Testing Formal Models of Direct Democracy

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Bertelli, A. & Richardson, L. E. (2004) Testing Formal Models of Direct Democracy, Report 37-2004. Retrieved [Month, Day, Year], from University of Missouri – Columbia, Institute of Public Policy Web site: http://www.truman.missouri.edu/ipp/publications/presentations.html

Research Questions

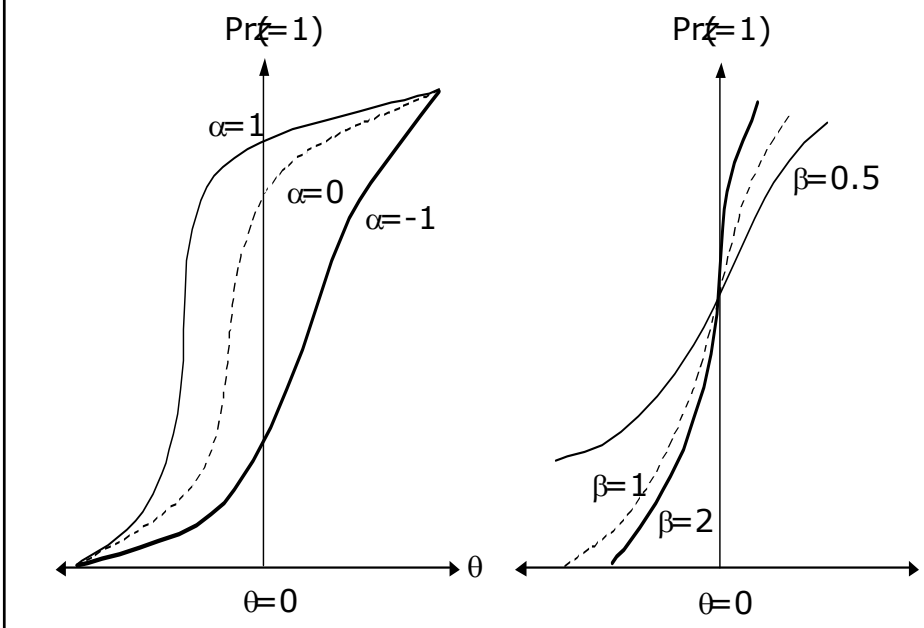
- Many issues in state politics require preference estimates for constituents, legislators, and governors
  - Legislator responsiveness
  - Impact of initiatives
  - Committee outliers
  - Power of governors
- What is the best methodology for estimating preferences given the spatial model of voting?

Coding – Arizona 44th Legislature

- Substantive coding of I&R vs. Roll Calls
  - Proposition 203 (2000) general election would mandate English-only instruction in Arizona public schools
  - HB 2387 in the 44th Legislature, 1st Regular session provides for bilingual education.
  - County vote *for* Proposition 203 as a "nay" vote on HB 2387 and vice versa.
- Similar for governors

Statistical Model

- Logit model with the probability of a "yea" vote as a function of an unobserved regressor, the ideal point of actor *I*
- $z_{ij} = \alpha_j + \beta_j\theta_i + e_{ij}$
  - item response model with "difficulty" parameter α_j and "discrimination" parameter β_j.



