THE COSTS OF PATRONAGE: EVIDENCE FROM THE BRITISH EMPIRE - GUO XU
ONLINE APPENDIX


FIGURE A1. SAMPLE OF COMPARATIVE REVENUE STATEMENT FOR FIJI 1854 (BLUE BOOK)

Note: Sample of comparative revenue statement for Fiji 1854 from the Blue Book. Each row records the revenue for a specific source (e.g. customs revenue). The two columns report the revenue in the current (1854) and the previous year (1853).

FIGURE A2. DISTRIBUTION OF DEGREES OF SEPARATION AND CUT-OFF

Dark grey = Observed ties; Light grey = Randomly drawn
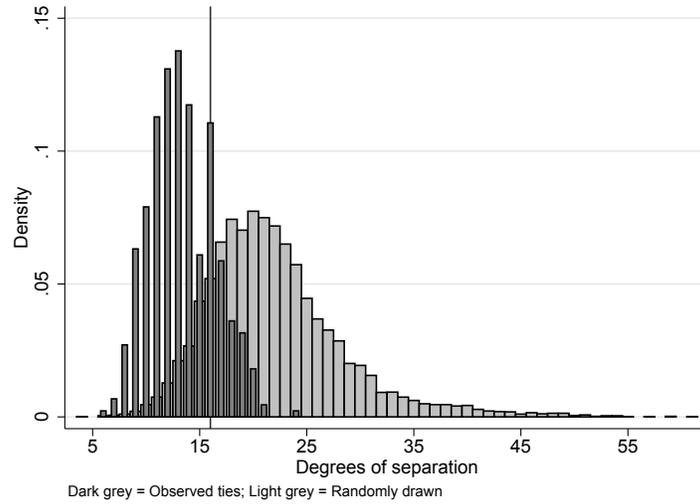
Note: Dark grey is the distribution of observed degrees of separation in the Colonial Office, light grey is the distribution for randomly drawn pairs from the population of the Peerage dataset. Vertical line marks the 16 degrees of separation cut-off.

FIGURE A3. SIZE OF SWITCHER SAMPLE AND CUT-OFF FOR SHARED ANCESTRY
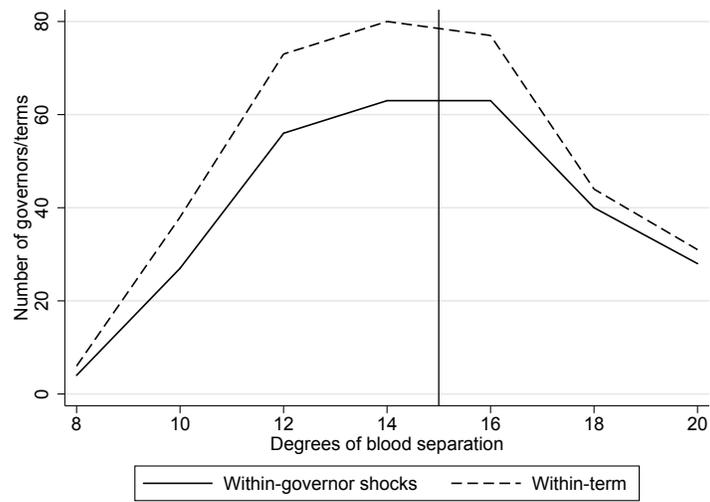
Note: Number of governors/governor-colony spells that experience a within-shock to connections as a function of the cut-off for connectedness

FIGURE A4. RETIREMENT BY CONNECTEDNESS - SURVIVAL ESTIMATES
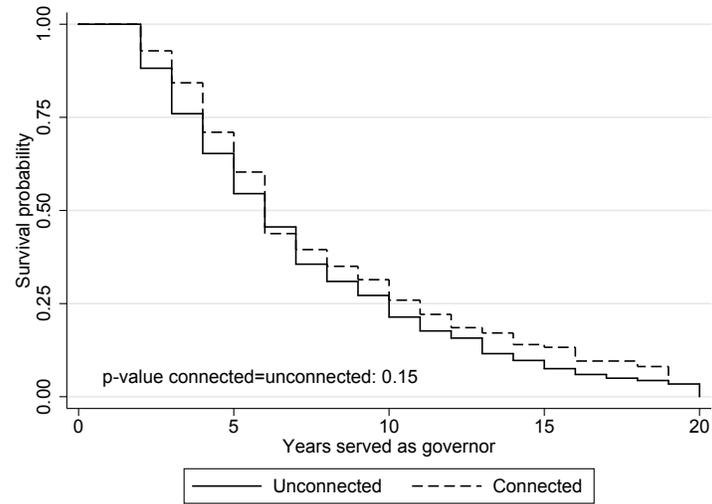
Note: Kaplan-Meier survival estimates. Absorbing state is retirement from Colonial Office. Reporting the *p*-value for test of equality of survivor functions.

