

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

Table of contents

1 Simulations	1
2 Exploratory data analysis	3
3 Estimates	7
4 Causal mechanisms	8

1 Simulations

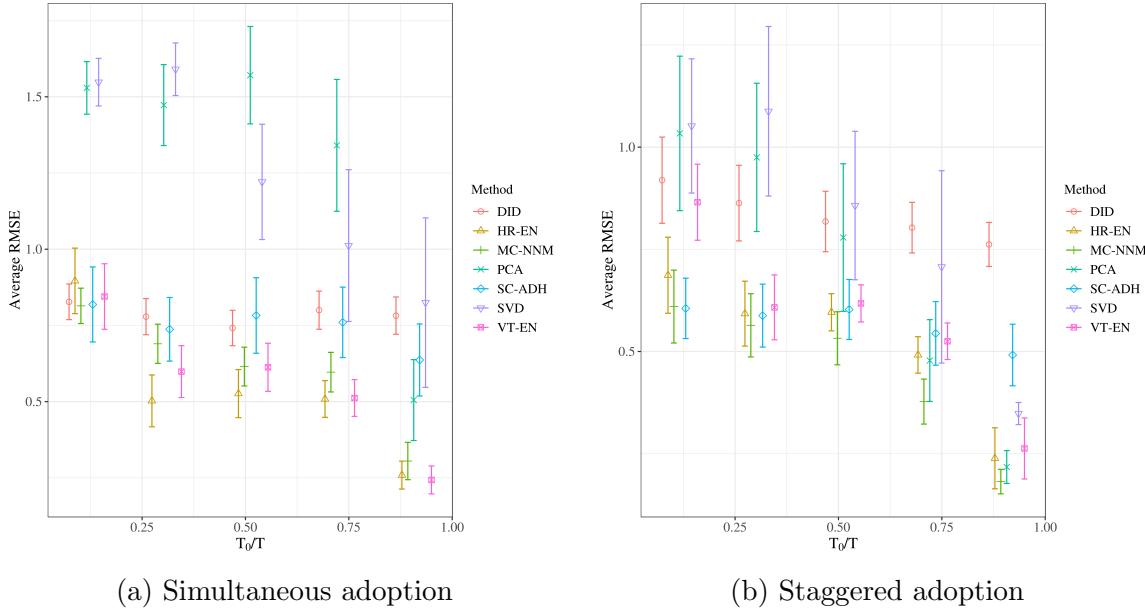


Figure 1: Basque Country Data, $N_t = 8$.

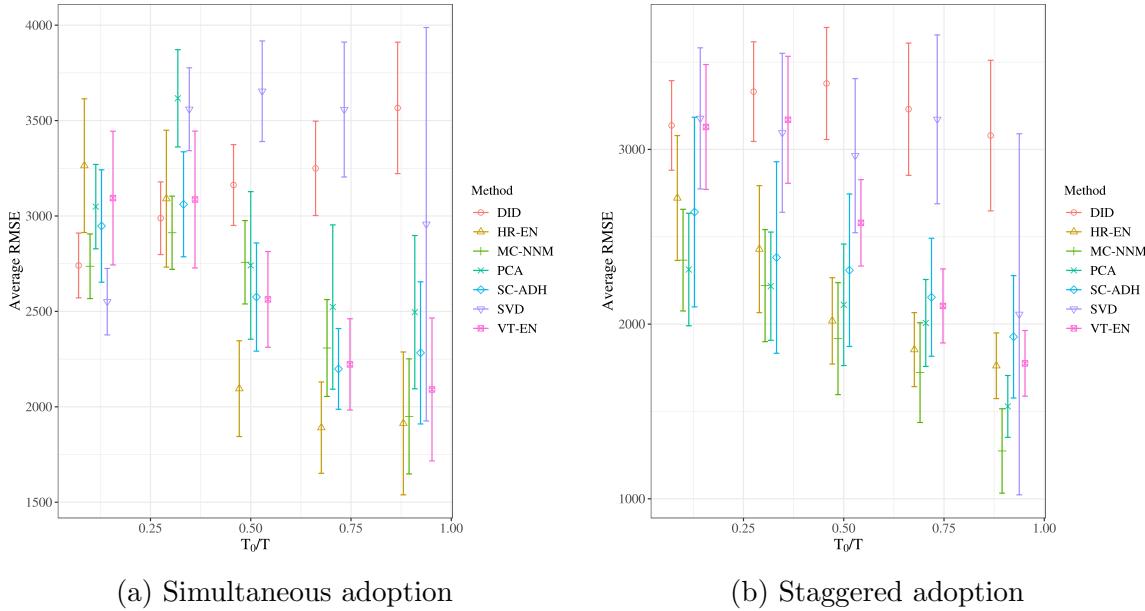


Figure 2: West German Reunification Data, $N_t = 8$.

