Making Sense of "Moderating Political Extremism" Bordignon et al (2016)

Can Runoff Elections Help?
Evidence from Italy

Causal Questions

- Bordignon, Massimo, Tommaso Nannicini, and Guido Tabellini. 2016. "Moderating Political Extremism: Single Round versus Runoff Elections under Plurality Rule." American Economic Review, 106 (8): 2349-70.
- <u>First Question</u>: Is there is an effect of these systems on the number of candidates running for office?
- <u>Second Question</u>: Is a single ballot voting system more accommodating of political extremes than a runoff election under plurality rule system?
  - i.e., Are more extreme policies implemented under one of these systems?

Background: Electoral System

Two Systems: Runoff vs. Plurality

- Subjects of Interest: Municipal Elections in Cities across Italy
- Timeline: Elections between 1993 and 2007
- Elections for both mayor and city council (focus on mayor for simplicity)
- Populations under 15,000: single ballot elections for mayor
  - System: candidate that receives the most votes becomes mayor, regardless of if it was a majority or merely a plurality
- Populations over 15,000: runoff elections for mayor
  - System: if a candidate receives over half the vote, that candidate is elected, otherwise the two candidates with the most votes participate in a runoff election. Winner becomes mayor

Data

- Sample consists of 2,027 mayoral terms from 1993-2007 from 661 towns, 10% of all Italian municipalities.
- City **population size** is from two censuses: 1991 and 2001.
- Primary outcomes of interest:
  Number of Mayoral Candidates & Business Tax Rate Volatility
- Observed Covariates: per capita income, per capita transfers, age index, household size, location (north, central or south of Italy), altitude, area, participation rate, days in office of mayoral term, term limit policy
- Three sources:
  - ANCI (*Associazione Nazionale Comuni Italiani*) for population, geography, and demography
  - Statistical Office of the Italian Ministry of Internal Affairs for political variables
  - Italian Ministry of Internal Affairs for municipal tax rate on business property

RDD and Econometric Strategy
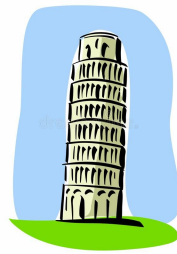
Require Continuity of Potential Outcomes across P_c = 15,000

- Truncated data to populations between 10,000 and 20,000
- Lack of evidence/feasibility of sorting on population around threshold
- Assumption of $E[Y_i(1) - Y_i(0)|P_i = P_c] = \lim_{P_i \to P_c^+} Y_i - \lim_{P_i \to P_c^-} Y_i,$

Models:

Local Linear
$$Y_i = \sum_{k=0}^{p} (\delta_k P_i^{*k}) + D_i \sum_{k=0}^{p} (\gamma_k P_i^{*k}) + \epsilon_i$$
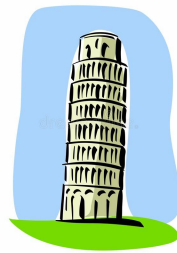
Polynomial Spline
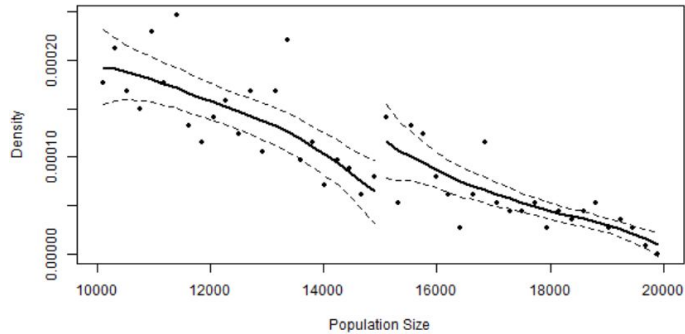$$Y_i = \delta_0 + \delta_1 P_i^* + D_i(\gamma_0 + \gamma_1 P_i^*) + \epsilon_i$$

