

Supplemental Text to “Free Riders or Competitive Races?”

The aim of this data collection project was to track state agenda setting to tobacco and vaccines over time. To accomplish this task, Pacheco and Boushey (2014) collected and coded all bills related to tobacco that were introduced in state legislatures from 1990-2010 using Lexis-Nexis’s State Capital database. For tobacco related bills, the following keywords were used: `smok! OR tobacco OR cigar! OR bronch! OR nicotine OR COPD OR "chronic obstructive pulmonary disorder"`. These search terms produced various bills that were unrelated to tobacco control (e.g., bills regarding smoke alarms), which were not used. In the end we ended up with a total of 20,671 tobacco bills introduced across the fifty states from 1990-2010.

A team of students read several bill synopses and formulated a coding tree to categorize bills. For the tobacco bills, students agreed on seven distinct categories, including one “miscellaneous.” Details of these categories are provided in Tables S1 and S2.

For the tobacco bills, a team of three students coded the bills according to the coding tree. Two students coded approximately 15% of the bills (N=3200) while one student coded less than 5% (N=800). The intercoder reliability across all three students as measured by Cohen’s Kappa is .73 with an average pairwise agreement of 76% (N=800). The intercoder reliability across two coders as measured by Cohen’s Kappa is .72 with an average pairwise agreement of 77% (N=3200). With more than 10% of the bills coded, we then used supervised computer learning to code the remaining bills (Jurka et al. 2011). We used four algorithms (random forests, maximum entropy, support vector machine, and Bagging) which resulted in 87% accuracy covering about 87% of the bills (see Collingwood and Wilkerson 2011). Two students recoded the bills that did not reach an optimal agreement from the computer (bills that did not reach 3 or 4 in agreement across the four algorithms).

Table S3 provides the percentage of all tobacco bills that fell into each of the 8 categories, pooled from 1990-2010 for each state. Similarly, Figure S1 shows the trends in categories over time, pooled across states, for tobacco bills.

Table S1 Description of Tobacco Code Categories and Examples

Category	Description	Example
Control	Includes regulations to control the consumption, access, and sale of tobacco products, youth access, packaging of tobacco, exceptions, and penalties	PA HB 2735 introduced in 1994: Amends the Fire and Panic Act. Provides for penalties relating to school tobacco control. Further provides for penalty relating to smoking and prohibited designers and apprentice fire sprinkler fitters. Provides for rules and regulations and for penalties.
Environment	Includes regulations that aim to protect nonsmokers from environmental smoke including clean indoor air acts	CA AB 1569 introduced in 2003: Makes it an infraction punishable by a fine for a person to smoke a pipe, cigar or cigarette in a motor vehicle, whether in motion or at rest, in which there is a child passenger who is required to be secured in a child passenger restraint system. Provides the first violation is not subject to a fine. Requires the Department of Health Services to conduct a public education program regarding the dangers of secondhand smoke in confined places and to inform the public of the bill's requirements.
Agriculture	Includes regulations of the growth of tobacco products, tobacco subsidies to farmers, regulations of tobacco in its leaf form, and alternative uses for tobacco leaves	VA HB 176 introduced in 2003: Provides a subtraction from Federal adjusted gross income for individuals, and from Federal taxable income for corporations, when calculating taxable income for any amounts received by tobacco farmers or tobacco farming businesses from tobacco settlement funds.
Insurance	Includes smoking cessation coverage, discounts for people who do not smoke, requirements for Medicaid beneficiaries	IL SB 475 introduced in 2001: Amends the Senior Citizens and Disabled Persons Property Tax Relief and Pharmaceutical Assistance Act; provides that covered prescription drug includes drugs used in the treatment of chronic and acute effects or conditions related to cancer, lung disease, and smoking related illnesses.
Advocacy	Includes government sponsored ads for prevention, anti-smoking advertisements, education programs, cessation programs, and delegation of responsibilities to bureaucracy	MI SR 60 introduced in 1999: Resolves to recognize October 23-31, 1999, as National Red Ribbon Week, sponsored by the Michigan Communities in Action for Drug-Free Youth.
Litigation	Includes decisions about the Master Settlement Fund	NJ ACR 166 introduced in 1999: Memorializes the U.S. Congress to enact legislation to prevent federal recoupment of tobacco settlement monies received by states.
Finance	Includes cigarette taxes, allocation of funding fo Master Settlement Fund, allocation of funds from tax revenues, and funding of government tobacco control programs	OK SB 1084 introduced in 2006: Relates to sales tax exemptions for tickets, programs, tourism, advertising, veterans, contractor sales and facility expansion; requires vendors to honor proof of eligibility; limits municipal authority to levy sales taxes; exempts vessels or motors owned by nonprofits; relates to the cigarette stamp and tobacco products tax, wholesaler's bond, alternate energy tax credits, ad valorem taxes, rural electric cooperatives, veteran's license plates and historic hotel rehabilitation tax credits.
Micellaneous	Includes all other bills that do not fit into other categories	TN SB 3346 introduced in 2004: Concerns Local Government, General; repeals section preempting local governments from regulating tobacco products. - Repeals TCA Section 39-17-1551.

