

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

Table 1: Definitions and data sources of variables.

Theme	Variable	Coverage	Definition	Source
Farms	Farm size	1860	Log average farm size	Haines (2010)
	Farm value	1850,1860	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	Ibid.
State Capacity	Revenues	1783-1982	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.
	Education spending	1783-1942	Log per-capita state government education spending (1942\$)	Ibid.
Homesteads	Homestead entries	1869-1982	Log per-capita statewide sum of patents issued under the HSA	U.S. BLM (https://glorerecords.blm.gov) (total free pop. data from Haines (2010))
Railroads	Railroad access	1850, 1860	Log total miles of operational railroad track per sq mi	Constructed from Atack (2013)

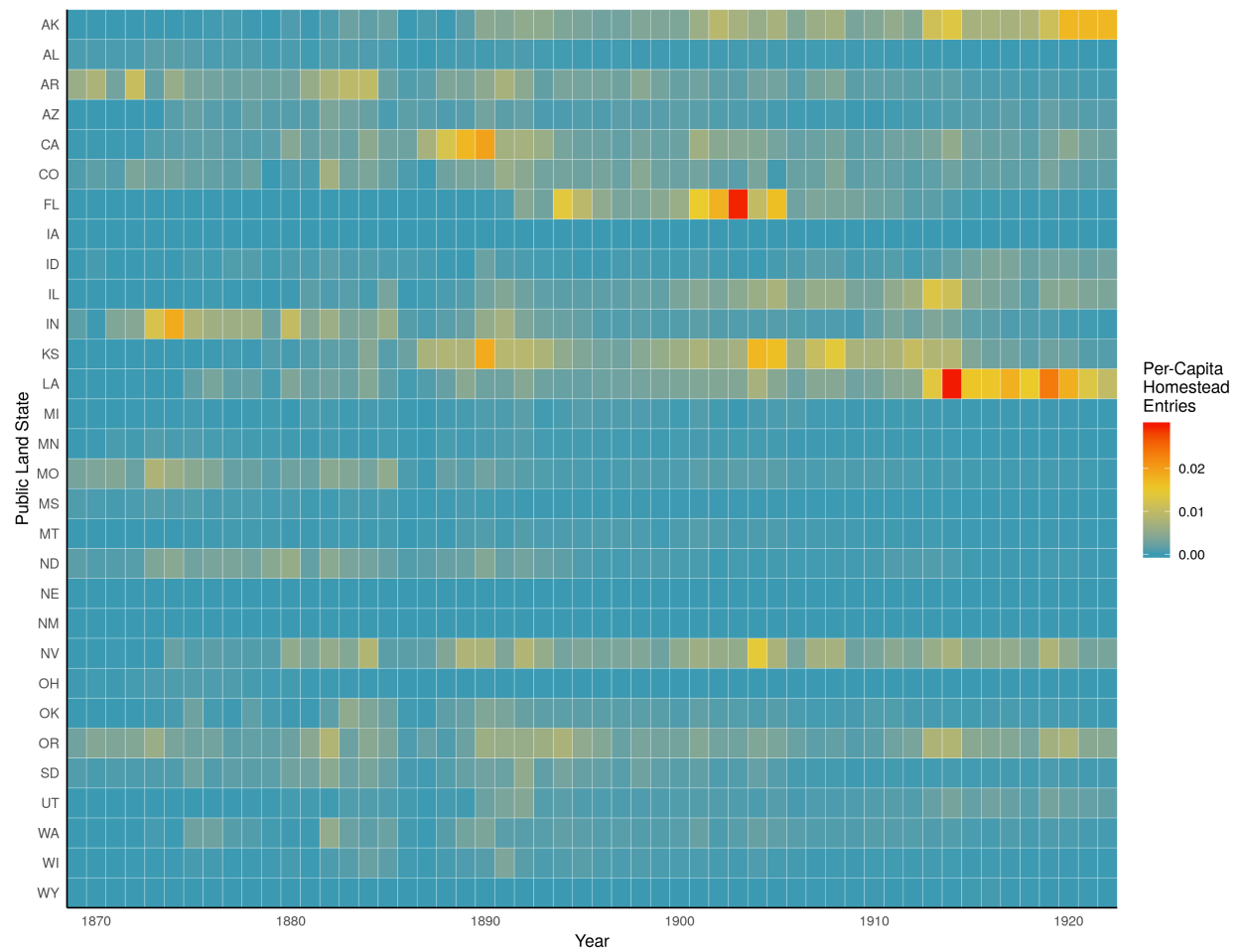
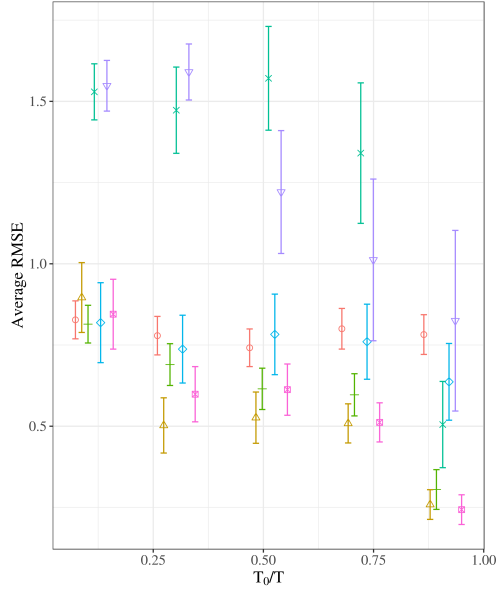
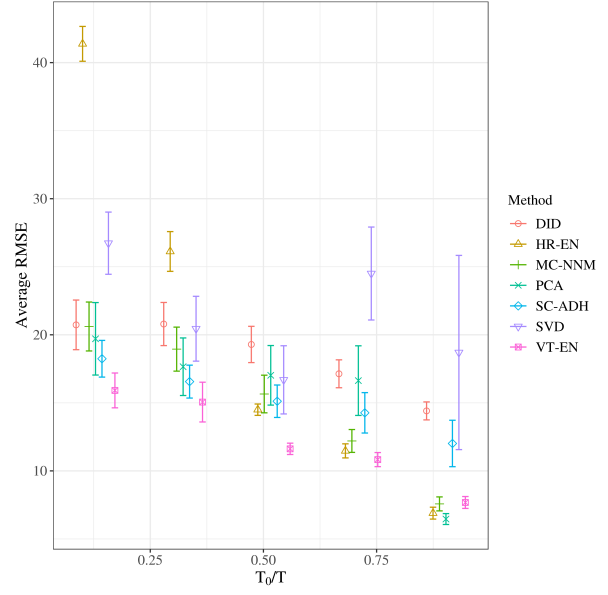


