Supporting Information
Epidemics, Rent Extraction, and the Value of Holding Office

Contents

A. Data Appendix

A.1 Major Epidemics in Mexico by the 18th Century

To construct our dataset on epidemics, we begin with the comprehensive chronology in Acuña Soto (2017). We then examine other known lists of important epidemics to identify possible additional disease outbreaks: Gibson (1964) and Florescano (1969), who list the dates of important epidemics and famines; Gerhard (1993a), who notes the most important epidemics in the colonial period; Malvido (1982), who extends the list of Florescano (1969); and Guedea (1991), who lists all of the epidemics mentioned in the *Gaceta de México*, the first periodical published on a regular basis in Mexico City, from 1728–1739.

Once we had identified a list of possible epidemics, we then investigated each one separately to identify the probable pathogen, the regions or modern Mexican states affected, and the approximate date of disease onset using these and other sources. While we were able to find comprehensive documentation on some larger epidemics, such as the outbreak of matlazahautl in 1736–1738, the historical record is more sparse on the smaller ones. Given the limited information on some of these outbreaks, and given the similarity in reported symptoms between the major diseases (e.g., fever, rash, fatigue), it is sometimes difficult to precisely identify the disease for each outbreak. Information on the epidemics of 1710 and 1733 in particular is somewhat limited, and there remains some debate about the source and extent of those outbreaks. Our results are unchanged if we reclassify those epidemics as "matlazahuatl" as opposed to measles or smallpox. Our results are also unchanged if we omit the reported epidemic in Pachuca in 1728, which is thought to be part of the larger measles outbreak that year, but is coded as a famine rather than epidemic in some sources.

An additional challenge was designating the geographic coverage for each epidemic. Here we rely on both secondary literature and direct descriptions in primary sources. We classify districts as being affected whenever we find documentation of disease outbreaks in specific towns within the district. When descriptions reference a region or present-day Mexican state being affected, we code all districts within that unit as affected by the crisis. In addition, we classify an epidemic as affecting the "Valle de México," the area around Mexico City, when we find a reference to an epidemic affecting

both the city itself and the surrounding areas. This area designation includes the neighboring districts of Chalco, Coatepec, Tacuba, and Tezcuco (Texcoco) in addition to the city itself.

We list the identified epidemics and their sources in Table A.1.

Table A.1: Major Epidemics in Mexico, 1702–1750

Epidemic	Region	Years	Sources
Smallpox	See Table 1	1707	Malvido (1973); Gerhard (1993b); Acuña Soto (2017)
Smallpox	Nuevo Leon, Coahuila	1707	Gerhard (1993b); Acuña Soto (2017)
Smallpox	Baja California	1709	Gerhard (1993b); Acuña Soto (2017)
Smallpox	See Table 1	1710	Lorenzana (1770); Orozco y Berra (1938); Gibson (1964); Florescano (1969)
Smallpox	Northern Mexico	1710	Acuña Soto (2017)
Coughing disease	Lampazos (Nuevo Leon)	1712	Acuña Soto (2017)
"Fevers," or matlazahuatl	See Table 1	1714	Cavo (1949); Cabrera y Quintero (1746); Gibson (1964); Florescano (1969)
Smallpox	Arizpe (Sonora)	1716–1723	Acuña Soto (2017)
Epidemic	Cusihuriachic (Nueva Vizcaya)	1720	Gerhard (1993b); Acuña Soto (2017)
Epidemic	Nayarit	1722	Gerhard (1993b); Acuña Soto (2017)
"Tabardillo"	San Felipe del Real (Chihuahua)	1727	Acuña Soto (2017)
Measles	See Table 1; also Sonora,Valle de San Bartolomé (Nueva Vizcaya), Chihuahua, Sinaloa, Tabasco, Chiapas	1728	Gibson (1964); Florescano (1969); Malvido (1973); Guedea (1991); Gerhard (1993b); Acuña Soto (2017) For Malinalco: *Archivo General de la Nación*, *Indiferente Virreinal*, C. 6665, exp. 55, 1728
Epidemic	Ciénega de Olivos, Cusihuriachic, (Nueva Vizcaya), Sinaloa	1728	Gerhard (1993b); Acuña Soto (2017)
Smallpox	Sisoguíchic (Chihuahua)	1728	Gerhard (1993b); Acuña Soto (2017)
Epidemic/famine	Pachuca	1728	Guedea (1991)
Smallpox	Baja California	1729	Acuña Soto (2017)
Hemorrhagic fever	Campeche/Yucatan	1730	Guedea (1991)
Matlazahuatl	Churubusco	1731	Gibson (1964)
Smallpox	Veracruz	1732	Guedea (1991)
"Alfombrilla," or measles	See Table 1	1733	Malvido (1973); Guedea (1991)
Smallpox	See Table 1	1734	Sedano (1880); Gibson (1964); Guedea (1991)
Matlazahuatl	See Table 1	1736–1738	Gibson (1964); Florescano (1969); Malvido (1973); Gerhard (1993b);Molina del Villar (2001); Acuña Soto (2017)
Epidemic	Ciénega de Olivos, Cusihuriachic, (Nueva Vizcaya) Ostimuri (Sinaloa)	1740	Gerhard (1993b); Acuña Soto (2017)
"Tabardillo," or matlazahuatl	Sonora	1741	Gerhard (1993b); Acuña Soto (2017)
Epidemics, including measles	Baja California	1742–1748	Gerhard (1993b); Acuña Soto (2017)
Smallpox	See Table 1	1748	Sedano (1880); Gibson (1964); Florescano (1969)
"Tabardillo"	San Luis Potosi	1748	Acuña Soto (2017)
Smallpox	See Table 1	1750	Gibson (1964); Florescano (1969); Acuña Soto (2017)

Notes: We highlight the epidemics used in the analysis in gray. Our results are substantively unchanged if we recode the epidemics of 1710 and 1733 as matlazahuatl, consistent with some sources. We code the reported epidemic in Pachuca in 1728 as measles, but note that results are not affected by its inclusion. Listed epidemics that are excluded from the analysis either affected districts where offices were not under sale at this time (the matlazahuatl outbreak in Churubusco in 1731; the outbreak of "tabardillo" in San Luis Potosi in 1748) or areas outside the *audiencias* of New Spain and Nueva Galicia, which are outside the scope of our study.

