

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

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# 1 Simulations

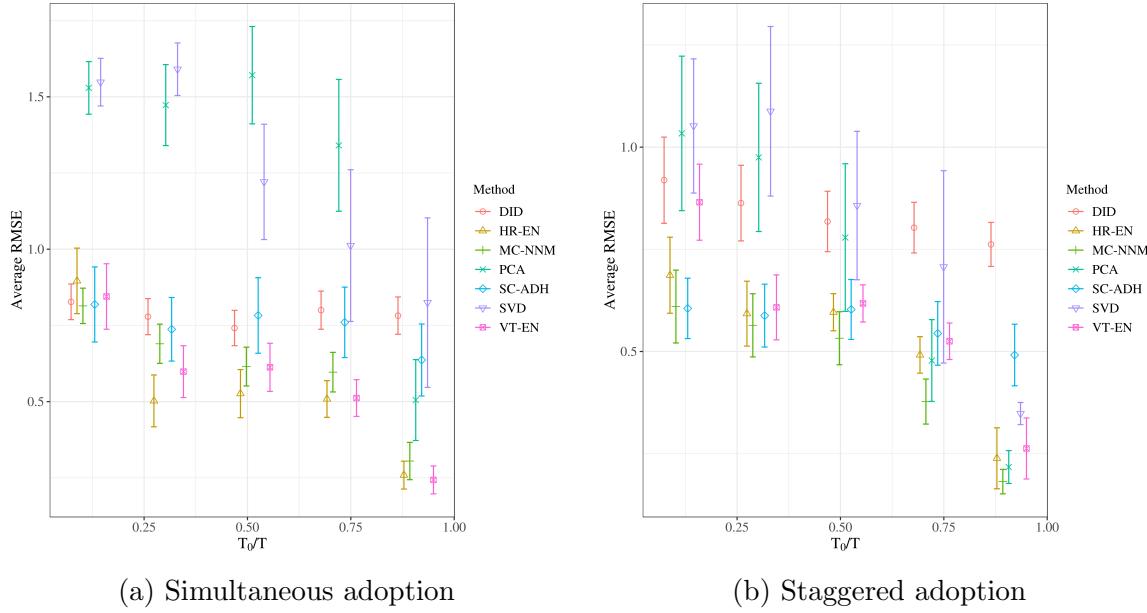


Figure 1: Basque Country data,  $N_t = 8$ . See footnotes to Fig. 1.

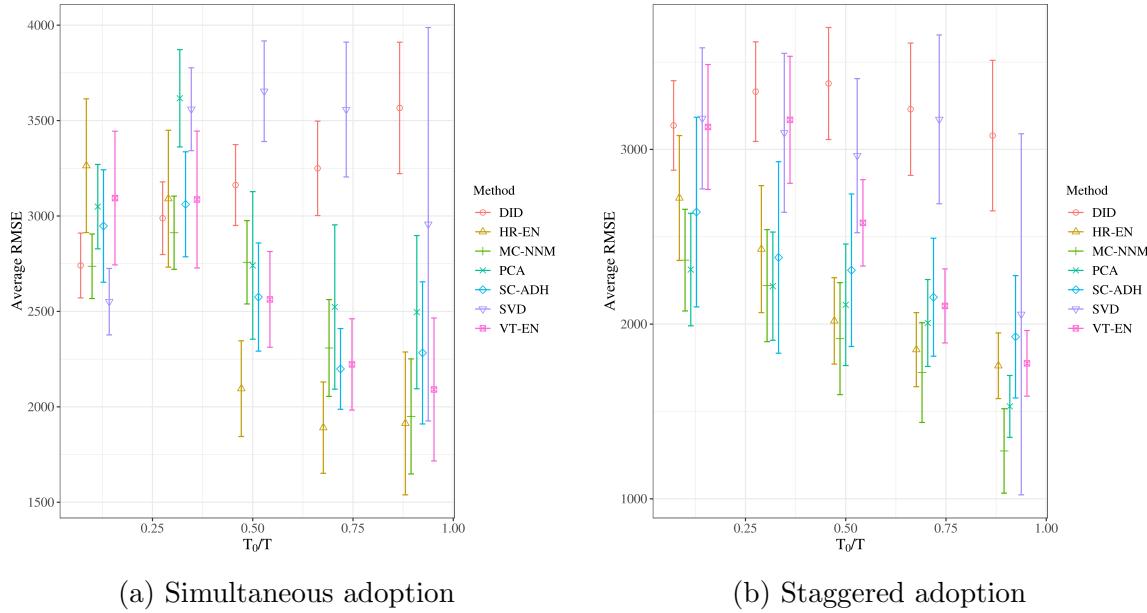


Figure 2: West German reunification data,  $N_t = 8$ . See footnotes to Fig. 1.

