Online Appendix

The Dynamic Consequences of State-Building: Evidence from the French Revolution

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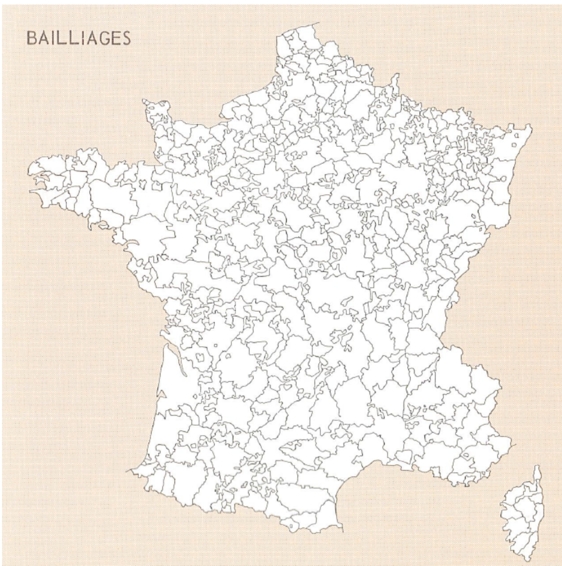
A Additional Results

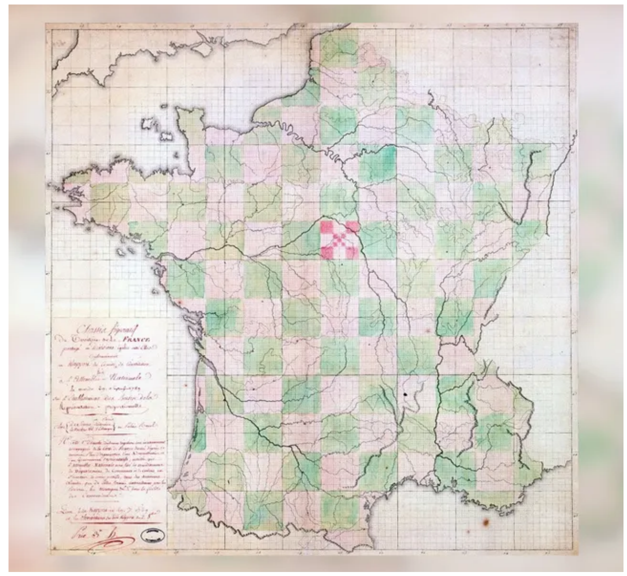
Figures

Figure A.1: Existing and Proposed Administrative Maps in 1789

(a) Bailiwicks in 1789 from Nordman et al. (1995)



(b) The Sieyès Proposal



(c) Final Proposal Adopted in February 1790

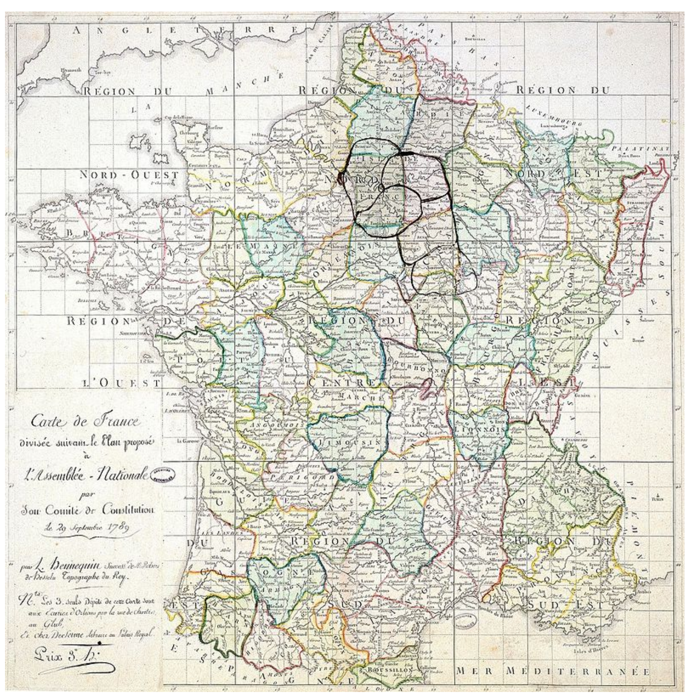
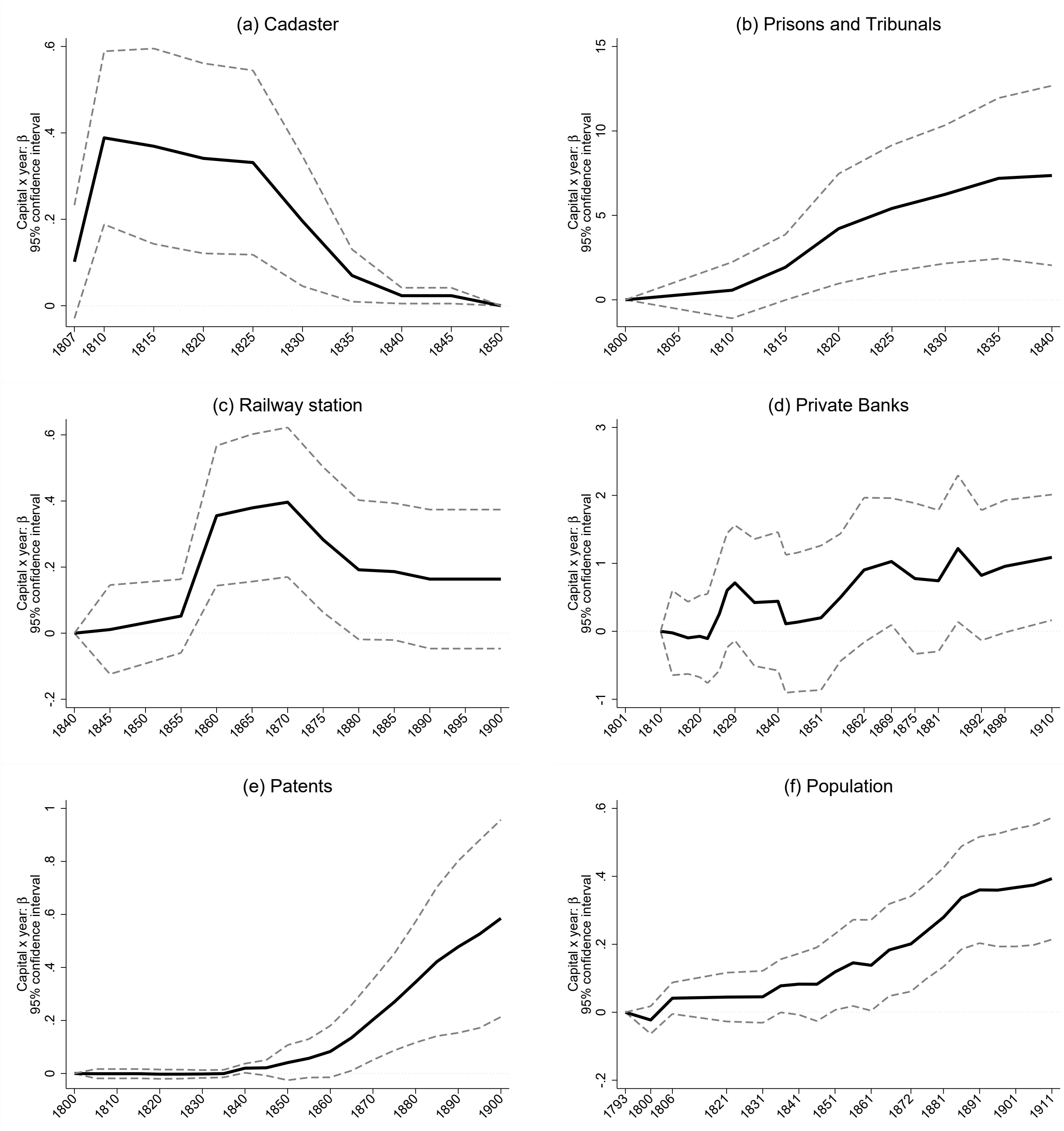
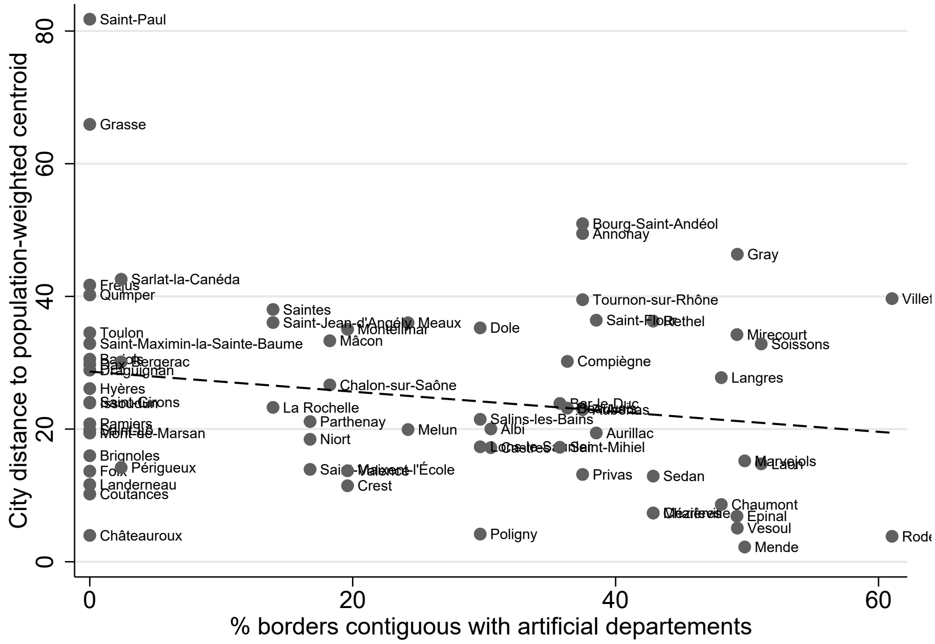


Figure A.2: Dynamic Effects of Capital Status
Augmented Sample



Notes: This figure shows the dynamic effects of the administrative reform during the 19th century. We plot the regression coefficients from a modified version of equation (1) estimated on a panel dataset at the municipality-year level, including municipality and year fixed effects. The sample only includes the 69 candidate cities in our augmented sample. The dependent variable is: in panel (a), a dummy variable equal to 1 if a municipality has established a cadaster by year t; in panel (b), the cumulative number of constructions and renovations of prisons and tribunal buildings by year t; in panel (c) a dummy variable equal to 1 if the municipality has a railway station by year t; in panel (d), the number of banks operating in the municipality in year t; we drop year 1864 due to data quality issues; in panel (e), the number of patents registered by residents of the municipality per 100 inhabitant in 1793; in panel (f), log population measured in year t. The dashed lines indicate 95% confidence intervals, with standard errors two-way clustered by municipality and by department-year.

Figure A.3: Heterogeneity in Department Design



Notes: This figure plots the distance between candidate cities and the population-weighted centroid of the department as a function of the percentage of the department border that is contiguous with a non-artificial department. We use all cities in the augmented sample (69 cities in 25 departments).

Tables

Table A.1: Complete List of Departments Created in 1790

Modern name	Original name	Artificial Département	With Rotation/election	With List of Candidates
Ain	de Bresse	✓		
Aisne	du Vermandois et du Soissonnois	✓	✓	✓
Allier	du Bourbonnois			
Ardèche	du Vélai et du Vivarais	✓	✓	✓
Ardennes†	septentrional de la Champagne	✓	✓	
Ariège	de Foix et de Couséerans	✓	✓	✓
Aube	de Troyes			
Aude	de Carcassonne			
Aveyron†	de Rouergue	✓	✓	
Bas-Rhin	de Strasbourg			
Basses-Alpes	de la Haute Provence	✓	✓	
Basses-Pyrénées	du Béarn			
Bouches-du-Rhône	de l'ouest de la Provence			
Cantal	de la Haute-Auvergne	✓	✓	✓
Calvados	de Caen			
Charente	de l'Angoumois			
Charente-Inférieure	de Saintonge et d'Aunis	✓	✓	✓
Cher	du Haut Berry			
Corrèze	du Bas Limousin	✓		
Corse	de Corse			
Côte d'or	de Dijon			
Côtes-du-Nord	de Saint-Brieuc			
Creuse	de la Marche			
Deux-Sèvres	intermédiaire du Poitou	✓	✓	✓
Dordogne	du Périgord	✓	✓	✓
Doubs	de Besançon			
Drôme†	du Bas Dauphiné	✓	✓	
Eure	d'Évreux			
Eure-et-Loir	de Chartres			
Finistère†	de la partie basse de la Bretagne	✓	✓	
Gard	de Nîmes			
Gers	d'Armagnac	✓		
Gironde	de Bordelois			
Haute-Alpes	du Dauphiné oriental	✓	✓	
Haute-Garonne	de Toulouse			
Haute-Loire	du Velay	✓		
Haute-Marne	méridional de la Champagne	✓	✓	✓
Hautes-Pyrénées	de Bigorre	✓		
Haut-Rhin	de Colmar			
Haute-Saône	d'Amont	✓	✓	✓
Haute-Vienne	du Haut Limousin			
Hérault	de Montpellier			
Ille-et-Vilaine	de Rennes			
Indre	du Bas Berry	✓	✓	✓
Indre-et-Loire	de Touraine			
Isère	du Dauphiné Nord			
Jura	d'Aval	✓	✓	✓

Table A.1 (continued): Complete List of Departments Created in 1790

Modern name	Original name	Artificial Département	With Rotation/election	With List of Candidates
Landes†	des Landes et Chalosse	✓	✓	
Loir-et-Cher	du Blaisois	✓		
Loire-Inférieure	de Nantes			
Loiret	de l'Orléanois			
Lot	du Quercy	✓		
Lot-et-Garonne	d'Agénois	✓		
Lozère	du Gévaudan	✓	✓	✓
Maine-et-Loire	d'Anjou			
Manche†	du Cotentin	✓	✓	
Marne	de Châlons			
Mayenne	du bas Maine ou de Laval			
Meurthe	de Lorraine			
Meuse	du Barrois	✓	✓	✓
Morbihan	de Vannes			
Moselle	de Metz			
Nièvre	du Nivernois			
Nord	Deux Flandres, Hainaut et Cambrésis	✓		
Oise†	du Beauvaisis	✓	✓	
Orne	d'Alençon			
Paris	de Paris			
Pas-de-Calais	d'Artois			
Puy-de-Dôme	de la Basse Auvergne			
Pyrénées-Orientales	du Roussillon			
Saône-et-Loire	du Mâconnois	✓	✓	✓
Sarthe	du Haut Maine			
Seine-et-Marne†	de la Brie et du Gâtinois	✓	✓	
Seine-et-Oise	de Versailles			
Seine-Inférieure	de Rouen			
Somme	d'Amiens			
Tarn	de l'Albigeois	✓	✓	✓
Var	de l'est de la Provence	✓	✓	✓
Vendée	occidental du Poitou	✓		
Vienne	du Haut Poitou			
Vosges	des Vosges	✓	✓	✓
Yonne	de l'Auxerrois			

Notes: This table lists all the departments created in January and February 1790 along with their original name. Our main sample consists of departments with an equivocal name (not named after a single city or province), in which a rotation or local election was due to take place, and for which the list of candidate cities was explicitly specified. To distinguish between royal provinces and territories with no official status under the Ancien Régime, we use the list provided in the Royal Ordinance of 8 March 1776, which includes 39 provinces (*gouvernements généraux*). When a department was named after the subset of an old province, we consider the name as ambiguous if the department did not include the old provincial capital. For example, the department of Basse Auvergne (Puy-de-Dôme) included the historical capital of Auvergne, Clermont-Ferrand, while the department of Haute Auvergne (Cantal) did not. In departments flagged with a †, we use historical archives to reconstruct the list of candidate cities. The list excludes the department of Rhône-et-Loire which was split in 1793 into two separate departments called Rhône and Loire.