A.2 Public Granaries in Mexico by the 18th Century

To identify districts with public granaries, we systematically search for any mention of public granaries in the secondary literature and primary sources, including archival catalogs, legal compilations, and official correspondence. We also specifically investigate whether an *alhóndiga* or *pósito* were present in the most populous settlements of the late 18th century (given the paucity of population data for the first half of the century). Concretely, we investigate all 34 settlements with over 10,000 people according to Sánchez Santiró (2003) for 1777, "Plano que manifiesta la vbicacion..." for 1780, Castro Aranda (2010) for 1790, and Humboldt (1973) for 1804, as compiled by Stangl (2019). We further look for any reference to public granaries in settlements of over 5,000 people (according to these sources) that had been given the political categories of *ciudad*, *villa*, or *real de minas*, an additional mark of economic and social importance.

Dates and sources for each public granary are listed in Tables A.2–A.5. When there is ambiguity about the date of charter, we list the first date at which we could find a record of the granary being operational. For granaries chartered after 1750, note that there was a major revision to political divisions in 1786 with the introduction of the Intendancy system. We list the districts according to the Audiencia that they belonged to during the period under study for consistency.

Table A.2: Public Granaries in Central Mexico by the 18th Century: Sample Districts

Audiencia	District	Approximate Year of Creation	Sources
New Spain	Mexico	1583	Florescano (1969)
	San Luis Potosi	1609	Hernández Soubervielle (2012); Challú (2007); de León Meza (2016)
	Queretaro	1656	Urquiola Permisán (2006)
	Antequera	1689	Vila Vilar and Sarabia Viejo (1985) García Acosta et al. (Vol. 1, p. 215 2003)
	Tlaxcala	Before 1695	*Archivo General de la Nación*, *Civil Volumenes*, Vol. 76, exp. 25, 1727
	Valladolid	Before 1702	Archivo Histórico Municipal de Morelia, *Fondo Colonial*, C. 1, exp. 15-C, 1682–1702, Valladolid; Challú (2007)
	Pachuca	Before 1726	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 4650, exp. 36, 1726; Cruz Domínguez (2016)
	Tlalpujagua	1731	Islas Jiménez (1994)
	Guanajuato	1735	Vásquez de Warman (1968); Gordo Peláez (2013)
Nueva Galicia	Zacatecas	1623	de León Meza (2016); Challú (2007)
	Guadalajara	1672	de León Meza (2016); Challú (2007))

Notes: See Appendix Section A.2 for a description of the methodology. All public granaries are *alhóndigas*. When there is ambiguity about the date of charter, we code the earliest date at which we found a reference to the granary. Additional identified granaries outside the scope of our analysis are listed in Appendix Tables A.3–A.5.

Table A.3: Public Granaries in Districts without Office Sales in 1702–1750

Audiencia	District	Approximate Year of Creation	Sources
New Spain	Vera Cruz Nueva	1595	Vila Vilar and Sarabia Viejo (1985)
	Puebla	1626	Leicht (2017)
Nueva Galicia	Sombrerete	Before 1739	*Archivo Histórico Municipal de Sombrerete*, *Alcaldía Mayor*, *Ayuntamiento*, *Justicia*, C. 1, exp. 11/22, 1739
Nueva Vizcaya	Parral	Before 1642	*Archivo Histórico del Municipio de Hidalgo del Parral*, *Hacienda y Tesorería*, C. 1, exp. 1–10
	Chihuahua	1672	Aboites (1994)

Notes: See Appendix Section A.2 for a description of the methodology. All public granaries are *alhóndigas*. When there is ambiguity about the date of charter, we code the earliest date at which we found a reference to the granary.

Table A.4: *Alhóndigas* Created after 1750

Audiencia	District	Approximate Year of Creation	Sources
New Spain	Celaya	1754	Challú (2007)
	Leon	1756	Challú (2007)
	San Juan del Rio	Before 1767	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 3646, exp. 37, 1767
	Zapotlan	1786	Van Young (1981)
	San Miguel el Grande	Before 1790	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5395, exp. 1, 1790
	Salamanca	Before 1799	Morin (1979)
	Sayula	1802	Van Young (1981)
Nueva Galicia	Real de la Yesca	Before 1793	*Archivo de la Real Audiencia de la Nueva Galicia*, *Archivo Civil*, C. 368, exp. 4, 1793
	Mazapil	Before 1797	Román et al. (1997)
Nueva Vizcaya	Durango	1786	Casilleros from the "Archivo Histórico del Estado de Durango," C. 4, Expos. 1130, Rollo 37, fs. 6, 1786

Notes: See Appendix Section A.2 for a description of the methodology. When there is ambiguity about the date of charter, we code the earliest date at which we found a reference to the granary.