Results and Analysis

Manipulative Sorting and McCrary Tests
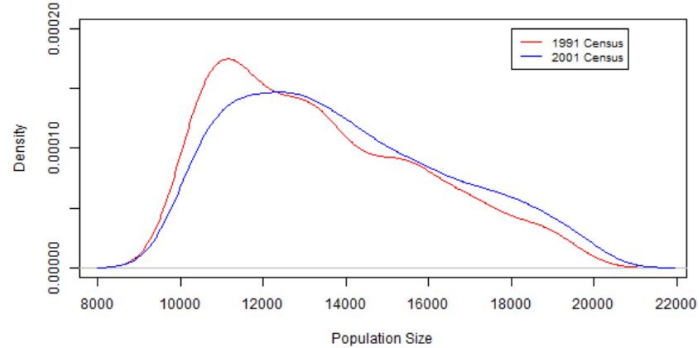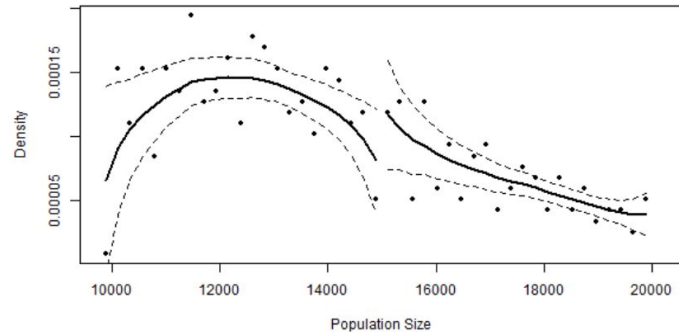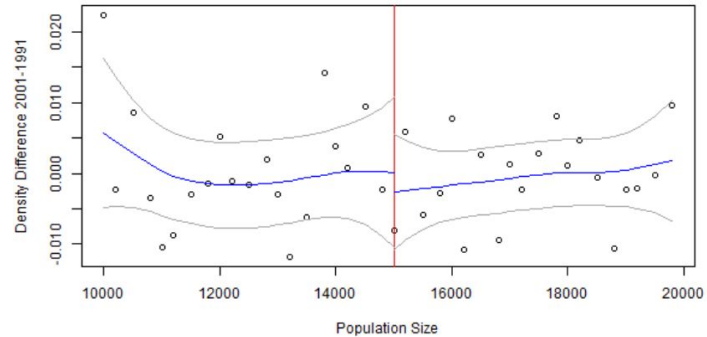
Loess and Bandwidth Sensitivity
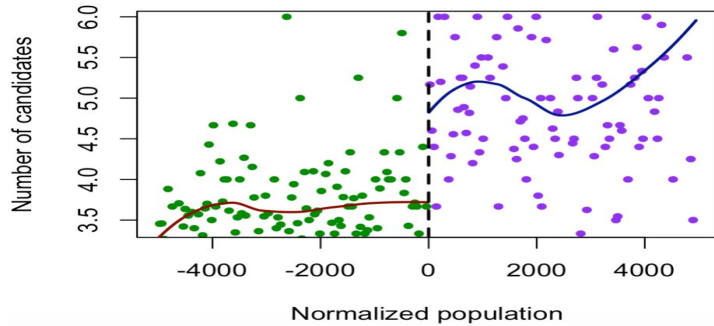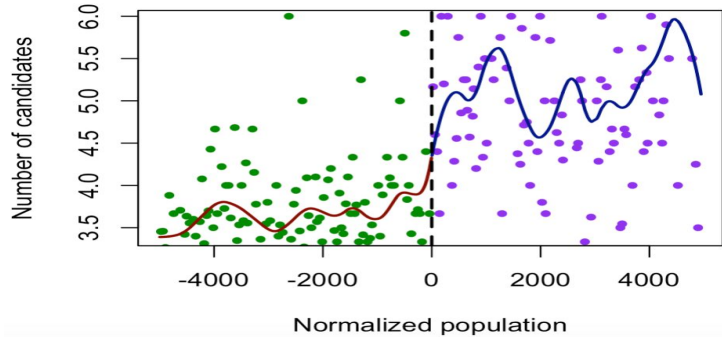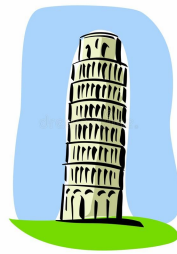
Summary Table of Selected Models

Outcome: *Number of Candidates*	Est.	S.E.	t-value
Estimation without covariates			
LLR(h)	1.3	0.408	3.185
LLR(h/4)	1.524	1.090	1.398
LLR(optimal h)	1.064	0.352	3.025
Estimation with covariates			
LLR(h)	1.331	0.396	3.366
LLR(optimal h)	1.105	0.343	3.218

Covariate Balance and Benchmarking

Do observed covariates, that might affect the outcome, jump at threshold?

- Placebo outcome tests indicate no statistically significant jumps.

- Running baseline model through *sensemakr* shows that 50x the strongest covariate effect is required to eliminate the treatment effect entirely. 20x for sig.
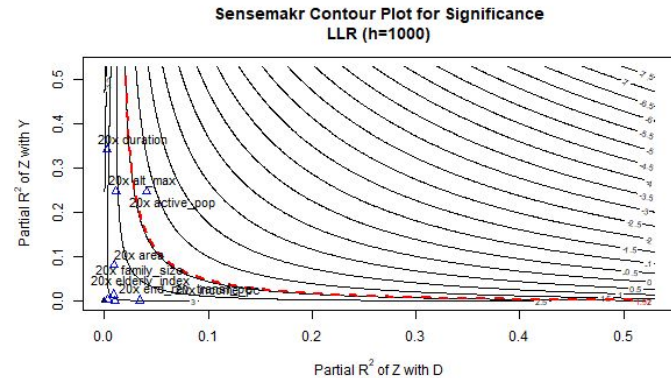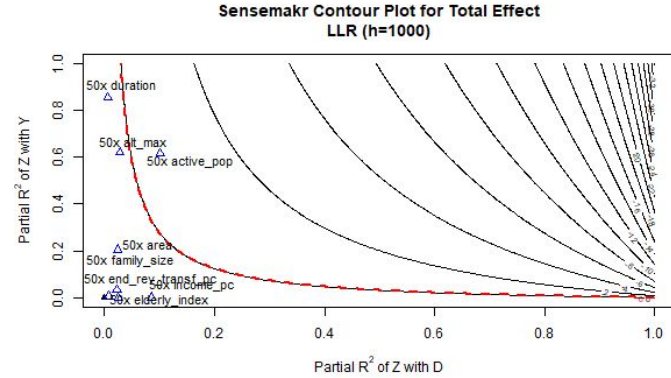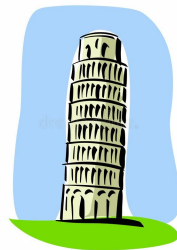
Balance Table