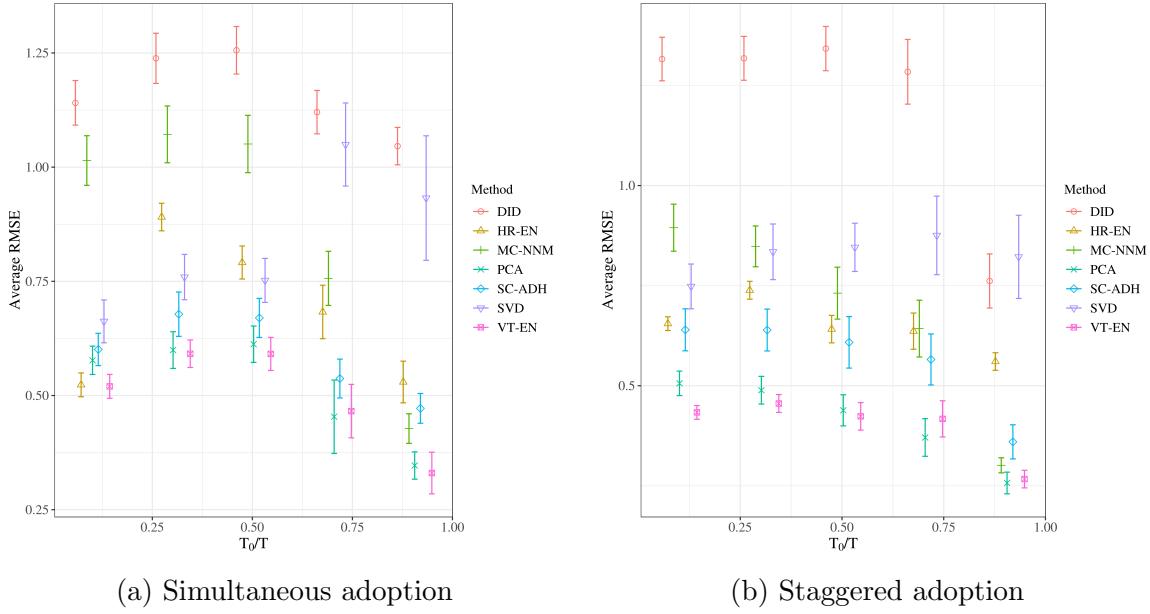


Figure 3: State Government Expenditures Data, $N_t = 10$.