FIGURE A5. EXIT (GOVERNOR-COLONY) BY CONNECTEDNESS - SURVIVAL ESTIMATES
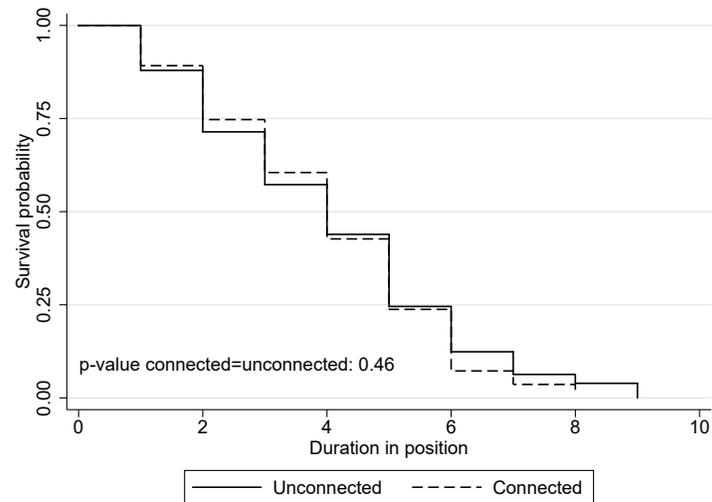
Note: Kaplan-Meier survival estimates. Absorbing state is exit from position. Reporting the *p*-value for test of equality of survivor functions.

FIGURE A6. FISCAL PERFORMANCE AND CONNECTEDNESS BY YEAR INTO APPOINTMENT
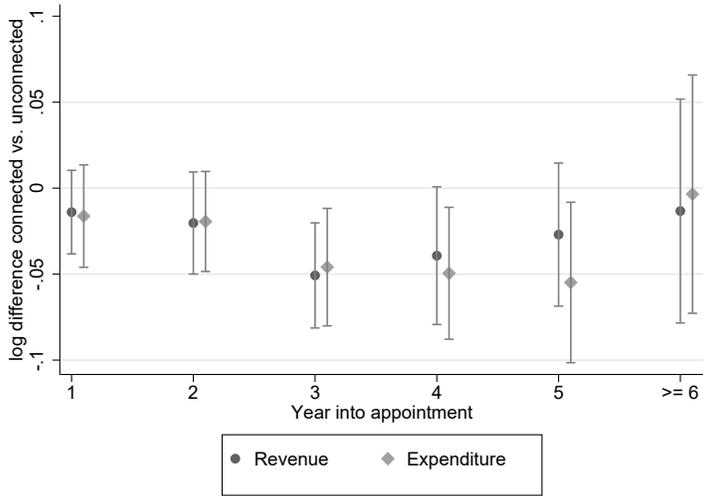
Note: Impact of connectedness on (log) revenue and expenditure by year into appointment. Reporting 90% confidence intervals.

FIGURE A7. SAMPLE OF TRADE TAX EXEMPTION LAWS (BLUE BOOK)

Note: Sample of customs tax exemptions laws from the 1869 Ceylon Blue Book.

Table B1—: British colonies and territories ($N = 70$)

Colony	Start	End	Modern territory (+ marks still dependent)
Antigua	1854	1871	Part of Antigua & Barbuda
Bahamas	1854	1964	Bahamas
Barbados	1854	1884	Barbados
Basutoland	1884	1946	Lesotho
Bechuanaland	1891	1941	Botswana
Bermuda	1854	1941	Bermuda+
British Columbia	1860	1866	Province of Canada
British Guiana	1854	1966	Guyana
British Honduras	1854	1942	Honduras
Cape of Good Hope	1854	1908	Part of South Africa
Cayman Islands	1919	1939	Cayman Islands+
Ceylon	1854	1944	Sri Lanka
Cyprus	1879	1955	Cyprus
Dominica	1856	1932	Dominica
Falkland Islands	1854	1959	Falkland Islands (Islas Malvinas)+
Fiji	1876	1940	Fiji
Gambia	1854	1945	Gambia
Gibraltar	1854	1947	Gibraltar+
Gold Coast	1850	1946	Ghana
Grenada	1854	1946	Grenada
Heligoland	1854	1889	Part of Germany
Hong Kong	1854	1959	Hong Kong (SAR, PR China)
Ionian Islands	1854	1863	Part of Greece
Jamaica	1854	1960	Jamaica
Kenya	1922	1962	Kenya
Labuan	1856	1887	Part of Malaysia
Lagos	1862	1904	Part of Nigeria
Leeward Islands	1885	1945	Dissolved into Antigua & Barbuda, British Virgin Islands, Montserrat, St. Kitts & Nevis, Anguilla and Dominica
Malta	1854	1960	Malta
Mauritius	1854	1946	Mauritius
Montserrat	1858	1888	Montserrat+
Natal	1854	1907	Part of South Africa
Nevis	1854	1882	St. Kitts & Nevis
New Brunswick	1854	1865	Province of Canada
New South Wales	1854	1901	State of Australia
New Zealand	1854	1920	New Zealand
Newfoundland	1855	1932	Province of Canada
Nigeria	1914	1939	Nigeria

