

# Pre-event trends in the panel event-study design

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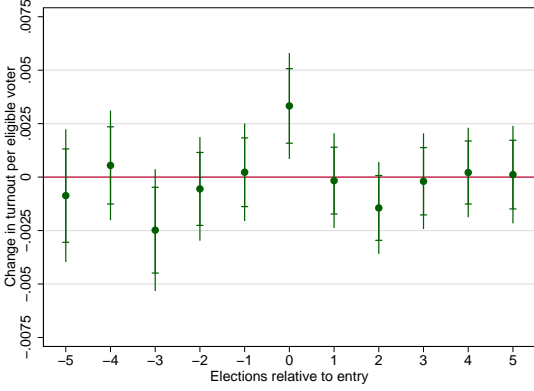
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Estimator	Effect of newspaper entry	Coefficient of lead in first-stage
No control	0.0034 (0.0009)	
Controlling for $x_{it}$	0.0041 (0.0010)	
Proposed 2SLS estimator (one lead)	0.0029 (0.0014)	0.0079 (0.0013)

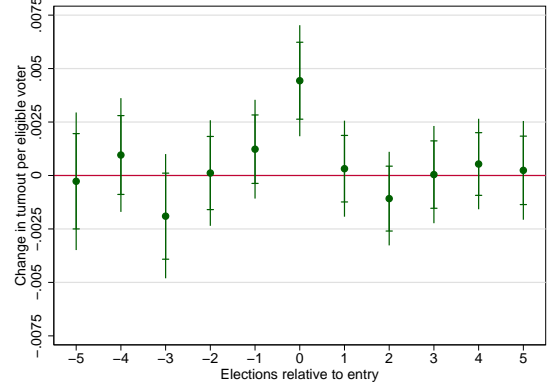
Online Appendix Table 1: Estimates of the effect of newspapers on voter turnout, including covariates. Table depicts estimates  $\hat{\beta}$  of the effect of number of newspapers on voter turnout from  $\Delta y_{it} = \beta \Delta z_{it} + \Delta \omega_{st} + \gamma \Delta \eta_{it} + \psi \Delta \mathbf{q}_{it} + \Delta \varepsilon_{it}$ . The model differs from the model in the main paper through the inclusion of the vector of covariates  $\mathbf{q}_{it}$ . In line with the alternative specification in Gentzkow et al. [2011], this vector includes the share of the population that is white, the share of the white population that is foreign-born, the share of the population living in cities with 25,000+ residents, the share of the population living in towns with 2,500+ residents, the population employed in manufacturing as a share of 21+-year old males, and the log of manufacturing output per capita (as proxy for income). See table 2 for definitions of the estimators. Standard errors in parentheses are clustered at the county level.

Estimator	Effect of newspaper entry	First-stage F-test of excluded instruments
Proposed 2SLS estimator (one lead)	0.0034 (0.0013)	54.62
Proposed 2SLS estimator (five leads; BIC)	0.0044 (0.0011)	12.01

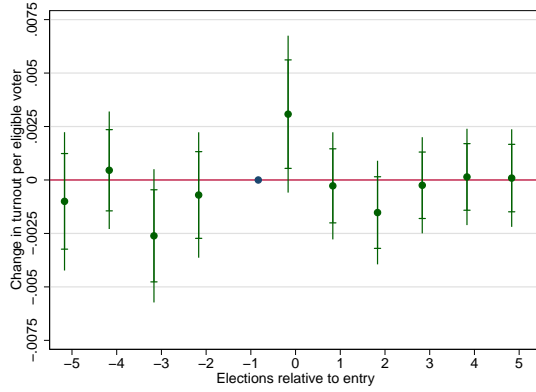
Online Appendix Table 2: Estimates  $\hat{\beta}$  of the effect of newspapers on voter turnout from  $\Delta y_{it} = \beta \Delta z_{it} + \Delta \omega_{st} + \gamma \Delta \eta_{it} + \Delta \varepsilon_{it}$ , using our proposed 2SLS estimator. In the first row we use the closest lead of  $\Delta z_{it}$  as the excluded instrument. In the second row we use the BIC to choose the number of leads, allowing up to eight leads. Standard errors in parentheses are clustered at the county level.



