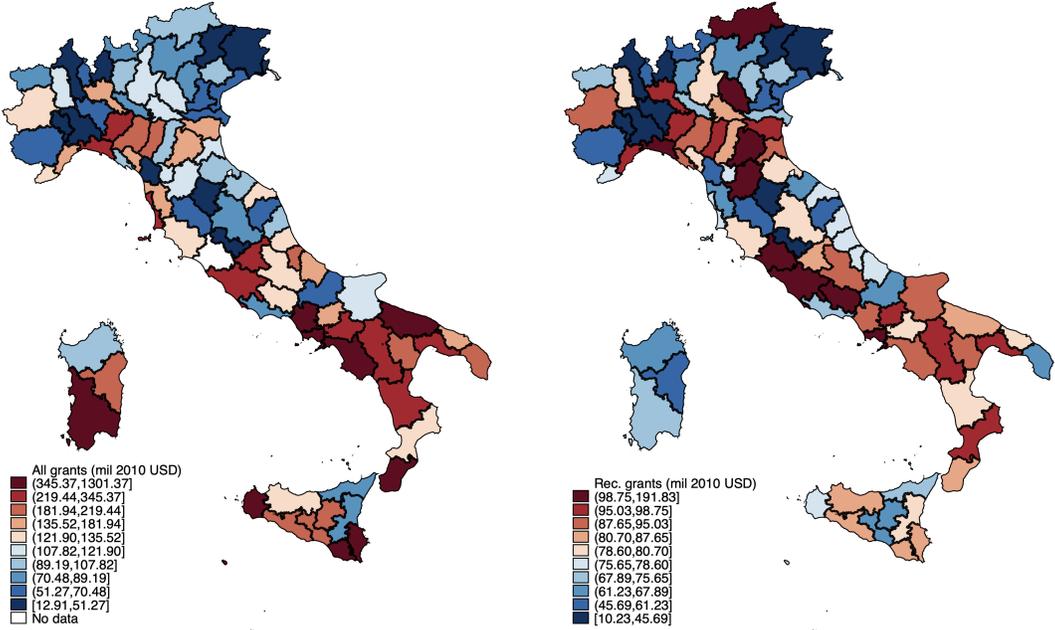


# Online Appendix - Not For Publication

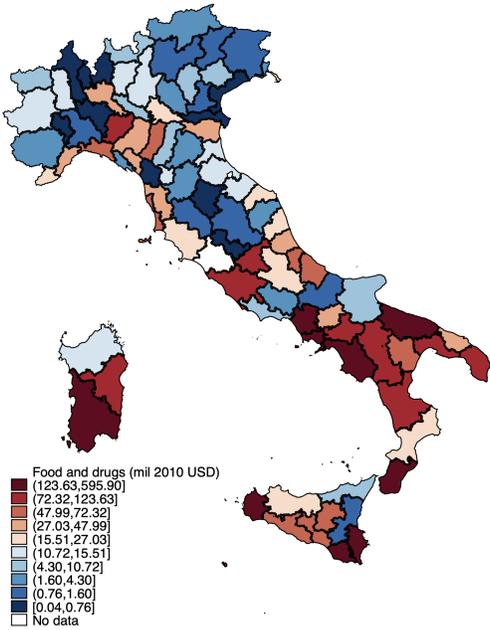
# A Additional Figures and Tables

Figure A1: Maps of Reconstruction Grants



A. All ERP aid

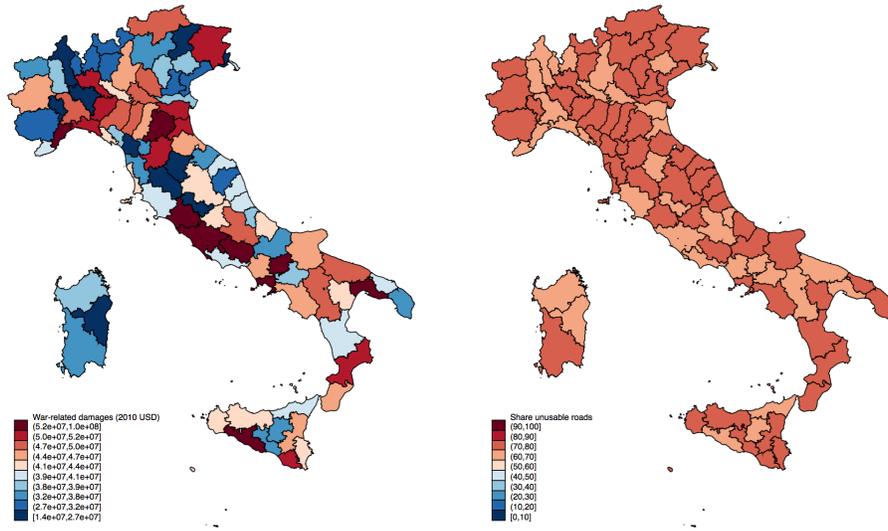
B. Reconstruction grants



C. Food and drugs

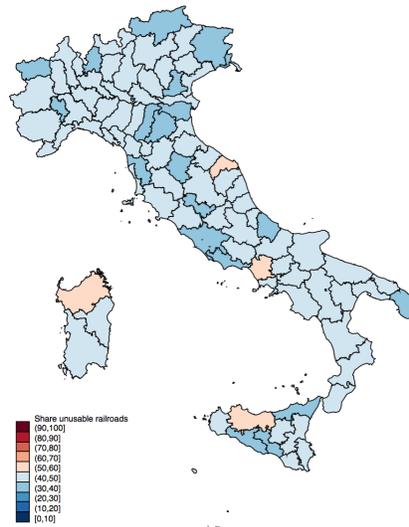
Notes: This graph shows the distribution of ERP aid across the Italian provinces. Panel A shows all ERP aid. Panel B focuses on reconstruction grants. Panel C shows the value of food and drugs assigned to each province.  
 Sources: "Missione Americana ERP in Italia", "Mutual Security Agency" bulletins, and historical archive of the *Istituto Mobiliare Italiano*.

Figure A2: Maps of War-Related Damages



A. Damages

B. Share of unusable roads

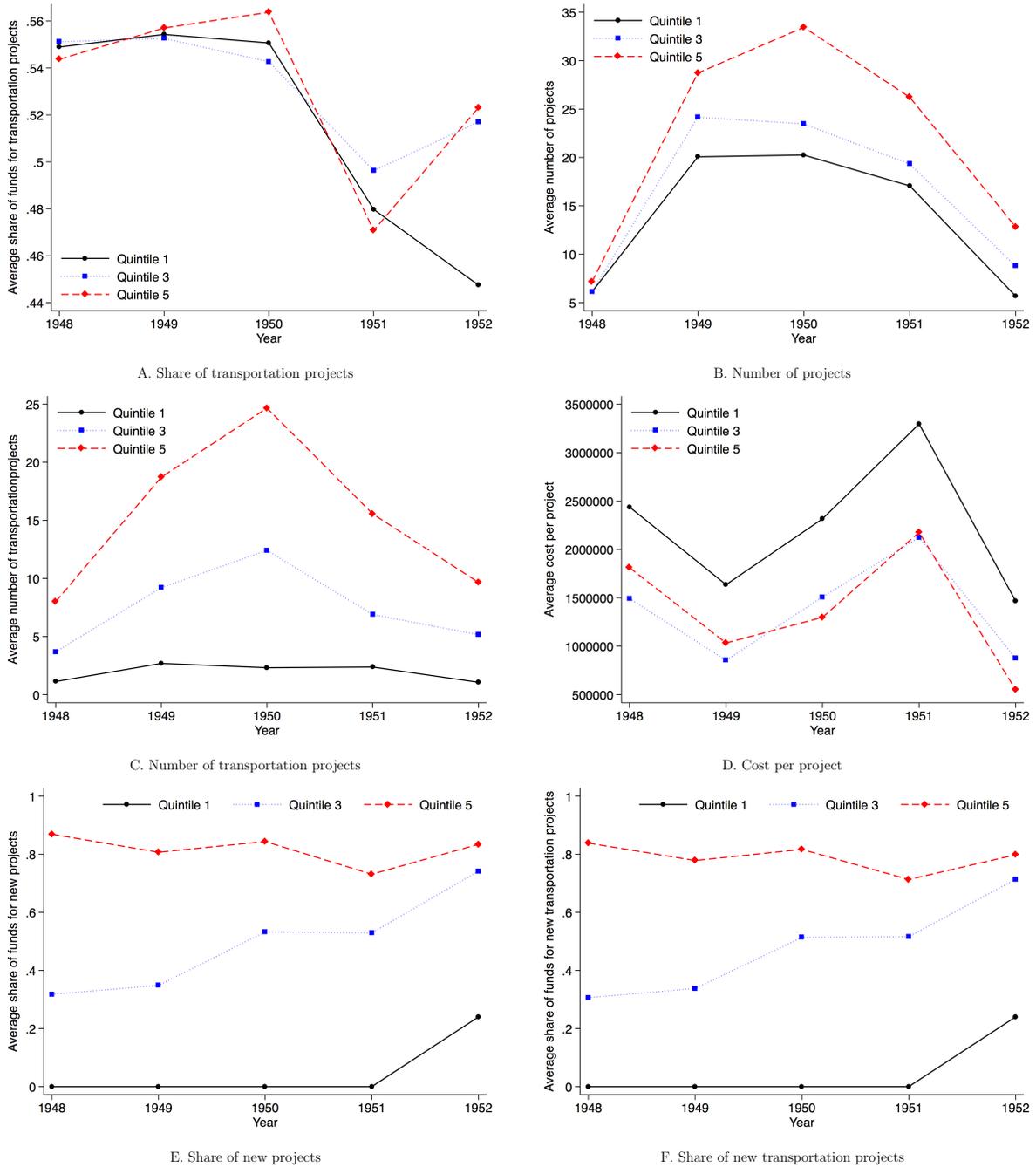


C. Share of unusable railroads

Notes: This graph shows the distribution of war-related damages across the Italian provinces. Panel A shows the monetary value of war-related damages to public infrastructure. Panel B shows the share of unusable roads. Panel C shows the share of unusable railroads.

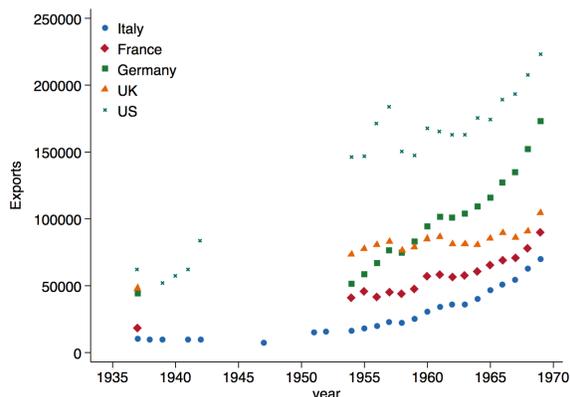
Source: "Italy Country Study," 1947.

Figure A3: Funded Projects

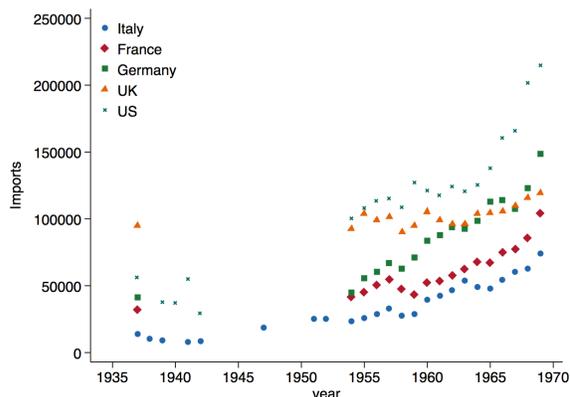


Notes: These graphs show statistics on the projects funded through ERP reconstruction aid for provinces in different quintiles of the distribution of explosives dropped during the Italian Campaign. The variables are the share of grants used for transportation projects (panel A), the number of projects (panel B), the number of transportation projects (panel C), the average cost per project (panel D), the share of funds used for new projects (panel E), and the share of funds used for new transportation projects (panel F). Costs are expressed in 2010 USD. “New projects” identifies public works that did not reconstruct public infrastructure that was present before WWII. Sources: “*Missione Americana ERP in Italia*”, “*Mutual Security Agency*” bulletins, and the historical archive of the *Istituto Mobiliare Italiano*.

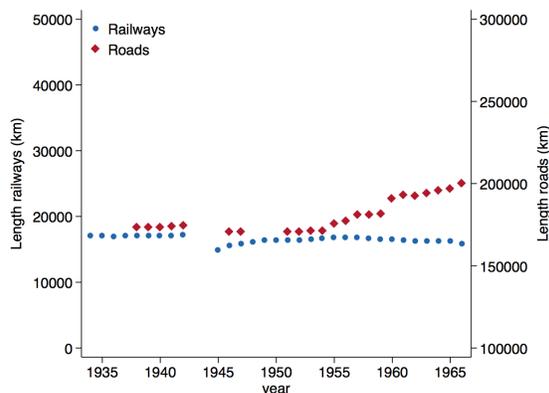
Figure A4: National Time Series



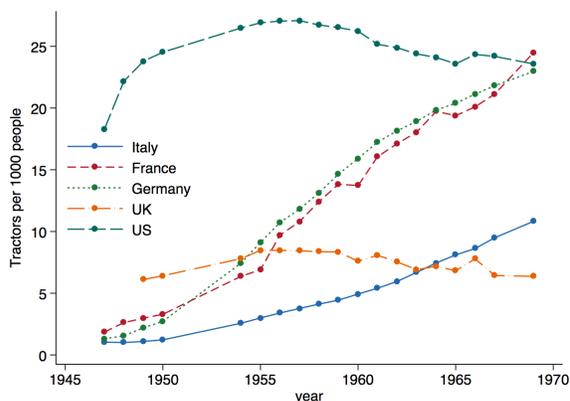
A. Exports (2016 €)



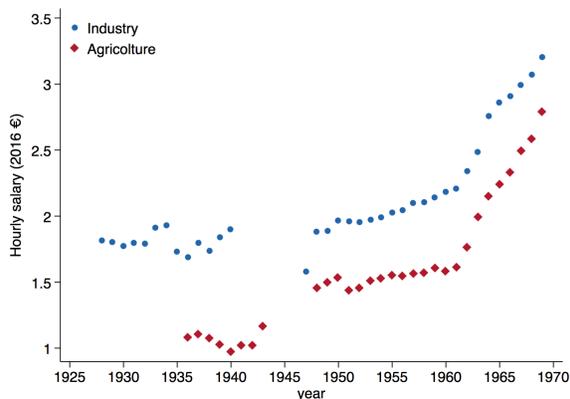
B. Imports (2016 €)



C. Infrastructure stock



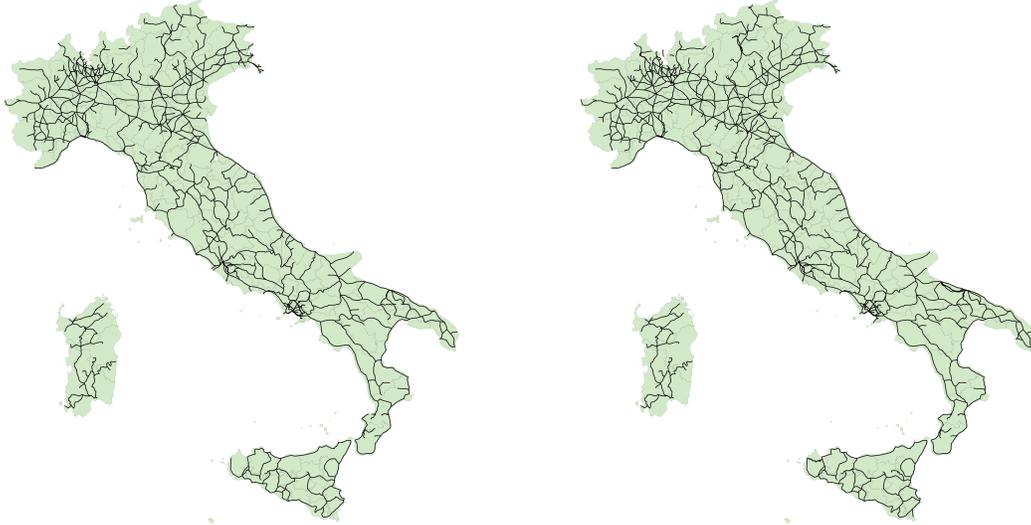
D. Tractors per 1000 people



E. Salaries

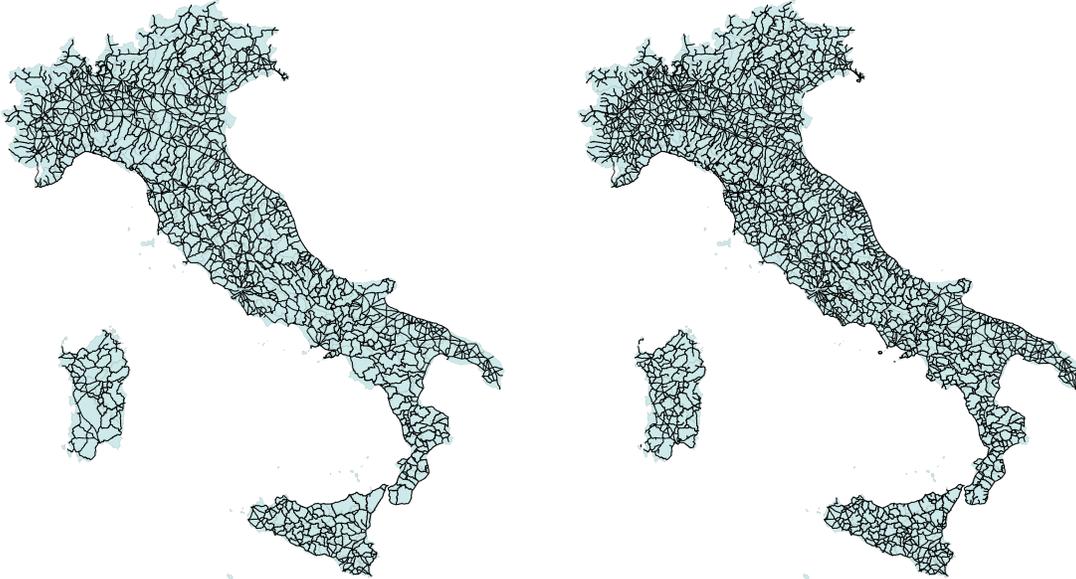
Notes: These graphs show four different national time series: yearly value of exports (panel A) and imports (panel B) in 2016 € with international comparisons, infrastructure stock (panel C), tractors per 1000 people (panel D), and salaries in industry and agriculture (panel E). Source: Annuario di Statistica Agraria, Istituto Nazionale di Statistica.

