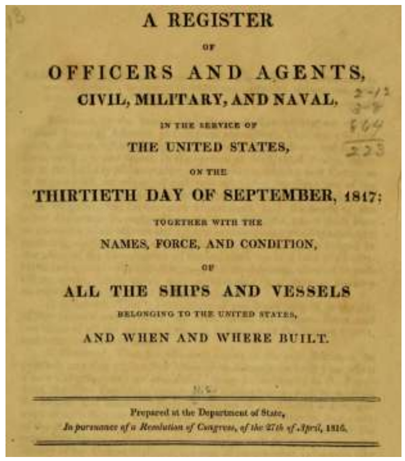
ONLINE APPENDIX (not intended for publication)

A Additional figures and tables

Figure A1: Examples of pages in the Official Register



A REGISTER

OF

OFFICERS AND AGENTS,

CIVIL, MILITARY, AND NAVAL,

IN THE SERVICE OF

THE UNITED STATES,

ON THE

THIRTIETH DAY OF SEPTEMBER, 1817:

TOGETHER WITH THE

NAMES, FORCE, AND CONDITION,

OF

ALL THE SHIPS AND VESSELS

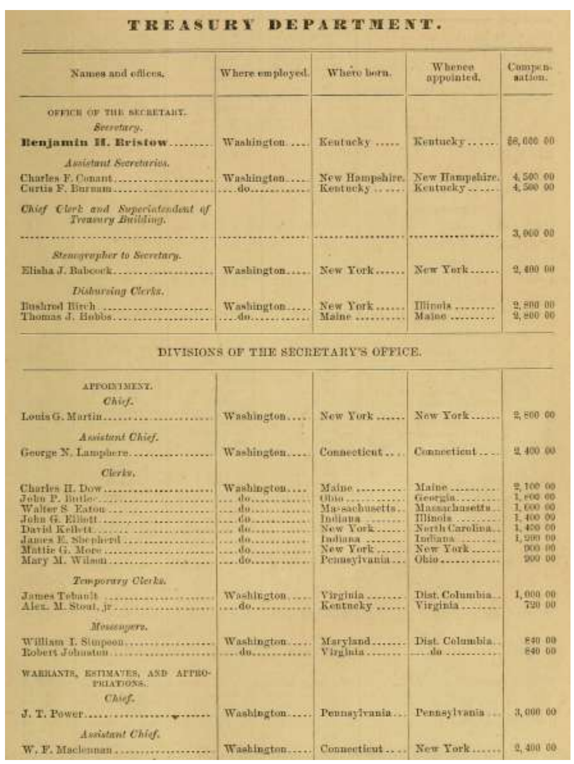
BELONGING TO THE UNITED STATES,

AND WHEN AND WHERE BUILT.

Prepared at the Department of State,

In pursuance of a Resolution of Congress, of the 27th of April, 1816.

(a) 1817 Register



TREASURY DEPARTMENT.

Names and offices.	Where employed.	Where born.	Whence appointed.	Compensation.
OFFICE OF THE SECRETARY.				
Secretary.				
Benjamin H. Bristow	Washington	Kentucky	Kentucky	$8,000 00
Assistant Secretaries.				
Charles F. Conant	Washington	New Hampshire.	New Hampshire.	4,500 00
Curtis F. Burnam	do	Kentucky	Kentucky	4,500 00
Chief Clerk and Superintendent of Treasury Building.				
				3,000 00
Stenographer to Secretary.				
Elisha J. Babcock	Washington	New York	New York	2,400 00
Disbursing Clerks.				
Bushrod Birch	Washington	New York	Illinois	2,800 00
Thomas J. Hobbs	do	Maine	Maine	2,800 00

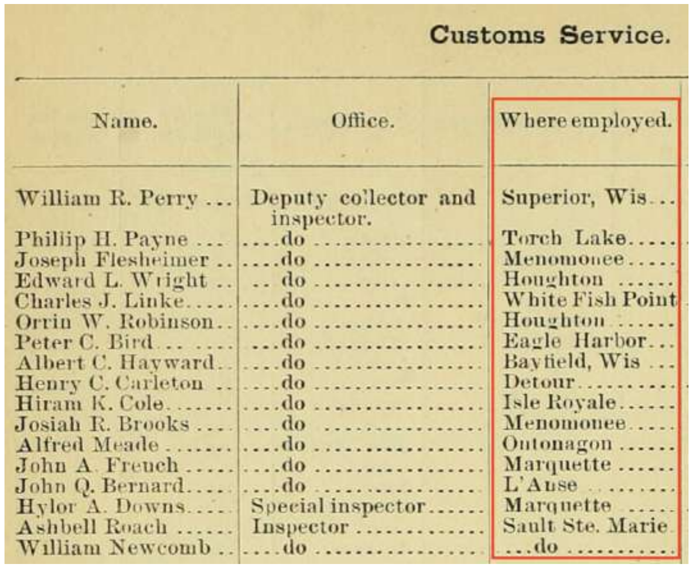
DIVISIONS OF THE SECRETARY'S OFFICE.

APPOINTMENT.				
Chief.				
Louis G. Martin	Washington	New York	New York	2,800 00
Assistant Chief.				
George N. Lamphere	Washington	Connecticut	Connecticut	2,400 00
Clerks.				
Charles H. Dow	Washington	Maine	Maine	2,100 00
John P. Butler	do	Ohio	Georgia	1,800 00
Walter S. Eaton	do	Massachusetts	Massachusetts	1,600 00
John G. Elliott	do	Indiana	Illinois	1,400 00
David Kellett	do	New York	North Carolina	1,400 00
James E. Shepherd	do	Indiana	Indiana	1,200 00
Mattie G. More	do	New York	New York	900 00
Mary M. Wilson	do	Pennsylvania	Ohio	900 00
Temporary Clerks.				
James Tebault	Washington	Virginia	Dist. Columbia	1,000 00
Alex. M. Stout, jr	do	Kentucky	Virginia	720 00
Messengers.				
William I. Simpson	Washington	Maryland	Dist. Columbia	840 00
Robert Johnston	do	Virginia	do	840 00
WARRANTS, ESTIMATES, AND APPROPRIATIONS.				
Chief.				
J. T. Power	Washington	Pennsylvania	Pennsylvania	3,000 00
Assistant Chief.				
W. F. Maclennan	Washington	Connecticut	New York	2,400 00

(b) 1875 Register

Notes: The figure shows the cover page of the 1817's Register, and the first page of the Treasury Department in the 1875's Register.