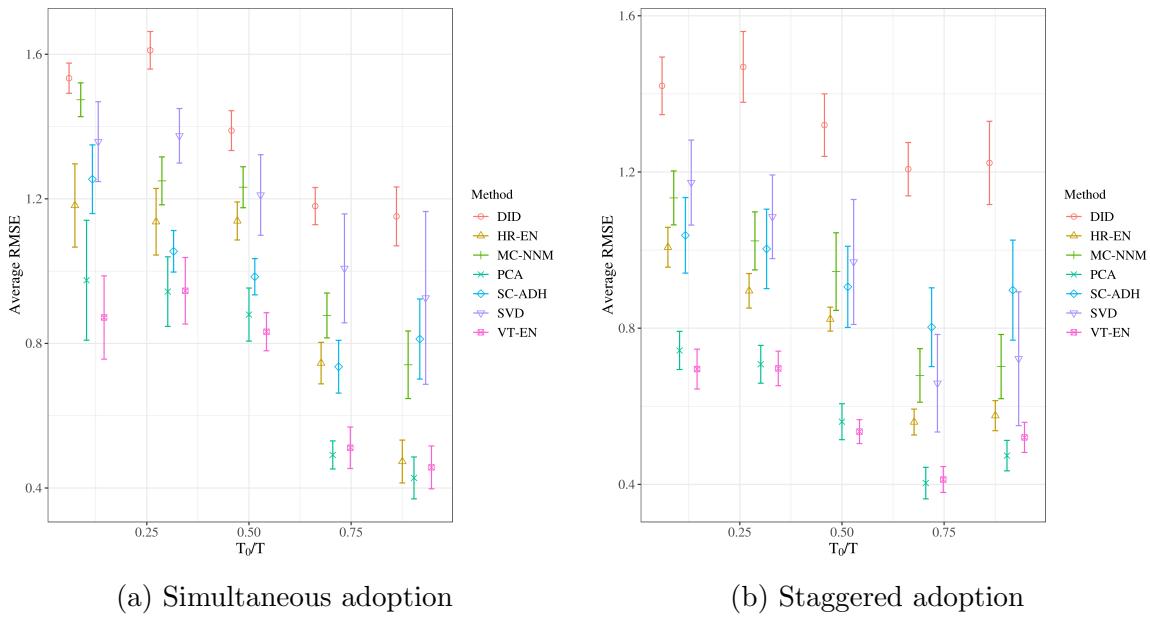


Figure 4: State Government Education Spending Data, $N_t = 10$.

2 Exploratory data analysis

Table 1: Definitions and sources of variables.

Theme	Variable	Coverage	Definition	Source
Farms	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.
State Capacity	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 (https://glorecords.blm.gov) (total free pop. data from Haines (2010))

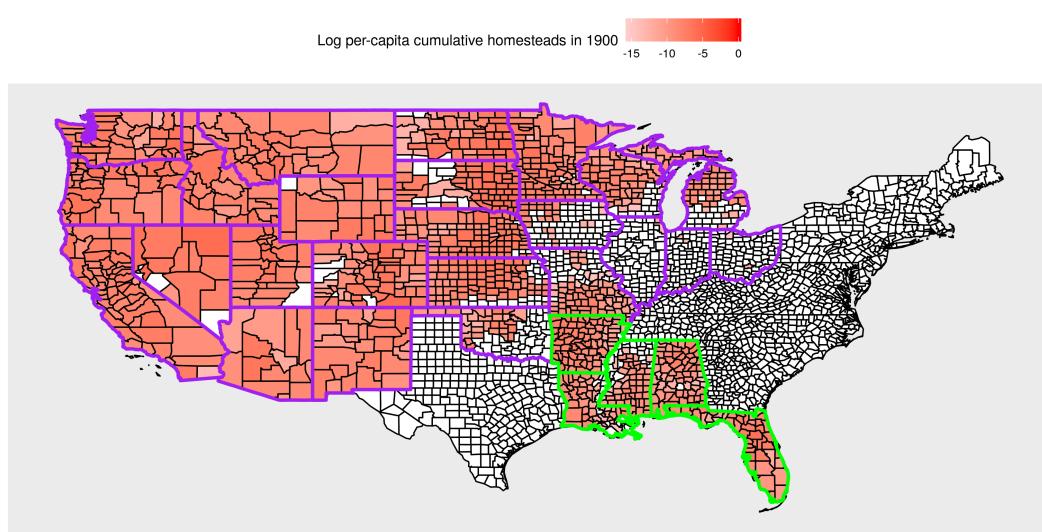
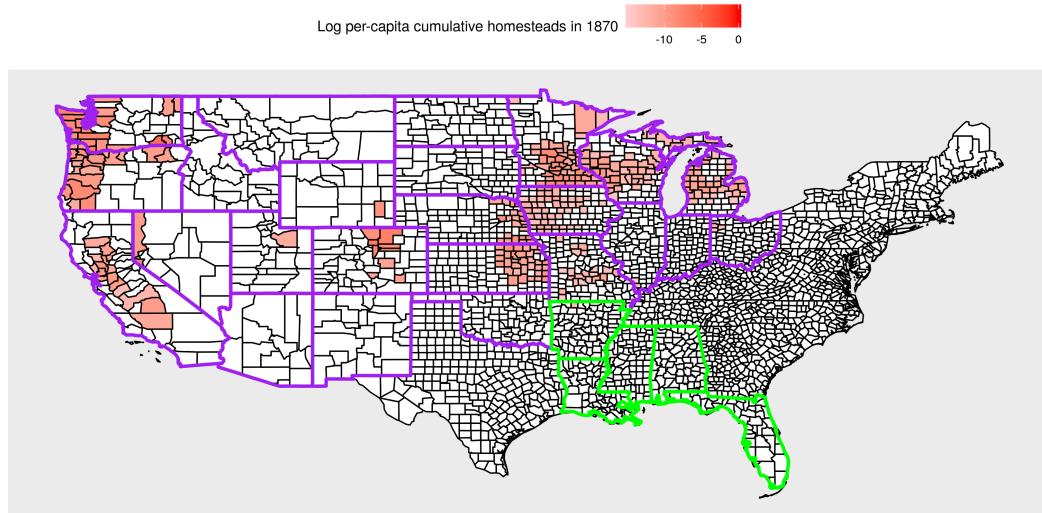