**Figure A5: Railroad and Road Network**



A. Railroads in 1931

B. Railroads in 1955

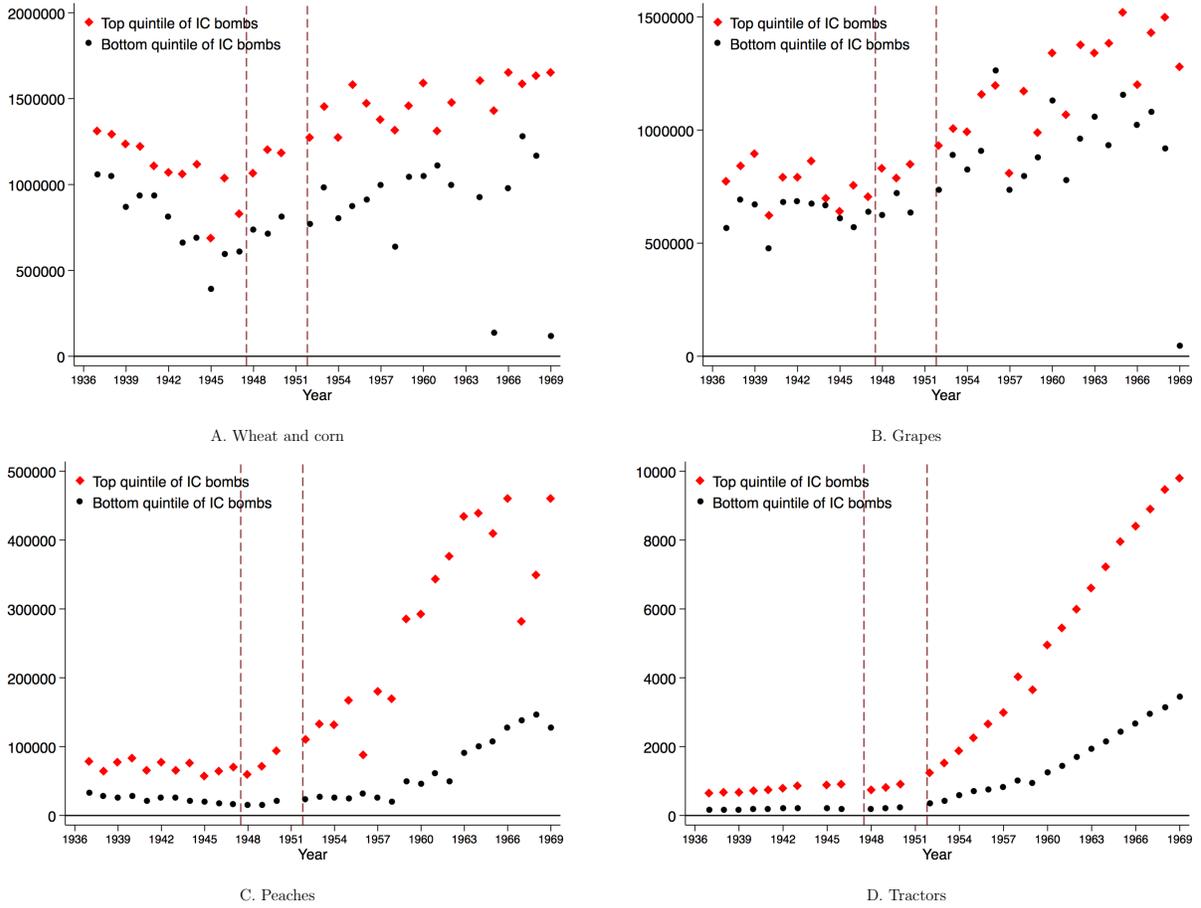


C. Roads in 1938

D. Roads in 1957

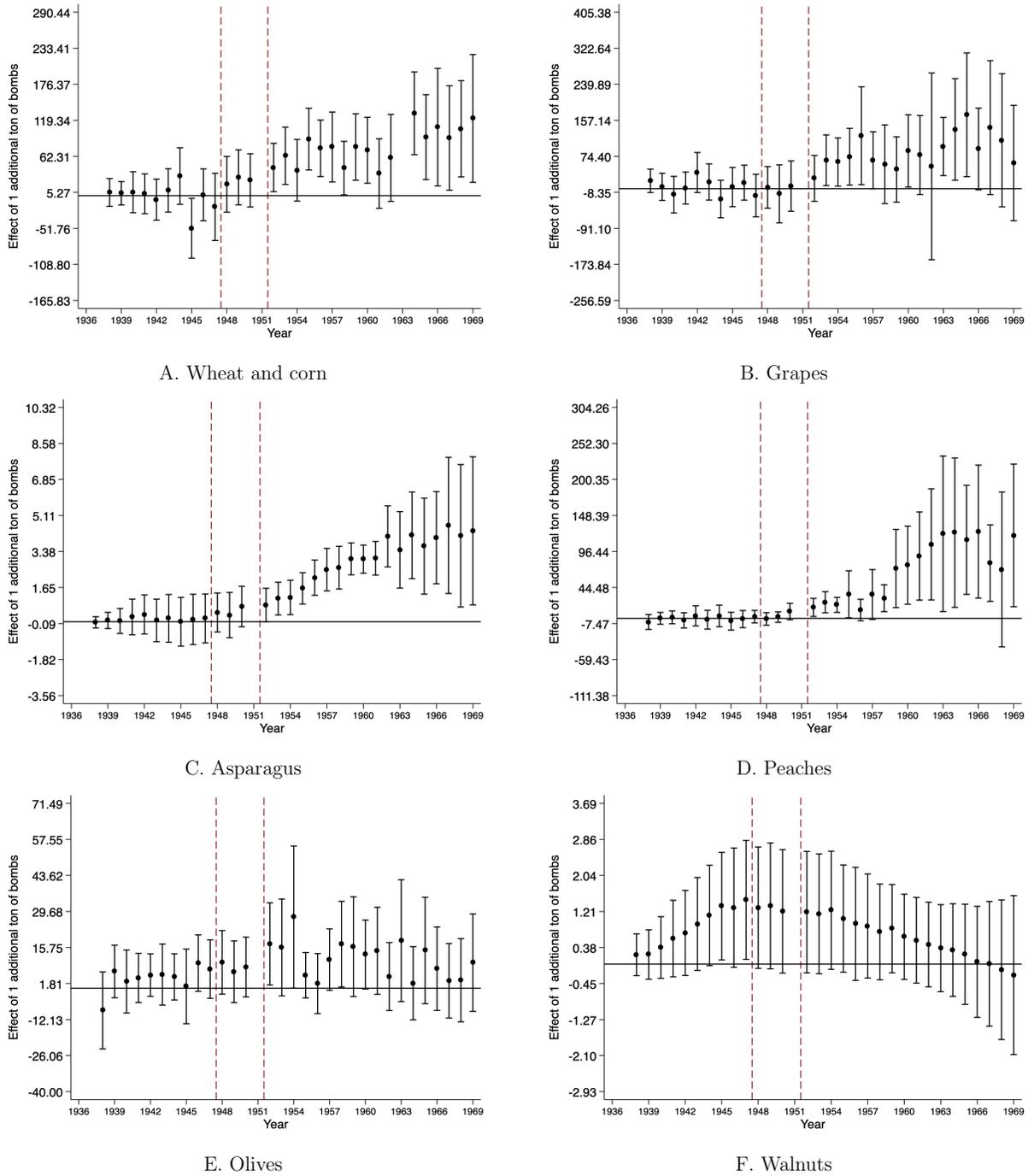
Notes: These graphs show the Italian railroad and road network just before WWII and immediately after the Marshall Plan. We digitized the railroads in 1931 from the railroad map of Italy by the cartographer Pozzo ([http://www.stagniweb.it/foto6.asp?Tipo=random&Foto=altro2/mappe3/fer931\\_.jpg&Percorso=mappefer](http://www.stagniweb.it/foto6.asp?Tipo=random&Foto=altro2/mappe3/fer931_.jpg&Percorso=mappefer)) and in 1955 from a railroad map of Italy published by the Ministry of Transportation ([http://www.stagniweb.it/foto6.asp?Tipo=random&Foto=mappe/fer955\\_.jpg&Percorso=mappefer](http://www.stagniweb.it/foto6.asp?Tipo=random&Foto=mappe/fer955_.jpg&Percorso=mappefer)). Similarly, we digitized the roads in 1938 and in 1957 from the official maps of the Italian Automobile Association (ACI).

Figure A6: Recovery vs. Expansion



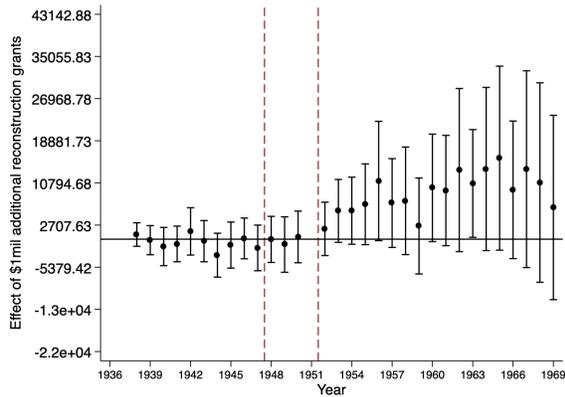
Notes: These graphs show the trends in average outcomes between provinces in the top and bottom quintile of bombing during the Italian Campaign. The outcomes are the production of wheat and corn (100kg, panel A), grapes (100kg, panel B), peaches (100kg, panel C), and the number of tractors (panel D). Sources: Censimento dell'Industria e dei Servizi, Annuario di Statistica Agraria, Censimento Generale della Popolazione, Istituto Nazionale di Statistica. USAF Theater History of Operations Reports (THOR) Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

**Figure A7:** Reduced Form, Effects of IC Bombings on Agricultural Production

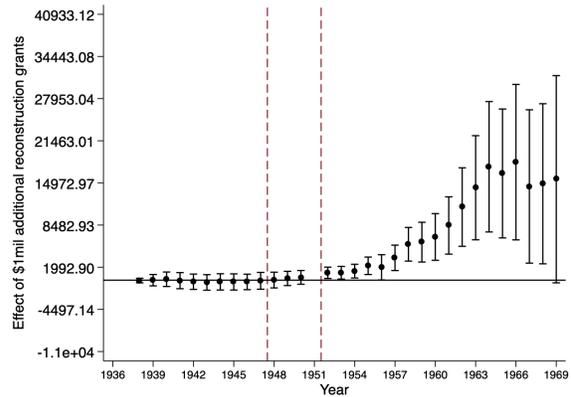


Notes: These graphs show the effect of one ton of IC bombs on different crops. The regressions also include province fixed effects and region-year fixed effects, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, employment rate, horsepower, share of industrial workers, share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the production of wheat and corn in each province, and year (100kg, panel A), grapes (100kg, panel B), asparagus (100kg, panel C), peaches (100kg, panel D), olives (100kg, panel E), walnuts (100kg, panel F). Sources: Censimento dell'Industria e dei Servizi, Istituto Nazionale di Statistica. USAF THOR Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

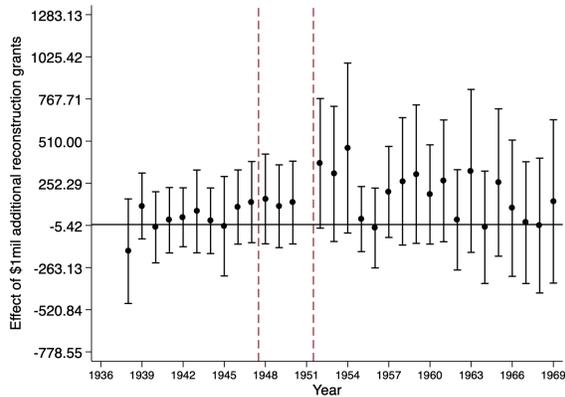
**Figure A8: IV, Other Graphs on Italian Recovery**