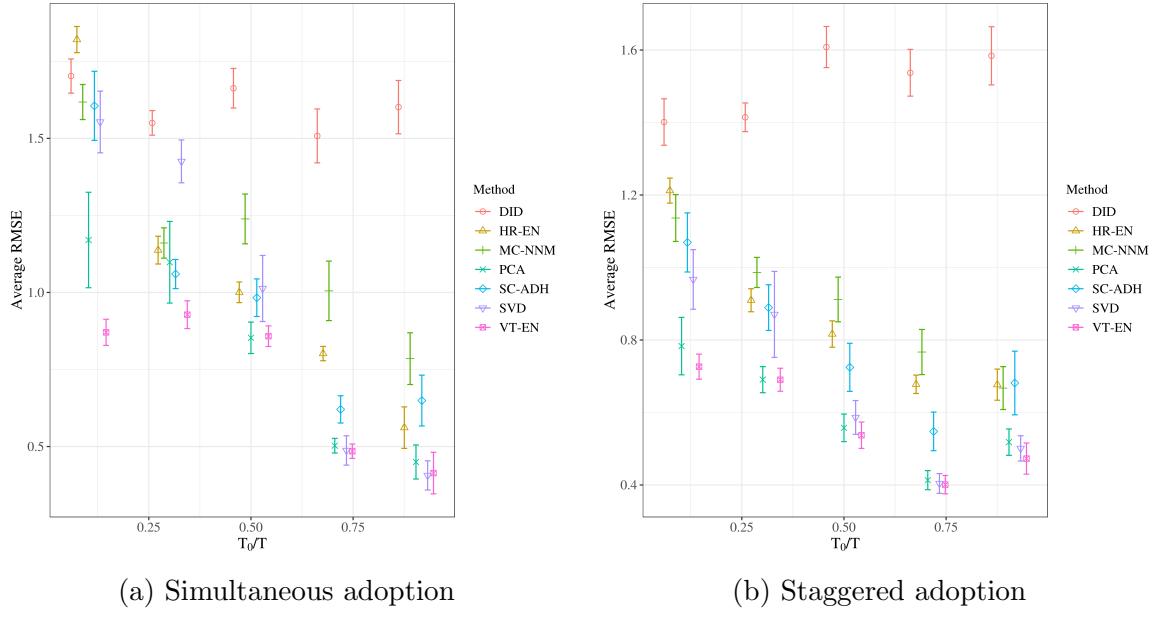


Figure 3: State government education spending data,  $N_t = 10$ . See footnotes to Fig. 1.

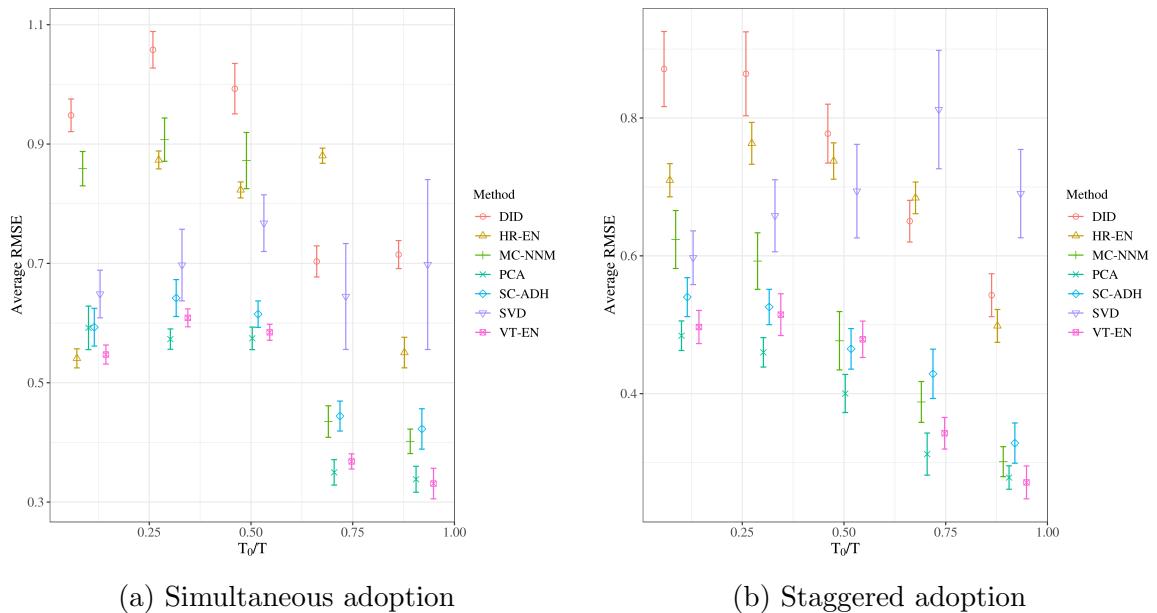


Figure 4: State government expenditures data,  $N_t = 10$ . See footnotes to Fig. 1.