Figure 1: Per-capita statewide sum of homestead entries in state i and year t , 1869-1922.

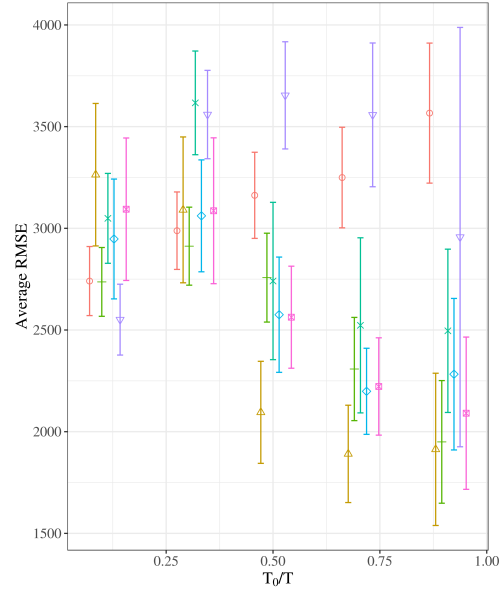
2 Simulations



(a) Basque Country terrorism data, $N_t = 8$

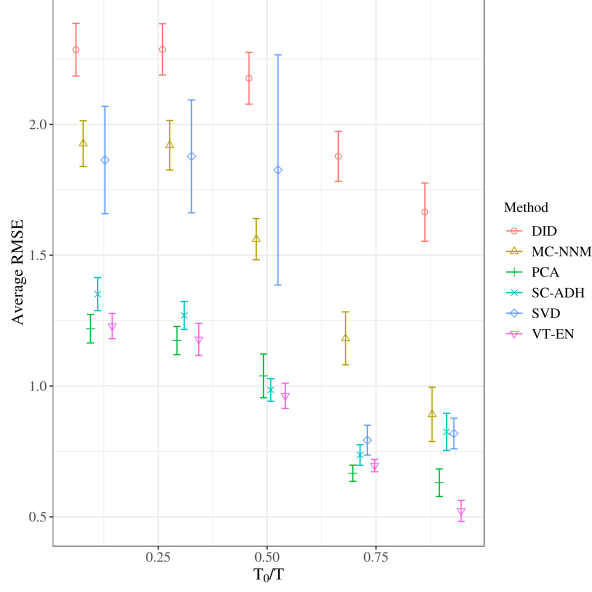


(b) California smoking ban data, $N_t = 19$

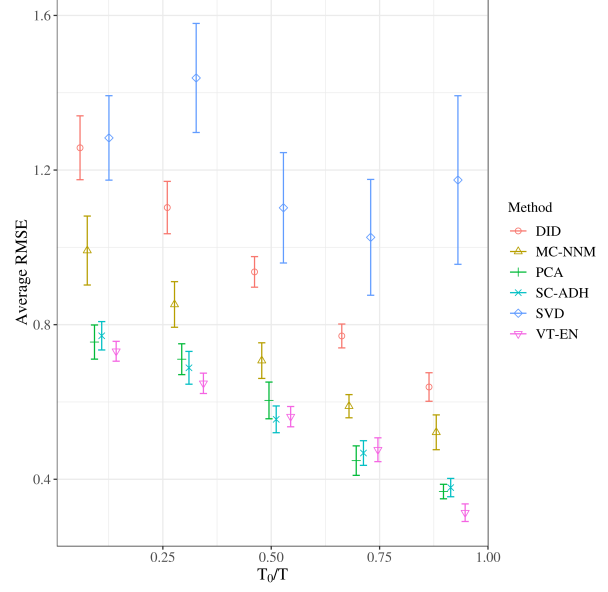


(c) West German reunification data, $N_t = 8$

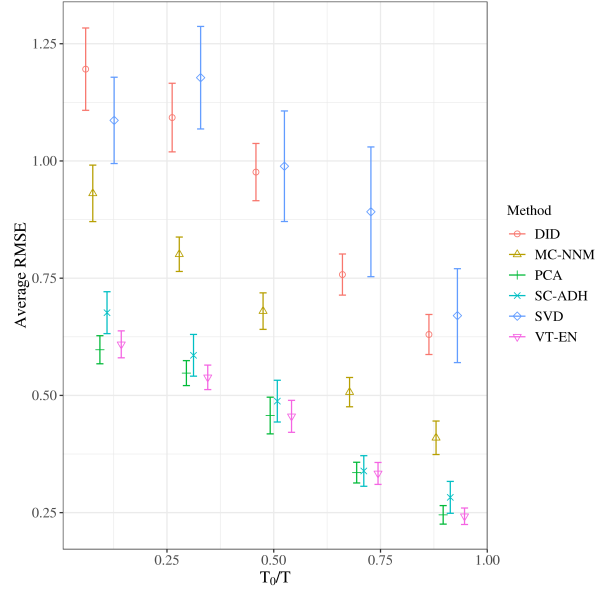
Figure 2: Placebo tests under simultaneous treatment adoption. See footnotes to Fig. 1.