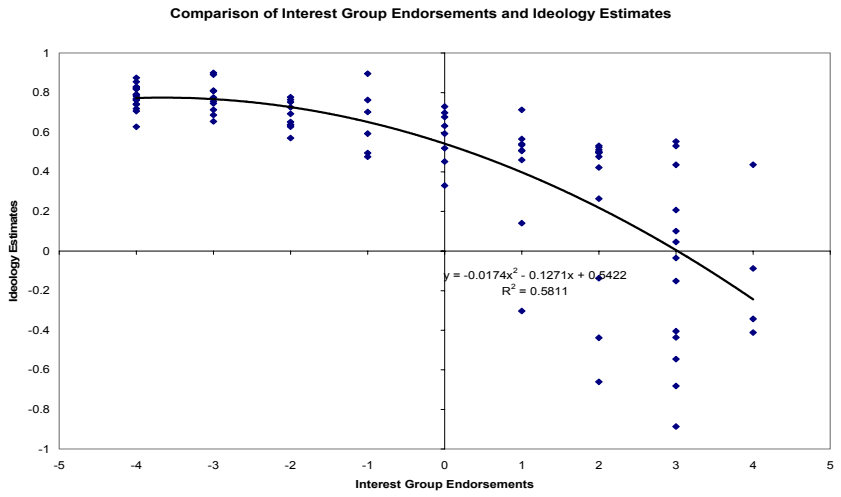
Identification

- Bayesian setup (e.g., Martin and Quinn 2003; Clinton, Jackman, and Rivers 2003; Trier 2003; Bailey 2004)
  - Diffuse priors of *N*(0,25) on bill parameters
  - "Spike priors" of *N*(-1,.000001) for known liberal legislators, *N*(1, .000001) for known conservative legislators
  - *N*(0,1) on other legislators
- *Very little information in these priors*

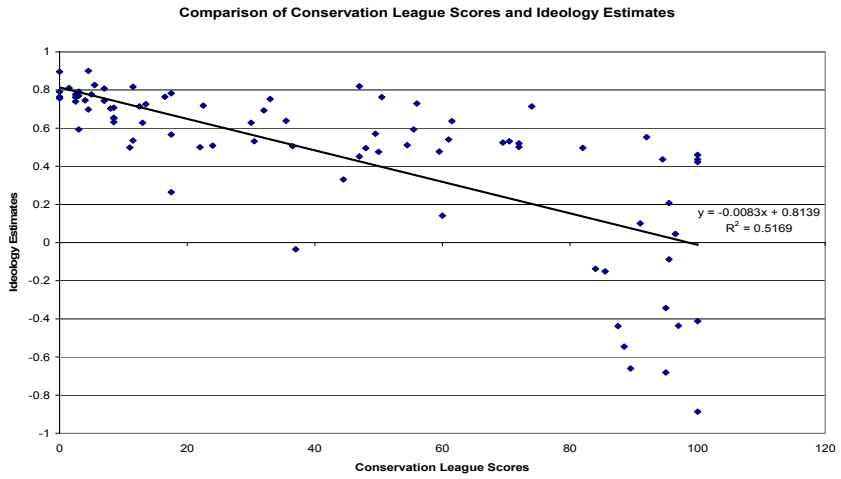
Posterior Density Summary of Ideal Points, Governor & Counties

Actor	Mean	S Dev	Actor	Mean	S Dev
Gov Hull	-0.39084	0.09986	Maricopa	0.01050	0.05069
Apache	-0.03593	0.04887	Mohave	0.16252	0.07821
Cochise	0.15815	0.07483	Navajo	-0.00795	0.04897
Coconino	-0.00517	0.04887	Pima	0.04493	0.05760
Gila	0.17053	0.08646	Pinal	0.06698	0.05185
Graham	0.15284	0.07743	S Cruz	0.04839	0.05352
Greenlee	0.09452	0.04731	Yavapai	0.15958	0.07129
La Paz	0.16031	0.07163	Yuma	0.16583	0.07725

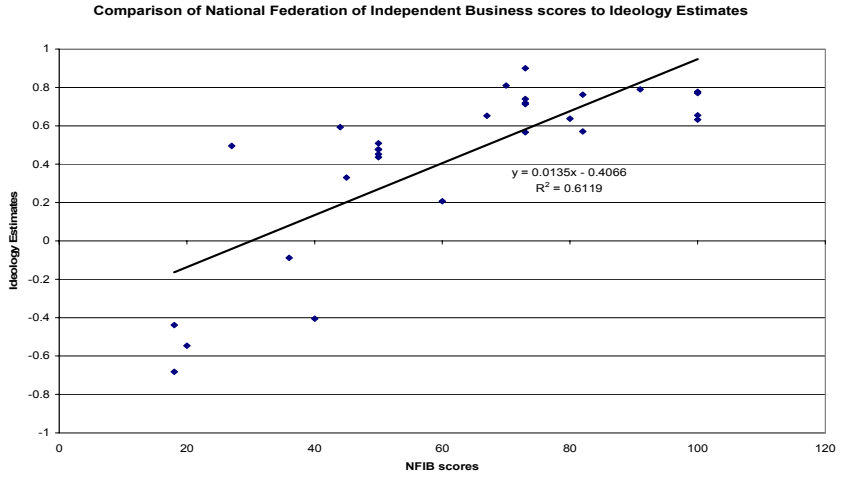
Preference Estimates vs. a Scale of Interest Group Endorsements