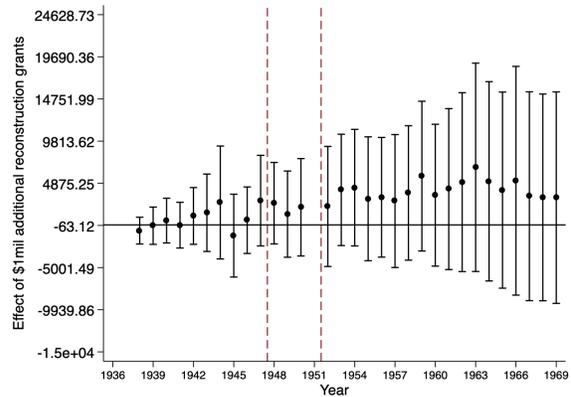
A. Wine



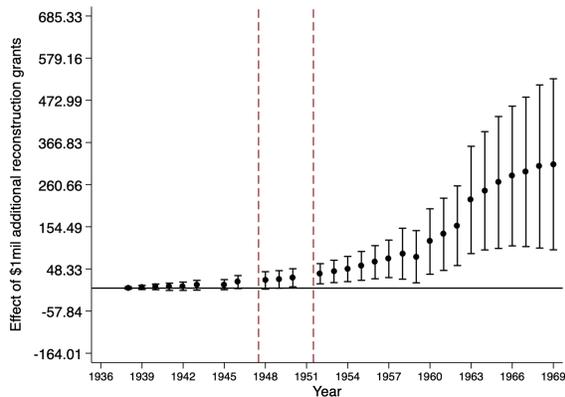
B. Pears



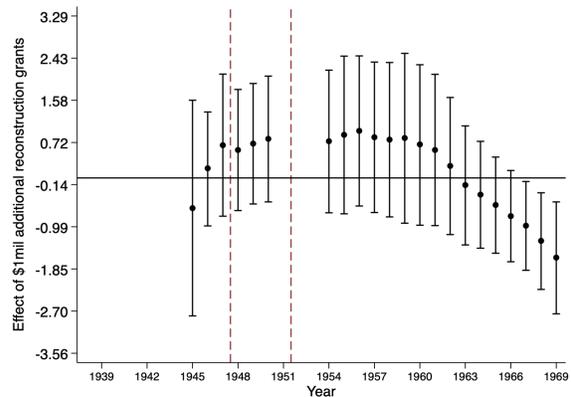
C. Oil



D. Potatoes



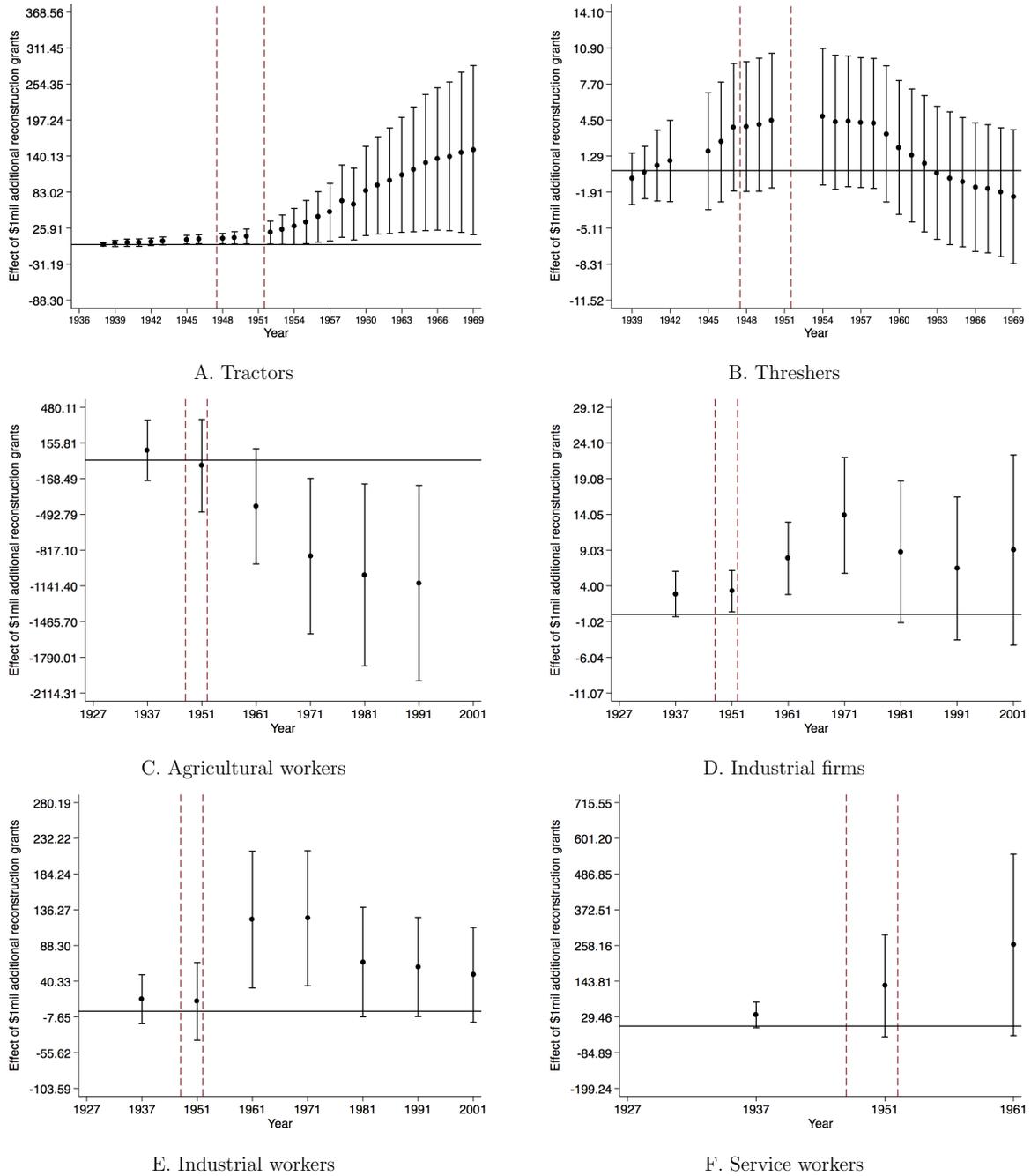
E. All agricultural machines



F. Gins

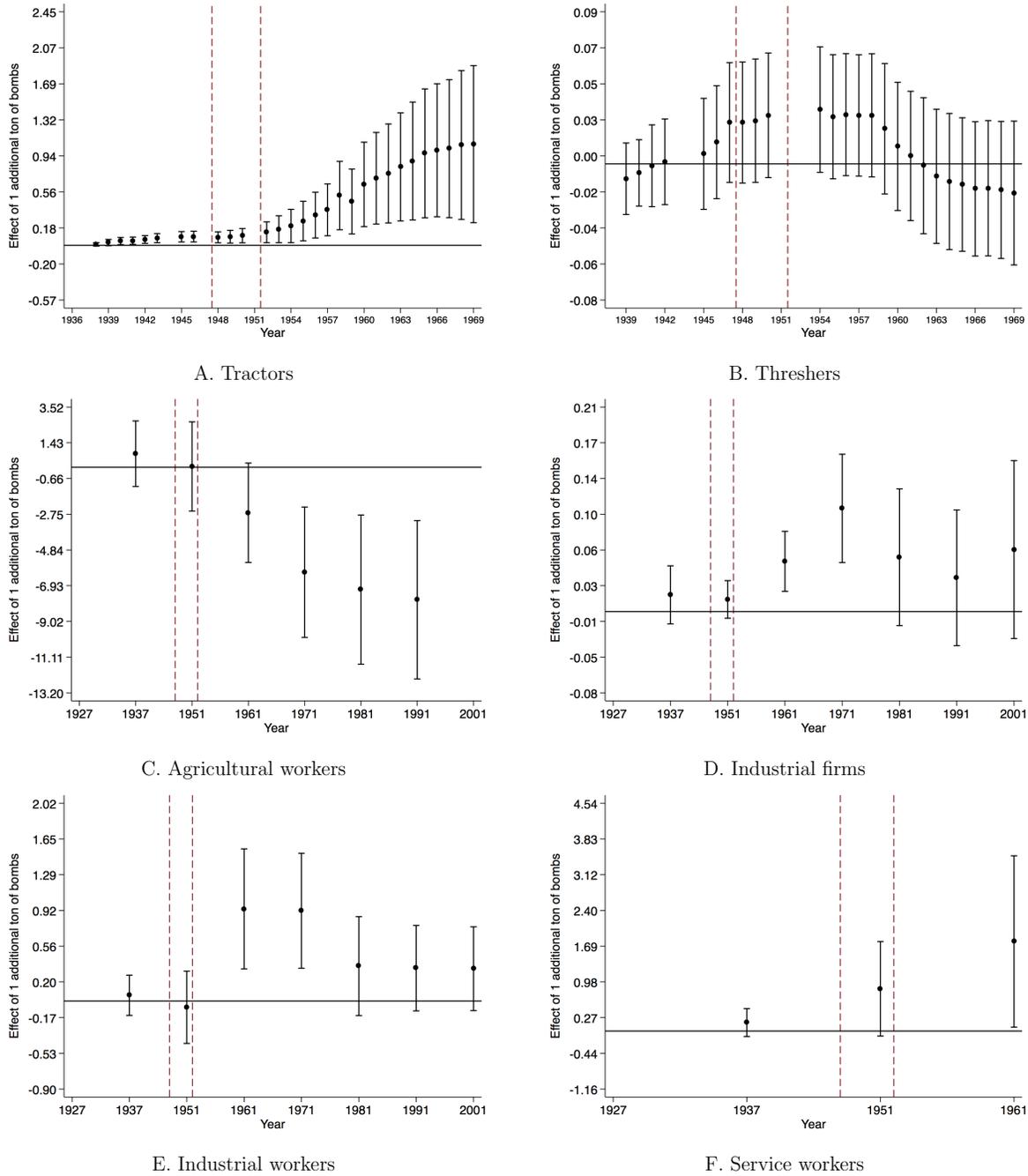
Notes: These graphs show the effect of of an additional \$1 million in reconstruction grants on different outcomes. The amount of reconstruction grants received by a province is instrumented with the amount of explosives dropped during the Italian Campaign. The regressions also include province fixed effects and region-year fixed effects, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, horsepower, employment rate, share of industrial workers, share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the production of wine (100L, panel A), pears (100kg, panel B), olive oil (100L, panel C), potatoes (100kg, panel D), the number of all agricultural machines (panel E), and the number of gins (panel F). Sources: Annuario di Statistica Agraria, Istituto Nazionale di Statistica. USAF Theater History of Operations Reports (THOR) Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

**Figure A9: IV Effects of Reconstruction Grants on Technology and Labor Markets**



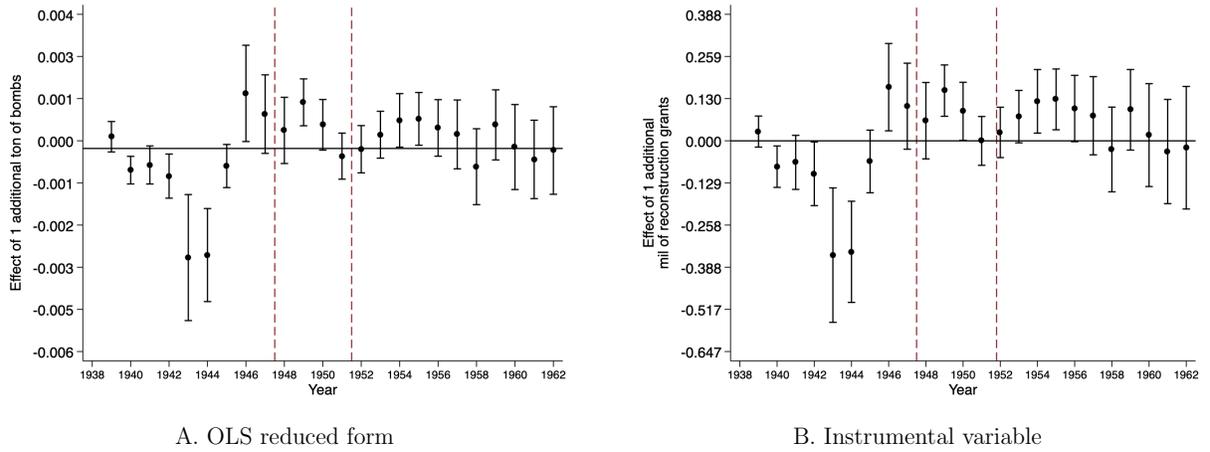
Notes: These graphs show the effect of an additional \$1 million in reconstruction grants on different outcomes. The amount of reconstruction grants received by a province is instrumented with the amount of explosives dropped during the Italian Campaign. The regressions also include province fixed effects, industry fixed effects (in panels D and E) and region-year fixed effects, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, employment rate, horsepower, share of industrial workers, share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the number of tractors in each province (panel A), the number of nonmotorized threshers (panel B), the number of agricultural workers (panel C), the number of firms active in each province, industry, and year (panel D), the number of industrial workers in each province, industry, and year (panel E), and the number of workers in the service sector (panel F). Sources: Censimento dell'Industria e dei Servizi, Istituto Nazionale di Statistica. USAF THOR Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

**Figure A10: Reduced Form, Effects of IC Bombings on Technology and Labor Markets**



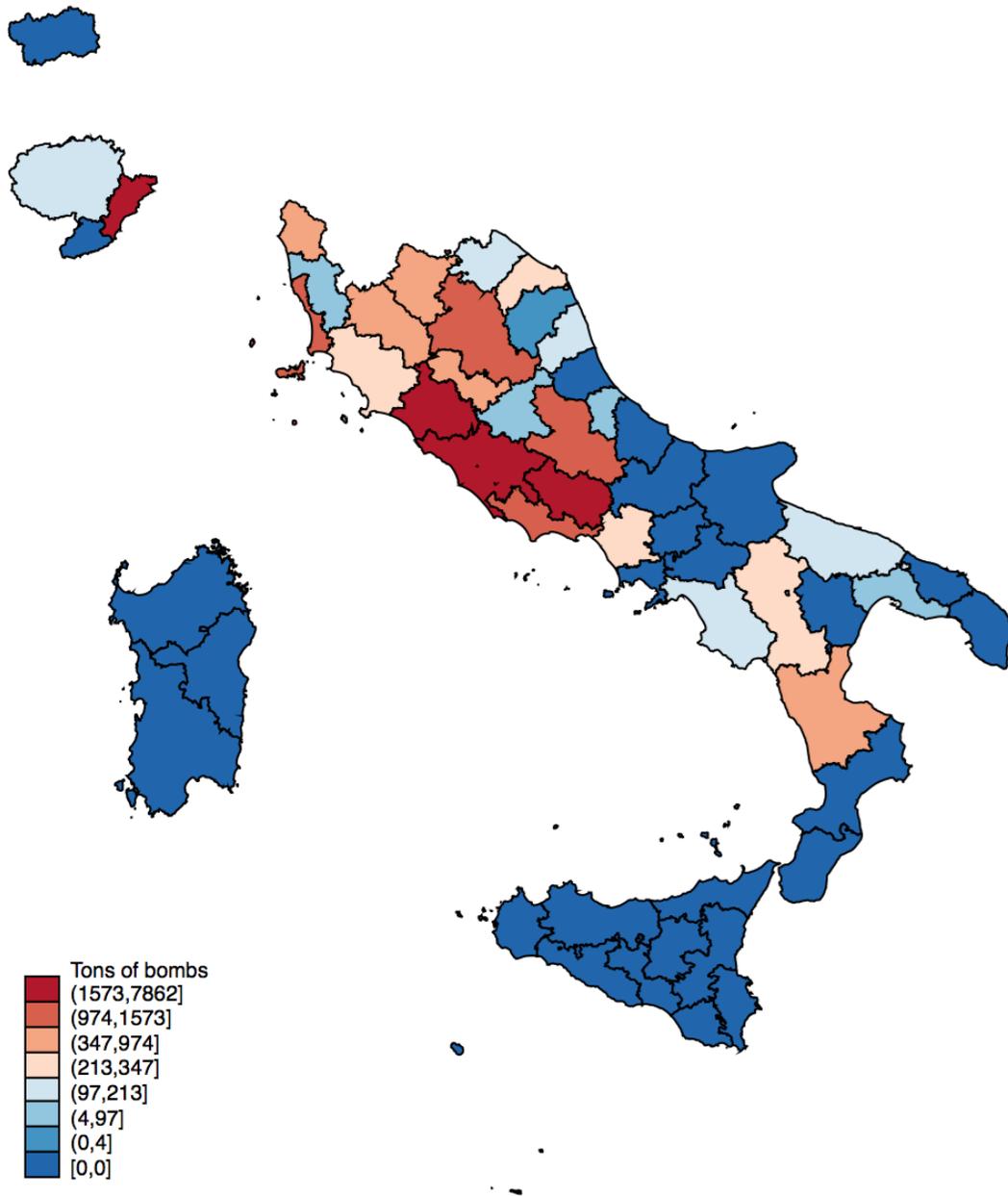
Notes: These graphs show the effect of one ton of IC bombs on different outcomes. The regressions also include province fixed effects, industry fixed effects (in panels D and E) and region-year fixed effects, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, employment rate, horsepower, share of industrial workers, share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the number of tractors in each province (panel A), the number of nonmotorized threshers (panel B), the number of agricultural workers (panel C), the number of firms active in each province, industry, and year (panel D), the number of industrial workers in each province, industry, and year (panel E), and the number of workers in the service sector (panel F). Source: Censimento dell'Industria e dei Servizi, Istituto Nazionale di Statistica. USAF THOR Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

**Figure A11:** Development of Intellectual Property



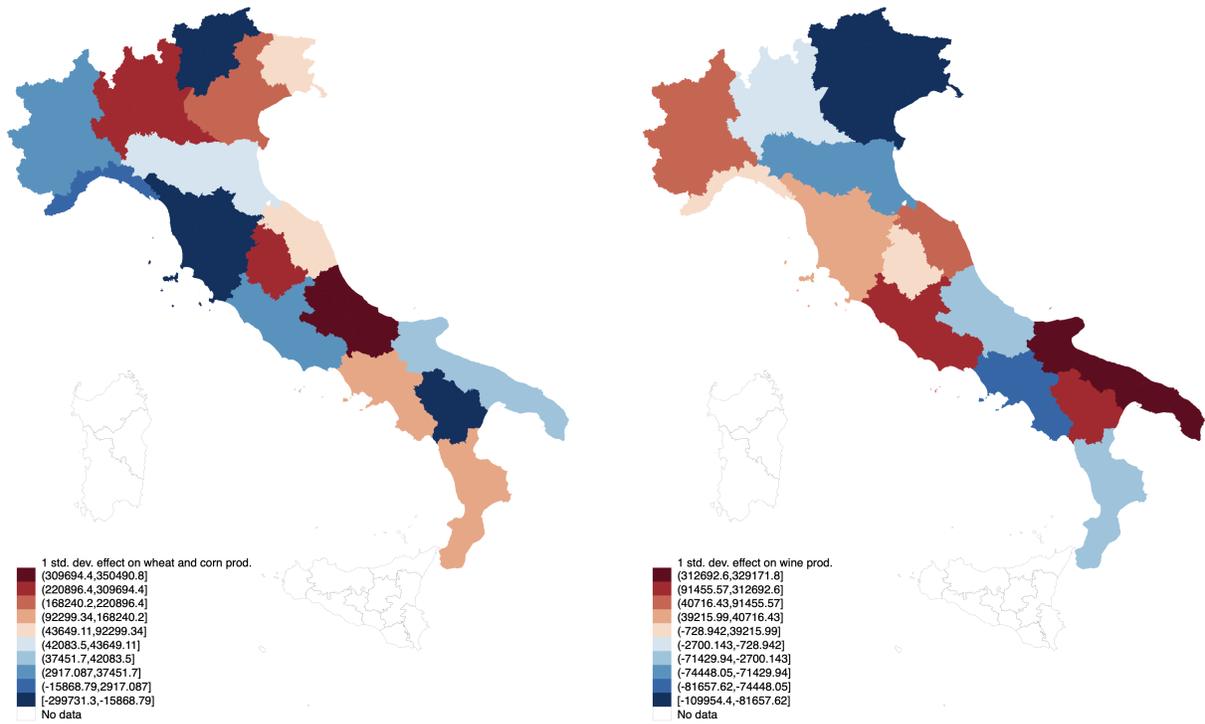
Notes: These graphs show the effect of one ton of IC bombs (panel A) or \$1 million of reconstruction grants (panel B) on different types of patents. The regressions also include province fixed effects, patent class fixed effects and region-year fixed effects, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, employment rate, horsepower, share of industrial workers, and share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the number of patents per province, and year. Sources: Bollettino della Proprietà Intellettuale, Ministero dell’Agricoltura, dell’Industria, e del Commercio. USAF Theater History of Operations Reports (THOR) Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

Figure A12: Provinces at Least 500km Away From Brenner Pass



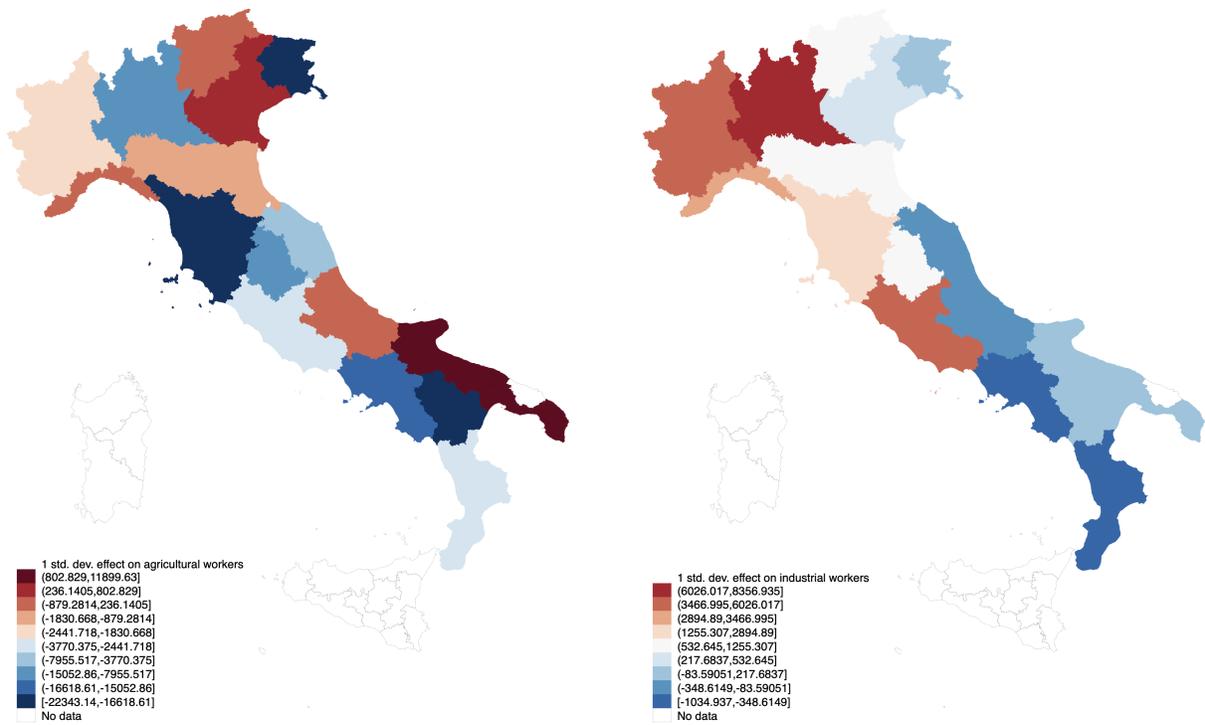
Notes: Sample of provinces that are at least 500km away from the Brenner Pass, which connects Italy to Austria and Germany. The map shows the tons of bombs dropped by Allied air strikes during the Italian Campaign on this restricted group of provinces. USAF Theater History of Operations Reports (THOR) Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