Table A.5: Other *Pósitos* Created after 1750

Prior Audiencia	District	Approximate Year of Creation	Sources
New Spain	Tula	1795	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 5, 1795–1796
	Chalco	1795	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 6, 1795–1796. (See note.)
	Tenancingo	1795	*Archivo General de la Nación* *Indiferente Virreinal*,C. 5761, exp. 9, 1795–1796
	Otumba	1795	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 7, 1795–1796
	Taxco	1795	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 10, 1795–1796
	Xalapa	Before 1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 4973, exp. 67, 1796
	Cinacantepec	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 8, 1796
	Texcoco	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 11, 1796
	Actopan	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 12, 1796
	Tetela del Río	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 13, 1796
	Tixtla	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 14, 1796
	Zimapan	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 15, 1796
	Cempoala	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 16, 1796
	Tulancingo	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 18, 1796
	Tenango del Valle	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 19, 1796
	Huichapan	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 21, 1796–1797
	Coatepec-Chalco	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 20, 1796–1799
	Intendancy of San Luis Potosi	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 17, 1796
	Intendancy of Valladolid	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 22, 1796
	Intendancy of Veracruz	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 23, 1796
	Intendancy of Guanajuato	1796	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 24, 1796
Captaincy General of Yucatan	Yucatan	1795	*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 25, 1795–1796

Notes: See Appendix Section A.2 for a description of the methodology. When there is ambiguity about the date of charter, we code the earliest date at which we found a reference to the granary. Chalco, along with Toluca, previously had an alhóndiga subordinate to Mexico City (Challú, 2007). Granaries listed under intendancy rather than district: Intendancy of San Luis Potosi in 1796, possibly in San Sebastian del Venado, Guadalcazar, or Santa Maria del Rio (*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 17, 1796); intendancy of Valladolid in 1796, location unspecified (*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 22, 1796); intendancy of Veracruz in 1796, possibly Cordoba, Orizaba, or Jalapa (*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 23, 1796); intendancy of Guanajuato, location unspecified (*Archivo General de la Nación*, *Indiferente Virreinal*, C. 5761, exp. 24, 1796).

A.3 Descriptive Statistics

Table A.6: Descriptive Statistics

Pooled Observations in Estimating Sample

	count	mean	sd	min	p25	p50	p75	max
Interpolated Office Prices, Silver Pesos (log)	2828	7.53	0.78	5.71	6.95	7.51	8.06	10.3
Office Prices, Silver Pesos (log)	567	7.55	0.82	5.71	6.91	7.52	8.07	10.3
Granary	2828	0.076	0.27	0	0	0	0	1
Matlazahuatl (1736–1739)	737	0.049	0.22	0	0	0	0	1
Any Epidemic	2828	0.022	0.15	0	0	0	0	1
Post-Epidemic (5 years)	2828	0.12	0.32	0	0	0	0	1
Post-Matlazahuatl (5 years)	2828	0.074	0.26	0	0	0	0	1
Post-Measles (5 years)	2828	0.017	0.13	0	0	0	0	1
Post-Smallpox (5 years)	2828	0.033	0.18	0	0	0	0	1
Sale incl. Military Rank	2828	0.011	0.10	0	0	0	0	1
Sale incl. Other Positions	2828	0.25	0.43	0	0	0	0.50	1
Merit was Considered	2828	0.0025	0.050	0	0	0	0	1
Position Bought as Future	2828	0.78	0.41	0	1	1	1	1
Avg. PDSI	2736	0.20	1.94	-6.50	-1.18	0.25	1.47	5.87
Reales per Maize Kg	1662	0.31	0.089	0.21	0.22	0.30	0.34	0.56

Cross Section by 1750 in Estimating Sample

	count	mean	sd	min	p25	p50	p75	max
Granary by 1750	102	0.11	0.31	0	0	0	0	1
Dist. to Mexico City (log)	102	4.94	1.04	0	4.44	5.20	5.74	6.50
Malarial Zone	102	0.60	0.49	0	0	1	1	1
Surface Area (log)	102	7.77	1.18	4.68	6.89	7.95	8.60	10.1
Mine in District	102	0.25	0.44	0	0	0	1	1
City $>$ 5k People by 1700	102	0.069	0.25	0	0	0	0	1

Table A.7: Differences Between Districts with and without a Public Granary

	No Granary		Granary		Difference	t-statistic	p-value
	N	Average	N	Average			
Dist. to Mexico City (log)	91	4.965	11	4.694	0.271	0.814	0.418
Malarial Zone	91	0.637	11	0.273	0.365	2.371	0.020
Surface Area (log)	91	7.789	11	7.636	0.153	0.405	0.686
Mine in District	91	0.253	11	0.273	-0.020	-0.142	0.887
Avg. PDSI	88	0.132	11	0.184	-0.052	-0.293	0.770
City $>$ 5k People by 1700	91	0.022	11	0.455	-0.433	-6.262	0.000

B. Additional Evidence

B.1 Maize Prices, Epidemics, and Drought in Mexico City, 1721-1749

Table B.1: Maize Prices, Epidemics, and Drought in Mexico City, 1721–1749

	Maize Prizes (Reales/kg)			
	All Epidemics		Matlazahuatl	
	Levels	First Difference	Levels	First Difference
	(1)	(2)	(3)	(4)
Post-Epidemic (5 years)	0.077**			
	(0.029)			
Post-Epidemic (5 years; first difference)		0.13***		
		(0.021)		
Post-Epidemic (5 years)			0.068**	
			(0.033)	
Post-Matlazahuatl (5 years; first difference)				0.091
				(0.062)
Avg. PDSI in Mexico City	-0.014*		-0.0093	
	(0.0071)		(0.0069)	
Avg. PDSI in Mexico City (First Difference)		-0.017***		-0.014**
		(0.0052)		(0.0059)
Constant	0.26***	0.0092	0.29***	0.014
	(0.016)	(0.011)	(0.020)	(0.013)
Mean of DV	0.30	0.31	0.30	0.31
SD of DV	0.092	0.091	0.092	0.091
R sq.	0.24	0.46	0.16	0.26
Observations	29	28	29	28

OLS estimations. The unit-of-analysis is year. Robust standard errors in parentheses. Maize prices from Florescano (1969).