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

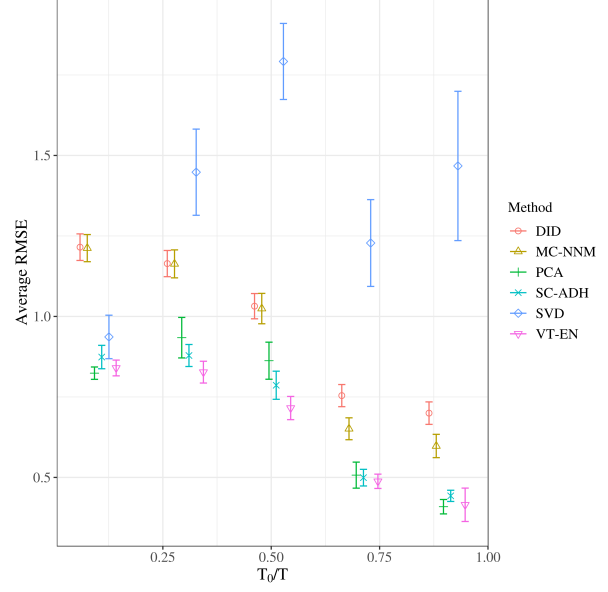
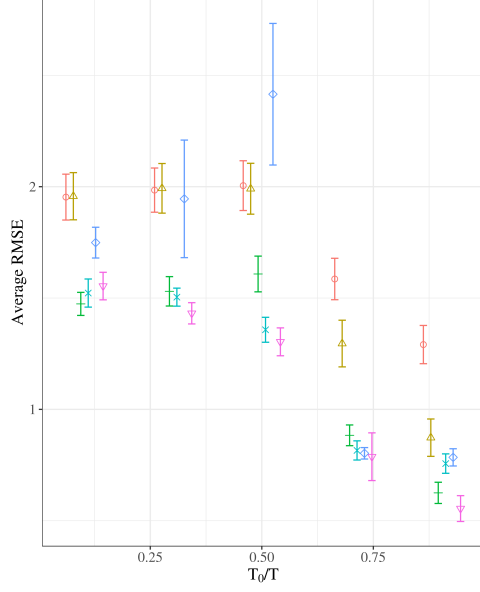


(b) State government expenditures, $N_t = 9$



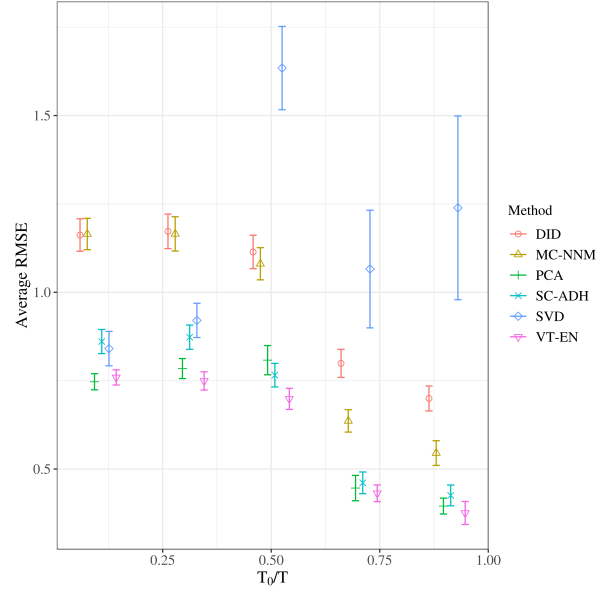
(c) State government revenues, $N_t = 10$

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



(a) State government education spending, $N_t = 9$

(b) State government expenditures, $N_t = 9$



(c) State government revenues, $N_t = 9$

Figure 4: Placebo tests under simultaneous treatment adoption. See footnotes to Fig. 2.

