California Redistricting Commission Racially Polarized Voting Training

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Outline and Goals

- Definitions
- Why RPV is important
- Look at the current RPV statistical techniques
- Q and A

Definitions

- Racially polarized voting - RPV
  - When different groups have distinct candidate preferences
- RPV Analysis
  - Multiple electoral contests over multiple years
- Ecological Inference (EI) statistic
  - 1 of 4 methods to evaluate RPV but also used as shorthand
- Ecological inference
  - Drawing conclusions about individual-level behavior from aggregate-level data

Why RPV is Important

- *Thornburg v. Gingles* (1986)
  - "First, the minority group must be able to demonstrate that it is sufficiently large and geographically compact to constitute a majority in a single-member district."
    - "If it is not, as would be the case in a substantially integrated district, the multimember form of the district cannot be responsible for minority voters' inability to elect its candidates."
  - "Second, the minority group must be able to show that is politically cohesive."
    - "If the minority group is not politically cohesive, it cannot be said that the selection of a multimember electoral structure thwarts distinctive minority group interests."
    - Distill the question: Is voting racially polarized? If so, who is the candidate of choice?
  - "Third, the minority must be able to demonstrate that the white majority votes sufficiently as a bloc to enable it - in the absence of special circumstances, such as the minority running unopposed - usually to defeat the minority's preferred candidate."
    - Distill the question: Are the minority voters' candidates of choice usually defeated by the majority vote?

Context

- Cook County, Chicago - States' Attorney Election
  - Democratic primary
  - Incumbent was a Latina
  - She had two challengers, one African-American and one white
  - Strong local and vocal opposition to the incumbent
  - African-American candidate won the primary and the general

Statistical Techniques for RPV

- Homogenous precincts
- Ecological Regression (ER)
- Ecological Inference (EI)
- Ecological Inference Rows by Columns (EI RxC)

Homogeneous Precincts

- Primitive and simple
  - Isolate precincts with 80% + homogeneity
    - Typical range is 80% - 95% as data allow
    - Formally, take the mean support in homogeneous precincts and ascribe to that group across the jurisdiction
    - Less formally, it's an eyeball test
- Drawbacks
  - Dependent on existence of homogenous precincts
  - Doesn't make use of available data
  - Ascribes behavior in homogenous precincts to all voters in that racial/ethnic category

Results

- 80% homogeneity included:
  - 620 white precincts
  - 129 Black precincts
  - 26 Latino precincts
- Support for the white candidate very low - not a viable candidate
- White voters split between the Latina and African-American candidates
  - No clear candidate of choice
- Black voters heavily supported the African-American candidate
  - Clear candidate of choice
- Latino voters favored the Latino candidate with a significant block voting for the African-American candidate
  - Showed preference but did not vote as a cohesive block

Ecological Regression

- Bivariate regression
  - Bivariate = summarizing the relationship between two variables:
    - Racial/ethnic composition of the precinct
    - Candidate vote total in the precinct
  - Ecological because we use aggregate data collected at the precinct level to infer individual behavior
- Improvements
  - Uses data from all precincts, not just homogeneous ones
  - Can produce results with no homogeneous precincts
- Drawbacks
  - Produces estimates outside the realm of possibility (e.g. below 0% support or above 100% support)
  - Can only model 1 candidate and 1 racial group at a time

ER Results

- Mimicked homogenous precinct findings
- Support for white candidate was low
- White voters split
- Black voters had a clear candidate of choice
- Latino voters had a candidate of choice with crossover

Ecological Inference (EI)

- Developed by Gary King in 1997 in a book called *A Solution to the Ecological Inference Problem* (later expanded in 2004)
  - Directly recommended by the Court.
- Improvements
  - Incorporates a 'method of bounds', developed by Duncan and Davis in 1952
  - Can model 2 racial/ethnic groups at once instead of one at a time
- Drawbacks
  - Can only model 2 racial/ethnic groups at once
    - Minority group is defined but other category is a catch all for 'other' voters

EI Results

- Reiterate previous findings
- Support for white candidate was low
- White voters split
- Black voters had a clear candidate of choice
- Latino voters had a candidate of choice with crossover

Ecological Inference Rows by Columns (EI RxC)

- Developed by Rosen, et all in 2001
  - Employs a bayesian approach
- Improvements
  - Models 2+ candidates and 2+ demographics groups
- Drawbacks
  - Not yet a staple in court

EI RxC Results

- EI RxC produces similar estimates
- Support for white candidate was low
- White voters split
- Black voters had a clear candidate of choice
- Latino voters had a candidate of choice with crossover

Data

- Data needed at the precinct level of geography
  - Candidate vote totals
  - Demographic variables including total
    - CVAP or VAP from Census Bureau
    - Registration/TO by race in the few states that collect it
- Candidate details
  - race/ethnicity
  - Party ID
  - Incumbency status
  - Other details

Q and A