(a) Not controlling for market profitability

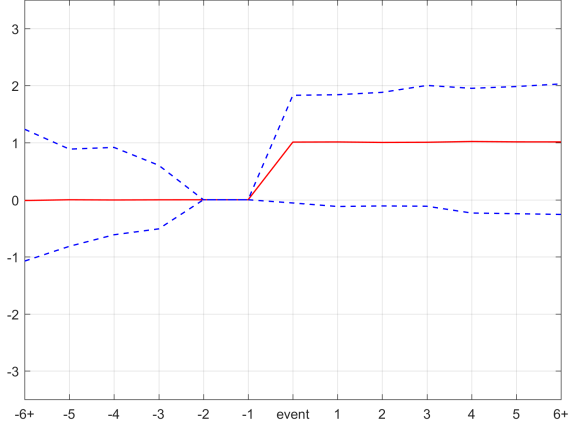


(b) Using the log of voting-eligible population as a proxy for market profitability

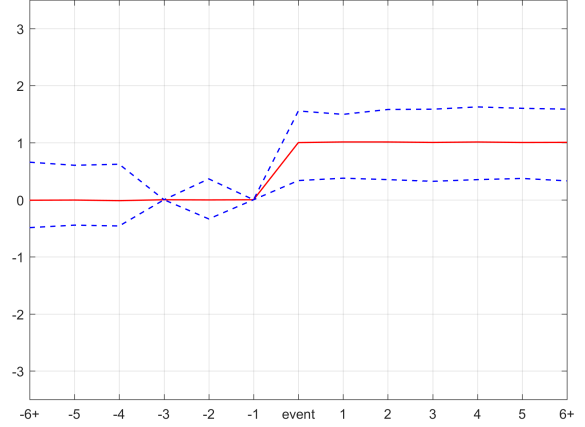


(c) Proposed 2SLS estimator, with closest lead of  $z_{it}$  as excluded instrument

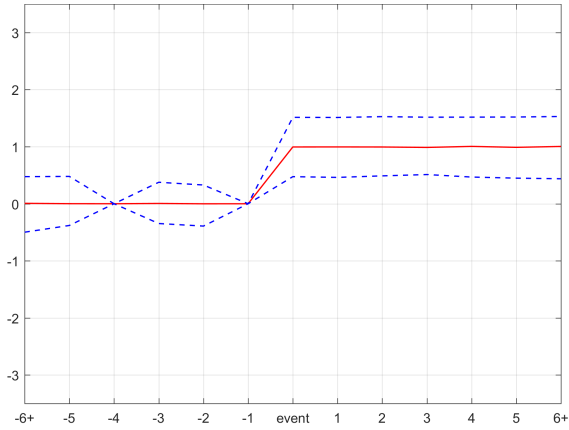
Online Appendix Figure 1: Estimated effects on presidential turnout at election years around newspaper entries/exits including demographic controls. Figure depicts estimates of the coefficients  $\delta_k$  from three specifications of the equation  $\Delta y_{it} = \sum_{k=-5}^5 \delta_k \Delta z_{it-k} + \Delta \omega_{st} + \gamma \Delta \eta_{it} + \psi \Delta \mathbf{q}_{it} + \Delta \varepsilon_{it}$ . The model differs from (18) through the inclusion of the vector of covariates  $\mathbf{q}_{it}$ . In line with the alternative specification in Gentzkow et al. [2011], this vector includes the share of the population that is white, the share of the white population that is foreign-born, the share of the population living in cities with 25,000+ residents, the share of the population living in towns with 2,500+ residents, the population employed in manufacturing as a share of 21+-year old males, and the log of manufacturing output per capita (as proxy for income). Inner confidence sets as indicated by the dashes correspond to 95% pointwise confidence intervals, while outer confidence sets are the uniform 95% sup-t bands (with critical values obtained via simulation). Confidence sets are clustered at the county level.



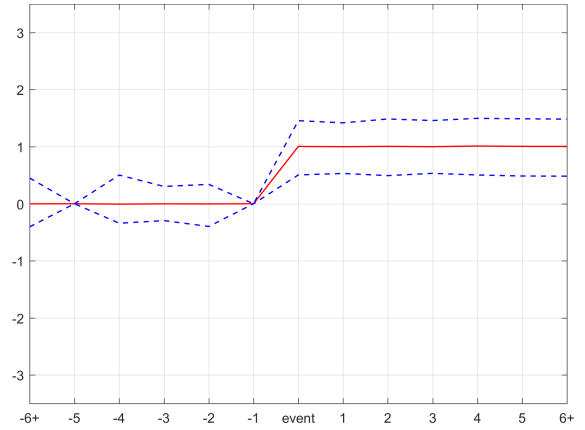
(a) Proposed 2SLS estimator, with closest lead of  $z_{it}$  as excluded instrument. Normalised such that  $\delta_1 = \delta_2 = 0$ .



