# Supporting Materials for "Building State Capacity through Public Land Disposal: An Application of Matrix Completion for Counterfactual Prediction"

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# 1 Exploratory data analysis

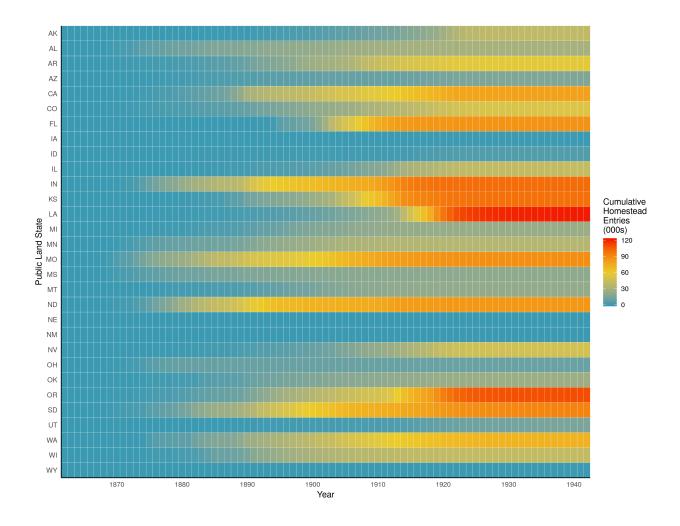
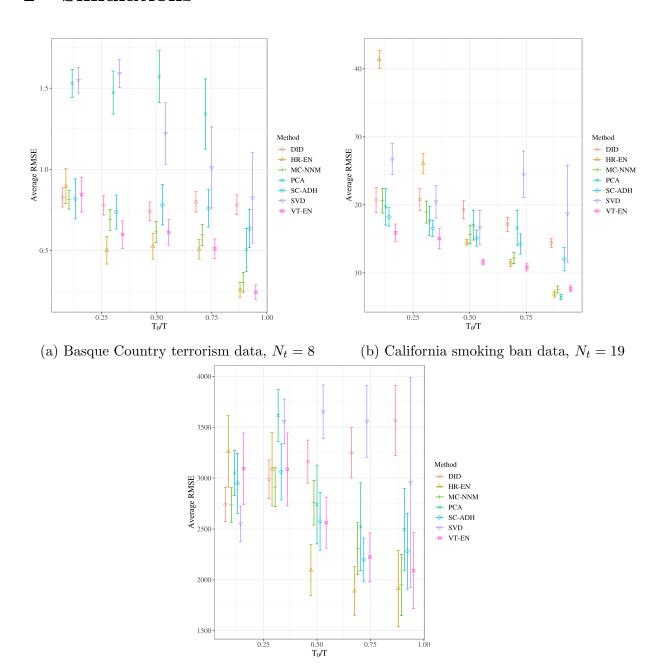


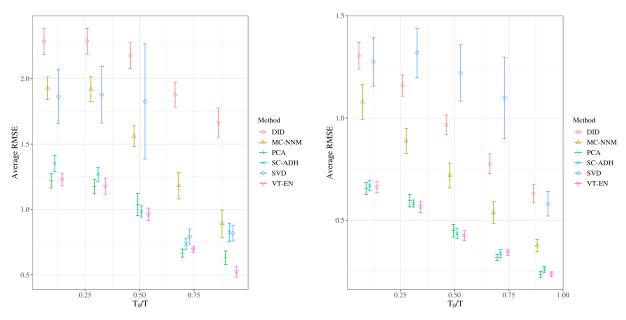
Figure 1: Cumulative sum of land patents authorized under the HSA in public land states, 1862-1942.

## 2 Simulations

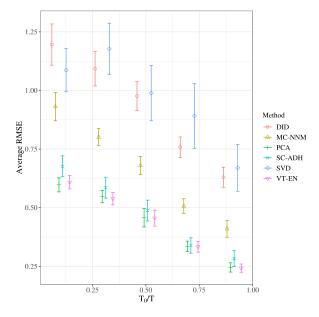


(c) West German reunification data,  $N_t = 8$ 

Figure 2: Placebo tests under simultaneous treatment adoption. See footnotes to Fig. 1.