Figure A13: Treatment Effects in Different Regions



A. Wheat and corn production

B. Wine production

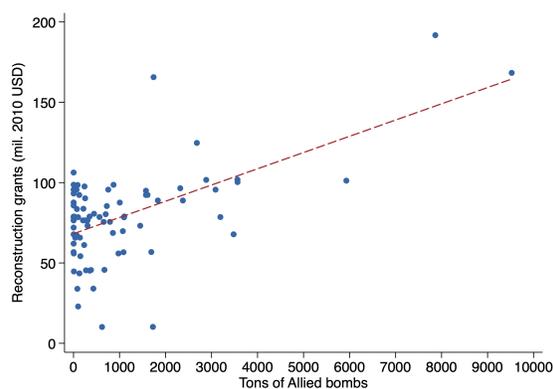


C. Agricultural workers

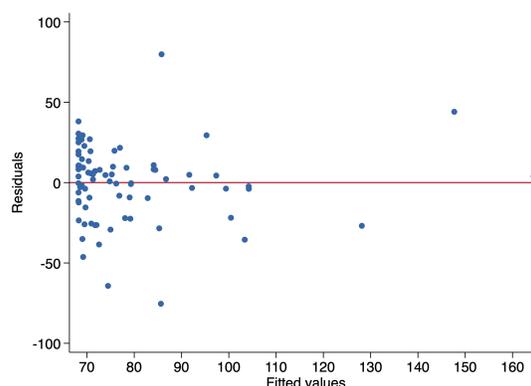
D. Industrial workers

Notes: These graphs show the treatment effects for a 1 standard deviation increase in Allied bombings on the production of wheat and corn (panel A), the production of wine (panel B), the number of agricultural workers (panel C), the number of industrial workers (panel D).

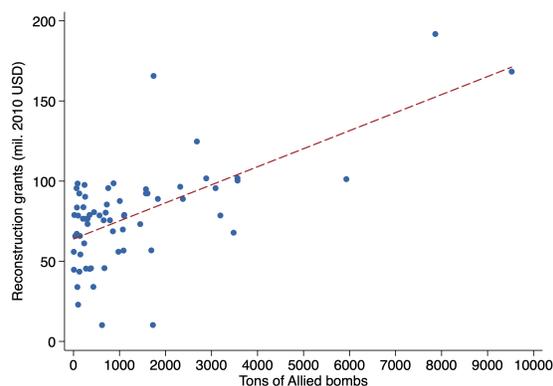
**Figure A14:** Investigate the Linearity Between Bombings and Reconstruction Grants



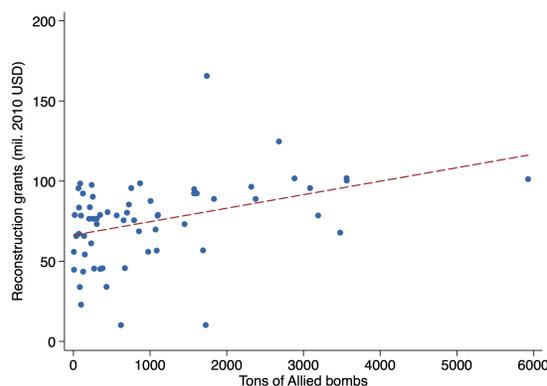
A. Scatterplot of bombings and grants



B. Rvfplot



C. Scatterplot dropping locations with 0 bombings



D. Scatterplot dropping locations with 0 and >7000 tons of bombs

Notes: These scatterplots show the province-level relationship between tons of bombs dropped by the Allied air forces during the Italian Campaign and the amount of reconstruction grants received through the Marshall Plan. Panel A includes all the provinces in the main sample. Panel B tests the linearity of this relationship by showing its residuals against the fitted values (rvfplot). Panel C drops provinces without bombings. Panel D drops provinces without bombings and provinces that received more than 7,000 tons of bombs. Source: “Missione Americana ERP in Italia,” *“Mutual Security Agency”* bulletins, and historical archive of the Istituto Mobiliare Italiano.

**Table A1:** Correlation between Local Ideology and Reconstruction Grants

	Reconstruction grants (M)	Tons of IC bombs	Reconstruction grants (M)	Tons of IC bombs
	(1)	(2)	(3)	(4)
	<u>1946 national election</u>		<u>1948 national election</u>	
Share of votes for Democrazia Cristiana (center/christian)	-0.191 (0.403)	-7.362 (25.052)	0.305 (0.600)	21.371 (37.400)
Share of votes for Fronte dell'Uomo Qualunque (conservative/center-right)	0.733 (0.789)	5.863 (42.717)		
Share of votes for Partito Comunista Italiano (far left)	0.619 (0.419)	19.530 (25.659)		
Share of votes for Partito Socialista Italiano di Unità Proletaria (far left)	-0.757 (0.542)	22.616 (31.065)		
Share of votes for Unione Democratica Nazionale (center)	0.782 (0.618)	-19.416 (30.857)		
Share of votes for Blocco Nazionale (conservative/center-right)			0.822 (0.624)	-24.762 (30.896)
Share of votes for Fronte Democratico Popolare (far left)			0.526 (0.381)	33.914* (17.142)
Share of votes for Partito Repubblicano Italiano (center)			0.246 (0.654)	61.895 (37.406)
Share of votes for Unità Socialista (left)			-1.882 (1.164)	54.293 (65.925)
Partial f-test PCI-PSIUP (p-value)	0.215	0.491		
Partial f-test Fronte-Unità Socialista (p-value)			0.201	0.066
Mean dependent variable	79	1,033	79	1,033
Std. dev. dependent variable	29	1,684	29	1,684

Notes: This table correlates the province-level amount of reconstruction grants disbursed through the Marshall Plan (in millions) and province-level tons of bombs dropped by Allied air forces during the Italian Campaign on province-level share of votes for the five political parties or coalitions that received the highest vote share in the 1946 and 1948 elections. At the bottom, the table includes p-values from the partial f-tests of joint significance of the coefficients of the center-left and far-left parties. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Sources: Ministero dell'Interno. USAF Theater History of Operations Reports (THOR).

**Table A2:** Correlation between Characteristics of Funded Projects and Bombing

	IC bombs (1)	Mean (2)	Standard deviation (3)	Observations (4)
Share of grants used for transp. network (1948-1952)	-0.000 (0.002)	0.525	0.0168	79
Share of grants used for hygiene infrastr. (1948-1952)	0.007 (0.008)	0.155	0.0776	79
Share of grants used for public buildings (1948-1952)	-0.007 (0.007)	0.321	0.0780	79
Number of projects (1948-1952)	21.531*** (7.955)	77.04	58.73	79
Number of projects in 1948	1.302** (0.526)	5.716	4.217	79
Number of projects in 1949	5.357** (2.356)	21.79	17.20	79
Number of projects in 1950	6.910*** (2.536)	23.04	18.64	79
Number of transp. projects (1948-1952)	20.262*** (6.173)	37.80	41.63	79
Number of transp. projects in 1948	2.091** (0.854)	3.778	5.045	79
Number of transp. projects in 1949	4.257*** (1.328)	9.654	9.393	79
Number of transp. projects in 1950	6.871*** (2.021)	11.80	14.12	79
Cost per project (1948-1952)	-218,724.424* (118,601.445)	1,773,641	1,880,658	79
Cost per project in 1948	-204,466.826* (116,268.907)	1,931,482	1,967,943	79
Cost per project in 1949	-102,277.500 (92,640.737)	1,212,103	1,295,238	79
Cost per project in 1950	-220,747.402* (119,923.682)	1,872,237	2,046,273	79
Share of grants used for new infrastructure (1948-1952)	0.096*** (0.031)	0.484	0.340	79
Share of grants used for new infrastructure in 1948	0.126*** (0.041)	0.432	0.437	79
Share of grants used for new infrastructure in 1949	0.113*** (0.036)	0.408	0.373	79
Share of grants used for new infrastructure in 1950	0.096*** (0.035)	0.518	0.380	79
Share of grants used for new transp. infrastr. (1948-1952)	0.092*** (0.030)	0.469	0.329	79
Share of grants used for new transp. infrastr. in 1948	0.121*** (0.039)	0.416	0.419	79
Share of grants used for new transp. infrastr. in 1949	0.109*** (0.035)	0.394	0.360	79
Share of grants used for new transp. infrastr. in 1950	0.092*** (0.034)	0.501	0.368	79

Notes: Each row-column combination shows the coefficient  $\beta_1$  from a different regression of the characteristics of projects funded through ERP reconstruction grants and the tonnage of bombs in a province (*in thousands of tons*):  $Projects_p = \beta_0 + \beta_1 \cdot IC\ bombs_p + \gamma_r + \varepsilon_p$ . The “Share of grants” divide the amount of grants used for a specific purpose by the total amount of grants received between 1948 and 1952 or in a given year. Column 2 shows the mean of each dependent variable, while column 3 shows the standard deviation. The regression also includes region fixed effects ( $\gamma_r$ ). Robust standard errors in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Sources: Censimento dell’Industria e dei Servizi, Annuario di Statistica Agraria, Censimento Generale della Popolazione, Istituto Nazionale di Statistica. USAF Theater History of Operations Reports (THOR) Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

**Table A3: Changes in Commuting Distance to Provincial Capitals**

	$\Delta$ mean comm. distance (1)	$\Delta$ mean comm. distance (2)	$\Delta$ mean comm. distance (3)	$\Delta$ median comm. distance (4)	$\Delta$ median comm. distance (5)	$\Delta$ median comm. distance (6)
Panel A: All municipalities						
All reconstruction grants (M)	-57.613 (47.244)			8.617 (45.802)		
Grants for transportation (M)		-1,557.328* (799.941)	-1,570.916* (799.396)		-2,024.700** (865.809)	-2,042.328** (865.857)
Grants for sanitation (M)		1,438.152* (818.543)			2,045.528** (888.439)	
Grants for public buildings (M)		1,675.012* (863.504)			2,352.813** (937.634)	
Grants for nontransp. projects (M)			1,606.152* (827.851)			2,263.479** (900.070)
Observations	79	79	79	79	79	79
Mean—dep. var.	-12,547	-12,547	-12,547	-9,402	-9,402	-9,402
Std. dev.—dep. var.	22,095	22,095	22,095	25,186	25,186	25,186
Panel B: Only in-network municipalities before WWII						
All reconstruction grants (M)	-57.826 (47.043)			-0.468 (44.159)		
Grants for transportation (M)		-1,631.389* (820.164)	-1,641.718** (818.356)		-2,022.354** (862.592)	-2,038.368** (862.635)
Grants for sanitation (M)		1,555.835* (838.870)			2,042.049** (880.796)	
Grants for public buildings (M)		1,735.894* (874.177)			2,321.212** (930.367)	
Grants for nontransp. projects (M)			1,683.547** (841.522)			2,240.054** (892.838)
Observations	79	79	79	79	79	79
Mean—dep. var.	-12,083	-12,083	-12,083	-9,353	-9,353	-9,353
Std. dev.—dep. var.	21,871	21,871	21,871	24,845	24,845	24,845

Notes: This table shows the correlation between the change in commuting distance to the provincial capital and the amount of reconstruction grants. For each municipality, we computed the shortest commuting distance in meters to its provincial capital in 1938 and 1957 using the road network that we digitized from official road maps by the Italian Automobile Association. We then computed its post-WWII change. Finally, we computed the mean (columns 1 to 3) and median (columns 4 to 6) change for each Italian province. We regressed these variables on different measures of the amount of reconstruction grants assigned to each province. Robust standard errors in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A4: IV Effects on Agricultural Outcomes, Coefficients of All Trends**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Agricultural workers (4)	Agricultural firms (5)	Tractors (6)	Threshers (7)
Reconstr. grants (M) x Post 1952	9,445.833** (3,673.788)	8,416.683 (5,069.177)	10,506.192* (5,995.361)	-769.282*** (259.088)	341.844 (375.848)	67.456** (31.098)	-0.421 (1.172)
Share of war deaths x Trend	-5098073.068 (15754399.092)	16895994.318 (20430211.385)	23215508.564 (28863276.925)	35,766.811 (151,814.065)	-10,829.872 (134,811.577)	6,469.150 (73,312.641)	-2,801.834 (5,419.245)
Share of war deaths x Trend <sup>2</sup>	200,918.372 (529,669.595)	-714,572.358 (749,909.908)	-961,887.822 (1040239.310)	184.240 (4,922.417)	151.213 (1,678.588)	-548.473 (2,742.359)	123.016 (170.118)
Share of war deaths x Trend <sup>3</sup>	-2,271.565 (5,587.221)	9,726.799 (8,807.190)	12,742.125 (11,958.817)	-7.429 (41.052)		12.824 (30.553)	-1.444 (1.822)
Pop. density x Trend	27,756.677 (57,717.280)	-81,681.781** (37,889.160)	-133,318.747** (54,313.840)	-9.116 (6.121)	116.094 (485.177)	172.395 (135.046)	5.549 (14.309)
Pop. density x Trend <sup>2</sup>	-1,197.875 (1,833.173)	2,640.070* (1,363.292)	4,376.108** (1,953.684)	0.118 (0.172)	-1.050 (5.568)	-5.774 (5.226)	-0.272 (0.465)
Pop. density x Trend <sup>3</sup>	12.571 (18.015)	-25.443* (14.984)	-43.251** (21.597)	-0.001 (0.001)		0.060 (0.065)	0.003 (0.006)
Empl. rate x Trend	4129178.449* (2424925.897)	2411053.797 (1962281.106)	3568800.680 (2506678.916)	-31,770.078* (16,912.362)	-23,732.409 (23,180.989)	9,059.307 (8,421.424)	-2,603.799 (1,971.329)
Empl. rate x Trend <sup>2</sup>	-143,809.914* (84,210.906)	-93,964.935 (73,875.264)	-134,824.221 (94,239.427)	1,218.143* (622.813)	305.379 (281.669)	-411.771 (310.666)	78.704 (55.512)
Empl. rate x Trend <sup>3</sup>	1,513.893* (889.003)	1,078.169 (840.456)	1,503.330 (1,068.124)	-11.222** (5.319)		5.371 (3.343)	-0.795 (0.515)
Horsepower x Trend	-1.929*** (0.482)	0.620 (0.412)	0.878 (0.572)	0.013** (0.005)	0.000 (0.004)	-0.002 (0.001)	-0.000 (0.000)
Horsepower x Trend <sup>2</sup>	0.064*** (0.016)	-0.020 (0.015)	-0.029 (0.021)	-0.000** (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Horsepower x Trend <sup>3</sup>	-0.001*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000** (0.000)		-0.000 (0.000)	-0.000 (0.000)
Share ind. workers x Trend	30,895.140 (2408923.927)	-1872505.579 (2418899.105)	-2318304.749 (3050890.970)	32,936.892 (20,414.322)	44,367.657* (23,662.545)	-4,851.746 (9,366.854)	1,236.869 (1,549.163)
Share ind. workers x Trend <sup>2</sup>	16,433.871 (83,560.794)	72,621.055 (90,105.401)	89,095.885 (114,212.469)	-1,027.632 (686.023)	-628.299** (286.369)	322.236 (348.425)	-36.274 (46.974)
Share ind. workers x Trend <sup>3</sup>	-340.332 (884.067)	-829.060 (1,010.510)	-995.244 (1,282.619)	9.331 (5.763)		-5.463 (3.788)	0.381 (0.485)
Share agri. workers x Trend	-1922213.997 (2021358.481)	-2430719.519 (2186898.703)	-3409745.816 (2797787.551)	44,394.375*** (15,964.148)	23,476.514 (21,714.604)	-6,969.941 (8,544.738)	924.843 (1,398.386)
Share agri. workers x Trend <sup>2</sup>	73,950.711 (71,414.712)	90,071.224 (81,732.235)	123,811.567 (104,598.753)	-1,552.603** (592.838)	-313.134 (258.816)	350.692 (317.494)	-24.455 (40.016)
Share agri. workers x Trend <sup>3</sup>	-838.043 (760.842)	-981.025 (923.297)	-1,322.231 (1,179.694)	13.585*** (5.060)		-4.834 (3.434)	0.226 (0.377)
Mean outcome	1,234,237	459,348	694,159	96,445	45,958	454	383
Reconstr. grants (M)- mean	79	79	79	79	79	79	79
Reconstr. grants (M)- std. dev.	29	29	29	29	29	29	29
Partial F-test—share of deaths	0.940	0.060	0.183	0.747	0.992	0.101	0.224

Notes: This table shows all the coefficients from nonlinear trends included in IV regressions (Table 6, panel C). Regressions also include province fixed effects and region-year fixed effects. The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the number of agricultural workers (column 4), the number of agricultural firms (column 5), the number of tractors (column 6), and the number of threshers (column 7). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A5: Tests for Weak Instrument**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Agricultural workers (4)	Agricultural firms (5)	Tractors (6)	Threshers (7)
<u>Montiel Olea-Pflueger effective F-statistic</u>							
Effective F-statistic	33.91	34.51	34.51	29.75	16.69	35.11	32.18
Critical value 5% significance	37.42	37.42	37.42	37.42	37.42	37.42	37.42
Critical value 10% significance	23.11	23.11	23.11	23.11	23.11	23.11	23.11
<u>Identification robust Anderson-Rubin confidence intervals</u>							
AR lower bound	4,144.80	918.90	1,631.91	-1,276.52	-322.67	22.20	-2.16
AR upper bound	16,244.10	18,495.40	22,418.90	-394.40	942.84	129.95	1.69
Mean outcome	1,234,237	459,348	694,159	96,445	45,958	454	383
Reconstr. grants (M)- mean	79	79	79	79	79	79	79
Reconstr. grants (M)- std. dev.	29	29	29	29	29	29	29

Notes: This table follows the best practices indicated by [Andrews, Stock, and Sun \(2019\)](#) on how to test for a weak instrument in the case of a single endogenous variable. We first report a test on instrument strength based on the effective F-statistic of [Olea and Pflueger \(2013\)](#). Then, we report identification-robust Anderson-Rubin confidence intervals ([Anderson and Rubin, 1949](#)).