Table S2. Additional Bills in the Four Categories

Control Category Examples	Environment Category Examples
AZ 1990 Bill: Repeals current law relating to cigarettes and other tobacco products could not be sold through vending machines except in private clubs or workplaces, and forbidding the sale to minors.	IA 2009 Bill: Relates to the exemption from the application of the smokefree air Act of certain residential treatment facilities.
MA 1992 Bill: Prohibits the sale of tobacco products in certain health care facilities.	MI 2008 Bill: Implements smoking ban in public places.
AL 1993 Bill: Regulates the sale, distribution, and use of tobacco and tobacco products. Provides penalties for violations.	OR 1995 Bill: Modifies Oregon Indoor Clean Air Act to prohibit smoking in public places with specified exceptions.
TN 2008 Bill: prohibits cigarette sales at any place of business where medical services are also offered to the public in the place of business; violation punishable as Class C misdemeanor.	CO 1994 Bill: Concerns the prohibition against smoking in State buildings.
RI 2008 Bill: Would increase the fees for a cigarette distributors and retail dealer's licenses from twenty five dollars (\$ 25.00) to two hundred fifty dollars (\$ 250) annually; relates to tax stamps.	OK 2010 Bill: Relates to smoking; relates to smoking in certain gaming or simulcast areas; provides an effective date.
NY 1999 Bill: Prohibits the packaging, shaping, and manufacturing of candy in the shape of tobacco products or drug paraphernalia; requires violations to be punishable by a fine.	AK 1990 Bill Relates to a ban on smoking in the chambers and committee rooms of the House of Representatives.
Finance Category Examples	Litigation Category Examples
CT 1990 Bill: Establishes a program to pay the prescription drug expenses associated with organ transplants for certain organ transplant recipients; increases the tax on cigarettes to cover some of the expenses of the program.	HI 2000 Bill: Relates to the enforcement of the tobacco settlement agreement.
MS 1991 Bill: Increases the exercise tax on cigarettes, provides that the revenue generated from such tax increase shall be deposited into the special fund in the State Treasury to the credit of the division of Medicaid to be expended by the division for the	IL 1999 Bill: Urges the United States Congress to support House Resolution 351 concerning distribution of tobacco settlement funds to the states.
NC 1992 Bill: Appropriates funds to the Tobacco Museum of North Carolina, Inc. in Kenly for operating expenses.	WV 2001 Bill: Relates to tobacco and tobacco products; provides a limit on the maximum appeal bond required in litigation in which an appellant is a signatory to a tobacco settlement.
MD 1994 Bill: Increases the tobacco tax rate from 18 to 30.5 cents for 10 or fewer cigarettes, from 36 to 61 cents for 11 to 20 cigarettes, and from 1.8 to 3.05 cents for each cigarette in a package of more than 20 cigarettes or in a free sample package.	OR 2009 Bill: Allows plaintiff in civil action or suit based on use of tobacco, or exposure to tobacco, to recover costs of medical monitoring for disease without showing of present injury if plaintiff establishes that plaintiff has increased risk of disease

Table S3 Percentage of Tobacco Bills Falling into Each Category, by State pooled 1990-2010

State	Control	Environment	Agriculture	Insurance	Advocacy	Litigation	Finance	Miscellaneous
AL	25	16	0	0	2	2	55	1
AK	47	6	0	1	2	6	39	0
AZ	28	11	0	0	3	2	55	0
AR	25	14	0	0	2	4	54	1
CA	31	15	0	3	5	5	40	1
CO	24	16	0	1	1	3	53	1
CT	29	28	1	3	1	1	37	0
DE	40	21	0	1	8	6	21	4
FL	23	16	1	0	12	3	43	1
GA	32	24	1	1	9	3	28	1
HI	33	28	0	2	3	3	28	2
ID	23	17	0	0	6	5	48	1
IL	29	17	0	1	3	7	31	10
IN	37	17	0	3	3	1	37	1
IA	21	24	0	0	2	3	47	2
KS	28	24	0	0	1	7	39	0
KY	30	6	7	2	10	5	38	1
LA	23	23	0	1	3	6	43	1
ME	32	36	0	1	4	2	21	3
MD	45	12	0	2	7	2	31	1
MA	48	26	0	4	2	1	16	3
MI	37	27	0	1	3	2	28	1
MN	24	20	0	1	1	0	51	3
MS	19	28	0	1	1	1	48	1
MO	34	9	0	2	4	8	41	3
MT	15	14	0	0	2	2	65	1
NE	28	16	0	0	4	3	48	1
NV	35	24	0	0	0	9	30	1
NH	29	22	0	1	2	4	41	1
NJ	40	22	0	1	1	3	30	2
NM	21	12	0	0	5	3	57	2
NY	48	14	0	2	4	2	27	2
NC	19	22	1	1	0	4	50	2
ND	30	19	0	0	5	2	43	1
OH	27	26	0	0	3	5	36	3
OK	25	30	0	1	4	5	33	3
OR	26	19	0	2	2	4	45	2
PA	33	14	0	1	3	4	44	1
RI	41	27	0	3	3	3	19	4
SC	31	24	1	1	3	5	34	0
SD	34	15	0	0	2	1	47	1
TN	28	22	1	2	3	6	36	1
TX	37	19	0	0	3	1	39	2
UT	31	18	0	0	1	4	47	0
VT	44	20	0	2	4	3	23	5
VA	18	22	2	0	5	6	44	3
WA	35	20	0	0	5	3	35	3
WV	42	16	1	2	3	4	30	3
WI	44	23	0	4	0	4	21	4
WY	20	13	0	0	1	1	63	1

Figure S1 Percentage of Tobacco Bills Falling into Categories, by Legislative Session Pooled Across States