Figure 5: Log per-capita cumulative homesteads in 1870 and 1900, overlaid on 1911 county borders. Darker-colored counties have higher values than lighter-colored counties, and white-colored counties have missing values. States bordered in green are southern public land states and those bordered in purple are western public land states. County border data from Long (1995).

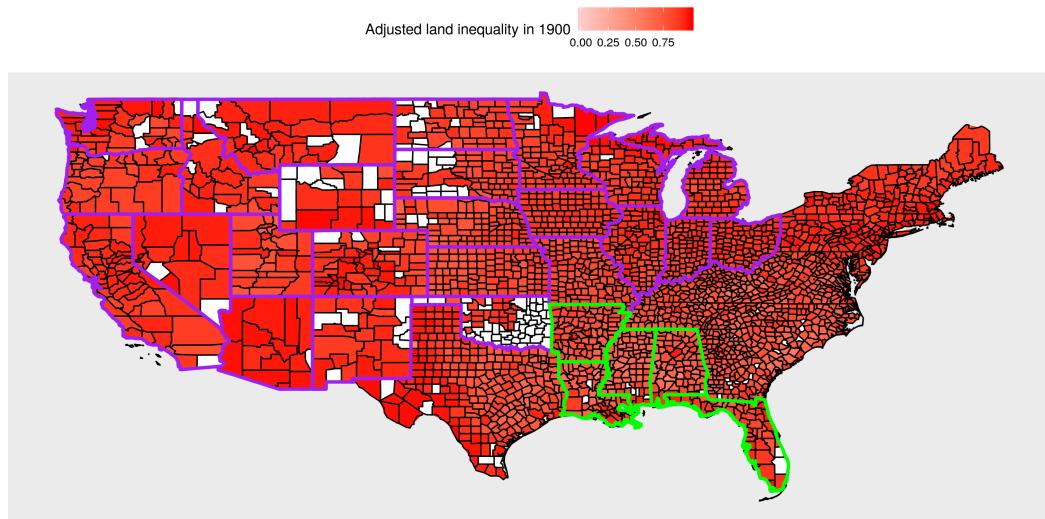
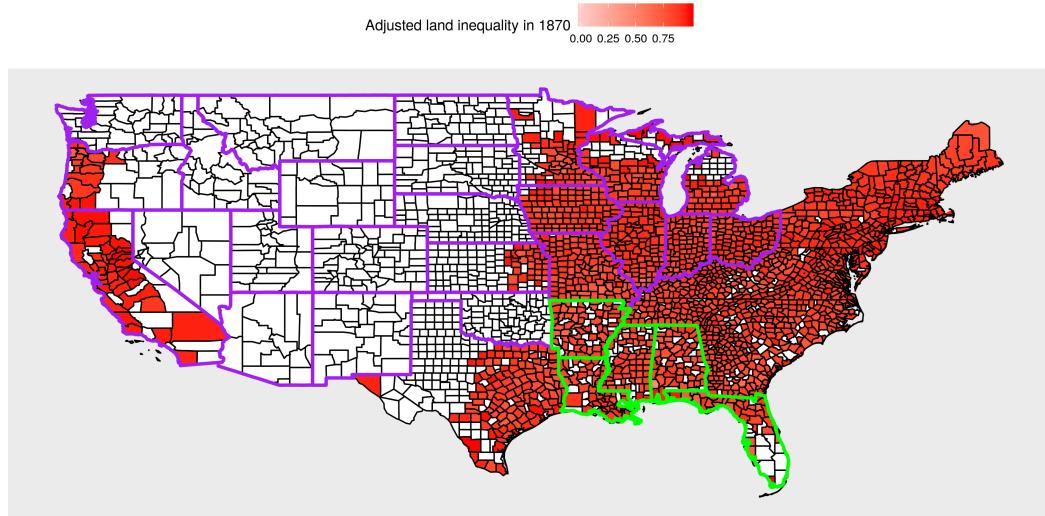


Figure 6: Adjusted land inequality in 1870 and 1900, overlaid on 1911 county borders. See notes to Fig. 5.