- (a) State government education spending,  $N_t = 10$
- (b) State government expenditures,  $N_t = 10$



(c) State government revenues,  $N_t=10$ 

Figure 3: Placebo tests under staggered treatment adoption. See footnotes to Fig. 2.

### 3 Estimates

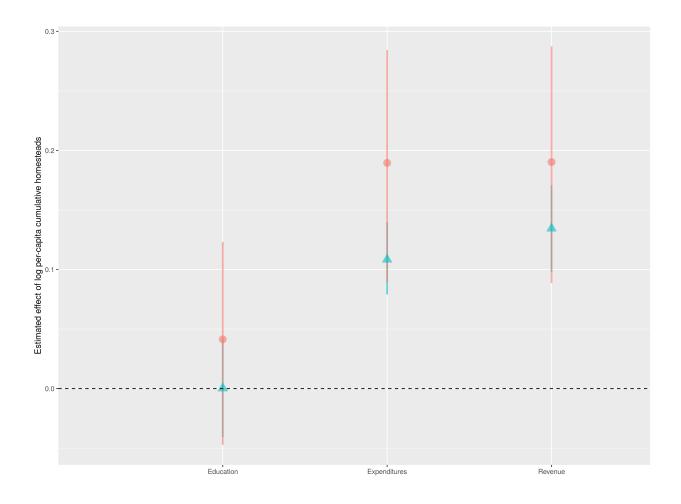


Figure 4: DD estimates of log per-capita cumulative homesteads on log per-capita state government finance, without including average farm values in the regression. See notes to Fig. 3.

#### 4 Causal mechanisms

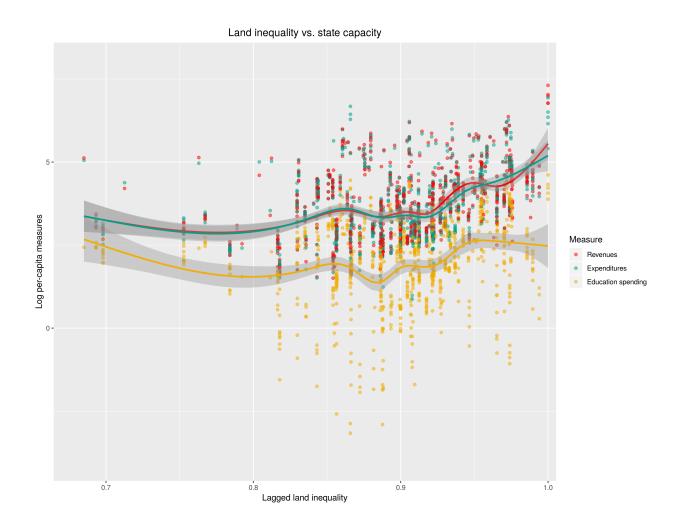


Figure 5: Land inequality vs. log per-capita revenues and expenditures at the state-level, 1860-1950. Each point is a state-year observation. Lines represent generalized additive model (GAM) fits to the data and shaded regions represent corresponding 95% confidence intervals.

Table 1: DD estimates: Impact of log per-capita cumulative homesteads (county-level).

Region	South	West
Land inequality Land inequality (no farm values) Railroad access Railroad access (no farm values)	$ \begin{array}{l} -0.001 \; [-0.003,  0.0004], \; N = 523 \\ 0.0007 \; [-0.0008,  0.002] \; , \; N = 590 \\ 0.03 \; [0.01,  0.05], \; N = 350 \\ 0.06 \; [0.04,  0.08], \; N = 361 \end{array} $	$ \begin{array}{l} -0.004 \; [\text{-}0.005, \text{-}0.002], \; N=2,002 \\ \text{-}0.001 \; [\text{-}0.002, \text{-}0.0001], \; N=2,549 \\ 0.09 \; [0.07, 0.1], \; N=1,053 \\ 0.12 \; [0.11, 0.13], \; N=1,251 \end{array} $

Notes: Values in brackets represent 95% confidence intervals constructed using 1,000 state-stratified bootstrap samples.

#### References

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