**Table A6: Additional Outcomes**

	Population	Total wages	Average wage	Illiterate individuals	Non-agri area	Wheat and corn area	Gins	All machines
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Reduced form								
Tons of bombs x Post 1952	14.378 (21.042)	4,724.488** (1,915.477)	-4.518 (4.532)	0.183 (1.833)	0.050 (0.430)	0.127 (0.468)	-0.002 (0.002)	0.950*** (0.291)
Observations	588	2,736	2,635	368	1,628	2,247	1,702	2,218
$R^2$	0.978	0.399	0.090	0.968	0.970	0.984	0.958	0.928
Panel B: IV								
Reconstr. grants (M) x Post 1952	1,931.305 (2,914.216)	650,582.865*** (215,754.828)	-627.841 (648.509)	24.863 (248.751)	6.307 (54.696)	16.876 (61.436)	-0.250 (0.273)	124.444*** (42.172)
Observations	588	2,736	2,635	368	1,628	2,247	1,702	2,218
$R^2$	0.979	0.399	0.090	0.968	0.970	0.985	0.958	0.927
F-statistic	34.81	36.24	35.04	32.81	40.95	36.24	35.62	37.27
Mean outcome	461,828	11,339,233	2294	73,733	27,142	69,992	78	773
Tons of IC bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681	1,681	1,681
Reconstr. grants (M)- mean	79	79	79	79	79	79	79	79
Reconstr. grants (M)- std. dev.	29	29	29	29	29	29	29	29
Source	Decennial census	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics	Yearly statistics

Notes: Regressions include province fixed effects, industry fixed effects (first four columns), region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. Panel B shows instrumental-variable regressions in which the reconstruction grants received by a province (in millions) are instrumented with the amount of explosives dropped during the Italian Campaign. The dependent variables are the residential population (column 1), the wage bill in an industry, province, and year (column 2), the average wage (column 3), the number of illiterate individuals (column 4), the hectares not used for agriculture (column 5), the hectares used for wheat and corn (column 6), the number of gins (column 7), and the number of all motorized agricultural machines (column 8). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A7: Additional Crops**

	Asparagus (1)	Peaches (2)	Pears (3)	Walnuts (4)	Potatoes (5)	Olive Oil (6)	Olives (7)	Tomatoes (8)
Panel A: Reduced form								
Tons of bombs x Post 1952	2.567*** (0.336)	62.823** (27.289)	55.429*** (11.883)	-0.286 (0.351)	20.482 (25.464)	1.007 (1.007)	6.919 (5.334)	-32.349 (24.231)
Observations	2,365	2,367	2,368	2,368	2,368	2,368	2,368	2,368
$R^2$	0.753	0.799	0.596	0.955	0.890	0.895	0.892	0.814
Panel B: IV								
Reconstr. grants (M) x Post 1952	337.445*** (63.275)	7,407.986* (4,178.452)	7,296.070*** (2,069.120)	-37.701 (46.848)	2,696.017 (3,221.773)	132.559 (137.567)	910.686 (744.461)	-4,258.069 (3,251.304)
Observations	2,365	2,367	2,368	2,368	2,368	2,368	2,368	2,368
$R^2$	0.644	0.721	0.540	0.954	0.891	0.895	0.892	0.807
F-statistic	36.80	42.38	36.66	36.66	36.66	36.66	36.66	36.66
Mean outcome	1,472	30,664	22,340	5,703	352,859	27,196	167,829	99,657
Tons of IC bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681	1,681	1,681
Reconstr. grants (M)- mean	79	79	79	79	79	79	79	79
Reconstr. grants (M)- std. dev.	29	29	29	29	29	29	29	29

Notes: Regressions in Panel A include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. Panel B shows instrumental variable regressions in which the reconstruction grants received by a province (in millions) are instrumented with the amount of explosives dropped during the Italian Campaign. The dependent variables are the production of asparagus in 100kg (column 1), peaches in 100kg (column 2), pears in 100kg (column 3), walnuts in 100kg (column 4), potatoes in 100kg (column 5), olive oil in 100L (column 6), olives in 100kg (column 7), and tomatoes in 100kg (column 8). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A8: Reconstruction Grants for New and Old Infrastructure**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Agricultural workers (4)	Agricultural firms (5)	Tractors (6)	Threshers (7)
Re. grants NEW (M) x Post 1952	6,930.791*** (1,733.031)	773.503 (1,736.347)	942.903 (2,317.898)	-223.218* (116.367)	441.360** (214.974)	42.656*** (12.617)	-0.500 (0.478)
Rec. grants OLD (M) x Post 1952	4,507.899* (2,358.198)	-831.047 (2,133.988)	-820.206 (2,831.348)	88.386 (178.558)	52.414 (260.140)	7.403 (16.867)	-0.910 (0.746)
Observations	2,244	2,341	2,341	516	222	2,218	1,998
$R^2$	0.951	0.892	0.892	0.951	0.781	0.915	0.866
Mean outcome	1,234.237	459.348	694.159	96,445	45,958	454	383
Reconstr. grants NEW (M)- mean	38	38	38	38	38	38	38
Reconstr. grants NEW (M)- std. dev.	27	27	27	27	27	27	27
Reconstr. grants OLD (M)- mean	41	41	41	41	41	41	41
Reconstr. grants OLD (M)- std. dev.	36	36	36	36	36	36	36

Notes: This table shows OLS regressions in which agricultural outcomes are regressed on the amount of reconstruction grants received by a province (in millions). Reconstruction grants are divided in two variables: grants for new projects (Rec. grants NEW) and grants for fixing preexisting infrastructure (Rec. grants OLD). The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the production of oil in 100kg (column 4), the number of agricultural workers (column 5), the number of agricultural firms (column 6), the number of tractors (column 7), and the number of threshers (column 8). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A9:** Mediation Analysis on Shorter Commuting Distance

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Agricultural workers (4)	Peaches (5)	Pears (6)	Tractors (6)
Baseline treatment effect	71.220*** (25.453)	63.747* (33.246)	79.573** (39.480)	-5.801*** (1.681)	62.823** (27.289)	55.429*** (11.883)	0.515** (0.208)
Non-mediated effect	30.070*** (8.214)	53.790*** (10.342)	67.983*** (12.398)	-2.819*** (0.904)	57.181*** (6.201)	54.546*** (8.248)	0.593*** (0.052)
Share explained by shorter commuting distance	58%	16%	15%	51%	9%	2%	0%

Notes: This table follows the procedure outline by [Acharya, Blackwell, and Sen \(2016\)](#) to estimate how much of the main treatment effects are mediated by the change in the transportation network. First, we augment the baseline reduced-form specifications by including the average post-WWII change in commuting distance between the provincial capital and each municipality within a province interacted with a Post-1952 dummy. Then, we compute the “de-mediated” dependent variable by subtracting the predicted influence of the mediator on the dependent variable. Then, we re-estimate the main reduced-form specifications on the de-mediated dependent variable. The “Non-mediated treatment effect” is the coefficient of the tons of post-armistice Allied bombs interacted with Post 1952 from this last regression. Finally, we bootstrap this coefficient (100 reps) to obtain unbiased standard errors. The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the production of oil in 100kg (column 4), the number of agricultural workers (column 5), the number of agricultural firms (column 6), the number of tractors (column 7), and the number of threshers (column 8). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A10:** Heterogeneous Effects by Mechanization Level

	Wheat & corn production		Wine production		Grape production		Pear production	
	Above median (1)	Below median (2)	Above median (3)	Below median (4)	Above median (5)	Below median (6)	Above median (7)	Below median (8)
Panel A: Reduced form								
Tons of bombs x Post 1952	105.259** (41.570)	-12.539 (56.030)	65.982 (48.911)	44.540 (36.268)	89.758 (59.278)	28.079 (65.104)	68.854*** (25.150)	4.498 (4.807)
Observations	1,082	1,046	1,118	1,099	1,118	1,099	1,120	1,120
$R^2$	0.957	0.958	0.916	0.923	0.923	0.903	0.630	0.788
Panel B: IV								
Reconstr. grants (M) x Post 1952	13,967.878** (6,839.853)	-1,761.329 (9,022.376)	8,738.238 (7,819.022)	6,029.275 (5,246.527)	11,886.864 (9,725.061)	3,800.964 (8,507.897)	9,119.227** (3,965.461)	601.864 (788.813)
Observations	1,082	1,046	1,118	1,099	1,118	1,099	1,120	1,120
$R^2$	0.957	0.957	0.893	0.922	0.902	0.903	0.596	0.785

Notes: This table shows heterogeneous effects on agricultural production based on the postwar increase in the provincial-level number of tractors. For each province, we compute the percentage increase in the number of tractors between 1939 and 1960. Then, we run separate regressions for provinces above and below the median increase. The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A11:** P-values Adjusted for Multiple Hypothesis Tests

	Industrial firms (1)	Firms $\leq$ 10 employees (2)	Industrial workers (3)	Agricultural workers (4)	Wheat & corn production (5)	Tractors (6)
Tons of bombs x Post 1952	0.054** (0.025)	0.041* (0.022)	0.640*** (0.202)	-5.801*** (1.681)	71.220*** (25.453)	0.515** (0.208)
P-value (B-H)	0.076	0.076	0.009	0.002	0.026	0.046
P-value (S-H)	0.074	0.075	0.009	0.002	0.026	0.046
P-value (W-Y)	0.160	0.160	0.080	0.040	0.060	0.080
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.391	0.356	0.477	0.952	0.949	0.908
Tons of bombs - mean	1,486	1,486	1,486	1,486	1,486	1,486
Tons of bombs - std. dev.	2,063	2,063	2,063	2,063	2,063	2,063
Mean outcome	704	667	3,969	96,445	1,234,237	454
Source	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics

Notes: This table computes adjusted p-values for multiple concurrent hypothesis tests using three different methodologies: Bonferroni-Holm, Sidak-Holm, and Westfall-Young (“Resampling-based Multiple Testing: Examples and Methods for p-value Adjustment.” by Westfall and Young (1993)). The table uses the user-written Stata command `wyoung` (“What Do Workplace Wellness Programs Do? Evidence From the Illinois Workplace Wellness Study.” by Jones, Molitor, and Reif (2019)). All regressions include province fixed effects, region-year fixed effects, pre-war characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The first three columns also include industry fixed effects. The dependent variables are the number of firms in an industry, province, and year (column 1), the number of firms with less than 10 employees (column 2), the number of industrial workers (column 3), the number of agricultural workers (column 4), production of wheat and corn in 100kg (column 5), and the number of tractors (column 6). Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A12: Political Outcomes**

	Strikes (1)	Share of firms with strikes (2)	Share of votes for DC (3)	Share of votes for PCI (4)
Panel A: Reduced form				
Tons of bombs x Post 1952	0.0001 (0.0001)	-0.0004 (0.0006)	0.0037*** (0.0010)	0.0002 (0.0003)
Observations	1,850	666	432	420
$R^2$	0.4834	0.3128	0.8344	0.9813
Panel B: IV				
Reconstr. grants (M) x Post 1952	0.0094 (0.0118)	-0.0447 (0.0615)	0.4078*** (0.1227)	0.0331 (0.0382)
Observations	1,850	666	432	420
$R^2$	0.4825	0.3090	0.7593	0.9808
F-statistic	28.08	26.66	22.61	15.05
Mean outcome	5.5	86	44	31
Tons of IC bombs - mean	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681
Reconstr. grants (M)- mean	79	79	79	79
Reconstr. grants (M)- std. dev.	29	29	29	29

Notes: Regressions include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. Panel B shows instrumental-variable regressions in which the reconstruction grants received by a province (in millions) are instrumented with the amount of explosives dropped during the Italian Campaign. The dependent variables are the number of strikes per province and year (column 1), the share of firms affected by strikes per province and year (column 2), the share of votes for the Christian Democratic party per province and national election (column 3), the share of votes for the Italian Communist Party per province and national election (column 4). The data on strikes (1946-1970) come from Archivio Storico dello Stato (Rome-Italy), fondo CIR, busta 39. Data on national elections in 1946, 1948, 1953, 1958, 1963, 1968, 1972 come from the historical archive of the Ministry of the Interior. It is available online at <https://elezionistorico.interno.gov.it/>. The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A13: Controls for Distance from Austrian Border**

	Industrial firms (1)	Firms $\leq 10$ employees (2)	Industrial workers (3)	Agricultural workers (4)	Wheat & corn production (5)	Tractors (6)
Panel A: Distance $\geq 500$ km from Brenner Pass						
Tons of bombs x Post 1952	0.098*** (0.023)	0.080*** (0.020)	0.968*** (0.257)	-11.545*** (2.976)	32.271 (37.823)	0.358** (0.142)
Observations	2,727	2,725	2,725	244	1,034	1,050
Tons of bombs - mean	642	642	642	642	642	642
Tons of bombs - std. dev.	1,381	1,381	1,381	1,381	1,381	1,381
Panel B: Controls for provinces with Brenner Highway						
Tons of bombs x Post 1952	0.051* (0.026)	0.039* (0.022)	0.622*** (0.205)	-5.775*** (1.702)	68.483*** (21.945)	0.486*** (0.159)
Observations	5,454	5,443	5,443	516	2,244	2,218
Tons of bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681
Panel C: Controls for provinces with any highway leading abroad						
Tons of bombs x Post 1952	0.051* (0.026)	0.040* (0.022)	0.614*** (0.205)	-5.791*** (1.716)	68.983*** (21.880)	0.492*** (0.160)
Observations	5,454	5,443	5,443	516	2,244	2,218
Tons of bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681
Panel D: Controls for length of roads in 1938						
Tons of bombs x Post 1952	0.036 (0.022)	0.027 (0.020)	0.528*** (0.186)	-3.530*** (1.329)	53.559* (28.818)	0.372* (0.222)
Observations	5,454	5,443	5,443	516	2,244	2,218
Tons of bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681
Mean outcome	704	667	3,969	96,445	1,234,237	454
Source	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics

Notes: Panel A includes only provinces that are at least 500 km away from the Brenner Pass (on Italian border with Austria). Panel B includes a dummy that identifies provinces touched by the Brenner Highway, the most direct road to the Austrian border, interacted with trends up to the third order. These provinces are: Modena, Reggio Emilia, Mantova, Verona, Trento, Bolzano. In addition to controlling for the Brenner Highway, Panel C includes a dummy that identifies provinces with any highway leading abroad interacted with trends up to the third order. The highways are: A34, A23, A5, A9, A10, and A32. The provinces are: Gorizia, Udine, Torino, Aosta, Milano, Varese, Como, Genova, Savona, Imperia. Panel D includes the province-level length of roads in 1938 interacted with trends up to the third order. All regressions include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The first three columns also include industry fixed effects. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A14: Controls for Geography**

	Industrial firms (1)	Firms $\leq 10$ employees (2)	Industrial workers (3)	Agricultural workers (4)	Wheat & corn production (5)	Tractors (6)
Panel A: Trends correlated with geographical features (elevation, degree of urbanization)						
Tons of bombs x Post 1952	0.072*** (0.023)	0.058*** (0.020)	0.744*** (0.188)	-6.011*** (1.741)	66.952*** (24.371)	0.474** (0.195)
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.393	0.358	0.479	0.954	0.950	0.912
Tons of bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681
Panel B: Trends correlated with fertility of soil						
Tons of bombs x Post 1952	0.061** (0.026)	0.048** (0.023)	0.686*** (0.205)	-6.428*** (1.808)	74.877*** (23.255)	0.525*** (0.164)
Observations	5,454	5,443	5,443	516	2,215	2,188
$R^2$	0.391	0.357	0.477	0.956	0.952	0.916
Tons of bombs - mean	1045	1045	1045	1,045	1,045	1,045
Tons of bombs - std. dev.	1681	1681	1681	1,681	1,681	1,681
Panel C: Trends correlated with latitude, longitude, distance from Brenner Pass						
Tons of bombs x Post 1952	0.040* (0.024)	0.030 (0.020)	0.584*** (0.210)	-5.414** (2.133)	66.544*** (19.503)	0.468** (0.182)
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.392	0.357	0.478	0.955	0.960	0.936
Tons of bombs - mean	1045	1045	1045	1,045	1,045	1,045
Tons of bombs - std. dev.	1681	1681	1681	1,681	1,681	1,681
Mean outcome	704	667	3,969	96,445	1,234,237	454
Source	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics

Notes: Panel A includes geographical characteristics (average elevation, share of rural municipalities) interacted with a trend up to the third order. Panel B includes data on the fertility of soil interacted with a trend up to the third order. These variables measures the province-level average fertility of soil (kg/ha) for the production of wheat, maize, tomato, and potato. These variables are measured in 1961 (first year available) by the Food and Agriculture Organization (FAO) through its project “Global Agro-Ecological Zones.” More information is available online at <http://www.fao.org/nr/gaez/about-data-portal/agricultural-suitability-and-potential-yields/en/>. Panel C includes latitude and longitude of the centroid of each province, their squares, and the distance of the centroid from the Brenner Pass, all interacted with a trend up to the third order. All regressions include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The first three columns also include industry fixed effects. The dependent variables are the number of firms in an industry, province, and year (column 1), the number of firms with less than 10 employees (column 2), the number of industrial workers (column 3), the number of agricultural workers (column 4), production of wheat and corn in 100kg (column 5), and the number of tractors (column 6). Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A15: Alternative Samples**

	Industrial firms (1)	Firms $\leq$ 10 employees (2)	Industrial workers (3)	Agricultural workers (4)	Wheat & corn production (5)	Tractors (6)
Panel A: All Italian Provinces						
Tons of bombs x Post 1952	0.056** (0.025)	0.044** (0.022)	0.613*** (0.194)	-5.224*** (1.588)	60.992** (24.933)	0.492** (0.201)
Observations	6,246	6,235	6,235	593	2,598	2,578
$R^2$	0.389	0.355	0.476	0.950	0.937	0.909
Tons of bombs - mean	907	907	907	907	907	907
Tons of bombs - std. dev.	1,604	1,604	1,604	1,604	1,604	1,604
Panel B: No Southern Provinces						
Tons of bombs x Post 1952	0.042* (0.024)	0.031 (0.021)	0.571*** (0.193)	-6.003*** (1.817)	66.656*** (24.813)	0.484** (0.209)
Observations	4,302	4,291	4,291	404	1,780	1,738
$R^2$	0.390	0.354	0.479	0.939	0.957	0.905
Tons of bombs - mean	1,305	1,305	1,305	1,305	1,305	1,305
Tons of bombs - std. dev.	1,825	1,825	1,825	1,825	1,825	1,825
Mean outcome	704	667	3,969	96,445	1,234,237	454
Source	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics

Notes: Panel A includes all Italian provinces . Panel B drops provinces from Sardegna, Sicilia (like the baseline sample), Abruzzo, Basilicata, Campania, Calabria, Puglia, and Molise. All regressions include province fixed effects, region-year fixed effects, pre-war characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The first three columns also include industry fixed effects. The dependent variables are the number of firms in an industry, province, and year (column 1), the number of firms with less than 10 employees (column 2), the number of industrial workers (column 3), the number of agricultural workers (column 4), production of wheat and corn in 100kg (column 5), and the number of tractors (column 6). Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A16: Spatial HAC Standard Errors**

	Industrial firms (1)	Firms $\leq$ 10 employees (2)	Industrial workers (3)	Agricultural workers (4)	Wheat & corn production (5)	Tractors (6)
Panel A: Baseline with standard errors clustered at the province level						
Tons of bombs x Post 1952	0.054** (0.025)	0.041* (0.022)	0.640*** (0.202)	-5.801*** (1.681)	71.220*** (25.453)	0.515** (0.208)
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.391	0.356	0.477	0.952	0.949	0.908
Panel B: Spatial HAC standard errors						
Tons of bombs x Post 1952	0.054** (0.025)	0.041* (0.022)	0.640*** (0.197)	-5.801*** (1.474)	71.220*** (16.951)	0.515*** (0.140)
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.391	0.356	0.477	0.954	0.949	0.908
Tons of bombs - mean	1045	1045	1045	1,045	1,045	1,045
Tons of bombs - std. dev.	1681	1681	1681	1,681	1,681	1,681
Mean outcome	704	667	3,969	96,445	1,234,237	454
Source	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics

Notes: Panel A shows the baseline results with standard errors clustered at the province level. Panel B shows estimates with spatial HAC standard errors (Conley, 1999). Spatial HAC standard errors correct for spatial correlation among provinces that are within 5,000km of each other. All regressions include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The first three columns also include industry fixed effects. The dependent variables are the number of firms in an industry, province, and year (column 1), the number of firms with less than 10 employees (column 2), the number of industrial workers (column 3), the number of agricultural workers (column 4), production of wheat and corn in 100kg (column 5), and the number of tractors (column 6). Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A17: Controls for WWII, the Marshall Plan, and Other Public Spending**

	Industrial firms (1)	Firms $\leq 10$ employees (2)	Industrial workers (3)	Wheat & corn production (4)	Agricultural workers (5)	Tractors (6)
Panel A: Controls for tons of bombs before the Armistice of Cassibile						
Tons of bombs x Post 1952	0.057** (0.026)	0.044* (0.022)	0.687*** (0.201)	57.957** (25.039)	-5.252*** (1.500)	0.534*** (0.176)
Observations	5,526	5,515	5,515	2,270	523	2,245
$R^2$	0.391	0.356	0.477	0.952	0.954	0.909
Panel B: Controls for other MP grants						
Tons of bombs x Post 1952	0.059** (0.025)	0.045** (0.022)	0.712*** (0.202)	77.583*** (25.955)	-7.199*** (2.165)	0.667*** (0.201)
Other MP grants (M) x Post 1952	-0.417 (0.387)	-0.384 (0.327)	0.542 (3.189)	-437.041 (506.145)	-24.516 (38.092)	1.176 (3.090)
Observations	5,526	5,515	5,515	2,270	523	2,245
$R^2$	0.391	0.356	0.477	0.949	0.949	0.902
Panel C: Controls for other MP grants and war-related deaths						
Tons of bombs x Post 1952	0.046* (0.024)	0.034 (0.021)	0.634*** (0.210)	63.278** (26.683)	-5.820*** (1.788)	0.508** (0.215)
Other MP grants (M) x Post 1952	-0.629 (0.410)	-0.571 (0.347)	-0.500 (3.395)	-630.564 (491.164)	-1.402 (37.390)	-0.502 (3.003)
Observations	5,454	5,443	5,443	2,244	516	2,218
$R^2$	0.391	0.356	0.477	0.949	0.952	0.908
Panel D: Controls for investments in the transportation network by the Italian government						
Tons of bombs x Post 1952	0.026 (0.021)	0.020 (0.018)	0.480*** (0.173)	68.584** (28.420)	-2.852** (1.329)	0.479** (0.208)
Observations	5,526	5,515	5,515	2,270	523	2,245
$R^2$	0.392	0.357	0.478	0.951	0.961	0.911
Panel E: Controls for infrastructural investments by the Italian government						
Tons of bombs x Post 1952	0.030 (0.021)	0.022 (0.018)	0.502*** (0.172)	65.854** (27.111)	-3.470** (1.351)	0.463** (0.192)
Observations	5,526	5,515	5,515	2,270	523	2,245
$R^2$	0.392	0.357	0.478	0.950	0.958	0.909
Mean outcome	704	667	3,969	1,234,237	96,445	454
Tons of IC bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681

Notes: Regressions include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order. In addition, panel A includes the tons of bombs dropped in each province before the armistice interacted with a trend up to the third order; panel B includes the amount of grants (not for reconstruction of public infrastructures) assigned through the Marshall Plan interacted with a dummy equal to 1 starting from 1952; panel C includes the amount of grants (not for reconstruction of public infrastructures) assigned through the Marshall Plan interacted with a dummy equal to 1 starting from 1952, as well as the share of war-related deaths interacted with a trend up to the third order; panel D includes the amount of investments in the transportation network from the Italian government (separately for the periods 1946-1952 and 1953-1970) interacted with a trend up to the third order; panel E includes all infrastructural investments from the Italian government (separately for the periods 1946-1952 and 1953-1970) interacted with a trend up to the third order. The dependent variables are the amount of firms active in each province, industry, and year (column 1), the number of industrial workers (column 2), the number of firms with less than 10 workers (column 3), the production of wheat and corn in each province and year (column 4), the number of agricultural workers (column 5), and the number of tractors (column 6). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A18: Sobel-Goodman Mediation Test**

	Industrial firms (1)	Firms $\leq 10$ employees (2)	Industrial workers (3)	Wheat & corn production (4)	Agricultural workers (5)	Tractors (6)
Panel A: Controls for other MP grants						
Tons of bombs x Post 1952	0.063	0.075	0.007	0.051	0.035	0.018
Panel B: Controls for other MP grants and war-related deaths						
Tons of bombs x Post 1952	0.147	0.175	0.009	0.112	0.003	0.012

Notes: This table shows the results of Sobel-Goodman mediation tests. Each number represents the share of the effect of “Tons of IC bombs x Post 1952” on the dependent variable that is mediated by “Other MP grants (M) x Post 1952” (the amount of ERP grants not destined to infrastructure reconstruction). Regressions include province fixed effects, region-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) and war-related deaths (panel B only) interacted with a trend up to the third order. The dependent variables are the amount of firms active in each province, industry, and year (column 1), the number of industrial workers (column 2), the number of firms with less than 10 workers (column 3), the production of wheat and corn in each province and year (column 4), the number of agricultural workers (column 5), and the number of tractors (column 6). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign.

**Table A19: Alternative Specifications of Bombings**

	Industrial firms (1)	Firms $\leq$ 10 employees (2)	Industrial workers (3)	Agricultural workers (4)	Wheat & corn production (5)	Tractors (6)
Panel A: Drop provinces with 0 bombings						
Tons of bombs x Post 1952	0.067*** (0.024)	0.052** (0.021)	0.728*** (0.210)	-6.763*** (2.227)	77.276*** (28.548)	0.438* (0.231)
Observations	4,446	4,435	4,435	404	1,718	1,678
$R^2$	0.392	0.357	0.481	0.938	0.956	0.906
Tons of bombs - mean	1,270	1,270	1,270	1,270	1,270	1,270
Tons of bombs - std. dev.	1,776	1,776	1,776	1,776	1,776	1,776
Panel B: Drop provinces with 0 bombings or more than 7,000 tons of bombs						
Tons of bombs x Post 1952	0.064 (0.048)	0.052 (0.041)	0.742** (0.342)	-8.485* (4.384)	108.681** (46.043)	0.816** (0.331)
Observations	4,302	4,291	4,291	390	1,658	1,618
$R^2$	0.397	0.361	0.484	0.936	0.956	0.903
Tons of bombs - mean	1,034	1,034	1,034	1,034	1,034	1,034
Tons of bombs - std. dev.	1,183	1,183	1,183	1,183	1,183	1,183
Panel C: IC bombings since the Armistice of Cassibile						
Tons of bombs x Post 1952	0.058** (0.022)	0.046** (0.019)	0.613*** (0.165)	-5.894*** (1.441)	61.318*** (22.852)	0.413** (0.168)
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.391	0.356	0.477	0.953	0.949	0.907
Tons of bombs - mean	1,486	1,486	1,486	1,486	1,486	1,486
Tons of bombs - std. dev.	2,063	2,063	2,063	2,063	2,063	2,063
Panel D: More targets during the Italian Campaign						
Tons of bombs x Post 1952	0.042** (0.019)	0.034** (0.016)	0.371*** (0.116)	-4.798*** (1.140)	60.789*** (17.271)	0.444*** (0.108)
Observations	5,454	5,443	5,443	516	2,244	2,218
$R^2$	0.391	0.356	0.477	0.957	0.951	0.914
Tons of bombs - mean	2,490	2,490	2,490	2,490	2,490	2,490
Tons of bombs - std. dev.	3,074	3,074	3,074	3,074	3,074	3,074
Mean outcome	704	667	3,969	96,445	1,234,237	454
Source	Decennial census	Decennial census	Decennial census	Yearly statistics	Yearly statistics	Yearly statistics

Notes: In Panel A, the sample drops provinces with 0 Allied bombings. In Panel B, the sample does not include provinces with 0 bombings and with more than 7,000 tons of bombs. In Panel C, the treatment variable measures the amount of explosives related to the Italian Campaign between the signing of the Armistice of Cassibile (on September 3, 1943 instead of March 1944) and the end of the war. In Panel D, the treatment variable measures the amount of explosives used during the Italian Campaign against a longer list of targets: direct cooperation with ground forces; troop concentrations; radar installations; gun emplacements; weapon launching sites; tactical targets; supply dumps; tracks and marshaling yards; moving trains; highways and vehicles; transportation facilities; tunnels and bridges; waterways; and airdromes. The other variables included in the regression are described in Table 6 and Table 7. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table A20:** The Correlation of Different Measures of Bombings with War Damages

	Reconstruction grants (1)	Reconstruction grants (2)	Reconstruction grants (3)	War damages (4)	War damages (5)	War damages (6)
Tons of bombs	10,109*** (1,740)			5,232*** (910)		
Tons of bombs per km <sup>2</sup>		24,158,909*** (6,515,393)			12,339,403*** (3,358,614)	
Tons of bombs per 1,000 prewar residents			3,749,492*** (1,061,327)			1,891,232*** (527,386)
Observations	5,454	5,443	5,443	516	2,244	2,218
R <sup>2</sup>	0.391	0.356	0.477	0.953	0.949	0.907
Dep. var.—mean	78,745,789	78,745,789	78,745,789	42,127,685	42,127,685	42,127,685
Bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681
Effect (1 $\sigma$ of bombs)	16,989,283	13,287,400	12,410,818	8,793,272	6,786,671	6,259,979

Notes: Tons of bombs is the total tons of Allied bombs dropped in each province during the Italian Campaign. Tons of bombs per km<sup>2</sup> is the ratio between total tons of bombs and the area of a province. Tons of bombs per 1,000 prewar residents is the ratio between total tons of bombs and the provincial population (in 1,000 of inhabitants) in 1937. Data on funding from the Marshall Plan come from “*Missione Americana ERP in Italia*”, “*Mutual Security Agency*” bulletins, and the historical archive of the *Istituto Mobiliare Italiano*. Data on damages to public infrastructure (transportation system, sanitation system, and public buildings) come from “*Italy: Country Study*” by the ECA. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

## B Anecdotal Evidence on Updated Infrastructure

This section discusses two more anecdotes in addition to the one included in the main text.

First, the Marshall Plan financed the reconstruction and expansion of the railroad connecting Bologna and Padova, two major cities in northern Italy. The project, started in 1950 and completed in 1954, led to an increase in cherry, apricots, and peaches production. This effect was likely due to the fact that the updated railroad (not just its reconstruction, but the addition of a second track to address increased demand for transportation) allowed the fruit farmers near Bologna to sell their products to local markets outside their region. This example is discussed in the 2004 book “Il piano Marshall in Emilia Romagna e Lombardia” by Simona Spertini.

Second, the Marshall Plan financed the reconstruction and expansion of the road between Rezzato and Vicenza in Veneto. The construction of this road allowed local farmers to sell their products on many more markets, not just their local ones. This example is included in the 1991 essay “Un sondaggio periferico: Gli americani a Vicenza” by Maurizio Caiaffa.

Next, we include the articles used as a reference for the anecdote in the main text. The first article was published by La Stampa on November 15, 1949 on page 4, and is cited in Section 4.2 of the draft (emphasis added in the relevant part of the article).

**Un rapporto ufficiale dell’ERP sulla nostra regione. Prestiti per diciotto miliardi concessi alle industrie piemontesi. Si tratta di una cifra pari a circa un quarto di quella totale per l’Italia—Altri due miliardi e 127 milioni di lire saranno impiegati per opere delle FF. SS.**

A quasi un anno a mezzo di distanza dalla entrata in funzione del Piano Marshall, è interessante vedere quale ne è stata l’applicazione in Piemonte, specialmente nei confronti delle altre regioni italiane. Come è noto, l’European Recovery Plan contempla sia grants (offerti gratuitamente dall’America) sia loans (prestiti in dollari a lunga scadenza, alle industrie). E’ facile osservare, anche dopo una prima superficiale scorsa dei dati statistici, come il Piemonte abbia usufruito in misura molto modesta (nel confronti di altre regioni, s’intende) dei grants e come invece la sua industria si sia resa immediatamente conto dei vantaggi offerti dai loans. Tipica voce tra grants, quella dei medicinali. Dati aggiornati che citiamo da una relazione della divisione informazioni dell’E.C.A. dimostrano che di 2.306.000 milioni di unità di penicillina donate all’Italia, solo 62.096 milioni sono state distribuite in Piemonte; di 4.032.70 grammi di streptomycin, 207.936; di 6.734.000 centimetri cubi d’insulina, solo 32.500; di 2.060.000 oc di estratto di fegato, infine, solo 10.000 sono toccate alla nostra regione. Ben diversa la distribuzione della seconda voce: prestiti (loans) E.R.P. a lunga scadenza e ed un modesto tasso di interesse. Al 15 ottobre u. s., infatti, era stata approvata la concessione all’industria italiana per 109.103.274 milioni di dollari: di tale cifra, 29.276.039 dollari—più di un quarto—sono stati assegnati a ditte piemontesi e così ripartiti: Industria tessile. Maglioni e Tedeschi: dollari 750.000; Robassonero: 350.000; Cotonificio Val di Susa: 180.000; Manifattura Pastore: 55.000; Manifatture Mosca: 14.000; Amia 8800. Industria Meccanica. Officine S. Andrea: 880.000; Off. Sa vigliano; 080.000; Fiat 12.820.658; Fiat 1.800.000; Lancia e C. 800.000; Gavini Vittorio 65.000; Conterò O. e C.: 60.000; Fratelli Zerboni e C.: 600.000. Industria Elettromeccanica. WeetInghouse: 170.000; inóet: 220.000; Carburatori Zenith: 36 mila; P. Pogliano 20.000; Utensileria Speciale e Attresz.: 26 mila; Bematssegmentl.: 11.000. Industria Siderurgica. Officine Metallurgiche Pepino G.S.A. 85.000; Fiat 4.159.000; Cogne 1.034.000; Società Leghe Porose: 82.000. Industria Chimica. Soc. Italiana Gas: 900.000. Industria Cartaria. Giacomo Bosso: 206.000; Cartiera Burgo: 1.660.000. Industria Editoriale. Stamperia Artist Naz.: 12.000; Linotipia Bearzatto: 17.000; Ist. Grafico Bertello: 100.000; Istit. Geograf. De Agostini: 125.000. Telecomunicazioni. T.I.M.O.: 70.000; R.A.I.: 826.581. Industria Elettrica. Ceat: 250.000. Industria Gomma. Ceat: 420 mila. Industrie Varie. Pennellinolo Piemontese: 11.000; Imprese Coetruz. Borini: 26.000. Con i soldi forniti

gratuitamente all'Italia dall'E.R.P. (grants), vengono, come noto, alimentati i fondi per la ricostruzione, tra cui 127 miliardi per la ricostruzione delle ferrovie dello Stato. Di quest'ultima somma, 875 milioni di lire sono stati stanziati per il Piemonte per il 1950; altri 2 miliardi e 127.200.000, lo saranno nel corso del 1951. *Tra i finanziamenti approvati per il primo trimestre del 1950 figura la ricostruzione del Binario Carmagnola-Fossano (lire 923.300.000) con l'aggiunta di un secondo binario. Questa opera si figura indispensabile nel panorama piemontese. La percorrenza della linea ferroviaria Torino-Savona, fortemente danneggiata dai bombardamenti della Seconda Guerra Mondiale, specialmente nel tratto indicato, richiede fino a sette ore, a fronte di appena 259km percorsi.* Altre finanziamenti già stanziati includono: ponte sul fiume Tanaro a km. 89.292 della linea Torino-Genova (168.600.000); arcate di metallo del ponte su Roccia Braga a 91.531 km. della linea Torino-Milano (86.900 mila); ponte ferroviario sul Ticino a 33.272 km. della linea Milano-Vigevano (101200.000); pensilina passeggeri nella stazione di Alessandria (59.600.000); tettoia riparo veicoli per l'Officina Materiale Rotabile e rotaie per due gru a ponte a Torino (47.200.000).