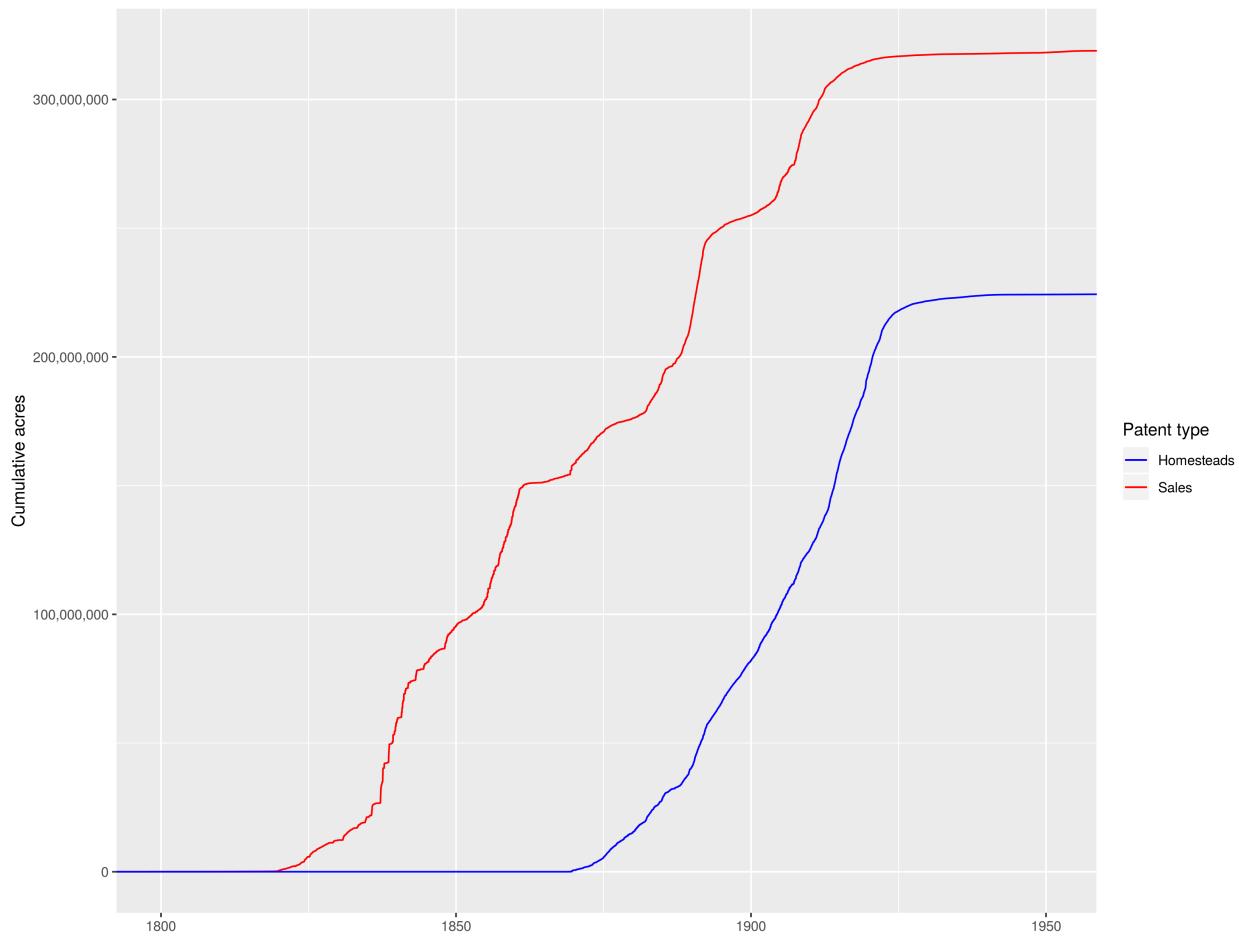


Figure 7: Cumulative total acres (by patent type) disbursed in public land states, 1800 - 1950.