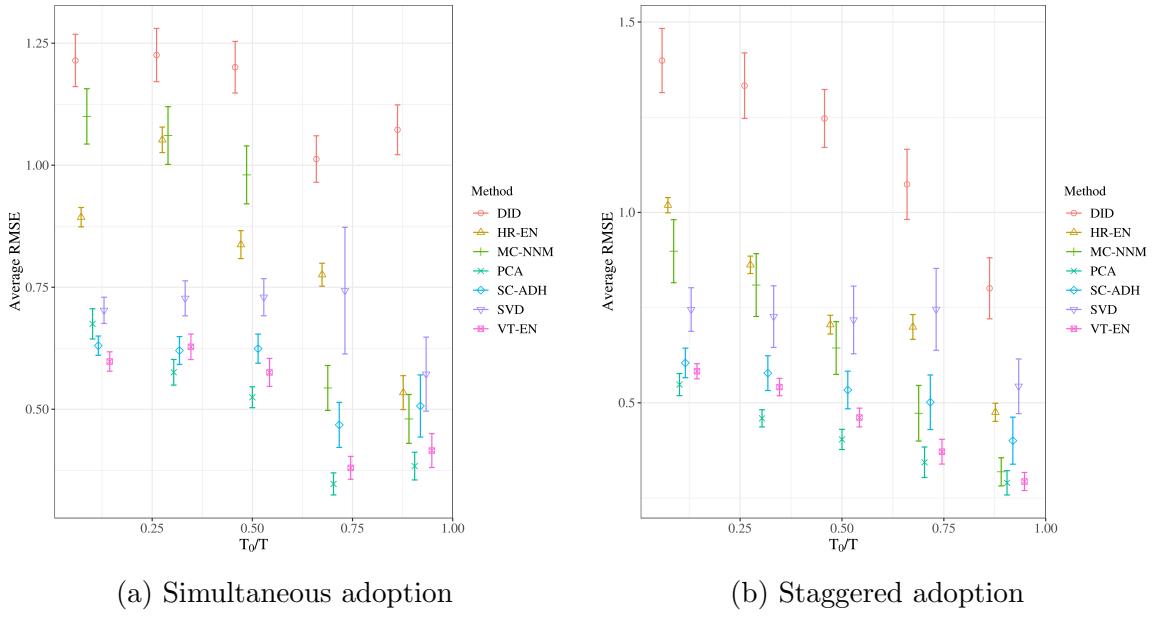


Figure 5: State government revenues data,  $N_t = 10$ . See footnotes to Fig. 1.

## 2 Exploratory data analysis

Table 1: Definitions and sources of variables.

Theme	Variable	Coverage	Definition	Source
<b>Farms</b>	Farm value	1860-1950 (decennial)	Log average value of farmland and buildings per acre (\$)	Haines (2010)
	Land inequality	Ibid.	Gini coefficient based on distribution of farm sizes, adjusted for the share of propertyless farmers (see Vollrath (2013, pg. 273))	Ibid.
<b>State Capacity</b>	Revenues	1790-1982	Log per-capita state government total revenue (1982\$)	Sylla et al. (1993, 1995a,b); Haines (2010) (total free pop. data from Haines (2010))
	Expenditures	Ibid.	Log per-capita state government total expenditure (1982\$)	Ibid.
Ibid.	Education spending	Ibid.	Log per-capita state government education spending (1982\$)	Ibid.
	Homesteads	1860-1950	Log per-capita cumulative number patents issued under the Homestead Act of 1862	U.S. BLM ( <a href="https://glorecords.blm.gov">https://glorecords.blm.gov</a> ) (total free pop. data from Haines (2010))

