Building Capacity for Economic Research on Tobacco Regulation in Low- and Middle-Income Countries: Methodology, Analysis, and Interpreting Evidence

Pre-Congress Session

International Health Economics Association

Bali, Indonesia

July 20, 2025

Goal and Intended Audience

- Describe opportunities for economic research on tobacco regulation.
  - Tobacco regulation includes taxation, place-based smoking bans, and product regulations.
  - New products, including e-cigarettes, have been introduced worldwide.
  - Low- and middle-income countries have adopted a range of regulatory approaches to e-cigarettes. Many countries in sub-Saharan Africa and elsewhere do not regulate e-cigarettes, while India and some other countries ban e-cigarettes entirely.
- The Pre-Congress Session will review new (& old) policies, new products, and state-of-the-art econometric and applied welfare economic methods.
- Intended audience: anyone interested in economic research on tobacco regulation

Discussion Leaders

- Don Kenkel, Cornell University
- Yang Liang, San Diego State University
- James Prieger, Pepperdine University
- Joe Sabia, San Diego State University

- Cornell Research on Tobacco Regulation
    - https://sites.google.com/view/cornellcrtr
    - Virtual Office Hours: Mondays, 7 – 9 a.m. New York time

Schedule/ Outline

- Session I: 1:00 - 2:30 p.m.
  - Introduction and Overview (Kenkel & Prieger)
  - Quasi-Experimental Design in E-Cigarette Policy Research: Evidence from the U.S. and Canada (Sabia & Yang)
  - Discrete Choice Experiments to Inform Tobacco Regulations (Kenkel)
- Refreshment break: 2:30 – 3:00 p.m.
- Session 2: 3:00 – 4:30 p.m.
  - Opportunities for Quasi-Experimental Research on Tobacco Regulations in Low- and Middle-Income Countries (Sabia & Yang)
  - Applied welfare economics & the promise of e-cigarettes to reduce health disparities (Prieger)
  - Cost-Benefit Analysis of Tobacco Regulations (Kenkel)