3 Estimates

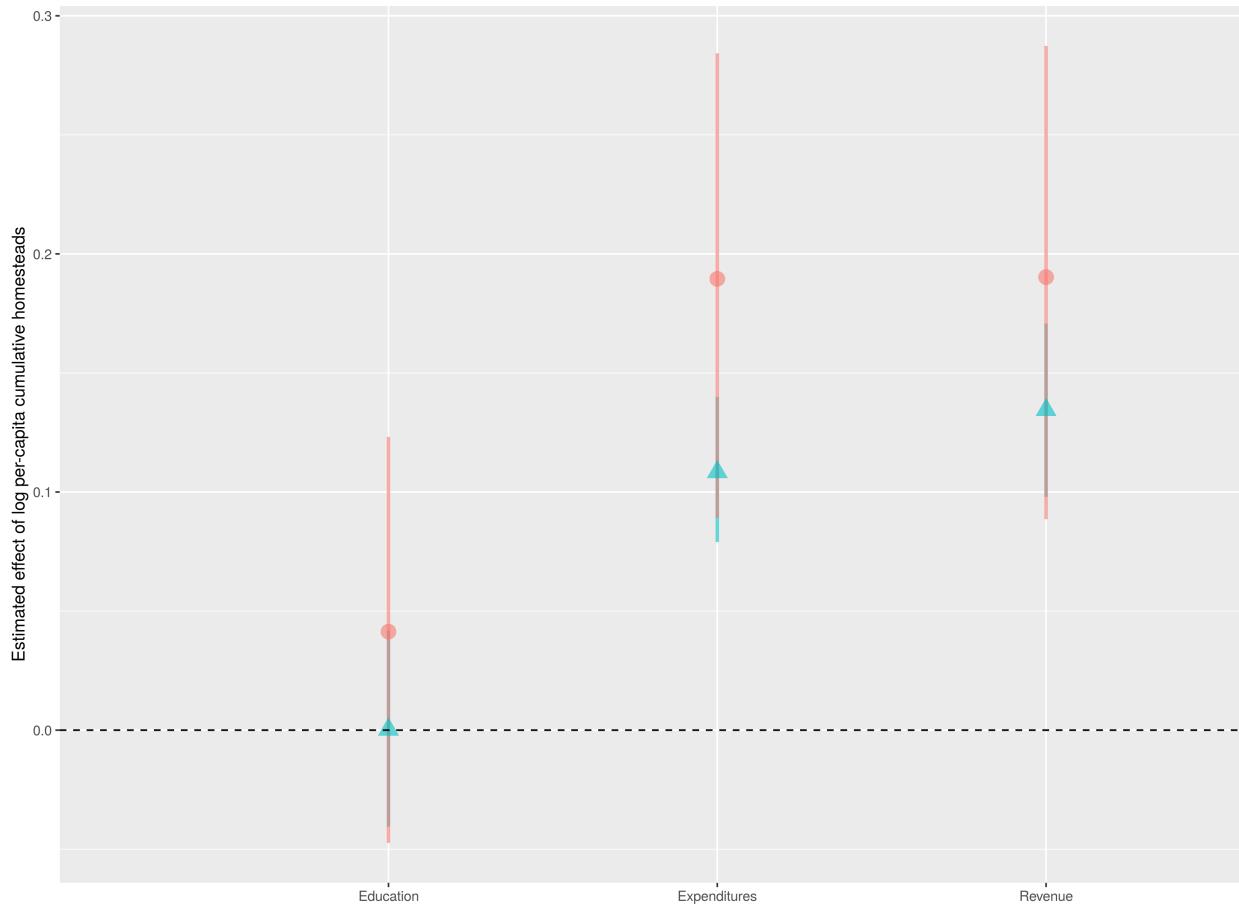


Figure 8: DD estimates of log per-capita cumulative homesteads on log per-capita state government finance, without including average farm values in the regression. See notes to Fig. 2.