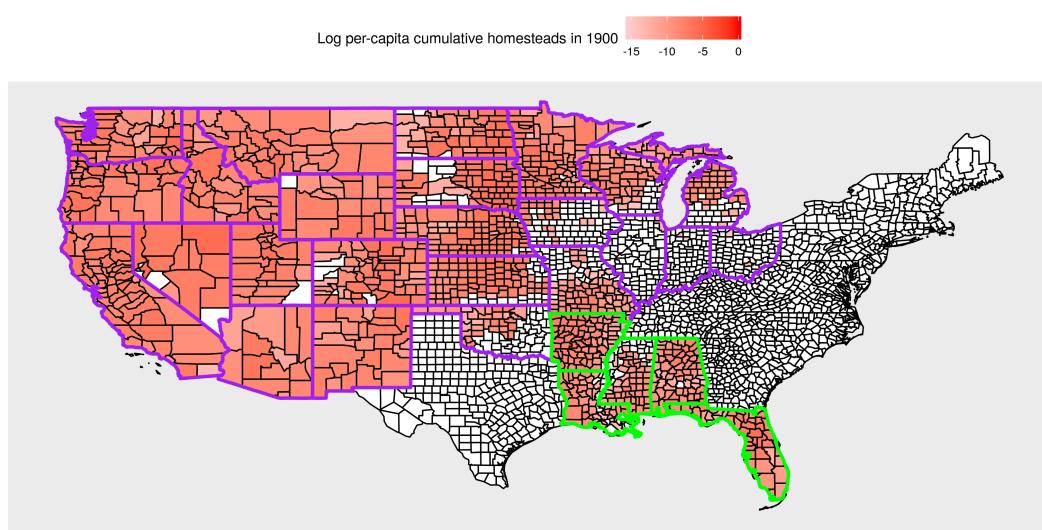
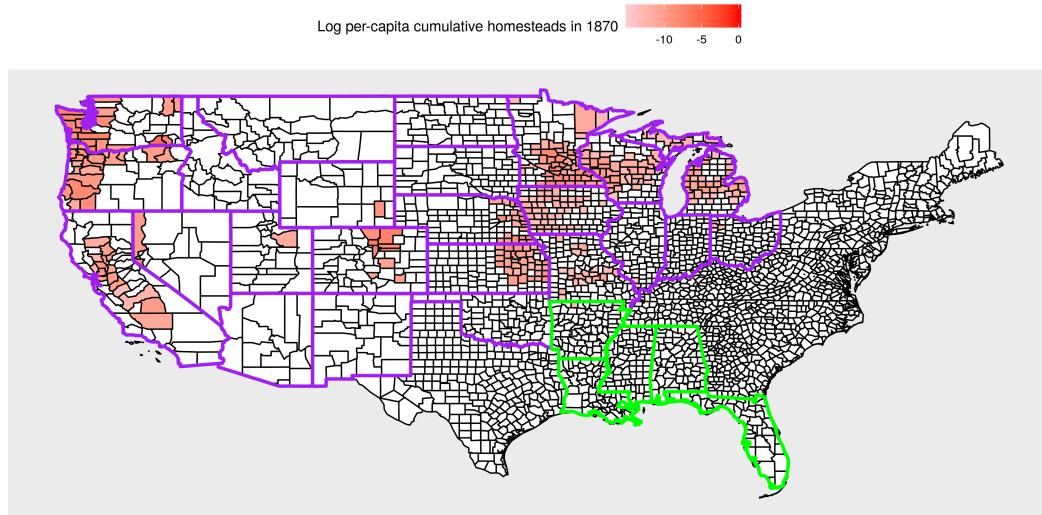


Figure 6: Log per-capita cumulative homesteads in 1870 and 1900, overlaid on 1911 county borders. Darker-colored counties have higher values than lighter-colored counties, and white-colored counties have missing values. States bordered in green are southern public land states and those bordered in purple are western public land states. County border data from Long (1995).

