Rest tax = Rest tax <

State tax rates as of 1/1/07: Restaurant, etc. tax vs. general food tax & general sales tax





Safe Routes to School Policy Measurement

- Initial topics
 - SRTS Program Formality
 - SRTS Laws' Purpose, Administration, and Approval Process
 - Characteristics of Eligible Projects
 - Selection of Projects/Vetting Criteria
 - Other Relevant Laws Affecting Students' Ability to Walk or Bicycle to School
 - Federal funding for SRTS projects
 - Development status
 - Engaging officials from National Center for Safe Routes to School to review coding scheme
 - Baseline measurement of 1/1/07
 - Plan to compile annual data for 2005-2006 and prospectively starting with 2008
- 



A Few Examples of Utility of Data for Policy Analyses:

**Associations between
Prices and
Youth Behavior and
Weight Outcomes**

Community Food Environment and Youth Behavior

- Find that:

- youth in communities with lower fruit and vegetable prices have more frequent fruit & vegetable consumption and lower BMI
- youth in communities with lower fast food prices have less frequent fruit & vegetable consumption, higher BMI, and are more likely to be overweight
 - *10 percent rise in fast food prices would increase probability of frequent F&V consumption by 3%, reduce BMI by 0.4% and lower probability of being overweight by 5.9%*

Community Food Environment and Youth Behavior

- Find that:

- *Impact of fast food and F&V prices greatest among most at risk youth (higher BMI)*

- Above 90th percentile, fast food price impact 4 times larger than average effect for full sample

- Above 95th percentile, fruit & vegetable price impact 5 times larger than average effect

- Little impact of prices at low/mid-ranges of BMI

- Supermarket availability inversely associated with BMI at all levels, with greater impact on upper end

- No associations between fast food and full service restaurant availability



**BTG Local Wellness
Policy Identification and
Measurement Efforts**

Local Wellness Policies

- Wellness policies mandated by Congress (P.L. 108-265) for all school districts participating in the National School Lunch Program
 - Policies needed to be in place by the 1st day of the school year following June 30, 2006

Local Wellness Policy Identification—Food & Fitness Study

- Phase I: nationally representative sample of 580 school districts in the U.S.
- Dual-collection methods: Internet research with telephone follow-up
 - Policies obtained from 504 districts (87%)
 - Verified to not exist in 28 districts (5%)
- Wellness policies collected include both the mandatory Federal policy components as well as administrative regulations/procedures

HER-developed Local Wellness Policy Coding Tool

- Parallels federally-mandated topics:
 - Nutrition education, reimbursable school meals, competitive food sales, physical activity/physical education, communications and marketing, and implementation and evaluation
- Incorporates many of the components of the NCI systems and systems developed by AFHK, NANA, and the Alliance for a Healthier Generation/Clinton Foundation, NASPE and others
- 96-item coding tool (0/1/2 ordinal variables)
 - Initially tested by HER grantees on policies from school districts in CT, PA, MN, WA
 - Further refined by BTG researchers for use with a nationally-representative sample of school districts throughout the U.S. (N=580 districts)

HER-developed Local Wellness Policy Coding Tool—UIC/BTG Adaptations to Facilitate Policy Evaluation Studies

- Adapt coding tool for measuring policy variance by grade-level (ES/MS/HS)
- Further refinement of competitive food variables to allow for policy nuances based on sale/serve “location” (i.e., a la carte, vending, school stores, fund raisers, parties, etc.)



**BTG plans for
analysis and
policy measurement**

Planned analyses... a few examples

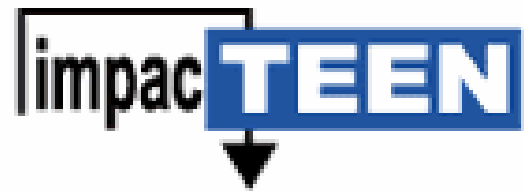
- Relationships between:
 - state sales taxes for soft drinks and snacks and consumption patterns, weight outcomes
 - state sales taxes for restaurants and consumption patterns, weight outcomes
 - state/local policy requirements governing nutrition and physical activity and reported school practices, student behavior, weight outcomes
 - state safe routes policies and biking/walking to school among students

State policy measurement: Planned/possible future topics

- Planned topics
 - Farm to school program requirements
 - Restrictions on competitive food contracts/
vending
- Possible future topics
 - Dedicated funding for school-based nutrition, PE
and/or other obesity prevention programs
 - Menu labeling requirements
 - Zoning/land use policies, policies related to the
built environment
 - New taxes (if enacted, e.g., “junk food taxes”)

Local policy measurement: Planned/possible future topics

- Planned refinement of HER coding tool; addition of new sub-topics by BTG researchers
 - Farm-to-school, BMI measurement/reporting, contract requirements, vending machine bans, closed campus provisions, etc.
- County/municipal policy collection and measurement
 - Zoning/school siting policies



*A Policy Research Partnership
for Healthier Youth Behavior*



www.impactteen.org

www.yesresearch.org

www.monitoringthefuture.org