B.2 Main Results without Interpolating Office Prices

Table B.2: Epidemics and Office Prices, 1702–1750
No Price Interpolation

	Office Prices, Silver Pesos (log)					
	All Districts			Districts Affected by an Epidemic		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	-0.34**	-0.36**	-0.72***	-0.33**	-0.32**	-1.02*
	(0.16)	(0.14)	(0.23)	(0.16)	(0.15)	(0.57)
	[0.078]	[0.044]	[0.0060]	[0.066]	[0.056]	[.]
Post-Epidemic (5 years)	-0.032	-0.045	-0.039	-0.071	-0.067	0.11
	(0.079)	(0.079)	(0.081)	(0.100)	(0.10)	(0.20)
	[0.68]	[0.54]	[0.56]	[0.46]	[0.49]	[.]
Post-Epidemic (5 years) × Granary	0.39**	0.38**	0.36	0.36**	0.32**	0.27
	(0.15)	(0.16)	(0.23)	(0.17)	(0.15)	(0.30)
	[0.023]	[0.018]	[0.13]	[0.038]	[0.035]	[.]
Post-Epidemic + Post × Granary	0.36***	0.34***	0.32	0.29**	0.25**	0.38
	(0.13)	(0.13)	(0.22)	(0.13)	(0.11)	(0.28)
	[0.03]	[0.02]	[0.15]	[0.05]	[0.02]	[.]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.55	7.55	7.55	7.49	7.49	7.49
Within-District SD of DV	0.32	0.32	0.32	0.32	0.32	0.32
R sq.	0.89	0.89	0.93	0.89	0.90	0.97
Observations	567	550	550	248	242	242
Number of districts	102	99	99	44	43	43

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include yearly average PDSI, whether the office was sold in addition to either military rank or another office; whether it was granted as a reward for past merits; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) in parentheses, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table B.3: The Matlazahuatl Epidemic of 1736–1738 and Office Prices, 1728–1750
No Price Interpolation

	Office Prices, Silver Pesos (log)					
	All Districts			Districts Affected by Matlazahuatl		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	0.054	0.046	-0.086	0.042	0.12	-0.18
	(0.077)	(0.063)	(0.34)	(0.15)	(0.13)	(2.91)
	[0.55]	[0.57]	[.]	[0.71]	[0.49]	[.]
Post-Matlazahuatl (5 years)	-0.013	-0.031	-0.093	0.055	0.041	-0.16
	(0.043)	(0.041)	(0.067)	(0.097)	(0.085)	(1.26)
	[0.74]	[0.38]	[.]	[0.78]	[0.70]	[.]
Post-Matlazahuatl (5 years) × Granary	0.059	0.084	0.21	0.055	0.069	0.41
	(0.050)	(0.068)	(0.24)	(0.062)	(0.064)	(3.12)
	[0.18]	[0.18]	[.]	[0.32]	[0.25]	[.]
Post-Matlazahuatl + Post × Granary	0.046	0.053	0.12	0.11	0.11	0.24
	(0.06)	(0.07)	(0.23)	(0.12)	(0.10)	(2.56)
	[0.32]	[0.43]	[.]	[0.49]	[0.38]	[.]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.56	7.56	7.56	7.50	7.50	7.50
Within-District SD of DV	0.20	0.20	0.20	0.21	0.21	0.21
R sq.	0.96	0.97	0.98	0.98	0.98	1.00
Observations	335	322	322	124	124	124
Number of districts	94	91	91	36	36	36

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include yearly average PDSI, whether the office was sold in addition to either military rank or another office; whether it was granted as a reward for past merits; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) in parentheses, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.3 Main Results for All Epidemics with Alternate Epidemic Geography

Table B.4: Epidemics and Office Prices with Alternate Epidemic Geography, 1702–1750

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by an Epidemic		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	-0.13*	-0.14**	-0.12	-0.15*	-0.15*	-0.057
	(0.072)	(0.071)	(0.14)	(0.082)	(0.080)	(0.15)
	{0.16}	{0.15}	{0.28}	{0.18}	{0.17}	{0.29}
	[0.22]	[0.16]	[0.50]	[0.19]	[0.22]	[0.73]
Post-Epidemic (5 years)	-0.013	-0.020	-0.0064	-0.022	-0.021	0.030
	(0.037)	(0.034)	(0.036)	(0.052)	(0.052)	(0.064)
	{0.080}	{0.074}	{0.075}	{0.11}	{0.11}	{0.13}
	[0.72]	[0.57]	[0.87]	[0.67]	[0.71]	[0.63]
Post-Epidemic (5 years) × Granary	0.25***	0.25***	0.24***	0.26***	0.24***	0.26***
	(0.080)	(0.079)	(0.081)	(0.084)	(0.077)	(0.094)
	{0.17}	{0.17}	{0.17}	{0.18}	{0.17}	{0.18}
	[0.065]	[0.061]	[0.047]	[0.054]	[0.059]	[0.092]
Post-Epidemic + Post × Granary	0.24***	0.23***	0.23***	0.24***	0.22***	0.29***
	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)	(0.10)
	{ 0.15}	{ 0.15}	{ 0.17}	{ 0.15}	{ 0.14}	{ 0.20}
	[0.05]	[0.06]	[0.07]	[0.04]	[0.04]	[0.05]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.53	7.53	7.53	7.47	7.46	7.46
Within-District SD of DV	0.22	0.22	0.22	0.22	0.22	0.22
R sq.	0.90	0.90	0.91	0.89	0.90	0.92
Observations	2828	2736	2736	1273	1238	1238
Number of districts	102	99	99	44	43	43

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include yearly average PDSI, whether the office was sold alongside either a military rank or another office; whether it was granted as a reward for past merit; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) unadjusted and adjusted for degrees of freedom in parentheses and curly brackets, respectively, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.4 Main Results for All Epidemics with Spatial Clustering of Standard Errors