3 Estimates

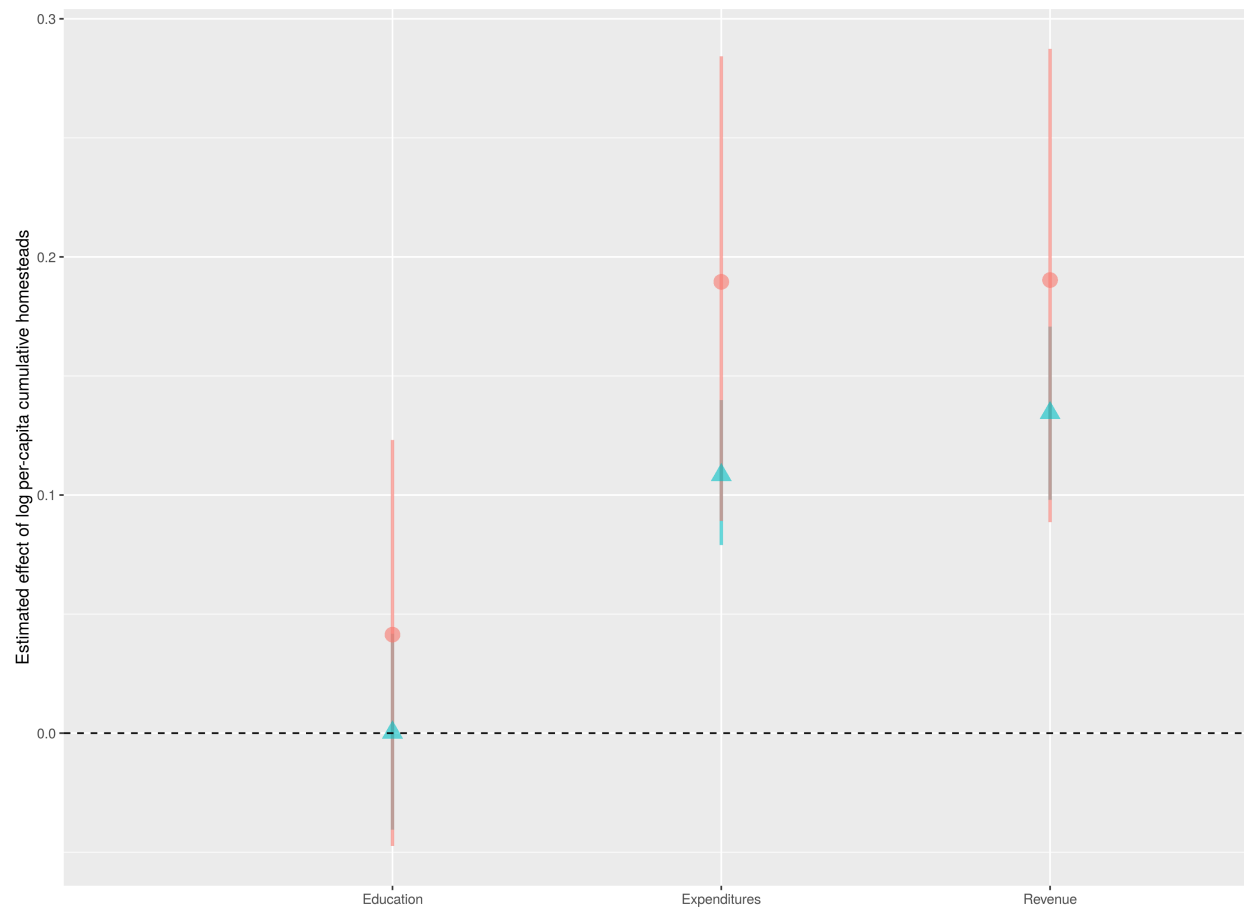


Figure 5: DD estimates of log per-capita cumulative homesteads on log per-capita state government finance, without including average farm values in the regression. See notes to Fig. 3.

