Municipal Disincorporation and Voter Turnout

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"Theory"

In the United States, municipal disincorporation (or dissolution) is the act terminating a city-level government. [1] This can happen involuntarily, or from the top-down, or voluntarily, from the bottom-up. In voluntary dissolution cases, voters decide via referendum whether to terminate their local government. [7] In nearly all cases, it is decided by a simple majority-vote.

Does the act of dissolution have other consequences of interest to political science? Unfortunately, the social science literature is largely nonexistent [1], and the legal scholarship has competing theories of how or why dissolution occurs [8], as well as their consequences. I consider dissolution as a treatment in the potential outcomes framework, where the act of disincorporating can plausibly cause other outcomes. For the purposes of this poster, the outcome of interest is voter turnout.

There are competing theories predicting what effect dissolution will have on voter turnout (all of which I basically made up):

- *Decreased faith in government*: having watched their own local government dissolve, voters are dissatisfied with the efficacy of government in general, and are less likely to vote in subsequent elections.
- *Increased faith in voting*: having successfully dissolved their own local government, voters have renewed confidence in the efficacy of democracy, and are more likely to vote in subsequent elections.
- *No effect*: having experienced the dissolution of their local government, nothing really changes. Life is exactly the same, and that includes proclivity for civic engagement. This is not a real hypothesis, but one of the perks of inventing a literature is getting to set the agenda, and I'm doing it this way.

Data

The capital-B Big problem with studying disincorporation is the overall lack of data. Anderson 2012 [1] catalogues as many disincorporations as possible dating back to the 1950s, but by her own admission it is incomplete – particularly in the decade since. The vast majority of work for this poster was simply cataloguing disincorporations.

The data I use are the near-universe of dissolution attempts in the United States since 2010, the end of Anderson's collection period. I used the U.S. Census Gazeteer files [2] to create a catalog of places that have dissolved since 2010, and found local news coverage of each and every one. to confirm. From those news articles and resources from the Rockefeller Institute of Government [6], I pieced together a near-complete list of every dissolution attempt in the country, including when they occurred and what the actual vote result looked like.

I merged this with data from the MIT Election Lab [4] and the American Community Survey [3] to estimate voter turnout in the next Presidential election following the dissolution attempt. Because of a variety of data issues by nature of the phenomena, the best estimate I can use is county-level voter turnout (in terms of population, rather than registered voters).

Table 1. Disincorporation Attempts since 2010

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Pop. at Attempt	86	2,316.279	3,800.735	33	302.5	2,124.2	17,234
Attempt Margin	86	0.018	0.219	−0.425	−0.135	0.180	0.447
Disincorporated	86	0.512	0.503	0	0	1	1
Attempt Turnout	86	0.298	0.132	0.053	0.232	0.353	1.000
Subsequent Election Turnout	86	0.450	0.061	0.297	0.408	0.483	0.634

Population at attempt is the population in the city at the time of the dissolution vote. *Attempt margin* measures how close to the threshold the final vote result was. *Disincorporated* takes on value 1 it the margin is greater than zero, and 0 otherwise. *Attempt Turnout* is the voter turnout for the dissolution vote, and *Subsequent Election Turnout*, the primary DV of interest, is the modified voter turnout measure for the next Presidential election following the dissolution attempt. Other variables were collected but not included.

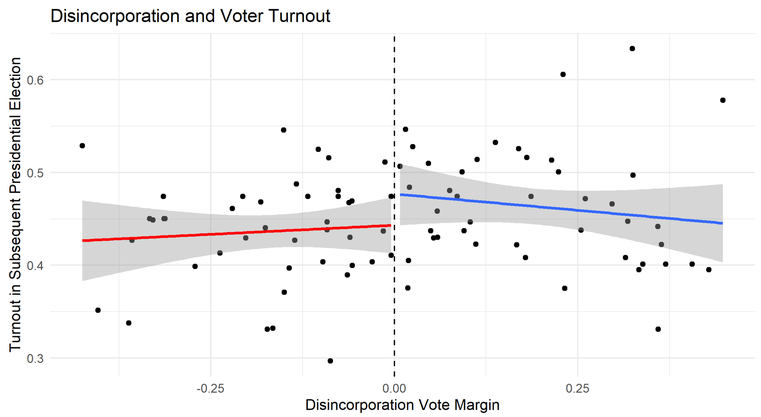
Table 2 describes the pre-'treatment' balance on population and attempt turnout. Unfortunately, this isn't super balanced, which poses major threats to our SRD assumptions to follow.

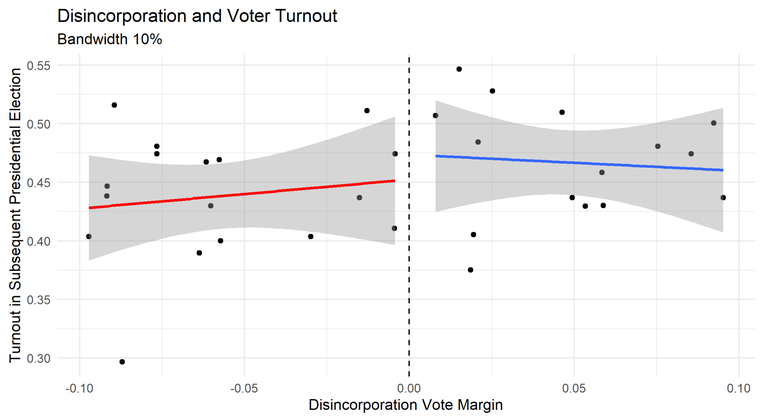
Table 2. Balance on 'Treatment'

Disincorporated	N	Pop. at Attempt	Attempt Turnout
0	42	3,183.119	0.291
1	44	1,488.841	0.304

Methods

Ex-ante, an ideal method for analysis is *Sharp Regression Discontinuity* (SRD). Since each dissolution vote is precisely deterministic of treatment, I seek to measure the local average treatment effect of dissolution right around the vote threshold, or around *margin* = 0.00 [5]. Because of tiny-n concerns, I chose to restrict the bandwidth to a vote margin of ± 0.10.





