Supporting Information

Elite Competition and State Capacity Development: Theory and Evidence from Post-Revolutionary Mexico

Following text to be published online.

Contents

A Mechanism of Persistence: Political Development of the PRI

One explanation for the observed persistence in capacity can be traced to the process of political development of the PRI regime. In places where the path to political consolidation was cleared by the large negative shock brought about by the Great Depression, local political leaders would have been better able to bargain with the emerging national regime to their advantage.

These local bosses were attractive to the regime because of the control they exerted in their regions. The PRI needed these alliances as it consolidated, because they provided political order in the regions. To those local leaders that were able to provide local order, the national regime could offer ample leeway to continue local extraction—reaping the benefits of local investments in capacity—and access to higher office to the local leader's clique. This was part of a broader strategy pursued by the national PRI. As Gil-Mendieta and Schmidt (1996) note,

> [t]he network established by the generals in power, originated in the aftermath of the Mexican revolution, created the main political institution which helped recruit politicians for government and expanded the economic and political resources available to the network. This supported Mexico's corporatist political structure and political stability because it expanded the connections between politicians who belong to a wide array of institutions. In order to maintain a unique political power system, the network members developed a system of loyalties extended also to political institutions which created a transmission band with the society at large. (357)

In exchange for their support to the national ruling coalition, consolidated bosses could have secured local extraction over the long term—using locally developed capacity—but also increased their ability to place themselves (or their allies) in high profile national positions.

To assess the conjecture of consolidation and increased access to national political influence, I

Table A.1: Commodity Shocks and Future National-Level Politicians

	(1) Federal government cabinet members (1940-1970)	(2) Federal government cabinet members (1940-1970)	(3) National-level legislators (1940-1970)	(4) National-level legislators (1940-1970)
Commodity potential 1920s (log)	-0.033	-0.042	-0.073	-0.071
	(0.038)	(0.038)	(0.17)	(0.16)
% shock to commodity potential	-2.17***	-2.28**	-6.43**	-4.13
	(0.82)	(1.12)	(2.71)	(3.45)
Population, 1930 (log)	1.08***	0.77***	4.26***	2.92***
	(0.19)	(0.15)	(0.65)	(0.58)
Bureaucrats per 1000 people, 1930		0.13***		0.31***
		(0.043)		(0.064)
Municipal surface area, Ha. (log)		-0.32***		-0.85*
		(0.11)		(0.44)
Localities per Ha., 1930		-142.4		-640.5*
		(95.0)		(385.7)
Pop. in agriculture 1930 (%)		-0.0088		-0.030*
		(0.0057)		(0.016)
Pop. in cities 1930 (%)		0.034***		0.16***
		(0.0098)		(0.032)
Mean of DV	0.57	0.60	2.52	2.67
SD of DV	3.35	3.44	9.85	10.1
R sq.	0.099	0.26	0.18	0.36
Number of municipios	1557	1462	1557	1462

OLS estimations. See equation (2) for the econometric specification. The unit-of-analysis is the *municipio*, and the dependent variable measures the total years served by politicians born in each *municipio*. Municipios with *haciendas*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

analyze the access to national-level political office associated with each *municipio* for the period 1940-1976. This period spans from immediately after I measure state capacity outcomes, following the commodity shocks, to the end of president Luis Echeverría's term in 1976. Past analyses of the Mexican national political network suggest that a military-based sub-network (akin to a *camarilla*) ruled from the revolution until Echeverría's term, replaced later by a finance-based sub-network (Gil-Mendieta and Schmidt 1996).[1] This military-based sub-network had a regional approach to bringing the country's economic regions under the regime's control, by integrating local strongmen to expand its influence geographically.

I construct a geographic political access measure using Roderic Camp's political biographies, and focus on members of Congress and appointed high-ranking officials (members of the national cabinet, the attorney general, and Justices of the Supreme Court). I assign each politician to their place of birth, under the assumption that geographical origin is a reasonable indication of having close ties with the local political leadership. Finally, I add the number of years served in the Chamber of Deputies and the Senate (or in high-ranking appointments), aggregating to the *municipio* level.

Table A.1 presents the estimates of the cross-sectional model, equation (2), using the *municipio* aggregate number of years in national-level political offices as the dependent variable. Negative shocks following the Great Depression are associated with higher representation of a *municipio* in both appointed and elective high-ranking positions (albeit the latter is less precisely estimated). The results provide evidence for one channel of persistence of the documented shorter-term effects of temporary landed elite weakness on state capacity. They also suggest the relevance of political geography as a determinant of the patterns of political recruitment during the PRI regime, beyond the social characteristics of individual politicians (e.g., Smith 1979; Camp 1995).

[1] While the military-based ruling coalition was not characterized by direct intervention of the military in national politics, its civilian leadership did rely on the support of the military for presidential bids (Camp 1992).

B Descriptives

B.1 Crop Prices Before and After the Great Depression

Table B.1: Average Spot Prices (USD per metric tonne), Before and After the Great Depression

Commodity	1920-29	1930-39	% Change
Banana	$472.65	$593.60	+25.6%
Barley	$91.11	$110.00	+20.7%
Cacao	$1,220.89	$853.86	-30.1%
Coffee	$1,708.03	$1,135.70	-33.5%
Cotton	$2,647.34	$1,541.33	-41.8%
Maize	$35.17	$25.27	-28.2%
Rice	$591.97	$537.43	-9.2%
Sugar	$613.42	$489.22	-20.3%
Wheat	$302.88	$231.50	-23.6%

Source: Global Financial Data, from various primary sources.

B.2 Descriptive Statistics

Table B.2: Descriptive Statistics

	count	mean	sd	min	p25	p50	p75	max
Bureaucrats per 1000 people	4516	3.66	7.16	0	0.76	1.90	3.86	190.1
Number of bureaucrats (log)	4516	2.18	1.56	0	1.10	2.08	3.14	8.59
Local bureaucrats per 1000 people	2327	0.54	0.81	0	0	0.23	0.80	8.11
Number of local bureaucrats, 1940 (log)	2327	1.02	1.16	0	0	0.69	1.79	6.28
Irrigated Land Redistribution (grants)	4516	1.04	3.72	0	0	0	0	93
Irrigated Land Redistribution (% of municipio)	4516	0.61	2.66	0	0	0	0	40.6
Hacienda in 1930	2189	0.67	0.47	0	0	1	1	1
Commodity potential (log)	4516	8.17	1.34	0.48	7.35	8.38	9.08	11.2
Placebo commodity potential (log)	4516	8.03	1.43	0.48	7.12	8.21	9.06	11.3
Population, 1930 (log)	2189	8.18	1.05	5.21	7.39	8.21	8.90	12.1
Pop. in agriculture 1930 (%)	2189	30.2	10.5	1.63	25.7	29.0	32.8	100
Localities per Ha., 1930	2189	0.00072	0.00083	0.0000044	0.00023	0.00049	0.00095	0.016
Municipal surface area, Ha. (log)	2189	10.1	1.51	5.46	9.06	10.0	11.1	14.8
Pop. in cities 1930 (%)	2189	5.66	17.3	0	0	0	0	100
Local taxes (% of mun. GDP) Avg. 1989-2013	2189	0.43	0.50	0	0.16	0.28	0.50	7.55
Bureaucrats per 1000 people (2000)	2159	9.19	7.02	0.22	4.96	7.62	11.2	82.4
Municipal GDP 2005 (log)	2189	19.8	1.77	14.9	18.6	19.8	20.9	25.8
Federal transfers (log) Avg. 1989-2013	2189	16.5	1.73	0	15.8	16.6	17.4	21.3
Federal government cabinet member-years (1940-1970)	4516	0.24	2.13	0	0	0	0	58
National-level legislator-years (1940-1970)	4516	1.12	6.17	0	0	0	0	190

