

PAA 2022 – Workshop Proposal

Title

- Data Visualization & Model Presentation in Stata

Organizer

- Trenton D. Mize, Assistant Professor of Sociology & Advanced Methodologies, Purdue University, tmize@purdue.edu

Workshop objectives, goals, and expected outcomes

- Understanding data and effectively presenting results are challenges that applied quantitative researchers face most every day. There is seldom a more effective solution than a well thought out visualization. Problems in the data are easily identified; complex effects are quickly summarized; effect sizes and variability are immediately clear. In this workshop, we will cover best practices for accurately representing data as well as many specific approaches to data exploration, model diagnostics, and model presentation. The focus is on the applied analyst's "bread and butter" types of visualizations: those I suspect will be useful in most every quantitative research project. Topics covered will range from exploratory data analysis techniques to methods for presenting complex model results. Template Stata code will be provided to workshop participants allowing participants to reproduce all workshop examples.

Statement on how the workshop can benefit PAA 2020 attendees

- Most PAA attendees work with quantitative data most every day. Many attendees use Stata to clean, examine, model, and visualize their data. The data and model visualization capabilities of Stata are impressive yet vastly underutilized. This workshop will teach attendees about best data visualization practices generally – and specific ways to implement these using Stata.

Preferred workshop day to be held

- 1st choice: Saturday April 9
- 2nd choice: Wednesday April 6

Proposed workshop duration and format

- ½ day
 - The workshop will mix multiple instructional methods, including: (1) lecture (where the slides are shared with all attendees), (2) applied group activities where workshop attendees implement workshop techniques using popular social science datasets, and (3) discussion of different approaches and the visualizations attendees make during the workshop
 - Note that Stata can provide free temporary licenses for workshops attendees so all attendees can download and use Stata during the workshop for no cost

Online workshop possibility

- I would strongly prefer to present the workshop in person—but could potentially convert it to online if absolutely necessary.

A/V needs

- Only a projector is needed

Biographical sketch

I am an assistant professor in the department of sociology at Purdue University and a core faculty member for the cluster in advanced methodologies for the social, behavioral, and health sciences at Purdue (AMAP). I received my PhD in Sociology, MS in Statistics, and MA in Sociology from Indiana University and a BA in Sociology and a BS in Psychology from the University of Georgia.

My research covers three distinct but overlapping areas: (1) how gender and sexuality shape workplace interaction and labor market outcomes; (2) methodological and statistical approaches for causal inference, cross-model comparisons, and for modeling categorical dependent variables; and (3) how social roles and relationships shape health behavior and health inequalities. Recent work has appeared in the *American Sociological Review*, *Sociological Methodology*, *Social Problems*, and *Social Science Research*.

I use multiple quantitative methods in my work, including representative survey data, longitudinal surveys, survey experiments, and lab experiments. My work has been supported by the National Science Foundation, Time-Sharing Experiments for the Social Sciences (TESS), the Kinsey Institute, the American Sociological Association's social psychology section, and others.

I primarily teach applied statistics and quantitative methods courses and short workshops on advanced quantitative methods. Topics include categorical data

analysis, experimental methods, data visualization, missing data analysis, latent variable modeling, workflow practices for reproducible research, statistical programming, and survey design.

A current CV is available at: trentonmize.com/cv