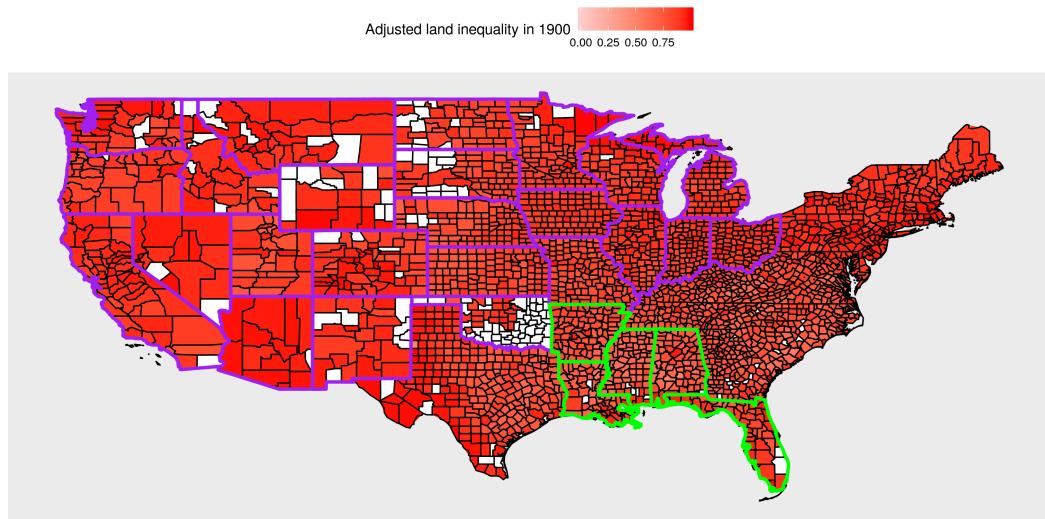
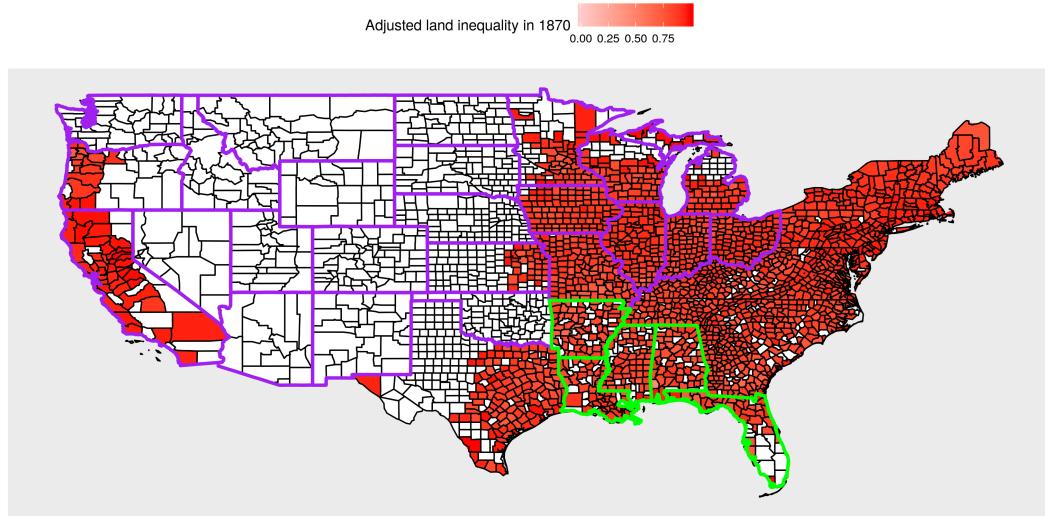


Figure 7: Adjusted land inequality in 1870 and 1900, overlaid on 1911 county borders. See notes to Fig. 6.