B.3 Crop Suitability and Present-Day Production

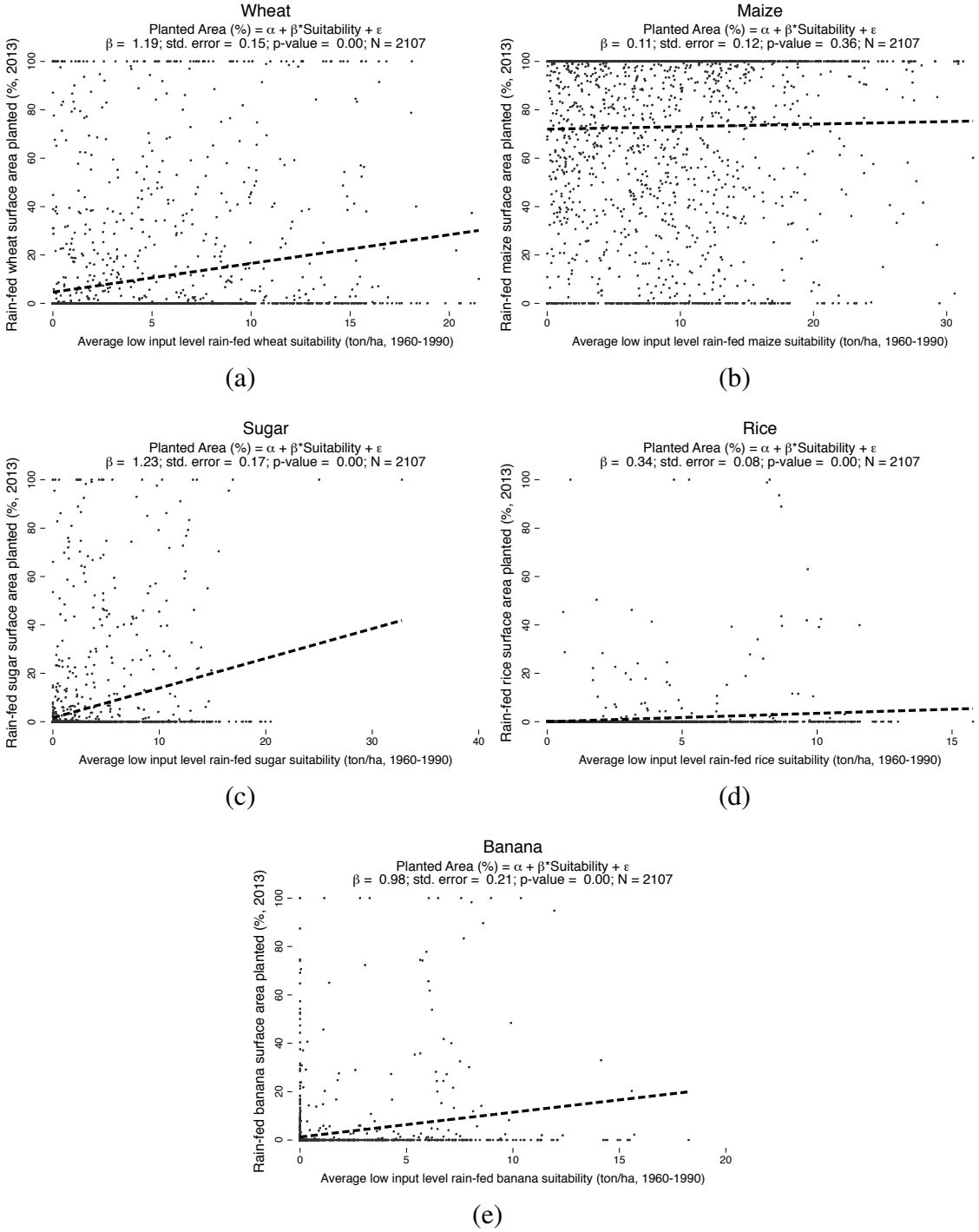
Crop suitability, available from FAO's Global Agro-Ecological Zones, is calculated using information about local climate, soil types, slope, and rainfall. This measure is constructed in several steps.

First, historical climate geo-spatial data are processed to create climatic indicators relevant for plant production, such as the duration of plant-growing periods, and the rate of water loss in different soil types. In a second step, maximum yields for each crop are estimated as a function of different agro-climatic regimes. These calculations are made using different assumptions about inputs in agricultural production. I use the low-input-level rain-fed crop suitability because it best reflects baseline suitability; that is, it measures production potential without considering endogenous production conditions related to irrigation investment decisions, and selection of varieties and input intensity.

In a third and fourth steps, potential yields for each crop are adjusted to climatic, soil, and slope constraints that reduce production. Finally, in a fifth step, all these elements are integrated and computed for each grid-cell with available information (local climate, soil types, slope, and rainfall).

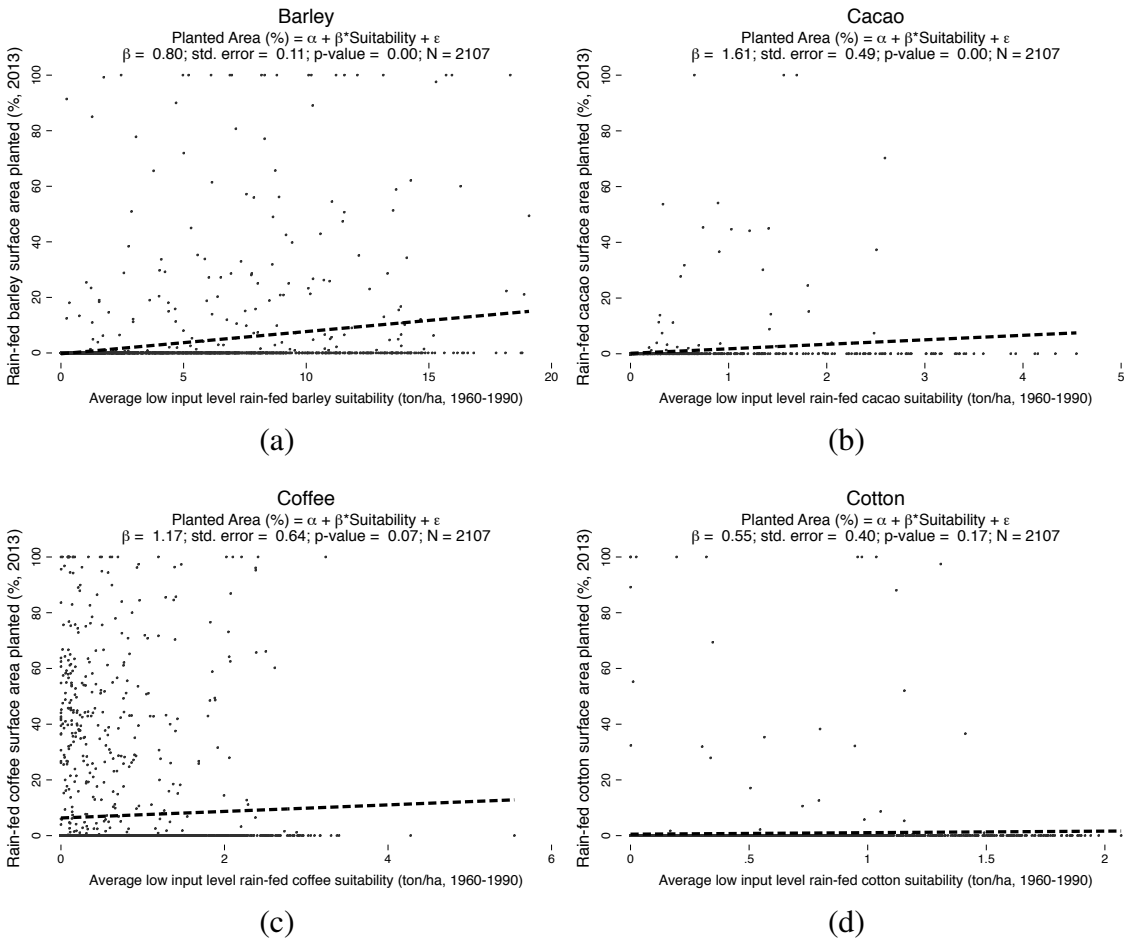
The resulting crop suitability measure is, as expected, highly correlated with observed, present-day planted area shares and production volume (data from SIAP 2013), as shown in figures B.1 and B.2, as well as in tables B.3 and B.4. The partial correlation between historic suitability and present-day planted shares/production is strongly positive, and significant in most cases.

Figure B.1: Share of Planted Area (2013) and Crop Suitability (1961-1990)
(Wheat, Maize, Sugarcane, Rice, Banana)



Share of planted area among the selected crops: Wheat, maize, sugarcane, rice, and banana. Data from SIAP and GAEZ.

Figure B.2: Share of Planted Area (2013) and Crop Suitability (1961-1990)
(Barley, Cacao, Coffee, Cotton)



Share of planted area among the selected crops: Barley, cacao, coffee, and cotton. Data from SIAP and GAEZ.