Covariate	Est.	SE	t	p-value
area	-4.27	19.65	-0.22	0.83
alt_max	-40.60	149.55	-0.27	0.79
end_rev_transf_pc	-15.93	73.56	-0.22	0.823
income_pc	-283.58	484.72	-0.59	0.56
elderly_index	0.02	0.08	0.31	0.76
active_pop	-0.00	0.01	-0.51	0.61
family_size	0.01	0.04	0.25	0.80
duration	20.26	81.63	0.25	0.80

Sensemakr Contour Plot for Total Effect
LLR (h=1000)

Partial R^2 of Z with Y

50x duration
50x alt_max
50x active_pop
50x area
50x family_size
50x end_rev_transf_pc 50x income_pc
50x elderly_index

Partial R^2 of Z with D

Sensemakr Contour Plot for Significance
LLR (h=1000)

Partial R^2 of Z with Y

20x duration
20x alt_max
20x active_pop
20x area
20x family_size
20x elderly_index 20x end_rev_transf_pc

Partial R^2 of Z with D

Additional Robustness Analyses

- Falsification test on pre-1993 potential outcomes (1985-1992)
  - No significant discontinuity detected
- DID for cities crossing threshold from 1991 to 2001 census
  - Results are similar to RDD
- Placebo thresholds (1,000 different thresholds)
  - Only 1.6% of placebo estimates are larger in abs. val. than baseline result
- Alternative bandwidths
  - Estimates are similar to baseline
- Spline fits of various orders
  - Estimates are similar to baseline
- Additional outcome variables
  - Estimates are similar to baseline
- Optimal bandwidth

Takeaways:
- Runoff elections seem to increase no. candidates and reduce policy volatility
- Results seem fairly robust

Discussion

Unobserved Confounding

- For the RDD Design, the confounding question becomes chiefly whether we believe that there is a covariate that will change across the threshold that affects the outcome
    - Policies that could be implemented at 15,000 population, such as a bump in tax rate, crime rate policies, differences in immigration policies
    - Difficult to speculate without deep knowledge of Italian bureaucratic system
    - Benchmarking against observed covariates
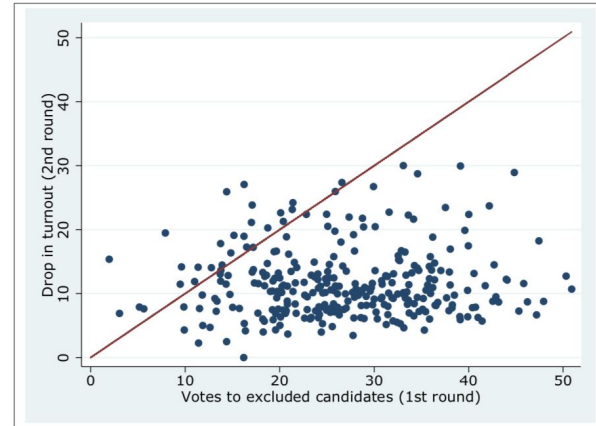
Internal and External Validity

Internal Validity

- Confounding
- Manipulative Sorting
- Pretreatment Period (Falsification Test)
- Attached Voters

External Validity

- Country & Years
- RDD only identified at threshold

Figure A1: Drop in turnout between first and second round

Notes. Vertical axis: drop in turnout between first and second round (expressed as a fraction of eligible voters). Horizontal axis: total votes for the excluded candidates in the first round (expressed as a fraction of eligible voters). Municipalities between 15,000 and 20,000 only.

Takeaways
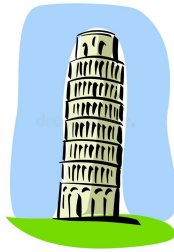
- Results indicate that runoff elections are associated with
  - Increased number of candidates
  - Decreased policy volatility
- Results survive most of the common RDD robustness analyses
- Unobserved confounding is possible, but likely not significantly at the RDD threshold
- Internal validity is <u>high</u>
- External validity is <u>low</u>
- Italian municipal elections are complicated 😃

Questions