Northern Nigeria	1900	1913	Unified as Nigeria after 1913
Northern Rhodesia	1924	1948	Zambia
Nova Scotia	1854	1866	Province of Canada
Nyasaland	1903	1938	Malawi
Palestine	1921	1944	Israel, State of Palestine
Prince Edward Island	1854	1871	Province of Canada
Queensland	1860	1901	State of Australia
Seychelles	1903	1939	Seychelles
Sierra Leone	1854	1943	Sierra Leone
Solomon Islands	1920	1941	Solomon Islands
Somaliland	1902	1938	Somalia
South Australia	1854	1902	State of Australia
Southern Nigeria	1900	1913	Unified as Nigeria after 1913
Southern Rhodesia	1924	1932	Zimbabwe
St. Christopher	1854	1893	St. Kitts & Nevis
St. Helena	1854	1958	St. Helena, Ascension & Tristan da Cunha+
St. Lucia	1854	1959	St. Lucia
St. Vincent	1854	1986	St. Vincent & Grenadines
Straits Settlements	1865	1938	Malaysia
Swaziland	1906	1947	Swaziland
Tanganyika	1920	1961	Tanzania
Tasmania	1854	1909	State of Australia
Tobago	1854	1898	Part of Trinidad & Tobago
Trinidad	1854	1899	Part of Trinidad & Tobago
Trinidad & Tobago	1899	1945	Trinidad & Tobago
Turks & Caicos	1851	1946	Turks & Caicos
Uganda	1901	1945	Uganda
Vancouver Island	1862	1863	Part of Canada
Victoria	1855	1899	State of Australia
Virgin Islands	1856	1932	British Virgin Islands+
Western Australia	1854	1913	State of Australia
Zululand	1887	1986	Part of South Africa

TABLE B2—CONNECTEDNESS BETWEEN SECRETARY OF STATE AND GOVERNOR: CORRELATION MATRIX

	(1) Shared ancestry	(2) Both aristocrats	(3) Both Etonian	(4) Both Oxbridge	(5) Connected
(1) Shared ancestry	1.000	0.424	0.135	0.048	0.818
(2) Both aristocrats	0.424	1.000	0.252	0.120	0.392
(3) Both Etonian	0.135	0.252	1.000	0.083	0.273
(4) Both Oxbridge	0.048	0.120	0.083	1.000	0.482
(5) Connected	0.818	0.392	0.273	0.482	1.000

Note: Unit of observation is the Secretary of State-governor pair ($N = 1,518$). Sample period 1854-1966. Reporting the correlation coefficient between the different measures of connectedness. Connected is the combined dummy that is 1 if the governor and Secretary of State share either common ancestry, are both aristocrats, both went to Eton or both studied at Oxford or both at Cambridge.

TABLE B3—DESCRIPTIVE STATISTICS: GOVERNOR SALARY AND CONNECTEDNESS BY SWITCHING IN/OUT

	(1)	(2)	(3)
		Average governor salary	
Governors who only	All switches	Single switch in	Single switch out
Connected	8.129	8.020	8.144
Not connected	8.009	7.400	8.189
Diff: Connected - Unconnected	0.120	0.619	-0.045
	(0.048)	(0.123)	(0.085)
Observations	977	183	233
Number of switches in	78	55	0
Number of switches out	89	0	66

Note: Average difference in (log) governor salary between connected and unconnected governors for the subset of governors who experience any switch, a switch from unconnected to connected, or a switch from connected to unconnected. Robust standard errors in parentheses.

TABLE B4—DETERMINANTS OF GOVERNOR SALARIES

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: log Governor salary in GBP					
Mean of dep. var	7.929	7.922	8.262	7.929	8.250	8.250
log Revenue in GBP	0.355				0.279	0.276
	(0.022)				(0.042)	(0.043)
log Population		0.295			0.064	0.082
		(0.041)			(0.035)	(0.037)
log Settler mortality			-0.113		-0.001	-0.054
			(0.040)		(0.036)	(0.055)
log Distance to London				0.164	-0.083	-0.402
				(0.183)	(0.131)	(0.337)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Continent FEs	-	-	-	-	-	Yes
Observations	3,510	3,270	2,213	3,510	2,096	2,096
Within R^2	0.768	0.531	0.106	0.0136	0.730	0.760

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) salary in GBP paid to a governorship in a given year. (log) Revenue is the total annual revenue in the colony. (log) Population is the total population size in the colony. (log) Settler mortality is the log settler mortality rate from Acemoglu, Johnson and Robinson (2001). (log) distance to London is the log distance (in km) to London from the colony's capital. Continent fixed effects include dummy for Africa, Europe, North America, Latin America, Asia and Oceania.

TABLE B5—CHANGE IN SECRETARY OF STATE, POLITICAL TURNOVER AND COLONY PERFORMANCE

	(1)	(2)	(3)	(4)
	New Secretary of State			
Mean of dep. var	0.366	0.366	0.361	0.361
New Party $t-1$	0.431			0.419
	(0.115)			(0.222)
New Prime Minister $t-1$		0.308		0.011
		(0.109)		(0.202)
Revenue growth $t-1$			0.533	0.398
			(0.844)	(0.827)
Decade FEs	Yes	Yes	Yes	Yes
Linear trend	Yes	Yes	Yes	Yes
Observations	112	112	112	112

Note: Unit of observation is the year. Sample period 1854-1966. Dependent variable is a dummy for whether a new Secretary of State was appointed in given year. New party (New Prime Minister) is a dummy if the ruling party (prime minister) came to power in a given year. Revenue growth is the average revenue growth in the colonies. All explanatory variables are lagged (contemporaneous effects are all insignificant). Robust standard errors in parentheses.