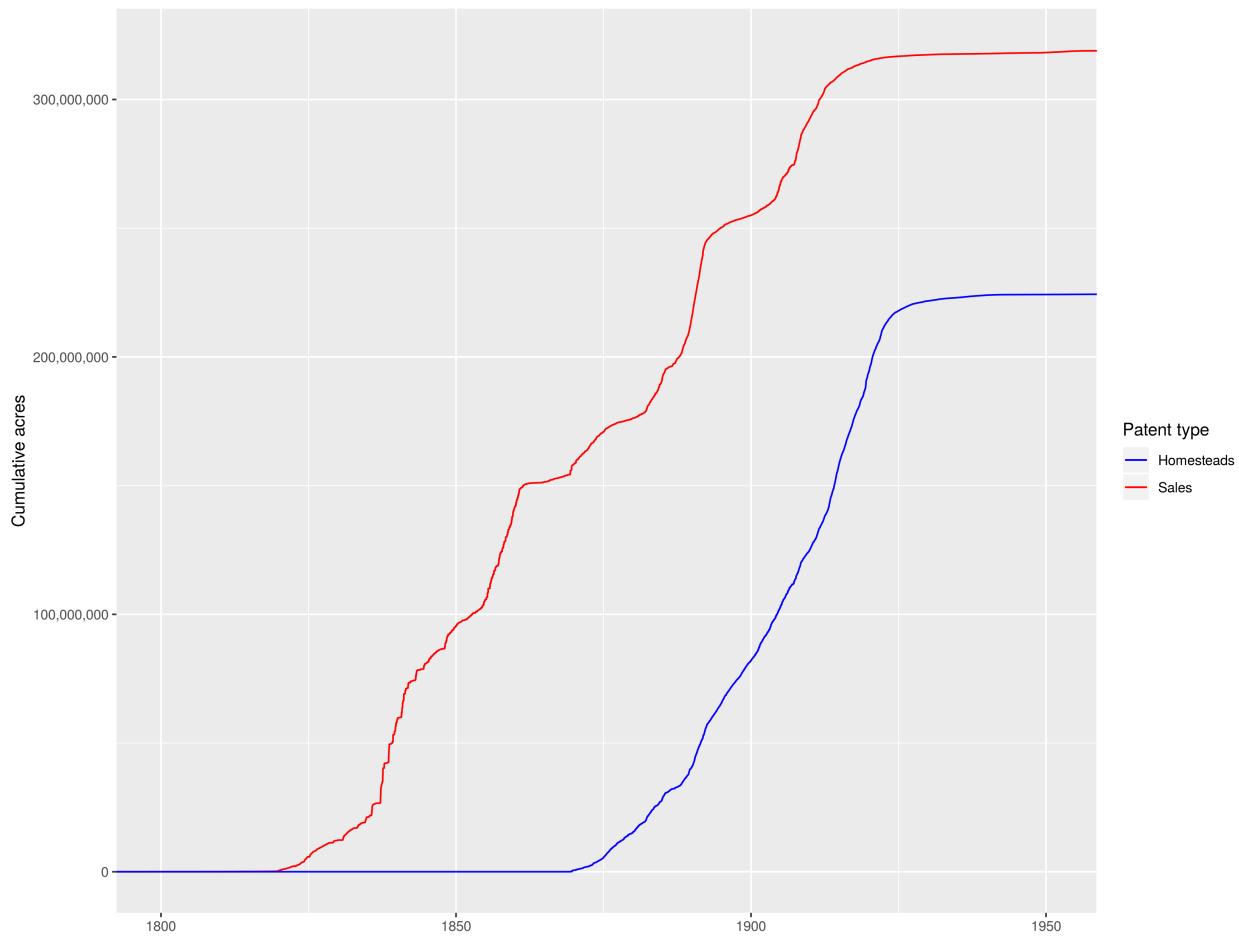


Figure 8: Cumulative total acres (by patent type) disbursed in public land states, 1800 - 1950.