Figure A2: "Where employed" column from the 1875 Official Register

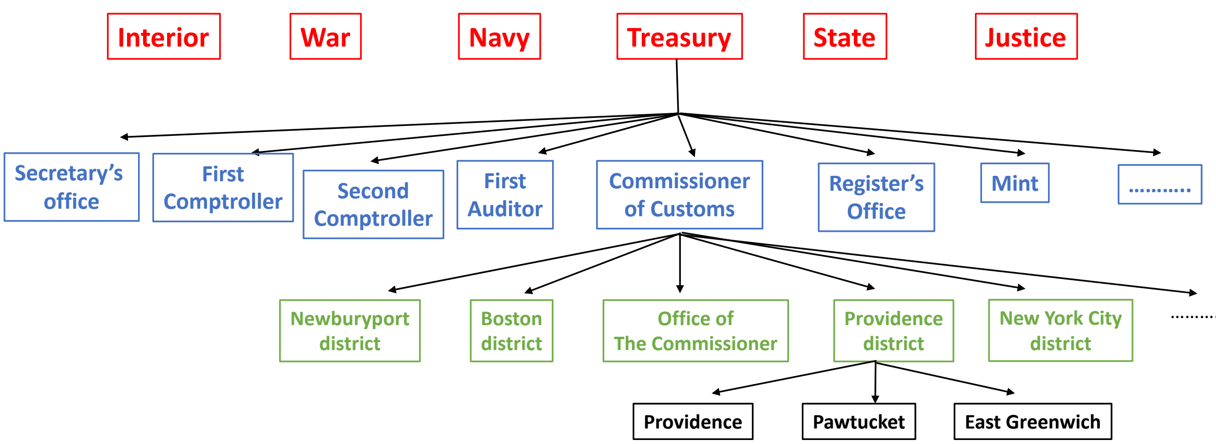


Customs Service.

Name.	Office.	Where employed.
William R. Perry	Deputy collector and inspector.	Superior, Wis
Philip H. Payne	do	Torch Lake
Joseph Flesheimer	do	Menomonee
Edward L. Wright	do	Houghton
Charles J. Linke	do	White Fish Point
Orrin W. Robinson	do	Houghton
Peter C. Bird	do	Eagle Harbor
Albert C. Hayward	do	Bayfield, Wis
Henry C. Carleton	do	Detour
Hiram K. Cole	do	Isle Royale
Josiah R. Brooks	do	Menomonee
Alfred Meade	do	Ontonagon
John A. French	do	Marquette
John Q. Bernard	do	L'Anse
Hylor A. Downs	Special inspector	Marquette
Ashbell Roach	Inspector	Sault Ste. Marie
William Newcomb	do	do

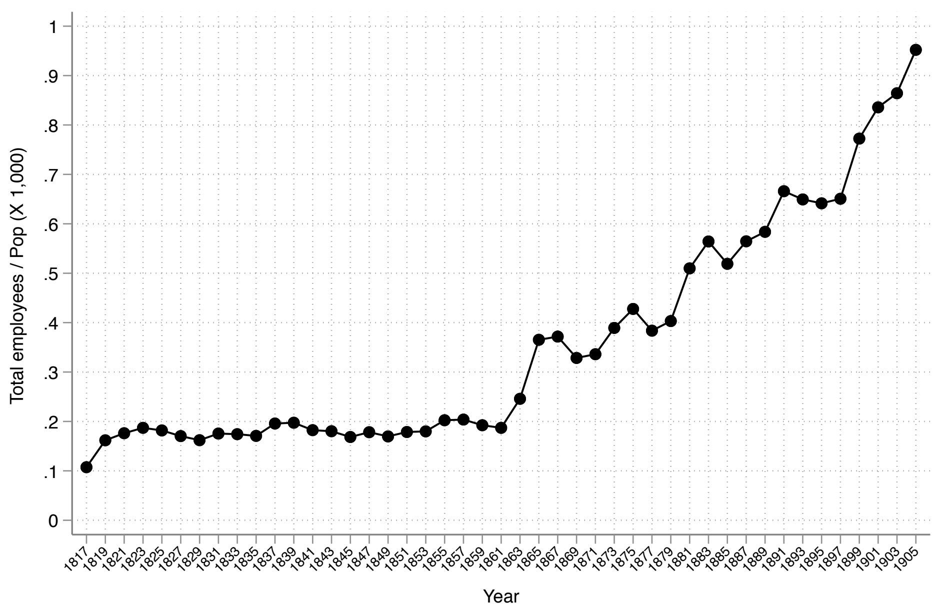
Notes: The figure shows an extract from the 1875 Register, highlighting the locations under the "where employed" column.