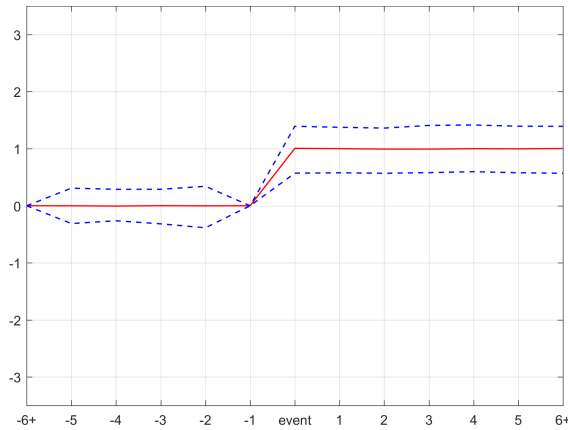
(b) Proposed 2SLS estimator, with closest lead of  $z_{it}$  as excluded instrument. Normalised such that  $\delta_1 = \delta_3 = 0$ .



(c) Proposed 2SLS estimator, with closest lead of  $z_{it}$  as excluded instrument. Normalised such that  $\delta_1 = \delta_4 = 0$ .

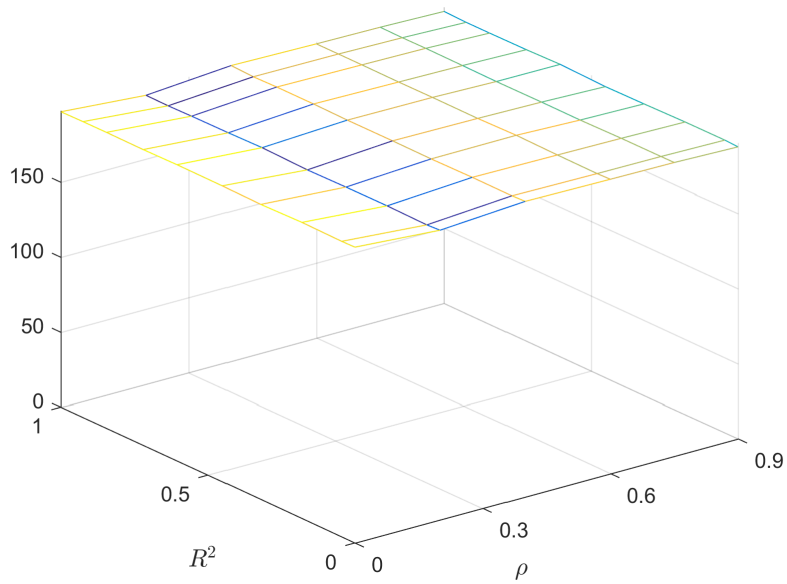


(d) Proposed 2SLS estimator, with closest lead of  $z_{it}$  as excluded instrument. Normalised such that  $\delta_1 = \delta_5 = 0$ .

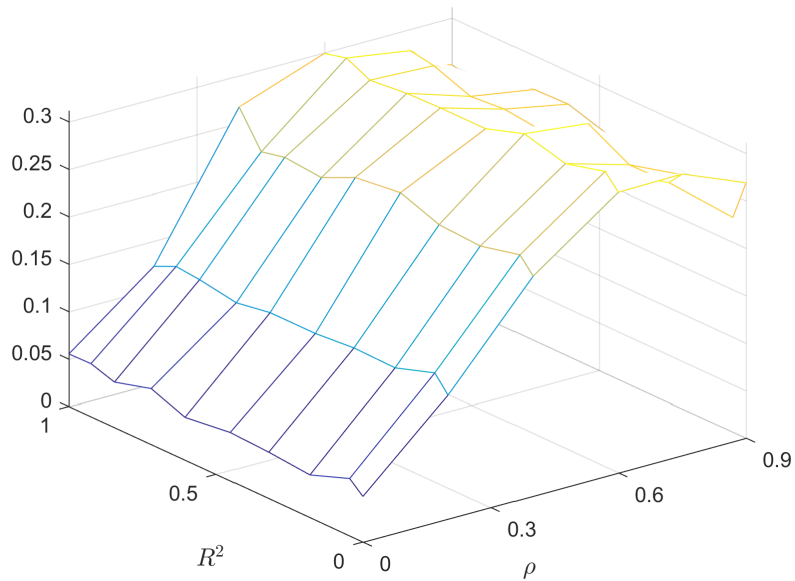


(e) Proposed 2SLS estimator, with closest lead of  $z_{it}$  as excluded instrument. Normalised such that  $\delta_1 = \phi_1 = 0$ .