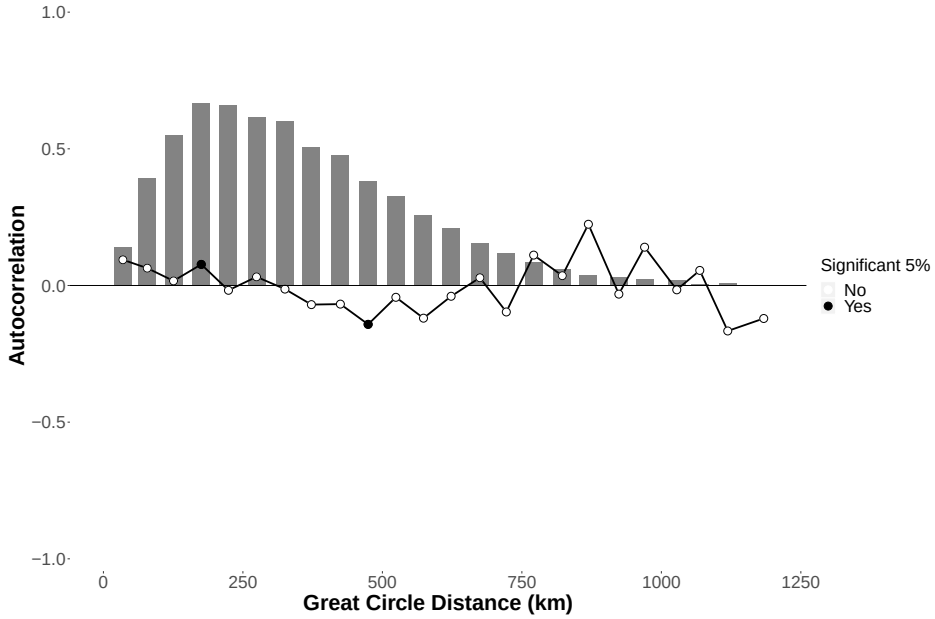
Epidemics spread in spatially dependent patterns. This is directly visible in our case in Figure 1, which maps the expansion of the matlazahuatl epidemic across the territory. This spatial pattern can pose empirical challenges, including bias due to spillovers and inadequate standard error estimates due the non-independent errors. In this section, we examine the spatial autocorrelation of epidemics in our sample, and present alternative standard errors that allow for spatial correlation between districts.

In Figure B.1, we present spatial correlograms of epidemic incidence between districts at difference distances from one another. The top panel considers any epidemic over the 1702–1750 period, while the lower panel focuses specifically on the matlazahuatl epidemic of 1736–1738. In both cases, there is evidence of a moderate, positive, and at some ranges significant spatial autocorrelation between districts, up to 200km of distance between them. Beyond this distance, the autocorrelation turns negative, and is estimated to be significant at standard levels for districts that are 500km apart for all epidemics, and up to 600km apart for matlazahuatl. Beyond this distance, and as the number of district dyads declines, the autocorrelation is not statistically significant.

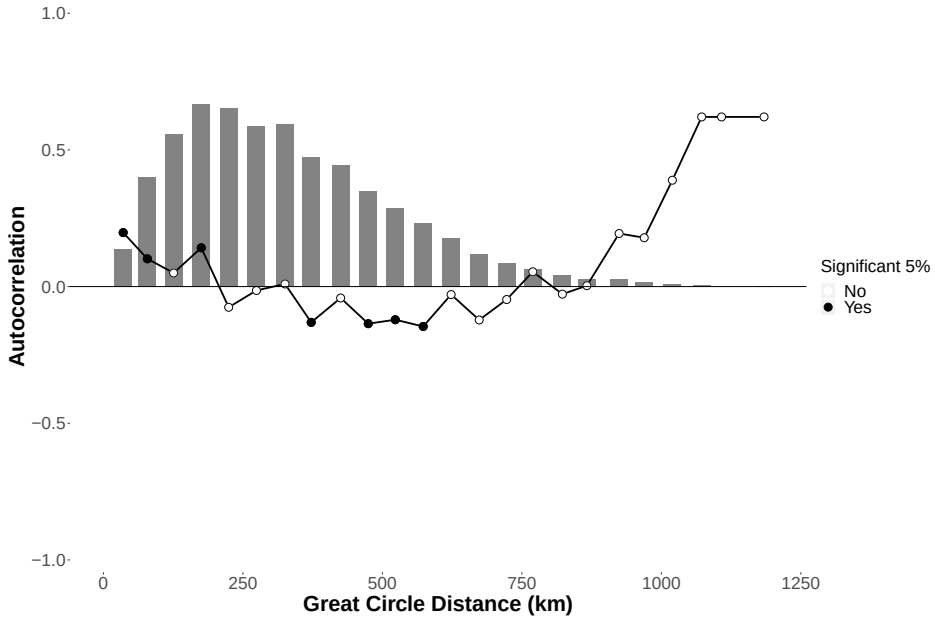
These results provide evidence of spatial dependence in one of our main independent variables. We do not attempt to model these patterns — for example, through the inclusion of spatial lags. However, we do re-estimate the standard errors using an estimator that allow for spatial correlation between districts in addition to serial correlation within districts. Specifically, we use an approach described by Conley (2008) and Hsiang (2010).

The results are presented in Tables B.5 and B.6. In both the full sample of epidemics, as well as the analysis of the matlazahuatl epidemic of 1736–1738, the results are unchanged. In the aftermath of epidemics, the sales price of office does not change for most districts — or, the case of the matlazahuatl epidemic it increases slightly— but markedly increases for districts with a public granary.

Figure B.1: Spatial Correlation of Epidemics: Spatial Correlograms



(a) All Epidemics



(b) The Matlazahuatl Epidemic

The figures present the spatial correlation between epidemic incidence over the period of analysis as distance between districts increases up to the maximum distance in the sample. The **upper** panel refers to an indicator for any epidemic over the period 1702–1750, and the **lower** panel to indicator for the matlazahuatl epidemic of 1736–1738. The histogram presents the distribution of the number of district dyads by distance.