Figure A3: Partial Hierarchy for 1853



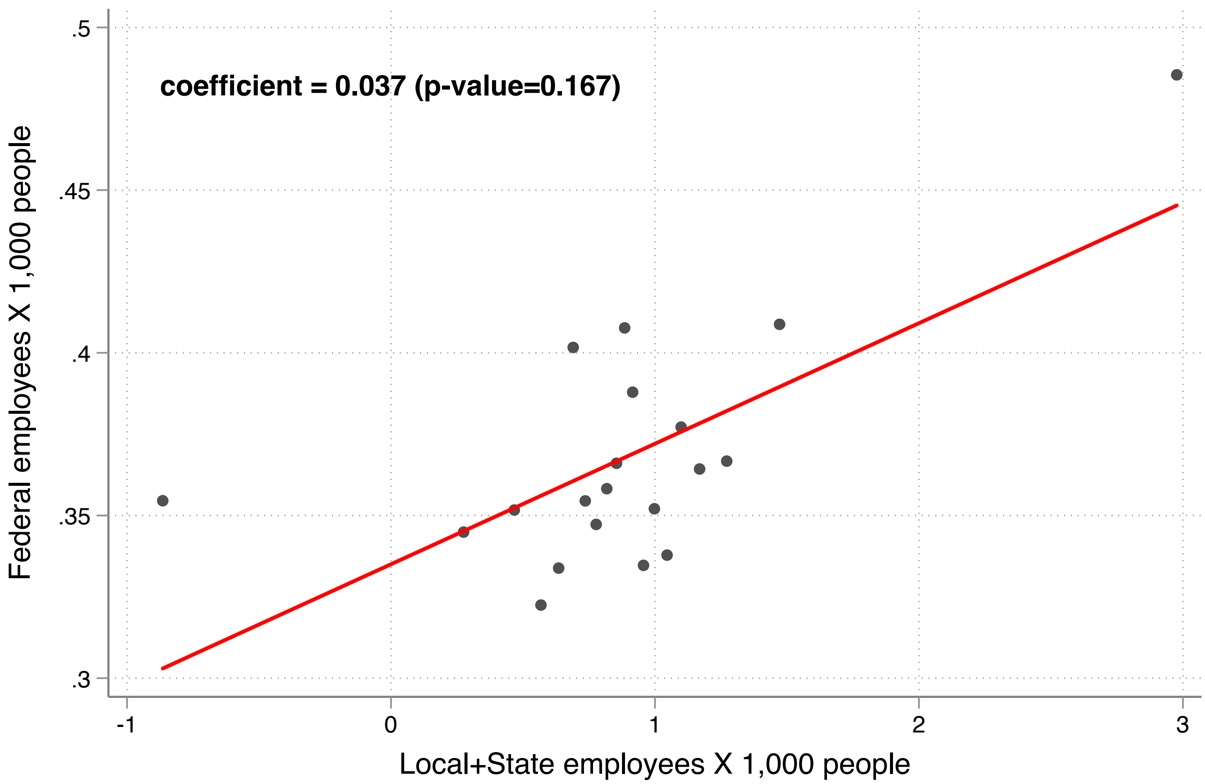
Notes: The figure shows a partial graphical representation of the hierarchy of the U.S. federal bureaucracy in 1853. Departments are shown in red, bureaus/offices are shown in blue, divisions are shown in green, and local offices are shown in black.

Figure A4: Number of federal employees normalized by U.S. population



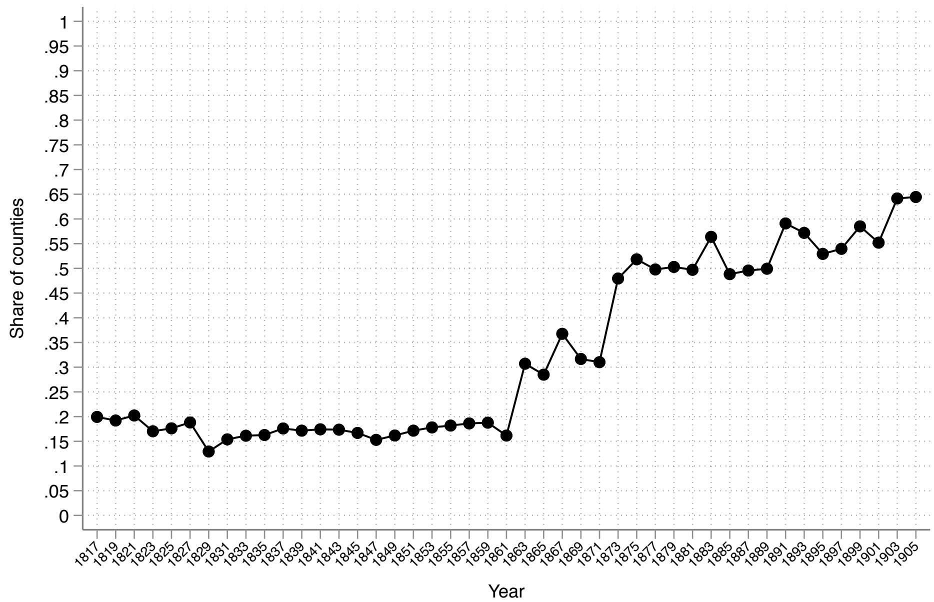
Notes: The figure shows the number of federal employees normalized by U.S. population (divided by 1,000).

Figure A5: Does the federal state substitute for local and state governments?



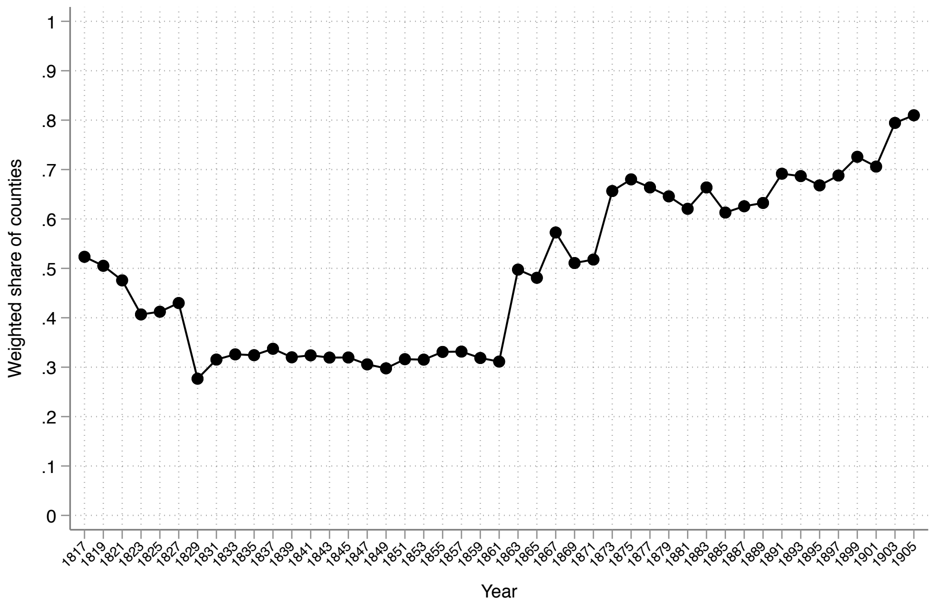
Notes: The figure shows the partial relationship between the number of federal employee per 1,000 people and the number of local and state public employees per 1,000 people. The unit of observation is a county-year, with the sample limited to 1855, 1865, 1875, 1885, 1895, and 1905. The relationship shown is after partialing out county fixed effects and year fixed effects. The p-value is from a regression clustering at the county level.