4 Causal mechanisms

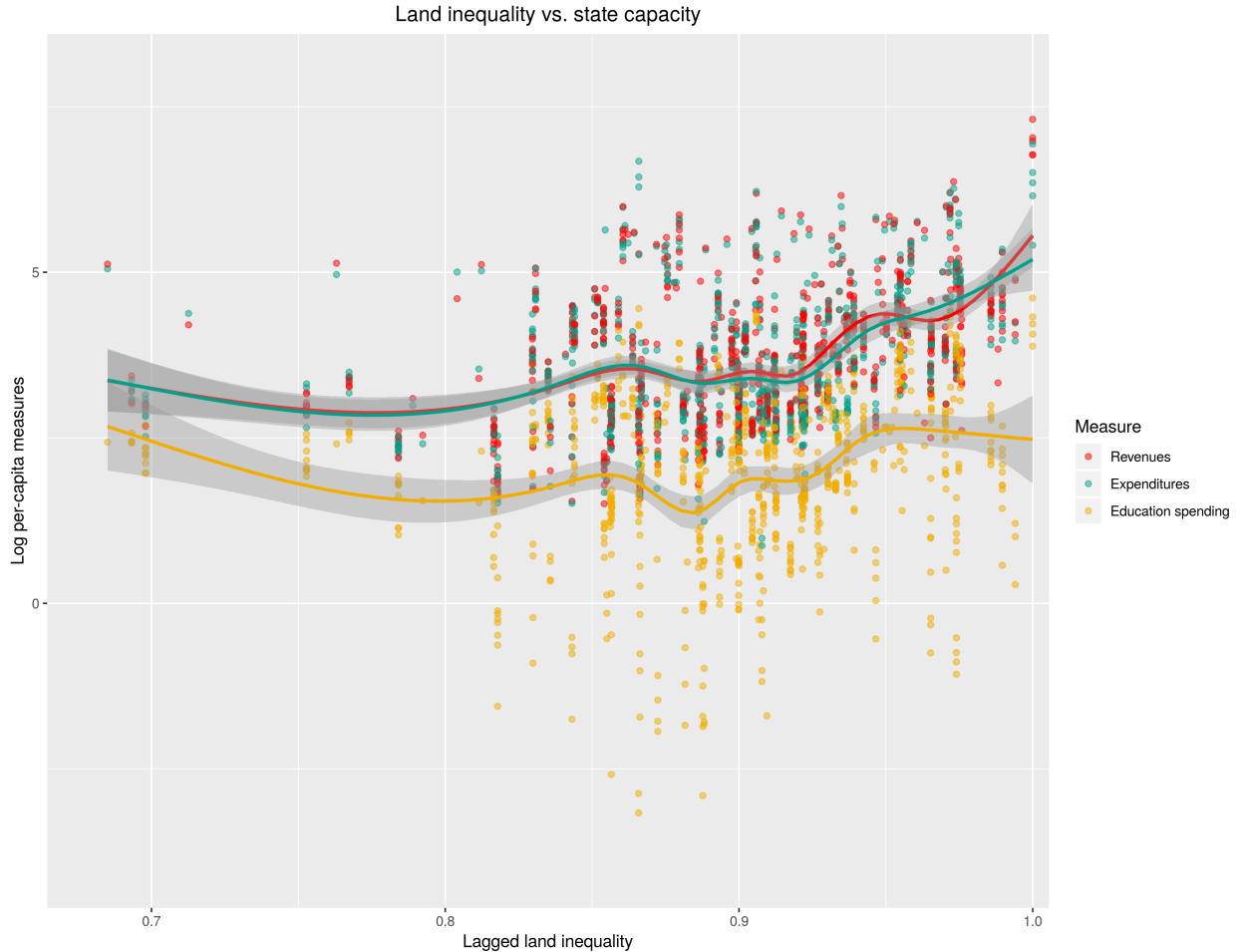


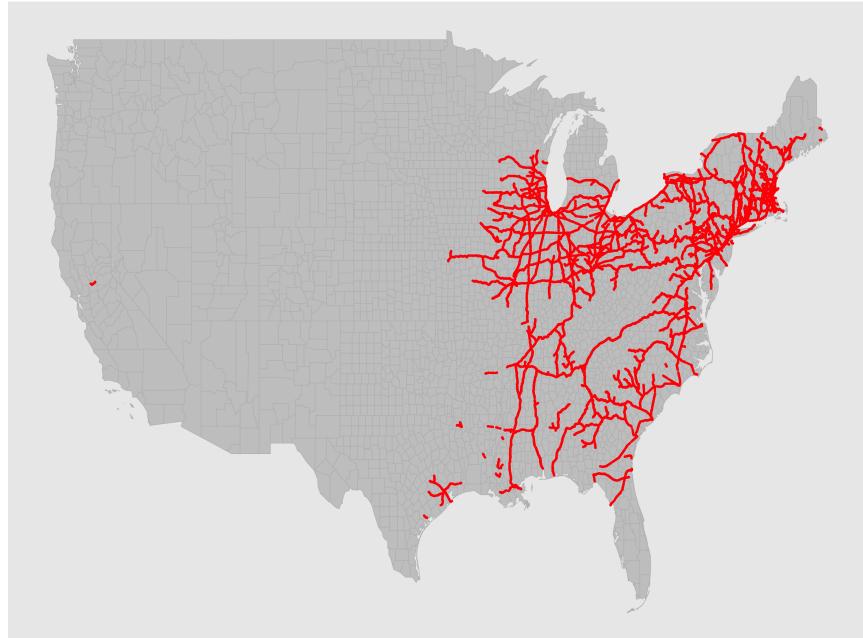
Figure 9: Land inequality vs. log per-capita revenues and expenditures at the state-level, 1860-1950. Each point is a state-year observation. Lines represent generalized additive model (GAM) fits to the data and shaded regions represent corresponding 95% confidence intervals.

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

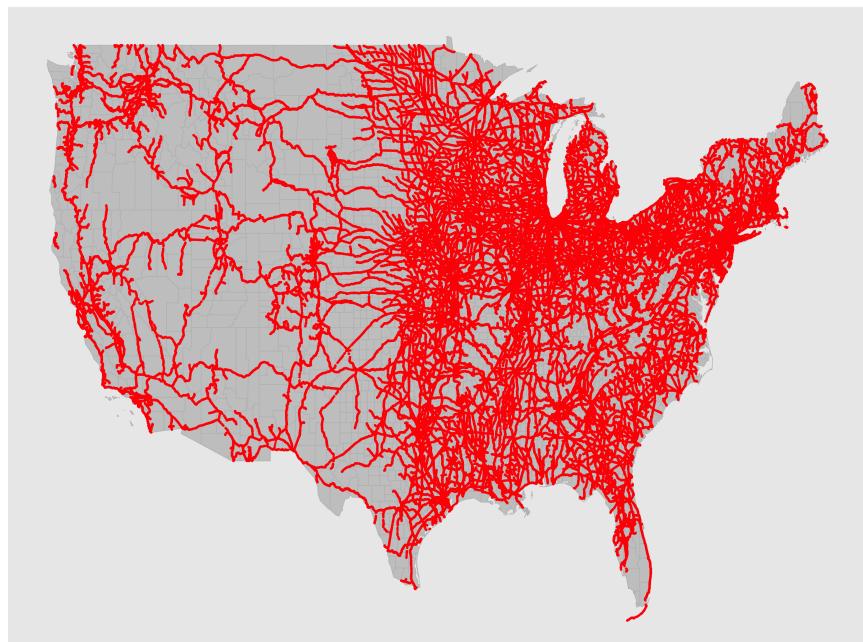


Figure 10: Railroad lines in 1862 and 1911, overlaid on 1911 county borders. Railroad data from Atack (2013) and county border data from Long (1995).

References

- Atack, J. (2013). On the use of geographic information systems in economic history: The american transportation revolution revisited. *The Journal of Economic History* 73(2), 313–338.
- Haines, M. R. (2010). Historical, Demographic, Economic, and Social Data: The United States, 1790-2002. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2010-05-21. doi.org/10.3886/ICPSR02896.v3.
- Long, J. H. (1995). Atlas of historical county boundaries. *The Journal of American History* 81(4), 1859–1863.
- Sylla, R. E., J. B. Legler, and J. Wallis (1993). Sources and Uses of Funds in State and Local Governments, 1790-1915: [United States]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2017-05-21. doi.org/10.3886/ICPSR06304.v1.
- Sylla, R. E., J. B. Legler, and J. Wallis (1995a). State and Local Government [United States]: Sources and Uses of Funds, Census Statistics, Twentieth Century [Through 1982]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2017-05-21. doi.org/10.3886/ICPSR06304.v1.
- Sylla, R. E., J. B. Legler, and J. Wallis (1995b). State and Local Government [United States]: Sources and Uses of Funds, State Financial Statistics, 1933-1937. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2017-05-21. http://doi.org/10.3886/ICPSR06306.v1.
- Vollrath, D. (2013). Inequality and school funding in the rural united states, 1890. *Explorations in Economic History* 50(2), 267–284.