Table B.3: Crop Suitability (1961-1990) and Present-Day Production (2013)

	Production (log tonnes)									
	(1) Wheat	(2) Wheat	(3) Maize	(4) Maize	(5) Rice	(6) Rice	(7) Sugar	(8) Sugar	(9) Banana	(10) Banana
Surface Area (log)		0.17***		-0.36***		0.055***		0.043**		0.15***
		(0.029)		(0.041)		(0.017)		(0.018)		(0.022)
Wheat Suitabilty	0.12***	0.18		-0.49		-0.17**		0.30**		-0.41***
	(0.011)	(0.26)		(0.34)		(0.085)		(0.15)		(0.13)
Maize Suitabilty		-0.020*	-0.0083	0.065***		0.027***		0.0060		0.027***
		(0.011)	(0.0083)	(0.016)		(0.0063)		(0.0055)		(0.0068)
Rice Suitabilty		-0.24***		0.014	0.050***	0.045***		-0.043		0.14***
		(0.061)		(0.077)	(0.0093)	(0.016)		(0.042)		(0.034)
Sugarcane Suitabilty		-0.054***		0.036		0.036***	0.017*	0.035		0.072**
		(0.019)		(0.042)		(0.012)	(0.0091)	(0.025)		(0.029)
Banana Suitabilty		-0.0083		-0.030		-0.045***		0.011	0.12***	0.021
		(0.017)		(0.043)		(0.014)		(0.023)	(0.021)	(0.034)
Barley Suitabilty		-0.065		0.37		0.16*		-0.37**		0.38***
		(0.29)		(0.38)		(0.092)		(0.17)		(0.14)
Cacao Suitabilty		0.17**		-0.43**		0.21***		-0.28***		-0.20
		(0.069)		(0.18)		(0.079)		(0.093)		(0.14)
Coffee Suitabilty		0.27***		-0.36***		-0.13***		0.086		-0.013
		(0.093)		(0.13)		(0.038)		(0.053)		(0.063)
Cotton Suitabilty		1.21***		-0.57		-0.41***		0.074		-1.04***
		(0.31)		(0.36)		(0.086)		(0.17)		(0.14)
Mean of DV	0.85	0.85	4.34	4.34	0.15	0.15	0.24	0.24	0.40	0.40
SD of DV	1.88	1.88	2.62	2.62	0.90	0.90	1.14	1.14	1.43	1.43
R sq.	0.073	0.16	0.00044	0.083	0.027	0.079	0.0029	0.021	0.041	0.10
Number of municipios	2107	2107	2107	2107	2107	2107	2107	2107	2107	2107

OLS estimations. The unit-of-analysis is the *municipio*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$. Data from SIAP and GAEZ.

Table B.4: Crop Suitability (1961-1990) and Present-Day Production (2013)

	Production (log tonnes)							
	(1) Barley	(2) Barley	(3) Cacao	(4) Cacao	(5) Coffee	(6) Coffee	(7) Cotton	(8) Cotton
Surface Area (log)		0.091***		0.030***		-0.15***		0.030**
		(0.018)		(0.0091)		(0.030)		(0.012)
Wheat Suitabilty		0.25*		-0.14***		-0.12		-0.21
		(0.13)		(0.051)		(0.15)		(0.17)
Maize Suitabilty		0.0058		0.000050		-0.0092		0.00081
		(0.0069)		(0.0031)		(0.0073)		(0.0022)
Rice Suitabilty		0.051**		0.040***		0.070*		-0.079***
		(0.025)		(0.015)		(0.036)		(0.028)
Sugarcane Suitabilty		-0.026***		0.016		-0.053**		0.020***
		(0.0096)		(0.011)		(0.027)		(0.0067)
Banana Suitabilty		-0.0048		-0.023		0.12***		-0.0026
		(0.0085)		(0.019)		(0.034)		(0.0062)
Barley Suitabilty	0.090***	-0.19		0.15***		0.030		0.23
	(0.0095)	(0.15)		(0.057)		(0.16)		(0.19)
Cacao Suitabilty		0.15***	0.30***	0.24***		-0.015		-0.043
		(0.044)	(0.063)	(0.064)		(0.12)		(0.028)
Coffee Suitabilty		-0.095		-0.020	-0.00090	0.015		0.017
		(0.072)		(0.029)	(0.047)	(0.065)		(0.013)
Cotton Suitabilty		-0.60***		-0.32***		-0.54***	0.072***	0.47***
		(0.10)		(0.061)		(0.15)	(0.025)	(0.15)
Mean of DV	0.32	0.32	0.087	0.087	0.69	0.69	0.052	0.052
SD of DV	1.25	1.25	0.64	0.64	1.83	1.83	0.53	0.53
R sq.	0.081	0.11	0.065	0.079	0.00000013	0.089	0.0040	0.081
Number of municipios	2107	2107	2107	2107	2107	2107	2107	2107

OLS estimations. The unit-of-analysis is the *municipio*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$. Data from SIAP and GAEZ.

B.4 Commodity Potential Over Time

Commodity potential is defined as:

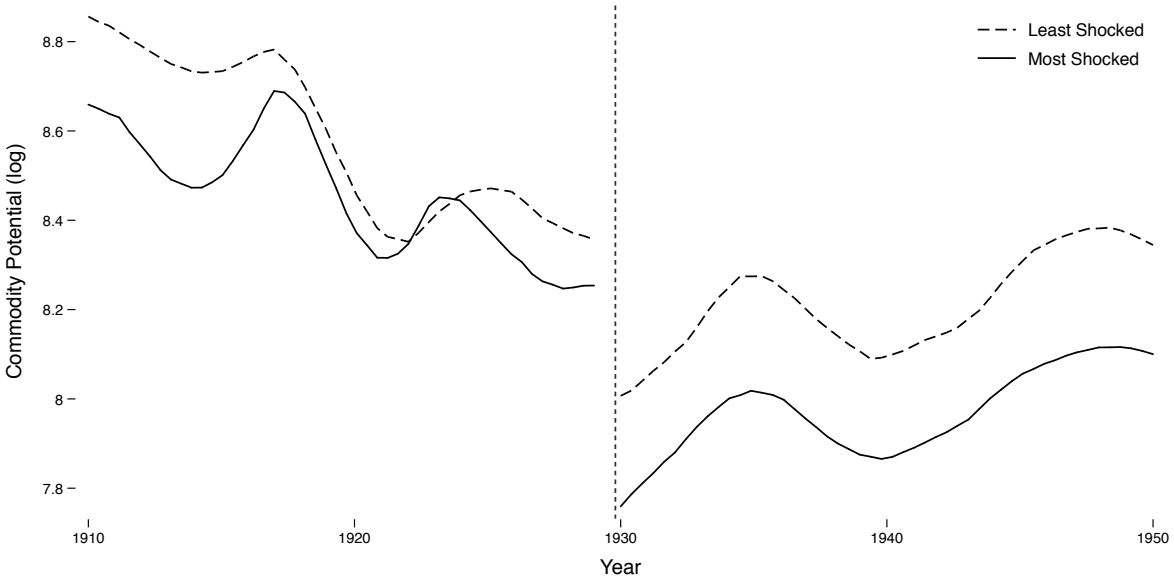
$$\bar{V}_{it} = \sum_{g=1}^{G} \frac{\bar{P}_{gt} \times Suitability_{ig}}{Avg.\ Suitability_g}$$

where $\bar{P}_{gt}$ is the average price of crop g in time $t \in \{1920s, 1930s\}$; $Suitability_{ig}$ is a *municipio*-specific crop suitability measure (in metric tonnes) determined by agro-climatic conditions; and $Avg.\ Suitability_g = \frac{1}{N}\sum_{i=1}^{N} Suitability_{ig}$ is a national average.

Commodity potential can vary between *municipios* at any given point in time because of differences in their crop suitability—their ability to grow certain crops given the local agro-climatic conditions. Higher suitability to grow crops, relative to the national average, will lead to higher commodity potential. These characteristics are exogenous, and do not vary over time (see section B.3 for a detailed description of crop suitability). Prices do change, which makes it possible that commodity potential vary over time for a given *municipio*. Increasing prices for the basket of crops leads to higher values of $\bar{V}_{it}$.

In short, commodity potential aggregates the value of the potential production of a *municipio* at a given point in time relative to the rest of the country. This measure is directly related to the availability of resources for the landed elite, who produce commodities for the market. A high commodity potential suggests abundant available resources in a *municipio*, relative to others. These resources can be transformed by the elite into political power, which enables them to challenge the local political leaders. A large, temporary decline in economic resources reduces the elite's political power, and with it their ability to defeat the ruler. This temporary shock, according to the theory, has two related effects: first, rulers seize upon this opportunity to eliminate the source of power of the elite—by expropriating their land; second, they have enhanced incentives to invest in

Figure B.3: Commodity Potential, 1910-1950



Nadaraya-Watson regressions. Bandwidths selected using the Rule of Thumb estimator. The unit-of-analysis is the *municipio*-year. Most and least shocked groups consist of *municipios* exposed to a below- and above-average percentage change in commodity potential from 1930 to 1940, respectively.

state capacity, which they will likely enjoy in the future now that they are relatively more secure in power.