Table A.2: Selection of Cities in Departments with rotation/election and no list

Name	List	Historical sources	Local elections	Requests
Ardennes	*Charleville, Mézières, Rethel, Sedan*	✓		✓
Aveyron	*Rodez, Villefranche-de-Rouergue*	✓		
Basses-Alpes	*Digne-les-Bains*	✓		
Drôme	*Crest, Montélimar, Valence*	✓	✓	
Finistère	*Landerneau, Quimper*	✓	✓	
Hautes-Alpes	*Gap*	✓	✓	
Landes	*Dax, Mont-de-Marsan*	✓		✓
Lot-et-Garonne	*Agen*	✓		
Manche	*Coutances, Saint-Lô*	✓	✓	✓
Oise	*Beauvais, Compiègne*	✓		
Seine-et-Marne	*Meaux, Melun*	✓	✓	✓

Notes: This table lists all the artificial departments where a rotation or an election was decided in the 26 February 1790 decree, but an explicit list of candidate cities was not specified. For each of these department, we specify the list of potential candidates and the criteria used to define this list. In column (3) we specify whether the list comes form the two main historical sources on the creation of departments (Masson (1984) and/or Margadant (1992)). In column (4) we specify whether a vote in the local assembly was held, vote in which the cities in the list got a large vote share. In column (5) we specify whether the cities in the list were mentioned in letters sent to the comité de constitution that we collected in the archives. Further details are given below for each department. For 3 out of the 11 artificial department where a list was not specified (Basses-Alpes, Hautes-Alpes and Lot-et-Garonne), a single city was in contention and these department are therefore not included in our final sample.

Ardennes: Masson (1984) states that "the relatively heterogeneous composition of this department meant that no city was seen as having an advantage over the others: Charleville, Mézières, Sedan and Rethel made claims to the *chef-lieu* [capital]." In the letters that we collected from the National Archives, only these four cities are mentioned: Charleville (32 times), Mezières (20), Réthel (27), Sedan (56).

Aveyron: Margadant (1992) describes how deputies from Villefranche-de-Rouergue and Rodez rested their claims to the capital. Representatives from Villefranche arguing that it had better soil conditions and population density, while those from Rodez argued it was more centrally located.

Basses Alpes: Masson (1984) does not mention any rival for Digne, which was confirmed as the capital on 24 January 1791.

Drôme: following the February 1790 decree, local delegates met on 28 May 1790 in the neutral town of Chabeuil. Valence obtained 157 votes to become the capital, beating Montélimar with 140 votes and Crest with 68.

Finistère: Masson (1984) describes how a first vote inside the department elected the town of Landerneau as capital, but this was undone by a second vote in which the town of Quimper was chosen. Local delegates ultimately agreed to leave this choice to the Committee. A decision was eventually made in August 1790 in favor of Landerneau, but once again, voices were then raised in favor of Quimper. Abbé Beradieu declared that *"the coast of Quimper is as poor as that of Landerneau is opulent"* and that not obtaining the status of capital would lead to Quimper's ruin. Quimper was eventually chosen.

Hautes Alpes: Masson (1984) reports that the local assembly held on 7 July 1790 in the town of Chorges decided without a vote that the capital would be Gap.

Landes: stuck between Gironde and Lot et Garonne, the department had to fight for its existence and the two main cities Dax and Mont-de-Marsan tried to build different alliances. As stated in Masson

(1984), when the department was eventually created, *"the rivalry between Dax and Mont-de-Marsan seemed difficult to resolve."* Moreover, in the letters that we collected from the archives, Dax was mentioned 35 times as a candidate for capital and Mont de Marsan 14 times, while two other cities are also mentioned, Saint-Sever and Tartas.

Lot et Garonne: Masson (1984) does not present any rival to Agen and even refers to the department as the *département d'Agen*. The issue revolved around the limits of the department. Masson (1984) explains that *"the limits of the department of Gironde, Lot et Garonne and Landes eventually were established. Bordeaux became without any problem the chef-lieu of its department, and so did Agen. On the contrary, in the Landes, the rivalry between Dax and Mont-de-Marsan seemed difficult to resolve."* Margadant (1992) describes a similar process where several towns tried to escape the domination of Bordeaux and Agen to create an intermediate department.

Manche: Masson (1984) describes the rivalry between Coutances and Saint-Lô. During a meeting between the deputies of the department held on December 18 1789, both towns received the same number of votes. Coutances was eventually chosen.

Oise: the local assembly decided to organize a rotation between Beauvais and Compiègne and this decision was ratified by the Constituent Assembly on 16 November 1790. As noted by Margadant (1992), this was the only rotation that was decided by a local assembly.

Seine-et-Marne: Masson (1984) states that the rivalry was limited to Melun and Meaux, which was resolved by a vote on 24 May 1790 when Melun was chosen by 259 votes in favor and 231 votes against. In the letters there are 27 mentions of Melun and 9 for Meaux.

Table A.3: Comparison of Artificial Departments with Others

	(1) **Baseline sample**	(2) **Augmented sample**	(3) **Other dep.**	(4) **Others, excl. Paris**
Size of largest city (thousand)	10.82	11.23	40.30	28.92
	[4.96]	[5.05]	[89.76]	[26.2]
Δ(Largest-2nd largest city)	2.95	3.42	30.52	19.05
	[2.50]	[3.12]	[89.32]	[21.91]
Centrality of largest city	32.86	34.13	20.80	21.14
	[16.79]	[15.95]	[14.20]	[14.10]
Total population, 1793	287.05	303.55	337.56	330.18
	[87.9]	[94.05]	[145.7]	[135.6]
Population density, 1793	0.40	0.42	0.68	0.50
	[0.11]	[0.13]	[1.37]	[0.20]
Population growth, 1793-1800	-0.01	-0.01	-0.01	-0.01
	[0.05]	[0.05]	[0.06]	[0.06]
Land area (km2)	7,307.4	7,348.4	6,563.2	6,666.1
	[1,675.9]	[1,524.7]	[1,477.0]	[1,263.1]
Subdélégations	7.65	7.76	8.45	8.56
	[5.34]	[4.68]	[4.11]	[4.06]
Recettes	3.76	4.00	4.10	4.16
	[2.28]	[2.20]	[3.12]	[3.12]
Bailliages	4.82	5.40	5.00	5.02
	[3.17]	[3.10]	[3.50]	[3.53]
Evêchés	1.53	1.64	1.52	1.53
	[1.18]	[1.11]	[1.13]	[1.14]
Distance to Paris (km)	385.14	370.31	348.62	354.53
	[153.93]	[173.90]	[192.63]	[188.97]
Distance to sea (km)	203.99	172.39	160.58	160.7
	[126.83]	[121.24]	[116.62]	[117.65]

Notes: This table reports sample means and standard deviations for various department-level variables measured across the 17 departments in our baseline sample (column 1), the 25 departments in our augmented sample (column 2), all other departments created in 1790 (column 3), and all other departments excluding Paris (column 4).

Table A.4: Effects on Social Conflict

	(1) Capitals [SD]	(2) Candidates [SD]	(3) t-test {RI p-value}	(4) Difference (SE)	(5) OLS (SE)	(6) Rand. Inference [95% CI] & {p-val}
			A. Main sample			
Short term (before 1815)						
Riots against the state	0.35	0.32	*t*=0.16	0.029	0.113	[-0.13,0.51]
	[0.61]	[0.47]	{1.00}	(0.184)	(0.182)	{0.30}
Fiscal riots	0.00	0.06	*t*=-1.00	-0.059	-0.049	[-0.07,0.00]
	[0.00]	[0.24]	{1.00}	(0.059)	(0.043)	{0.66}
Total riots	0.47	0.64	*t*=-0.73	-0.169	-0.085	[-0.40,0.42]
	[0.62]	[0.66]	{0.532}	(0.232)	(0.214)	{0.91}
Medium term (before 1850)						
Riots against the state	0.41	0.46	*t*=-0.33	-0.051	-0.001	[-0.22,0.37]
	[0.51]	[0.57]	{0.774}	(0.155)	(0.162)	{0.63}
Fiscal riots	0.12	0.28	*t*=-1.02	-0.162	-0.137	[-0.32,0.14]
	[0.33]	[0.56]	{0.403}	(0.159)	(0.123)	{0.42}
Total riots	1.35	1.53	*t*=-0.52	-0.174	-0.135	[-0.61,0.71]
	[1.27]	[1.46]	{0.675}	(0.335)	(0.287)	{0.83}
			B. Augmented sample			
Short term (before 1815)						
Riots against the state	0.28	0.29	*t*=-0.05	-0.007	0.061	[-0.14,0.32]
	[0.54]	[0.44]	{1.00}	(0.131)	(0.136)	{0.53}
Fiscal riots	0.00	0.04	*t*=-1.00	-0.04	-0.034	[-0.05,0.00]
	[0.00]	[0.20]	{1.00}	(0.040)	(0.030)	{0.95}
Total riots	0.44	0.53	*t*=-0.52	-0.088	-0.013	[-0.29,0.30]
	[0.65]	[0.64]	{0.630}	(0.170)	(0.163)	{0.97}
Medium term (before 1850)						
Riots against the state	0.36	0.37	*t*=-0.07	-0.008	0.017	[-0.16,0.28]
	[0.49]	[0.52]	{0.968}	(0.113)	(0.120)	{0.45}
Fiscal riots	0.08	0.19	*t*=-1.02	-0.110	-0.096	[-0.24,0.09]
	[0.28]	[0.47]	{0.405}	(0.108)	(0.088)	{0.37}
Total riots	1.24	1.32	*t*=-0.34	-0.085	-0.071	[-0.46,0.49]
	[1.20]	[1.38]	{0.763}	(0.247)	(0.221)	{0.82}

Notes: This table estimates effects on social conflict measured in the short term (between 1800 and 1815) or the medium term (between 1800 and 1848). All estimation details are identical to those in Tables 4 and 5. Riots against the state include all conflict events involving the military (including desertion and refusing conscription), police forces, or any conflict protesting against a decision taken by the authorities. Fiscal riots include are defined as riots protesting against taxes (local or national). Total riots include all episodes recorded in Chambru and Maneuvrier-Hervieu (2023). In Panel A, the sample includes 50 cities across 17 departments. In Panel B, the sample includes 69 cities across 25 departments.

Table A.5: Effects on Industrial Development in 1839-1847

	(1) **Capitals** [SD]	(2) **Candidates** [SD]	(3) **t-test** {RI p-value}	(4) **Difference** (SE)	(5) **OLS** (SE)	(6) **Rand. Inference** [95% CI] & {p-val}
				A. Main sample		
Industrial establisments	0.22	0.24	t=-0.12	-0.014	-0.004	[-0.42,0.26]
	[0.28]	[0.58]	{0.979}	(0.115)	(0.179)	{0.74}
Male workers	2.77	1.71	t=0.88	1.054	0.906	[-1.25,3.55]
	[4.15]	[2.66]	{0.479}	(1.202)	(0.946)	{0.46}
Female workers	4.79	0.96	t=1.54	3.826	3.721	[-0.64,9.46]
	[10.07]	[1.49]	{0.088}	(2.481)	(1.976)	{0.13}
Output per worker	4.77	5.62	t=-0.13	-0.249	-0.284	[-3.40,3.12]
	[3.63]	[4.50]	{0.900}	(1.599)	(2.164)	{0.88}
Male salary	212.18	199.4	t=0.56	4.567	2.735	[-12.98,20.33]
	[47.68]	[39.18]	{0.586}	(6.831)	(10.036)	{0.38}
Female salary	91.80	94.74	t=-0.22	-2.134	-3.752	[-19.48,12.19]
	[26.39]	[29.13]	{0.827}	(7.114)	(9.952)	{0.84}
				B. Augmented sample		
Industrial establisments	0.19	0.28	t=-0.98	-0.095	-0.094	[-0.41,0.12]
	[0.24]	[0.53]	{0.362}	(0.096)	(0.138)	{0.35}
Male workers	2.54	4.16	t=-0.64	-1.619	-2.415	[-7.72,1.48]
	[3.65]	[11.76]	{0.740}	(2.512)	(3.122)	{0.24}
Female workers	3.57	1.86	t=0.87	1.713	1.403	[-2.77,5.51]
	[8.45]	[4.18]	{0.468}	(1.966)	(1.883)	{0.61}
Output per worker	5.20	5.42	t=0.19	0.313	0.276	[-2.48,3.37]
	[4.08]	[4.68]	{0.856}	(1.395)	(1.755)	{0.93}
Male salary	211.91	200.21	t=0.81	7.399	8.400	[-6.57,23.77]
	[53.57]	[48.28]	{0.455}	(7.793)	(11.380)	{0.24}
Female salary	94.89	95.25	t=-0.05	-.336	-1.700	[-13.20,9.83]
	[26.49]	[26.40]	{0.959}	(4.920)	(7.484)	{0.79}

Notes: This table estimates effects on industrial development measured in the 1839-1847 census, using data from Chanut et al. (2000). Industrial establishments, male and female workers are divided by the 1793 population. All estimation details are identical to those in Tables 4 and 5. In Panel A, the sample includes 50 cities across 17 departments. In Panel B, the sample includes 69 cities across 25 departments.

Table A.6: Effects on Prices in 1849-1854

	(1) Capitals [SD]	(2) Candidates [SD]	(3) t-test {RI p-value}	(4) Difference (SE)	(5) OLS (SE)	(6) Rand. Inference [95% CI] & {p-val}
			A. Main sample			
Bread	0.17	0.17	t=-0.12	-0.001	0.002	[-0.02,0.02]
	[0.03]	[0.04]	{0.903}	(0.010)	(0.009)	{0.63}
Butter	0.79	0.78	t=-0.09	-0.005	-0.009	[-0.16,0.08]
	[0.20]	[0.23]	{0.926}	(0.048)	(0.047)	{0.51}
Eggs	0.44	0.43	t=0.55	0.013	0.005	[-0.09,0.04]
	[0.08]	[0.10]	{0.591}	(0.022)	(0.024)	{0.55}
Wine	0.29	0.29	t=0.20	0.006	0.003	[-0.05,0.06]
	[0.09]	[0.07]	{0.841}	(0.027)	(0.029)	{0.65}
Price index	0.26	0.26	t=0.07	0.002	0.004	[-0.05,0.06]
	[0.08]	[0.06]	{0.945}	(0.024)	(0.025)	{0.73}
Inflation 1849-1854	0.48	0.47	t=-0.12	-0.010	-0.008	[-0.14,0.19]
	[0.24]	[0.22]	{0.902}	(0.077)	(0.075)	{0.66}
Agricultural wage	1.52	1.46	t=0.75	0.070	0.094	[-0.24,0.28]
	[0.31]	[0.30]	{0.474}	(0.085)	(0.090)	{0.95}
			B. Augmented sample			
Bread	0.17	0.17	t=-0.23	-0.002	0.001	[-0.02,0.02]
	[0.03]	[0.05]	{0.826}	(0.010)	(0.010)	{0.71}
Butter	0.81	0.82	t=-0.58	-0.024	-0.018	[-0.13,0.06]
	[0.21]	[0.21]	{0.574}	(0.041)	(0.041)	{0.43}
Eggs	0.44	0.43	t=0.30	0.007	0.008	[-0.09,0.05]
	[0.10]	[0.10]	{0.767}	(0.022)	(0.024)	{0.65}
Wine	0.34	0.32	t=0.58	0.017	0.021	[-0.04, 0.08]
	[0.19]	[0.13]	{0.583}	(0.027)	(0.033)	{0.49}
Price index	0.28	0.28	t=0.07	0.002	0.007	[-0.04,0.05]
	[0.14]	[0.11]	{0.947}	(0.022)	(0.024)	{0.87}
Inflation 1849-1854	0.46	0.42	t=0.32	0.024	0.017	[-0.10,0.18]
	[0.28]	[0.24]	{0.754}	(0.071)	(0.068)	{0.52}
Agricultural wage	1.48	1.43	t=0.90	0.060	0.084	[-0.25,0.23]
	[0.35]	[0.28]	{0.389}	(0.061)	(0.067)	{0.89}

Notes: This table estimates effects on food prices and agricultural wages measured in 1849-53, as well as inflation in our price index between 1849-53 and 1854-55. Prices are expressed in Francs for 0.5kg of bread, 0.5kg of butter, one dozen eggs, and one liter of wine. The price index is calculated by taking the average of prices for bread, butter, eggs, and wine, applying weights corresponding to the number of product units required to fulfill the daily calorie requirement of 2,100 calories per day, following the tabulations from Allen (2015). All estimation details are as in Tables 4 and 5. In Panel A, the sample includes 50 cities across 17 departments. In Panel B, the sample includes 69 cities across 25 departments.

Table A.7: Capital status and technological shocks

	(1)	(2)	(3)	(4)	(5)
	Steam engines	Firms (raw)	Firms (p.c.)	Tax collected	Output/worker
	A. Main sample				
Capital	-0.138	3.818	0.228	3.909	-2.721
	(0.443)	(12.242)	(0.357)	(3.679)	(8.152)
Steam engines by 1839		6.162	0.112	1.133	-0.822
		(2.095)	(0.042)	(0.462)	(1.232)
Capital × steam engines		-2.040	-0.080	-1.573	0.642
		(4.278)	(0.127)	(1.014)	(2.408)
N	50	50	50	50	41
DV control mean	1.000	16.576	0.316	1.460	5.130
Department FE	Yes	Yes	Yes	Yes	Yes
R^2	0.172	0.893	0.858	0.650	0.630
	B. Augmented sample				
Capital	-0.222	-14.417	-0.100	0.033	-4.976
	(0.376)	(9.301)	(0.217)	(2.096)	(5.149)
Steam engines by 1839		6.410	0.116	1.305	-0.543
		(2.171)	(0.047)	(0.367)	(1.050)
Capital × steam engines		-0.403	-0.063	-0.580	2.393
		(4.895)	(0.111)	(0.888)	(2.367)
N	69	69	69	69	58
DV control mean	1.091	20.364	0.351	2.487	5.077
Department FE	Yes	Yes	Yes	Yes	Yes
R^2	0.222	0.821	0.774	0.626	0.587

Notes: This table reports estimates from a modified version of equation (1) where we interact capital status (C_{ij}) with the number of steam engines in candidate city i in the 1839-47 industrial census. The dependent variables are: in column 1, the number of steam engines in 1839; in column 2, the number of firms operating in city i; in column 3, the number of firms operating in city i per 100 inhabitants in 1793; in column 4, the business tax amount collected per 100 inhabitants in 1793; in column 5, output per worker in city i. In Panel A, the sample includes 50 cities across 17 departments. In Panel B, the sample includes 69 cities across 25 departments.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.8: Robustness on Table 4: Design-Based Approach

	(1) Difference Baseline	(2) Difference Weight by $(n_j/N)^{-1}$	(3) t-test {RI p-value}	(4) Difference Weight by $(1/n_j)^{-1}$	(5) t-test {RI p-value}
A. Taxation and Enforcement					
Cadaster by 1815	0.375	0.363	t=2.45	0.342	t=2.41
	(0.144)	(0.148)	{0.041}	(0.142)	{0.042}
Business tax collected, 1839	2.152	1.522	t=1.60	3.11	t=2.40
	(1.136)	(0.951)	{0.086}	(1.296)	{0.052}
Conscripts 1802-1815	0.153	0.119	t=1.13	0.221	t=1.94
	(0.110)	(0.105)	{0.275}	(0.114)	{0.193}
Police force in 1816	2.262	2.165	t=8.26	2.469	t=7.99
	(0.294)	(0.262)	{0.000}	(0.309)	{0.000}
Tribunal project by 1815	0.324	0.351	t=2.86	0.270	t=2.35
	(0.121)	(0.122)	{0.032}	(0.115)	{0.032}
B. Public Goods Provision					
Secondary school, 1812	0.147	0.160	t=1.61	0.170	t=1.44
	(0.105)	(0.099)	{0.196}	(0.118)	{0.438}
Hospital project by 1815	0.051	0.095	t=0.49	-0.003	t=-0.02
	(0.176)	(0.193)	{0.725}	(0.148)	{1.00}
Secondary school, 1836	0.162	0.167	t=1.75	0.195	t=1.82
	(0.098)	(0.095)	{0.186}	(0.107)	{0.310}
Hospital project by 1840	0.260	0.346	t=2.45	0.128	t=0.95
	(0.143)	(0.141)	{0.041}	(0.135)	{0.331}
Telegraph connexion, 1863	0.846	0.853	t=8.53	0.848	t=8.62
	(0.103)	(0.100)	{0.000}	(0.098)	{0.000}
Welfare beneficiaries, 1871	2.649	2.745	t=2.44	2.37	t=2.25
	(1.117)	(1.124)	{0.035}	(1.055)	{0.030}
Train station, 1870	0.346	0.322	t=2.90	0.398	t=3.93
	(0.108)	(0.111)	{0.014}	(0.101)	{0.014}
C. Economic Effects					
Industrial establishments, 1839	-0.014	-0.029	t=-0.29	0.052	t=0.42
	(0.115)	(0.101)	{0.971}	(0.125)	{0.766}
Output per worker, 1839	-0.249	-0.243	t=-0.13	0.012	t=0.01
	(1.599)	(1.631)	{0.916}	(1.456)	{0.994}
Log population, 1846	0.179	0.156	t=1.26	0.220	t=1.87
	(0.123)	(0.123)	{0.231}	(0.118)	{0.130}
Private banks, 1851	0.093	-0.149	t=-0.33	0.512	t=0.96
	(0.490)	(0.449)	{0.761}	(0.534)	{0.511}
Patents registered by 1850	0.030	0.019	t=0.56	0.047	t=1.47
	(0.033)	(0.034)	{0.600}	(0.032)	{0.208}
Private banks, 1910	0.895	0.821	t=1.82	1.144	t=2.34
	(0.464)	(0.451)	{0.098}	(0.489)	{0.106}
Patents registered by 1900	0.715	0.635	t=4.63	0.840	t=6.06
	(0.142)	(0.137)	{0.000}	(0.138)	{0.000}
Log population, 1886	0.462	0.456	t=3.40	0.462	t=3.86
	(0.130)	(0.134)	{0.004}	(0.120)	{0.002}
Log pop, 1886, no civil servants	0.341	0.400	t=2.57	0.172	t=0.96
	(0.163)	(0.156)	{0.027}	(0.178)	{0.453}
Log population, 1999	0.663	0.702	t=4.10	0.596	t=3.73
	(0.169)	(0.171)	{0.002}	(0.160)	{0.001}
Private employees (p.c.), 2015	0.195	0.193	t=4.61	0.194	t=5.16
	(0.040)	(0.042)	{0.000}	(0.038)	{0.000}

Notes: This table reports robustness checks on Table 4 using the baseline sample of 50 candidate cities. Column 1 reports the same estimates as those in column 4 of Table 4. Column 2 reports a weighted average of the within-department treatment-control differences, using as weights the inverse probability that city i belongs to stratum (department) j, denoted above as p_j. Column 3 reports the randomization inference p-value corresponding to this t-stat. In columns 4 and 5, we consider an alternative weighting scheme using as weights the inverse of the conditional treatment probability inside each department, $(p_{i|j})^{-1}$.

Table A.9: Robustness on Table 5: Design-Based Approach

	(1) Difference Baseline	(2) Difference Weight by $(n_j/N)^{-1}$	(3) t-test {RI p-value}	(4) Difference Weight by $(1/n_j)^{-1}$	(5) t-test {RI p-value}
A. Taxation and Enforcement					
Cadaster by 1815	0.377	0.368	t=3.17	0.355	t=3.16
	(0.111)	(0.114)	{0.009}	(0.110)	{0.008}
Business tax collected, 1839	0.737	0.501	t=0.55	1.312	t=1.06
	(1.068)	(0.912)	{0.559}	(1.238)	{0.457}
Conscripts 1802-1815	0.167	0.148	t=1.57	0.209	t=2.13
	(0.096)	(0.094)	{0.136}	(0.098)	{0.104}
Police force in 1816	2.252	2.260	t=9.20	2.309	t=7.49
	(0.279)	(0.246)	{0.000}	(0.308)	{0.000}
Tribunal project by 1815	0.367	0.398	t=3.28	0.307	t=2.71
	(0.119)	(0.121)	{0.008}	(0.113)	{0.008}
B. Public Goods Provision					
Secondary school, 1812	0.173	0.200	t=2.23	0.164	t=1.61
	(0.094)	(0.090)	{0.051}	(0.102)	{0.253}
Hospital project by 1815	0.075	0.094	t=0.64	0.042	t=0.34
	(0.138)	(0.147)	{0.601}	(0.122)	{0.735}
Secondary school, 1836	0.090	0.102	t=1.35	0.105	t=1.10
	(0.083)	(0.075)	{0.259}	(0.095)	{0.495}
Hospital project by 1840	0.297	0.355	t=2.80	0.194	t=1.62
	(0.126)	(0.127)	{0.017}	(0.120)	{0.096}
Telegraph connexion, 1863	0.842	0.871	t=11.20	0.812	t=8.97
	(0.086)	(0.078)	{0.000}	(0.091)	{0.000}
Welfare beneficiaries, 1871	3.608	3.669	t=2.96	3.297	t=2.82
	(1.228)	(1.240)	{0.006}	(1.169)	{0.004}
Train station, 1870	0.295	0.299	t=3.02	0.310	t=2.95
	(0.102)	(0.099)	{0.009}	(0.105)	{0.032}
C. Economic Effects					
Industrial establishments, 1839	-0.095	-0.096	t=-1.09	-0.052	t=-0.50
	(0.096)	(0.088)	{0.323}	(0.104)	{0.685}
Output per worker, 1839	0.313	0.340	t=0.20	0.442	t=0.30
	(1.395)	(1.446)	{0.861}	(1.264)	{0.768}
Log population, 1846	0.176	0.166	t=1.64	0.194	t=1.82
	(0.105)	(0.101)	{0.115}	(0.106)	{0.126}
Private banks, 1851	0.090	0.093	t=0.22	0.192	t=0.35
	(0.474)	(0.416)	{0.836}	(0.542)	{0.795}
Patents registered by 1850	0.039	0.029	t=1.17	0.053	t=2.24
	(0.024)	(0.025)	{0.272}	(0.024)	{0.055}
Private banks, 1910	1.062	1.160	t=2.72	1.051	t=2.18
	(0.450)	(0.427)	{0.014}	(0.481)	{0.098}
Patents registered by 1900	0.635	0.601	t=5.33	0.704	t=5.28
	(0.124)	(0.113)	{0.000}	(0.133)	{0.000}
Log population, 1886	0.399	0.395	t=3.77	0.397	t=3.67
	(0.108)	(0.105)	{0.000}	(0.108)	{0.003}
Log pop, 1886, no civil servants	0.287	0.332	t=2.73	0.155	t=1.06
	(0.132)	(0.121)	{0.011}	(0.146)	{0.387}
Log population, 1999	0.676	0.687	t=4.92	0.638	t=4.66
	(0.138)	(0.137)	{0.000}	(0.134)	{0.000}
Private employees (p.c.), 2015	0.173	0.172	t=4.87	0.175	t=5.29
	(0.034)	(0.035)	{0.000}	(0.032)	{0.000}

Notes: This table reports robustness checks on Table 5 using the augmented sample of 69 candidate cities. Column 1 reports the same estimates as those in column 4 of Table 5. Column 2 reports a weighted average of the within-department treatment-control differences, using as weights the inverse probability that city i belongs to stratum (department) j, denoted above as p_j. Column 3 reports the randomization inference p-value corresponding to this t-stat. In columns 4 and 5, we consider an alternative weighting scheme using as weights the inverse of the conditional treatment probability inside each department, $(p_{i|j})^{-1}$.

Table A.10: Robustness on Table 4: Controls and clustering

	(1) Baseline	(2) Controls	(3) Controls-Lasso	(4) Clustering	(5) Clustering + Controls	(6) Rand. Inf.
A. Taxation and Enforcement						
Cadaster by 1815	0.385	0.498	0.576	0.385	0.576	[-0.04,0.71]
	(0.140)	(0.230)	(0.170)	(0.176) {0.01}	(0.217) {0.01}	{0.08}
Business tax collected, 1839	2.582	2.293	3.080	2.582	3.080	[-0.56,6.26]
	(1.299)	(2.314)	(1.772)	(1.681) {0.05}	(2.156) {0.09}	{0.10}
Conscripts 1802-1815	0.176	0.238	0.008	0.176	0.008	[-0.05,0.43]
	(0.120)	(0.101)	(0.138)	(0.144) {0.17}	(0.155) {0.96}	{0.12}
Police force in 1816	2.329	2.447	2.551	2.329	2.551	[1.82,2.86]
	(0.315)	(0.606)	(0.303)	(0.414) {0.00}	(0.332) {0.00}	{0.00}
Tribunal project by 1815	0.305	0.466	0.324	0.305	0.324	[-0.04,0.64]
	(0.118)	(0.212)	(0.148)	(0.149) {0.01}	(0.175) {0.05}	{0.08}
B. Public Goods Provision						
Secondary school, 1812	0.139	0.070	0.164	0.139	0.164	[-0.20,0.41]
	(0.119)	(0.236)	(0.159)	(0.144) {0.25}	(0.231) {0.39}	{0.39}
Hospital project by 1815	0.022	-0.358	-0.091	0.022	-0.091	[-0.46,0.32]
	(0.138)	(0.295)	(0.214)	(0.189) {0.83}	(0.294) {0.69}	{0.72}
Secondary school, 1836	0.158	0.142	0.290	0.158	0.290	[-0.05,0.41]
	(0.108)	(0.147)	(0.131)	(0.130) {0.12}	(0.181) {0.09}	{0.20}
Hospital project by 1840	0.201	-0.039	0.138	0.201	0.138	[-0.16,0.45]
	(0.136)	(0.205)	(0.188)	(0.176) {0.18}	(0.232) {0.45}	{0.35}
Telegraph connexion, 1863	0.841	0.675	0.916	0.841	0.916	[0.67, 1.05]
	(0.097)	(0.207)	(0.114)	(0.132) {0.00}	(0.156) {0.00}	{0.00}
Welfare beneficiaries, 1871	2.584	0.743	2.212	2.584	2.212	[0.08,5.13]
	(1.140)	(4.157)	(2.031)	(1.388) {0.04}	(2.583) {0.25}	{0.04}
Train station, 1870	0.362	0.477	0.526	0.362	0.526	[0.21,0.82]
	(0.102)	(0.230)	(0.146)	(0.130) {0.00}	(0.182) {0.00}	{0.00}
C. Economic Effects						
Industrial establishments, 1839	-0.004	0.191	-0.094	-0.004	-0.094	[-0.15,0.28]
	(0.179)	(0.282)	(0.262)	(0.166) {0.98}	(0.250) {0.64}	{0.83}
Output per worker, 1839	-0.284	-2.471	0.133	-0.284	0.133	[-5.21,3.76]
	(2.164)	(4.500)	(2.180)	(2.460) {0.90}	(2.922) {0.94}	{0.77}
Log population, 1846	0.195	0.072	0.040	0.195	0.040	[-0.07,0.30]
	(0.126)	(0.127)	(0.105)	(0.153) {0.13}	(0.112) {0.64}	{0.19}
Private banks, 1851	0.258	0.168	-0.082	0.258	-0.082	[-1.43,1.30]
	(0.534)	(0.930)	(0.648)	(0.675) {0.64}	(0.892) {0.91}	{0.95}
Patents registered by 1850	0.038	0.032	0.074	0.038	0.074	[-0.02,0.14]
	(0.033)	(0.052)	(0.040)	(0.041) {0.28}	(0.051) {0.11}	{0.12}
Private banks, 1910	0.945	1.866	1.008	0.945	1.008	[-0.08,2.42]
	(0.491)	(1.044)	(0.618)	(0.609) {0.08}	(0.751) {0.10}	{0.06}
Patents registered by 1900	0.770	0.751	0.821	0.770	0.821	[0.45,1.31]
	(0.139)	(0.203)	(0.186)	(0.181) {0.00}	(0.261) {0.00}	{0.00}
Log population, 1886	0.466	0.329	0.327	0.466	0.327	[0.09,0.69]
	(0.136)	(0.137)	(0.139)	(0.157) {0.00}	(0.180) {0.03}	{0.01}
Log pop, 1886, no civil servants	0.302	0.196	0.193	0.302	0.193	[-0.03,0.65]
	(0.185)	(0.184)	(0.198)	(0.219) {0.11}	(0.237) {0.31}	{0.08}
Log population, 1999	0.636	0.795	0.444	0.636	0.444	[0.19,0.98]
	(0.184)	(0.240)	(0.231)	(0.209) {0.00}	(0.263) {0.02}	{0.01}
Private employees (p.c.), 2015	0.197	0.173	0.151	0.197	0.151	[0.08,0.24]
	(0.037)	(0.086)	(0.045)	(0.048) {0.00}	(0.055) {0.01}	{0.00}

Notes: This table reports robustness checks on equation (1) using the baseline sample of 50 candidate cities. Column 1 reports the same estimates as those in column 5 of Table 4. In column 2, we add pre-determined geographic, demographic, and administrative controls (see text for details). In column 3, we use a double selection LASSO procedure to select covariates among the controls included in column 2, imposing that department dummies are always included. In column 4, we report (in parentheses) standard errors clustered by department alongside (in curly brackets) the p-values from a wild bootstrap with 10,000 replications. In column 5, we include all controls selected by the LASSO procedure and also cluster standard errors by department. Column 6 reports 95% permutation-based randomization confidence intervals.

Table A.11: Robustness on Table 5: Controls and clustering

	(1) Baseline	(2) Controls	(3) Controls-Lasso	(4) Clustering	(5) Clustering + Controls	(6) Rand. Inf.
A. Taxation and Enforcement						
Cadaster by 1815	0.384	0.422	0.521	0.384	0.521	[0.07,0.60]
	(0.112)	(0.174)	(0.123)	(0.141) {0.00}	(0.163) {0.00}	{0.02}
Business tax collected, 1839	0.907	-0.756	0.462	0.907	0.462	[-3.20,3.97]
	(1.265)	(1.795)	(1.564)	(1.625) {0.51}	(1.990) {0.77}	{0.86}
Conscripts 1802-1815	0.181	0.129	0.064	0.181	0.064	[0.03,0.33]
	(0.104)	(0.075)	(0.091)	(0.126) {0.09}	(0.102) {0.46}	{0.02}
Police force in 1816	2.246	2.106	2.286	2.246	2.286	[1.57,2.81]
	(0.315)	(0.403)	(0.362)	(0.413) {0.00}	(0.433) {0.00}	{0.00}
Tribunal project by 1815	0.344	0.343	0.352	0.344	0.352	[0.02,0.60]
	(0.113)	(0.184)	(0.150)	(0.147) {0.01}	(0.198) {0.05}	{0.04}
B. Public Goods Provision						
Secondary school, 1812	0.154	0.044	0.206	0.154	0.206	[-0.07,0.43]
	(0.105)	(0.114)	(0.139)	(0.129) {0.15}	(0.186) {0.19}	{0.14}
Hospital project by 1815	0.061	-0.041	-0.014	0.061	-0.014	[-0.32,0.30]
	(0.114)	(0.165)	(0.150)	(0.157) {0.58}	(0.207) {0.93}	{0.96}
Secondary school, 1836	0.081	-0.065	-0.045	0.081	-0.045	[-0.17,0.25]
	(0.099)	(0.137)	(0.121)	(0.120) {0.38}	(0.154) {0.71}	{0.70}
Hospital project by 1840	0.254	0.246	0.256	0.254	0.256	[0.02,0.55]
	(0.118)	(0.135)	(0.126)	(0.156) {0.05}	(0.165) {0.05}	{0.03}
Telegraph connexion, 1863	0.820	0.753	0.858	0.820	0.858	[0.63,1.02]
	(0.093)	(0.136)	(0.114)	(0.122) {0.00}	(0.153) {0.00}	{0.00}
Welfare beneficiaries, 1871	3.564	5.592	4.001	3.564	4.001	[1.44,7.43]
	(1.167)	(1.990)	(1.684)	(1.543) {0.01}	(2.309) {0.04}	{0.00}
Train station, 1870	0.292	0.302	0.379	0.292	0.379	[0.04,0.63]
	(0.107)	(0.159)	(0.145)	(0.137) {0.01}	(0.185) {0.03}	{0.03}
C. Economic Effects						
Industrial establishments, 1839	-0.094	-0.181	-0.143	-0.094	-0.143	[-0.39,0.13]
	(0.138)	(0.197)	(0.147)	(0.137) {0.44}	(0.139) {0.20}	{0.38}
Output per worker, 1839	0.276	-1.575	0.613	0.276	0.613	[-2.68,3.97]
	(1.755)	(2.438)	(1.676)	(2.099) {0.87}	(2.294) {0.72}	{0.84}
Log population, 1846	0.183	0.162	0.093	0.183	0.093	[0.04,0.26]
	(0.112)	(0.066)	(0.066)	(0.141) {0.12}	(0.080) {0.14}	{0.01}
Private banks, 1851	0.088	-0.703	-0.422	0.088	-0.422	[-2.09,0.87]
	(0.559)	(0.895)	(0.716)	(0.707) {0.89}	(1.003) {0.69}	{0.45}
Patents registered by 1850	0.046	0.087	0.073	0.046	0.073	[0.02,0.12]
	(0.025)	(0.036)	(0.025)	(0.031) {0.08}	(0.032) {0.01}	{0.00}
Private Banks, 1910	0.990	0.942	0.765	0.990	0.765	[-0.10,2.39]
	(0.483)	(0.829)	(0.597)	(0.620) {0.06}	(0.778) {0.24}	{0.07}
Patents registered by 1900	0.659	0.588	0.652	0.659	0.652	[0.18,1.13]
	(0.153)	(0.233)	(0.211)	(0.176) {0.00}	(0.249) {0.01}	{0.01}
Log population, 1886	0.402	0.365	0.263	0.402	0.263	[0.17,0.52]
	(0.120)	(0.088)	(0.101)	(0.144) {0.00}	(0.131) {0.02}	{0.00}
Log pop, 1886, no civil servants	0.256	0.283	0.130	0.256	0.130	[0.02,0.46]
	(0.154)	(0.099)	(0.130)	(0.187) {0.10}	(0.175) {0.38}	{0.03}
Log population, 1999	0.668	0.847	0.578	0.668	0.578	[0.38,0.97]
	(0.156)	(0.233)	(0.166)	(0.182) {0.00}	(0.209) {0.00}	{0.00}
Private employees (p.c.), 2015	0.174	0.123	0.131	0.174	0.131	[0.09,0.24]
	(0.033)	(0.051)	(0.041)	(0.043) {0.00}	(0.048) {0.00}	{0.00}

Notes: This table reports robustness checks on equation (1) using the augmented sample of 69 candidate cities. Column 1 reports the same estimates as those in column 5 of Table 5. In column 2, we add pre-determined geographic, demographic, and administrative controls (see text for details). In column 3, we use a double selection LASSO procedure to select covariates among the controls included in column 2, imposing that department dummies are always included. In column 4, we report (in parentheses) standard errors clustered by department alongside (in curly brackets) the *p*-values from a wild bootstrap with 10,000 replications. In column 5, we include all controls selected by the LASSO procedure and also cluster standard errors by department. Column 6 reports 95% permutation-based randomization confidence intervals.

Table A.12: The Role of Centrality: Robustness Checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Cadaster by 1815		Train station 1870		Patents 1901		Banks 1898		Pop 1886		Pop 1999	
	A. Baseline sample: Controlling for a 3rd-order polynomial in centrality											
Capital	0.3688	0.6128	0.3799	0.4610	0.6158	0.7378	1.6193	2.1459	0.4253	0.2345	0.6455	0.7480
	(0.1449)	(0.2648)	(0.1334)	(0.2403)	(0.1475)	(0.2564)	(0.4941)	(1.0679)	(0.1034)	(0.1468)	(0.1360)	(0.2716)
Centrality		0.0507		-0.3468		-0.2944		-0.5786		-0.0964		-0.1678
		(0.1525)		(0.1358)		(0.1229)		(0.5656)		(0.0901)		(0.1451)
Centrality squared		0.1548		0.0964		0.0622		-0.1043		-0.1122		-0.0777
		(0.1753)		(0.1161)		(0.1960)		(0.6597)		(0.1208)		(0.2160)
Centrality cubed		0.0231		0.0374		0.0248		-0.0167		-0.0129		-0.0138
		(0.0374)		(0.0243)		(0.0433)		(0.1400)		(0.0265)		(0.0462)
Cities	49	49	50	50	50	50	50	50	50	50	50	50
Dep var mean	0.388	0.388	0.580	0.580	0.788	0.788	3.620	3.620	9.193	9.193	9.712	9.712
R^2	0.693	0.722	0.810	0.868	0.878	0.898	0.878	0.884	0.957	0.968	0.918	0.922
	B. Augmented sample: Controlling for a 3rd-order polynomial in centrality											
Capital	0.3392	0.4568	0.2973	0.2895	0.7792	0.6300	1.3850	1.2011	0.4088	0.3151	0.7383	0.8127
	(0.1436)	(0.2015)	(0.1124)	(0.1599)	(0.1725)	(0.2053)	(0.5014)	(0.7261)	(0.0702)	(0.0999)	(0.1627)	(0.2455)
Centrality		0.0614		-0.2276		-0.0448		-0.1520		-0.1432		-0.2625
		(0.1070)		(0.1259)		(0.1730)		(0.4171)		(0.0793)		(0.1639)
Centrality squared		-0.0120		0.1400		0.4341		0.0677		-0.0620		-0.0061
		(0.2080)		(0.1454)		(0.2789)		(0.5793)		(0.1014)		(0.2024)
Centrality cubed		-0.0122		0.0437		0.1097		0.0336		-0.0016		0.0083
		(0.0466)		(0.0328)		(0.0631)		(0.1296)		(0.0220)		(0.0462)
Cities	66	66	69	69	69	69	69	69	69	69	68	68
Dep var mean	0.394	0.394	0.551	0.551	0.915	0.915	3.739	3.739	9.258	9.258	9.831	9.831
R^2	0.640	0.660	0.783	0.819	0.750	0.802	0.822	0.826	0.935	0.945	0.850	0.857
	C. Baseline sample: Controlling for a "most central" indicator											
Capital	0.3688	0.4239	0.3799	0.3452	0.6158	0.6624	1.6193	1.3514	0.4253	0.3173	0.6455	0.6190
	(0.1449)	(0.2274)	(0.1334)	(0.1821)	(0.1475)	(0.1753)	(0.4941)	(0.7387)	(0.1034)	(0.1260)	(0.1360)	(0.2084)
Most central city		-0.0850		0.0537		-0.0722		0.4146		0.1672		0.0410
		(0.2726)		(0.2007)		(0.1666)		(0.6478)		(0.0954)		(0.2033)
Cities	49	49	50	50	50	50	50	50	50	50	50	50
Dep var mean	0.388	0.388	0.580	0.580	0.788	0.788	3.620	3.620	9.193	9.193	9.712	9.712
R^2	0.693	0.696	0.810	0.811	0.878	0.879	0.878	0.880	0.957	0.961	0.918	0.918
	D. Augmented sample: Controlling for a "most central" indicator											
Capital	0.3392	0.3514	0.2973	0.2798	0.7792	0.6325	1.3850	1.0065	0.4088	0.3633	0.7383	0.6933
	(0.1436)	(0.1764)	(0.1124)	(0.1527)	(0.1725)	(0.2271)	(0.5014)	(0.5790)	(0.0702)	(0.1037)	(0.1627)	(0.2147)
Most central city		-0.0208		0.0293		0.2444		0.6309		0.0759		0.0713
		(0.1932)		(0.1464)		(0.2790)		(0.4606)		(0.1158)		(0.2232)
Cities	66	66	69	69	69	69	69	69	69	69	68	68
Dep var mean	0.394	0.394	0.551	0.551	0.915	0.915	3.739	3.739	9.258	9.258	9.831	9.831
R^2	0.640	0.640	0.783	0.784	0.750	0.758	0.822	0.830	0.935	0.936	0.850	0.851

Notes: This table reports robustness checks on the results in Table 6. In panels A and B, centrality is defined as minus log distance to the department centroid. In panels C and D, we control for an indicator equal to 1 if city i is the most central candidate. All regressions control for department fixed effects, land area and land area squared, minimal and maximal altitude, latitude and longitude, log population in 1793 and 1800, four dummy variables indicating the presence of bishoprics, bailiwicks, tax centers, and *subdélégations*, pre-reform market access, and wheat suitability. In even-numbered columns, we additionally control for centrality.
* p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.13: Heterogeneity in the Design of Departments

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Cadaster by 1815		**Train station by 1870**		**Patents 1901**		**Banks 1898**		**Pop 1901**	
	A. Baseline sample									
Capital	0.4977	0.3024	0.4773	0.5432	0.7509	0.7864	2.2161	2.3296	0.2698	0.3162
	(0.2302)	(0.2570)	(0.2299)	(0.3149)	(0.2034)	(0.2512)	(0.9152)	(1.0356)	(0.1699)	(0.1922)
Capital*% Contiguous Artif. Dep.		0.0092		-0.0031		-0.0017		-0.0053		-0.0022
		(0.0082)		(0.0077)		(0.0060)		(0.0242)		(0.0044)
Number of municipalities	49	49	50	50	50	50	50	50	50	50
Dep var mean	0.388	0.388	0.580	0.580	0.788	0.788	3.620	3.620	9.240	9.240
R^2	0.700	0.720	0.814	0.816	0.882	0.883	0.884	0.884	0.957	0.957
	B. Augmented sample									
Capital	0.4223	0.2507	0.3021	0.4314	0.5882	0.7323	1.2462	1.7579	0.4323	0.5404
	(0.1729)	(0.2347)	(0.1587)	(0.2001)	(0.2334)	(0.2514)	(0.6898)	(0.7511)	(0.1193)	(0.1650)
Capital*% Contiguous Artif. Dep.		0.0069		-0.0052		-0.0058		-0.0205		-0.0043
		(0.0071)		(0.0052)		(0.0067)		(0.0188)		(0.0045)
Number of municipalities	66	66	69	69	69	69	69	69	69	69
Dep var mean	0.394	0.394	0.551	0.551	0.915	0.915	3.739	3.739	9.296	9.296
R^2	0.648	0.661	0.783	0.790	0.763	0.765	0.823	0.828	0.916	0.918

Notes: Odd-numbered columns report the estimate from equation (1), estimated via OLS and controlling for department fixed effects and our standard set of covariates. In even-numbered columns, we additionally interact the capital dummy with the fraction of the department boundaries contiguous to a non-artificial departments, as described in the text. The main effect of "% contiguous borders" is absorbed by the department fixed effects.
* $p<0.1$, ** $p<0.05$, *** $p<0.01$. Robust standard errors in parentheses.

Table A.14: The Early Buildup of Coercive Capacity: Augmented Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	A. Coercive capacity							
		Cadaster		**Business tax**	**Conscripts**	**Police**	**Prisons**	**Tribunal**
	1815	1830	1850	1839-47	1802-15	1816	1815	1815
Capital in 1800	0.1721	0.0497	0.0010	0.0611	0.1565	2.1874	0.2792	0.4360
	[0.1053]	[0.0992]	[0.0039]	[1.1062]	[0.0620]	[0.2740]	[0.1270]	[0.1149]
	(0.1011)	(0.0979)	(0.0042)	(1.3047)	(0.0564)	(0.3078)	(0.1071)	(0.1000)
	{0.101}	{0.621}	{0.839}	{0.965}	{0.017}	{0.000}	{0.020}	{0.000}
Closest candidate is capital	0.1702	0.1234	0.0004	0.3747	-0.0073	0.0023	0.0033	-0.0003
	[0.0243]	[0.0321]	[0.0032]	[0.2913]	[0.2874]	[0.0029]	[0.0019]	[0.0016]
	(0.0281)	(0.0435)	(0.0045)	(0.2977)	(0.0336)	(0.0032)	(0.0017)	(0.0016)
	{0.000}	{0.010}	{0.910}	{0.280}	{0.831}	{0.459}	{0.084}	{0.864}
Number of municipalities	4,226	4,226	4,226	4,608	4,556	4,608	4,608	4,608
DV control mean	0.183	0.602	0.994	0.808	2.014	0.003	0.001	0.001
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.189	0.115	0.028	0.049	0.576	0.798	0.410	0.459
	B. Public goods provision							
	Sec. schools		**Hospitals**		**Welfare**	**Telegraph**	**Railway**	
	1812	1836	1815	1840	1871	1863	1852	1870
Capital in 1800	0.1405	0.0901	0.0673	0.2870	3.9378	0.7970	0.0526	0.2746
	[0.0772]	[0.0725]	[0.1124]	[0.1071]	[1.5112]	[0.0888]	[0.0555]	[0.1128]
	(0.1012)	(0.1054)	(0.1153)	(0.0972)	(1.0147)	(0.0958)	(0.0402)	(0.1157)
	{0.251}	{0.551}	{0.568}	{0.007}	{0.001}	{0.000}	{0.189}	{0.047}
Closest candidate is capital	0.0017	0.0008	-0.0020	-0.0020	0.2558	0.0016	-0.0005	0.0152
	[0.0019]	[0.0015]	[0.0019]	[0.0018]	[0.2188]	[0.0010]	[0.0018]	[0.0073]
	(0.0024)	(0.0014)	(0.0020)	(0.0021)	(0.2971)	(0.0010)	(0.0023)	(0.0098)
	{0.539}	{0.586}	{0.337}	{0.359}	{0.425}	{0.120}	{0.826}	{0.166}
Number of municipalities	4,608	4,608	4,608	4,608	4,608	4,608	4,608	4,608
DV control mean	0.001	0.001	0.001	0.003	1.590	0.000	0.003	0.042
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.706	0.803	0.347	0.515	0.106	0.729	0.063	0.159

Notes: This table reports estimates from equation (3). The sample includes all municipalities located within a 20-km radius of candidate cities in 1790 in the augmented sample. Standard errors clustered by candidate city are reported in brackets. Standard errors clustered by department are reported in parentheses. Wild bootstrap p-values are reported in curly brackets. Controls include log population in 1793 and 1800, latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations*, centrality, pre-reform market access, and wheat suitability in 20-km radius around each municipality. In columns 1–3 of Panel A, the date of the first cadaster is unobserved for 382 municipalities (8% of the sample).

Table A.15: Dynamic Effects on Economic Development: Augmented Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	A. Effects on private sector activity							
	Estab.	**Output/wk.**	**Private Banks**			**Patents**		
	1839-47		1851	1869	1910	1850	1870	1914
Capital in 1800	-0.1484	3.3034	0.0885	0.8764	0.8982	0.0366	0.1611	0.5335
	[0.1073]	[2.4658]	[0.4502]	[0.4202]	[0.4506]	[0.0339]	[0.0783]	[0.1534]
	(0.0890)	(1.9596)	(0.6609)	(0.3896)	(0.5338)	(0.0230)	(0.0578)	(0.1579)
	{0.147}	{0.096}	{0.901}	{0.055}	{0.139}	{0.141}	{0.013}	{0.004}
Closest candidate is capital	0.0069	-2.3567	0.0107	0.0088	0.0040	0.0049	0.0378	0.0986
	[0.0116]	[1.4729]	[0.0056]	[0.0071]	[0.0078]	[0.0054]	[0.0142]	[0.0411]
	(0.0071)	(1.9475)	(0.0071)	(0.0070)	(0.0101)	(0.0046)	(0.0181)	(0.0551)
	{0.355}	{0.290}	{0.206}	{0.240}	{0.713}	{0.301}	{0.056}	{0.056}
Number of municipalities	4,608	514	4,608	4,608	4,608	4,608	4,608	4,608
DV control mean	0.039	11.027	0.004	0.012	0.024	0.014	0.042	0.079
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.070	0.274	0.583	0.637	0.687	0.033	0.079	0.106

	B. Effects on population							
	Log population in:							
	1800	1821	1846	1866	1886	$1886^{\dagger}$	1911	1999
Capital in 1800	-0.0160	0.0673	0.1231	0.2352	0.3429	0.1989	0.3753	0.5032
	[0.0365]	[0.0348]	[0.0545]	[0.0696]	[0.0784]	[0.0937]	[0.0926]	[0.1469]
	(0.0307)	(0.0356)	(0.0456)	(0.0570)	(0.0760)	(0.1004)	(0.0894)	(0.1562)
	{0.603}	{0.071}	{0.014}	{0.001}	{0.000}	{0.060}	{0.000}	{0.007}
Closest candidate is capital	-0.0066	0.0002	-0.0003	0.0026	0.0183	0.0172	0.0433	0.2528
	[0.0087]	[0.0072]	[0.0157]	[0.0202]	[0.0297]	[0.0314]	[0.0415]	[0.0722]
	(0.0111)	(0.0096)	(0.0220)	(0.0281)	(0.0411)	(0.0435)	(0.0580)	(0.0974)
	{0.569}	{0.984}	{0.991}	{0.944}	{0.767}	{0.799}	{0.588}	{0.020}
Number of municipalities	4,608	4,580	4,604	4,604	4,608	4,604	4,608	4,371
DV control mean	6.120	6.223	6.329	6.282	6.198	6.143	6.044	5.926
Department FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.948	0.965	0.937	0.917	0.882	0.870	0.833	0.702

Notes: This table reports estimates from equation (3). The sample includes all municipalities located within a 20-km radius of candidate cities in 1790 in the augmented sample. Standard errors clustered by candidate city are reported in brackets. Standard errors clustered by department are reported in parentheses. Wild bootstrap p-values are reported in curly brackets. Controls include log population in 1793, log population in 1800 (except in column 1 of Panel B), latitude and longitude, land area and land area squared, minimal and maximal altitude, a dummy for each of the four *Ancien Régime* administrative functions: *évêchés* (bishoprics), *bailliages* (bailiwicks), *recettes des finances* (tax centers), and *subdélégations*, distance to the department centroid, pre-reform market access, and wheat suitability in 20-km radius around each municipality. In column 6 of Panel B, we look at the 1886 log population excluding civil servants and their families (see Section 6.4). In column 8, we lose some observations due to municipal mergers and splits taking place after 1914.

Table A.16: Effects on the Periphery of Capitals:
Municipalities in a 10-km radius

	Main Sample		**Augmented Sample**	
	Difference	RI	Difference	RI
	(1)	(2)	(3)	(4)
A. Taxation and Law Enforcement				
Cadastre by 1815	0.256	[0.05,0.46]	0.234	[0.01,0.33]
	(0.078)	{0.02}	(0.056)	{0.03}
	{0.01}		{0.00}	
Business tax collected, 1839	0.689	[-0.50,2.12]	0.194	[-0.91,1.25]
	(0.439)	{0.26}	(0.570)	{0.80}
	{0.17}		{0.76}	
B. Public Goods				
Welfare Beneficiaries, 1871	-0.152	[-1.09,0.31]	0.099	[-0.70,0.73]
	(0.289)	{0.25}	(0.367)	{0.98}
	{0.62}		{0.81}	
Train station, 1870	0.002	[-0.03,0.05]	0.012	[-0.03,0.04]
	(0.020)	{0.57}	(0.015)	{0.71}
	{0.91}		{0.45}	
C. Economic Effects				
Industrial establishments, 1839	0.031	[-0.02,0.12]	-0.014	[-0.09,0.06]
	(0.026)	{0.20}	(0.044)	{0.96}
	{0.32}		{0.91}	
Output per worker	0.054	[-4.82,11.37]	-5.097	[-4.39,3.61]
	(4.507)	{0.60}	(5.442)	{0.86}
	{0.99}		{0.50}	
Log population, 1846	-0.007	[-0.07,0.04]	0.017	[-0.05,0.04]
	(0.022)	{0.60}	(0.023)	{0.90}
	{0.76}		{0.52}	
Banks, 1910	-0.016	[-0.02,0.00]	-0.006	[-0.01,0.00]
	(0.012)	{0.09}	(0.005)	{0.09}
	{0.26}		{0.24}	
Patents registered by 1900	0.078	[-0.01,0.20]	0.154	[0.04,0.21]
	(0.052)	{0.11}	(0.062)	{0.00}
	{0.16}		{0.04}	
Log population, 1886	-0.022	[-0.07,0.04]	0.042	[-0.05,0.10]
	(0.035)	{0.57}	(0.044)	{0.67}
	{0.56}		{0.49}	
Log population, 1999	0.292	[0.09,0.60]	0.514	[0.24,0.74]
	(0.129)	{0.01}	(0.119)	{0.00}
	{0.09}		{0.00}	

Notes: This table compares endline outcomes between municipalities located in the periphery of capitals and municipalities located in the periphery of other candidate cities. The sample is composed of all the municipalities within a 10-km radius of candidate cities (instead of 20km in the baseline estimation), excluding the candidates themselves. Columns 1 and 3 report estimates from equation (2). Standard errors clustered by department are reported in parentheses and wild-bootstrap p-values are reported in curly brackets. All specifications control for area and area squared, altitude, latitude and longitude, log population in 1793 and 1800, four dummy variables indicating the presence of bishoprics, bailiwicks, tax centers, and *subdélégations*, centrality, pre-reform market access, and wheat suitability. Columns 2 and 4 report 95% randomization confidence intervals and (in curly brackets) the randomization inference p-value testing the significance of the studentized treatment effect reported in columns 1 and 3, obtained after 50,000 permutations of the treatment.

Table A.17: Effects on the Periphery of Capitals:
Municipalities in a 30-km radius

	Main Sample		Augmented Sample	
	Difference (1)	RI (2)	Difference (3)	RI (4)
A. Taxation and Law Enforcement				
Cadastre by 1815	0.090 (0.036) {0.02}	[0.03,0.18] {0.01}	0.125 (0.028) {0.00}	[0.04,0.17] {0.00}
Business tax collected, 1839	0.383 (0.366) {0.40}	[-0.18,1.27] {0.25}	0.343 (0.273) {0.27}	[-0.25,0.81] {0.43}
B. Public Goods				
Welfare beneficiaries, 1871	0.015 (0.224) {0.95}	[-0.64, 0.34] {0.52}	0.076 (0.206) {0.72}	[-0.48,0.36] {0.75}
Train station, 1870	0.008 (0.008) {0.31}	[0.00,0.03] {0.12}	0.006 (0.007) {0.39}	[-0.01,0.02] {0.40}
C. Economic Effects				
Industrial establishments, 1839	0.007 (0.008) {0.44}	[-0.01,0.03] {0.34}	0.005 (0.007) {0.48}	[-0.02,0.01] {0.86}
Output per worker	-0.085 (1.345) {0.94}	[-2.72,3.85] {0.66}	-1.605 (1.258) {0.25}	[-5.24,2.50] {0.47}
Log population, 1846	-0.026 (0.015) {0.12}	[-0.07,0.01] {0.13}	0.006 (0.018) {0.75}	[-0.05,0.02] {0.45}
Banks, 1910	-0.014 (0.010) {0.22}	[-0.03,0.02] {0.52}	-0.009 (0.009) {0.32}	[-0.02,0.01] {0.75}
Patents registered by 1900	0.029 (0.012) {0.05}	[0.00,0.06] {0.03}	0.062 (0.032) {0.01}	[0.01,0.06] {0.01}
Log population, 1886	-0.028 (0.022) {0.27}	[-0.09, 0.01] {0.08}	0.022 (0.032) {0.56}	[-0.07,0.06] {0.81}
Log population, 1999	0.021 (0.073) {0.81}	[-0.20, 0.14] {0.70}	0.146 (0.081) {0.12}	[-0.05,0.27] {0.17}

Notes: This table compares endline outcomes between municipalities located in the periphery of capitals and municipalities located in the periphery of other candidate cities. The sample is composed of all the municipalities within a 30-km radius of candidate cities (instead of 20km in the baseline estimation), excluding the candidates themselves. Columns 1 and 3 report estimates from equation (2). Standard errors clustered by department are reported in parentheses and wild-bootstrap p-values are reported in curly brackets. All specifications control for area and area squared, altitude, latitude and longitude, log population in 1793 and 1800, four dummy variables indicating the presence of bishoprics, bailiwicks, tax centers, and *subdélégations*, centrality, pre-reform market access, and wheat suitability. Columns 2 and 4 report 95% randomization confidence intervals and (in curly brackets) the randomization inference p-value testing the significance of the studentized treatment effect reported in columns 1 and 3, obtained after 50,000 permutations of the treatment.

B The Creation of Artificial Departments and the Choice of Capitals

1. Aisne

The Decree specified that local delegates would gather in the neutral town of Chauny to decide which one of two cities, **Laon** or **Soissons**, would become the capital of the new Aisne department. Aisne was a new artificial entity covering parts of three distinct provinces: Champagne, Ile-de-France, and Picardie. The largest cities in the department in 1793 were Saint-Quentin (10,800 inhabitants), Soissons (7,675), Laon (7,500), and Château-Thierry (4,080). In May 1790, Laon defeated Soissons in a 411 to 37 vote to become the new department capital. Most of the delegates from Soissons had withdrawn from the vote to denounce insults made against the grain merchants from Soissons (Margadant, 1992, p. 264).

2. Ardèche

The construction of the department was tumultuous, as described in (Masson, 1984, p. 203). The initial plan was to merge parts of two territories: the upper part of the Vivarais and part of an area called Velay. In fact, the original name given to the department was *"du Velai et du Vivarais."* The 26 February 1790 Decree established a rotation across five cities: **Annonay**, Tournon (**Tournon-sur-Rhône**), **Aubenas**, **Privas**, and Lebourg (**Bourg-Saint-Andéol**). The city of Viviers, another important local town that hosted a bishopric and a tax center, was not included in the rotation. The three largest cities in 1793 were Annonay (5,800 inhabitants), Bourg-Saint-Andéol (3,598), and Tournon-sur-Rhône (3,300). Historical sources indicate that the first departmental assembly took place in Privas but the rotation was never actually implemented, leaving Privas as the *de facto* capital (Masson, 1984).

3. Ardennes

The Decree established that the first assembly would be held in Mézières and that the representatives would then choose where to position the capital, without specifying a list of candidates. Masson (1984) provides a credible list: "the relatively heterogeneous composition of this department meant that no city was seen as having an advantage over the others: **Charleville**, **Mézières**, **Sedan** and **Rethel** made claims to the *chef-lieux*." On 22 April 1790, following an agreement between Mézières and Charleville, 307 out of the 396 representatives voted in favor of Mézières, with the representatives from Sedan and Rethel abstaining in protest. The choice was confirmed by Decree on 7 May 1790. Charleville and Mézières, two cities sitting on opposite sides of the Meuse river (which marked the border of the French kingdom in the Middle Ages), subsequently merged to become a single city in 1966.

4. Ariège

The boundaries of the department of Ariège were hard to define because the entire area was affected by the outcome of negotiations around the limits of the department of Toulouse. Toulouse, a major city under the Ancien Régime, did not accept to simply become a department capital and attempted to create a larger department that would also include, among other areas, the county of Foix. This plan did not succeed, but this uncertainty led the Assembly to establish a rotation across three cities: **Foix**, **Saint-Girons**, and **Pamiers**. Foix eventually became the department capital instead of Pamiers, even though Pamiers was a more important urban center on the eve of the Revolution and continued to lobby for the capital status in the ensuing years (Margadant, 1992, p. 274).

5. Aveyron

The department of Aveyron was partly created out of the old territory of Rouergue and the district of Mur-de-Barrez; the allocation of the latter was particularly contentious as the territory was also claimed by Cantal (Masson, 1984). Margadant (1992) describes how deputies from **Villefranche-de-Rouergue** and **Rodez** rested their claims to the capital, representatives from Villefranche arguing that it had better soil conditions and population density, while those from Rodez argued it was more centrally located.

6. Cantal

The royal province of Auvergne was divided into Haute-Auvergne (later renamed Cantal) and Basse-Auvergne, which became the Puy-de-Dôme. While the Bassse-Auvergne contained the major city of Clermont-Ferrand, several cities could make legitimate claims for the capital in Cantal. The Decree established a rotation between the towns of **Aurillac** and **Saint-Flour**. Both candidate cities hosted a bailiwick, a tax center, and a *subdélégation* in 1790, but only Saint-Flour had a bishopric. On the other hand, Aurillac was more populated than Saint-Flour in 1793 (10,470 inhabitants as opposed to 5,282 in Saint-Flour). Historical sources document numerous grievances about the accessibility of both cities, which are locataed on opposite sides of the department (Archives Départementales du Cantal, 2021). The town of Vic-sur-Sère tried to capitalize on this uncertainty and used its more central location to lobby for the capital status, in vain. The first round of the rotation was given to Aurillac, which subsequently refused to alternate functions with Saint-Flour. However, this rotation was the only one to formally continue after the September 1791 abolition decree, which made an exception for Cantal. The rotation was finally abolished in 1794, and Aurillac was chosen as the capital (Masson, 1984, pp. 212, 292).

7. Charente-Inférieure

While according to (Masson, 1984, p. 223), the Committee was hoping that the three former provinces of Aunis (with the city of La Rochelle), Saintonge (city of Saintes) and Angoumois (city of Angoulême) would agree on the limits of new departements, all three cities insisted on preserving their old limits. However, only two new departments could realistically be created in this region. Eventually, the Charente-Inférieure was created merging parts of Aunis and Saintonge—the department was orginally named *"de Saintonge et d'Aunis."* The Decree then established a rotation across three cities: **La Rochelle**, **Saint-Jean-d'Angély**, and **Saintes**. Saintes received the first round of the rotation despite fierce opposition from La Rochelle's delegates (Masson, 1984, p. 223). This city then formally became the department capital throughout the revolutionary period and was again confirmed as the capital by Napoléon in 1800.

The capital was subsequently relocated to La Rochelle in 1810, although the department's main tribunal remained in Saintes. The department was also a hotbed of civil violence during the revolutionary period.

8. Deux-Sèvres

The original plan was to divide the old province of Poitou, whose capital was the major city of Poitiers, into two departments called Haut-Poitou and Bas-Poitou. Eventually, the department of Deux-Sèvres was squeezed in between the two and the Decree established a rotation between **Niort**, Saint-Maixent (**Saint-Maixent-l'École**), and **Parthenay**. Margadant (1992, p. 269) documents that heated debates about the choice of the capital continued after the establishment of the rotation: "Parthenay, which enjoyed the advantage of perfect centrality, opposed an alternate [rotation] in the hope of becoming the permanent seat; Saint-Maixent, fearing this ambition, voted the alternate; and Niort abstained. That night, however, delegates from Parthenay and Saint-Maixent joined forces (...). They agreed to eliminate Niort from the alternate and divide the spoils among themselves: Parthenay and Saint-Maixent would rotate the administration (...) Niort would be left with the college." However, delegates from Niort got wind of this alliance, withdrew from local deliberations, and successfully lobbied the National Assembly to officially become the capital in September 1790 (Margadant, 1992, p. 270). Saint-Maixent was promised the tribunal as compensation, but this promise was not kept (Masson, 1984, p. 223).

9. Dordogne

The Decree established a rotation between the towns of **Bergerac** (11,720 inhabitants in 1793), **Sarlat** (7,877), and **Périgueux** (9,898). This was deemed a good compromise solution for local towns in the old province of Périgord, which had feared being included in the same department as Bordeaux (Masson, 1984, p.229). In fact, Masson (1984) argues that the Bordelais and the Pyrénées were the regions of France where the creation of new departments was the most challenging due to strong local identities. The Committee had to cut across limits of old provinces. Périgueux officially became the department capital in September 1791 when the National Assembly abolished rotations.

10. Drôme

Together with Hautes-Alpes and Isère, Drôme was one of three departments carved out of the large province of Dauphiné. The 26 February 1790 Decree envisioned a rotation of administrative and functions and established that local delegates would gather in the neutral town of Chabeuil to decide which cities should be included in this rotation. Three candidate cities stood out: the two most populated towns of **Montélimar** and **Valence** and the more central town of **Crest**. On 28 May 1790, Valence defeated Montélimar and Valence in a three-way vote to become the capital (157-140-68).

11. Finistère

The department of Finistère was formed out of the westernmost part Brittany, gathering swathes of the *pays de Léon*, a principality founded in 937, and approximately half of the old Cornouaille region in its southern part. The largest city in the department was Brest, a military port. A first vote inside the department on 14 December 1789 elected **Landerneau** to become the capital, but this was undone on 23 December by a second vote, in which **Quimper** was chosen. Local delegates were ultimately incapable of designating a capital but agreed to leave this choice to the Committee. A decision was eventually made on 20 August 1790 in favor of Landerneau, but once again, voices were then raised in favor of Quimper. Abbé Beradieu declared that *"the coast of Quimper is as poor as that of Landerneau is opulent"* and that not obtaining the status of capital would lead to Quimper's ruin. Quimper was eventually chosen as the capital.

12. Haute-Marne

The department of Haute-Marne was a telling example of an artificial department, aggregating pieces of four provinces (Champagne, Lorraine, Bourgogne, and Franche-Comté) in an attempt to reach an appropriate size for a department. The Decree allowed local voters to establish a rotation between the towns of **Chaumont** (5,448 inhabitants in 1793) and **Langres** (8,613). Both cities were important administrative centers in the Ancien Régime, but Langres also hosted a bishopric while Chaumont did not. Local delegates voted to establish the capital permanently in Chaumont, with a fraction of voters siding against Langres because it had refused to sell grain to neighboring towns in May 1790 (Margadant, 1992).

13. Haute-Saône

The department combined parts of the province of Franche-Comté and of the bailiwick of Amont. The Decree established a rotation between the cities of **Gray** (5,429 inhabitants in 1793) and **Vesoul** (5,303). Both cities hosted a bailiwick, a tax center, and a *subdélégation*. Gray was a more important commercial hub while Vesoul used its more central position to lobby for the capital status. During the debates preceding the administrative reform, the Committee received anonymous letters denouncing the grain merchants of Gray for *"forestalling, speculation, and usury"'* (Margadant, 1992, p. 273). While historical sources disagree about the exact date when the capital was settled in Vesoul, the February 1800 law mentions Vesoul as the department capital.

14. Indre

The division of the province of Berry into two departments gave birth to the department of Indre (initial name Bas-Berry), to which were added small parts of Poitou, Marche, and Tourraine. The Decree allowed local voters to choose whether the capital should be located in **Châteauroux** (7,503 inhabitants in 1793) or rotate with the historical city of **Issoudun** (14,661). Despite being the smaller of the two cities, Châteauroux defeated Issoudun in a 262 to 47 vote, with its more central location being a factor (Margadant, 1992).

15. Jura

The department was created in the southern part of the province of Franche-Comté. This design came out of successful attempts to isolate the major city of Besançon into a separate department (department of Besançon, later renamed Doubs). The Decree established a rotation between the towns of **Lons-le-Saunier**, **Dôle**, Salins (**Salins-les-Bains**), and **Poligny**. Lons-le-Saunier became the capital in 1791 when rotations were abolished. The citizens from Dôle (the department's largest city in 1793) were among the fiercest opponents to the abolition of rotations, and continued to request the capital status in the ensuing years: in 1797, "petitioners from Dôle denounced [Lons-le-Saunier] as *a den of cyclops whose walls and pavements are still stained with the blood of innocent Republicans*" (Margadant, 1992, p. 273 and 283).

16. Landes

The Decree ordered the administration to temporarily settle in **Mont-de-Marsan** (4,950 inhabitants in 1793), but allowed local voters to establish a rotation and required that the department's tribunal would be based in **Dax** (4,390). A fierce rivalry opposed both cities, to the extent that they were initially reluctant to be associated in the same department (Masson, 1984, p. 230). Dax had at some point considered forming an alliance with Bayonne to form a common department. Mont-de-Marsan eventually became the department capital after the abolition of rotations.

17. Lozère

The limits of the department correspond quite closely to that of the bishopric of Gévaudan, a part of the old province of Languedoc. The Decree initially established a rotation between the Catholic city of **Mende** and the predominantly Protestant town of **Marvéjols**, which was the capital of Gévaudan. Mende eventually became the capital.

18. Manche

The predominantly rural department of Manche was formed out of a subset of the Normandy province, corresponding to an area known as the Cotentin peninsula and gathering the two bishoprics of Avranches and Coutances. As with Finistère, the department's largest city was a major port (Cherbourg). For the choice of capital, Masson (1984) describes the rivalry between **Coutances** and **Saint-Lô**, the department's second- and fourth-largest city as of 1793, respectively. During a meeting held among the deputies of the department held on 18 December 1789, both towns received the same number of votes. Coutances was subsequently chosen in a second vote on 23 December, and this decision was endorsed by the Constituent Assembly (temporarily) in March 1790 and (definitively) in July 1790. However, the National Convention went back on this choice on 11 October 1795, in favor of Saint-Lô. Coutances subsequently continued to claim the capital status until at least 1816, when local delegates voted against the transfer of the capital from Saint-Lô to Coutances.

19. Meuse

The department was carved out of the western part of the old province of Lorraine. The Decree established a rotation every four years between **Saint-Mihiel** (4,510 inhabitants in 1793) and **Bar-le-Duc** (9,111). Both cities hosted a bailiwick, a tax center, and a *subdélégation*. Bar-le-Duc was additionally the hometown of Pierre-François Gossin, a prominent revolutionary who was the rapporteur of the September 1791 decree abolishing rotations (he was subsequently guillotined in July 1794). The historical city of Verdun, which hosted the department's only bishopric in 1790, was not included in the rotation likely as a result of Gossin's lobbying efforts. Bar-le-Duc eventually became the department capital but Saint-Mihiel retained the tribunal (Masson, 1984, p. 199).

20. Oise

The department of Oise assembled the northern part of the géneralité of Paris as well as territories from the généralités of Amiens, Soissons and Rouen. The Decree established that the first assembly would be held in Beauvais and that it could decide, during the course of the session, the location of the next assemblies if it deemed it should no longer be held in Beauvais. An explicit list of alternative cities was thus not provided. The local assembly eventually proposed an original solution, to organize a rotation between **Beauvais** and **Compiègne**. This decision was ratified by the National Assembly on 16 November 1790. Eventually Beauvais became the capital.

21. Saône-et-Loire

The borders of the department were an important concern for the Committee, with the discussions centering in particular on whether the city of Autun should be included or not. Regarding the capital, the Decree stated that the very first assembly would be held in Mâcon and that the representatives would then meet in a district capital other than **Mâcon** and **Chalon** to decide on where the next assemblies would be held. Chalon had the advantage of centrality while Mâcon was slightly more populated; eventually Mâcon was chosen as the capital.

22. Seine-et-Marne

The department covered parts of the southeastern part of the généralité of Paris. The Decree established that the very first assembly would be held in Melun and that the representatives would then decide where the next assemblies would be held, without specifying a list. Masson (1984) states that the rivalry was limited to **Melun** (5,500 inhabitants in 1793) and **Meaux** (6,860), omitting the other important towns of Fontainebleau and Provins. This rivalry was resolved by a vote on 24 May 1790 when Melun was chosen by 259 votes in favor and 231 votes against.

23. Tarn

The department gathered the old bishoprics of Albi, Castres and Lavaur. The Decree established a rotation between the cities of **Albi** (11,176 inhabitants in 1793) and **Castres** (12,511), whose rivalry dated back centuries (Masson, 1984, p. 206). After the abolition of rotations, Castres was formally the department capital. The Castres representative in the National Assembly, a protestant pastor named Alba Lasource, opposed the deportation of Catholic priests and was subsequently guillotined in October 1793. Suspected of lacking enthusiasm for the Revolution, Castres was eventually stripped of its status and Albi became the department capital in 1797.

24. Var

The Decree established a rotation among all the district seats in the department, with several viable candidate cities presenting different advantages. Margadant (1992, p. 271) provides a detailed summary: "**Toulon**, a naval port of 26,000 inhabitants that expended more government revenues in a year than the interior of Provence in a decade argued that rotation would violate contemporary customs ... **Grasse** boasted of a population of 12,000, which made it the second-largest town of the Var, and its royal *sénéchaussée* [bailiwick] and bishopric had just been as important as the comparable establishments of Toulon in the old regime ... **Draguignan** was located near the geometrical center of the department, but **Brignoles** was closer to the most densely populated area around Toulon. While delegates from Draguignan used the argument of centrality to seek the provisional headquarters of the department, leaving open the question of permanency or rotation, delegates from Brignoles joined with Toulon in voting against the alternate, but only so they could claim the permanent seat for themselves. The contradictory tactics of these several towns resulted in a statemate (...)." Following a proposal by Pierre-François Gossin, the National Assembly settled in favor of Toulon in September 1790, but the capital was subsequently moved to first Grasse, then Brignoles, then finally Draguignan (Margadant, 1992, p. 274). Toulon allegedly lost its claim on the capital status in late 1793 when a monarchist faction allowed British forces to enter the city. The city was taken back by the revolutionaries in Napoléon's first major military success.

25. Vosges

The department was created in the southern part of the old province of Lorraine with the addition of some parts of Champagne and Franche-Comté. The Decree specified that local delegates would select the department capital among two candidate cities, **Épinal** (6,688 inhabitants in 1793) and **Mirecourt** (4,946), further stipulating that the city not chosen as capital would have to receive the tribunal. Both cities hosted a bailiwick, a tax center, and a *subdélégation*. On June 1, 1790, Épinal defeated Mirecourt in vote (311 vs. 127) to become the capital (Rothiot, 2000).

C Conceptual Framework: Proofs

We restate Proposition 1 below, before providing further intuition for these results and presenting the proof.

Proposition 1 In equilibrium,

1. in Period 1,

   1.a. taxes are strictly higher in city c ($\tau^*_{c,1} > \tau^*_{r,1}$),

   1.b. if the initial shock in coercive capacity for the capital is not too large, $C < \bar{C}$, city c has fewer local public goods ($G^*_{c,1} < G^*_{r,1}$), the private sector is less productive ($A_{c,1} < A_{r,1}$) and pays lower wages ($w^*_{c,1} < w^*_{r,1}$) in city c; and population migrates from city c to city r ($N^*_{c,1} < N^*_{r,1}$).

2. In Period 2,

   2.a. the gap in coercive capacity has grown ($lnC_{c,2} - lnC_{r,2} > lnC_{c,1} - lnC_{r,1}$),

   2.b. taxes are higher in city c ($\tau^*_{c,1} > \tau^*_{r,1}$),

   2.c. if $\beta_3 \leq \bar{\beta}_3$, more local public goods are provided in city c ($G_{c,2} > G_{r,2}$), the private sector is more productive in city c ($A_{c,2} > A_{r,2}$) pays higher wages ($w^*_{c,1} > w^*_{r,1}$) and population migrates to the capital ($N^*_{c,2} > N^*_{r,2}$).

In period 1, the government chooses the size and the allocation of the budget in both cities. We show in the proof below that the budget share allocated to coercive capacity is the same in city r and city c. The intuition is that the decision of allocating funds to coercive capacity amounts to a question of budget allocation across periods and is the same in both cities.

The budget allocation between coercive capacity and public goods is the same in both cities, but the size of the budget differs for two reasons. First, because it is easier for the government to recover resources from the capital to fund global public goods, the government sets a higher tax rate in c. Second, the disposable budget is higher in c since, for the same level of taxes, more resources are gathered due to the initial positive shock C in coercive capacity. These choices imply that the gap in coercive capacity grows between the two cities between period 1 and 2, as shown in Proposition 1 (2.a). In period 2, there is no investment in coercive capacity and the budget is spent on financing local and global public goods. Taxes are set higher in the capital to finance these global public goods, for the same reasons as above.

Proposition 1 shows how these choices impact local public goods and population. In period 1, the capital allocates a smaller share of the budget to local public goods. We show in the proof that $\mu_{c,1}\tau_{c,1} < \mu_{r,1}\tau_{r,1}$. However, how this translates into actual spending on local public goods depends on coercive capacity. Suppose for instance that the initial level of coercive capacity in city r is close to 0. Then there would be no spending on local public goods. As shown in result 1.b, if the initial shock in coercive capacity is not too large, city r has more local public goods than city c in period 1.

This has implications for population. Citizens decide where to live based on the maximum indirect utility they obtain in each location, taking into account current conditions. The solution to this discrete choice problem determines the probability that a location is chosen. The relative size of the population in city j thus depends on the relative size of indirect utilities obtained in the two cities, $\frac{N_{j,1}}{N_1} = \frac{e^{V_{j,1}}}{e^{V_{c,1}}+e^{V_{r,1}}}$. Thus in period 1, citizens tend to move away from the capital because of the higher taxes and lower levels of local public goods (provided the initial shock C in coercive capacity is not too large). In period 2, taxes are still higher in the capital, but because of increased coercive capacity, citizens can enjoy higher levels of local public goods and higher firm productivity (provided β_3 is not too large).

Proof of Proposition 1

Period 2. At the start of period 2, coercive capacity is realized, resulting from the investments made in period 1. The indirect utility in city j is given by

$$\ln V_{j,2} = \gamma_1 \ln(Q_{j,2}) + \beta_2 \ln G_{j,2} + \beta_3 \ln \bar{G}_2.$$

Introducing the budget constraint: $Q_{j,2} = (1-\tau_{j,2})w_{j,2} = (1-\tau_{j,2})A(G_{j,2})^{\beta_1}$, we have:

$$\ln V_{j,2} = \gamma_1 \ln(1-\tau_{j,2}) + \gamma_1 \ln A + \gamma_1\beta_1 \ln G_{j,2} + \beta_2 \ln G_{j,2} + \beta_3 \ln \bar{G}_2.$$

The objective of the central government in the second period can be expressed as follows:

$$\xi V_{c,2} + (1-\xi)V_{r,2} = \gamma_1 \ln A + \beta_3 \ln \bar{G}_2 + \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \ln G_{j,2}\right],$$

where we use the notation $\tilde{\beta} = \beta_2 + \gamma_1\beta_1$, which captures the direct effect of local public goods on the utility of citizens and the indirect effect through the increased productivity of firms.

In the second period, there is no investment in coercive capacity, since this is the last period of the game, and the quantity of public goods is determined by $G_{j,2} = \mu_{j,2}T_{j,2}$ and $\bar{G}_2 = ((1-\mu_{c,2})T_{c,2})^{\alpha_c}((1-\mu_{c,2})T_{c,2})^{\alpha_r}$. We can thus rewrite the government's period 2 objective as:

$$\begin{aligned}\xi V_{c,2} + (1-\xi)V_{r,2} &= \gamma_1 \ln A + \sum_j \xi_j \left[\alpha_j\beta_3 \ln(1-\mu_{j,2}) + \alpha_j\beta_3 \ln T_{j,2}\right] \\ &+ \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \ln \mu_{j,2} + \tilde{\beta} \ln(T_{j,2})\right].\end{aligned}$$

Furthermore $T_{j,2}$ is given by

$$\ln(T_{j,2}) = \ln \tau_{j,2} + \ln C_{j,2} + \ln N_{j,2} + \ln A + \beta_1 \ln G_{j,2}.$$

Given that $G_{j,2} = \mu_j T_{j,2}$, we have:

$$\ln(T_{j,2}) = \frac{1}{1-\beta_1}\left[\ln \tau_{j,2} + \ln C_{j,2} + \ln N_{j,2} + \ln A + \beta_1 \ln \mu_{j,2}\right] \tag{C.1}$$

Replacing the expression (C.1), the objective function of the government can be expressed as

$$CST + \alpha_j \beta_3 \ln(1-\mu_{j,2}) + \beta_3 \frac{\beta_1}{1-\beta_1} \ln \mu_{j,2} + \xi_j \left[\tilde{\beta} \ln \mu_c + \tilde{\beta} \frac{\beta_1}{1-\beta_1} \ln \mu_{c,2} \right]$$

where CST is a term that does not depend on $\mu_{c,2}$. Note that coercive capacity $C_{j,2}$ and population $N_{j,2}$ are given at the start of period 2 and not affected by the choices of $\mu_{j,2}$ and $\tau_{j,2}$, for $j \in c, r$.

The first order conditions with respect to $\mu_{c,2}$, imply that the optimal choice $\mu^*_{c,2}$ is characterized by:

$$\mu^*_{c,2} = \frac{\xi_j \tilde{\beta} + \alpha_j \beta_3 \beta_1}{\xi \tilde{\beta} + \alpha_j \beta_3}.$$

Similarly, the objective function can be expressed as a function of $\tau_{j,2}$

$$CST + \alpha_j \beta_3 \frac{1}{1-\beta_1} \ln \tau_{c,2} + \xi_j \left(\gamma_1 \ln(1-\tau_{j,2}) + \tilde{\beta} \frac{1}{1-\beta_1} \ln \tau_{j,2} \right). \tag{C.2}$$

The First Order Conditions yield:

$$\tau^*_{j,2} = \frac{\Psi}{\xi_j \gamma_1 + \Psi},$$

where $\Psi = \alpha_j \beta_3 \frac{1}{1-\beta_1} + \xi \tilde{\beta} \frac{1}{1-\beta_1} = \frac{\alpha_j \beta_3 + \xi \tilde{\beta}}{1-\beta_1}$

Thus $\tau^*_{j,2}$ is increasing in α_j, which establishes result 2.b.

Period 1. By backwards induction we now solve for period 1 choices. In period 1, the central government maximizes

$$\xi V_{c,1} + (1-\xi) V_{r,1} + \delta \left[\xi V_{c,2} + (1-\xi) V_{r,2} \right]. \tag{C.3}$$

In the first period, city j invests a portion $\mu_{j,1}$ of resources in the local public good, a share $\nu_{j,1}$ in global public goods and the remaining share $1-\mu_{j,1}-\nu_{j,1}$ in coercive capacity. We can thus rewrite the government's period 1 objective as:

$$\begin{aligned} \xi V_{c,1} + (1-\xi) V_{r,1} &= \gamma_1 \ln A + \sum_j \xi_j \left[\alpha_j \beta_3 \ln(\nu_{j,1}) + \alpha_j \beta_3 \ln T_{j,1} \right] \\ &+ \sum_j \xi_j \left[\gamma_1 \ln(1-\tau_{j,1}) + \tilde{\beta} \ln \mu_{j,1} + \tilde{\beta} \ln T_{j,1} \right] \end{aligned}$$

The choice of tax rates and the use of revenues in period 1 has implications for period 1 taxes that are used to fund an increase in coercive capacity. Taxes are given by

$$T_{j,1} = \tau_{j,1} C_{j,1} A (G_{j,1})^{\beta_1} N_{j,1}.$$

Given that $G_{j,1} = \mu_{j,1} T_{j,1}$, we have

$$T_{j,1} = \frac{1}{1-\beta_1} \left[\ln \tau_{j,1} + \ln C_{j,1} + \ln N_{j,1} + \ln A + \beta_1 \ln \mu_{j,1} \right].$$

Coercive capacity in period 2 is given by:

$$\begin{aligned} \ln C_{j,2} &= \ln(C_{j,1}) + \sigma \ln((1-\mu_{j,1}-\nu_{j,1})T_{j,1}) \\ &= \ln(C_{j,1}) + \sigma \ln(1-\mu_{j,1}-\nu_{j,1}) + \sigma \frac{1}{1-\beta_1} \left[\ln \tau_{j,1} + \ln C_{j,1} + \ln N_{j,1} + \ln A + \beta_1 \ln \mu_{j,1} \right]. \end{aligned}$$

Using these results, and the fact that in period 2, $\tau_{j,2}$ and $\mu_{j,2}$ do not depend on $\tau_{j,1}$, $\mu_{j,1}$ or $\nu_{j,1}$, we can reexpress the objective (C.3) keeping the terms that depend on $\mu_{j,1}$:

$$\begin{aligned} & CST + \xi_j \tilde{\beta} \ln \mu_{j,1} + \delta \left(\alpha_j \beta_3 + \xi_j \tilde{\beta} \right) \frac{1}{1-\beta_1} \ln C_{j,2} \\ & CST + \xi_j \tilde{\beta} \ln \mu_{j,1} + \delta \left(\alpha_j \beta_3 + \xi_j \tilde{\beta} \right) \frac{1}{1-\beta_1} \left(\sigma \ln(1-\mu_{j,1}-\nu_{j,1}) + \sigma \frac{\beta_1}{1-\beta_1} \ln \mu_{j,1} \right) \end{aligned}$$

Keeping the terms that depend on $\nu_{j,1}$, the government's objective can be rewritten:

$$\begin{aligned} & CST + \alpha_j \beta_3 \ln \nu_{j,1} + \delta \left(\alpha_j \beta_3 + \xi \tilde{\beta} \right) \frac{1}{1-\beta_1} \ln C_{j,2} \\ & CST + \alpha_j \beta_3 \ln \nu_{j,1} + \delta \left(\alpha_j \beta_3 + \xi \tilde{\beta} \right) \frac{1}{1-\beta_1} \left(\sigma \ln(1-\mu_{j,1}-\nu_{j,1}) \right) \end{aligned}$$

The first order conditions for these two problems yield

$$\frac{\Phi_\mu}{\mu_{j,1}} = \frac{\Lambda}{1-\mu_{j,1}-\nu_{j,1}} \; ; \; \frac{\alpha_j \beta_3}{\nu_{j,1}} = \frac{\Lambda}{1-\mu_{j,1}-\nu_{j,1}},$$

with $\Phi_\mu = \xi_j \tilde{\beta} + \delta \left(\alpha_j \beta_3 + \xi_j \tilde{\beta} \right) \frac{1}{1-\beta_1} \left(\sigma \frac{\beta_1}{1-\beta_1} \right)$ and $\Lambda = \delta \left(\alpha_j \beta_3 + \xi_j \tilde{\beta} \right) \frac{\sigma}{1-\beta_1}$
Thus

$$\mu_{j,1} = \frac{\Phi_\mu}{\Lambda + \Phi_\mu + \alpha_j \beta_3} \; ; \; \nu_{j,1} = \frac{\alpha_j \beta_3}{\Lambda + \Phi_\mu + \alpha_j \beta_3}$$

Similarly, for taxes in c, the objective can be expressed as

$$\begin{aligned} & CST + \xi_j \gamma_1 \ln(1-\tau_{j,1}) + \delta \left(\alpha_j \beta_3 + \xi_j \tilde{\beta} \right) \frac{1}{1-\beta_1} \ln C_{j,2} \\ & CST + \xi_j \gamma_1 \ln(1-\tau_{j,1}) + \delta \left(\alpha_j \beta_3 + \xi_j \tilde{\beta} \right) \left(\frac{1}{1-\beta_1} \right)^2 \left(\sigma \ln(\tau_{j,1}) \right) \end{aligned}$$

Taking first order conditions, we have:

$$\tau_{j,1}^* = \frac{\delta\sigma\left(\alpha_j\beta_3 + \xi_j\tilde{\beta}\right)}{\delta\sigma\left(\alpha_j\beta_3 + \xi_j\tilde{\beta}\right) + \xi_j\gamma_1(1-\beta_1)^2}$$

Thus $\tau_{j,1}^*$ increases in α_j, implying that $\tau_{c,1}^* > \tau_{r,1}^*$ This establishes result 1.a.

We compare the values in the rotation city and in the capital

We have

$$\mu_{j,1}^* = \frac{\xi_j\tilde{\beta}\left[(1-\beta_1)^2 + \delta\sigma\beta_1\right] + \delta\sigma\alpha_j\beta_3\beta_1}{(\alpha_j\beta_3 + \xi_j\tilde{\beta})\left[(1-\beta_1)^2 + \delta\sigma\right]}.$$

Since $\mu_{j,1}^*$ is decreasing in α_j, we have:

$$\mu_{r,1}^* \geq \mu_{c,1}^*.$$

Furthermore we have

$$\begin{aligned}
\mu_{j,1}^* + \nu_{j,1}^* &= \frac{\xi_j\tilde{\beta}\left[(1-\beta_1)^2 + \delta\sigma\beta_1\right] + \delta\sigma\alpha_j\beta_3\beta_1 + \alpha_j\beta_3(1-\beta_1)^2}{(\alpha_j\beta_3 + \xi_j\tilde{\beta})\left[(1-\beta_1)^2 + \delta\sigma\right]} \\
&= \frac{\left(\xi_j\tilde{\beta} + \alpha_j\beta_3\right)\left((1-\beta_1)^2 + \delta\sigma\beta_1\right)}{\left(\xi_j\tilde{\beta} + \alpha_j\beta_3\right)\left((1-\beta_1)^2 + \delta\sigma\right)} = \frac{(1-\beta_1)^2 + \delta\sigma\beta_1}{(1-\beta_1)^2 + \delta\sigma}
\end{aligned}$$

Overall this implies that both cities assign the same share of their budget to building coercive capacity versus current spending. Given that tax rates are higher in city c, and that coercive capacity is initially higher, the gap in coercive capacity grows. We have:

$$\ln C_{j,2} = \ln(C_{j,1}) + \sigma\ln(1-\mu_{j,1}-\nu_{j,1}) + \sigma\frac{1}{1-\beta_1}\left[\ln\tau_{j,1} + \ln C_{j,1} + \ln N_{j,1} + \ln A + \beta_1\ln\mu_{j,1}\right],$$

so that

$$\begin{aligned}
\ln C_{c,2} - \ln C_{r,2} &= \ln C_{c,1} - \ln C_{r,1} + \sigma\left(\ln(1-\mu_{c,1}-\nu_{c,1}) - \ln(1-\mu_{r,1}-\nu_{r,1})\right) \\
&+ \sigma\frac{1}{1-\beta_1}\left[\ln\tau_{c,1} - \tau_{r,1}\right] + \sigma\frac{1}{1-\beta_1}\left[\ln C_{c,1} - C_{r,1}\right] \\
&+ \sigma\frac{1}{1-\beta_1}\beta_1\left[\ln\mu_{c,1} - \ln\mu_{r,1}\right] \\
&> \ln C_{c,1} - \ln C_{r,1}.
\end{aligned}$$

This proves result 2.a.

Population. Citizens decide where to live based on the maximum indirect utility that they obtain in each location given their individual idiosyncratic taste shock, taking into account current conditions. The solution to this discrete choice problem determines the probability that a location is chosen by each worker. We have $\frac{N_{j,1}}{N_j} = \frac{e^{V_{j,1}}}{e^{V_{c,1}}+e^{V_{r,1}}}$, so that the relative size of the two cities can be expressed as:

$$\ln N_{c,1} - \ln N_{r,1} = \gamma_1 \left(\ln(1-\tau_{c,1}) - \ln(1-\tau_{r,1})\right) + \tilde{\beta}\left(\ln(\mu_{c,1}T_{c,1}) - \ln(\mu_{r,1}T_{r,1})\right).$$

$\mu_{c,1}$ and $\mu_{r,1}$ are independent of C, the initial shock in coercive capacity, while $T_{c,1}$ is an increasing function of C. Therefore there exists $\bar{C}$, such that $\mu_{c,1}T_{c,1} < \mu_{r,1}T_{r,1}$ if and only if $C \leq \bar{C}$, i.e fewer local public goods are produced in city c, and as a consequence $A_{c,1} < A_{r,1}$. This also implies that if $C \leq \bar{C}$, $lnN_{c,1} - lnN_{r,1} < 0$, as stated in result 1.b.

In the second period, the relative size is given by

$$\ln N_{c,2} - \ln N_{r,2} = \gamma_1 \left(\ln(1-\tau_{c,2}) - \ln(1-\tau_{r,2})\right) + \tilde{\beta}\left(\ln G_{c,2} - \ln G_{r,2}\right).$$

Using the expression for $G_{j,2}$, we obtain

$$\ln G_{c,2} - \ln G_{r,2} = \frac{1}{1-\beta_1}\left[\ln \mu_c + (\ln \tau_{c,2} - \ln \tau_{r,2}) + (\ln C_{c,2} - \ln C_{r,2}) + (\ln N_{c,2} - \ln N_{r,2})\right]$$

When $\beta_3 \to 0$, we can show that $\mu_c \to 1$, $\tau_{c,2} \to \tau_{r,2}$ and

$$\ln G_{c,2} - \ln G_{r,2} \to \frac{1}{1-\beta_1}\left(\ln C_{c,2} - \ln C_{r,2}\right) > 0$$

which implies that

$$\ln N_{c,2} - \ln N_{r,2} > 0$$

and

$$\ln G_{c,2} - \ln G_{r,2} > 0$$

which proves result 2.c.

C.1 Comparative Statics

We can derive some comparative results on the main choice variables characterized in Proposition 1.

Proposition 1. *In equilibrium,*

1. *in Period 1,*
   - 1.a. *The shares of resources allocated to the funding of local public goods $\mu^*_{c,1}$ and $\mu^*_{r,1}$ decrease with δ and σ. In addition $\mu^*_{c,1}$ decreases with β_3.*
   - 1.b. *Taxes $\tau^*_{c,1}$ and $\tau^*_{r,1}$ are increasing in δ, σ and $\tilde{\beta}$ and decreasing in γ_1. In addition $\tau^*_{c,1}$ is increasing in β_3 and ξ.*
2. *In Period 2,*
   - 2.a. *The share of resources allocated to the funding of local public goods in the capital city $\mu^*_{c,1}$ increases with $\tilde{\beta}$ and ξ and decreases with β_3.*

2.b. *Taxes $\tau_{c,2}^*$ and $\tau_{r,2}^*$ are decreasing in γ_1, increasing in $\tilde{\beta}$ and β_1. In addition $\tau_{c,2}^*$ is increasing in β_3 and ξ.*

Proof: These comparative statics follow directly from taking derivatives of the expressions derived in the proof of Proposition 1 and listed below.

Period 1.

$$\mu_{j,1}^* = \frac{\xi_j \tilde{\beta}\left[(1-\beta_1)^2 + \delta\sigma\beta_1\right] + \delta\sigma\alpha_j\beta_3\beta_1}{(\alpha_j\beta_3 + \xi_j\tilde{\beta})\left[(1-\beta_1)^2 + \delta\sigma\right]} \; ; \; \tau_{j,1}^* = \frac{\delta\sigma\left(\alpha_j\beta_3 + \xi_j\tilde{\beta}\right)}{\delta\sigma\left(\alpha_j\beta_3 + \xi_j\tilde{\beta}\right) + \xi_j\gamma_1(1-\beta_1)^2}$$

Period 2.

$$\mu_{j,2}^* = \frac{\xi_j\tilde{\beta} + \alpha_j\beta_3\beta_1}{\xi_j\tilde{\beta} + \alpha_j\beta_3} \; ; \; \tau_{j,2}^* = \frac{\alpha_j\beta_3 + \xi_j\tilde{\beta}}{\alpha_j\beta_3 + \xi_j\tilde{\beta} + \xi\gamma_1(1-\beta_1)}$$

D Conceptual Framework: Extensions

D.1 Rent Extraction

We modify the objective of the government to become

$$\theta\left[ln(R_1) + \delta ln(R_2)\right] + (1-\theta)\left[\xi V_{c,1} + (1-\xi)V_{r,1} + \delta\left[\xi V_{c,2} + (1-\xi)V_{r,2}\right]\right] \tag{D.1}$$

where R_i are the rents extracted in period i. We assume for simplification that the rents are extracted solely from the resources available in the capital city c.

Proposition 2. *In equilibrium, investments in coercive capacity in period 1 are increasing in θ, the weight the central government puts on private rents in its objective.*

Proof: we solve the model in the case where the taste for global public goods is set to zero. The problem is then exactly identical to the baseline model replacing parameter β_3 by $\frac{\theta}{1-\theta}$. We can show that the level of coercive capacity decreases in θ.

$$\ln C_{c,2} \quad = \quad \ln(C_{c,1}) + \sigma\ln(1-\mu_{c,1}-\nu_{c,1}) + \sigma\frac{1}{1-\beta_1}\left[\ln\tau_{c,1} + \ln C_{c,1} + \ln N_{c,1} + \ln A + \beta_1\ln\mu_{c,1}\right]$$

$(1-\mu_{c,1}-\nu_{c,1})$ and $\tau_{c,1}$ have been shown to increase in β_3 in the main model, and thus by equivalence increasing in θ.

D.2 Adding the Periphery

We extend the model to include, in addition to cities c and r, a city p located at a distance d of the capital city c. We assume that this city p can choose taxes and allocation of the budget, but cannot invest in coercive capacity. Furthermore we suppose that the coercive capacity in city p depends on coercive capacity in the capital and is decreasing in the distance to the capital. Specifically we assume that $C_{p,t} = \frac{C_{c,t}}{d}$

The central government assigns weights ξ_j, $j \in \{c, r, p\}$ to each city, so that its objective is to maximize

$$\sum_j \xi_j V_{j,1} + \delta \sum_j \xi_j V_{j,2}.$$

In this environment, we obtain the following result:

Proposition 3. *In equilibrium,*

1. *Local public good provision, productivity and wages in city p decrease in the distance to the capital city in both periods ($G_{p,t}, A_{p,t}, w_{p,t}$ decrease in d).*
2. *In city c, taxes in period 1 are increasing in the weight put on the periphery city (ξ_p) while the share of resources allocated to local public goods is increasing in ξ_p.*
3. *Choices and conditions in city r are independent of the weight put on the periphery city (ξ_p).*

Proof **Period 2.** The objective of the central government in the second period can be expressed as follows:

$$\sum_j \xi_j V_{j,2} = \gamma_1 \ln A + \beta_3 \ln \bar{G}_2 + \sum_j \xi_j \left[\gamma_1 \ln(1 - \tau_{j,2}) + \tilde{\beta} \ln G_{j,2} \right]$$

The solutions for city c and city r are identical to those of the baseline model. The problem for city p corresponds to the case where $\alpha_p = 0$, i.e. the periphery city does not contribute to the financing of the public good. Overall, this yields, for cities c and r

$$\mu^*_{j,2} = \frac{\xi_j \tilde{\beta} + \alpha_j \beta_3 \beta_1}{\xi_j \tilde{\beta} + \alpha_j \beta_3} \ ; \ \tau^*_{j,2} = \frac{\alpha_j \beta_3 + \xi_j \tilde{\beta}}{\alpha_j \beta_3 + \xi_j \tilde{\beta} + \xi \gamma_1 (1 - \beta_1)}$$

and for city p

$$\tau^*_{p,2} = \frac{\tilde{\beta}}{\tilde{\beta} + \gamma_1 (1 - \beta_1)}$$

Period 1. In period 1, city p can invest only in local public goods and there is no tradeoff between period 1 and 2 (no investment in coercive capacity), so that the problem of city p is identical to the problem in the second period, so we have

$$\tau^*_{p,1} \quad = \quad \frac{\tilde{\beta}}{\gamma_1(1-\beta_1)+\tilde{\beta}}$$

Taxes and allocation of the budget are independent of the distance d from the capital city. However, the level of coercive capacity, for the same allocation and tax level, shifts the resources allocated to local public goods. Thus, as stated in result 1, the level of local public goods decreases with d and as a consequence, so does productivity and wages.

The problem for city r is unaffected compared to the proof of Proposition 1. On the contrary, city c when it invests in coercive capacity has to take into account the impact of its decision on city p in period 2. This modifies the problem as follows. The objective, keeping the terms that depend on $\mu_{c,1}$ becomes:

$$CST + \xi_c\tilde{\beta}\ln\mu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\ln C_{r,2}$$
$$CST + \xi_c\tilde{\beta}\ln\mu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\left(\sigma\ln(1-\mu_{c,1}-\nu_{c,1}) + \sigma\frac{\beta_1}{1-\beta_1}\ln\mu_{c,1}\right)$$

Keeping the terms that depend on $\nu_{c,1}$:

$$CST + \alpha_c\beta_3\ln\nu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\ln C_{r,2}$$
$$CST + \alpha_c\beta_3\ln\nu_{c,1} + \delta\left(\alpha_c\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right)\frac{1}{1-\beta_1}\left(\sigma\ln(1-\mu_{c,1}-\nu_{c,1})\right)$$

Solving this system yields

$$\mu^*_{c,1} \quad = \quad \frac{\xi_c\tilde{\beta}(1-\beta_1)^2 + \delta\sigma\beta_1\left[\beta_3 + (\xi_c+\xi_p)\tilde{\beta}\right]}{(\beta_3+\xi_c\tilde{\beta})(1-\beta_1)^2 + \delta\sigma\left[\beta_3+(\xi_c+\xi_p)\tilde{\beta}\right]}$$
$$\tau^*_{c,1} \quad = \quad \frac{\delta\sigma\left(\beta_3+(\xi_c+\xi_p)\tilde{\beta}\right)}{\delta\sigma\left(\beta_3+(\xi_c+\xi_p)\tilde{\beta}\right) + \xi_c\gamma_1(1-\beta_1)^2}$$

This proves result 2. $\tau^*_{c,1}$ is increasing in ξ_p while $\mu^*_{c,1}$ is decreasing in ξ_p.

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