Here, there is its English translation (emphasis added in the relevant part of the article).

**An official report of ERP in our region. Loans for eighteen billion liras given to Piedmont firms. It is one fourth of the total for Italy. Two additional billion and 127 million liras will be used for projects of the State Railroads**

Almost one year and a half after the beginning of the Marshall Plan, it is interesting to see its implementation in Piedmont, especially in comparison with the other Italian regions. The European Recovery Plan includes both grants (given by the US with no repayment needed) and loans (long-term loans in dollars given to industries). It is easy to observe, even after a quick look at the statistical data, that Piedmont received few grants (compared to other regions) while its industry had immediately taken full advantage of loans. The most common form of grant was represented by the delivery of medicines. Updated data that we cite from a report by the information division of E.C.A. show that out of 2.306.000 million units of penicillin donated to Italy, only 62.096 million have been distributed in Piedmont; out of 4.032.700 grams of streptomycin, 207.936; out of 6.734.000 cm<sup>3</sup> of insulin, only 32,500; out of 2,060,000 of liver extract only 10,000 have been given to our region. The distribution of long-term E.R.P. loans at low interest rates looks very different. As of date, 109.103.274 million dollars have been loaned to Italian firms: Of this amount, 29.276.039 dollars—more than one fourth—have been assigned to Piedmont and distributed as follows: Textile Industry. Maglioni e Tedeschi: dollars 750.000; Robassonero: 350.000; Cottonificio Val di Susa: 180.000; Manifattura Pastore: 55.000; Manifatture Mosca: 14.000; Amia 8800. Mechanic Industry. Officine S. Andrea: 880.000; Off. Savigliano; 080.000; Fiat 12.820.658; Fiat 1.800.000; Lancia e C. 800.000; Gavini Vittorio 65.000; Conterò O. e C: 60.000; Fratelli Zerboni e C: 600.000. Electromagnetic Industry. WeetInghouse: 170.000; inóet: 220.000; Carburatori Zenith: 36 mila; P. Pogliano 20.000; Utensileria Speciale e Attresz.: 26 mila; Bematssegmentl.: 11.000. Iron Industry. Officine Metallurgiche Pepino G.S.A. 85.000; Fiat 4.159.000; Cogne 1.034.000; Società Leghe Porose: 82.000. Chemical Industry. Soc. Italiana Gas: 900,000. Industria Cartaria. Giacomo Bosso: 206.000; Cartiera Burgo: 1.660.000. Newspaper Industry. Stamperia Artist Naz.: 12.000; Linotipia Bearzatto: 17.000; Ist. Grafico Bertello: 100.000; Istit. Geograf. De Agostini: 125.000. Telecommunications. T.I.M.O.: 70.000; R.A.I.: 826.581. Electric Industry. Ceat: 250.000. Rubber Industry. Ceat: 420 mila. Other Industries. Pennellinolo Piemontese: 11.000; Imprese Coetruz. Borini: 26.000. The grants are often used for reconstruction, including 127 billion for the State Railroad reconstruction. For the latter, 875 million liras have been assigned to Piedmont in 1950; other 2 billion and 127.200.000 will be assigned in 1951. *Among the reconstruction projects approved for the first quarter of 1950, there is the reconstruction of the railway Carmagnola-Fossano (lire 923.300.000) with the addition of a second track. This project is crucial for Piedmont. Traveling along the railroad line Torino-Savona, heavily bombed during WWII, especially between Carmagnola and Fossano, takes up to 7 hours, for*

*a mere 259km.* Other projects already approved include: bridge on river Tanaro at a km. 89.292 from the line Torino-Genova (168.600.000); steel arcades on the bridge on Roccia Braga at 91.531 km. from the line Torino-Milano (86.900.000); railroad bridge on River Ticino a 33.272 km. from the line Milano - Vigevano (101200.000); passenger platform in the station of Alessandria (59.600.000); repair roof for vehicles for the Railroad Material Office and rails for two cranes in Torino (47.200.000).

The second article was published by La Stampa on October 20, 1957 on page 5, and is cited in Section 4.2 of the draft (emphasis added in the relevant part of the article).

**Note di agricoltura. Mentre si vendemmia migliora il prezzo del vino. L'imposta di consumo deve andare a favore dei produttori e dei consumatori**

La vendemmia delle uve dolcetto e Moscato, iniziata ai primi di ottobre, con temperature piuttosto fredde le quali hanno ostacolato la fermentazione, è poi continuata con la barbera, la freisa ed attualmente il nebbiolo. Il tempo, mantenendosi sempre bello, ha facilitato la maturazione delle uve, sebbene quest'anno le gradazioni glucometriche siano stale piuttosto basse, circa 18 gradi per la barbera, pari a 10.8-11 gradi di alcool. I prezzi medi delle uve sono stati soddisfacenti e sono sempre andati aumentando dall'inizio della vendemmia. Nell'attesa di conoscere le medie comunali che saranno pubblicate a vendemmia ultimata, le quotazioni approssimative, di orientamento, sono state le seguenti: Dolcetto delle zone classiche da 650 a 700, Moscato da 720 a 800, Barbera d'Asti da 580 a 650 fino a 680 nei giorni scorsi; Freisa da 460 a 520; Nebbiolo da 700 a 850. I vini che si ricaveranno nella corrente annata risulteranno sani, armonici, serbevoli, con giusta proporzione nei vari elementi, però dotati di gradazioni alcoliche un po' deficitarie: manca sovente un grado di alcool che si potrebbe ottenere, se da noi non fosse vietato lo zuccheraggio, aggiungendo Kg. 1.60 di zucchero ogni ettolitro di mosto. Si ritiene che la produzione nazionale possa aggirarsi sui 50 milioni di ettolitri di vino. Nel complesso, quest'anno, si avrà una produzione di qualità soddisfacente. In certe regioni però, come ad esempio in Piemonte la produzione risulta superiore del 25-30 per cento nei confronti del 1956. *In relazione all'attuale produzione vinicola è indubbio che quest'anno e così pure si ritiene che nel 1958 tutta la produzione vinicola verrà smerciata e saranno così superate quelle difficoltà che si sono riscontrate fino allo scorso anno. Il completamento della linea Carmagnola-Fossano e la costruzione del doppio binario finanziati dal Piano Marshall finalmente consente collegamenti rapidi ed efficienti con la Liguria e, quindi, con la Francia. E' auspicabile (ed i primi sintomi si sono già avuti in questi giorni), che anche presso i produttori il prezzo del vino prenda il dovuto «tono» e possa compensare il lavoro del viticoltore.* Ecco l'andamento dei prezzi dei vini all'ingrosso ed al minuto, prendendo come riferimento l'anno 1938 con il coefficiente uno. Nel 1950: 35 volte all'ingrosso e 45 al minuto; nel 1952: 35 contro 46; nel 1954: 54 contro 59; nel 1956: 46 contro 61; nel 1957, a maggio, 34 all'ingrosso contro 60 al minuto. I viticoltori, le organizzazioni di categoria ed il Governo, stanno lavorando per poter ridurre la tassazione vinicola. Il provvedimento più importante che dovrebbe essere deliberato dal Governo è quello dell'abolizione dell'imposta sul vino, il cui gettito annuo si aggira sui 35 miliardi di lire. E' necessario però prendere tutte le garanzie affinché tale riduzione del gravame su questa popolare bevanda vada a favore dei produttori e dei consumatori poiché se fosse altrimenti e per recuperare uguale somma si colpisse per altre vie l'agricoltura, converrebbe lasciare le cose come stanno.

Here, there is its English translation (emphasis added in the relevant part of the article).

**Report on Agricultural Production. While Harvesting Grapes, Wine Price Rises. The consumption tax should benefit producers and consumers**

Harvesting of Dolcetto e Moscato grapes, started at the beginning of October, with fairly cold temperatures which prevented fermentation, then continued to Barbera grapes, la Freisa

grapes, and these days Nebbiolo grapes. The weather, being always fine, has helped the grape maturation, despite this year the glucometric gradations are rather low, around 18 degrees for la Barbera, equivalent to 10.8-11 alcohol degrees. The average prices of grapes have been satisfactory and have been increasing since the beginning of the harvest. Waiting for the municipality average that will be published when the harvest is completed, the estimates have been the following: Dolcetto delle zone classiche from 650 to 700; Moscato from 720 to 800; Barbera d'Asti from 580 to 650 up to 680 in the last days; Freisa from 460 to 520; Nebbiolo from 700 to 850. The wines from this harvest will be good, harmonious, with the right proportion of the different elements, however with low alcoholic degrees: often, there is one degree missing, that could be obtained, if it wasn't forbidden, by adding 1.60kg of sugar for each hectoliter of must. It has been estimated that the national production could be around 50 million hectoliters of wine. Overall, this year there will be a satisfactory level of production. However, in some regions, such Piedmont, the production will be higher by 25-30 percent compared to 1956. *Regarding this year production, it is clear that this year as well as in 1958 all the wine production will be sold, and the difficulties found until last year will be overcome. The completion of the line Carmagnola-Fossano and the construction of the second track financed by the E.R.P. now guarantee fast connection with Liguria, and therefore France. It is desirable now (and the first signs happened these days) for the price of wine to further increase in order to fully compensate the farmers' work.* Here the prices of wine at wholesale and retail level, using as reference the year 1938 with coefficient 1. In 1950: 35 times wholesale and 45 retail; in 1952: 35 against 46; in 1954: 54 against 59; in 1956: 46 against 61; in 1957, in May, 34 wholesale against 60 retail. The wine farmers, the unions and the Government, are working to reduce the wine taxes. The most important change that the Government should pass is to abolish the wine tax, whose revenues is 35 milliard lire. It is necessary to have all the guarantees so that the wine tax cut would benefit the producers and the consumers because if it was the case and to recover that sum there will be other type of taxes on agriculture, it would be better not to change anything.

## C Roads and Railways: An Event-Study Analysis

Significant geographical variation exists in the year in which the first important construction projects were completed. The first five large public works in a province—each amounting to at least 5 percent of the total grants received by a province—were completed by 1953 in 37 provinces, by 1954 in 11 provinces, by 1955 in 34 provinces, by 1956 in 7 provinces, and by 1957 in 3 provinces (Figure C1, panel A). We exploit this distribution to draw a tighter correlation between the completion of public infrastructure in each province and economic development. We perform an event-study analysis to estimate how agricultural variables changed between provinces that suffered varying levels of tactical bombings after the execution of the first large construction projects:

$$y_{pk} = \alpha_p + \beta_t + \gamma_{rk} + \delta \text{IC Bombs}_p \times \text{Post}_k \quad (3)$$

$$+ \sum_{z=1}^3 \text{trend}_t^z \times \text{Econ}_p + \sum_{z=1}^3 \text{trend}_t^z \times \text{War}_p + \epsilon_{pk},$$

where the unit of observation is province  $p$  in event period  $k$ . The dependent variable  $y_{pk}$  is a measure of agricultural output.<sup>43</sup>

The dummy variable  $\text{Post}_k$  is equal to 1 for every period  $k$  after the completion of the first five large public works, each amounting to at least 5 percent of the total amount of ERP grants assigned to a province.<sup>44</sup>

As an additional test for the possible influence of omitted factors, we estimate placebo treatment effects starting from equation (3). Specifically, we restrict the sample to periods that preceded the completion of the first large public works in each province. We then create the variable  $\text{Post}_k$  by randomizing the first period in which this dummy takes value 1. The placebo treatment variable does not predict any significant change in the agricultural outcomes (Table C1 and Figure C2).

The event-study analysis indicates that agricultural outputs increased after the initial reconstruction of large public works (Table C2, panel A). A 1  $\sigma$  difference in tons of explosives is associated with 9.6 million (se=3.2) additional kilograms of wheat and corn, 10 million (se=5.1) additional liters of wine, 11.7 million (se=6) additional kilograms of grapes, and 857 (se=282) additional tractors per province and year. In the IV specifications, the estimated effect of reconstruction grants is between 13 percent and 46 percent larger than the baseline (Table C3, panel A). The event studies also confirm that the reconstruction grants had no significant effect on crops (like olive oil production) concentrated in provinces that were not heavily affected by air strikes during the Italian Campaign, or on the adoption of obsolete

<sup>43</sup>We restrict the analysis to agricultural variables because industrial outputs are observed only in 1927, 1937, 1951, 1961, 1971, 1981, 1991, and 2001. An event-study on industrial outcomes would lead to the same results described in Section 6.2. We also study the direct relationship between agricultural outputs and reconstruction grants by estimating the following IV specification:  $y_{pk} = \alpha_p + \beta_t + \gamma_{rk} + \delta \text{Reconstruction grants}_p \times \text{Post}_k + \sum_{z=1}^3 \text{trend}_t^z \times \text{Econ}_p + \sum_{z=1}^3 \text{trend}_t^z \times \text{War}_p + \epsilon_{pk}$ . We instrument the amount of reconstruction grants in province  $p$  with the amount of explosives dropped by Allied forces in the same province during the Italian Campaign.

<sup>44</sup>All other variables have been introduced in the previous analysis. The results are robust if  $\text{Post}_k$  equals 1 after the completion of the first project amounting to at least 5 percent of the total ERP budget (Table C4).

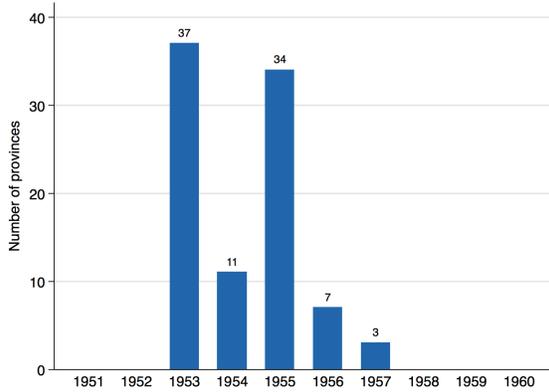
tools such as manual threshers.

The first large road and railway projects had a different completion year in 17 provinces (18 percent). We use this variation to explore whether different types of infrastructure have varying effects on economic outcomes. On average, roads are associated with larger increases in economic outcomes. This finding is consistent with the fact that the Italian government favored the modernization of the road network at the expense of rail transport (Figure A4, panel C). In the case of grape production, for example, a 1  $\sigma$  difference in tons of explosives is associated with 13.2 million (se=6.3) additional kilograms per province and year after the completion of the first five large roads (Table C2, panel B, column 3), but only 11.7 million (se=5.9) additional kilograms after the completion of the first five large railways (Table C2, panel C, column 3). The estimated effects for other variables are between 2 percent and 11 percent larger when  $Post_k$  flags the completion of the first five large roads.<sup>45</sup>

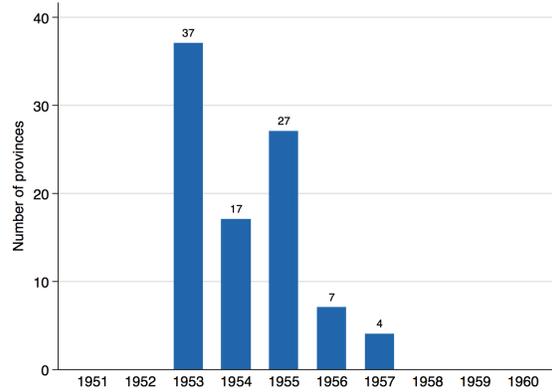
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<sup>45</sup>Difference-in-differences estimates for single event periods show how most agricultural outputs increased only after the completion of the first public works (between 1953 and 1957), instead of immediately after receiving the ERP grants (between 1949 and 1952) (Figure C3). This trend is especially clear for the completion of the first roads.

