

## **Competition and Participation in the 2002-2010 US Congressional Elections**

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What is the link between competitive elections and voter participation rates? Do competitive elections lead to more participation by voters? Much theory suggests that closer races should increase participation in elections, but not all empirical research has confirmed the relationship. This paper examines the 2002-2010 US house elections, using cross section time series analysis, looking to see if there is a relationship between the closeness of congressional races and the percentage of the population that participates, controlling for several factors. The main findings are that there is a statistically significant relationship between margin of victory and turnout, certain types of commissions have lower participation rates than others, and open seats have lower turnout as well.

## **Introduction**

Do competitive elections lead to more participation by voters? Downsian models of expected benefit from voting suggest that they would, and much theory suggests that closer races should increase participation in elections, but not all empirical research has confirmed the relationship. If there is a link, it could help to explain the historical trends of declining rates of competition (Jacobson 2009) and lower participation rates in US house races.

Additionally, does the way a state (and who in the state) draws its' districts impact turnout? And if so, do certain types of redistricting commissions draw districts with lower participation rates. This paper examines the 2002-2010 US house elections, using cross section time series analysis, looking to see if there is a relationship between the closeness of congressional races and the percentage of the population that participates, controlling for several factors.

## **Previous research**

Previous examinations of the relationship between closeness and turnout have been mixed. Some researchers have found no link, like Carroll Foster (1984) who found the relationship to be “weak, unstable or non-existent” in all of the pooled least squares dummy variable models she used in her study. (Foster 1984) Matsusaka (1993a) finds evidence that voter participation rates are not driven by calculations of the probability that one vote will be decisive, and he argues that findings of relationship at the district level may be spurious, and a result of aggregation bias (ecological fallacy). He also finds no significant relationship between closeness and turnout, using votes for California ballot propositions. (Matsusaka 1993b) Finally, Huckfeldt et al (2007) found little evidence that voters have good information on the competitiveness of their district race, suggesting that higher turnout was not reflecting higher anticipation of a “decisive vote”, but rather elite mobilization.

There is also some published research that supports the link between closeness and turnout. Kirchgassner and Meyer Zu Himmern (1997) found some empirical support that closeness impacted turnout, although they found some instances where the effect was actually negative. Cox and Munger (1989) found some evidence of a relationship, and theorized that it signifies elite response to close races. They believe that close races “stimulate elite effort, which in turn stimulates turnout,” and they support their hypothesis by examining campaign expenditures. Ultimately, they find some empirical evidence of an effect at both the mass and elite levels. Endersby et al (2002) also find evidence that close races (more complexly measured) had higher levels of voter participation, using election returns from the Canadian House of Commons.

No research was discovered that addresses whether certain types of redistricting methods would have a specific impact on turnout. As some of my previous research suggests, (Lindgren and Southwell 2013) and (another paper under review) certain types of districting commissions have different tendencies to draw competitive districts, and this suggest that the different forms might also impact voter participation rates.

### **Research design and Methodology**

Cross sectional time series GLS regression is used to analyze the entire decade’s worth of elections, controlling for variation across elections, allowing for more sophisticated isolation of our suspect independent variable. By using all five elections from the 2002-2010 decade, numerous different variables for every district can be controlled and the entire “existence” of the district can be included in the analysis. This research uses margin of victory as the measure of competitiveness of a district, although alternative measures were examined but not included.

## **Hypotheses:**

H1: Closer races will have higher turnout

H2: Some types of redistricting commission methods will negatively impact turnout

## **Discussion of Variables in Model**

The measure of turnout used in this model is calculated by dividing the total number of votes cast by the apportioned population, or in the case of single states the population of the state. The measure of margin of victory is the percentage of the vote the winner received minus the next highest vote candidates' percentage.

The paper utilizes a dummy variable array created to capture the difference in turnout by how the districts were drawn. In the post-2000 round of redistricting, 28 states used the traditional legislative process to draw their congressional districts (261 districts); three used an independent backup committee when the legislature failed to draw suitable districts (CT, IA, IN [19 districts]), three used an advisory committee (NY, OH, RI [49 districts]), two used a partisan commission (NJ, HI [15 districts]), three states had independent commissions (AZ, ID, WA [19 districts]), seven states only have one district (AK, DE, MT, ND, SD, VT, WY), and seven states had districts drawn by state or federal courts (ME, MN, NM, OK, OR, SC, TX). Table one shows the percentage of districts that each type of redistricting has the power to draw. All coefficients represent the difference in turnout from single states, since they are left out of the model.

The paper also uses control dummies in order to capture the variation in turnout by racial groups. The coefficients represent the difference in estimated impact of race on turnout with whites being the control group (left out of the model). Dummy variables were also used to control for those elections that coincided with presidential races (as they likely have significantly higher turnout), and for those (few) seats that did not have an incumbent running for reelection (open seats). Finally, the

Cook Partisan Voter Index (PVI) from 2008 was used to control for the partisan balance in a district.