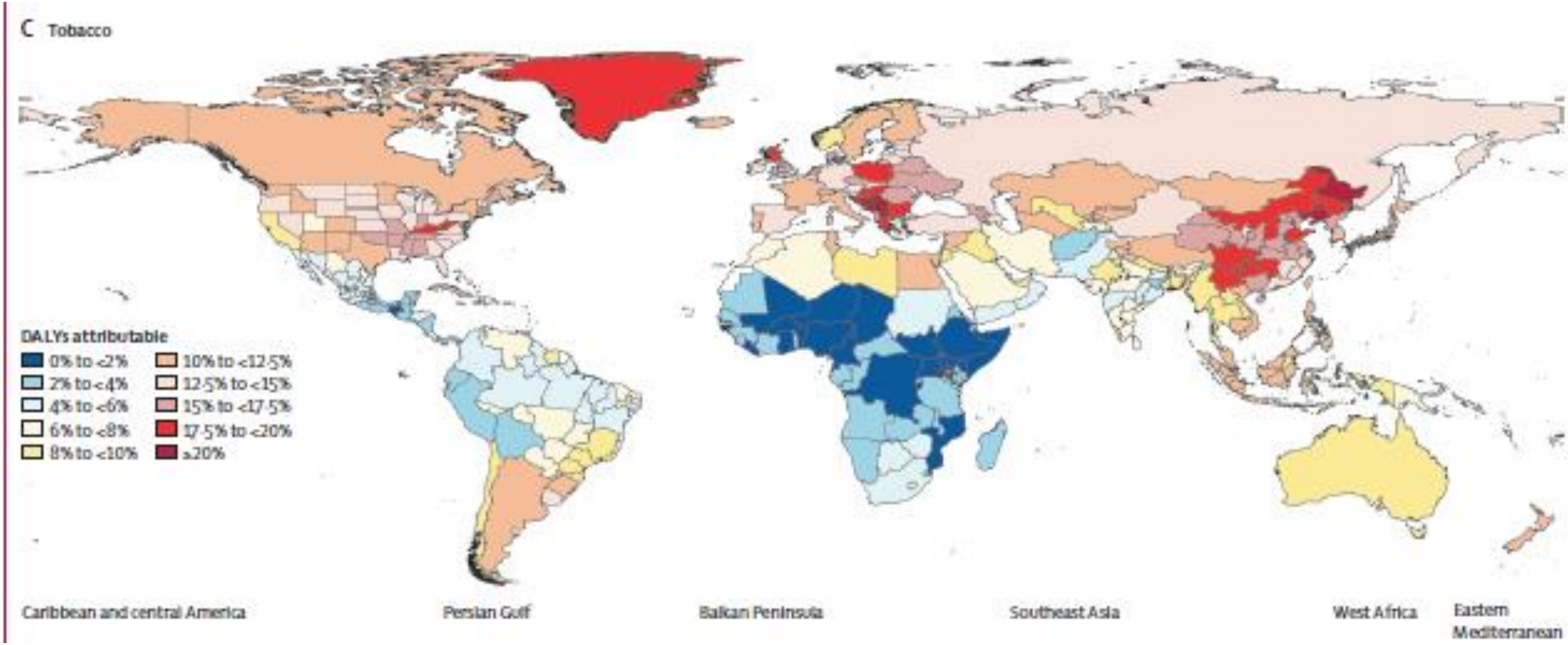
Disclosures

- All opinions and conclusions expressed in this lecture are my own.
- I acknowledge past research support through grants to Cornell University from the National Institutes of Health for my econometric research on alcohol taxation, cigarette taxation, and smoking cessation product advertising.
- I acknowledge past and current research support and support for this pre-Congress session through grants to Cornell University from Global Action to End Smoking (formerly known as Foundation for Smoke-Free World), an independent, U.S. nonprofit 501(c)(3) grantmaking organization. Global Action (GA) played no role in designing, implementing, data analysis, or interpretation of the research results, nor did GA edit or approve any presentations or publications from the study. The contents, selection, and presentation of facts, as well as any opinions expressed, are the sole responsibility of the authors and should not be regarded as reflecting the positions of Global Action. Through September 2023, GA received charitable gifts from PMI Global Services Inc. (PMI), which manufactures cigarettes and other tobacco products. To complement the termination of its agreement with PMI, GA's Board of Directors established a new policy to not accept or seek any tobacco or non-medicinal nicotine industry funding.

Tobacco Harms

- Tobacco use remains a leading cause of death and disease across the globe.
- 1.3 bill. tobacco users
- 8.7 mill. deaths annually
- 230 mill. DALYs

Percent of Global Burden of Disease Attributable to Tobacco



Economic research contributes to the evidence base for tobacco regulation to address the burden of disease attributable to tobacco

- Quasi-experimental methods or DCEs => credible estimates of immediate impacts on smoking, vaping, and quitting.
- Often, lack estimates of longer-term outcomes
  - Research on cost-effectiveness of clinical interventions faces similar lack.
- Use epidemiologic models to predict longer-term outcomes
  - Mendez & Warner developed dynamic population simulation model for long-term smoking outcomes, extended to vaping
  - Jin et al. (2016), Mzhavanadze et al (2025)
- Use results to conduct impact analysis, stake-holder analysis, and applied welfare economic analysis including cost-benefit analysis

Economic research helps build evidence base on multiple impacts of tobacco regulation

- Rate of smoking among youth and adults
- Rate of quitting
- Rates of smoking-related illness and death

Public health impacts

- Medical expenditures on smoking-related illness and death
- Tobacco farming, cigarette & e-cigarette manufacturing, etc.

Other sector impacts

- Consumer welfare
- Tax revenues

CBA

Good research practices for reproducible science

- Center for Open Science: *We envision a future scholarly community in which the process, content, and outcomes of research are openly accessible by default…. All stakeholders are included and respected in the research lifecycle and share pursuit of truth as the primary incentive and motivation for scholarship*
  - Post online documentation of research methods, data, and code in sufficient detail to allow replication.
  - Preregister research plans.
  - Report negative (null) findings.
- These steps address publication bias and bad practices such as data dredging or p-hacking
  - Discussed in context of clinical trials, social psychology research, etc.
- Reference: Munafò, Marcus R., Brian A. Nosek, Dorothy V. M. Bishop, et al. (2017). "A Manifesto for Reproducible Science." Nature Human Behaviour 1, Article number: 0021.

Good research practices in applied econometrics (taking the con out of econometrics)

- Applied econometrics often uses secondary observational data sets, which raises somewhat different issues.
- Athey & Imbens (2017): *Standard practice in modern empirical work is to present in the final paper estimates of the preferred specification of the model in combination with assessments of the robustness of the findings from this preferred specification. These alternative specifications are intended to convey that the substantive results of the preferred specification are not sensitive to some of the choices in that specification, like using different functional forms of the regression function or alternative ways of controlling for differences in subpopulations.*
- Reference: Athey, Susan, and Guido W. Imbens (2017). "The State of Applied Econometrics: Causality and Policy Evaluation." Journal of Economic Perspectives 31 (2): 3–32.

Research Practices Still Have Room for Improvement

- "Many analysts" studies assign multiple teams of researchers to use the same data to answer the same research question.
- Borjas & Bresnau (2024) report experiment where71 research teams used the same data to answer the same well-defined empirical question about immigration policies.
  - Results ranged from strongly negative to strongly positive.
  - Pro-immigration researchers estimated more positive impacts, while anti-immigration research teams reported more negative estimates.
- Huntington-Klein et al. (2025) report experiment where 146 research teams completed the same causal inference task with the same data, first with few constraints, and then using pre-cleaned data.
  - *…findings underscore the critical importance of data cleaning in shaping applied microeconomic results.*