Introduction to Quantitative Methods for Research on Governance and Public Policy

July 19-21, 2011 | The Ghana Center for Democratic Development (CDD-Ghana), Accra, Ghana

Schedule of Events:

Day 0: Preparation (Presenter and Assistants only, 18 July)

DAY 1: INTRODUCTION TO QUANTITATIVE RESEARCH

Session 1: An introduction to quantitative research (interactive lecture)

- Thinking like a social scientist
- How quantitative and qualitative methods can complement each other
- Measuring concepts
- Samples and populations

Session 2: Quantitative research in practice: difference of proportions (interactive lecture)

- (Re)coding data
- Tabulating data (contingency tables)
- Graphing data (mosaic plots)
- Difference of proportions as a measure of association
- Confidence intervals ("sampling error margins")

Session 3: "Statistics by hand" (exercise)

- Participants work in pairs to complete a structured exercise that involves a difference-of-proportions analysis. (Each pair works with a different sample of 100 observations, drawn from a national survey (Afrobarometer).)
- Discussion of the exercise.

Session 4: Introduction to R and GNU Emacs (interactive lecture)

- Overview and demonstration
- Installation of the software on each participant's laptop
- Using R as a calculator

DAY 2: INTRODUCTION TO STATISTICAL COMPUTING

Session 1: Basic data analysis in R (interactive lecture)

- R basics
- Data and functions
- A few R "recipes" (recoding, tables, graphs)

Session 2: "Using R" (exercise)

- Participants work in pairs on a structured exercise, applying the skills from the previous lecture to recode variables and run tables, graphs, and difference-of-proportion tests in R.
- Session 3: An extended difference-of-proportions analysis (interactive lecture)
- "Walk-through" of an R script file that runs a complete difference-of proportions analysis (very similar to the "statistics by hand" exercise, but using the full data from a national survey (Afrobarometer)).

Session 4: Projects – conceptualization and design

- Working individually or in pairs, participants use survey data (Afrobarometer) to analyze the association between a dichotomous "grouping (independent) variable" and an dichotomous "outcome (dependent) variable" – in which the grouping variable is typically demographic or biographical and the outcome variable is typically cognitive or attitudinal.

DAY 3: DOING QUANTITATIVE RESEARCH

Sessions 1 and 2: Projects (continued)

- Using the R script from the previous afternoon's lecture as a "template," participants run the analysis for their own projects.
- They record the findings in a simple report.

Session 3: Presentation of results

- Presentations of 5-10 minutes on each project.

Session 4: Taking stock

- Course summary and evaluation
- Next steps?