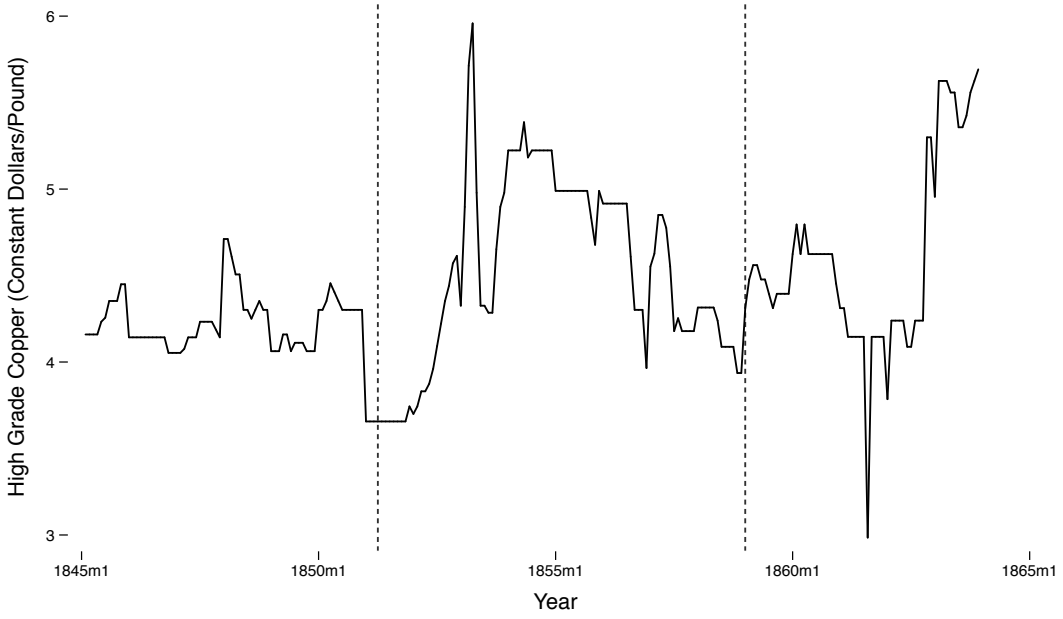
Figure B.3 illustrates how the commodity potential measure captures changes in prices over time, for two groups of *miunicipios*: those that were most- and least- shocked by the Great Depression. The lines show how commodity potential aggregates the production potential (via suitability) and prices for all crops, and how it shifts over time as prices change.

B.5 *Municipios* with *Haciendas* in 1930

Figure B.4: *Municipios* with *Haciendas* in 1930

B.6 Copper Prices in the XIX Century

Figure B.5: Copper Prices, 1845-1864



Wholesale prices in Philadelphia. The dashed lines indicate the onset of the Chilean civil wars of 1851 and 1859. Source: *Global Financial Data* (2014).

C Additional Empirical Analysis

C.1 Alternative Measures: Difference-in-differences Design

Table C.1: Commodity Shocks, Bureaucrats, and Land Redistribution
Alternative Measures

	(1) Bureaucrats (log) (Haciendas)	(2) Bureaucrats (log) (Haciendas)	(3) Bureaucrats (log) (No haciendas)	(4) Land reform (% of mun.) (Haciendas)	(5) Land reform (% of mun.) (Haciendas)	(6) Land reform (% of mun.) (No haciendas)
Commodity potential (log)	-0.79**	-1.03***	-0.26	0.89	-3.07***	3.54**
	(0.32)	(0.36)	(0.60)	(1.26)	(0.98)	(1.74)
Population in 1930 (log) × 1940		0.10**	0.16**		0.80***	0.37*
		(0.048)	(0.078)		(0.21)	(0.22)
Municipal surface area, Ha. (log) × 1940		0.0010	-0.036		-0.46***	0.016
		(0.034)	(0.058)		(0.17)	(0.17)
Localities per Ha. in 1930 × 1940		51.8	-5.61		650.8	-144.2
		(38.3)	(87.3)		(479.7)	(219.7)
Population in agriculture in 1930 (%) × 1940		-0.0032	-0.0016		-0.0045	0.0014
		(0.0039)	(0.0055)		(0.012)	(0.0055)
Population in cities in 1930 (%) × 1940		-0.0032	0.0041		-0.0058	0.0033
		(0.0020)	(0.0033)		(0.0075)	(0.013)
Commodity potential (log) in 1930 × 1940		-0.0048	-0.038		0.021	0.28***
		(0.024)	(0.041)		(0.074)	(0.11)
Land reform by 1930 (% of municipio) × 1940					-0.81***	-1.01***
					(0.19)	(0.021)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	2.57	2.57	1.39	0.68	0.68	0.46
Within-*Municipio* SD of DV	0.58	0.58	0.53	0.84	0.84	0.62
R sq.	0.91	0.91	0.88	0.56	0.62	0.71
Observations	3019	3019	1489	3114	3114	1524
Number of municipios	1557	1557	762	1557	1557	762

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (clustered at the *municipio* level) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

Table C.2: Commodity Shocks and Land Redistribution
Alternative Land Redistribution per Capita Measure

	(1) Land reform, grants per 1000 people (Haciendas)	(2) Land reform, grants per 1000 people (Haciendas)	(3) Land reform, grants per 1000 people (No haciendas)	(4) Land reform, grants per 1000 people (Haciendas)
Commodity potential (log)	-0.43***	-0.55***	0.86***	
	(0.13)	(0.15)	(0.32)	
Placebo commodity potential (log)				0.032
				(0.033)
Population in 1930 (log) × 1940		0.047*	0.019	0.030
		(0.024)	(0.040)	(0.023)
Municipal surface area, Ha. (log) × 1940		-0.0019	0.074***	0.0098
		(0.017)	(0.026)	(0.018)
Localities per Ha. in 1930 × 1940		20.7	-12.9	15.2
		(29.0)	(30.8)	(28.5)
Population in agriculture in 1930 (%) × 1940		0.00040	0.00078	0.00012
		(0.0014)	(0.0015)	(0.0014)
Population in cities in 1930 (%) × 1940		-0.0012	0.00027	-0.00086
		(0.00079)	(0.0022)	(0.00078)
Commodity potential (log) in 1930 × 1940		0.028***	0.059**	0.030***
		(0.010)	(0.025)	(0.010)
Land reform by 1930 (grants) × 1940		-0.017	-0.18***	-0.013
		(0.021)	(0.048)	(0.021)
Year FE	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	0.14	0.14	0.077	0.14
Within-*Municipio* SD of DV	0.17	0.17	0.10	0.17
R sq.	0.61	0.62	0.57	0.61
Observations	3114	3114	1524	3114
Number of municipios	1557	1557	762	1557

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (clustered at the *municipio* level) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

C.2 Alternative Measures: Cross-sectional Design

Table C.3: Commodity Shocks and Local Bureaucrats (1940)
Alternative Measures

	(1) Number of local bureaucrats (log)	(2) Number of local bureaucrats (log)	(3) Number of bureaucrats (log)	(4) Number of bureaucrats (log)	(5) Land reform (% of mun.)	(6) Land reform (% of mun.)
Commodity potential 1920s (log)	0.019	-0.021	0.039	-0.015	0.14***	0.019
	(0.021)	(0.014)	(0.029)	(0.015)	(0.046)	(0.052)
% shock to commodity potential	-1.61***	-1.01***	-2.61***	-1.84***	1.51	-4.25***
	(0.40)	(0.30)	(0.52)	(0.32)	(1.04)	(0.96)
Population, 1930 (log)		0.61***		0.87***		0.79***
		(0.030)		(0.034)		(0.15)
Bureaucrats per 1000 people, 1930		0.015***		0.036***		
		(0.0026)		(0.0047)		
Municipal surface area, Ha. (log)		0.12***		0.18***		-0.46***
		(0.021)		(0.025)		(0.12)
Localities per Ha., 1930		88.8**		171.5***		654.5*
		(36.5)		(51.0)		(339.0)
Pop. in agriculture 1930 (%)		-0.0048**		-0.0027		-0.0046
		(0.0021)		(0.0022)		(0.0084)
Pop. in cities 1930 (%)		0.016***		0.014***		-0.0057
		(0.0014)		(0.0014)		(0.0053)
Land reform by 1930 (% of municipio)					0.28*	0.19
					(0.15)	(0.13)
Mean of DV	1.28	1.36	2.72	2.85	1.14	1.17
SD of DV	1.18	1.18	1.54	1.48	3.36	3.39
R sq.	0.010	0.61	0.016	0.72	0.018	0.11
Number of municipios	1587	1462	1587	1462	1596	1557

OLS estimations. See equation (2) for the econometric specification. The unit-of-analysis is the *municipio*. *Municipios* with *haciendas*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

Table C.4: Commodity Shocks and Long Term Local State Capacity
Alternative Measures