Figure A6: Share of counties with state presence – sample of states as of 1817



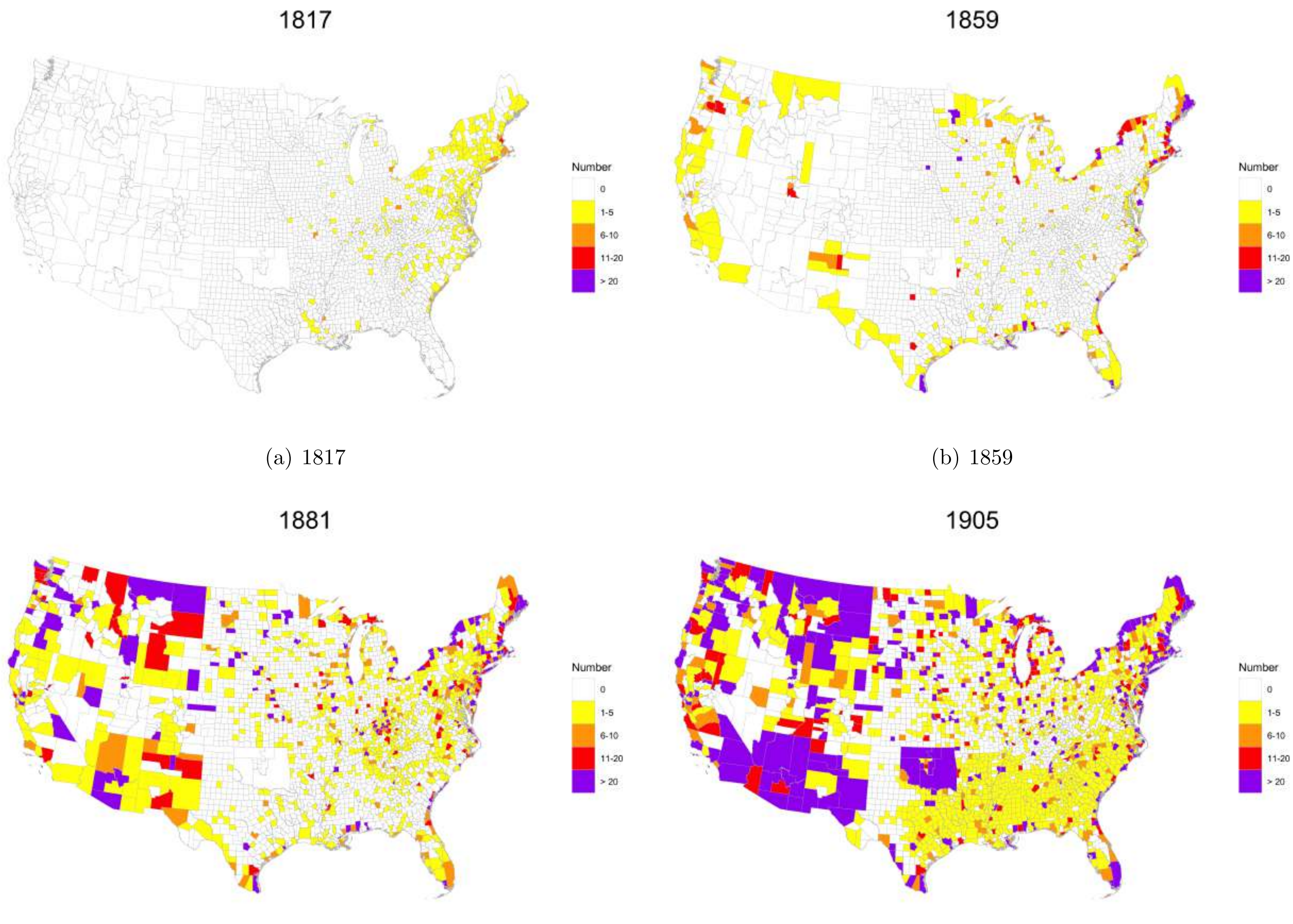
Notes: The figure shows share of U.S. counties with state presence, limiting the sample to counties in states that were already part of the U.S. in 1817.

Figure A7: Share of counties with state presence – weighting by population



Notes: The figure shows share of U.S. counties with state presence, weighting each county by the fraction of the U.S. population living in the county in that year.

Figure A8: The Geographic Expansion of the U.S. Federal Bureaucracy



(a) 1817

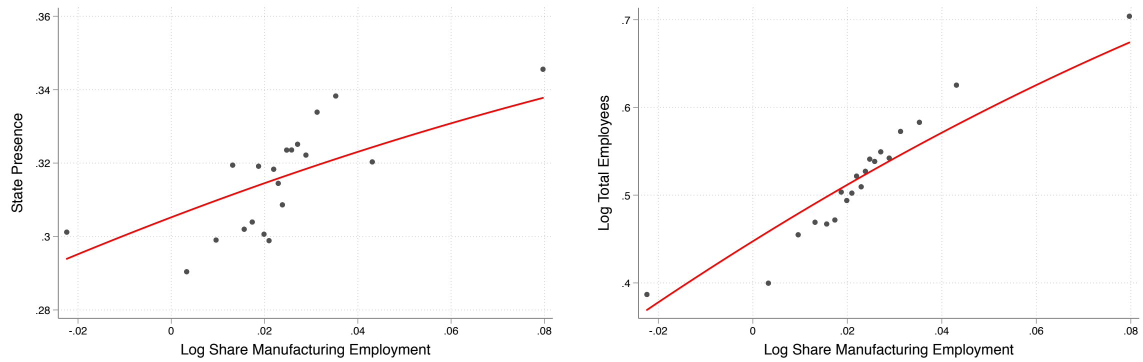
(b) 1859

(c) 1881

(d) 1905

Notes: The figure shows the number of federal employees in each U.S. county (using fixed 1890 county border), in 1817 (Panel A), 1859 (Panel B), 1881 (Panel C), 1905 (Panel D).