**Table 1. Who Drew the 2002-2010 US House Districts**

Who Drew District:	#of States(districts)	Percent of Districts
Normal Legislative Process	28(261)	60
Backup Commission	3(19)	4.37
Advisory Commission	3(49)	11.26
Partisan Commission	2(15)	3.45
Independent Commission	3(19)	4.37
Single District State	7(7)	1.61
Court Drawn Districts	7(65)	15
Total	50(435)	100

**Table 2. Margin of Victory (MOV) and Turnout by Who Drew the Districts**

Who Drew District:	AVG MOV	Median MOV	AVG Turnout	Median Turnout
Normal Legislative Process	40.08	35	34.45	33.69
Backup Commission	22.31	21	36.25	34.48
Advisory Commission	40.23	35	33.24	32.30
Partisan Commission	36.48	35	30.74	28.89
Independent Commission	26.63	26	37.15	37.83
Single District State	26.65	24	42.89	43.15
Court Drawn Districts	37.21	33	33.42	32.13
Total	37.96	33	34.40	33.53

Figure 1. Boxplots of MOV in US House Districts 2002-2010, by Who Drew

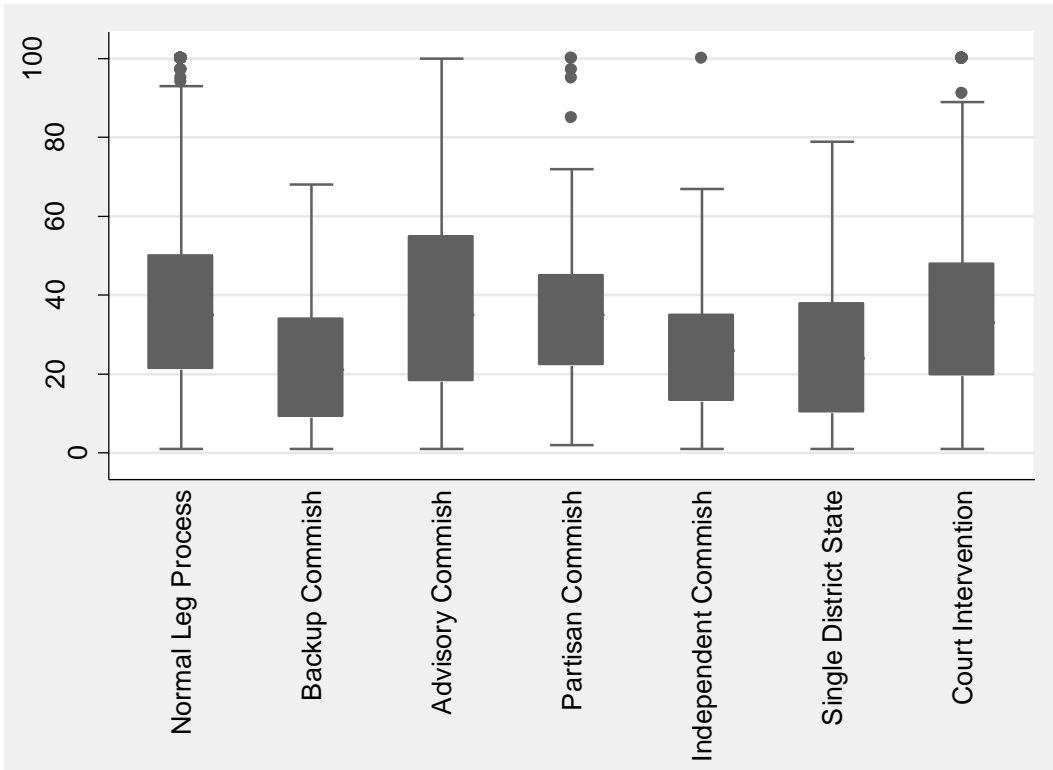


Figure 2. Boxplots of Turnout in US House Districts 2002-2010, by Who Drew

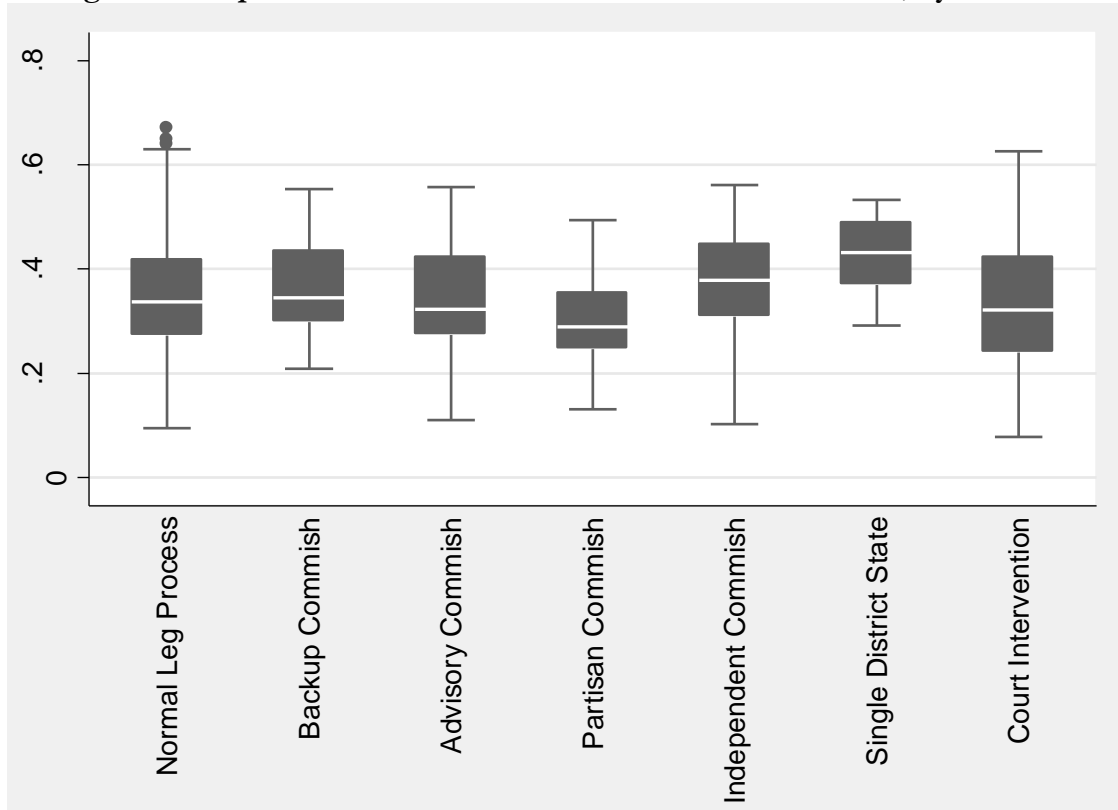


Table 2 shows the margin of victory and turnout by who drew the districts. As it shows, (and the Boxplots in figures 1 and 2 confirm) there are some differences in margin of victory and median turnout. In order to test the differences and the relationship, a cross sectional time series analysis is called for, allowing us to control for the various other known influences over turnout. (Wooldbridge 2002)

**Table 3. CSTS Regression of Turnout by Margin of Victory**

Random-effects GLS regression			Number of obs = 2149	
Group variable (i): US Congressional District			Number of groups = 435	
			Obs per group: min = 3	
R-sq: within = 0.8255			avg = 4.9	
between = 0.6655			max = 5	
overall = 0.7464			Wald chi2(13) = 8933.53	
			Prob > chi2 = 0.0000	
<hr/>				
DV: Turnout	Coef.	Std. Err.	Z	P>  z
<hr/>				
Margin	-.000865	.000042	-20.38	0.000
Normal Leg Process	-.023059	.017451	-1.32	0.186
Backup	-.058671	.019954	-2.94	0.003
Advisory	-.052686	.018366	-2.87	0.004
Partisan	-.057860	.021087	-2.74	0.006
Independent	-.013902	.020032	-0.73	0.468
Court drawn	-.008510	.018281	-0.49	0.626
PCT AA	-.001993	.000177	-11.26	0.000
PCT Asian/PI	-.001519	.000398	-3.81	0.000
PCT Latino	-.003048	.000135	-22.51	0.000
President	.135337	.001523	88.85	0.000
PVI	-.001216	.000195	-6.22	0.000
Open seat	-.007333	.002911	-2.52	0.012
_cons	.430647	.016506	26.09	0.000

sigma\_u | .0402

sigma\_e | .0344

rho | .5767 (fraction of variance due to u\_i)