TABLE B6—WITHIN-GOVERNOR - SWITCHER SAMPLE

	(1)	(2)	(3)	(4)
		Demeaned within governor		p-value
	Mean	Connected	Unconnected	diff
Total years served	7.790	0.131	-0.176	0.373
		(5.438)	(5.229)	
Duration in position	2.324	0.051	-0.068	0.286
		(1.718)	(1.748)	
Transfer	0.108	-0.008	0.011	0.312
		(0.289)	(0.322)	
Retire	0.098	-0.007	0.009	0.361
		(0.282)	(0.301)	
Observations	977 (28%)	559	418	
Number of governors	96 (21%)			

Note: Average characteristics (demeaned within governor) for the same governor when connected and unconnected. Showing mean and standard deviations (in parentheses). Total years served is the total years served as a governor in the Colonial Office. Duration in position is the years in the current governorship. Transfer is a dummy that is 1 if the governor was transferred to another colony. Retire is a dummy that is 1 if the governor exited the Colonial Office. p-value for mean comparison is computed with robust standard errors, clustered at the dyadic governor-secretary of state level.

TABLE B7—DESCRIPTIVE STATISTICS BETWEEN WITHIN-GOVERNOR SWITCHERS AND ALWAYS/NEVER CONNECTED

	(1)	(2)	(3)	(4)
	Full governor sample $N = 456$		Mean difference connection switching ($N = 96$) $-$	
	Mean	Standard deviation	Always connected	Never connected
Peerage	0.085	0.280	-0.422	0.024
Civil servant	0.846	0.361	0.042	0.217
Military	0.440	0.497	-0.067	-0.076
Politician	0.087	0.283	-0.186	0.058
Eton	0.109	0.312	-0.126	0.154
Oxford	0.178	0.383	-0.038	0.250
Cambridge	0.150	0.358	0.001	0.138
Age at entry	48.652	8.990	-0.737	-2.854
Age at retirement	57.262	7.699	3.812	0.852
Years served	8.313	6.649	4.577	4.060
Colonies served	1.793	1.263	0.858	0.837
Average salary	3656.00	2148.16	-707.368	1216.240
Highest salary	4085.17	2379.15	-496.014	1584.590
Lowest salary	3206.60	2158.23	-1124.678	741.860
Award received	0.020	0.058	-0.009	0.003
Years connected	2.317	4.368	-0.817	5.822

Note: Descriptive governor characteristics: mean, standard deviation (in parentheses) and mean comparison between switchers and always connected governors (Column 3) and never connected governors (Column 4). Peerage is a dummy that is 1 if the governor is a Duke, Marquess, Earl, Viscount or Baron. Civil servant/military/politician are dummies that are 1 if the governor served as a civil servant/in the military/as a politician before assuming the first governorship. Eton/Oxford/Cambridge are dummies that are 1 if the governor was educated in the named institutions. Age at entry (retirement) is the age of the governor at time of first (last) governorship. Years served is the total number of years served as governor. Colonies served is the number of colonies served as governor. Average (highest/lowest) salary is the mean (highest/lowest) salary earned throughout the governor career. Award received is the share of governors who received the highest distinction of GCMG/GCB. Years connected is the total number of years connected to the Secretary of State. Number in parentheses denotes the minimum number of observations across all variables.

TABLE B8—WITHIN-APPOINTMENT - SWITCHER SAMPLE

	(1)	(2)	(3)	(4)
		Demeaned within position		*p*-value
	Mean	Connected	Unconnected	diff
Total years served	6.311	0.010	-0.014	0.873
		(1.877)	(1.782)	
Duration in position	2.481	0.008	-0.012	0.877
		(1.578)	(1.699)	
Transfer	0.086	-0.003	0.004	0.734
		(0.252)	(0.264)	
Retire	0.104	-0.015	0.021	0.125
		(0.267)	(0.309)	
Exit (Transfer or retire)	0.182	-0.017	0.023	0.200
		(0.360)	(0.397)	
Observations	581 (17%)	333	248	
Number of governors	89 (20%)			
Number of governor-colonies	112 (15%)			

Note: Average characteristics (demeaned within governor-colony/appointment) for the same governor in the same colony when connected and unconnected. Showing mean and standard deviations (in parentheses). Total years served is the total years served as a governor in the Colonial Office. Duration in position is the years in the current governorship. Transfer is a dummy that is 1 if the governor was transferred to another colony. Retire is a dummy that is 1 if the governor exited the Colonial Office. Exit is a dummy that is 1 if the governor exited the position (was either transferred or retired) *p*-value for mean comparison is computed with robust standard errors, clustered at the dyadic governor-secretary of state level.