Figure A9: Manufacturing Growth and State Presence

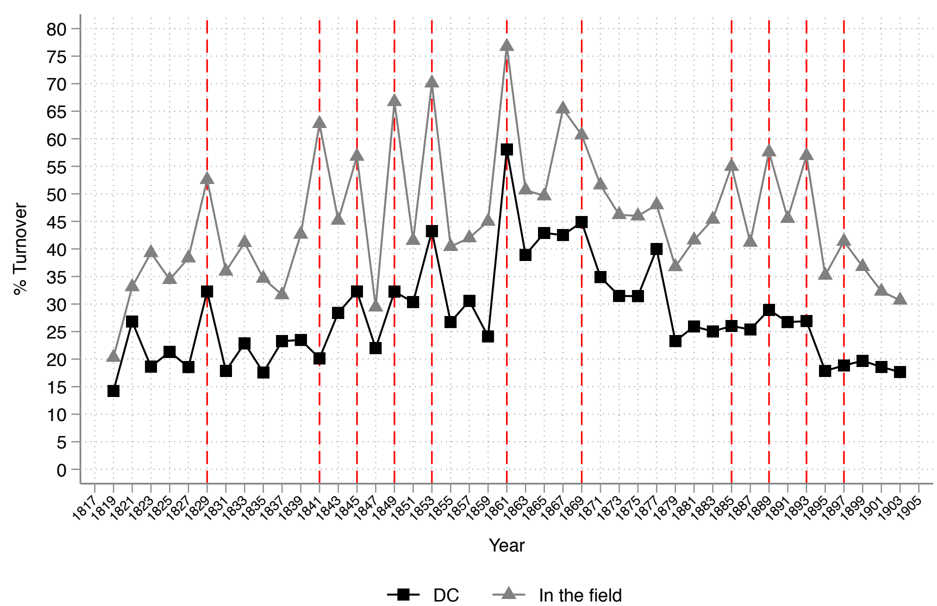


(a) State Presence Indicator

(b) Number of Employees

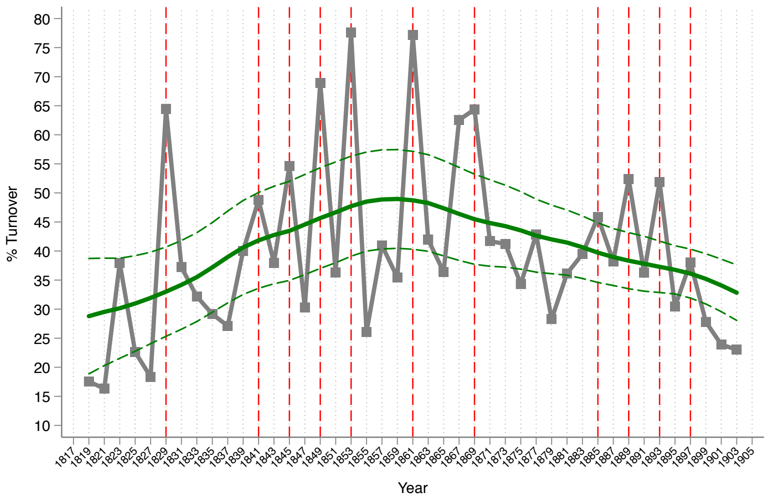
Notes: The figure shows the partial relationship between an indicator for state presence in a county (Panel A), or the logarithm of one plus the total number of employees employed in the county (Panel B), and the share of manufacturing employment in the county, in a bin scatter plot. The relationship shown is after partialing out county fixed effects and state-year fixed effects (see columns 1 and 2 of Table 1). The sample includes all odd years between 1821-1905, with the exception of 1831-1839.

Figure A10: Turnover - DC vs Field

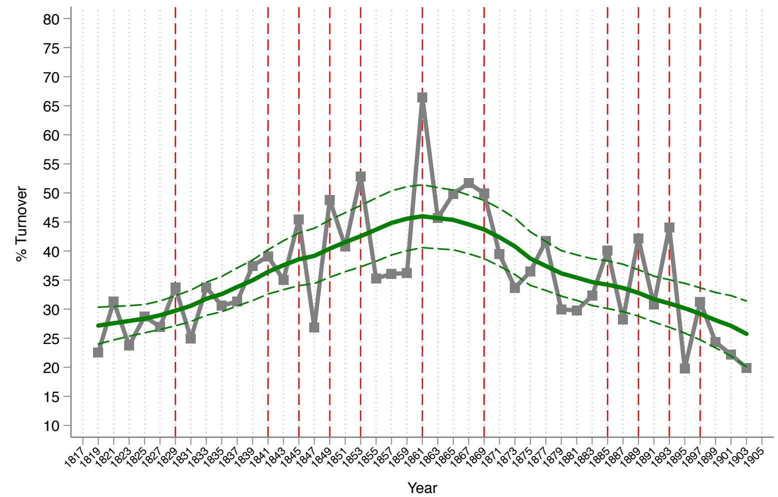


Notes: The figure shows turnover rates, i.e. the share of employees leaving the bureaucracy, over 1817-1905, separately for employees in DC (black) and outside of DC (gray).

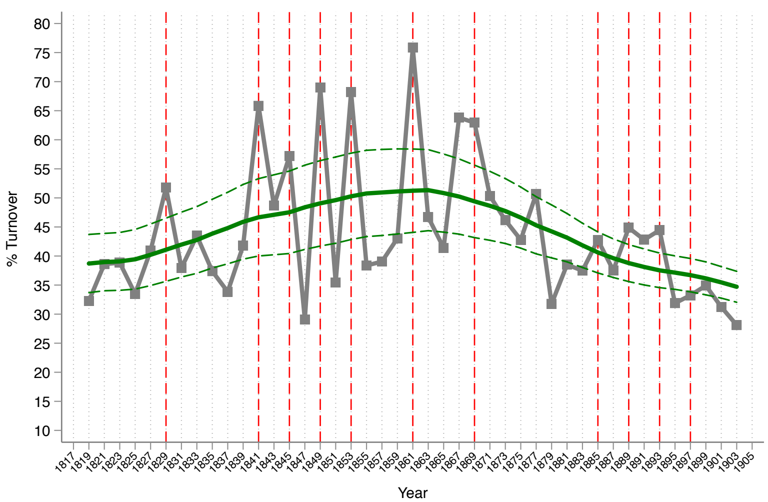
Figure A11: Turnover by occupational category