Table B.5: Epidemics and Office Prices, 1702–1750
Spatial Clusterng of Standard Errors

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by an Epidemic		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	-0.13*	-0.14*	-0.12	-0.15*	-0.15*	-0.060
	(0.075)	(0.075)	(0.13)	(0.083)	(0.081)	(0.13)
Post-Epidemic (5 years)	-0.0080	-0.013	-0.0025	-0.0094	-0.0087	0.047
	(0.038)	(0.038)	(0.039)	(0.048)	(0.049)	(0.053)
Post-Epidemic (5 years) × Granary	0.25***	0.25***	0.23***	0.25***	0.24***	0.25***
	(0.077)	(0.078)	(0.076)	(0.076)	(0.070)	(0.081)
Post-Epidemic + Post × Granary	0.24***	0.23***	0.23***	0.24***	0.23***	0.30***
	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)	(0.09)
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2828	2736	2736	1273	1238	1238
Number of districts	102	99	99	44	43	43

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include average PDSI, whether the sale included a military rank or another office; whether it was granted as a reward for past merit; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (that allow for serial correlation within districts and spatial correlation between districts within 500 km from each other) in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table B.6: The Matlazahuatl Epidemic of 1736–1738 and Office Prices, 1728–1750
Spatial Clusterng of Standard Errors

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by Matlazahuatl		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	-0.027	-0.029	-0.087	-0.066**	-0.062*	-0.098
	(0.027)	(0.026)	(0.065)	(0.033)	(0.033)	(0.084)
Post-Matlazahuatl (5 years)	0.027	0.020	0.033	0.042**	0.037**	0.021
	(0.026)	(0.026)	(0.029)	(0.018)	(0.018)	(0.018)
Post-Matlazahuatl (5 years) × Granary	0.089*	0.091*	0.10**	0.091*	0.089*	0.067
	(0.048)	(0.049)	(0.048)	(0.047)	(0.049)	(0.053)
Post-Epidemic + Post × Granary	0.12***	0.11**	0.14***	0.13***	0.13***	0.09**
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1693	1631	1631	651	651	651
Number of districts	94	91	91	36	36	36

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include average PDSI, whether the sale included a military rank or another office; whether it was granted as a reward for past merit; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (that allow for serial correlation within districts and spatial correlation between districts within 600 km from each other) in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.5 Main Results for All Epidemics with Clustered Standard Errors at the State Level

Table B.7: Epidemics and Office Prices, 1702–1750

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by an Epidemic		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	-0.13	-0.14**	-0.12	-0.15*	-0.15*	-0.060
	(.)	(0.063)	(0.14)	(0.076)	(0.068)	(0.15)
	{0.13}	{0.13}	{0.28}	{0.16}	{0.14}	{0.29}
	[0.090]	[0.095]	[0.51]	[0.15]	[0.12]	[0.72]
Post-Epidemic (5 years)	-0.0080	-0.013	-0.0025	-0.0094	-0.0087	0.047
	(.)	(0.039)	(0.032)	(0.050)	(0.052)	(0.044)
	{0.087}	{0.083}	{0.065}	{0.10}	{0.11}	{0.085}
	[0.87]	[0.75]	[0.94]	[0.84]	[0.87]	[0.31]
Post-Epidemic (5 years) × Granary	0.25	0.25**	0.23**	0.25**	0.24**	0.25**
	(.)	(0.088)	(0.096)	(0.092)	(0.087)	(0.098)
	{0.19}	{0.19}	{0.19}	{0.19}	{0.18}	{0.19}
	[0.11]	[0.11]	[0.11]	[0.10]	[0.11]	[0.096]
Post-Epidemic + Post × Granary	0.24	0.23***	0.23***	0.24***	0.23***	0.30***
	(.)	(0.07)	(0.09)	(0.07)	(0.07)	(0.10)
	{ 0.15}	{ 0.15}	{ 0.19}	{ 0.16}	{ 0.14}	{ 0.19}
	[0.06]	[0.05]	[0.11]	[0.06]	[0.07]	[0.06]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.53	7.53	7.53	7.47	7.46	7.46
Within-District SD of DV	0.22	0.22	0.22	0.22	0.22	0.22
R sq.	0.90	0.90	0.91	0.89	0.90	0.92
Observations	2828	2736	2736	1273	1238	1238
Number of districts	17	17	17	13	13	13

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include yearly average PDSI, whether the office was sold in addition to either military rank or another office; whether it was granted as a reward for past merits; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) unadjusted and adjusted for degrees of freedom in parentheses and curly brackets, respectively, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.6 Main Results for All Epidemics Excluding Mexico City