TABLE B9—PROMOTIONS, CONNECTEDNESS AND REVENUE PERFORMANCE

	(1)	(2)	(3)	(4)	(5)
		Promoted		Retire	Transfer
Mean of dep. var	0.0624	0.0624	0.0624	0.129	0.0706
Connected	-0.022	-0.033	-0.034	-0.021	-0.038
	(0.022)	(0.023)	(0.023)	(0.026)	(0.023)
Average growth (%)	-0.001	-0.002	-0.002	0.003	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
End of term $\mathbf{1}[T_{it} \geq 6]$	0.100	0.014	0.002	0.225	0.000
	(0.027)	(0.034)	(0.035)	(0.050)	(0.038)
Average growth (%) $\times$ Connected		0.002	0.002	-0.000	0.002
		(0.002)	(0.002)	(0.002)	(0.002)
End of term $\mathbf{1}[T_{it} \geq 6] \times$ Average growth (%)		0.013	0.015	-0.014	0.014
		(0.005)	(0.005)	(0.006)	(0.005)
End of term $\mathbf{1}[T_{it} \geq 6] \times$ Connected		0.133	0.189	0.024	0.249
		(0.068)	(0.080)	(0.104)	(0.079)
End of term $\mathbf{1}[T_{it} \geq 6] \times$ Average growth			-0.017	0.022	-0.021
$\times$ Connected			(0.013)	(0.017)	(0.013)
Colony FEs	Yes	Yes	Yes	Yes	Yes
Governor FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Time varying controls	Yes	Yes	Yes	Yes	Yes
Observations	3,269	3,269	3,269	3,269	3,269

Note: Replicating Jia, Kudamatsu and Seim (2015). Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is a dummy for a promotion, as defined by being allocated to a higher salaried colony (Columns 1-3), a dummy for retiring from the colonial service (Column 4) and a dummy for being transferred (Column 5). Connected is a dummy that is 1 if the governor is connected to the Secretary of State. Average growth is the growth in revenue in the colony of the serving governor up to the given year in, defined as the (log) change in revenue between last year and the first year of appointment, normalized by $\times$ 100 to ease readibility. End of term is a dummy that is 1 if the governor is beyond the 5th year in the appointment. Time-varying controls comprise the number of colonies the governor has served in. Spell length FEs are dummies for each year of the term. Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

TABLE B10—ROBUSTNESS: SALARY, CONNECTEDNESS TO PM AND HETEROGENEITY

	(1)	(2)	(3)	(4)
	log Governor salary in GBP			
Mean of dep. var	7.929	7.929	7.929	7.929
Connected	0.097	0.098	0.101	0.090
	(0.036)	(0.035)	(0.036)	(0.040)
Connected to PM		0.076		
		(0.133)		
Connected × Election			-0.018	
			(0.021)	
Connected × Tory party				0.013
				(0.040)
Controls	Yes	Yes	Yes	Yes
Governor FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Spell length FEs	Yes	Yes	Yes	Yes
Observations	3,510	3,510	3,510	3,510

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) salary in GBP paid to a governorship in a given year. Connected is a dummy that is 1 if the governor and Secretary of State share either common ancestry, are both aristocrats, both went to Eton or studied at Oxford or Cambridge. Connected to PM is the same measure for the governor and the Prime Minister in office. Election is a dummy that is 1 if there was a general election in the given year. Tory is a dummy that is 1 if the government in power is the Tory/Conservative party. The remaining explanatory variables drop one type of connections from the combined measure in turn. Controls are the number of colonies the governor has served up to the given year. Spell length FEs are dummies for each year of the term. Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

TABLE B11—ROBUSTNESS: ALTERNATIVE CLUSTERING OF STANDARD ERRORS

	(1)	(2)	(3)	(4)	(5)	(6)
	log Salary		log Revenue		log Expenditure	
Mean of dep. var	7.929	7.929	12.31	12.31	12.33	12.33
Connected	0.097	0.127	-0.040	-0.055	-0.029	-0.042
Standard errors						
Governor-Secretary of State (dyadic)	(0.036)	(0.043)	(0.017)	(0.021)	(0.019)	(0.023)
Governor & Secretary of State (2 way)	(0.039)	(0.044)	(0.021)	(0.023)	(0.021)	(0.026)
Dyadic & Year (2 way)	(0.036)	(0.044)	(0.019)	(0.022)	(0.020)	(0.023)
Connected × Reform dummy		-0.123		0.061		0.053
Standard errors						
Governor-Secretary of State (dyadic)		(0.043)		(0.021)		(0.023)
Governor & Secretary of State (2 way)		(0.057)		(0.039)		(0.032)
Dyadic & Year (2 way)		(0.056)		(0.038)		(0.041)
Governor FEs	Yes	Yes	No	No	No	No
Governor-Colony FEs	No	No	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Spell length FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,510	3,510	3,510	3,510	3,510	3,510

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) total salary in GBP for the governorship (Columns 1-2), the (log) total revenue (Columns 3-4) and the (log) total expenditure (Columns 5-6). Connected is a dummy that is 1 if the governor and Secretary of State share either common ancestry, are both aristocrats, both went to Eton or studied at Oxford or Cambridge. The asterisks report the preferred (dyadic governor-secretary clustered) standard errors. Alternative clustering specifications are reported in parentheses. These include two-way clustering on the governor and secretary level, as well as two-way clustering on the dyadic *and* year level.