Table 3 is the cross sectional time series analysis of turnout with controlling for margin of victory, redistricting method, race, presidential, PVI, and whether the seat was open, showing that almost 75 percent of the variation in turnout is explained by the model. The time series analysis allows us to distinguish variance that is caused by our hypothesized effect and across the different redistricting methods, controlling for variation in average turnout across elections. Turning to the coefficients, the model supports the hypothesis that the margin of victory has a significant negative relationship with turnout, showing a hypothesized effect of  $-.0008$  for each point of victory margin.

Furthermore, there is considerable difference across the different methods of redistricting seen in the model, with only the normal legislative process, independent commissions and court drawn districts having insignificant differences from single district states (indicating no negative effect), while backup, advisory and partisan commissions each have over 5 percentage points lower average turnout (controlling for all else) than single district states.

The percentage of African American and Latino voters in a district also had significant negative impacts on predicted turnout. The congressional elections that coincided with the presidential race saw on average 13 percentage points higher turnout. Interestingly, for each point of PVI in the Republican direction, the model predicted a statistically significant decrease of  $-.0012$  in turnout for that district over the decade. Finally, open seats also had significantly lower turnout (a somewhat surprising finding) with an estimated coefficient of  $-.0073$ .



## **Conclusion**

These findings support the hypothesis that closer races increase turnout in a significant way, and that the method for redistricting (which was previously shown to be important predictor of margin of victory (see Lindgren and Southwell 2013) is also an important factor in predicting turnout. This suggests that closer races can be an important way to improve the democratic process and strengthen the link between constituents and representatives. Furthermore, as more states reform their redistricting processes they should be mindful of the impact on margin of victory and turnout of certain forms of commissions, looking to make the most impactful reform to improve democracy.

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