	(1)	(2)	(3)	(4)	(5)	(6)
	Bureaucrats (log) (2000)	Bureaucrats (log) (2000)	Bureaucrats (log) (2000)	Local taxes (log) Avg. 1989-2013	Local taxes (log) Avg. 1989-2013	Local taxes (log) Avg. 1989-2013
Commodity potential 1920s (log)	-0.018	-0.012	0.014	0.078***	0.088***	0.063***
	(0.011)	(0.011)	(0.0094)	(0.022)	(0.022)	(0.021)
% shock to commodity potential	-1.86***	-1.50***	0.083	-1.84***	-0.48	-3.32***
	(0.20)	(0.22)	(0.19)	(0.35)	(0.83)	(0.40)
Population, 1930 (log)		-0.11***	0.0015		0.22***	0.064
		(0.029)	(0.024)		(0.063)	(0.045)
Bureaucrats per 1000 people, 1930		0.021***	0.013***		-0.0026	0.0060*
		(0.0020)	(0.0017)		(0.0064)	(0.0032)
Municipal surface area, Ha. (log)		0.047***	0.063***		0.11*	-0.033
		(0.017)	(0.014)		(0.063)	(0.027)
Localities per Ha., 1930		88.3***	44.5*		-47.5	96.5**
		(31.3)	(24.7)		(191.8)	(44.6)
Pop. in agriculture 1930 (%)		-0.0064***	-0.00034		0.0035	-0.0092***
		(0.0016)	(0.0014)		(0.0038)	(0.0026)
Pop. in cities 1930 (%)		0.0039***	0.0015**		0.012***	0.0025*
		(0.00083)	(0.00072)		(0.0043)	(0.0014)
Municipal GDP 2005 (log)			0.82***	0.87***	0.69***	0.37***
			(0.033)	(0.054)	(0.083)	(0.035)
Federal transfers (log) Avg. 1989-2013			-0.014			0.85***
			(0.013)			(0.044)
Population, 2000 (log)	1.05***	1.02***	0.047			
	(0.013)	(0.019)	(0.044)			
Mean of DV	9.71	9.71	9.71	0.42	0.42	0.42
SD of DV	6.69	6.69	6.69	0.46	0.46	0.46
R sq.	0.86	0.88	0.92	0.49	0.51	0.78
Number of municipios	1455	1455	1455	1462	1462	1462

OLS estimations. See equation (2) for the econometric specification. The unit-of-analysis is the *municipio*. Municipios with *haciendas*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

C.3 Evidence of Pre-Depression Parallel Trends

An important assumption for a causal interpretation of the effect of shocks to commodity potential is that, in the absence of the shock, affected and unaffected places would have followed parallel trends in terms of bureaucrats and land redistribution. This assumption, while untestable, implies that, prior to the shock, trends should be parallel between relatively affected and unaffected *municipios*.

In table C.5, I directly assess whether the shock to commodity potential (from 1930 to 1940) predicts pre-Depression changes in bureaucrats (from 1900 to 1930) and land redistribution (from 1920 to 1930). If this were the case, then the parallel trends assumption would be violated in the pre-Depression period.

The results confirm the pattern illustrated by the figure 4. In no case is commodity potential significantly associated with the pre-Depression outcomes. Furthermore, the estimated conditional correlations are much smaller than the actual effects (presented in columns 1-2 and 5-6 for reference), and close to zero.

Table C.5: Pre-Depression Parallel Trends

	Bureaucrats per 1000 people (1930-1940)		Bureaucrats per 1000 people (Pre-Depression, 1900-1930)		Land reform, grants (1930-1940)		Land reform, grants (Pre-Depression, 1920-1930)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Commodity potential (log)	-9.19*	-11.1**	-1.76	3.49	-3.31**	-4.69***	-0.046	0.066
	(4.86)	(4.59)	(4.05)	(4.50)	(1.65)	(1.73)	(0.30)	(0.075)
Population in 1930 (log) × 1940		0.092		-0.58		2.12***		-0.0066
		(0.52)		(0.48)		(0.37)		(0.0067)
Municipal surface area, Ha. (log) × 1940		-0.011		0.55		0.0090		0.00011
		(0.35)		(0.36)		(0.15)		(0.0048)
Localities per Ha. in 1930 × 1940		390.5		349.4		40.9		-1.45
		(357.4)		(418.3)		(197.7)		(6.32)
Population in agriculture in 1930 (%) × 1940		0.0065		-0.070		0.017		-0.00051
		(0.035)		(0.048)		(0.013)		(0.00060)
Population in cities in 1930 (%) × 1940		-4.03		15.3***		0.015		0.000098
		(3.55)		(4.07)		(0.014)		(0.00031)
Commodity potential (log) in 1930 × 1940		0.0093		-0.11		-0.028		0.0086
		(0.20)		(0.20)		(0.11)		(0.011)
Land reform by 1930 (grants) × 1940						0.28		0.97***
						(0.38)		(0.016)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	4.40	4.40	2.54	2.54	1.35	1.35	1.35	1.35
Within-*Municipio* SD of DV	2.31	2.31	2.15	2.15	1.62	1.62	1.62	1.62
R sq.	0.73	0.73	0.60	0.67	0.58	0.65	0.52	0.98
Observations	2396	2396	2396	2396	3114	3114	3114	3114
Number of municipios	1216	1216	1216	1216	1557	1557	1557	1557

OLS estimations. See equation (1) for the econometric specification. Jurisdictions or *municipios* with *haciendas*. In models 1-4, the yearly unit-of-analysis is the smallest jurisdiction in which the *municipios* of 1900 and 1940 completely overlap. This spatial aggregation results in 1,547 artificial jurisdictions, of which 1,235 had at least an *hacienda* in 1930. In models 5-8, the unit-of-analysis is the *municipio*-year. Standard errors (clustered at the jurisdiction level in models 1-4 and at the *municipio* level in models 5-8) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

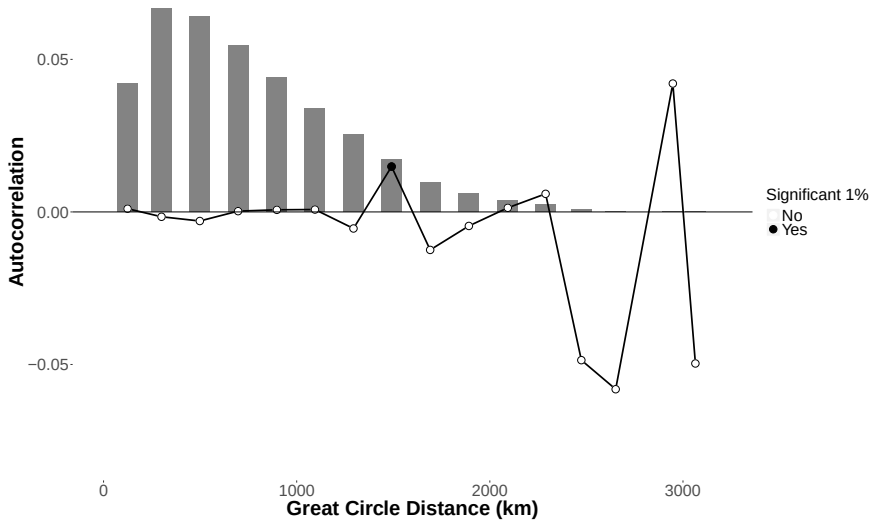
C.4 Spatial Correlation of Errors

Given the nature of crop suitabilities, spatial clustering may affect the validity of the results. The Moran's I statistics for the residuals of the estimated models from equation (1) suggest some evidence of spatial autocorrelation for land redistribution. Taking column 2 of table 2, for example, the estimated Moran's I is 0.0293, and the null of no spatial autocorrelation is rejected at the 1% level. For the case of the number of bureacrats, in contrast, I find no evidence of spatial autocorrelation. From the model in column 2 of table 1, Moran's I is 0.0007, and the null of no spatial autocorrelation cannot be rejected at standard levels (the p-value is 0.35).

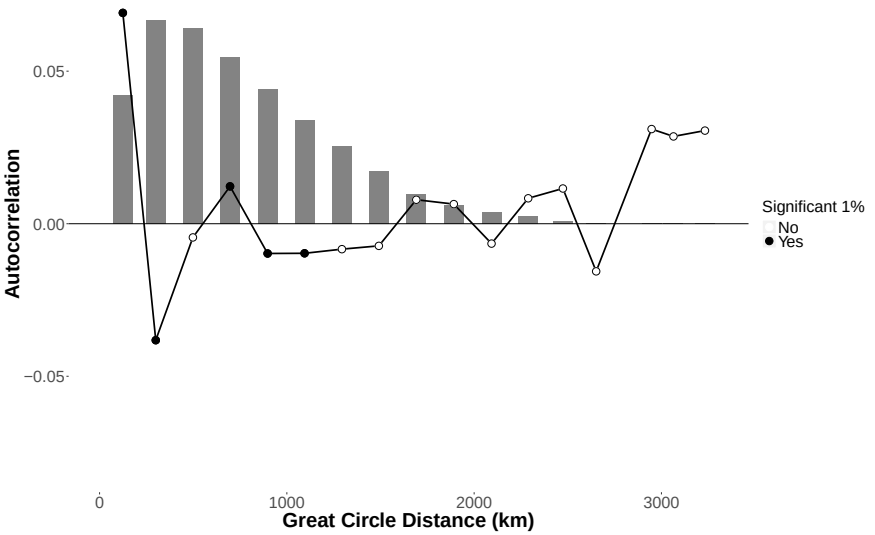
To further explore the nature of the spatial autocorrelation of the residuals, I present in figure C.1 the spatial correlograms of the residuals for both outcomes. The figure presents the spatial correlation of residuals as distance between *municipio* dyads increases up to roughly 3,300km, the maximum distance between *municipio* dyads in Mexico. These correlations suggest a similar conclusion as the global Moran's I above: there is no discernible pattern of spatial correlation in residuals from the model on bureaucrats, and a small but visible one for the model on land redistribution. Specifically, the residuals of *municipios* that are close are positively correlated, a pattern that is reversed at around the 400km mark. After 1,200km, the spatial autocorrelation is no longer significant.