TABLE B12—ROBUSTNESS: GOVERNOR SALARY AND CONNECTEDNESS, DROPPING CONNECTION TYPES

	(1)	(2)	(3)	(4)	(5)
	log Governor salary in GBP				
Mean of dep. var	7.929	7.929	7.929	7.929	7.929
No. colonies served	0.223	0.225	0.224	0.222	0.222
	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)
Connected	0.097				
	(0.036)				
Connected excl. Ancestry		0.122			
		(0.040)			
Connected excl. Aristocrats			0.114		
			(0.036)		
Connected excl. Eton				0.076	
				(0.040)	
Connected excl. Oxbridge					0.098
					(0.048)
Year FEs	Yes	Yes	Yes	Yes	Yes
Governor FEs	Yes	Yes	Yes	Yes	Yes
Spell length FEs	Yes	Yes	Yes	Yes	Yes
Observations	3,510	3,510	3,510	3,510	3,510

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) salary in GBP paid to a governorship in a given year. No. of colonies served is the number of colonies the governor has served in up to the given year. Connected is a dummy that is 1 if the governor and Secretary of State share either common ancestry, are both aristocrats, both went to Eton or studied at Oxford or Cambridge. The remaining explanatory variables drop one type of connections from the combined measure in turn. Spell length FEs are dummies for each year of the term. Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

TABLE B13—ROBUSTNESS: GOVERNOR SALARY, PERFORMANCE AND CONNECTEDNESS

Panel A: Salary	(1)	(2)	(3)	(4)
Connected	0.127	0.126	0.137	0.130
	(0.043)	(0.043)	(0.046)	(0.044)
Reform 1930 × Connected	-0.123	-0.167	-0.103	-0.118
	(0.056)	(0.057)	(0.059)	(0.056)
Sample	Full sample	Drop WW II	Drop depression	Full sample
UK GDP growth × Connected	-	-	-	Yes
Year FEs	Yes	Yes	Yes	Yes
Governor FEs	Yes	Yes	Yes	Yes
Spell length FEs & controls	Yes	Yes	Yes	Yes
Observations	3,510	3,354	3,357	3,510
Panel B: Revenue	(5)	(6)	(7)	(8)
Connected	-0.055	-0.054	-0.061	-0.054
	(0.021)	(0.021)	(0.023)	(0.021)
Reform 1930 × Connected	0.061	0.089	0.042	0.064
	(0.033)	(0.037)	(0.036)	(0.033)
Sample	Full sample	Drop WW II	Drop depression	Full sample
UK GDP growth × Connected	-	-	-	Yes
Year FEs	Yes	Yes	Yes	Yes
Governor-Colony FEs	Yes	Yes	Yes	Yes
Spell length FEs & controls	Yes	Yes	Yes	Yes
Observations	3,510	3,349	3,345	3,510
Panel C: Expenditure	(9)	(10)	(11)	(12)
Connected	-0.042	-0.042	-0.037	-0.041
	(0.023)	(0.023)	(0.025)	(0.023)
Reform 1930 × Connected	0.053	0.057	0.057	0.058
	(0.034)	(0.034)	(0.039)	(0.034)
Sample	Full sample	Drop WW II	Drop depression	Full sample
UK GDP growth × Connected	-	-	-	Yes
Year FEs	Yes	Yes	Yes	Yes
Governor FEs	Yes	Yes	Yes	Yes
Spell length FEs & controls	Yes	Yes	Yes	Yes
Observations	3,510	3,349	3,345	3,510

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) salary in GBP paid to a governorship in a given year. Connected is a dummy that is 1 if the governor and Secretary of State share either common ancestry, are both aristocrats, both went to Eton or studied at Oxford or Cambridge. Controls are the number of colonies the governor has served up to the given year. Spell length FEs are dummies for each year of the term. Column 1 is the baseline specification. Column 2 drops the years of World War II, Column 3 drops the UK Great Depression years (1929-1932), Column 4 allows connectedness to vary with the UK GDP per capita growth rates (Maddison Project 2013). Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

TABLE B14—ROBUSTNESS: GOVERNOR SALARY, PERFORMANCE AND CONNECTEDNESS BY TYPE

Panel A: Salary	(1)	(2)	(3)	(4)
Connection measure	0.097	0.127	0.088	0.153
	(0.036)	(0.043)	(0.054)	(0.045)
Connection measure × Reform dummy		-0.123	-0.058	-0.153
		(0.056)	(0.075)	(0.057)
Connection type	Connected		Family	Alumni
Governor FEs	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y
Spell length FEs & Controls	Y	Y	Y	Y
Observations	3,510	3,510	3,510	3,510
Panel B: Revenue	(5)	(6)	(7)	(8)
Connection measure	-0.040	-0.055	-0.074	-0.010
	(0.017)	(0.021)	(0.028)	(0.020)
Connection measure × Reform dummy		0.061	0.039	0.036
		(0.033)	(0.049)	(0.033)
Connection type	Connected		Family	Alumni
Governor-Colony FEs	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y
Spell length FEs & Controls	Y	Y	Y	Y
Observations	3,510	3,510	3,510	3,510
Panel C: Expenditure	(9)	(10)	(11)	(12)
Connection measure	-0.029	-0.042	-0.028	-0.034
	(0.019)	(0.023)	(0.030)	(0.020)
Connection measure × Reform dummy		0.053	0.048	0.041
		(0.034)	(0.047)	(0.032)
Connection type	Connected		Family	Alumni
Governor-Colony FEs	Y	Y	Y	Y
Year FEs	Y	Y	Y	Y
Spell length FEs & Controls	Y	Y	Y	Y
Observations	3,510	3,510	3,510	3,510