### 3 Estimates

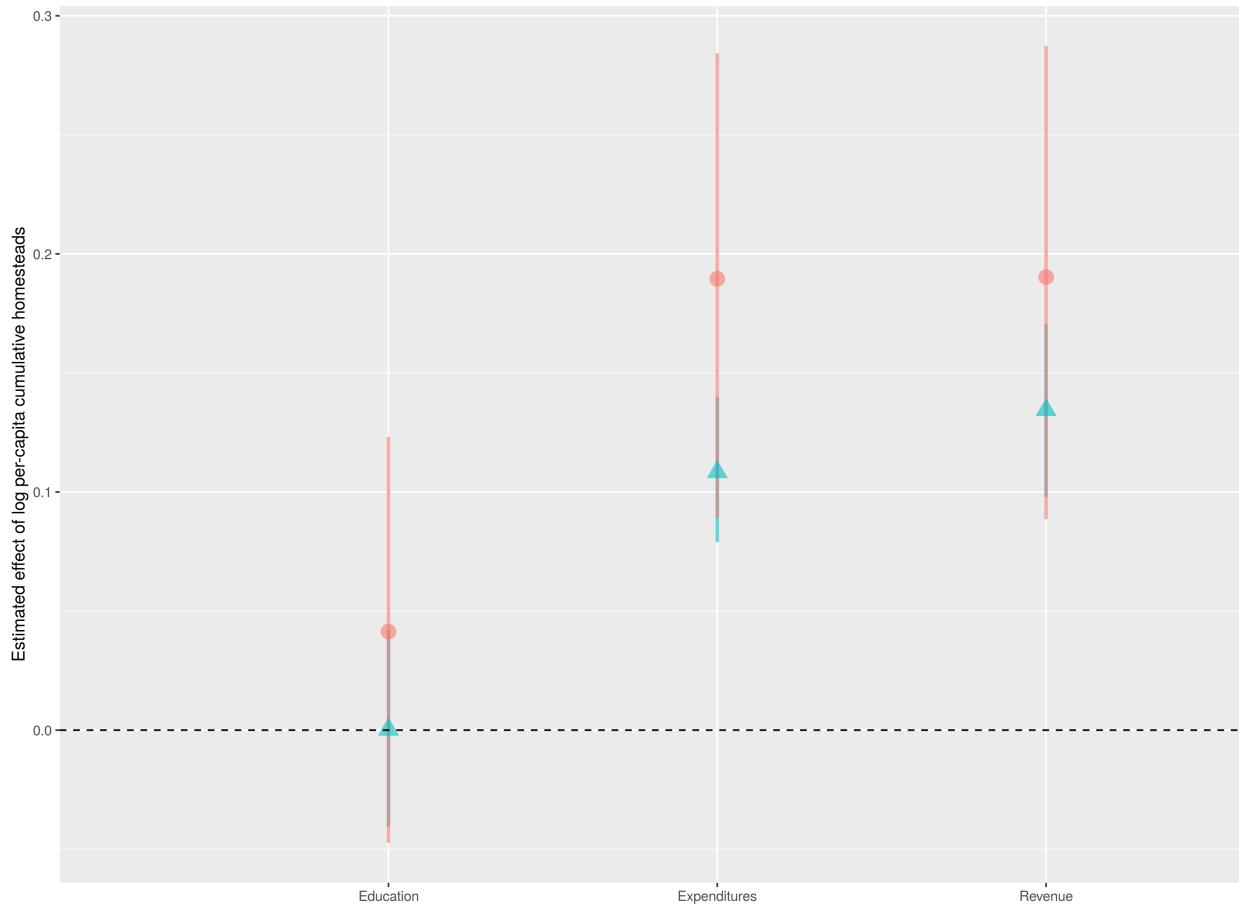


Figure 9: DD estimates of log per-capita cumulative homesteads on log per-capita state government finance, without including average farm values in the regression. See notes to Fig. 2.