I use these insights to re-estimate tables 1 and 2, assuming serial correlation within *municipio*—equivalent to clustering at the *municipio* level—as well as spatial correlation in equation (1)'s errors between *municipios* that are within 1,200 km of one another. The variance-covariance matrix is estimated using an approach described in Conley (2008) and Hsiang (2010). These estimations are presented in tables C.6 and C.7 below. The main results are unchanged by making these alternative assumptions about the distribution of the errors in equation (1).

Figure C.1: Spatial Correlation of Errors: Spatial Correlograms
The Correlograms Reveal Some Spatial Autocorrelation in Land Redistribution.



(a) Bureaucrats



(b) Land Redistribution

The figures present the spatial correlation between residuals as distance between *municipios* increases up to the maximum distance in Mexico. The **upper** panel uses the residuals of the fully specified model for the number of bureaucrats (column 2 in table 1) and the **lower** panel uses the residuals from a model for land redistribution (column 2 in table 2). The histogram presents the distribution of the number of *municipio* dyads by distance.

Table C.6: Commodity Shocks and Bureaucrats
Spatial Clustering of Errors

	(1) Bureaucrats per 1000 people (Haciendas)	(2) Bureaucrats per 1000 people (Haciendas)	(3) Bureaucrats per 1000 people (No haciendas)	(4) Bureaucrats per 1000 people (Haciendas)
Commodity potential (log)	-7.92***	-9.39***	2.14	
	(2.55)	(2.50)	(2.17)	
Placebo commodity potential (log)				-0.34
				(0.37)
Population in 1930 (log) × 1940		0.12	0.97***	-0.29
		(0.26)	(0.24)	(0.32)
Municipal surface area, Ha. (log) × 1940		0.090	0.15	0.49**
		(0.18)	(0.26)	(0.22)
Localities per Ha. in 1930 × 1940		474.0**	437.0*	418.7**
		(188.1)	(249.2)	(200.3)
Population in agriculture in 1930 (%) × 1940		-0.022	-0.019	-0.034
		(0.021)	(0.015)	(0.022)
Population in cities in 1930 (%) × 1940		-0.042**	0.036**	-0.035*
		(0.019)	(0.015)	(0.019)
Commodity potential (log) in 1930 × 1940		0.011	0.013	0.050
		(0.11)	(0.13)	(0.16)
Year FE	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	4.23	4.23	4.23	4.23
Within-*Municipio* SD of DV	2.34	2.34	2.34	2.34
R sq.	0.0092	0.019	0.073	0.0092
Observations	3019	3019	1489	3019
Number of municipios	1557	1557	1557	1557

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (that assume serial correlation within *municipios* and spatial correlation between *municipios* within 1,200 km from each other) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

Table C.7: Commodity Shocks and Land Redistribution
Spatial Clustering of Errors

	(1) Land reform, grants (Haciendas)	(2) Land reform, grants (Haciendas)	(3) Land reform, grants (No haciendas)	(4) Land reform, grants (Haciendas)
Commodity potential (log)	-3.31*	-4.69***	3.78***	
	(1.71)	(1.11)	(1.27)	
Placebo commodity potential (log)				0.056
				(0.20)
Population in 1930 (log) × 1940		2.12***	0.43*	1.96***
		(0.44)	(0.22)	(0.41)
Municipal surface area, Ha. (log) × 1940		0.0090	0.41***	0.15
		(0.11)	(0.11)	(0.11)
Localities per Ha. in 1930 × 1940		40.9	17.6	2.25
		(121.5)	(75.9)	(117.9)
Population in agriculture in 1930 (%) × 1940		0.017**	0.0011	0.015*
		(0.0078)	(0.0028)	(0.0079)
Population in cities in 1930 (%) × 1940		0.015*	0.0032	0.018**
		(0.0080)	(0.0062)	(0.0081)
Commodity potential (log) in 1930 × 1940		-0.028	0.17***	-0.0087
		(0.095)	(0.053)	(0.089)
Land reform by 1930 (grants) × 1940		0.28	-0.74***	0.31
		(0.21)	(0.25)	(0.21)
Year FE	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	1.35	1.35	1.35	1.35
Within-*Municipio* SD of DV	1.62	1.62	1.62	1.62
R sq.	0.0036	0.17	0.17	0.17
Observations	3114	3114	1524	3114
Number of municipios	1557	1557	1557	1557

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (that assume serial correlation within *municipios* and spatial correlation between *municipios* within 1,200 km from each other) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

C.5 Alternative Estimation Strategies

To further assess the robustness of the results, in tables C.8 and C.9 I implement two alternative estimation strategies to the main difference-in-differences approach.

First, I follow an estimation strategy based on selection on observables, presented in columns 1-4 of both tables. To be able to match between two groups (i.e., treatment and control), I first identify *municipios* that were negatively shocked above average between 1930 and 1940, and *municipios* that were negatively shocked below average over the same period. I then find weights that match the mean of predetermined observables between these two groups. I find these weights using a method described in Hainmueller (2012), matching on pre-Great Depression covariates: commodity potential in 1930, the *municipio*'s surface area, log of 1930 population, localities per Ha. in 1930, the proportion of the population in agriculture and in cities in 1930, and land redistribution by 1930. With these weights, I re-estimate equation (1) (columns 1 and 2), as well as a modified difference-in-differences that uses the dichotomous treatment described above instead of the continuous commodity shock (columns 3 and 4).

I also follow O'Neill et al. (2016) and estimate a Lagged Dependent Variable model, using only the 1940 cross-section (columns 5 and 6 of tables C.8 and C.9.) Specifically, the estimating equation is

$$y_{i,1940} = \alpha + \phi y_{i,1930} + \beta ln\bar{V}_{i,1940} + \delta X_{i,1930} + \varepsilon_i. \tag{A3}$$

As tables C.8 and C.9 show, the results are largely robust to these estimation strategies. The coefficients for commodity potential are negative and of comparable magnitude to the baseline difference-in-difference estimation for both bureaucrats and land redistribution (though the estimate for bureaucrats in a model without controls is not precisely estimated). A shock variable that indicates whether a *municipio* was hit by the Great Depression harder than average also re-

veals a qualitatively similar negative effect. Finally the lagged dependent variable model reveals similar results with the inclusion of the pre-determined controls (but no effect of the shock in the specification without controls).

Table C.8: Commodity Shocks and Bureaucrats
Alternative Estimation Strategies

	Entropy Balance				Lagged DV	
	(1)	(2)	(3)	(4)	(5)	(6)
	Bureaucrats per 1K p.	Bureaucrats per 1K p.	Bureaucrats per 1K p.	Bureaucrats per 1K p.	Bureaucrats per 1K p.	Bureaucrats per 1K p.
Commodity potential (log)	-6.34	-7.01*			-0.015	-7.39***
	(3.98)	(3.88)			(0.089)	(2.17)
% Shock to Commodity Potential (Dichotomous: Above Avg.)			-1.04	-1.04*		
			(0.65)	(0.62)		
Bureaucrats per 1000 people (Lagged)					0.47***	0.37***
					(0.044)	(0.044)
Population in 1930 (log) × 1940		0.32		0.23		-0.29
		(0.55)		(0.55)		(0.27)
Municipal surface area, Ha. (log) × 1940		0.085		0.20		0.64***
		(0.36)		(0.37)		(0.20)
Localities per Ha. in 1930 × 1940		410.8		404.9		967.7**
		(355.3)		(347.8)		(400.2)
Population in agriculture in 1930 (%) × 1940		-0.035		-0.037		-0.046***
		(0.033)		(0.032)		(0.017)
Population in cities in 1930 (%) × 1940		-0.092		-0.091		0.075***
		(0.059)		(0.059)		(0.015)
Commodity potential (log) in 1930 × 1940		0.010		0.052		7.38***
		(0.19)		(0.19)		(2.20)
Entropy Balance Weights	Yes	Yes	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	No	No
Municipality FE	Yes	Yes	Yes	Yes	No	No
Within-*Municipio* Mean of DV	4.29	4.29	4.29	4.29		
Within-*Municipio* SD of DV	2.34	2.34	2.34	2.34		
Mean of DV					4.79	4.79
SD of DV					8.03	8.03
R sq.	0.78	0.79	0.78	0.79	0.21	0.26
Observations	2924	2924	2924	2924	1462	1462
Number of municipios	1462	1462	1462	1462	1462	1462