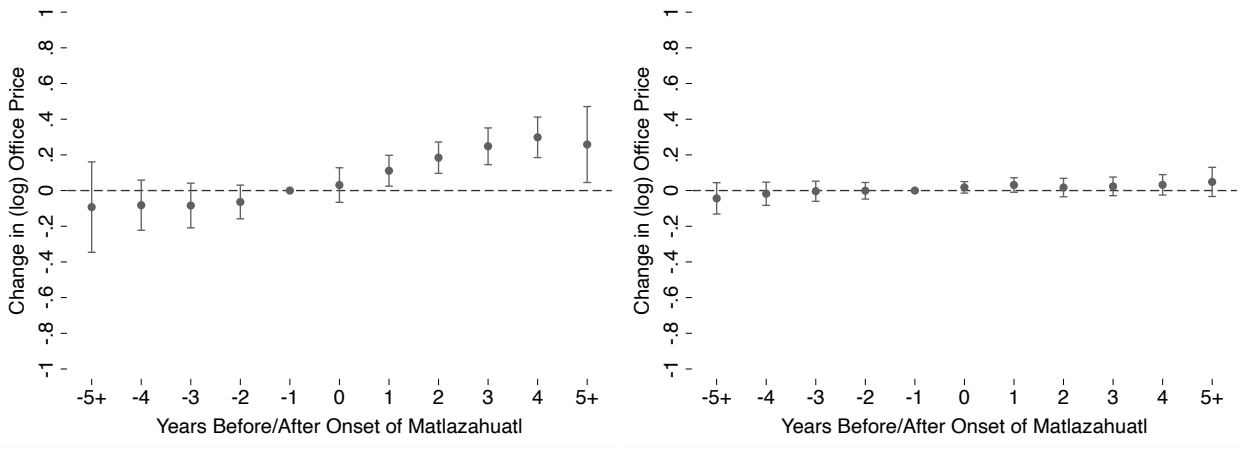
Table B.8: Epidemics and Office Prices (Excluding Mexico City), 1702–1750

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by an Epidemic		
	(1)	(2)	(3)	(4)	(5)	(6)
Granary	-0.14*	-0.14*	-0.11	-0.15*	-0.15*	-0.057
	(0.074)	(0.074)	(0.12)	(0.085)	(0.084)	(0.14)
	{0.16}	{0.16}	{0.25}	{0.19}	{0.18}	{0.27}
	[0.19]	[0.19]	[0.47]	[0.23]	[0.21]	[0.70]
Post-Epidemic (5 years)	-0.0068	-0.012	0.0033	-0.0052	-0.0045	0.046
	(0.040)	(0.040)	(0.040)	(0.052)	(0.053)	(0.062)
	{0.087}	{0.086}	{0.084}	{0.11}	{0.11}	{0.12}
	[0.87]	[0.80]	[0.95]	[0.92]	[0.94]	[0.46]
Post-Epidemic (5 years) × Granary	0.26***	0.26**	0.28***	0.27***	0.24***	0.27***
	(0.097)	(0.099)	(0.092)	(0.096)	(0.088)	(0.098)
	{0.21}	{0.21}	{0.19}	{0.21}	{0.19}	{0.19}
	[0.11]	[0.12]	[0.041]	[0.10]	[0.11]	[0.11]
Post-Epidemic + Post × Granary	0.25***	0.24***	0.28***	0.26***	0.24***	0.32***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.08)	(0.10)
	{ 0.19}	{ 0.20}	{ 0.18}	{ 0.19}	{ 0.18}	{ 0.20}
	[0.10]	[0.12]	[0.06]	[0.05]	[0.05]	[0.04]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.51	7.50	7.50	7.42	7.40	7.40
Within-District SD of DV	0.22	0.22	0.22	0.22	0.22	0.22
R sq.	0.89	0.90	0.91	0.86	0.87	0.90
Observations	2793	2701	2701	1238	1203	1203
Number of districts	101	98	98	43	42	42

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include yearly average PDSI, whether the office was sold alongside either a military rank or another office; whether it was granted as a reward for past merit; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) unadjusted and adjusted for degrees of freedom in parentheses and curly brackets, respectively, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

B.7 Event Study Graphs with Unadjusted and Wild Cluster Bootstrap Confidence Intervals

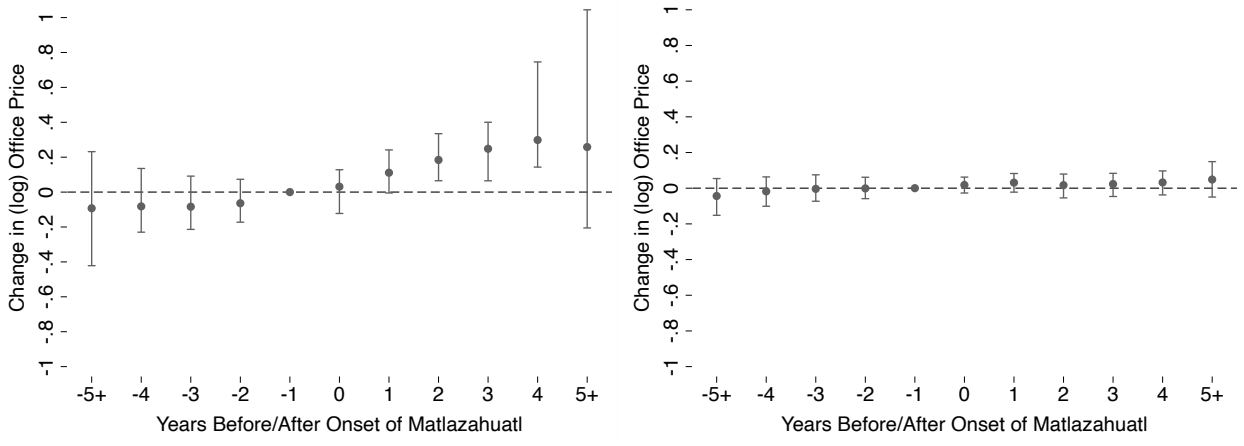
Figure B.2: The Matlazahuatl Epidemic of 1736–1738 and Office Prices
Unadjusted for Degrees-of-Freedom Cluster-Robust Confidence Intervals



(a) Districts with Granary (b) Districts without Granary

The figures display the point estimates and cluster-adjusted 95% confidence intervals from an event study estimation including districts and year fixed effects. The initial lead is equal to 1 for every year prior to five years before the onset of matlazahuatl, and the final lag is equal to 1 for every year beginning with the fifth year after matlazahuatl. The omitted category corresponds to the year before matlazahuatl and includes non-affected districts.

