

Extension Write Up

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I extended Gerber et al 2010 by examining heterogeneity in outcome by race. Recall this paper has multiple regression specifications. An OLS regression that measures directly the effect of the party registration mailer on political opinions and behavior. There were two IV specification that used pre-treatment party lean as an instrument, both in absolute and relative terms. I extended this by seeing if there were differential effects for black citizens in the experiment. The new regression specifications are as follows. For the OLS regression:

$$Y_{it+1} = \alpha + \beta_1 T + \beta_2 Blck + \beta_3 Blck \times T + \beta_4 Y_{it} + \beta_5 D_{it} + \gamma M_{it} + \varepsilon$$

Where i is the individual observed, t and t+1 are the pre-treatment and post-treatment time periods, Y is the outcome of interest, T is a dummy for the treatment group, Blck is a dummy for if an individual is Black or not, Blck x T interacts race with the treatment, D is a dummy for initial partisan lean, and M is a vector of observables. The IV regression is very similar except now it includes the instrument X.

$$Y_{it+1} = \alpha + \beta_1 X_{it+1} + \beta_2 Blck + \beta_3 Blck \times X_{it+1} + \beta_4 Y_{it} + \beta_5 D_{it} + \gamma M_{it} + \varepsilon$$

The results are sensitive to regression specification. The OLS and first IV specification are both positive for the interaction suggesting that Black individuals responded more strongly to the treatment than the other groups (Table 1). However, in the second the IV specification the sign flips, and additionally the magnitude between the OLS and first IV regression is drastically different. This is not surprising because roughly half of the observations had to be dropped due to missing racial information and the ratio of Black individuals to others is very skewed, so the underlying data is very noisy. Therefore, it's hard to say anything conclusive about whether there was a heterogeneous response to the treatment by race.

Table 1: The effect of being sent mail on party alignment interacted with race

	Voting and Party Alignment Scale (-4 to 6)		
	OLS	ATT (Identified with Pre-Survey Latent Party)	ATT (Post-Survey Directional Party ID Relative to Pre-Survey Latent Party)
Black	-0.060 (0.527)	-35.954 (647.791)	17.704 (17.143)
Sent Mail	0.224 (0.143)		
Sent Mail x Black	1.342 (0.667)		
Post-survey identified with pre-survey latent party		0.248 (62.978)	
Post ID w/ Party x Black		86.575 (1556.272)	
Post-Survey Directional Party ID Relative to Pre-Survey Latent Party			1.025 (0.622)
Post Directional ID x Black			-3.207 (3.118)
Num.Obs.	419	405	405
R2	0.364	-16.836	0.237
Controls	X	X	X