OLS estimations. See equation (1) for the econometric specification of columns 1-4, and equation (A3) for the estimating equation of columns 5-6. The unit-of-analysis is the *municipio*-year. *Municipios* with *haciendas*. Standard errors (clustered at the *municipio* level in columns 1-4, and robust in columns 5-6) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

Table C.9: Commodity Shocks and Land Redistribution
Alternative Estimation Strategies

	Entropy Balance				Lagged DV	
	(1) Land reform, grants	(2) Land reform, grants	(3) Land reform, grants	(4) Land reform, grants	(5) Land reform, grants	(6) Land reform, grants
Commodity potential (log)	-5.07***	-4.93**			0.13	-4.63***
	(1.96)	(1.93)			(0.087)	(1.22)
% Shock to Commodity Potential (Dichotomous: Above Avg.)			-1.10**	-1.10**		
			(0.48)	(0.45)		
Land reform, grants (Lagged)					1.88***	-0.70
					(0.32)	(2.19)
Population in 1930 (log) × 1940		2.34***		2.27***		2.11***
		(0.53)		(0.52)		(0.26)
Municipal surface area, Ha. (log) × 1940		-0.070		0.014		0.0091
		(0.22)		(0.22)		(0.10)
Localities per Ha. in 1930 × 1940		-275.8		-282.6		39.7
		(347.1)		(350.1)		(139.5)
Population in agriculture in 1930 (%) × 1940		0.043**		0.042**		0.016*
		(0.021)		(0.021)		(0.0094)
Population in cities in 1930 (%) × 1940		0.012		0.012		0.015
		(0.016)		(0.016)		(0.010)
Commodity potential (log) in 1930 × 1940		0.021		0.051		4.61***
		(0.10)		(0.11)		(1.21)
Land reform by 1930 (grants) × 1940		0.35		0.37		1.96
		(0.46)		(0.46)		(2.17)
Entropy Balance Weights	Yes	Yes	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	No	No
Municipality FE	Yes	Yes	Yes	Yes	No	No
Within-*Municipio* Mean of DV	1.37	1.37	1.37	1.37		
Within-*Municipio* SD of DV	1.65	1.65	1.65	1.65		
Mean of DV					2.44	2.44
SD of DV					5.74	5.74
R sq.	0.57	0.63	0.57	0.63	0.086	0.23
Observations	2924	2924	2924	2924	1557	1557
Number of municipios	1462	1462	1462	1462	1557	1557

OLS estimations. See equation (1) for the econometric specification of columns 1-4, and equation (A3) for the estimating equation of columns 5-6. The unit-of-analysis is the *municipio*-year. *Municipios* with *haciendas*. Standard errors (clustered at the *municipio* level in columns 1-4, and robust in columns 5-6) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

C.6 Exclusion of Commodity Potential in Cross-sectional Design

Initial commodity potential, in levels ($ln\bar{V}_i^{1920s}$), can be plausibly correlated with unobservables, which themselves may be associated with any of the outcomes that I consider (local bureaucrats and land redistribution by 1940, or long-term outcomes). That alone would bias the estimate of initial commodity potential ($\hat{\beta}_0$ from equation 2). However, if initial commodity potential is additionally correlated with the commodity shock ($S_i^{1920s-30s}$), then the main estimate of interest, $\hat{\beta}_1$, will be biased as well.

The commodity shock, however, is driven by exogenous changes in international commodity prices, and is not correlated with initial (1920s) commodity potential (the correlation coefficient is 0.0056 in places with *haciendas*, and statistically indistinguishable from zero.) This suggests that the inclusion/exclusion of initial commodity potential should not affect the results. I verify that this is the case by re-estimating the cross-sectional models in tables C.10 and C.11, which exclude initial commodity potential, both for contemporary changes in local bureaucrats and for long term outcomes. In both the short- and long-term models, the results are substantively unchanged by the exclusion of initial commodity potential.

Table C.10: Commodity Shocks and Local Bureaucrats (1940)
Excluding Commodity Potential (1920s)

	(1) Local bureaucrats per 1000 people	(2) Local bureaucrats per 1000 people	(3) Bureaucrats per 1000 people	(4) Bureaucrats per 1000 people	(5) Land redistribution (grants)	(6) Land redistribution (grants)
% shock to commodity potential	-2.08***	-0.96***	-14.3***	-9.65***	-4.63***	-6.29***
	(0.34)	(0.30)	(3.51)	(2.81)	(1.51)	(1.63)
Population, 1930 (log)		-0.052		-0.33		2.10***
		(0.036)		(0.27)		(0.26)
Bureaucrats per 1000 people, 1930		0.017***		0.37***		
		(0.0048)		(0.044)		
Municipal surface area, Ha. (log)		0.14***		0.67***		0.021
		(0.025)		(0.20)		(0.10)
Localities per Ha., 1930		85.2**		971.9**		41.1
		(36.7)		(397.2)		(138.9)
Pop. in agriculture 1930 (%)		-0.0083***		-0.047***		0.016*
		(0.0024)		(0.016)		(0.0092)
Pop. in cities 1930 (%)		0.013***		0.076***		0.015
		(0.0018)		(0.015)		(0.0100)
Land reform by 1930 (grants)					2.85***	2.25***
					(0.31)	(0.27)
Mean of DV	0.66	0.69	4.64	4.79	2.63	2.69
SD of DV	0.85	0.85	7.94	8.03	6.00	6.06
R sq.	0.031	0.24	0.017	0.26	0.19	0.31
Number of municipios	1565	1462	1565	1462	1596	1557

OLS estimations. See equation (2) for the econometric specification. The unit-of-analysis is the *municipio*. Municipios with *haciendas*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

Table C.11: Commodity Shocks and Long Term Local State Capacity
Excluding Commodity Potential (1920s)

	(1) Bureaucrats per 1000 people (2000)	(2) Bureaucrats per 1000 people (2000)	(3) Local taxes (% of mun. GDP) Avg. 1989-2013	(4) Local taxes (% of mun. GDP) Avg. 1989-2013
% shock to commodity potential	-14.1***	-13.3***	-1.00***	-0.96***
	(2.37)	(2.31)	(0.15)	(0.15)
Population, 1930 (log)	-1.32***	-2.66***	-0.028	0.071***
	(0.30)	(0.32)	(0.022)	(0.020)
Bureaucrats per 1000 people, 1930	0.33***	0.28***	0.00049	0.0034**
	(0.032)	(0.032)	(0.0014)	(0.0016)
Municipal surface area, Ha. (log)	0.14	0.29	0.0095	0.0050
	(0.21)	(0.19)	(0.013)	(0.013)
Localities per Ha., 1930	628.6**	395.0	63.3***	74.2***
	(294.8)	(258.0)	(23.2)	(23.9)
Pop. in agriculture 1930 (%)	-0.075***	-0.069***	-0.0024	-0.0023
	(0.020)	(0.020)	(0.0017)	(0.0016)
Pop. in cities 1930 (%)	0.035***	0.032***	-0.00039	0.00014
	(0.011)	(0.010)	(0.00059)	(0.00064)
Municipal GDP 2005 (log)		1.51***		-0.093***
		(0.21)		(0.017)
Federal transfers (log) Avg. 1989-2013		-0.60***		0.012*
		(0.10)		(0.0068)
Mean of DV	9.71	9.71	0.42	0.42
SD of DV	6.69	6.69	0.46	0.46
R sq.	0.23	0.28	0.033	0.072
Number of municipios	1455	1455	1462	1462

OLS estimations. See equation (2) for the econometric specification. The unit-of-analysis is the *municipio*. Municipios with *haciendas*. Robust standard errors in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