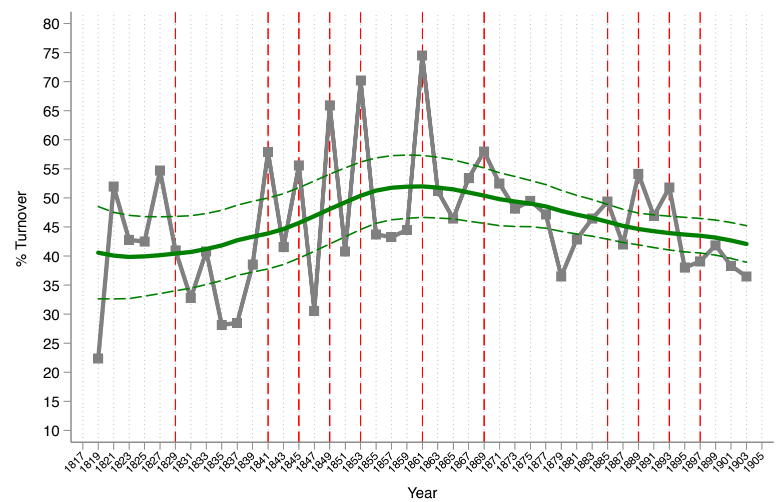
(a) Managers



(b) Clerical



(c) Professionals



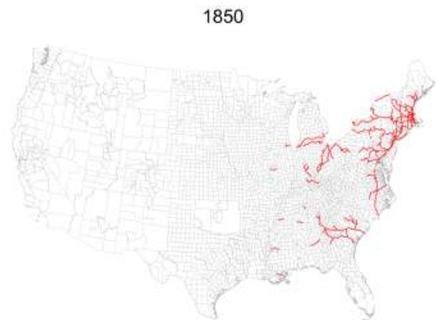
(d) Low skills

Notes: The figure shows aggregate turnover over 1817-1905 for employees employed as managers (Panel A), in clerical occupations (Panel B), as professionals (Panel C), and in relatively low skills occupations (Panel D). The red vertical lines indicate years in which the party of the President changes.

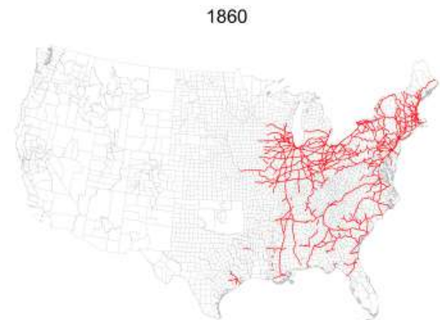
Figure A12: Expansion of the railroad network over time