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) salary in GBP paid to a governorship (Panel A), (log) public revenue (Panel B) and (log) public expenditures in a given year (Panel C). Connected is a dummy that is 1 if the governor and Secretary of State share either common ancestry, are both aristocrats, both went to Eton or studied at Oxford or Cambridge. This measure is split down by family ties (ancestry and aristocracy) and alumni ties (Eton and Oxbridge). Reform dummy is 1 after 1930. Spell length FEs are dummies for each year of the term and controls comprise number of colonies the governor has served in up to the given year. Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

TABLE B15—ROBUSTNESS: REVENUE PERFORMANCE - SUBSAMPLES

	(1)	(2)	(3)	(4)
	log Revenue in GBP			
	Drop moved immediately	Drop first&last year	Appointed connected	Appointed unconnected
Mean of dep. var	12.31	12.29	13.15	13.02
No. colonies served	0.077	0.322	0.226	0.137
	(0.059)	(0.052)	(0.107)	(0.089)
Connected	-0.041	-0.073	-0.059	-0.060
	(0.018)	(0.024)	(0.031)	(0.029)
Governor-Colony FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Spell length FEs	Yes	Yes	Yes	Yes
Observations	3,460	2,013	1035	1015

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) total revenue. Connected is a dummy that is 1 if the governor is connected to the Secretary of State. Column 1 drops the switchers who move immediately after experiencing a shock to connections. Column 2 drops the first and last year of the appointment in the switcher sample. Column 3 is the sample of those who are appointed connected. Column 4 is the sample of those who are appointed unconnected. Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

TABLE B16—ROBUSTNESS: REVENUE PERFORMANCE - BOUNDING SELECTIVE EXIT

	(1)	(2)	(3)	(4)	(5)
	log Revenue in GBP				log Exp
	Main	Trend	Trend+2%	Trend+4%	Trend+4%
Connected	-0.040	-0.033	-0.038	-0.043	-0.033
	(0.017)	(0.020)	(0.020)	(0.020)	(0.020)
No. colonies served	0.068	0.066	0.065	0.064	0.082
	(0.063)	(0.063)	(0.063)	(0.063)	(0.059)
Governor-Colony FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Spell length FEs	Yes	Yes	Yes	Yes	Yes
Observations	3,510	3,622	3,622	3,622	3,622

Note: Unit of observation is the governor-year. Sample period 1854-1966. Dependent variable is the (log) total revenue in Columns 1-4. Connected is a dummy that is 1 if the governor is connected to the Secretary of State. Column 2 assumes that revenue growth follows the pre-trend after the governor has exited. Column 3 and 4 assume growth increases by 2% and 4% points above the trend. Column 5 uses (log) total expenditure as the dependent variable. Robust standard errors in parentheses, clustered at the dyadic governor-secretary of state level.

DATA APPENDIX

B1.　*Historical fiscal data*

The main source of historical colonial revenue and expenditure data are the Colonial Blue Books, a set of standardized yearly reports providing detailed information about public revenue and spending, trade and socio-economic indicators for over 80 colonies covering the period 1821-1949 (Banton, 2008). This unique data source has remained largely untapped among economists (with the notable exception of Dippel et al. 2015) but enables the construction of long series of comparable measures on a wide range of variables (such as sources of revenue income, spending patterns, salaries, education, newspapers). The original set of Blue Books is stored at the National Archives, with incomplete subsets stored at the University Library in Cambridge and the University of London Commonwealth Library.

I digitized data on revenue and expenditures from the full set of 3,905 Blue Books. The main part of interest was the Section "Comparative Statement of Revenue and Expenditure" (Appendix Figure A1). This section provides a breakdown of both revenue and expenditures for two years: the current year of the Blue Book, and the previous year. Since I collected data from all Blue Books, this provided an additional redundancy to validate the quality of the fiscal data across all the years. All monetary values are typically listed in pounds. When needed, the local currency (e.g. Hong Kong Dollar, Sri Lankan rupees) was converted at the historical exchange rate provided by the Blue Book.

The breakdown broadly follows two patterns: it lists the ordinary expenditures for the colonial bureaucracy (civil establishment) and the extra-ordinary expenditures accruing to the various departments. Ordinary expenditures comprise salaries, allowances and pensions paid to colonial civil servants and are grouped by function (e.g. revenue collection, education, police and gaols). These closely resemble the Ministries in later periods. Extra-ordinary expenditures typically encompass unexpected expenditures (e.g. following natural disasters) or investments in public works. As the Blue Books were not compiled across the entire period of the colonies (with most discontinued shortly after WWII), I extend these series using reported aggregates provided by the Colonial Lists. This allows me to extend the series up to 1966. The disadvantage, however, is that the Colonial Lists only provide aggregates without the finer breakdowns from the Blue Books.