Figure B.3: The Matlazahuatl Epidemic of 1736–1738 and Office Prices
Wild Cluster Bootstrap Confidence Intervals



(a) Districts with Granary (b) Districts without Granary

The figures display the point estimates and 95% wild cluster bootsrap confidence intervals from an event study estimation that includes districts and year fixed effects. The initial lead is equal to 1 for every year prior to five years before the onset of matlazahuatl, and the final lag is equal to 1 for every year beginning with the fifth year after matlazahuatl. The omitted category corresponds to the year before matlazahuatl and includes non-affected districts.

B.8 Main Results with Maize Suitability

In this appendix section, we further investigate the mechanism that we argue drove the differential rise in office prices in granary-containing districts: the *alcalde*'s ability to manipulate local grain markets through forcing smallholders to sell at below market rate, making deals with largeholders to overcharge the Crown for grain during crises, and co-opting the *repartimiento* to monopolize the sale and distribution of goods harvested in indigenous communities. While the ability to take advantage of these powers was likely to have been greater in districts with a granary, where grain was purchased and stored for a large population, *alcaldes* in other districts that were well suited to growing maize may also have been able to capitalize on food scarcity in the aftermath of epidemics through similar mechanisms.

In Tables B.9 and B.10, we replicate our main analyses using a measure of district-level average maize suitability in place of the granary indicator. The parameter of interest is the interaction between the maize suitability indicator and the post-epidemic indicator term. A positive coefficient would imply a differential increase (or smaller decrease) in the price of office in high-suitability relative to low-suitability places. A few cautions are warranted. The suitability measure, the log space-weighted average of maize potential productivity from the Food and Agriculture Organization's Global Agro-Ecological Zones database, records the potential yield of rain-fed, low-input maize based on current climate and soil conditions. While soil quality changes in geological time, there have been changes in both climate conditions and standard varieties of maize since the 18th century. This measure also does not record where maize was actually grown during this period or where markets for grain would have been most developed given population density and land use.

However, the analysis provides some additional suggestive evidence of officials extracting rents through manipulating grain markets in the wake of crisis. Both using the full panel of epidemics (B.9) and focusing on the matlazahuatl outbreak in the 1730s (B.9), the coefficient on the interaction between maize suitability and the post-epidemic indicator is positive, implying a lower decline in the price of office in areas of high maize suitability in the aftermath of epidemics.

Table B.9: Epidemics, Maize Suitability, and Office Prices, 1702–1750

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by an Epidemic		
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Epidemic (5 years)	-0.013	-0.0089	-0.070	-0.020	-0.0080	-0.0046
	(0.060)	(0.060)	(0.10)	(0.067)	(0.066)	(0.11)
	{0.13}	{0.13}	{0.21}	{0.14}	{0.14}	{0.22}
	[0.82]	[0.88]	[0.52]	[0.78]	[0.93]	[0.96]
Post-Matlazahuatl (5 years)	0.0089	0.0068	0.018	0.016*	0.012	0.020
× Maize Potential Yield (log)	(0.0085)	(0.0087)	(0.016)	(0.0086)	(0.0082)	(0.016)
	{0.018}	{0.019}	{0.033}	{0.019}	{0.018}	{0.031}
	[0.30]	[0.43]	[0.30]	[0.074]	[0.16]	[0.26]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.53	7.53	7.53	7.47	7.46	7.46
Within-District SD of DV	0.22	0.22	0.22	0.22	0.22	0.22
R sq.	0.90	0.90	0.91	0.89	0.90	0.92
Observations	2828	2736	2736	1273	1238	1238
Number of districts	102	99	99	44	43	43

OLS estimations. See equation (2.1) for the econometric specification. The unit of analysis is the district-year. Controls include average PDSI, whether the sale included a military rank or another office; whether it was granted as a reward for past merit; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) unadjusted and adjusted for degrees of freedom in parentheses and curly brackets, respectively, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table B.10: The Matlazahuatl Epidemic of 1736–1738, Maize Suitability, and Office Prices, 1728–1750

	Office Prices, Silver Pesos (log)					
	All districts			Districts Affected by Matlazahuatl		
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Matlazahuatl (5 years)	-0.50*	-0.51**	-0.79**	-0.50*	-0.54**	-0.52
	(0.26)	(0.25)	(0.32)	(0.26)	(0.25)	(0.44)
	{0.56}	{0.54}	{0.67}	{0.56}	{0.53}	{0.84}
	[0.091]	[0.075]	[0.021]	[0.098]	[0.045]	[0.24]
Post-Matlazahuatl (5 years)	0.066**	0.066**	0.10**	0.068**	0.072**	0.068
× Maize Potential Yield (log)	(0.032)	(0.031)	(0.040)	(0.032)	(0.031)	(0.053)
	{0.068}	{0.066}	{0.083}	{0.070}	{0.066}	{0.10}
	[0.077]	[0.064]	[0.011]	[0.066]	[0.034]	[0.20]
Controls	No	Yes	Yes	No	Yes	Yes
Time-Invariant Controls × Year FE	No	No	Yes	No	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Within-District Mean of DV	7.53	7.52	7.52	7.50	7.50	7.50
Within-District SD of DV	0.13	0.13	0.13	0.13	0.13	0.13
R sq.	0.97	0.97	0.97	0.97	0.97	0.98
Observations	1693	1631	1631	651	651	651
Number of districts	94	91	91	36	36	36

OLS estimations. See equation (2.1) for the econometric specification. The unit-of-analysis is the district-year. Controls include average PDSI, whether the sale included a military rank or another office; whether it was granted as a reward for past merit; and whether it was sold to be filled in the future. Time invariant controls include logged distance to Mexico City, malarial conditions, logged surface area, and indicators for any mine or city in the district. Standard errors (clustered at the district level) unadjusted and adjusted for degrees of freedom in parentheses and curly brackets, respectively, and wild-cluster bootstrap p-values in brackets. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

C. Appendix References

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