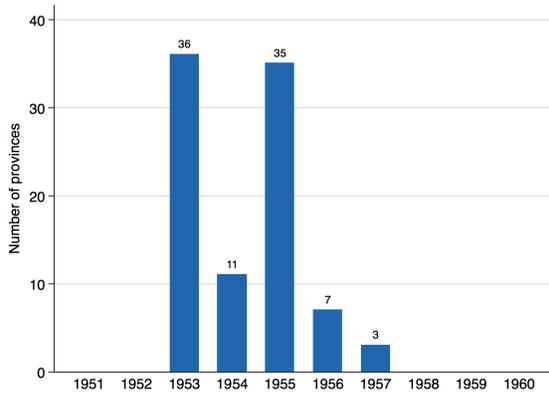
**Figure C1: Year of Completion of Large Infrastructure Projects**



A. Year of completion top five projects



B. Year of completion top five roads

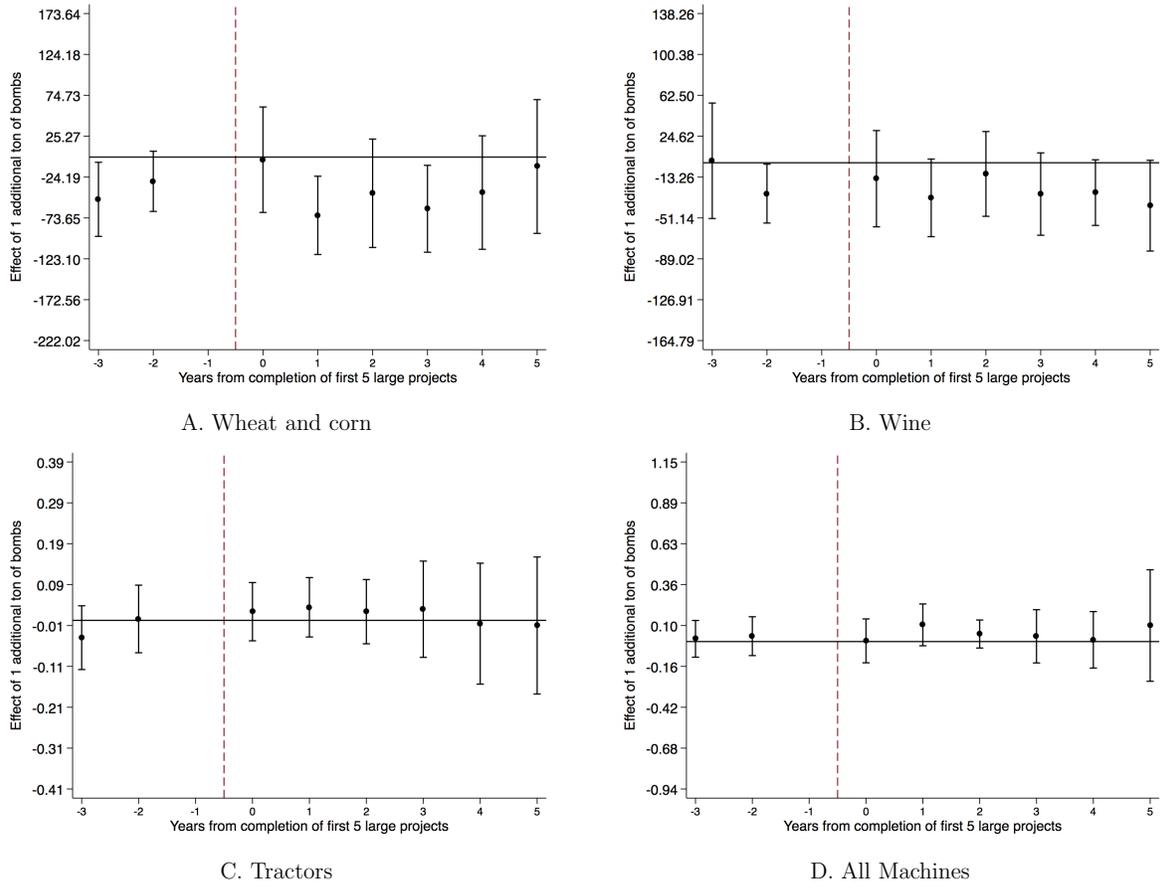


C. Year of completion top five railways

Notes: This graph shows the distribution of the completion year of the first five large infrastructure projects funded by E.R.P aid across the 92 Italian provinces. Panel A shows the completion year of the first 5 projects, each amounting to at least 5 percent of total funds assigned to a province. Panel B shows the completion year of the first five roads, each amounting to at least five percent of total funds assigned to a province. Panel C shows the completion year of the first five railways, each amounting to at least five percent of total funds assigned to a province.

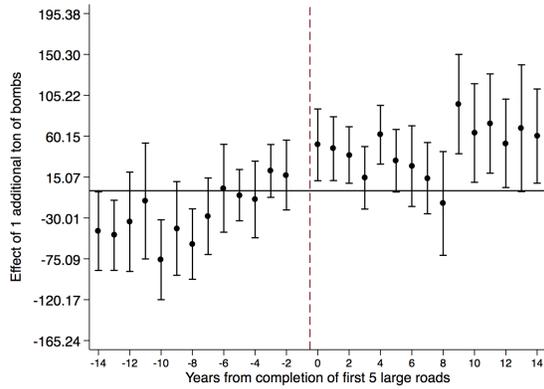
Source: “*Missione Americana ERP in Italia*,” “*Mutual Security Agency*” bulletins, and historical archive of the *Istituto Mobiliare Italiano*.

**Figure C2: Completion of Large Infrastructure Projects, Placebo Treatments**

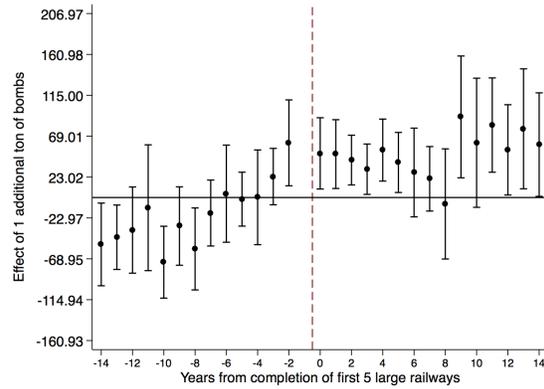


Notes: These regressions are placebo-event studies. The estimating sample includes only periods before the actual completion of large infrastructure project. In each province, period 0 is chosen randomly among the pre-treatment periods. Regressions also include province fixed effects, region-event period fixed effects and calendar year fixed effects, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, horsepower, employment rate, share of industrial workers, and share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the production of wheat and corn in each province, and year (100kg, panel A), the production of wine (100L, panel B), the number of tractors (panel C), and the number of all motorized agricultural machines (panel D). Sources: Annuario di Statistica Agraria, Censimento Generale della Popolazione, Istituto Nazionale di Statistica. USAF Theater History of Operations Reports (THOR) Database, available at [www.afri.au.af.mil/thor](http://www.afri.au.af.mil/thor).

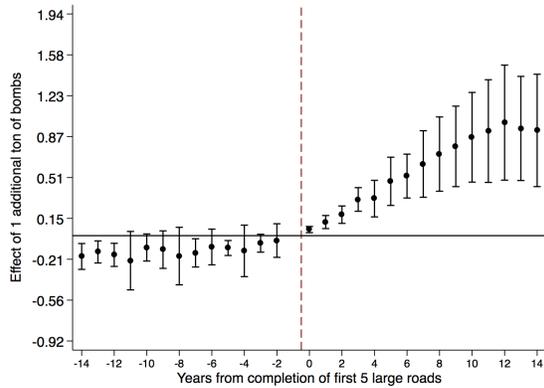
**Figure C3: Completion of Large Infrastructure Projects**



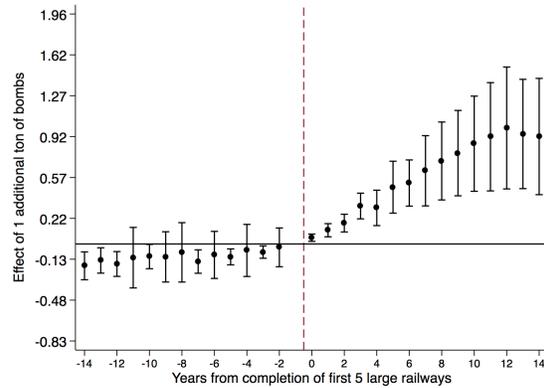
A. Wheat and corn - top five roads



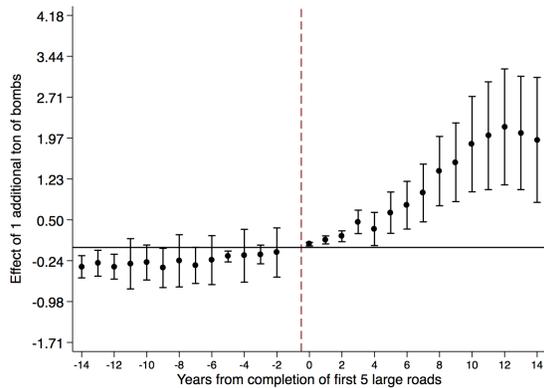
B. Wheat and corn - top five railways



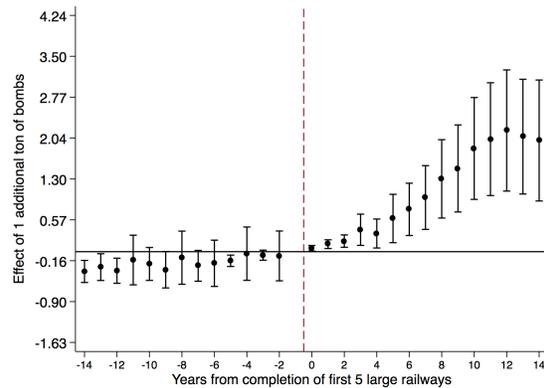
C. Tractors - top five roads



D. Tractors - top five railways



E. All Machines - top five roads



F. All Machines - top five railways

Notes: The regressions are event studies in which period 0 is the completion year of the first five large infrastructure projects (roads in panels A, C, and E; railways in panels B, D, and F), each amounting to at least five percent of total funds assigned to a province, funded by E.R.P aid. Regressions also include province FEs, region-event period FEs, and calendar year FEs, as well as linear, quadratic, and cubic trends in several baseline characteristics (population density, horsepower, employment rate, share of industrial workers, and share of agricultural workers) and in the share of war-related deaths. Standard errors are clustered at the province level. The vertical bars measure 95% confidence intervals. The outcomes are the production of wheat and corn (100kg, panel A and B), the number of tractors (panel C and D), and the number of all motorized agricultural machines (panel E and F). Sources: Anuario di Statistica Agraria, Censimento Generale della Popolazione. USAF THOR Database.

**Table C1: Event Study on Infrastructure Development, Placebo Treatments**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Oil production (4)	Tractors (5)	Threshers (6)
Tons of bombs x Post event	-4.224 (17.467)	-11.094 (12.657)	-19.134 (17.054)	-0.202 (0.947)	-0.010 (0.025)	-0.008 (0.006)
Observations	452	453	453	453	366	288
$R^2$	0.971	0.947	0.947	0.868	0.973	0.990
Mean outcome	1,234,237	459,348	694,159	27,196	454	383
Tons of IC bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681

Notes: This table shows results from placebo-event studies. The estimating sample includes only periods before the actual completion of large infrastructure projects. The dummy variable Post event turns from 0 to 1 randomly in each province. Regressions also include province fixed effects, region–event period fixed effects, calendar–year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the production of oil in 100kg (column 4), the number of tractors (column 5), and the number of threshers (column 6). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table C2: Event Study on Infrastructure Development**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Oil production (4)	Tractors (5)	Threshers (6)
Panel A: Top five projects						
Tons of bombs x Post event	57.393*** (19.214)	59.459* (30.504)	69.731* (35.561)	0.073 (1.188)	0.510*** (0.168)	-0.008 (0.009)
Observations	1,938	2,041	2,041	2,055	1,895	1,728
$R^2$	0.952	0.872	0.888	0.856	0.918	0.894
Panel B: Top five roads						
Tons of bombs x Post event	58.247*** (19.210)	65.938** (31.909)	78.527** (37.280)	0.213 (1.216)	0.511*** (0.160)	-0.008 (0.009)
Observations	1,939	2,041	2,041	2,054	1,892	1,725
$R^2$	0.950	0.873	0.886	0.855	0.918	0.895
Panel C: Top five railways						
Tons of bombs x Post event	56.796*** (18.708)	59.190* (30.225)	69.430* (35.215)	0.095 (1.156)	0.502*** (0.164)	-0.007 (0.009)
Observations	1,937	2,041	2,041	2,055	1,893	1,730
$R^2$	0.952	0.872	0.887	0.879	0.919	0.894
Mean outcome	1,234,237	459,348	694,159	27,196	454	383
Tons of IC bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681

Notes: This table shows results from event studies that isolate the completion of large infrastructure projects funded by ERP aid. Post event in panel A is 1 after the first five large projects, each costing at least five percent of the total reconstruction budget, were completed. Post event in panel B is 1 after the first five large roads, each costing at least five percent of the total reconstruction budget, were completed. Post event in panel C is 1 after the first five large railways, each costing at least 5 percent of the total reconstruction budget, were completed. Regressions also include province fixed effects, region–event period fixed effects, calendar-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the production of oil in 100kg (column 4), the number of tractors (column 5), and the number of threshers (column 6). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table C3: Event Study on Infrastructure Development, IV**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Oil production (4)	Tractors (5)	Threshers (6)
Panel A: Top five projects						
Reconstr. grants (M) x Post event	10,677.909*** (3,903.050)	10,963.212* (6,321.661)	12,857.245* (7,345.798)	13.481 (218.478)	98.583*** (36.906)	-1.167 (1.371)
Observations	1,938	2,041	2,041	2,055	1,895	1,728
$R^2$	0.952	0.843	0.867	0.856	0.900	0.894
F-statistic	30.75	31.46	31.46	31.53	32.49	29.71
Panel B: Top five roads						
Reconstr. grants (M) x Post event	10,846.143*** (3,957.860)	12,151.265* (6,742.170)	14,471.117* (7,874.598)	39.091 (223.593)	98.253*** (35.040)	-1.231 (1.372)
Observations	1,939	2,041	2,041	2,054	1,892	1,725
$R^2$	0.950	0.836	0.859	0.855	0.900	0.894
F-statistic	29.38	29.64	29.64	29.90	32.72	30.39
Panel C: Top five railways						
Reconstr. grants (M) x Post event	10,603.712*** (3,847.406)	10,939.745* (6,314.698)	12,832.320* (7,332.643)	17.495 (213.207)	97.776*** (36.690)	-1.122 (1.388)
Observations	1,937	2,041	2,041	2,055	1,893	1,730
$R^2$	0.953	0.843	0.867	0.879	0.901	0.893
F-statistic	30.85	31.61	31.61	31.67	32.44	29.44
Mean outcome	1,234,237	459,348	694,159	27,196	454	383
Reconstr. grants (M)- mean	79	79	79	79	79	79
Reconstr. grants (M)- std. dev.	29	29	29	29	29	29

Notes: This table shows results from event studies that isolate the completion of large infrastructure projects funded by ERP aid. Post event in panel A is 1 after the first five large projects, each costing at least five percent of the total reconstruction budget, were completed. Post event in panel B is 1 after the first five large roads, each costing at least five percent of the total reconstruction budget, were completed. Post event in panel C is 1 after the first five large railways, each costing at least five percent of the total reconstruction budget, were completed. The reconstruction grants received by a province (in millions) are instrumented with the amount of explosives dropped during the Italian Campaign. Regressions also include province fixed effects, region–event period fixed effects, calendar year fixed effects, and pre-war characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the production of oil in 100kg (column 4), the number of tractors (column 5), and the number of threshers (column 6). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table C4: Event Study on Infrastructure Development, First Project**

	Wheat & corn production (1)	Wine production (2)	Grape production (3)	Oil production (4)	Tractors (5)	Threshers (6)
Panel A: First project						
Tons of bombs x Post event	64.156*** (20.586)	60.472** (30.195)	71.795** (35.393)	1.316 (1.113)	0.434** (0.179)	-0.003 (0.008)
Observations	1,963	2,065	2,065	2,067	1,907	1,756
$R^2$	0.951	0.876	0.891	0.854	0.907	0.906
Panel B: First road						
Tons of bombs x Post event	60.684*** (21.198)	64.225** (27.684)	77.446** (32.377)	1.155 (1.128)	0.473*** (0.164)	-0.005 (0.009)
Observations	1,965	2,066	2,066	2,068	1,910	1,758
$R^2$	0.951	0.876	0.891	0.854	0.908	0.905
Panel C: First railway						
Tons of bombs x Post event	64.621*** (20.465)	59.863** (30.017)	71.077** (35.151)	1.566 (1.081)	0.435** (0.179)	-0.003 (0.008)
Observations	1,961	2,063	2,063	2,066	1,907	1,752
$R^2$	0.952	0.876	0.891	0.858	0.907	0.906
Mean outcome	1,234,237	459,348	694,159	27,196	454	383
Tons of IC bombs - mean	1,045	1,045	1,045	1,045	1,045	1,045
Tons of IC bombs - std. dev.	1,681	1,681	1,681	1,681	1,681	1,681

Notes: This table shows results from event studies that isolate the completion of large infrastructure projects funded by ERP aid. Post event in panel A is 1 after the first large project, costing at least 5 percent of the total reconstruction budget, was completed. Post event in panel B is 1 after the first large road, costing at least 5 percent of the total reconstruction budget, was completed. Post event in panel C is 1 after the first large railway, costing at least 5 percent of the total reconstruction budget, was completed. Regressions also include province fixed effects, region–event period fixed effects, calendar-year fixed effects, prewar characteristics (population density, employment rate, industrial horsepower, share of industrial workers, and share of agricultural workers) interacted with a trend up to the third order, and the share of war-related deaths interacted with a trend up to the third order. The dependent variables are the production of wheat and corn in 100kg (column 1), the production of wine in 100L (column 2), the production of grapes in 100kg (column 3), the production of oil in 100kg (column 4), the number of tractors (column 5), and the number of threshers (column 6). The estimating sample does not include provinces in Sardegna and Sicilia, because these regions were not affected by bombings related to the Italian Campaign. Standard errors clustered by province in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .