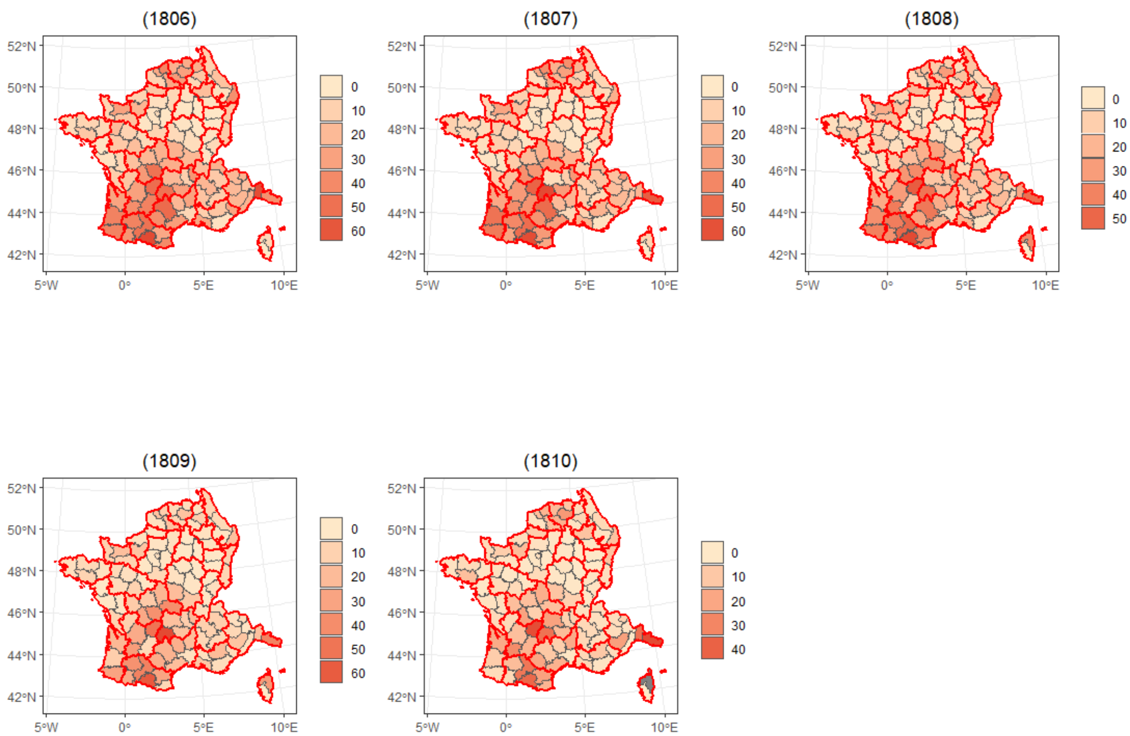
A Maps

Figure 1: Maps of the draft-dodging rate for each year between 1806 and 1810.



B Scatterplots

B.1 Draft-dodging rate

Figure 2: Draft-dodging and ruggedness for each year.

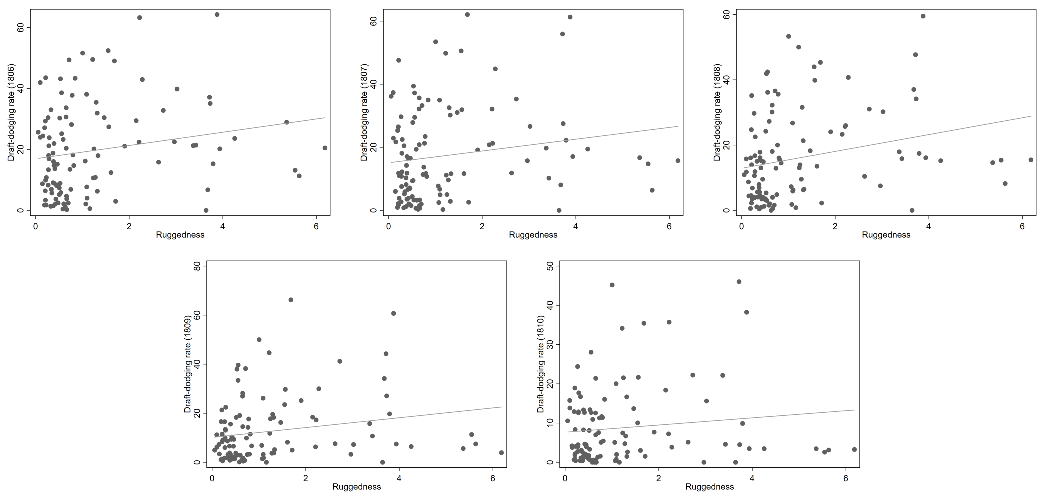
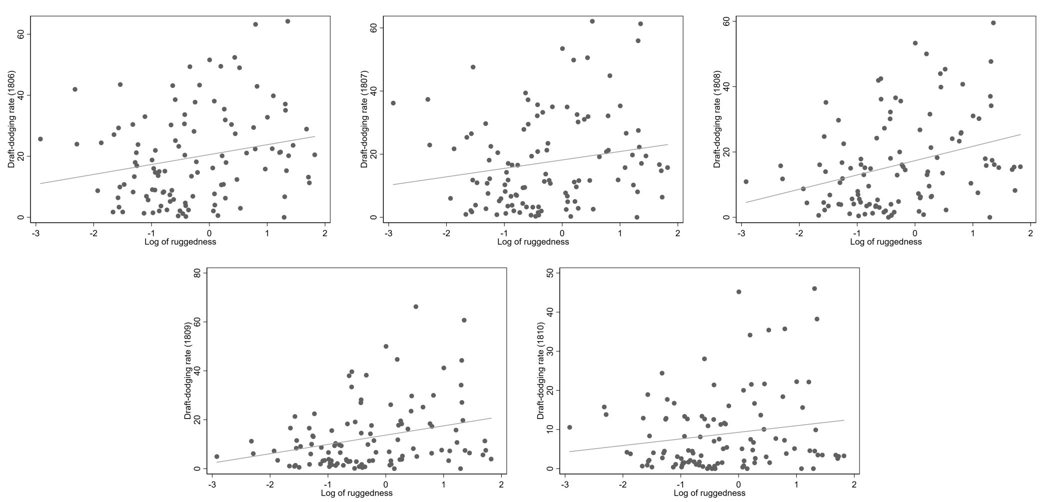


Figure 3: Draft-dodging and the natural log of ruggedness for each year.



B.2 Conscription rate

Figure 4: Scatterplots of conscription rate and ruggedness for each year.

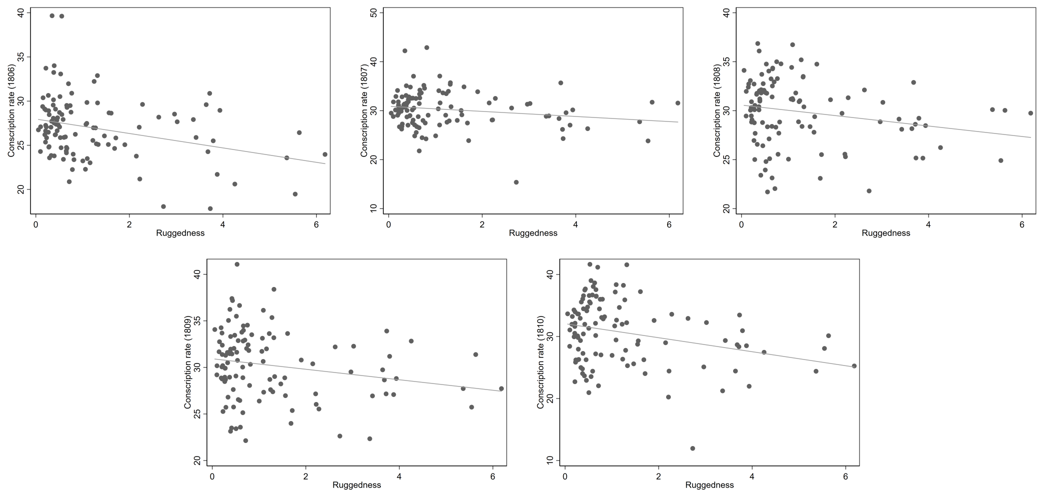
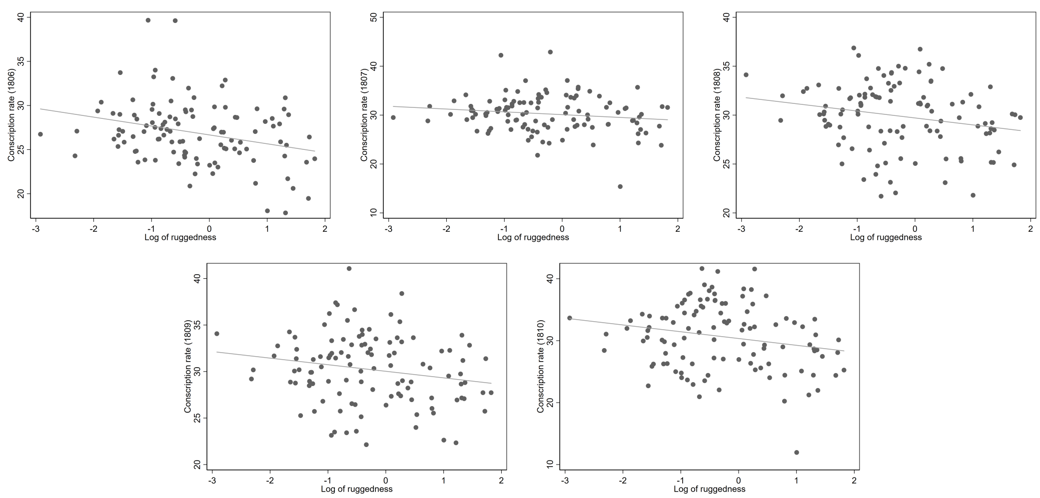


Figure 5: Scatterplots of conscription rate and the natural log of ruggedness for each year.



C Descriptive statistics

Table 1: Summary statistics.

VARIABLES	N	mean	sd	min	max	p25	p50	p75
				French Empire:				
Agricultural sector	420	0.553	0.175	0.00223	0.809	0.465	0.589	0.682
Border	555	0.189	0.392	0	1	0	0	0
Civil Law	421	0.388	0.466	0	1	0	0	1
Group 4&5	555	0.450	0.498	0	1	0	0	1
Conscription rate	555	29.59	4.230	11.96	42.89	26.75	29.49	32.40
Draft-dodging rate	554	14.95	14.03	0	66.24	3.556	10.92	21.69
Distance from Paris	555	3.873	1.991	0	9.218	2.466	3.558	5.543
Elevation	555	326.8	317.4	7.779	1,477	98.57	238.4	431.4
Exemption rate	555	54.21	9.09	23.94	77.49	47.58	54.05	60.91
Germany	555	35.18	30.63	0	100	2.391	34.93	55.36
German border	555	0.0721	0.259	0	1	0	0	0
Height	420	1.66	0.16	1.589	1.7	1.65	1.66	1.67
Identity	430	2.246	0.321	1.405	2.910	2.065	2.262	2.445
Italian border	555	0.0541	0.226	0	1	0	0	0
Italy	555	20.63	31.69	0	97.72	0	0	33.43
Literacy (1790)	386	43.42	24.06	3.240	92.18	23.96	33.02	66.97
Literacy	381	50.98	22.14	13.35	96.28	33.22	46.15	69.05
Literacy (1831)	421	49.6	19.3	14.9	86.2	35.0	47.5	63.3
Log of ruggedness	555	-0.277	1.009	-2.921	1.822	-0.975	-0.416	0.438
Log of ruggedness (glaciers and mountainous rocks excluded)	555	-0.282	1.001	-2.921	1.790	-0.975	-0.416	0.438
Log of ruggedness (buffer)	555	-0.228	0.936	-2.415	1.701	-0.929	-0.365	0.472
Log of ruggedness (>2000m excluded)	555	-0.301	0.972	-2.921	1.635	-0.975	-0.416	0.438
Log of slope	555	-3.749	1.011	-6.455	-1.636	-4.447	-3.878	-3.052
Maritime	555	0.261	0.440	0	1	0	0	1
Military relays	415	0.222	0.0859	0.0723	0.466	0.157	0.205	0.269
Mounted gendarmerie brigades (%)	515	76.26	19.63	16.67	97.30	65.38	84.21	90.91
Oath	405	55.81	23.01	9	94	39	61	75
Percentage Artillery	555	0.0201	0.0110	0	0.0487	0.0137	0.0205	0.0273
Percentage Cavalry	555	0.105	0.136	0	0.639	0.0195	0.0205	0.142
Percentage Infantry	555	0.712	0.143	0.195	1	0.674	0.742	0.812
Postal office density	415	0.00284	0.00233	0	0.0171	0.00137	0.00255	0.00370
Replacement rate	444	4.99	4.55	0	61.29	2.42	4.28	6.48
Road density	415	0.0620	0.0220	0.00408	0.160	0.0504	0.0599	0.0730
Ruggedness	555	1.253	1.356	0.0539	6.184	0.377	0.660	1.550
Ruggedness (buffer)	555	1.25	1.29	0.09	5.48	0.39	0.69	1.60
Ruggedness (glaciers and mountainous rocks excluded)	555	1.233	1.312	0.0539	5.988	0.377	0.660	1.550
Ruggedness (>2000m excluded)	555	1.166	1.169	0.0539	5.131	0.377	0.660	1.550
Spain	555	39.30	30.33	0	99.45	13.72	35.15	54.88
Spanish border	555	0.0450	0.208	0	1	0	0	0
Tax per capita	540	8.879	3.203	1	17.32	7.035	8.562	10.61
Urbanization	555	0.128	0.104	0	0.843	0.0686	0.105	0.156
Urbanization (towns>10,000)	555	0.0828	0.102	0	0.828	0.0232	0.0559	0.121
Townships density	535	0.0788	0.0350	0.0216	0.174	0.0497	0.0711	0.106
Travel cost to Paris	536	58.34	33.15	0	139.5	32.50	52.25	76.75
Wheat suitability	555	4.114	1.127	1.922	7	3.340	3.959	4.729
Year created	555	1,792	4.067	1,790	1,808	1,790	1,790	1,790
				Haute-Vienne:				
Ruggedness	26	0.651	0.208	0.368	1.235	0.526	0.637	0.685
Log of ruggedness	26	-0.472	0.291	-0.999	0.211	-0.642	-0.451	-0.378
Desertion rate (before leaving for unit)	26	15.01	12.08	0	42.31	5	11.61	22.58
Desertion rate (after leaving for unit)	26	15.81	9.239	3.448	36.36	6.667	16.33	20.69
Height	26	1.623	0.0127	1.591	1.643	1.614	1.622	1.632
Agricultural sector	26	0.536	0.192	0.175	0.871	0.378	0.560	0.720
Construction workers	26	0.146	0.215	0	0.675	0	0.0416	0.258
Owner share	26	0.0395	0.0497	0	0.208	0	0.0230	0.0667
Wheat suitability	26	4.344	0.733	2.500	6	4	4.500	4.667
Wood workers	26	0.0477	0.0339	0	0.133	0.0250	0.0413	0.0690
Leather and textile workers	26	0.0405	0.0412	0	0.128	0	0.0396	0.0566
Glass and metal workers	26	0.0219	0.0235	0	0.0811	0	0.0204	0.0333

D Variable description

Table 2 provides source and description for each variable we employed in our empirical analysis.

Table 2: Variable description

VARIABLES	Source	Description
Draft-dodging rate	Archives Nationales, AF/IV/1124, n°1 and n°9.	The draft-dodging rate was defined as the proportion of people effectively drafted who dodged the draft. Draft-dodging rate = (Number of draft dodgers + Number of conscripts escaping on their way to their units)*100 / (Conscripts incorporated in their unit + Number of draft dodgers + Number of conscripts escaping on their way to their units).
Conscription rate	Archives Nationales, AF/IV/1124, n°1, n°9 and *Rapport a sa Majesté impériale et Royale.* April 6, 1809.	"Conscription rate" represent the portion of the population being drafted and is defined as follows: Conscription rate= Contingent size*100/Cohort size.
Exemption rate	Archives Nationales, AF/IV/1124, n°1.	"Exemption rate" measures the portion (in %) of young men in each cohort declared unfit for military service (*reformed*).
Ruggedness	(Nunn & Puga 2012, Nüssli 2012, Poirson 1808).	We calculated average terrain ruggedness for department polygons. The department polygons were partly drawn from *Euratlas*. However, the Italian departments were missing from this source so we georeferenced the Italian departments using a map of the French empire from Poirson (1808).

Ruggedness (buffer)	(Nunn & Puga 2012, Nüssli 2012, Poirson 1808).	We extracted the average terrain ruggedness by adding a 30 km buffer to each department's borders.
Townships density	(Prudhomme 1804, vol.1 to 5).	This variable is equal the number of townships per km^2.
Border	(Nüssli 2012).	This variable is equal to 1 if a department is adjacent to a border and 0 otherwise.
Replacement rate	Archives Nationales, AF/IV/1124, p.198-215.	We calculated this variable by dividing the number of military replacements by the contingent size of each department in each year between 1806 and 1809 multiplied by 100.
Military relays	(Arbellot et al. 1985).	This variable measures the number of military relays per 10 km^2 in 1795. Those relays enabled to host troops during their travel. The area of each department was calculated using the st_area command in R.
Post office density	(Arbellot et al. 1985).	This variable measures the number of post offices per km^2 in each department in 1792.
Road density	(Arbellot et al. 1985).	This variable measures length of roads in km per km^2 in each department in 1811.
Urbanization	(Bairoch et al. 1988) and Archives Nationales, AF/IV/1124, *Rapport a sa Majesté impériale et Royale.* April 6, 1809.	We georeferenced the cities found in Bairoch et al. (1988) and then extracted the population size of cities above 5,000 inhabitants for each department. We then divide this number by each department's total population. The variable "Urbanization (towns>10,000)" uses the same method but for cities above 10,000 inhabitants.
Maritime	(Poirson 1808).	This variable is equal to 1 when a department is adjacent to the sea and equal to 0 otherwise.
Tax revenues per capita	(Peuchet 1805).	We use the data on revenues from direct taxes for Year XI (1802-1803) from Peuchet (1805).

Distance from Paris	Wikipedia.	We calculated the geographic distance between each department's capital and Paris. We used Wikipedia to find the longitude and latitude of each city. The geographic distance, in 100's of kilometers, was then calculated using st_distance in R.
Distance to depot	*État des départements qui doivent fournir les Conscripts de 1810.* Archives nationales, AF/IV/1124. Wikipedia.	We calculated the geographic distance between each department's capital and the military depots (barracks) to which conscripts had been assigned. Cities were georeferenced using the longitude and latitude information from Wikipedia. "Distance to depot" represents the average geographic distance (calculated with the "getdistance" function in Excel), in kilometers, that conscripts had to travel to join their units in 1810.
Percentage cavalry	*État des départements qui doivent fournir les Conscripts de 1810.* Archives Nationales, AF/IV/1124.	This variable measures the percentage of conscripts allocated to a cavalry unit in 1808 for the 30,000 of the 1810 cohort drafted.
Percentage Artillery	*État des départements qui doivent fournir les Conscripts de 1810.* Archives Nationales, AF/IV/1124.	This variable measures the percentage of conscripts allocated to an artillery unit in 1808 for the 30,000 of the 1810 cohort drafted.
Height	Archives Nationales, series F/9, boxes 150 to 259.	This variable measures the average height of men in the 1820 cohort eligible for conscription (in 1821).
Agricultural sector	Archives Nationales, series F/9, boxes 150 to 259.	This variable measures the percentage of men in the 1820 cohort eligible for conscription (in 1821) who worked in the agricultural sector.
Literacy (1790)	Ministère de l'instruction publique (1880).	Percentage of young men who signed their marriage certificate between 1786 and 1790.

Literacy	Ministère de l'instruction publique (1880).	Percentage of young men who signed their marriage certificate between 1816 and 1820.
Literacy (1831)	Archives Nationales, series F/9, boxes 150 to 259.	This variable measures the percentage of men in the 1830 cohort eligible for conscription (in 1831) who know could read.
Travel cost to Paris	État Général des postes et relais de l'empire Francais (1808).	This variable measures the cost of traveling from Paris to each department's capital.
Wheat suitability	FAO, GAEZ v3.0. Crop suitability index (class) for intermediate input level rain-fed wheat.	This variable measures how suitable land is to growing wheat.
Year created	Wikipedia, 130 departments of the First French Empire.	This variable measures the date at which each department was created.
Identity	(Hyslop 1934, Johnson 2015).	The data was coded following Johnson (2015)'s methodology and then spatially interpolated using the statistical software *R*. Each grid point in the map was assigned a value based on the inverse-weighted distance of surrounding 12 cities that sent their Cahiers to Paris (exponent of distance used is 1).
Oath	(Tackett 1986).	"Oath" gives the percentage of the clergy in each department which swore allegiance to the new republican constitution in 1791.
Mounted gendarmerie brigades (%)	(de Halle 1803).	This variable measures the percentage of gendarmerie brigades in each department which were mounted on horses.

Germany	*État des départements qui doivent fournir les Conscripts de 1810.* Archives nationales, AF/IV/1124. (Pascal 1864).	This variable measures the percentage of conscripts sent to Germany.
Italy	*État des départements qui doivent fournir les Conscripts de 1810.* Archives nationales, AF/IV/1124. (Pascal 1864).	This variable measures the percentage of conscripts sent to Italy.
Spain	*État des départements qui doivent fournir les Conscripts de 1810.* Archives nationales, AF/IV/1124. (Pascal 1864).	This variable measures the percentage of conscripts sent to Spain.
	Haute-Vienne:	
Agricultural sector	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the portion of young men in the 1807 Haute-Vienne cohort whose occupations were: Jardinier, Fermier, Cultivateur, Laboureur, Metayer, Colon, Vigneron, Manoeuvrier.
Construction workers	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the portion of young men in the 1807 Haute-Vienne cohort whose occupations were: Tuillier, Thuiller, Tailleur de Pierre, Recouvreur, Macon, Couvreur, Goujat.
Owner share	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the portion of young men in the 1807 Haute-Vienne cohort whose occupations were (in French): Propriétaire, Bourgeois.

Wood workers	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the portion of young men in the 1807 Haute-Vienne cohort whose occupations were (in French): Scieur de long, Sabotier, Menuisier, Charpentier, Chaisier, Aprentit Charpentier, Charron, Charon, Chabonnier.
Leather and textile workers	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the portion of young men in the 1807 Haute-Vienne cohort whose occupations were (in French): Tisserand, Tanneur, Tailleur d'habits, Tailleur, Perruquier, Pelassier, Cardeur, Bonnetier, Cordonnier, Chapelier, Arsonnier, Sellier.
Glass and metal workers	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the portion of young men in the 1807 Haute-Vienne cohort whose occupations were (in French): Chaudronnier, Cloutier, Epinglier, Forgeron, Marechal, Orfèvre, Peintre en porcelaine, Porcelainier, Serrurier, Verrier, Taillandier.
Height	*Archives de Haute-Vienne*, 1/R/50.	This variable measures the height, in cm, of young men in the 1807 Haute-Vienne cohort.
Desertion rate (before leaving for unit)	*Archives de Haute-Vienne*, 1/R/50.	The desertion rate is defined as: Desertion rate (before leaving for unit) = (Number of Deserters (before leaving for unit))*100 / (Conscript incorporated in the army + Desertion rate (before leaving for unit)).
Desertion rate (after leaving for unit)	*Archives de Haute-Vienne*, 1/R/50.	The desertion rate is defined as: Desertion rate (after leaving for unit) = (Number of Deserters (after leaving for unit))*100 / (Conscript incorporated in the army + Desertion rate (after leaving for unit)).

Wheat suitability	(Texier-Olivier 1808). FAO, GAEZ v3.0. Crop suitability index (class) for intermediate input level rain-fed wheat.	We calculated wheat suitability for canton polygons. To construct each canton's boundary, we used information from Texier-Olivier (1808).
Ruggedness	(Texier-Olivier 1808, Nüssli 2012)	We calculated average terrain ruggedness for canton polygons. To construct each canton's boundary, we used information from Texier-Olivier (1808).

E Fouché's police reports

Table 3 contains extracts from Napoléon's chief of police's reports referencing the country's conscription enforcement efforts and discussing potential causes of draft-dodging among the local population. Keep in mind that during the Napoleonic regime, draft-dodgers were usually referred to as deserters.

Table 3: Fouché's police reports

Date of report	Source	Quote
		Mentions of the effect of ruggedness
09-14-1804	vol.1 n°285.	"Desertion is considerable in the nine other [departments]: Ariège, Bouches-du-Rhône, Haute-Garonne, Landes, Lot, Loire, Lozère, Puy-de-Dôme, Tarn. The prefects indicate various causes. In Loire, Lozère and Tarn, the mountains offer safe asylums and make prosecution almost impossible. In Ariège, it is the proximity of Spain. In the Landes, the gendarmerie is incomplete, and resides too long in the same place. The links of the gendarmes with the conscripts and their parents caused the slowness of the prosecutions."
06-08-1805	vol.1 n°1454.	"Ardèche. Bandits. Conscripts. [...] Conscripts seek to escape the law which affects them and meet in large numbers in the woods of the same mountains. M. Bonnardel is also in pursuit of them, but the gendarmes he has at his disposal are too small in number, in proportion to that of these deserters, for one to hope for complete success."
08-02-1806	vol.2 n°1411.	"Léman. Bandits. -The prefect of Geneva writes, on July 24, that a band of 15 to 20 bandits has gathered in the woods and mountains of the Bonneville district and disturbs the tranquility of the neighboring countryside by the thefts that it commits there during the night. We have recognized 3 to 4 criminals sentenced to death. The others are refractory conscripts."
08-20-1806	vol.2 n°1452.	"Léman. A search party led to the arrest of 2 of the deserters; the others are in inaccessible mountains."

09-05-1806	vol.2 n°1502.	“At the beginning of August, a band of 15 to 20 deserters was reported, gathered in the mountains of Léman. Several gendarmerie brigadiers and a detachment of 25 men from the reserve company were employed in their pursuit (Bulletins of 2, 20 and 23 August) (1411.1452.1462). The gendarmerie reports the results. Only four of these deserters were arrested. Two had caliber rifles. They were taken to Geneva. The captain himself led, on August 24, a search party that lasted 22 hours; she had no success. This officer declares that 4000 men could not search the mountains where these vagrants retreat.”
09-22-1806	vol.2 n°1556.	Conscription. - The prefect of Pau exposes that conscription having experienced, until now, a lot of resistance in this department, where the mountains and the vicinity of Spain make the pursuits of the gendarmerie futile, he published a decree stating that garrisons would be established in communes where refractories are with their parents.”
10-28-1806	vol.3 n°86.	“Conscription. -Haute-Loire. Recruitment in this department experiences difficulties every year because the mountains make it almost impossible to find fugitives.”
12-20-1806	vol.3 n°235.	“Forest offenses, by 17 refractory conscripts, in the mountains of Nore: the prefects of Aude and Tarn are going to conduct a general search.”
07-13-1806	vol.3 n°823.	“In the Tarn, the cantons which are located in the mountains are almost all late in providing their contingents. The prefect addressed a circular to the mayors of these communes and sent them commissioners responsible for announcing to them that, if they persist in their refusal, they will be sent garnissaries.”
05-28-1807	vol.3 n°684.	“Strasbourg. Deserters. Surveillance. [...] The commissioner general also observes that deserters follow in droves the mountain ranges where the mounted gendarmerie can hardly penetrate; that the mayors of the municipalities located on these mountains should be forced to pooling their resources to stop these deserters.”
06-27-1808	vol.4 n°520.	“Conscripts arrested: 21 refractory hiding in the mountains in the Pô; among them Allais, accused of murder.”

09-07-1808	vol.4 n°722	“Conscription. Arrest in the mountains of Piedmont of 5 refractory conscripts.”
12-03-1808	vol.4 n°916.	“Parma. Conscription. Taro’s contingent is incomplete; impunity of mountainous municipalities.”
12-31-1808	vol.4 n°974.	“The prefect of Taro writes, on December 22, that since the establishment of conscription in this department of 39 cantons, 7 have always resisted and have enjoyed a kind of impunity by their situation in the mountains and at the borders: two in the district of Parma, two in that of Borgo, three in that of Piacenza. The contingents of these 7 cantons were almost entirely provided by the 32 others.”
		Mentions conscripts fleeing abroad
08-02-1804	vol.1 n°89.	“Emigration of conscripts.—The prefect of Haute-Garonne complains of a considerable emigration of young people. He ensures that all the conscripts of the year XII have passed to Spain, and that those of the year XIII begin to go there. The families of these young people will join them to avoid the lawsuits they fear. It was written to the prefects of the neighboring departments, to recommend the greatest surveillance of travelers, etc.”
06-24-1805	vol.1 n°1518.	“The prefect of Jemmapes reports that refractory conscripts cross the Rhine with ease, and that it is probable that they are enlisted by foreign nations.”
12-21-1805	vol.2 n°621.	“Nearly half [of conscripts] are missing in Ariège and Haute-Garonne, the effect of desertion in Spain (Bulletin of 21 Frimaire) (589). In the Basses-Pyrenées, out of 650 men, only 96 left. Strong measures were taken against this department. Mayors and entire municipalities are held responsible for this violation of the law.”
01-08-1806	vol.2 n°675.	“Conscription.—The prefect of Antwerp writes that conscription is experiencing a lot of difficulties in this department. [...] The vicinity of Holland and the disposition of spirits contribute to making desertion more numerous.”
03-04-1806	vol.2 n°872.	“Desertion in Spain.- The prefect of Haute-Garonne exposes that, for a long time, refractory conscripts pass in Spain and are welcomed there.”

08-20-1806	vol.2 n°1451.	“Meuse-Inférieure. Conscription. -The prefect of the Meuse-Inférieure observes that the young people of this department and of those adjacent to it generally seek to escape conscription by taking refuge in Holland or in the Duchy of Cleves. One would appreciably decrease the number of refractories, if one took measures so that they were not received in these states.”

F Robustness

F.1 Alternatives to ruggedness

F.1.1 Box-Cox transformation, non-logged variables and slope

In this section, we provide evidence of the robustness of our main results on the relationship between geographic characteristics, draft-dodging, and conscription under Napoléon. Table 4 reproduces the results of the specifications from Table 1 in the main text when we replace the natural logarithm of terrain ruggedness as the main independent variable with: a) the natural logarithm of the a department's average slope; b) a Box-Cox transformation of a department's average terrain ruggedness; c) average terrain ruggedness; and d) a department's average slope.

Table 4: Draft-dodging and geography using alternative measures of ruggedness.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
			Log of slope			
Log of slope	3.13931	2.77877	3.83798	4.56168	6.11596	5.68394
	(0.57161)***	(0.90629)***	(1.04251)***	(1.62084)***	(1.65712)***	(1.72743)***
	[1.32347]**	[1.30918]**	[1.31420]***	[1.90446]**	[2.16425]***	[2.15511]***
Observations	554	534	534	365	292	292
R-squared	0.12498	0.64031	0.64391	0.75260	0.78817	0.78844
			Zero-skewness Box-Cox transformation			
Ruggedness (Box-Cox)	3.08420	2.77994	3.75120	4.52568	6.02773	5.57696
	(0.56566)***	(0.90096)***	(1.02207)***	(1.58360)***	(1.60961)***	(1.65515)***
	[1.31872]**	[1.28974]**	[1.29215]***	[1.89738]**	[2.14425]***	[2.13873]***
Observations	554	534	534	365	292	292
R-squared	0.12447	0.64049	0.64392	0.75274	0.78828	0.78869
			Ruggedness			
Ruggedness	1.91376	0.92732	1.54222	1.98656	2.96812	1.35407
	(0.45205)***	(0.63365)	(0.73597)**	(1.16078)*	(1.28115)**	(1.98635)
	[1.01442]*	[1.04219]	[1.17456]	[1.82899]	[1.97488]	[2.96058]
Observations	554	534	534	365	292	292
R-squared	0.10800	0.63431	0.63633	0.74288	0.77853	0.77946
			Slope			
Slope	60.88337	29.84526	49.64838	61.01269	92.50443	38.09600
	(14.48994)***	(19.99714)	(23.28698)**	(36.75198)*	(40.60019)**	(63.79691)
	[32.51215]*	[32.95193]	[37.28309]	[57.81974]	[62.49260]	[95.26667]
Observations	554	534	534	365	292	292
R-squared	0.10731	0.63435	0.63640	0.74275	0.77837	0.77938
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓
			*** p<0.01, ** p<0.05, * p<0.1			

Table 5 reproduces the results of the specifications from Table 3 in the main text when we replace the natural logarithm of terrain ruggedness as the main independent variable with: a) the natural logarithm of the a department's average slope; b) a Box-Cox transformation of a department's average terrain ruggedness; c) average terrain ruggedness; and d) a department's average slope.

Table 5: Conscription rate and geography using alternative measures of ruggedness.

Conscription rate	(1)	(2)	(3)	(4)	(5)
			Log of slope		
Log of slope	-0.82309	-1.39353	-0.84083	-2.30203	-2.33678
	(0.14016)***	(0.27522)***	(0.29716)***	(0.47317)***	(0.50813)***
	[0.25532]***	[0.39176]***	[0.36827]**	[0.45060]***	[0.48918]***
Observations	555	535	535	365	365
R-squared	0.14019	0.68178	0.69403	0.74369	0.74372
			Zero-skewness Box-Cox transformation		
Ruggedness (Box-Cox)	-0.78669	-1.38140	-0.85846	-2.27219	-2.27052
	(0.13831)***	(0.26791)***	(0.28663)***	(0.46010)***	(0.48473)***
	[0.25508]***	[0.37779]***	[0.35246]**	[0.44376]***	[0.47384]***
Observations	555	535	535	365	365
R-squared	0.13774	0.68195	0.69455	0.74397	0.74397
			Ruggedness		
Ruggedness	-0.71301	-0.70598	-0.12941	-0.90225	-0.99963
	(0.10637)***	(0.21191)***	(0.22429)	(0.38445)**	(0.57212)*
	[0.17767]***	[0.31186]**	[0.26605]	[0.52589]*	[0.64317]
Observations	555	535	535	365	365
R-squared	0.15372	0.67050	0.68874	0.73068	0.73073
			Slope		
Slope	-22.93019	-22.13465	-3.59244	-27.56246	-29.60171
	(3.39834)***	(6.72673)***	(7.11496)	(12.25263)**	(18.34899)
	[5.66534]***	[9.91908]**	[8.45820]	[16.92565]	[20.71725]
Observations	555	535	535	365	365
R-squared	0.15377	0.67027	0.68868	0.73032	0.73034
Same Controls as in Table 1	✓	✓	✓	✓	✓
*** p<0.01, ** p<0.05, * p<0.1					

F.1.2 Excluding practically irrelevant values for terrain ruggedness

As we discuss in the main body of the text (Section 3), high values of terrain ruggedness for some departments may be capturing the high altitude levels due to the presence of very tall mountains.

However, not all rugged terrains gave draftees the same chance of success in escaping their military obligation. Highly rugged areas in the Alps and Pyrenees were often inaccessible or too dangerous to travel through. Perpetual snows would cover some steep mountains in both regions and temperatures stayed below freezing for most of the year. Similarly, these areas were mostly lacking of vegetation and fauna, due to both their low temperature and high elevations and are known as the "alpine zone." This area starts at altitude levels of between 1800 and 2300 meters in the Alps and at 2300 meters in the Pyrenees (Nagy et al. 2003, p.2).[1] In this appendix, we use two strategies to account for this fact and exclude ruggedness values that are likely to be irrelevant for conscription choice and therefore could bias the results:

- First, we exclude any data point within the raster file with altitude of 2000 meters above the sea level and higher.
- Second, we exclude any data point within the raster file classified as being covered in mountainous rocks or glaciers by the European geological survey.[2]

With respect to the first method, we use the raster files on elevation data provided by the U.S. Geological Survey and constructed from the Shuttle Radar Topography Mission. We then modified our department shapefile by removing all land more than 2,000 meters above the sea level.

For the second method excluding glaciers and mountainous bare rocks, we use Corine land cover data for the reference year 2006 (CLC2006) which is derived from satellite imaging (Büttner & Kosztra 2007). We then modified our department shapefile by removing land cover which was characterized as "glaciers and perpetual snows" and "bare rocks" in the CLC2006 data.

Figure 6 shows portions of the raster file excluded from the new calculation of average departmental ruggedness when using either of our two strategies. Table 7 reproduces the results of evaluating the specifications from Table 1 using both

[1] The Church of the highest village in Europe, Saint-Véran, is at an elevation of 2,042 meters above the sea level. Already in 1929, there was only 3 villages inhabited all year above 2,000 meters in the Alps (Godefroy 1938).

[2] `https://image.discomap.eea.europa.eu/arcgis/rest/services/Corine/CLC2006_WM/MapServer`.

ruggedness and its natural logarithm when using the newly calculated value of terrain ruggedness. The results show that the two strategies improve the significance of the coefficients for ruggedness when compared to the results in table 4. This suggests that the regions with very high altitudes were responsible for the ruggedness coefficient' failure to consistently meet standard levels of statistical significance.

Table 6: Draft-dodging and ruggedness using different measures of ruggedness.

Note: This table displays the same specifications as in Table 1 using alternative measures of ruggedness to exclude high but non-relevant values of ruggedness.

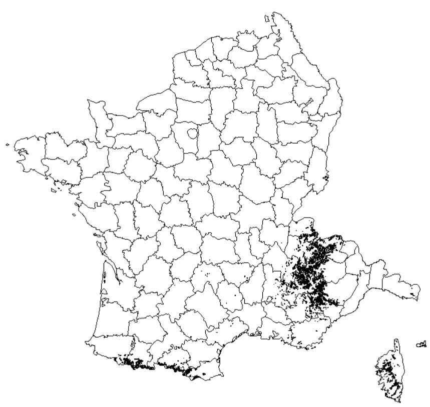
Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
	Ruggedness with elevation > 2000m excluded:					
Ruggedness	2.39995	1.70842	2.66907	4.23362	5.41174	4.85990
	(0.53931)***	(0.77229)**	(0.89020)***	(1.61282)***	(1.77539)***	(2.34586)**
	[1.19336]**	[1.28871]	[1.39368]*	[2.47734]*	[2.64706]**	[3.24306]
Observations	554	534	534	365	292	292
R-squared	0.11368	0.63620	0.63943	0.74602	0.78235	0.78245
	Log of Ruggedness with elevation > 2000m excluded:					
Log of ruggedness	3.28465	3.10327	4.45996	5.49861	7.04372	6.37595
	(0.60043)***	(0.97503)***	(1.10523)***	(1.71007)***	(1.74625)***	(1.75538)***
	[1.38912]**	[1.41293]**	[1.40857]***	[2.11823]***	[2.30295]***	[2.20286]***
Observations	554	534	534	365	292	292
R-squared	0.12554	0.64108	0.64628	0.74879	0.78661	0.78750
	Ruggedness excluding glaciers and land covered by mountainous bear rocks:					
Ruggedness	2.02068	1.07650	1.75986	2.56249	3.57329	2.33094
	(0.47194)***	(0.65151)*	(0.75738)**	(1.24466)**	(1.38125)**	(2.08480)
	[1.05653]*	[1.07363]	[1.20279]	[1.95579]	[2.11436]*	[3.08478]
Observations	554	534	534	365	292	292
R-squared	0.10950	0.63467	0.63695	0.74367	0.77952	0.78003
	Log of Ruggedness excluding glaciers and land covered by mountainous bear rocks:					
Log of ruggedness	3.19454	2.89229	4.21241	5.25958	6.84624	6.17477
	(0.57951)***	(0.93685)***	(1.06661)***	(1.66810)***	(1.71210)***	(1.74178)***
	[1.34349]**	[1.35786]**	[1.35381]***	[2.08096]**	[2.27918]***	[2.18334]***
Observations	554	534	534	365	292	292
R-squared	0.12571	0.64048	0.64554	0.74828	0.78617	0.78687
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓
	*** p<0.01, ** p<0.05, * p<0.1					

Table 7: Conscription rates and ruggedness using different measures of ruggedness.

Note: This table displays the same specifications as in Table 3 using alternative measures of ruggedness to exclude high but non-relevant values of ruggedness.

Conscription rate	(1)	(2)	(3)	(4)	(5)
	Ruggedness with elevation > 2000m excluded:				
Ruggedness	-0.83344	-1.04670	-0.39308	-1.69802	-2.09964
	(0.12281)***	(0.24873)***	(0.26342)	(0.49123)***	(0.65141)***
	[0.20642]***	[0.35947]***	[0.31248]	[0.64846]***	[0.73571]***
Observations	555	535	535	365	365
R-squared	0.15453	0.67497	0.68990	0.73625	0.73705
	Log of Ruggedness with elevation > 2000m excluded:				
Log of ruggedness	-0.83156	-1.54565	-0.98428	-2.47006	-2.46453
	(0.14697)***	(0.28695)***	(0.30738)***	(0.47932)***	(0.50169)***
	[0.27355]***	[0.40468]***	[0.37357]***	[0.45450]***	[0.48177]***
Observations	555	535	535	365	365
R-squared	0.13798	0.68365	0.69537	0.74574	0.74574
	Excluding glaciers and land covered by mountainous bear rocks:				
Ruggedness	-0.74021	-0.75697	-0.16199	-1.08521	-1.30160
	(0.10966)***	(0.21844)***	(0.23114)	(0.40573)***	(0.59599)**
	[0.18389]***	[0.32368]**	[0.27792]	[0.56105]*	[0.69162]*
Observations	555	535	535	365	365
R-squared	0.15420	0.67113	0.68884	0.73196	0.73219
	Excluding glaciers and land covered by mountainous bear rocks:				
Log of ruggedness	-0.82286	-1.45195	-0.89276	-2.38564	-2.40803
	(0.14235)***	(0.28139)***	(0.30262)***	(0.47658)***	(0.50719)***
	[0.26110]***	[0.39974]***	[0.37236]**	[0.45648]***	[0.49263]***
Observations	555	535	535	365	365
R-squared	0.13938	0.68230	0.69446	0.74455	0.74456
Same Controls as in Table 3	✓	✓	✓	✓	✓
*** p<0.01, ** p<0.05, * p<0.1					

Figure 6: Modified department level shapefile.



((a)) Mountainous rocks and glaciers excluded

((b)) Elevation >2000m excluded

F.1.3 Buffers, 30km

To account for the possible impact of ruggedness in neighboring departments, we draw a 30 *km* buffer around each department (see figure 7) and recalculate the average ruggedness within those modified polygons.

Our results in tables 8 and 9 suggest that the impact of ruggedness, when accounting for the characteristics of neighboring departments, is slightly bigger.

Figure 7: Departments' polygons with 30 km buffers.

Table 8: Draft-dodging and ruggedness with 30 km buffers.

Note: This table displays the same results as in Table 1. We draw a buffer of 30 km around each department and assign the average terrain ruggedness to the department if it falls within either the department itself or the buffer.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
Log of ruggedness (buffer)	3.37464	3.73357	5.13290	4.75651	6.67692	6.17293
	(0.60023)***	(1.16885)***	(1.33483)***	(1.81645)***	(1.79912)***	(1.95166)***
	[1.42213]**	[1.72627]**	[1.75321]***	[2.08551]**	[2.42742]***	[2.49201]**
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓
Observations	554	534	534	365	292	292
R-squared	0.12439	0.64132	0.64537	0.75164	0.78725	0.78747

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 9: Geography and conscription with 30km buffers.

Note: This table displays the same results as in Table 3. We draw a buffer of 30 km around each department and assign the average terrain ruggedness to the department if it falls within either the department itself or the buffer.

Conscription rate	(1)	(2)	(3)	(4)	(5)
Log of ruggedness (buffer)	-0.76261	-1.90528	-1.30152	-2.41319	-2.46889
	(0.14653)***	(0.33570)***	(0.36381)***	(0.56619)***	(0.62508)***
	[0.26544]***	[0.44968]***	[0.45872]***	[0.56339]***	[0.64800]***
Same Controls as in Table 3	✓	✓	✓	✓	✓
Observations	555	535	535	365	365
R-squared	0.12992	0.68532	0.69692	0.74067	0.74071

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

F.2 Influential observations

In this appendix, we test whether our empirical results are robust to the exclusion of influential observations. Table 10 provides the results of the same specifications as in table 1 when a) we exclude the observations from the ten least rugged departments; b) we exclude the ten most rugged departments; c) we omit observations for which for which $|DFBETA| > 2/\sqrt{N}$, where N is the number of observations and where DFBETA is a measure of the difference in the estimated coefficient for the ruggedness coefficient (scaled by the standard error) when including and excluding from the sample. The results are consistent with those in table 1 in showing a large and significant positive effect of ruggedness on the Draft-dodging rate.

Table 11 reproduces the results of the specifications from table 3 when we adopt the same three strategies. Once again, the original results are unaffected by the exclusion of influential observations.[3]

Table 10: Draft-dodging and ruggedness excluding influential observations

Note: This table display the same specifications as in Table 1 while excluding potentially influential observations and outliers.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
	Excluding the 10 least rugged departments:					
Log of Ruggedness	4.08255	3.12095	4.27812	6.01772	7.84141	7.88932
	(0.67151)***	(1.15501)***	(1.39925)***	(2.00427)***	(2.07211)***	(2.36343)***
	[1.49586]***	[1.76543]*	[1.83087]**	[2.83150]**	[3.27927]**	[3.46906]**
Observations	504	484	484	315	252	252
R-squared	0.13566	0.64507	0.64947	0.78241	0.81936	0.81936
	Excluding the 10 most rugged departments:					
Log of Ruggedness	3.14661	3.15978	4.14798	5.16097	6.44983	1.74739
	(0.66918)***	(1.05887)***	(1.14131)***	(1.76567)***	(1.94043)***	(2.03729)
	[1.46775]**	[1.47560]**	[1.41285]***	[2.85998]*	[3.29518]*	[3.37268]
Observations	504	484	484	315	252	252
R-squared	0.11524	0.65566	0.65968	0.76634	0.79200	0.80258
	Omit if $\|DFBETA\| > 2/\sqrt{N}$					
Log of Ruggedness	3.14182	2.76014	4.39480	4.05916	6.82557	6.28218
	(0.43608)***	(0.74786)***	(0.86376)***	(1.34350)***	(1.42603)***	(1.60483)***
	[0.95100]***	[1.25499]**	[1.38902]***	[2.27262]*	[2.00846]***	[2.29567]***
Observations	522	502	499	345	279	282
R-squared	0.14644	0.68668	0.68383	0.77002	0.81853	0.80637
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓
*** p<0.01, ** p<0.05, * p<0.1						

[3]With the exception of column 6 in Table 10—where a control for elevation is included—in the case where we removed the 10 most rugged departments.

Table 11: Conscription rate and ruggedness excluding influential observations

Note: This table display the same specifications as in Table 3 while excluding potentially influential observations and outliers.

Conscription rate	(1)	(2)	(3)	(4)	(5)
	Excluding the 10 least rugged departments:				
Log of ruggedness	-0.95964	-1.70262	-0.93622	-1.88672	-2.29931
	(0.18253)***	(0.38904)***	(0.41295)**	(0.70761)***	(0.81660)***
	[0.33035]***	[0.58835]***	[0.51302]*	[0.77791]**	[0.94576]**
Observations	505	485	485	315	315
R-squared	0.13312	0.68887	0.70050	0.75710	0.75779
	Excluding the 10 most rugged departments:				
Log of ruggedness	-0.61813	-1.54284	-1.06788	-2.91807	-2.04548
	(0.18412)***	(0.29157)***	(0.30956)***	(0.53642)***	(0.57719)***
	[0.34550]*	[0.38105]***	[0.36852]***	[0.63429]***	[0.62092]***
Observations	505	485	485	315	315
R-squared	0.11284	0.68391	0.69837	0.76487	0.77001
	Omit if $\|DFBETA\| > 2/\sqrt{N}$				
Log of ruggedness	-0.56359	-1.48578	-1.08788	-1.74266	-1.94977
	(0.11718)***	(0.24458)***	(0.26731)***	(0.37851)***	(0.43752)***
	[0.21235]***	[0.32763]***	[0.32822]***	[0.45640]***	[0.53776]***
Observations	533	501	504	345	345
R-squared	0.14758	0.72247	0.72761	0.78836	0.78293
Same Controls as in Table 3	✓	✓	✓	✓	✓
	*** p<0.01, ** p<0.05, * p<0.1				

F.3 Alternative controls

F.3.1 Distance from Paris

In this appendix, we show that our results are unaffected when we use travel costs from Paris instead of a department's distance from the capital as a control variable. The correlation coefficient between the cost of travelling to Paris and distance from Paris is 0.9803. Figure 8 shows the relationship between the cost of travelling to each department from Paris and geographic distance. Tables 12 and 13 provide the results of our original specifications when we substitute travel costs for geographic distance from Paris. The sign, magnitude, and significance of the coefficients for our variables of interest are unaffected by this change while the coefficients for travel costs are unstable and generally insignificant across our specifications.

Figure 8: Distance to Paris is highly correlated to the cost of traveling to Paris

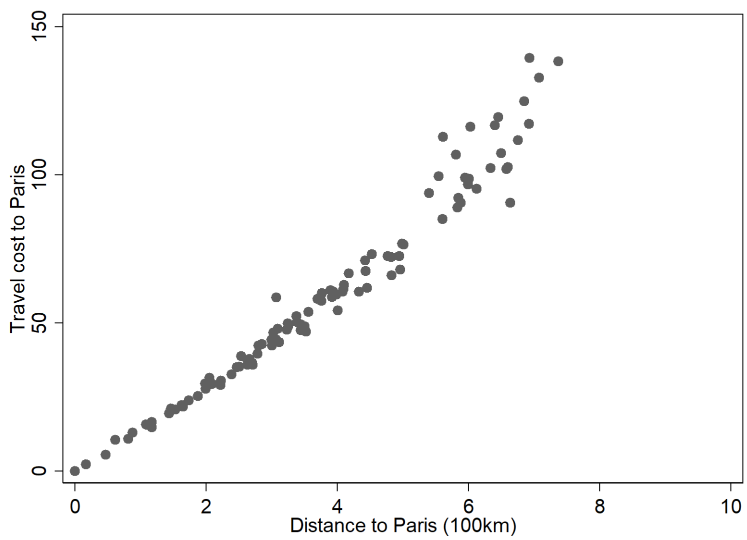


Table 12: Draft-dodging and ruggedness with alternative to "Distance from Paris".

Note: This table displays the same regressions as in Table 1 while replacing "Distance from Paris" with "Travel cost to Paris." We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
Log of ruggedness	3.16375	2.88612	3.89288	5.75363	6.96121	6.65639
	(0.57352)***	(0.93131)***	(1.06323)***	(1.70418)***	(1.72031)***	(1.78429)***
	[1.32991]**	[1.32515]**	[1.30317]***	[2.01416]***	[2.21429]***	[2.22949]***
Townships Density		-100.09052	-111.08467	-80.37848	-44.30469	-37.50246
		(19.16306)***	(20.26873)***	(45.75262)*	(46.17883)	(45.25740)
		[36.15076]***	[36.87713]***	[80.20601]	[75.26936]	[72.83559]
Travel cost to Paris		0.17286	0.16529	-0.01955	0.04789	0.04568
		(0.04988)***	(0.04976)***	(0.06266)	(0.06877)	(0.06934)
		[0.07955]**	[0.07851]**	[0.09133]	[0.09723]	[0.09796]
Border		2.59494	3.03584	4.39649	4.38448	4.23074
		(1.31833)**	(1.34541)**	(2.37496)*	(2.59907)*	(2.61682)
		[1.79957]	[1.80598]*	[3.62634]	[3.83561]	[3.91533]
Same Controls as in Table 1 (except for "Distance from Paris")	✓	✓	✓	✓	✓	✓
Observations	554	520	520	360	288	288
R-squared	0.12556	0.66014	0.66307	0.75933	0.79031	0.79046

*** p<0.01, ** p<0.05, * p<0.1

Table 13: Conscription and ruggedness with alternative to "Distance from Paris".

Note: This table displays the same regressions as in Table 3 while replacing "Distance from Paris" with "Travel cost to Paris." We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Conscription rate	(1)	(2)	(3)	(4)	(5)
Log of ruggedness	-0.81793	-1.45973	-0.89312	-2.40067	-2.44831
	(0.14110)***	(0.28334)***	(0.30380)***	(0.48495)***	(0.51762)***
	[0.25757]***	[0.40252]***	[0.38069]**	[0.46231]***	[0.49557]***
Exemption rate		-0.31921	-0.31661	-0.33557	-0.33584
		(0.01720)***	(0.01676)***	(0.02005)***	(0.02013)***
		[0.02256]***	[0.02130]***	[0.02122]***	[0.02120]***
Townships Density		5.54250	0.18260	-6.15161	-5.07760
		(6.08921)	(5.91194)	(10.53551)	(11.34679)
		[8.52403]	[8.11703]	[11.40585]	[13.41541]
Travel cost to Paris		-0.00710	-0.00885	0.03248	0.03213
		(0.01577)	(0.01575)	(0.02076)	(0.02098)
		[0.02195]	[0.02226]	[0.02667]	[0.02696]
Border		-1.70960	-1.47786	-1.52569	-1.55282
		(0.44264)***	(0.44390)***	(0.69000)**	(0.69615)**
		[0.55695]***	[0.56436]***	[0.66226]**	[0.67042]**
Same Controls as in Table 3 (except for "Distance from Paris")	✓	✓	✓	✓	✓
Observations	555	520	520	360	360
R-squared	0.13954	0.68694	0.69945	0.74666	0.74672

*** p<0.01, ** p<0.05, * p<0.1

F.3.2 Urbanization

In this appendix, we use a different measure of urbanization than in tables 1 to 4, were urbanization is defined as the percentage of people living in a city of more than 5,000 inhabitants. In tables 14 and 15, we use the percentage of the population living in a city of more than 10,000 inhabitants as a measure of urbanization instead. Using these alternative measures leaves the overall pattern of our results unaffected.

Table 14: Draft-dodging and ruggedness with alternative to "Urbanization".

Note: This table displays the same regression as in Table 1's column 3, 4 and 5, while replacing "Urbanization" with another measure of urbanization. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(3)	(4)	(5)
Log of ruggedness	4.12574	5.13110	6.73537
	(1.05578)***	(1.65401)***	(1.69516)***
	[1.34327]***	[2.06144]**	[2.26209]***
Townships Density	-92.95887	-40.79928	0.05567
	(20.62083)***	(42.57956)	(44.33058)
	[36.69457]**	[76.57471]	[71.95935]
Distance from Paris	3.37038	2.35798	3.31861
	(0.87368)***	(1.08847)**	(1.24696)***
	[1.41119]**	[1.74104]	[2.00780]*
Border	2.75361	2.93673	2.97142
	(1.29967)**	(2.15092)	(2.22459)
	[1.72700]	[3.21844]	[3.23309]
Urbanization (towns>10,000)	6.96776	-10.31918	0.37931
	(3.96530)*	(15.28033)	(15.67894)
	[6.59128]	[26.74470]	[25.05897]
Same other controls as in Table 1	✓	✓	✓
Observations	534	365	292
R-squared	0.64523	0.74801	0.78592

*** p<0.01, ** p<0.05, * p<0.1

Table 15: Conscription and ruggedness with alternative to "Urbanization".

Note: This table displays the same regression as in Table 3's column 3, 4 and 5, while replacing "Urbanization" with another measure of urbanization. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Conscription rate	(3)	(4)	(5)
Log of ruggedness	-0.88471	-2.25974	-2.32155
	(0.29967)***	(0.47282)***	(0.50884)***
	[0.37125]**	[0.45139]***	[0.49280]***
Exemption rate	-0.31726	-0.33825	-0.33873
	(0.016670)***	(0.019564)***	(0.019712)***
	[0.021619]***	[0.020481]***	[0.020519]***
Townships Density	-1.81781	-3.30084	-2.06126
	(5.99509)	(10.3776)	(11.1281)
	[8.08142]	[12.6668]	[14.5580]
Distance from Paris	-0.30056	0.59348	0.58458
	(0.28414)	(0.39061)	(0.39529)
	[0.41338]	[0.49152]	[0.49674]
Border	-1.41346	-1.99767	-2.02452
	(0.44609)***	(0.68737)***	(0.69165)***
	[0.56855]**	[0.69249]***	[0.70370]***
Urbanization (towns>10000)	4.37882	1.01573	1.11959
	(1.43678)***	(2.68266)	(2.70468)
	[2.03710]**	[3.37411]	[3.47566]
Same Controls as in Table 3	✓	✓	✓
Observations	535	365	365
R-squared	0.69350	0.74332	0.74341
*** p<0.01, ** p<0.05, * p<0.1			

F.3.3 Literacy

In this appendix, we replicate our empirical tests including two additional measures for a department's literacy rate. The first measure, literacy (1790), consists of the number of married men who were able to sign their marriage certificate between the years 1786 and 1790. The second measure, literacy (1831), consists of the percentage of men eligible for conscription in 1831 who could read. The results from both tables confirm our original findings. The coefficients of our variables of interest remain large and significant throughout.

Table 16: Draft-dodging and ruggedness with alternative to "Military relays".

Note: This table displays the same regression as in Table 1, column (4) while replacing "Literacy" with other measures of literacy. The first column is equivalent to column (4) in Table 1. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(1)	(2)	(3)
Log of ruggedness	4.65358	3.87815	5.14020
	(1.62817)***	(1.69038)**	(1.63336)***
	[1.94372]**	[2.04044]*	[2.21987]**
Townships Density	-62.71338	-12.06185	-51.56883
	(44.89035)	(46.59960)	(38.19794)
	[80.14154]	[78.07672]	[63.27735]
Distance from Paris	2.16670	3.01266	1.86318
	(1.06161)**	(1.06946)***	(1.15628)
	[1.63886]	[1.63479]*	[1.92381]
Border	4.65163	5.93110	0.35297
	(2.34167)**	(2.36550)**	(1.97336)
	[3.57922]	[3.49427]*	[2.62615]
Literacy	-0.14993		
	(0.04280)***		
	[0.07162]**		
Literacy (1790)		-0.20493	
		(0.04036)***	
		[0.05664]***	
Literacy (1831)			-0.29932
			(0.04519)***
			[0.06997]***
Same other controls as in Table 1	✓	✓	✓
Observations	365	370	405
R-squared	0.75273	0.76084	0.73749
*** p<0.01, ** p<0.05, * p<0.1			

Table 17: Conscription and ruggedness with alternative to "Literacy".

Note: This table displays the same regression as in Table 3, column (4) while replacing "'Literacy" with other measures of literacy. The first column is equivalent to column (4) in Table 3. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Conscription rate	(1)	(2)	(3)
Log of ruggedness	-2.33772	-2.08919	-1.97321
	(0.47519)***	(0.48251)***	(0.45442)***
	[0.45585]***	[0.54412]***	[0.42722]***
Exemption rate	-0.33988	-0.33361	-0.33275
	(0.01977)***	(0.01939)***	(0.01845)***
	[0.02102]***	[0.01989]***	[0.01721]***
Townships Density	-6.78714	-15.34428	1.05049
	(10.36324)	(10.87582)	(9.45305)
	[11.93277]	[12.96192]	[11.20811]
Distance from Paris	0.54143	0.29982	0.41529
	(0.38626)	(0.38322)	(0.36754)
	[0.48476]	[0.45423]	[0.45551]
Border	-1.69050	-1.95167	-2.05992
	(0.69502)**	(0.72868)***	(0.67197)***
	[0.69252]**	[0.83758]**	[0.62109]***
Literacy	0.05261		
	(0.01401)***		
	[0.01388]***		
Literacy (1790)		0.05778	
		(0.01225)***	
		[0.01313]***	
Literacy (1831)			0.07382
			(0.01568)***
			[0.01878]***
Same other controls as in Table 3	✓	✓	✓
Observations	365	370	405
R-squared	0.74391	0.75148	0.75126

*** p<0.01, ** p<0.05, * p<0.1

F.3.4 Communication infrastructure

In this appendix, we include additional controls in our baseline specifications for two different measures for investment in infrastructure: the number of postal offices per km^2 and kilometers of roads per km^2. As tables 18 and 19 show, our results are unchanged when these controls are included. Moreover, the coefficients for either are generally insignificant.

Table 18: Draft-dodging and ruggedness with alternative to "Military relays".

Note: This table displays the same regression as in Table 1, column (4) while replacing "Military relays" with either "Road density" or "Postal office density." The first column is equivalent to column (4) in Table 1. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(1)	(2)	(3)
Log of ruggedness	4.65358	5.16105	5.39163
	(1.62817)***	(1.68323)***	(1.80888)***
	[1.94372]**	[2.08742]**	[2.34040]**
Townships Density	-62.71338	-117.98476	-107.68265
	(44.89035)	(39.39172)***	(34.46292)***
	[80.14154]	[71.24117]*	[62.11998]*
Distance from Paris	2.16670	1.73300	1.38421
	(1.06161)**	(1.27352)	(1.17546)
	[1.63886]	[1.89858]	[1.73569]
Border	4.65163**	3.85636	3.56078
	(2.34167)	(2.49167)	(2.55216)
	[3.57922]	[3.84993]	[4.02741]
Military relays	-26.35774		
	(9.87579)***		
	[15.93356]*		
Road density		9.27484	
		(31.60329)	
		[44.81094]	
Postal office density			-281.20294
			(517.78319)
			[853.99754]
Same other controls as in Table 1	✓	✓	✓
Observations	365	365	365
R-squared	0.75273	0.74852	0.74866

*** p<0.01, ** p<0.05, * p<0.1

Table 19: Conscription and ruggedness with alternative to "Military relays".

Note: This table displays the same regression as in Table 3, column (4) while replacing "Military relays" with either "Road density" or "Postal office density." The first column is equivalent to column (4) in Table 3. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Conscription rate	(1)	(2)	(3)
Log of ruggedness	-2.33772	-2.38696	-2.46050
	(0.47519)***	(0.46906)***	(0.48479)***
	[0.45585]***	[0.48642]***	[0.49542]***
Exemption rate	-0.33988	-0.33933	-0.33354
	(0.01977)***	(0.01982)***	(0.01951)***
	[0.02102]***	[0.02143]***	[0.02035]***
Townships Density	-6.78714	12.45535	8.12456
	(10.36324)	(9.12026)	(9.35739)
	[11.93277]	[11.57298]	[11.79192]
Distance from Paris	0.54143	0.36739	0.62756
	(0.38626)	(0.46417)	(0.41572)
	[0.48476]	[0.62313]	[0.56003]
Border	-1.69050	-1.40977	-1.53622
	(0.69502)**	(0.69164)**	(0.70429)**
	[0.69252]**	[0.76972]*	[0.77805]**
Military relays	6.43879		
	(2.99431)**		
	[3.58888]*		
Road density		-21.33953*	
		(12.25513)	
		[15.44490]	
Postal office density			-65.47770
			(157.30827)
			[229.84444]
Same other controls as in Table 3	✓	✓	✓
Observations	365	365	365
R-squared	0.74391	0.74307	0.74075

*** p<0.01, ** p<0.05, * p<0.1

F.4 Choice of enforcement technology

Given the results of our empirical test on the relationship between geographic characteristics and the prevalence of draft-dodging, it would be reasonable to assume that the former will also be correlated with conscription enforcement costs. In order to provide more robust justification for this assumption, we devise a simple econometric test on the relationship between geography and conscription enforcement costs. The Napoleonic regime had entrusted the enforcement of the draft to the gendarmerie, France's military police force. The gendarmerie had two types of units: Infantry units and cavalry units (Pigeard 2000, p.190). Mounted gendarmes were more effective escorting conscripts and pursuing draft-dodgers than their unmounted counterparts. However, the nature of the terrain could make the use of horses altogether uneconomical (Emsley 1999, p. 34). So, already in 1800, Napoléon had instructed his Secretary of State to employ unmounted gendarmes in France's more mountainous regions (Emsley 1999, p. 57).

Table 20: Geography and the choice of conscription enforcement technology

Note: This table displays the results of regressing the percentage of gendarmerie brigades which were mounted in 1802 on geographical characteristics. Variables are described in the Appendix. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Mounted gendarmerie brigades (%)	(1)	(2)	(3)	(4)	(5)
Log of ruggedness	-6.56432	-8.19232	-8.13984	-14.69275	-12.05288
	(1.94343)***	(2.84354)***	(3.08743)**	(6.44431)**	(7.26244)
	[2.09650]***	[2.50284]***	[2.67371]***	[5.16304]***	[5.74158]**
Townships density		✓	✓	✓	✓
Distance from Paris		✓	✓	✓	✓
Border		✓	✓	✓	✓
Maritime		✓	✓	✓	✓
Wheat suitability		✓	✓	✓	✓
Tax revenues per capita			✓	✓	✓
Urbanization rate			✓	✓	✓
Agricultural sector				✓	✓
Road density				✓	✓
Elevation					✓
Military division fixed effects		✓	✓	✓	✓
Observations	103	102	102	80	80
R-squared	0.10488	0.61103	0.61173	0.57955	0.58558

*** p<0.01, ** p<0.05, * p<0.1

If geographic characteristics affected conscription enforcement costs, we should expect the latter to predict the choice of enforcement technology (mounted vs. unmounted gendarmes) across departments. Table 20 presents the results of five specifications testing this relationship. The results are consistent with our assumption: more rugged departments had a smaller percentage of mounted as opposed to "on foot" gendarmerie brigades. Because the gendarmerie was in charge of maintaining safety on roads (Emsley 1999, Forrest 1989), one confounding factor could be the diverging importance of communication infrastructure across departments. To mitigate this concern, column (5) controls for “road density,” a measure of a department’s average road length per km^2. The results are statistically significant and consistent across specifications and therefore further suggest that geography, and more specifically terrain ruggedness, did affect conscription enforcement costs in Napoleonic France.

G Alternative hypotheses

G.1 The allocation of soldiers

One worry with our results may be that draftees from more rugged regions were allocated systematically to different destinations or army battalions and therefore faced different payoffs of draft-dodging than the rest, in which case our main results may be spurious. For instance, draftees in more rugged regions may have to travel longer to join their units, hence giving them additional opportunities to desert. Similarly, draftees from rugged departments may have been less likely to be assigned to the cavalry due to the latter's higher height requirements, and since those those assigned to cavalry and artillery regiments received higher compensations they may have been less likely to desert. Hence, by not controlling for the allocation of soldiers we may be spuriously attributing to geography the effects of these correlates.

However, the historical record suggests that the bias may be going in the opposite direction and that our measured impact of ruggedness on draft-dodging and conscription rates may be an underestimation. Specifically, the French government seems to have adopted the strategy of sending draftees from rural (and thus desertion prone) to regiments located in areas that made deserting harder (Pigeard 2000, p.235).

The documents compiled by Lacuée (AF/IV/1124) do not include detailed information about the destination of draftees. It does however gives information about the levy of 80,000 men from the 1810 cohort in 1808 in *Etat des départemens Qui doivent fournir les Conscrits de 1810 et des Corps qui les recoivent*. This document identifies the number of soldiers allocated to each regiment as well as the latter's location. There were, in 1808, 3 levies for a total of 255,225 men Pigeard (2000, p.419). Hence we have detailed data about the allocation of around 30% of soldiers drafted in 1808. This is likely to be representative of the overall army since the allocation of soldiers followed a very consistent pattern through time as is made clear by the archival documents we collected.[4]

Using these data, we calculate the geographic distance between the capital of each department and the location of the regiment to which local draftees were sent. We then calculate the average geographic distance conscripts from each departments had to travel to their assigned military barracks (see variable "Distance to depot" in Table 22). We also calculate the percentage of conscripts allocated to infantry, cavalry, and artillery units. Finally, we calculate what percentage of conscripts (allocated to either

[4]See especially the "*Tableau des corps qui ont eu le plus de déserteurs pendant le 1er semestre de 1808*", *Archives Nationales*, AF/IV/1124.

the infantry or cavalry) from each departments went to the 3 main war theaters:

- About 40.6% of the infantry conscripts were sent to Spain.
- About 16.9% of the infantry conscripts were sent to Italy.[5]
- About 40.1% of the infantry conscripts were sent to Germany (including today's Belgium).
- About 2.4% of the infantry conscripts were allocated to other minor regions (defense of the atlantic coast etc.)

To come up with this measure, we cross-referenced the data included in the "*Etats des départemens Qui doivent fournir les Conscrits de 1810 et des Corps qui les recoivent*" (AF/IV/1124) with data about the location of each of the 68 cavalry and 125 infantry regiments in activity at the time given in Pascal (1864).[6]

We first show that the allocation of soldiers was not random. Departments classified as belonging to Groups 1 or 2 by Lacuée in 1809 were more likely to be sent to Germany and less likely to be sent to either Spain or Italy. As Morgan (1994, p.2) puts it, "The French Ministry of War organized the new Armée d'Espagne with younger and more green conscripts as well as more allied contingents so as to maintain the strength of the Grande Armée in Germany, and the Armée d'Italie."

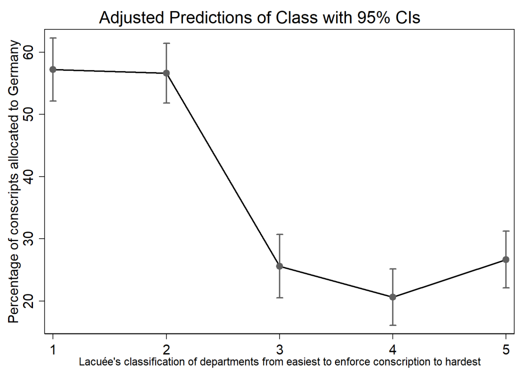
Table 21 reports the results of 6 OLS regressions where the dependent variables ("Rhine," "Spain" and "Italy") are the percentage of conscripts from the 1810 cohort (drafted in 1808) from a given department sent to the German, Spanish, or Italian front respectively. The dependent variables are dummies for whether a department was considered by the regime as among the best for conscription (first class), relatively good (second class), average (third class) or relatively bad (fourth class). The worst departments (fifth class) for conscription are omitted and are therefore used as a benchmark. Finally, column (2), (4) and (6) had a dummy variable for whether a department is adjacent to the German/Belgian border, the Spanish border, or the Italian border.

The results, shown graphically in figure 9, indicate that the allocation of soldiers was not random: departments classified as worse for conscription by the authorities were less likely to have their conscripts sent to Germany and more likely to have them sent to Italy or Spain. Conscripts in the first and second class departments were more than twice as likely to be sent to Germany than conscripts in other departments.

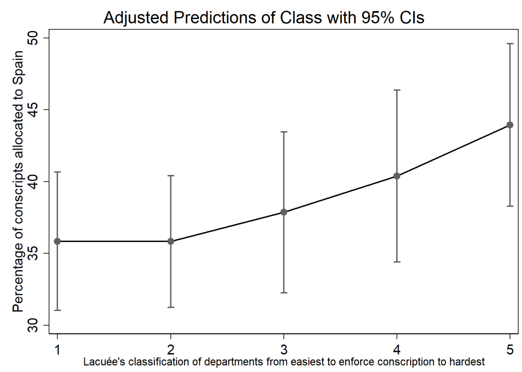
[5]This includes Illyria and the Ionian islands.

[6]Information about artillery and special forces is missing in Pascal (1864).

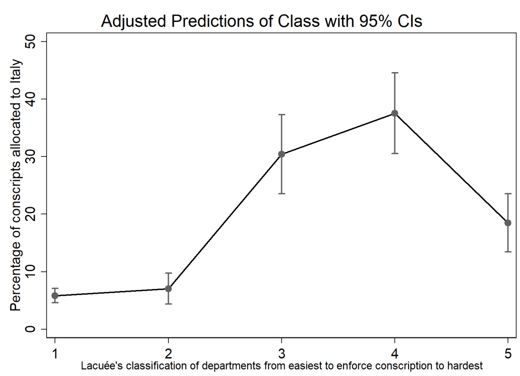
Figure 9: The allocation of soldiers was not random



((a)) Lacuée's classification and the percentage of conscript going to Germany



((b)) Lacuée's classification and the percentage of conscript going to Spain



((c)) Lacuée's classification and the percentage of conscript going to Italy

Table 21: The allocation of soldiers and Lacuée's classification.

Note: This table displays regressions of Lacuée's classification on the percentage of 30,000 conscripts from the 1810 cohort sent to different theaters of war in 1809. Conscripts were sent, broadly speaking, in 3 different regions: Germany (including Belgium), Italy (Including Illyria) and Spain. 'First class' represents the group of departments Lacuée considered the easiest to conscript from, 'Second class' the second easiest group of departments for conscription authorities and so on. 'Fifth class' is omitted and is therefore the baseline group. Robust standard errors are reported in parenthesis.

	Germany		*Spain*		*Italy*	
	(1)	(2)	(3)	(4)	(5)	(6)
First class	30.59125***	27.49264***	-8.08779**	-10.40361***	-31.69690***	-13.15878***
	(3.47537)	(3.55183)	(3.77916)	(3.83921)	(3.63043)	(2.71544)
Second class	29.99035***	28.89392***	-8.10397**	-10.41979***	-30.50490***	-11.35039***
	(3.37954)	(3.39001)	(3.70293)	(3.76406)	(3.82926)	(2.88135)
Third class	-1.05631	-2.19659	-6.07647	-8.39230**	-7.13106	12.04811***
	(3.48626)	(3.41586)	(4.05219)	(4.10873)	(5.01083)	(4.35060)
Fourth class	-6.04210*	-6.04210*	-3.54561	-4.99300		18.93878***
	(3.27494)	(3.27792)	(4.18684)	(4.11968)		(4.37295)
German border		14.25358***				
		(5.07459)				
Spanish border				-17.36869**		
				(6.99629)		
Italian border						-8.01319
						(6.53615)
Observations	555	555	555	555	555	555
R-squared	0.24929	0.26234	0.01129	0.02436	0.14094	0.14416

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In table 22 we compare the results of Table 1 to the same specifications when we include the new controls. Overall, the inclusion of the latter leaves the former unaffected: the effect of ruggedness on the draft-dodging rate is robust to the introduction of controls with respect to the allocation of soldiers. Coefficients on the natural log of ruggedness variable are slightly bigger in half of the specifications and slightly smaller in the other half, once we account for the allocation of soldiers. This suggests that our original estimates were not significantly biased by a failure to account for the strategic allocation of soldiers.

Table 22: Draft-dodging and the allocation of soldiers

Note: This table displays the same specifications as in Table 1 but only for year 1808, for which we have data about where 80,000 men from the 1810 cohort (drafted in 1808) were sent. Columns 1 to 5 reproduce the specifications in Table 1 while columns 1bis to 5bis add to those specifications 5 controls for where and to what kind of units were soldiers allocated. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(1)	(2)	(2bis)	(3)	(3bis)	(4)	(4bis)	(5)	(5bis)
Log of Ruggedness	4.37913	4.32179	4.71237	5.30706	5.78293	6.38193	5.70093	7.94737	6.73443
	(1.17625)***	(1.66987)**	(1.70593)***	(1.99237)***	(2.07202)***	(3.26558)*	(3.34943)*	(3.45976)**	(3.56812)*
	[1.33063]***	[1.49797]***	[1.44516]***	[1.68809]***	[1.64803]***	[2.42370]**	[2.39302]**	[2.52838]***	[2.46191]***
Townships Density		-47.07236	-29.95797	-58.44612	-40.60289	-3.68330	-20.58824	11.17962	4.26281
		(50.06276)	(54.81973)	(52.74689)	(56.44777)	(111.26527)	(124.25108)	(98.91698)	(107.14675)
		[44.35593]	[46.48071]	[45.54206]	[46.14760]	[85.07620]	[89.83163]	[75.19214]	[75.48497]
Distance from Paris		2.37436	2.17994	2.28853	2.13268	1.81673	0.59088	2.08903	0.99373
		(2.13943)	(2.50037)	(2.13330)	(2.46791)	(2.70639)	(2.88274)	(2.76485)	(2.75526)
		[1.67858]	[1.94425]	[1.65756]	[1.88915]	[1.96865]	[1.99923]	[2.00517]	[1.92069]
Border		1.61116	1.98059	2.05080	2.29385	3.83022	7.46414	5.65811	9.92165
		(2.29071)	(2.38516)	(2.33155)	(2.44765)	(4.59855)	(5.06653)	(4.46318)	(4.87567)**
		[1.91311]	[1.89646]	[1.89175]	[1.91571]	[3.31327]	[3.77985]*	[3.15821]*	[3.58183]***
Distance to depot			0.00906		0.00865		0.00018		-0.00219
			(0.01170)		(0.01185)		(0.01227)		(0.01170)
			[0.00986]		[0.00985]		[0.00896]		[0.00814]
Spain			0.02773		0.01719		0.20046		0.19754
			(0.06803)		(0.06828)		(0.07830)**		(0.06349)***
			[0.05675]		[0.05582]		[0.05320]***		[0.04267]***
Germany			0.01428		0.00465		0.09792		0.07727
			(0.07367)		(0.07512)		(0.10338)		(0.08224)
			[0.06308]		[0.06219]		[0.07110]		[0.05403]
Percentage Cavalry			-13.18487		-24.60775		3.18158		-6.15282
			(67.13806)		(68.18135)		(89.29523)		(77.05303)
			[55.99631]		[55.46108]		[66.07575]		[55.00336]
Percentage Artillery			-88.93989		-102.28245		-47.63763		6.08608
			(127.90747)		(133.25085)		(118.93821)		(118.66444)
			[106.45220]		[108.55822]		[78.64719]		[76.24721]
Observations	111	107	107	107	107	73	73	73	73
R-squared	0.10218	0.68487	0.69001	0.68783	0.69369	0.84896	0.88076	0.87004	0.90162
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓	✓	✓	✓
*** p<0.01, ** p<0.05, * p<0.1									

G.2 National identity

The existing historiography on the pervasiveness of draft-dodging in Napoleonic France identifies one main alternative explanation for the variation in draft-dodging rates across the country: culture (Forrest 1989). As the reaction to the revolution made clear, the country was all but in agreement when it came to the religious sensibility of the local populations, their attachment to revolutionary ideals, and even to their national identity. Varying cultural values, social norms, and attitudes may have generated variation in the response to the conscription effort. As Levi (1997, p.5) puts it, "Debates over the introduction of obligatory military service in democracies rehearses themes of ennobling self-sacrifice, nationalism, and the superiority of the needs of the state to the rights of the individual."

Variation over cultural traits may affect the propensity to desert of the population across departments. For example, departments with stronger popular support for the regime or with a more ardent sense of French national identity may experience lower draft-dodging rates. Because national identity, ideology, or adherence to the regime could be negatively correlated to ruggedness on the one hand and conscription choice and draft-dodging on the other, not controlling for national identity could lead us to overestimate the effect of ruggedness. Hence we use data measuring how strongly people in each department identified as French and data measuring support for the new revolutionary ideology.

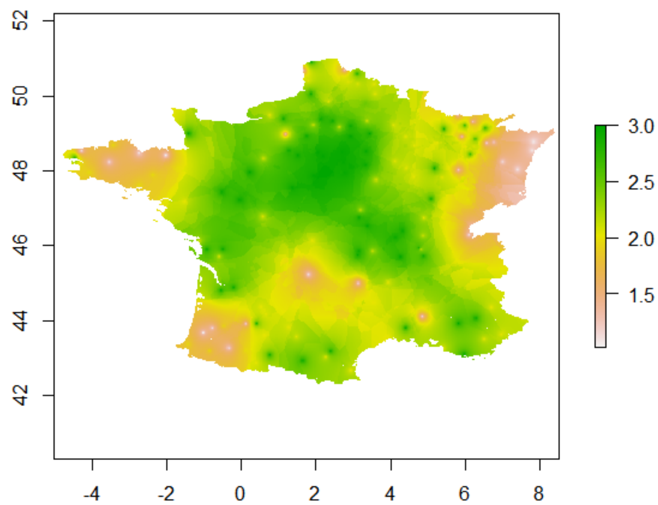
To test for the national identity hypothesis, we rely on data from Johnson (2015), who draws from Hyslop (1934), on the regional identification of the population with the French Crown or the French state on the eve of the revolution. In preparation for the Estates Generals of 1789, the capital of each French district was to collect grievances from the local population and communicate them to the national assembly. This resulted in a collection of documents known as *Cahiers de Doléances*.

Based on these documents, Hyslop (1934) creates an index for national identity across French localities, which Johnson (2015) codes as having values of 3 for localities with strong patriotism, 2 for those with mixed loyalties, 1 for those with strong local identities, and "missing" for those presenting no significant loyalties, either their local identity or to the Crown. Hyslop (1934) recorded whether the topic is mentioned in the general *cahier* of the that electoral city for that estate. Thus, missing values are really missing, not zeroes. Following Johnson (2015), we spatially interpolate the 150 observations for city-level measures of national identity. We show the results in figure 10. We then create a new variable for the average measure of national identity at the departmental level and add it to the specifications of tables 1 and 4.

Our measure of national identity is consistent with broad historical evidence regarding national identity: Basque country, Brittany and Alsace, which were regions with distinct languages and customs, all have low "national identity" values, while the region around Paris has the highest levels of national identity.

Figure 10: National identity across France in 1788.

Note: Greener colors represents greater identification in the *Cahiers* by the Third Estate with either the 'King' or 'France' according to Hyslop (1934). Each grid point in the map was assigned a value based on the inverse-weighted distance of surrounding 12 cities that sent in Cahiers (exponent of distance used is 1).

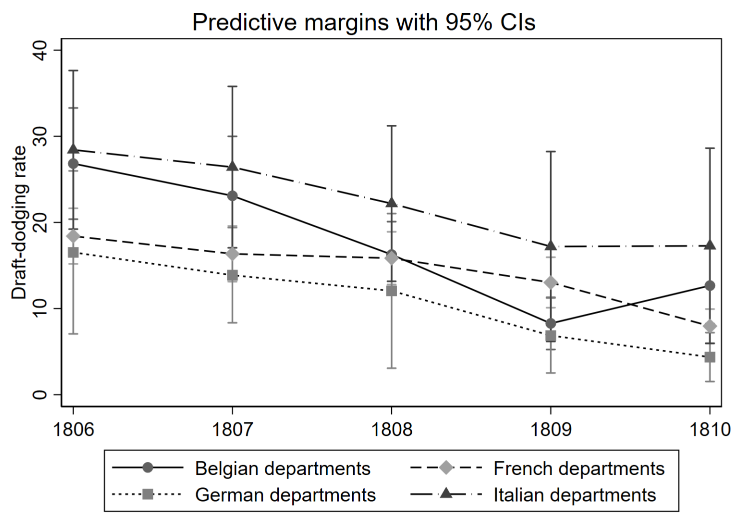


The link between the sense of belonging to the French nationality and draft-dodging during the Napoleonic era was not as straightforward as one may think. Although politicians and generals did talk about patriotism, honor, etc. most conscripts gave little attention to those considerations: they wished to be able to help their parents during the harvest season and found proving their patriotism on the battlefield too costly to their taste. Paradoxically, the new departments outside of France's 1789 borders were not systematically more likely to have high draft-dodging rates. German departments, in particular, were among the most obedient for conscription authorities (Hudemann-Simon 1987) (See figure 11). Yet, it is unlikely that conscripts speaking German, and in territories only recently annexed, deserted at lower rates because of their rabid nationalism. On the other hand, conscription may have been used to make "new French" into "old French." As the Prefect of Meuse-Inférieure wrote to the Minister of the Interior in 1802:

> [Local public officials] must constantly look to achieve rapprochement by the best means, and as a result the identification of the new with the old

French. The most effective means to obtain this significant result consists, in this country as elsewhere, in rendering communications between the two people closer, more essential and more general. That is very difficult in the countryside, and nothing would contribute more to the gradual introduction of the customs, the speech and the character of the French than making recruitment for the French armies as frequent as possible.[7]

Figure 11: Draft-dodging rates over time by nationality



Tables 23 and 24 report the results of the new specifications. The coefficients for the effect of "identity" on the draft-dodging rate are negative but are statistically significant when using Conley standard errors in only half of our specifications. Those for the "Log of ruggedness" variable, on the other hand, remain overall statistically significant—except in column 2—and the coefficients are generally higher than in Table 1.

We also find no evidence that the central government drafted a higher share of the population in regions which identified more strongly as French (table 24). If anything the sign on our identity variable is negative, suggesting that leaving in regions where inhabitants "felt more French" was negatively correlated with the likelihood of being drafted. Our ruggedness variable, on the other hand, remains statistically and economically significant throughout.

[7]Cited in McCain (2017, p.156).

Table 23: Identity and draft-dodging

Note: This table displays the same regressions as in Table 1 while adding the variable 'Identity' which measures the sense of belonging to a French nation in 1789. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
Identity	-1.76078	-9.12380	-14.83810	-15.20102	-16.76919	-16.68784
	(2.17035)	(3.94106)**	(4.52293)***	(5.58745)***	(6.02584)***	(6.04402)***
	[5.31607]	[7.71085]	[8.85760]*	[10.27255]	[10.04113]*	[10.05771]*
Log of ruggedness	4.53656	3.30479	5.26895	5.42845	7.08562	6.82773
	(0.83247)***	(1.39994)**	(1.56174)***	(1.75902)***	(1.81784)***	(1.97807)***
	[1.89766]**	[2.10473]	[2.16972]**	[2.46413]**	[2.61351]***	[2.92270]**
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓
Observations	430	430	430	360	288	288
R-squared	0.15784	0.68771	0.70236	0.76342	0.80066	0.80073

*** p<0.01, ** p<0.05, * p<0.1

Table 24: Identity and conscription

Note: This table displays the same regressions as in Table 3 while adding the variable 'Identity' which measures the sense of belonging to a French nation in 1789. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Conscription rate	(1)	(2)	(3)	(4)	(5)
Identity	-0.49212	-1.00335	-2.03056	-0.70060	-0.67402
	(0.65231)	(0.76589)	(0.90843)**	(1.18360)	(1.18596)
	[1.38522]	[1.10482]	[1.38288]	[1.55143]	[1.56104]
Log of ruggedness	-0.65480	-2.16440	-1.38176	-2.46635	-2.54792
	(0.18795)***	(0.42097)***	(0.43235)***	(0.48625)***	(0.53520)***
	[0.35354]*	[0.58653]***	[0.52396]***	[0.47397]***	[0.53935]***
Same Controls as in Table 3	✓	✓	✓	✓	✓
Observations	430	430	430	360	360
R-squared	0.13121	0.70694	0.72174	0.74246	0.74257

*** p<0.01, ** p<0.05, * p<0.1

G.3 Ideology

Measuring directly the ideological profile of the local population unfeasible for early 19th century France. However, we construct a proxy measure by using data collected by Tackett (1986) on the percentage of the French clergy who agreed to swear an oath to the Constitution in 1791 in each department. The 1790 Civil Constitution of the Clergy ordered clergymen to swear an oath of allegiance to the State "on a Sunday at the conclusion of the mass" (Decree on the clerical oath, 1790). As Tackett (1986, 4) writes, "the issue of the oath soon became a veritable obsession, unleashing emotional reactions and factional strife in parishes everywhere." In 1791, in both Paris and provinces, the oath became "the central public event" and "the most discussed problem" Tackett (1986, p.5).

While anti-revolutionaries and the King himself championed a return to the Church of the *Ancien Régime*, revolutionaries wanted to ensure the loyalty of the clergy to the new constitution. The politicization of the oath became so intense that it "became a sort of indirect referendum for or against the religious politics of revolutionaries" (Langlois et al. 1996, 32) as clergymen who had been in parishes for several long periods of time could scarcely resist popular pressure (Forrest 1989, 77).[8] Hence we can use data about oath-taking to investigate whether ideology impacted conscripts' choice to dodge the draft. An administrator in Saône-et-Loire during the end of the Directory (1795-1799), for instance, complained that in various cantons "fifteen to sixteen [refractory priests] go through the countryside" and "forbid the conscripts to leave [to the army]." (Waquet 1968, p.193).

If ideology matters, we should expect the "Oath" variable to have a negative impact on the draft-dodging rate and a positive one on the conscription rate, reflecting the higher adherence of the population to the revolutionary policies of the central government. Our results in table 25 and 26 suggest that neither the draft-dodging rate nor the conscription rate was significantly affected by our "Oath" variable while coefficients for the "Log of ruggedness" remain generally large and statistically significant throughout.

[8]The data on the oath could also measure in part religiosity as suggested by Tackett (1986) and Blanc (2019). Forrest (1989) argues that religion may have been a factor the dynamics of desertion.

Table 25: Ideology and draft-dodging

Note: This table displays the same regressions as in Table 1 while adding the variable 'Oath' which is an indirect measure of adherence toward the ideals of the French Revolution. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
Oath	-0.04946	-0.06676	-0.08172	-0.04575	-0.03968	-0.04005
	(0.02477)**	(0.03523)*	(0.03648)**	(0.03796)	(0.04089)	(0.04139)
	[0.05408]	[0.06073]	[0.06266]	[0.06186]	[0.05975]	[0.06125]
Log of ruggedness	5.72230	3.60389	5.15235	4.50707	6.03752	6.07977
	(0.81967)***	(1.53899)**	(1.71541)***	(1.72766)***	(1.78861)***	(1.95091)***
	[1.87014]***	[2.60072]	[2.59116]**	[2.24946]**	[2.40408]**	[2.71476]**
Same Controls						
as in Table 1	✓	✓	✓	✓	✓	✓
Observations	405	405	405	345	276	276
R-squared	0.18115	0.69269	0.69884	0.76145	0.79672	0.79673

*** p<0.01, ** p<0.05, * p<0.1

Table 26: Ideology and conscription

Note: This table displays the same regressions as in Table 3 while adding the variable 'Oath' which is an indirect measure of adherence toward the ideals of the French Revolution. We report robust standard errors in parenthesis and Conley standard errors (100km) in brackets.

Conscription rate	(1)	(2)	(3)	(4)	(5)
Oath	-0.00039	0.00378	0.00325	0.00889	0.00974
	(0.00831)	(0.01024)	(0.01048)	(0.01188)	(0.01227)
	[0.01678]	[0.01319]	[0.01343]	[0.01345]	[0.01336]
Log of ruggedness	-0.43310	-2.11900	-1.45693	-2.72240	-2.80431
	(0.18515)**	(0.41647)***	(0.44037)***	(0.49320)***	(0.54549)***
	[0.34458]	[0.59431]***	[0.57358]**	[0.47537]***	[0.52120]***
Same Controls					
as in Table 3	✓	✓	✓	✓	✓
Observations	405	405	405	345	345
R-squared	0.12216	0.70200	0.71259	0.74817	0.74827

*** p<0.01, ** p<0.05, * p<0.1

G.4 Legal origins

Before 1789, France contained regions that were governed by either "customary" or "civil" systems of law. Mostly, civil law ruled in the the south of France, due to the historical presence of the Roman empire and "[its] geographic proximity with Rome" (Le Bris 2019). Northern France, on the other hand, used customary law which, as with common law, left more room for judges to "make" the law and constrained the arbitrary power of central government and its officials. While Le Bris (2019) finds no lasting effect of legal origins on economic development in France, the distinction between civil and customary law regions represented more than a legal demarcation: it also delineated a cultural barrier. McCain (2017, p.186), for instance, points that "there [...] existed an enduring division between the pays du droit écrit or Roman law of the South, and the pays du droit coutumier or customary law of the North. In general, the populations of the South displayed a greater propensity to seek redress from the legal system, a fact it is difficult to explain except as the manifestation of a distinct litigious culture or mentality." The legal distinction between civil and customary law territories was also compounded by the linguistic differences between the *langue d'oc*-speaking South and the *langue d'oil*-speaking North. Figure 12 map shows the civil law regions of France in yellow.

Figure 12: Map of Civil and Customary Areas before the Revolution (Klimrath 1837).

To investigate whether the relationships we identify between ruggedness, draft-dodging, and conscription hold when accounting for the demarcation the cultural differences between the Southern and Northern regions of France, we use a variable constructed by Le Bris (2019). This variable, named "Civil law," is equal to 1 when a department had exclusively civil law institutions on its territory and 0 otherwise. Departments using a mix of "customary" and "civil" law institutions are assigned a value of 0.5.

Table 27 reproduces the specifications from table 1 while controlling for "Civil law" (Panel A), using only departments in which civil law was used as a sample (Panel B), and using only departments in which customary law was used (Panel C).

As one might expect, introducing "Civil law" as a control makes the results statistically weaker because our "Civil law" variable is highly correlated with ruggedness,[9]. Despite this, our results have the right sign for "Log of ruggedness"—except for the univariate regression using civil law department only which is virtually equal to zero,[10] and are generally statistically significant. The results are strongest for customary law departments—which is also the group with the most observations.

In addition, "Distance from Paris" is highly correlated with both the log of ruggedness (0.64) and "Civil law" (0.83).[11] The absence of statistical significance in some of the columns may therefore be the result of our data having too few observations to identify the independent effect of those 3 highly correlated variables. Once we exclude "Distance from Paris," all regressions, using Conley standard errors, are significant at the 10% level and a majority are significant at the 5% level. As for Panel B and C, excluding "Distance from Paris" leads all of the 'Log of ruggedness" coefficient to be significant at the 5% level in columns 2 to 5.

Finally, table 28 reproduces the specifications from Table 3 and show that its results are, here too, robust to accounting for legal origins. The relationship between the log of ruggedness and the rate of conscription, on the other hand, seems markedly more pronounced in "civil law" departments than in "customary law" ones.

[9] The correlation coefficient between the log of ruggedness and "civil law" is equal to 0.64.

[10] This is likely due to departments in the Alps with much higher ruggedness values than the rest of France. Note also that the regressions in Panel C rely on fewer than half observations as in Panel A.

[11] The VIF score for the "Distance from Paris" variable is equal to 37.9 in Panel A, column 5. A VIF greater than 10 is said to indicate potential issues with multicollinearity.

Table 27: Draft-dodging and ruggedness accounting for legal origins

Note: This table display the same specifications as in Table 1 while controlling for civil law institutions during the *Ancien Régime* (Panel A), using only departments in which civil law was used as a sample (Panel B) and using only departments in which customary law was used (Panel C). Robust standard errors are in parenthesis and Conley standard errors in brackets.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
			Panel A: *Controlling for Civil law.*			
Log of ruggedness	5.77765	3.58553	5.30981	4.53723	6.06976	5.46383
	(0.85522)***	(1.49758)**	(1.72094)***	(1.92967)**	(2.06331)***	(2.21895)**
	[1.98292]***	[2.63231]	[2.72036]*	[2.83521]	[3.08380]*	[3.30301]*
Townships Density		-120.34487	-133.57890	-62.00699	-23.13438	-11.47901
		(23.96731)***	(23.66142)***	(47.18833)	(49.02981)	(50.27376)
		[48.35680]**	[45.09295]***	[84.46100]	[78.60811]	[79.30109]
Distance from Paris		2.22319	2.76286	2.13521	3.01656	2.92046
		(1.17091)*	(1.21719)**	(1.07585)**	(1.22985)**	(1.25233)**
		[1.85231]	[2.02440]	[1.67094]	[1.93438]	[1.96567]
Border		0.95083	0.28875	4.87621	4.92784	4.89192
		(2.51451)	(2.62958)	(2.74629)*	(2.91701)*	(2.94470)*
		[4.12900]	[4.49622]	[4.62619]	[4.63347]	[4.69163]
Civil law		5.28784	3.62330	0.62319	0.73558	1.32446
		(3.58973)	(3.64008)	(4.05993)	(4.56702)	(4.65189)
		[6.26441]	[6.64875]	[7.31242]	[7.30119]	[7.45456]
Observations	420	420	420	365	292	292
R-squared	0.17054	0.68765	0.69330	0.75276	0.78833	0.78869
			Panel B: *Customary law departments only.*			
Log of ruggedness	4.81269	5.49439	6.78093	5.38230	6.86121	4.32270
	(1.55572)***	(1.61033)***	(1.56573)***	(1.87875)***	(2.17470)***	(2.77005)
	[3.40152]	[2.86287]*	[2.57599]***	[3.13844]*	[3.45831]**	[3.90375]
Townships Density		-125.66523	-127.88799	-231.13357	-241.59048	-194.54520
		(22.52908)***	(22.21029)***	(55.58125)***	(55.62693)***	(68.15034)***
		[41.20070]***	[38.83294]***	[89.82238]**	[87.88121]***	[105.54333]*
Distance from Paris		4.37405	4.87778	2.10998	1.93865	1.50128
		(0.95052)***	(1.02960)***	(1.02403)**	(1.14430)*	(1.15313)
		[1.79804]**	[1.95310]**	[1.66008]	[1.75645]	[1.72962]
Border		-2.30271	-3.39668	5.65984	7.78167	3.37909
		(1.41749)	(1.47423)**	(2.70633)**	(2.75682)***	(4.58425)
		[1.71762]	[1.73667]*	[3.78593]	[4.14755]*	[7.60276]
Observations	275	275	275	230	184	184
R-squared	0.10473	0.68975	0.69592	0.75721	0.79294	0.79580
			Panel C: *Civil law departments only.*			
Log of ruggedness	-0.05405	8.36048	10.96630	8.10695	7.39802	10.64860
	(1.33162)	(2.96577)***	(3.09572)***	(3.76113)**	(4.19375)*	(4.72327)**
	[2.89910]	[5.26665]	[5.33145]**	[5.41848]	[5.77493]	[6.26432]*
Townships Density		-430.49922	-449.37398	-196.11810	-150.03691	-336.54205
		(89.84225)***	(88.26535)***	(148.97150)	(173.34136)	(222.93822)
		[166.31739]**	[158.50661]***	[234.76946]	[248.64918]	[338.51404]
Distance from Paris		1.94939	1.99373	8.40554	11.76047	11.32319
		(2.84980)	(2.74932)	(3.58369)**	(4.08707)***	(3.90943)***
		[4.69053]	[4.65984]	[4.75268]*	[5.15434]**	[4.57116]**
Border		1.25488	4.80045	12.80854	14.17984	11.38069
		(3.35340)	(3.87938)	(4.33081)***	(4.75630)***	(5.51318)**
		[5.02975]	[6.18168]	[4.78728]***	[4.84865]***	[6.09901]*
Observations	180	180	180	160	128	128
R-squared	0.13422	0.60955	0.66538	0.78710	0.80576	0.81442
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1

Table 28: Conscription rates and ruggedness accounting for legal origins

Note: This table display the same specifications as in Table 3 while controlling for civil law institutions during the *Ancien Régime* (Panel A), using only departments in which civil law was used as a sample (Panel B) and using only departments in which customary law was used (Panel C). Robust standard errors are in parenthesis and Conley standard errors in brackets.

Conscription rate	(1)	(2)	(3)	(4)	(5)
	Panel A: *Controlling for Civil law.*				
Log of ruggedness	-0.27474	-1.94332	-1.06504	-2.23281	-2.23312
	(0.18718)	(0.40521)***	(0.44313)**	(0.50495)***	(0.54847)***
	[0.35737]	[0.58173]***	[0.56309]*	[0.52578]***	[0.57417]***
Townships Density		16.27206	9.35116	-7.33362	-7.32767
		(8.06479)**	(7.50815)	(10.43036)	(11.35151)
		[13.52233]	[12.82917]	[12.19553]	[14.36447]
Distance from Paris		-0.18190	0.02686	0.57202	0.57197
		(0.34470)	(0.35682)	(0.38527)	(0.39119)
		[0.48247]	[0.47987]	[0.47356]	[0.47645]
Border		-1.54517	-2.25724	-1.89750	-1.89754
		(0.67461)**	(0.71797)***	(0.74724)**	(0.74893)**
		[0.70716]**	[0.85203]***	[0.74397]**	[0.74631]**
Civil law		-0.94307	-1.99803	-0.60661	-0.60629
		(0.77598)	(0.81191)**	(0.94891)	(0.96863)
		[0.94737]	[0.99417]**	[1.21468]	[1.22299]
Observations	420	420	420	365	365
R-squared	0.11711	0.69880	0.71310	0.74419	0.74419
	Panel B: *Customary law departments only.*				
Log of ruggedness	0.54112	-1.52426	-0.44896	-2.32059	-2.19796
	(0.42058)	(0.55196)***	(0.57997)	(0.73968)***	(0.87749)**
	[0.85685]	[0.83746]*	[0.77868]	[0.89967]**	[1.04791]**
Townships Density		6.57574	5.15201	6.83213	4.62846
		(9.89646)	(9.00243)	(17.63856)	(19.37255)
		[17.38529]	[14.56773]	[21.20738]	[22.20749]
Distance from Paris		-1.18538	-0.98462	-0.08306	-0.06223
		(0.36220)***	(0.38914)**	(0.45851)	(0.45431)
		[0.48593]**	[0.53959]*	[0.51235]	[0.48528]
Border		-1.58077	-2.70850	-1.85230	-1.63801
		(1.36166)	(1.37665)*	(1.48158)	(1.73492)
		[0.67035]**	[0.61991]***	[1.07747]*	[1.58669]
Observations	275	275	275	230	230
R-squared	0.10985	0.73353	0.75414	0.78893	0.78898
	Panel C: *Civil law departments only.*				
Log of ruggedness	-0.79852	-2.56586	-2.60837	-4.34897	-5.13016
	(0.31645)**	(0.73978)***	(0.73130)***	(1.14532)***	(1.11379)***
	[0.56666]	[0.76914]***	[0.61168]***	[1.30912]***	[1.21716]***
Townships Density		58.63373	59.46316	115.46908	174.74826
		(22.45050)***	(22.88369)**	(38.01789)***	(44.69996)***
		[29.76176]*	[26.45827]**	[54.00397]**	[77.88675]**
Distance from Paris		0.66571	0.66894	2.04170	1.84732
		(0.83197)	(0.82552)	(1.14083)*	(1.16107)
		[0.95723]	[0.94421]	[1.44823]	[1.48922]
Border		-1.47537	-1.49651	0.01680	0.89050
		(0.84374)*	(0.84791)*	(1.20162)	(1.23346)
		[0.90122]	[0.82665]*	[1.24311]	[1.19623]
Observations	180	180	180	160	160
R-squared	0.14443	0.66662	0.66671	0.68379	0.70370
Same Controls as in Table 1	✓	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1

H Lacuée's plan

In this appendix, we provide evidence that Lacuée's classification of departments for purposes of conscription policy was correlated with their average terrain ruggedness. Table 29 shows the result of four logistic regressions, using different set of controls, for the probability that Lacuée classified a department as above average in its population's resistance to conscription. The coefficient for the natural logarithm of terrain ruggedness is consistently positive and statistically significant across all four specifications. Figure 13 provides a graphical representation of the results from column 3 in table 29 and shows a clear positive relationship between a department's terrain ruggedness and the probability that it was put by Lacuée in either groups 4 or 5 of his classification of France's departments.

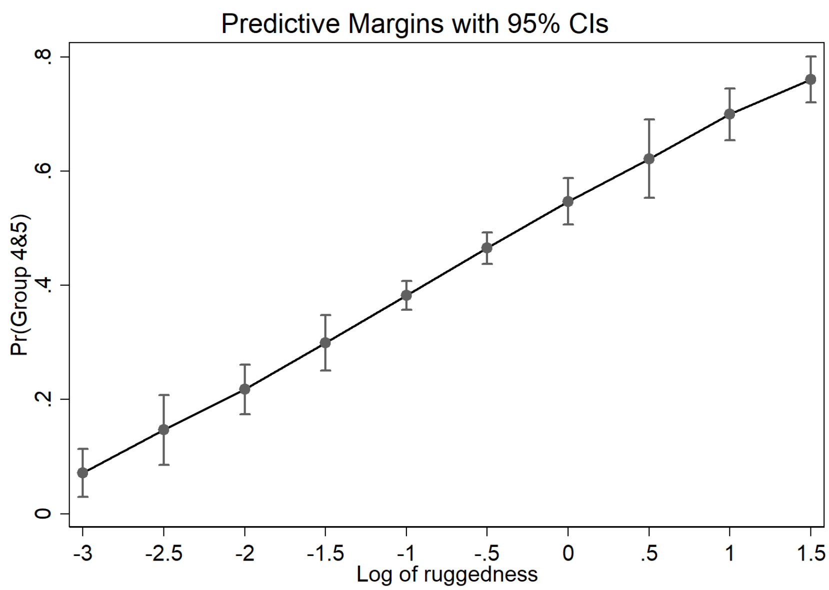
Table 29: Logistic regression of Lacuée classification choice

Note: This table displays the logistic regression of *Group 4&5* on geographic variables. *Group 4&5* is a categorical variable equal to 1 when a department is part of group 4 or 5 (that is one of the departments which, according to Lacuée, was least amenable to conscription) and equal to 0 otherwise.

Group 4&5	(1)	(2)	(3)
Log of ruggedness	0.53729	0.55468	1.66021
	(0.20258)***	(0.27046)**	(0.71687)**
Townships density		-25.6083	-37.0362
		(8.29329)***	(24.1940)
Exemption rate		0.093053	0.24327
		(0.036736)**	(0.081956)***
Maritime		1.41314	2.35585
		(0.53882)***	(1.32795)*
Border		0.085358	6.61611
		(0.76750)	(2.48340)***
Urbanization rate			-3.79521
			(5.39538)
Tax revenues per capita			✓
Literacy			✓
Agricultural sector			✓
Height			✓
Observations	111	107	74

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure 13: The probability of belonging to Group 4 & 5 by ruggedness levels (predicted from column 3 in table 29).



I Spatial dependence

In this appendix, we test whether our results, which we have found so far to be consistently highly significant, may suffer from spatial dependence. The spatial distribution of ruggedness and draft-dodging is geographically clustered, which may lead spurious results to appear statistically significant. If both the dependent and the independent variable are spatially correlated, the standard error of the coefficient will not be adjusted for the fact that close observations are naturally more likely to possess the same attributes, hence resulting in inflated t-statistics.

The issue of spatial dependence has generally been dealt with by reporting adjusted standard errors (Conley 1999). In order to mitigate this concern, throughout our paper we report Conley standard errors with a 100km cutoff value. However, Kelly (2019) shows that the use of Conley standard errors can be unsatisfactory when using low cutoff values. To avoid this problem, we report Conley standard errors for our main regressions (Tables 1 and 4) when changing the cutoff value to 600km. The standard errors, if anything, become smaller and our results remain statistically significant, suggesting that they are robust to a change in the correlation range.

Table 30: Geography and draft-dodging with CSEs.

Note: This table displays the same results as in Table 1. We report Conley standard errors in brackets with a threshold of 600km instead of 100 km.

Draft-dodging rate	(1)	(2)	(3)	(4)	(5)	(6)
Log of ruggedness	3.16375**	2.82657**	3.86229***	4.65358***	6.20847***	5.76847***
	[1.39623]	[1.22587]	[1.31907]	[1.75593]	[2.13639]	[2.19430]
Same Controls as in Table 1	✓	✓	✓	✓	✓	✓
Observations	554	534	534	365	292	292
R-squared	0.12556	0.64026	0.64373	0.75273	0.78830	0.78860

*** p<0.01, ** p<0.05, * p<0.1

Table 31: Geography and conscription with CSEs.

Note: This table displays the same results as in Table 3. We report Conley standard errors in brackets with a threshold of 600km instead of 100 km.

Conscription rate	(1)	(2)	(3)	(4)	(5)
Log of ruggedness	-0.81793***	-1.42835***	-0.87341**	-2.33772***	-2.36288***
	[0.26416]	[0.31895]	[0.36904]	[0.23386]	[0.26917]
Same Controls as in Table 3	✓	✓	✓	✓	✓
Observations	555	535	535	365	365
R-squared	0.13954	0.68197	0.69429	0.74391	0.74392
*** p<0.01, ** p<0.05, * p<0.1					

J Theoretical appendix

This appendix develops a simple model of discriminatory conscription enforcement. Consider the problem of a rational ruler who must raise an army of size X from a population of size N, where X is so large as to make reliance on volunteers incompatible with its fiscal constraints.[12] A volunteer army being off-the-table, our ruler must rely on conscription. An army of size X requires a conscription rate x where $x = X/N$. The ruler's subject population consists of identical agents distributed homogeneously across d regional departments. Thus, each department has the same population N/d. While identical in size and population, these departments may vary on a variety of margins. Our analysis focuses on variation in geographical and environmental characteristics and its effect on the ruler's ability to enforce conscription a given conscription rate.

Equation (1) gives the ruler's value function for a given rate of conscription.

$$V = \sum_{i=1}^{i=d} (bx_i - c_i x_i^{1/a}) \tag{1}$$

where x_i is the conscription rate in department i and $i \in (1,\ 2,\ ...,\ d)$. Sine x_i indicates a share of the department's population, $x_i \in [0, 1]$. The ruler's total benefits are given by the sum of the benefits of conscription across all departments, where these are linear in the conscription rate. b measures the benefits to the ruler of increasing the rate of conscription across all departments and reflects the urgency of drafting more men due to an increase in the optimal army size. A threat of foreign invasion or newly discovered opportunities for territorial expansion both increase the value of b. Thus, b is strictly positive and—since we assume that individuals are identical regardless of where they come from—it does not vary across departments.

The ruler's total cost is given by the sum of all department-level cost functions of the form $c_i x_i^{1/a}$, where $a,\ c_i \in (0,\ 1)$. a represents the reciprocal of the elasticity of the cost function with respect to the conscription rate. c_i is a shift parameter that measures the effects (direct and indirect) of geographical and environmental factors on the ruler's cost of administrating conscription in a given department. Since these characteristics vary across departments, so will c_i. Underlying this discussion is the relationship between conscription, environmental characteristics, and draft-dodging. The higher the conscription rate, the more individuals will desert their legal obligation to serve in the national army. The costs of administrating a system of conscription will be linked to the subjects' ability to evade their military obligation.

[12]See the discussion in Ross (1994).

Geography can enable draft-dodging via its effect on the ruler's own ability to catch deserters. Thus, the total cost of administrating conscription in department i are increasing in this measure of department-specific geographical characteristics and in the ruler's choice of the conscription rate in the same department or $\frac{\partial TC_i}{\partial x_i} > 0$, $\frac{\partial TC_i}{\partial c_i} > 0$.

If the ruler wishes to maximize the value of V, it must choose $x_i^* \ \forall \ i \in (1,\ 2,\ ...,\ d)$ subject to the constraint that the sum of all department-level contingents must equal the (exogenously determined) optimal army size or $\sum_{i=1}^{i=d} x_i \frac{N}{d} = X$. The first order conditions to the ruler's optimization problem yield the equimarginal principle in equation (2):

$$b = \frac{1}{a} c_i x_i^{\frac{1-a}{a}} \tag{2}$$

Solving for x_i^*:

$$x_i^* = \left(\frac{ba}{c_i}\right)^{\frac{a}{1-a}} \tag{3}$$

Proposition 1: The optimal conscription rate in every department is increasing in the marginal benefit of conscription.

Proof: Equation (4) gives the value of the effect of a change in the marginal benefit of conscription on the optimal draft-dodging rate in department i.

$$\frac{\partial x_i^*}{\partial b} = \frac{a^2 \left(\frac{ba}{c_i}\right)^{\frac{2a-1}{1-a}}}{c(1-a)} > 0 \tag{4}$$

Since $a,\ c_i \in (0, 1)$ and $b > 0$, equation (4) shows that an increase in b positively affects the ruler's choice of the conscription rate in department i. When the benefits of increasing the conscription rate increase—for example, due to an unexpected threat of foreign invasion—the ruler will want to draft more men across the board, bumping up the rate of conscription in every department.

Proposition 2: The optimal conscription rate is decreasing in the shift parameter c_i.

Proof: To prove proposition 2, we look at the partial effect of a change in c_i on the optimal rate of conscription in department i. This is given by equation (5).

$$\frac{\partial x_i^*}{\partial c_i} = -\frac{ba^2}{(1-a)c^2} \left(\frac{ba}{c}\right)^{\frac{2a-1}{1-a}} < 0 \tag{5}$$

Since a, b and c_i are strictly larger than 0 and a, c strictly smaller than 1, the partial effect of c_i on x_i^* is negative.

K Aux Armes, Citoyens

K.1 The French Army and the Revolution

At the eve of the revolution of 1789, the French army was one of the largest in the continent (Downing 1992, p. 69). The infantry force alone was over 130,000 men strong (Nafziger 1987, p. 1). The country had one of the longest military traditions in Europe, going back to the establishment of the *Compagnie d'Ordonnance* in the fifteenth century, and had come to embody the principles of the military revolution more than any other armed force, second only to that of Frederician Prussia (Parker 1996). Traditionally, military recruitment in France operated through four sources (Best 1998). The two largest had been domestic volunteers and foreign mercenaries (Tozzi 2016). The state would also sometime compel service from convicts and beggars. Only recently had France begun experimenting with military conscription, though conscripts were few and relegated to garrisons and to the newly formed provincial militia, which was responsible mainly for domestic service. With few exceptions, only members of the French nobility had access to the officer corps (Best 1998, pp. 24-26).

When the revolutionaries began to bring down the country's social, political, and religious institutions, they did not spare the *Ancien Régime* army. Officers suspected of royalist sympathies were encouraged to step-down. Many of them left the country altogether, fearful for their necks (Nafziger 1988, p. 11). By 1792, only three of the *Ancien Régime* generals had remained in service. All others were guillotined (Delbrück 1985, p. 396). The revolutionary government also disbanded all regiments of foreign mercenaries and did away with any form of conscription, which it deemed a form of servitude incompatible with the principles of the new regime (Best 1998, p. 77). Reform was warranted. In the century before the revolution, the army had claimed few consequential victories. It had also developed a notoriety for the lack of discipline among its ranks (Delbrück 1985, p. 390). The two most consequential changes to the organization of the French armed forces pertained to the access to the officer corps and the logic of promotion within it. Officers needed not be of noble extraction anymore, which had a democratizing effect on army life and culture, and advancement to the top of the hierarchy was driven by merit more than seniority and status: "The distinction between the officer corps and the men no longer had the nature of a class division but rather of one between higher and lower education and qualification" (Delbrück 1985, p. 411).

The need for reform became more pressing with the start of the Revolutionary wars. The latter had started as a defensive effort to protect the revolution from the *Ancien Regime* powers—led by Austria—but quickly evolved into an expansionary one. The occupation in quick succession of Avignon (1791), Savoy (1792), Belgium (1795), and the Eastern Rhineland (1798) was justified with the *République*'s need to defend its "natural frontiers" as well as the ideological goal of "exporting the revolution" (Grab 2003, p. 1). The new regime found itself quickly in need for soldiers. Its military needs were growing and it had little trust in the line army that it had inherited from the monarchy, and even less so in its officer corp. Already in 1791, it had created a parallel military hierarchy, under the leadership of the revolutionary movement, manned by volunteers motivated by ideological fervor.

The flow of volunteers to this force, the National Guard, had mitigated the country's military needs in the earliest years of the war (Best 1998, p. 78). However, their number was not sufficient to compensate for the many officers and line soldiers that had abandoned the army since the revolution (Nafziger 1987, p.2). The government soon recognized that it had to reverse its stance on conscription. In 1793, it introduced the *levée en masse*, making all (male) able-bodied French citizens liable for military service and 300,000 of them were to join the army immediately (Forrest 1989, p. 26).

Over the following five years, France's demand for soldiers grew with the need to defend a larger territory and the threat posed to its integrity by the coalition of *Ancien Regime* powers. Conscription thus became even more integral to its survival. The 300,000 draftees of 1793 became 450,000 before the end of the year and one million the next one. Even with less-than-full compliance, by 1795 the French army had 750,000 men at its disposal (Best 1998, p. 87). The same year, the country's new constitution included a reference to every citizen's obligation to serve the nation against its enemies (Furet 1996, p. 165). Finally, in 1798, the *Loi Jourdan* made conscription a permanent feature of the French military system, "year in year out, peace or war" (Best 1998, p. 90): "In the history of no other European country is there any comparable feat of total mobilization for war purposes before the twentieth century" (Best 1998, p. 93). With this step, a new form of military organization made its entrance in European history: the national army (Downing 1992, p. 253):

During the Directory (1795-1799), Consulate (1799-1804) and Empire (1804-1814) conscription was administered via a lottery system to which all able-bodied men aged between 20-25 years old were required to participate. Military service was, in theory, to last for five years only. In reality, the most likely ways out of one's military obligation were death and serious injury.

K.2 The Napoleonic Way of War

At the time of Napoléon's ascent to power in 1799, France's national army had no match on the continent. Nobody knew this better than Napoléon himself. He had led much of it in two campaigns (1796 and 1797) that had effectively extended France's sphere of influence to a majority of Northern Italy. The strength of this army lied chiefly in its size. By mobilizing an unprecedented number of men—however poorly trained and lacking in discipline—France would overwhelm its enemies on the battlefield. Nor were fortifications much of an obstacle to it. The national army was large enough to "break the stranglehold of the *trace italienne*" which had frustrated the ambitions of invading armies since the sixteenth century (Parker 1996, p. 153).

Napoléon did not invent this new way of doing war. However, he was responsible for perfecting it and exploiting it to achieve his goal of French hegemony over Europe (Best 1998, p. 63). He maintained and strengthened those features of the revolutionary army he found effective. Its reliance on conscription, for instance, and the more democratic attitude towards admission and promotion to the officer corps (Best 1998, p. 111). He also introduced a variety of innovations. For instance, the army he inherited from the *République* was not a professional one. Soldiers and officers were inexperienced and undisciplined. This changed under his leadership. By 1805, the newly baptized *Grande Armée* had become "an admirable instrument of war ... troops with experience and enthusiasm who were rested and confident" (Furet 1996, p. 255). He abandoned the customary approach to rationing armed forces employed on foreign land. Traditionally, an army would have to invest resources into maintaining secure lines of communication with the homeland. This had the effect of reducing drastically how deeply an army could penetrate into enemy territory. Instead, Napoléon would have his men rely almost entirely on the resources of their immediate surroundings wherever they were (Delbrück 1985, p. 421).

Most consequentially, Napoléon revolutionized the organization of the army by introducing corps and divisions, which formed self-sustaining and independent units within the army. He entrusted each marshal (the officer responsible for a corps) with significant independence on the battlefield. As long as their actions were consistent with Napoléon's overall strategic vision, they were free to make their own decisions and adjust to changes in circumstances without having to receive direct input from the top. The new organization gave the *Grande Armée* its characteristic quickness of action and flexibility, even as its numbers dwarfed those of enemy forces (Delbrück 1985, p. 409). Napoléon introduced another tactical innovation that leveraged his army's numerical advantage on the battlefield. Standard military practice would relegate only a small share of the available forces in the army reserve. The French Emperor took the opposite stance. He would assign large numbers of men to the reserve and have them join the fight as the battle went on so as to have attacks of ever-growing intensity and overwhelm the enemy (Delbrück 1985, p. 409).

Taken together, these innovations contributed to the emergence of a new way of war. This was Napoléon's "strategy of annihilation" (Delbrück 1985, p.427). He saw war as having only one objective: The destruction of the enemy army. Once a country had lost its army, it had no alternative but to bend to the victor. There was no need for long military campaigns, war of attrition, sieges, or the occupation of enemy territory. As Napoléon himself put it:

> There are many good generals in Europe; but they see too much at the same time. As for me, I see only one thing, and that is the masses of men, I seek to destroy them, because I am certain that with that everything else falls at the same time.[13]

With the *Grande Armée* at his disposal and having crowned himself emperor of the French in 1804, Napoléon was ready to put the strategy of annihilation to the test. Over the following ten years, this army fought five major wars against an evolving coalition of anti-French powers, often including Austria, Prussia, Russia, and the United Kingdom. By 1812, of the major European powers only Russia was left opposing Napoléon on the continent. The emperor had finally gotten his empire, which included France, most of Central Italy, the former Venetian territories in the Adriatic, North-Eastern Spain, the Netherlands, and most of Saxony. But Napoléon's control extended well beyond the empire's nominal boundaries. He was the head of the Kingdom of Italy, "protector" of the Confederation of the Rhine (encompassing almost all of modern Germany), and *de facto* ruler of Spain, Westphalia, and the Duchy of Warsaw. Even Prussia and Austria had turned into French client states.

France's hegemony over the continent would not have been possible without a continuous inflow of young men into its ranks. This was necessary just to maintain the size of the *Grande Armée* constant, compensating for the tens of thousands of soldiers killed in action or seriously wounded year after year.[14] Yet, as more fronts were opening up Napoléon demanded a larger army. The French infantry alone was 640,000 men strong in 1809, 700,000 in 1810, 720,000 in 1811, and almost 750,000

[13] Quoted in Delbrück (1985, pp. 427-428).

[14] Over 900,000 Frenchmen lost their lives while serving in the army during the Napoleonic Wars (Gates 2011).

by the start of the Russian campaign in 1812 (Nafziger 1987, pp. 19-31). Even after almost 400,000 French had either died or fallen in enemy hands during the retreat from Russia, the army could muster over 600,000 infantrymen (Nafziger 1987, p. 35).

L Back-of-the-envelope estimates

This appendix provides a derivation of the formula on which we relied for our back of the envelope estimates in section 4.3. We define the draft-dodging rate as:

$$d_i = \frac{D_i}{C_i} = \frac{D_i}{S_i + D_i} \tag{6}$$

where D_i is the number of deserters, S_i is the number of people who actually join their assigned units, and C_i is the total number of people drafted—including deserters and non-deserters. Manipulating equation 6, we get:

$$D_i = d_i C_i = \frac{d_i}{(1 - d_i)} S_i. \tag{7}$$

For each department i belonging to groups 4&5 , the additional number of deserters there would have been if conscription had been the same as for the base group is approximated by the following total differential:

$$\Delta D_i = \frac{d}{1 - d} \Delta S + \frac{S}{(d - 1)^2} \Delta d. \tag{8}$$

From Table **??**, our preferred estimates of Lacuée's reform are $\Delta d = 4.99631$ and—since we estimate the change in the share of the population drafted—$\Delta S = 0.0002387 \times Population_i$. Substituting these figures into equation 8 and adding-up the change in draft-dodging of all departments indexed $i \in (1, ..., n)$ we get:

$$\sum_{i=1}^{n} \Delta D_i = 2,812. \tag{9}$$

We can similarly use this formula to calculate the additional number of men that would have joined the French army if the central government had not adopted a discriminatory conscription enforcement policy and demanded of departments in categories 4 and 5 the same share of able-bodied men as the rest of the country:

$$\sum_{i=1}^{n} \Delta S_i = \sum_{i=1}^{n} 0.0002387 \times Population_i = 3,256. \tag{10}$$

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