(a) 1830

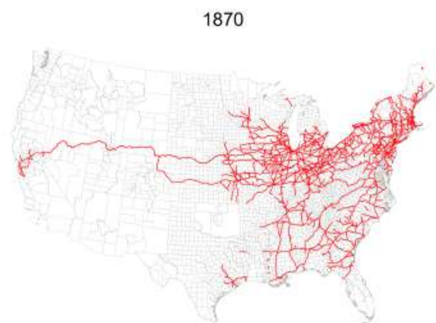
(b) 1840



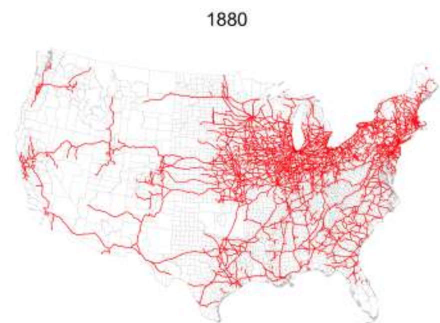
(c) 1850



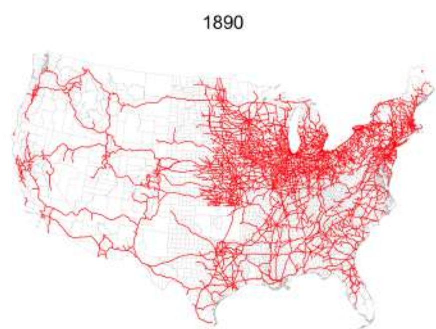
(d) 1860



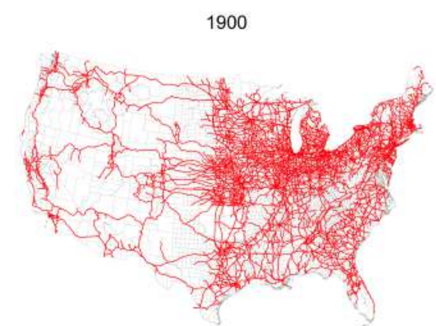
(e) 1870



(f) 1880



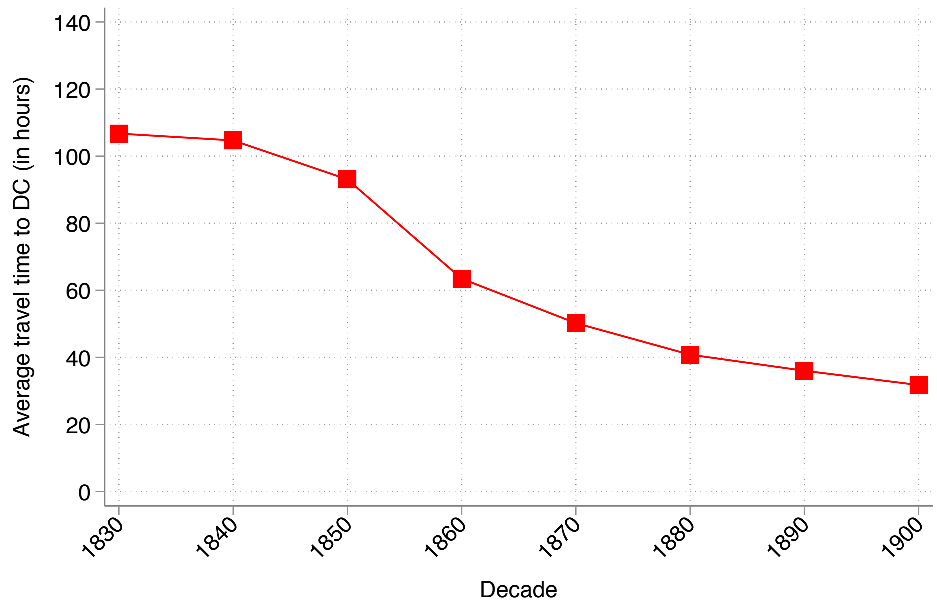
(g) 1890



(h) 1900

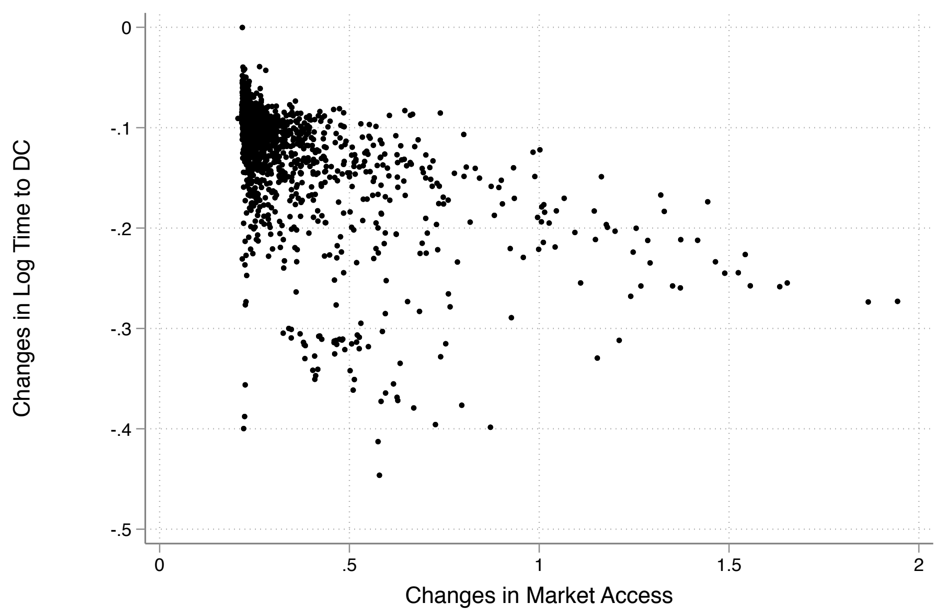
Notes: The figure shows the expansion of the railroad network over time. Source: transportation network database by Donaldson and Hornbeck (2016), based on initial GIS railroad files by Atack (2013).

Figure A13: Average travel time between DC and other counties, 1830-1900



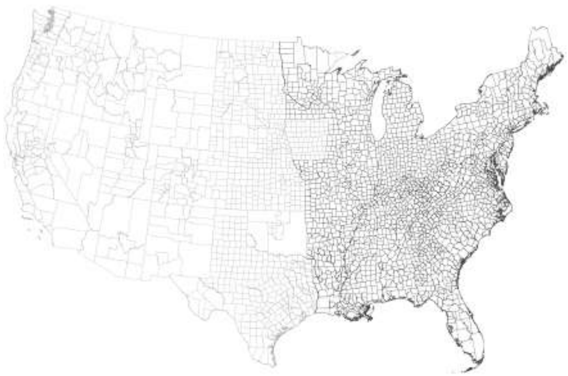
Notes: The figure shows the average travel time (in hours) between DC and other counties in each decade 1830 and 1900.

Figure A14: Changes in travel time to DC and changes in market access, 1880-1890.

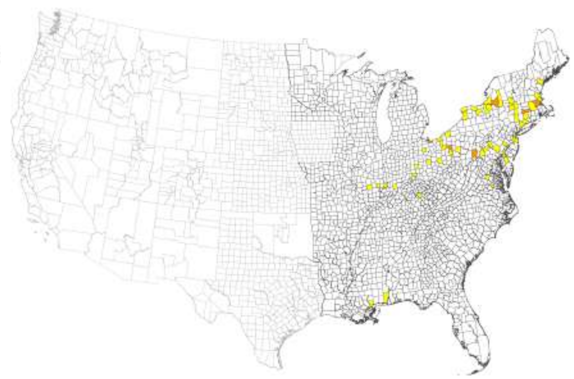


Notes: The figure shows the relationship between changes in log market access and changes in log travel time to DC between 1880 and 1890.

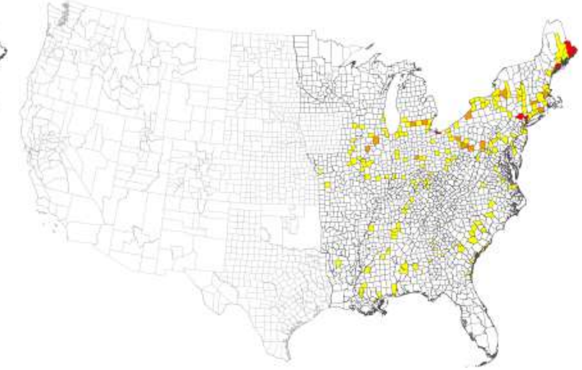
Figure A15: Expansion of the telegraph network over time



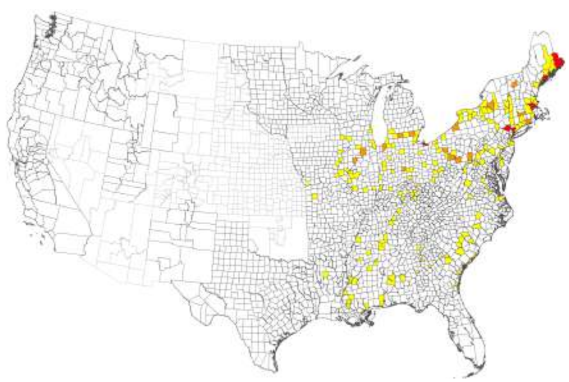
(a) 1845



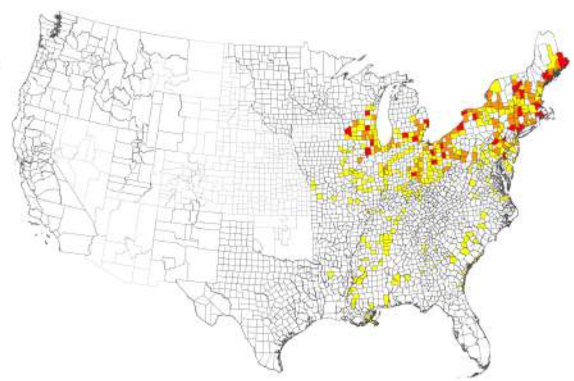
(b) 1847



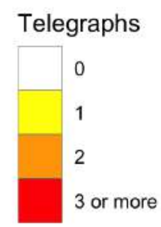
(c) 1849



(d) 1851



(e) 1853



(f)

Notes: The figure shows the number of locations in each county connected to the telegraph network in each year between 1845 and 1853. Source: Wang (2022).

Table A1: Largest bureaus outside of DC

Bureau	*Employees*
Customs	134,136
Internal revenue	49,969
Indian office	43,939
Ordnance - War	33,001
Quartermaster - War	28,253
Lighthouse board	27,644
Mint	16,247
General land office	13,281
Life saving service	11,863
Weather bureau	7,404
Other bureaus	69,170

Table A2: Manufacturing Growth and State Presence - Extractive vs Non-Extractive Bureaus

	(1) State presence	(2) Log tot. employees	(3) State presence	(4) Log tot. employees
Log Share Manu. Emp.	0.539***	1.729***	0.518***	2.177***
	(0.114)	(0.254)	(0.115)	(0.334)
Observations	89,870	89,870	89,870	89,870
Type of Bureau	Extractive	Extractive	Other	Other

Notes: The unit of observation is a county-year. State presence takes value one if the federal state is present in the county. Log tot. employees is the logarithm of one plus the total number of employees employed in the county. Log(Share Manu. Emp.) is the logarithm of the share of a county's population that is employed in manufacturing. All specifications control for county fixed effects and state-year fixed effects. The sample includes all odd years between 1821-1905, with the exception of 1831-1839. Standard errors in parentheses, clustered at the county-level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A3: Turnover is Lower in DC than in the Field

	(1)	(2)	(3)
	Turnover	Turnover	Turnover
Employed in DC	-0.185***	-0.191***	-0.173***
	(0.001)	(0.002)	(0.003)
Observations	657,325	657,230	652,708
Mean Turnover in Field	0.433	0.433	0.433
Fixed effects	Year	Year-Bureau	Year-Bureau-Occ. layer

Notes: The unit of observation is the employee-year. Turnover takes value one if the employee leaves the organization. Employed in DC takes value one if the employee is employed in DC. Column 1 includes year fixed effects, column 2 includes year-bureau fixed effects, column 3 includes year-bureau-occupational layer fixed effects. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Railroad expansion, DC's monitoring capacity, and state presence – Only states as of 1821

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	State presence				Log Clerks	Log Profess.	Log Low skills
Log Time to DC	-0.251***	-0.186***	-0.184***	-0.192***	-0.271**	-0.023	0.047
	(0.032)	(0.034)	(0.034)	(0.034)	(0.120)	(0.122)	(0.152)
Local Railroads		✓	✓	✓	✓	✓	✓
Log Market Access			✓	✓	✓	✓	✓
Additional controls				✓	✓	✓	✓
Observations	83,944	83,944	83,944	82,664	24,375	24,375	24,375
Sd dep. var.	0.4553	0.4553	0.4553	0.4565	0.9222	0.9204	1.0631
Sd Log Time to DC	0.7818	0.7818	0.7818	0.7825	0.7923	0.7923	0.7923

Notes: The unit of observation is a county-year. The table presents results from the same specifications as in Table 2, restricting the sample to counties in states that were already part of the U.S. in 1821. See notes to Table 2 for additional details. Standard errors in parentheses, clustered at the county-level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A5: Railroad expansion, DC's monitoring capacity, and state organization – Only states as of 1821

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Manager Delegation				Share Leave Bureaucracy			
Log Time to DC	-0.306***	-0.222***	-0.216***	-0.222***	0.070*	0.054	0.065*	0.068*
	(0.062)	(0.069)	(0.069)	(0.069)	(0.036)	(0.039)	(0.038)	(0.038)
Local Railroads		✓	✓	✓		✓	✓	✓
Log Market Access			✓	✓			✓	✓
Additional controls				✓				✓
Observations	24,470	24,470	24,470	24,315	22,667	22,667	22,667	22,507
Sd dep. var.	0.4663	0.4663	0.4663	0.4667	0.3836	0.3836	0.3836	0.3834
Sd Log Time to DC	0.7921	0.7921	0.7921	0.7920	0.8036	0.8036	0.8036	0.8035

Notes: The unit of observation is a county-year. The table presents results from the same specifications as in Table 3, restricting the sample to counties in states that were already part of the U.S. in 1821. See notes to Table 3 for additional details. Standard errors in parentheses, clustered at the county-level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A6: Railroad expansion, DC's monitoring capacity, and state organization – only first two years of each decade

	(1) State Presence	(2) Log Clerks	(3) Log Profess.	(4) Log Low Skills	(5) Manager Delegation	(6) Share Leave Bureaucracy
Panel A: Railroad network expansion						
Log Time to DC	-0.189***	-0.243*	-0.102	0.193	-0.213***	0.088*
	(0.034)	(0.130)	(0.132)	(0.157)	(0.070)	(0.052)
Observations	41,284	11,943	11,943	11,943	11,892	11,715
Sd dep. var.	0.4580	0.9303	0.9649	1.1278	0.4679	0.3727
Sd Log Time to DC	0.8063	0.8830	0.8830	0.8830	0.8813	0.888

Notes: The unit of observation is a county-year. The table presents results from the same specifications as in columns 4-7 of Table 2, and as in columns 4 and 8 of Table 3, restricting the sample to the first two years of the sample for each decade. All specifications control for county fixed effects, year fixed effects, the straight line distance between the county and DC interacted with year fixed effects, an indicator taking value one if the county contains any railroad track, the length of railroad track in the county, the county's log market access, the log of the county's total population and the log of the share of the county's population that is employed in manufacturing. In columns 5 we additionally control for a set of fixed effects for the total number of federal employees in the county. Standard errors in parentheses, clustered at the county-level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.