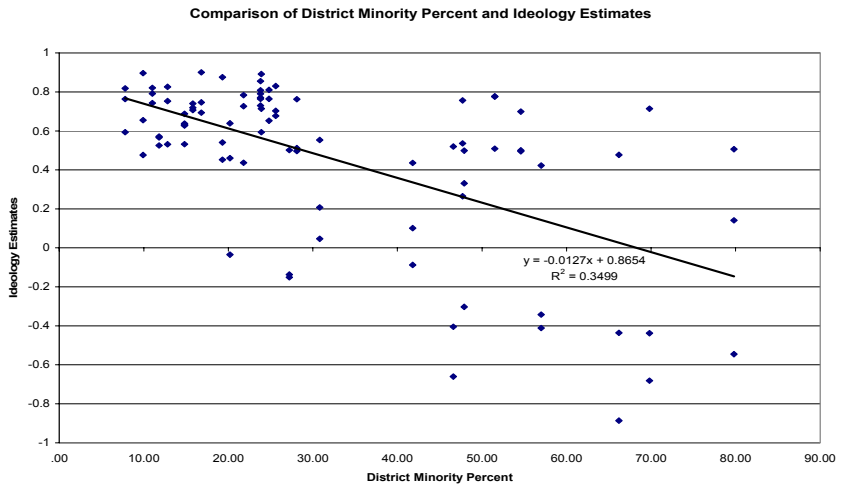
Preference Estimates vs. Scores from the Arizona League of Conservation Voters



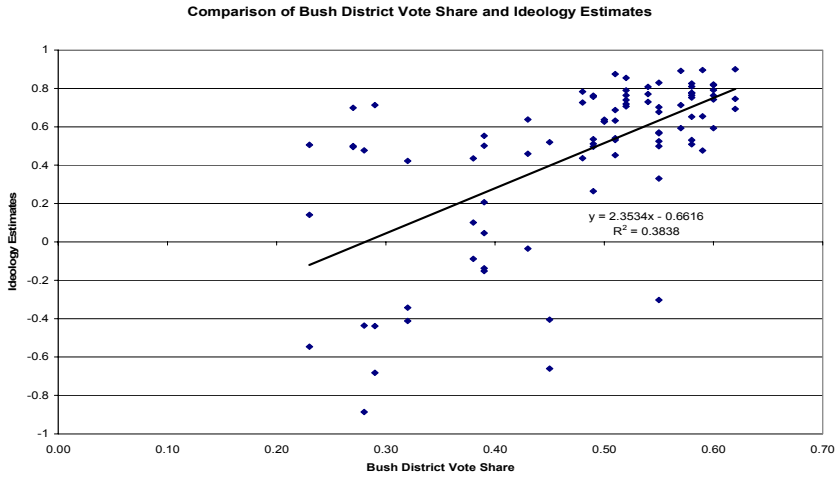
Preference Estimates vs. Scores from the National Federal of Independent Businesses



Preference Estimates vs. the District Minority Percent



Comparison of Preference Estimates and Bush's Vote Share in the District



Next Steps

- Agenda Considerations
- Estimate District Level Ideal Points
- Expand Data to 1994
- Examine Voters vs Legislator Ideal Points
- Test Formal Models
- Other States