4 Causal mechanisms

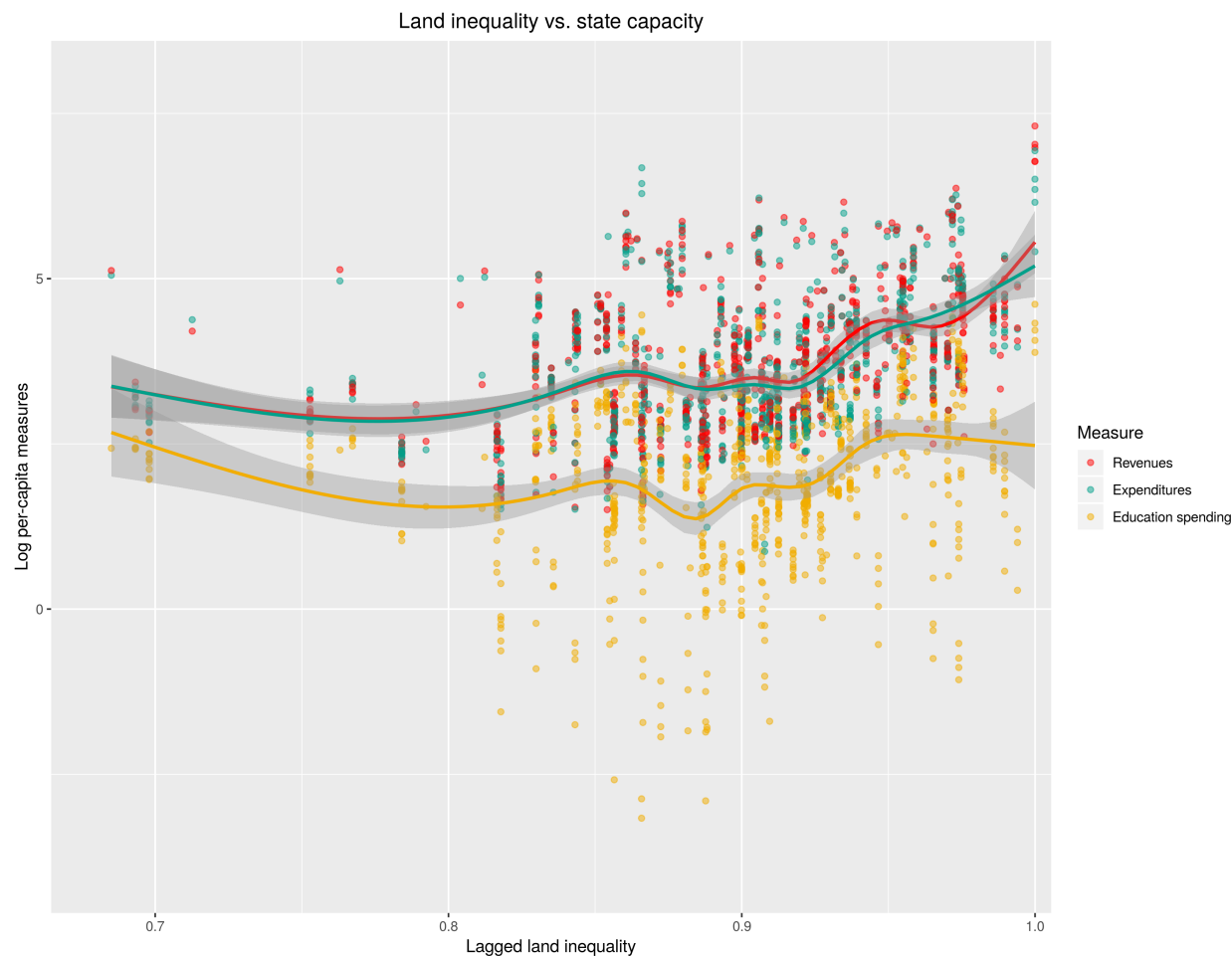


Figure 6: Land inequality vs. log per-capita revenues and expenditures at the state-level, 1860-1950. Each point is a state-year observation. Lines represent generalized additive model (GAM) fits to the data and shaded regions represent corresponding 95% confidence intervals.

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

	Region	
Outcome	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], $N = 1,251$

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

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.