I estimate SRD models using common, different, and non-linear slopes. The regression specifications are as follows:

- *Common Slope*: $turnout = disinc + margin$
- *Different Slopes*: $turnout = disinc + margin + disinc * margin$
- *Non-linear slopes*: $turnout = disinc + margin + margin^2 + disinc * margin + disinc * margin^2$

The coefficient of interest for each is on $disinc$: that is the estimate of the LATE. The biggest things to worry about are (1) a small-n, which means I might be underpowered to actually detect the LATE, and (2) omitted-variable bias due to both the imprecision of the voter turnout measure and the fact that units aren't exactly balanced in population right around the cutoff threshold from Table 2. Other measures from the ACS to alleviate concerns about pre-treatment balance are noisy measures, particularly when looking at small communities. Adding other ACS 'controls' don't do much to resolve concerns of balance.

References

[1] Michelle Wilde Anderson. Dissolving cities. *The Yale Law Journal*, 121(6):1364–1447, 2012.

[2] US Census Bureau. Gazetteer files, Oct 2021.

[3] US Census Bureau. American community survey (acs), Apr 2022.

[4] MIT Election Data and Science Lab. County Presidential Election Returns 2000-2020, 2018.

[5] Guido W. Imbens and Thomas Lemieux. Regression discontinuity designs: A guide to practice. *Journal of Econometrics*, 142(2):615–635, 2008.

[6] Lisa K Parshall. A comparative look at the village dissolution movement in ohio and new york, Jan 2022.

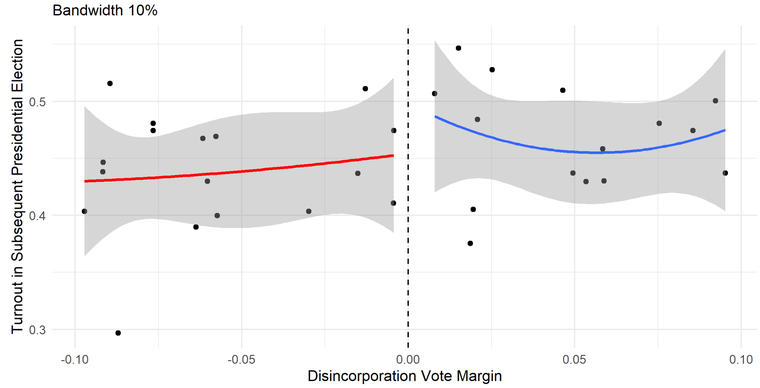
[7] Sandra M. Stevenson. *Understanding Local Government*. LexisNexis, 2009.

[8] James L Tatum. To disappear a city. *Syracuse Law Review*, 69(1):105–126, 2019.

Results

Table 3. Sharp RD Results

	Subsequent Turnout		
	Common Slope	Different Slopes	Non-linear Slopes
	(1)	(2)	(3)
Disincorporated	0.020	0.021	0.044
	(0.037)	(0.037)	(0.058)
Margin	0.086	0.248	0.381
	(0.301)	(0.400)	(1.717)
Margin-squared			1.341
			(16.865)
Disinc * Margin		−0.386	−1.905
		(0.617)	(2.767)
Disinc * Margin-squared			12.112
			(26.562)
Constant	0.443***	0.452***	0.454***
	(0.021)	(0.026)	(0.036)
Observations	32	32	32
R^2	0.082	0.094	0.109
Adjusted R^2	0.018	−0.003	−0.062
Residual Std. Error	0.051 (df = 29)	0.052 (df = 28)	0.053 (df = 26)
F Statistic	1.289 (df = 2; 29)	0.972 (df = 3; 28)	0.638 (df = 5; 26)
Note:			*p<0.1; **p<0.05; ***p<0.01



Discussion

Perhaps not surprisingly, results aren't (statistically) significant. It's entirely possible that the small-n is such that no effect estimate was detectable to begin with, but the SRD was executed correctly. It's also possible that the choice of bandwidth was improper, although the trade-off between n and appropriate bandwidth localized around the cutpoint is a difficult exercise. Even with "full" bandwidth, wherein the model would converge to naive OLS, it's possible that effect sizes aren't detectable. Finally, perhaps there actually is no effect. While it is true that null-results are **not** evidence for a null effect, it is also true that we can't explicitly rule out a null effect.

Moving forward, my goals are twofold. First, I'd like to redo this kind of study using a different method, such as a synthetic control, which might better capture the scope of the phenomena than SRD. I think I pre-committed to the wrong choice of method with this project, but still learned a fair amount from the process (even if the results weren't there). Second, I'd like to continue rounding out the qualitative or descriptive side of this story more. While I've got the pieces catalogued, I haven't taken steps to robustly summarize and describe the patterns of dissolution (as Anderson 2012 muses). I think that small-n concerns can't just be resolved by improving quantitative methodology; I also think there is work to be done to fully capture the substance of what is going on and why it matters.

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