C.7 State-Level Covariate: Access to Land

Table C.12: Access to Land and Rural Population in 1930

State	Households with access to rural land	Number of households	Households with access to rural land (%)	Population	Rural population	Rural population (%)
Aguascalientes	4 264	27 240	15.7%	132 900	60 165	45.3%
Baja California Norte	1 994	8 736	22.8%	48 327	22 059	45.6%
Baja California Sur	1 943	7 857	24.7%	47 089	30 110	63.9%
Campeche	5 032	16 276	30.9%	84 630	46 475	54.9%
Coahuila						
Colima	3 222	13 058	24.7%	61 923	34 521	55.7%
Chiapas	53 398	106 085	50.3%	529 983	437 356	82.5%
Chihuahua	35 459	94 936	37.4%	491 792	329 693	67.0%
Distrito Federal	18 218	238 565	7.6%	1 229 576	94 453	7.7%
Durango	23 481	80 062	29.3%	404 364	310 116	76.7%
Guanajuato	39 358	205 502	19.2%	987 801	651 138	65.9%
Guerrero	90 796	129 112	70.3%	641 690	544 354	84.8%
Hidalgo	83 165	134 999	61.6%	677 772	562 839	83.0%
Jalisco	65 098	254 958	25.5%	1 255 346	760 894	60.6%
México	128 056	199 096	64.3%	990 112	787 156	79.5%
Michoacán	75 195	213 612	35.2%	1 048 381	773 051	73.7%
Morelos	15 584	28 109	55.4%	132 068	98 849	74.8%
Nayarit	9 781	34 666	28.2%	167 724	109 021	65.0%
Nuevo León	23 673	81 547	29.0%	417 491	245 316	58.8%
Oaxaca	160 994	225 865	71.3%	1 084 549	888 648	81.9%
Puebla	134 343	238 944	56.2%	1 150 425	830 901	72.2%
Querétaro	13 382	48 965	27.3%	234 058	187 782	80.2%
Quintana Roo	1 139	1 829	62.3%	10 620	7 830	73.7%
San Luis Potosí	40 156	117 281	34.2%	579 831	421 119	72.6%
Sinaloa	35 486	74 509	47.6%	395 618	304 967	77.1%
Sonora	19 000	57 443	33.1%	316 271	200 046	63.3%
Tabasco	19 775	39 617	49.9%	224 023	185 233	82.7%
Tamaulipas	17 369	67 943	25.6%	344 039	196 672	57.2%
Tlaxcala	25 850	41 218	62.7%	205 458	148 826	72.4%
Veracruz	130 863	272 084	48.1%	1 377 293	984 367	71.5%
Yucatán	24 744	77 916	31.8%	386 096	200 229	51.9%
Zacatecas	33 272	94 828	35.1%	459 047	348 756	76.0%

Data from the 1930 Population Census.

Table C.13: Commodity Shocks and Bureaucrats
Conditioning on State-Level Access to Land

	(1) Bureaucrats per 1000 people (Haciendas)	(2) Bureaucrats per 1000 people (Haciendas)	(3) Bureaucrats per 1000 people (No haciendas)	(4) Bureaucrats per 1000 people (Haciendas)
Commodity potential (log)	-7.92*	-7.68*	1.10	
	(4.33)	(4.47)	(2.92)	
Placebo commodity potential (log)				-0.58
				(0.53)
Population in 1930 (log) × 1940		0.14	0.96**	-0.21
		(0.46)	(0.43)	(0.53)
Municipal surface area, Ha. (log) × 1940		0.15	0.070	0.45
		(0.33)	(0.36)	(0.41)
Localities per Ha. in 1930 × 1940		424.9	364.0	346.5
		(379.0)	(495.0)	(360.4)
Population in agriculture in 1930 (%) × 1940		-0.017	-0.020	-0.023
		(0.035)	(0.028)	(0.034)
Population in cities in 1930 (%) × 1940		-0.046	0.036	-0.040
		(0.037)	(0.029)	(0.036)
Commodity potential (log) in 1930 × 1940		0.14	-0.029	0.22
		(0.20)	(0.18)	(0.20)
State rural population 1930 (%) × 1940		-0.077*	0.059	-0.094**
		(0.045)	(0.11)	(0.045)
State-level families w/rural land in 1930 (%) × 1940		0.023	-0.047	0.015
		(0.031)	(0.067)	(0.030)
Year FE	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	4.23	4.19	2.49	4.19
Within-*Municipio* SD of DV	2.34	2.33	1.75	2.33
R sq.	0.74	0.74	0.75	0.74
Observations	3019	2950	1487	2950
Number of municipios	1557	1522	761	1522

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (clustered at the *municipio* level) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

Table C.14: Commodity Shocks and Land Redistribution
Conditioning on State-Level Access to Land

	(1) Land reform, grants (Haciendas)	(2) Land reform, grants (Haciendas)	(3) Land reform, grants (No haciendas)	(4) Land reform, grants (Haciendas)
Commodity potential (log)	-3.31**	-3.89**	2.17**	
	(1.65)	(1.68)	(1.03)	
Placebo commodity potential (log)				-0.25
				(0.31)
Population in 1930 (log) × 1940		1.99***	0.51**	1.84***
		(0.35)	(0.22)	(0.34)
Municipal surface area, Ha. (log) × 1940		-0.37**	0.21*	-0.23
		(0.18)	(0.12)	(0.18)
Localities per Ha. in 1930 × 1940		-87.8	-115.3	-131.3
		(184.4)	(161.9)	(190.6)
Population in agriculture in 1930 (%) × 1940		0.013	-0.0015	0.012
		(0.010)	(0.0058)	(0.010)
Population in cities in 1930 (%) × 1940		0.015	0.0033	0.018
		(0.014)	(0.012)	(0.013)
Commodity potential (log) in 1930 × 1940		0.029	0.099	0.071
		(0.091)	(0.087)	(0.093)
Land reform by 1930 (grants) × 1940		0.26	-0.76**	0.28
		(0.38)	(0.38)	(0.37)
State rural population 1930 (%) × 1940		0.100***	0.15**	0.090***
		(0.024)	(0.067)	(0.023)
State-level families w/rural land in 1930 (%) × 1940		-0.089***	-0.093**	-0.092***
		(0.019)	(0.044)	(0.020)
Year FE	Yes	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes	Yes
Within-*Municipio* Mean of DV	1.35	1.31	0.34	1.31
Within-*Municipio* SD of DV	1.62	1.57	0.42	1.57
R sq.	0.58	0.66	0.63	0.66
Observations	3114	3044	1522	3044
Number of municipios	1557	1522	761	1522

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (clustered at the *municipio* level) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

C.8 Alternative Explanation: Federal Government-led Land Redistribution

Table C.15: Rate of Positive Land Reform Presidential Resolutions

	(1) Positive Land Grant Resolutions (%) (Haciendas)	(2) Positive Land Grant Resolutions (%) (Haciendas)	(3) Positive Land Grant Resolutions (%) (No Haciendas)
Commodity potential (log)	-0.13	-0.0075	0.82
	(0.16)	(0.19)	(0.52)
Population in 1930 (log) × 1940		0.0037	-0.054
		(0.030)	(0.077)
Municipal surface area, Ha. (log) × 1940		0.015	-0.0019
		(0.020)	(0.065)
Localities per Ha. in 1930 × 1940		-10.1	-89.4
		(32.9)	(100.3)
Population in agriculture in 1930 (%) × 1940		0.0017	0.0021
		(0.0020)	(0.0033)
Population in cities in 1930 (%) × 1940		0.00071	0.0013
		(0.0011)	(0.0023)
Commodity potential (log) in 1930 × 1940		0.0053	0.056
		(0.011)	(0.046)
Land reform by 1930 (grants) × 1940		-0.027**	-0.0076
		(0.011)	(0.032)
Year FE	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes
Within-*Municipio* Mean of DV	0.85	0.85	0.81
Within-*Municipio* SD of DV	0.15	0.15	0.17
R sq.	0.68	0.68	0.82
Observations	2144	2128	507
Number of municipios	1318	1308	365

OLS estimations. See equation (1) for the econometric specification. The unit-of-analysis is the *municipio*-year. Standard errors (clustered at the *municipio* level) in parentheses.
* $p < .10$, ** $p < .05$, *** $p < .01$.

D Appendix References

Camp, Roderic Ai. 1992. *Generals in the Palacio: the Military in Modern Mexico.* Oxford University Press.

Camp, Roderic Ai. 1995. *Political Recruitment across Two Centuries*. University of Texas Press.

Conley, Timothy G. 2008. Spatial Econometrics. In *New Palgrave Dictionary of Economics*, ed. Steven N. Durlauf and Lawrence E. Blume. Palgrave Macmillan pp. 741–747.

Gil-Mendieta, Jorge and Samuel Schmidt. 1996. "The Political Network in Mexico." *Social Networks* 18(4):355–381.

Global Financial Data. 2014.
https://www.globalfinancialdata.com/Databases/GFDatabase.html.

Hainmueller, Jens. 2012. "Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies." *Political Analysis* 20(1):25–46.

Hsiang, Salomon M. 2010. "Temperatures and Cyclones Strongly Associated with Economic Production in the Caribbean and Central America." *Proceedings of the National Academy of Sciences* 107(35):15367–15372.

O'Neill, Stephen, Kreif Noémi, Richard Grieve, Matthew Sutton and Jasjeet S. Sekhon. 2016. "Estimating Causal Effects: Considering Three Alternatives to Difference-in-Differences Estimation." *Health Services and Outcomes Research Methodology* 16:1–21.

SIAP. 2013. *Servicio de Información Agroalimentaria y Pesquera*. Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación.

Smith, Peter H. 1979. *Labyrinths of Power: Political Recruitment in Twentieth-Century Mexico*. Princeton University Press.