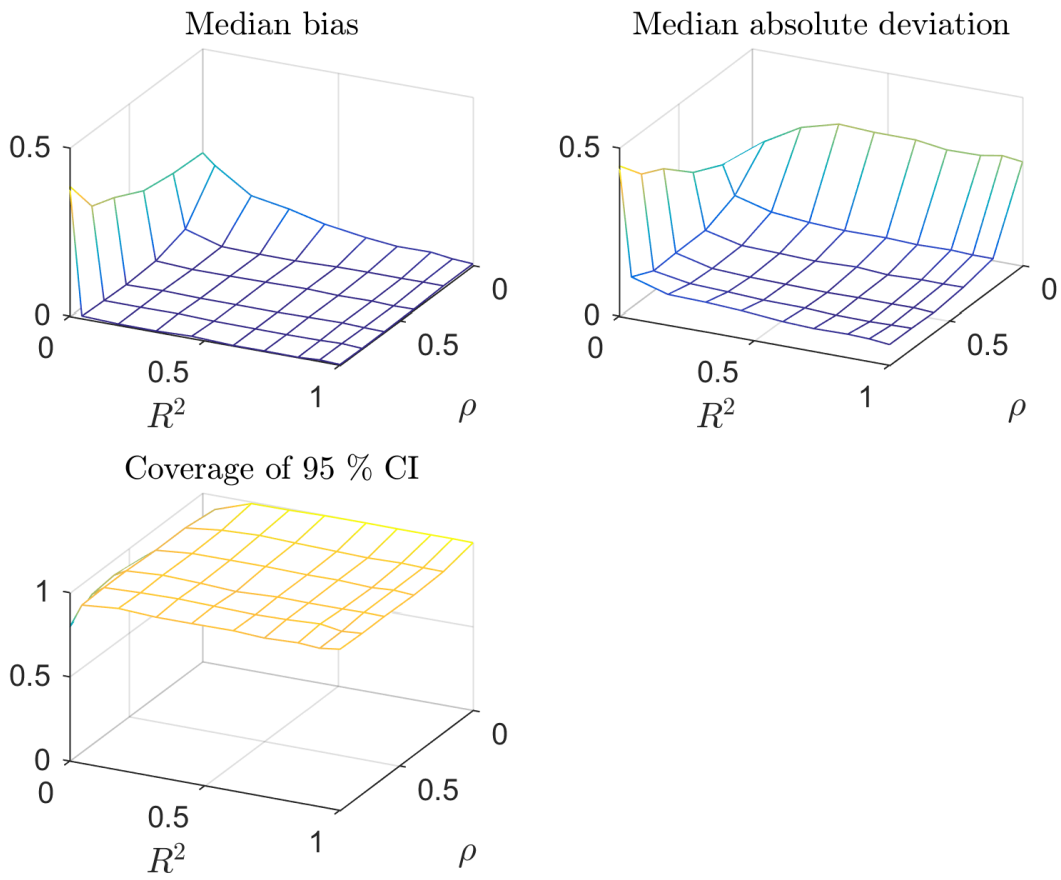
Online Appendix Figure 2: Distribution of event plots (in levels) under the presence of a confounding factor using simulated data from benchmark DGP. Each plot shows estimates of the coefficients  $\delta_k$  from (13) using a different normalisation. The red line in the center represents the average estimate across 1000 realizations, while the blue dotted lines depict the uniform 95% confidence band: 95% of the estimated sets of coefficients lie within this band. Panel 2a is identical to Figure 3d in the paper.



Online Appendix Figure 3: Average number of cross-sectional observations in which an event occurs, across the design space considered in the simulations for Figures 4 - 6. Within each set of simulation parameters the number of units with an event generally lies between 160 and 240.



Online Appendix Figure 4: Probability of rejecting the null hypothesis of no pre-trend for the bottom right panel of Figures 4 - 6. With the event plot normalized such that the coefficient on  $z_{it+1}$  is equal to zero, our pre-test tests that the coefficient on  $z_{it+2}$  is equal to 0 at the 5 % level.



Online Appendix Figure 5: Additional panel for Figures 4 - 6 using the BIC in the first stage to choose the number of leads, between 1 and 5, to be used as excluded instruments.