## 4 Causal mechanisms

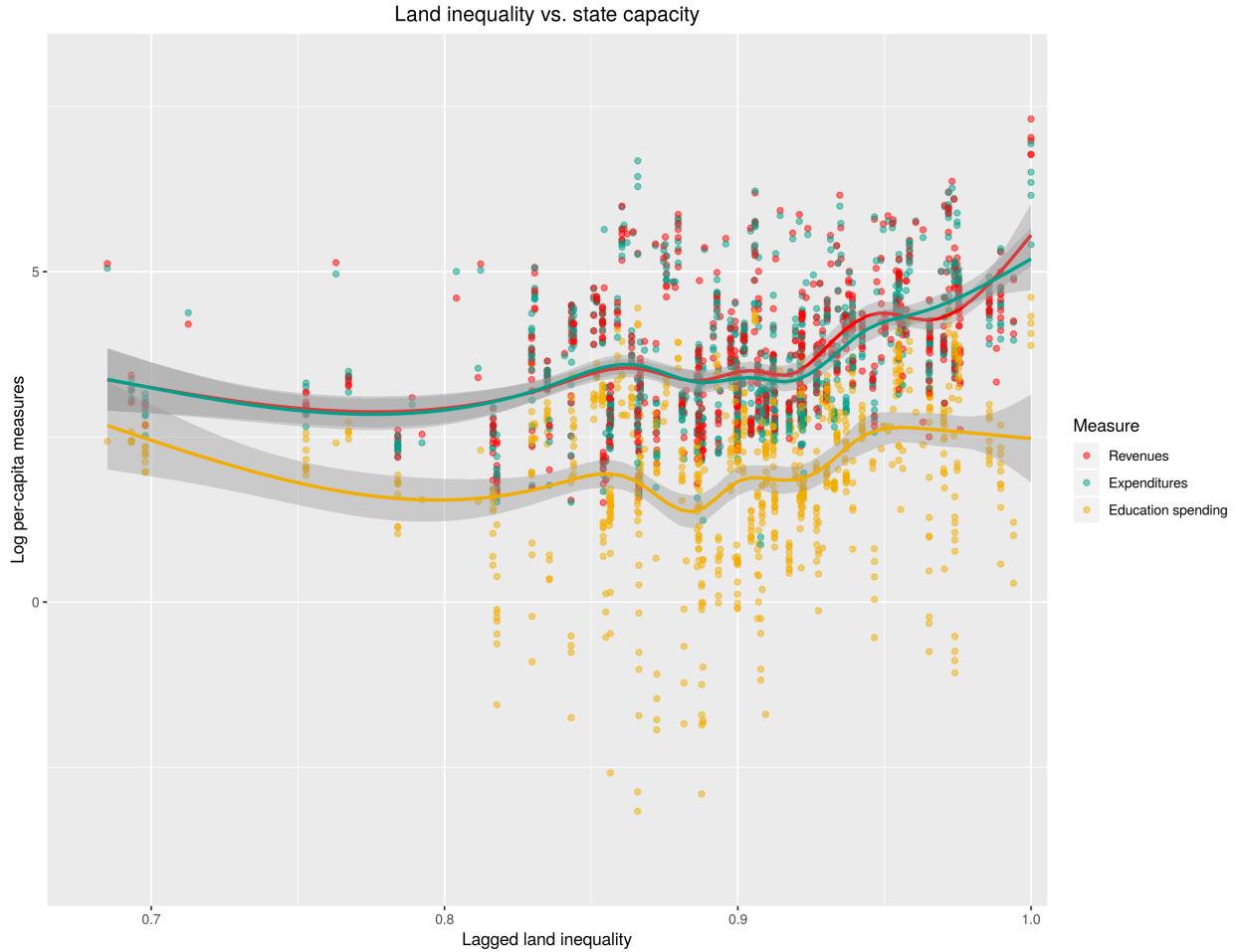


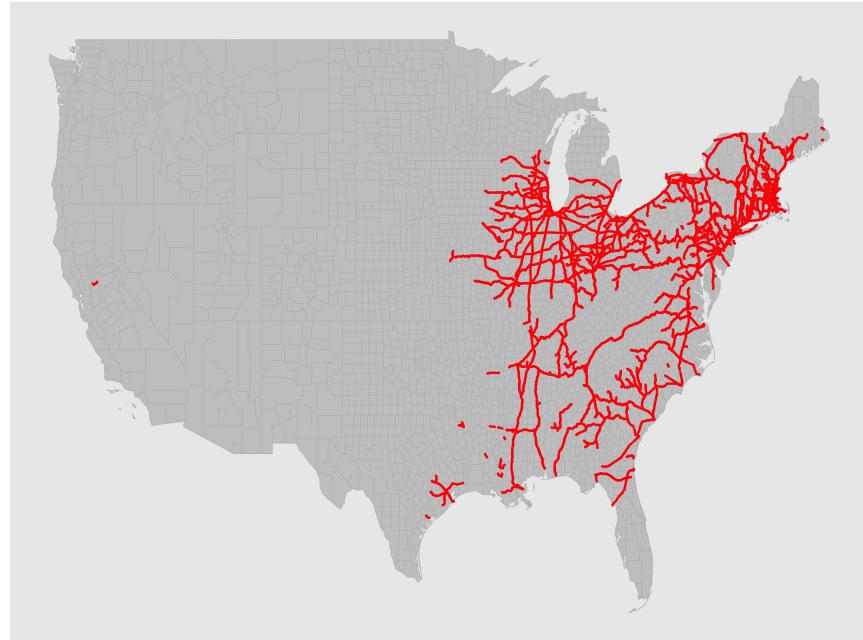
Figure 10: Land inequality vs. log per-capita revenues and expenditures at the state-level, 1860-1950. Each point is a state-year observation. Lines represent generalized additive model (GAM) fits to the data and shaded regions represent corresponding 95% confidence intervals.

Table 2: DD estimates: Impact of log per-capita cumulative homesteads (county-level).

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

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

1862 (1911 county borders)



1911

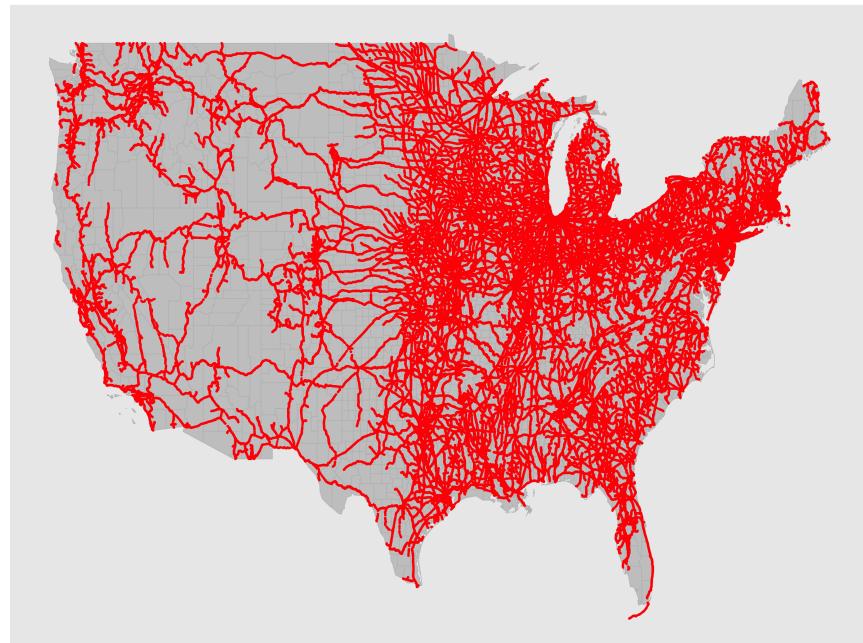


Figure 11: Railroad lines in 1862 and 1911, overlaid on 1911 county borders. Railroad data from Atack (2013) and county border data from Long (1995).

## References

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