HARMONIZING REVENUE AND SPENDING BREAKDOWN

I also digitize and construct breakdowns of the aggregate revenue and expenditure. The main challenge here lies in the changing definitions of the subitems. For example, one Blue Book may list a detailed breakdown of each department's disbursed salaries, while the subsequent year may only report the total. Similarly, police expenditures may have been grouped with the spendings for prisons in one year but then reported separately in the other.

To construct consistent series, I digitized the section "Net Abstract of Revenue and Expenditures" from all Blue Books. This is the section that precedes the "Comparative statement". Unlike the "comparative statements", this section only provides the breakdown of the current reporting year. The advantage, however, lies in its finer granularity: positions that may have been grouped in the "Comparative statement" are separately reported in the "Net Abstract".

In the second, step I harmonized the series, focusing on several broad groups: On the revenue side, I distinguish between external and internal revenue. External revenue comprise customs revenue and duties collected at the entry points (typically ports). Internal revenue comprise revenue raised within the colonies, such as income tax, hut taxes, poll taxes, land revenue, fees and duties. On the expenditure side, I focus on two broad groups of spending. First, I focus on expenditures in revenue collection. This comprises expenditures made for the collection of customs, but also the raising of direct taxes. I use this as a direct measure for investments in fiscal capacity. Second, I harmonize expenditure series on public works and infrastructure investments. This position includes public works, expenditures for roads, bridges, repairs for public buildings, as well as spendings on civil engineers.

Despite all my efforts in providing harmonized breakdowns, data constraints and changing definitions still reduce the final sample size of these breakdowns. In the paper, however, I provide evidence that the main results are robust for the subsample. This alleviates concerns of sample selectivity.

B2.   *Identifying social connections*

The main source of genealogical data is drawn from the database The Peerage (thePeerage.com), obtained on the 20th of June 2015. The data provides a genealogical survey of the peerage of Britain as well as the royal families of Europe, including the family trees of the British elite.

The dataset covers 664,265 individuals over more than 500 years including their family relationships. The data contains the full names and date of birth, as well as the details of the spouse, parents and children. I convert the family trees into 1,271,854 undirected links. To avoid concerns of endogenous network formation, I drop marriage links and focus only on blood-relatedness. Dropping marriages reduces the number of undirected links to 1,008,986.

In the second step, I match each of the 456 governors and 39 Secretary of States for the Colonies to the unique identifiers provided in the Peerage dataset. A match is defined as an identical name and birthday. Ambiguous matches, for example due to changing aristocrat titles, are resolved by consulting the UK Who is Who or the Oxford Dictionary of National Biography. Only two Colonial Secretaries cannot be matched (George Hall, Arthur Jones). Both are politicians of the Labour party not from elite backgrounds. 34% of the governors are reliably matched in the Peerage data. I assume that the missing individuals are not connected. This is not a restrictive assumption as the family trees of the Colonial

Secretaries are fully mapped out. A governor not included in the family tree, then, is unconnected.

For governors and Colonial Secretaries matched to the Peerage data, I compute the shortest distance using Djikstra's algorithm (Dijkstra, 1959), implemented using Matlab's *graphshortestpath* package. Two individuals are *connected* if the degree of separation is less than 16. Finally, to verify the data quality, I drew a random sample of 5 connected governors and manually traced the connection from the governor to the superior Colonial Secretary. In addition, I validated the genealogical data with data provided by Ancestry.com.

Finally, in presence of multiple Secretaries of State in a given year, connectedness is computed to the Secretary of State who served the longest period. So for a Secretary of State who is appointed in December of a given year while the predecessor served throughout the rest of the year (January-November), for example, connectedness is measured with respect to the "old" Secretary of State (January-November).

B3.   *Computing additional performance measures*

Sentiment analysis of parliamentary debates

I extracted the full set of parliamentary debates from the *Hansard* to compute the number of times a colony has been mentioned in the parliamentary debates and the associated sentiment of the mention. This allows me to compute a dummy that is 1 if the colony has been mentioned in a given year. To measure the sentiment, I then use the R's *qdap polarity* tool to compute sentiments associated with the mentions. Intuitively, the procedure assigns a positive/negative sentiment to each word and then weights these words depending on the context. For example, a negative word like "punishment" is amplified if it is preceded by a magnifying adjective, like "severe". Similarly, the sign is reversed if the word is preceded by a negator, like "not". See http://trinker.github.io/qdap for a detailed description of the procedure. I then compute the average sentiment based on all speeches in a given year that mentioned a given colony.

Social unrest based on newspaper reports

To measure social unrest, I collected data from historical newspapers to generate a dummy that proxies social unrest. The data is drawn from all London-based newspapers found in the *The British Newspaper Archive* in December 2015. For each year between 1854-1966, I count the frequency in which a colony is mentioned in conjunction with following keywords: (i) riot (ii) arrest (iii) killed (iv) murder. For example, the number of times Jamaica was mentioned together with the keyword "killed" spiked at 1008 in 1866, right after the Morant Bay rebellion. To alleviate concerns over measurement errors (e.g. that colony and keywords are mentioned in distinct articles that are mistakenly misclassified), I standardize the frequency of mentions within the colony for each keyword and compute an

average for each colony-year based on all four keywords. I then focus on "extreme cases" by defining social unrest to take a value of 1 if the average standardized unrest index exceeds the 95th decile.