Online Appendix for
Military Investment and the Rise of Industrial Clusters: Evidence from China's First Industrial Policy, 1858–1937

A Examples of Memorials Discussing Location Choice of Factories

We list examples of memorials to the throne, in which provincial governors discussed potential concerns about the locations of munitions factories. Most of the original archival material we use is from the archives of the Grand Council and other collections of official documents. The sources with munitions factories are selected and compiled into *Zhongguo jindai bingqi gongye dang'an shiliao* (The Second Historical Archives of China, 1993).

Below are several translated clips of the memorials to the throne that discuss the factory locations. All of the clips are obtained from memorials copied by the Grand Council. The page number indicates the location in the collection book.

Ding Baozhen on Sichuan Jiqiju Firearms are necessary for national defense. Foreign firearms are well made in recent years. Troops in Sichuan province have used these firearms but do not know how to fix them... As I will now be the provincial governor in Sichuan province, I plan to set up a munitions factory and produce firearms ourselves. I have already chosen a place in the provincial capital. As for funding, I will rely on Likin... if it is not enough, I will turn to the tea tax (page 141).

Wang Wenshao on Hunan Jiqiju It is important to set up factories along the coast, but we should consider the inland as well. The middle part of Hunan province is famous for producing coal and iron. When the factories were first built, we already relied on domestic coals, but we have to turn to foreigners for coals as they are of better quality (page 128).

Yinggui on Fujian Jiqiju I plan to build a factory, as the provincial governor, and send some capable people to be in charge. The monthly expenses can come from Likin (page 118).

Li Hongzhang on Jiangnan Zhizaoju I think that if we ask foreign merchants to purchase the machinery, it would be too risky due to the long distance and high price. Sending people overseas would take a long time. Therefore, it would be a good idea just to purchase existing factories from foreigners so we can immediately start production (page 53).

B Data Appendix

In this Appendix we provide additional information about our outcome variables on industrial development from 1858 to 1937, constructed from different datasets, and our main independent variables, i.e., the establishment of and investment in munitions factories.

B.1 Industrial Data

B.1.1 The Entry of Industrial Firms, 1858 to 1937

The county-level data on the entry of industrial firms provide the number of firms established every year, from 1858 to 1937. The original firm-level data collected by Du (1991, 2019) contain each firm's year of establishment, name, location, capital, names of founders, sources of materials, and whether it was government supervised or privately owned. We aggregate this original firm-level data to the county level based on the year of establishment.

The original data include industrial, mining, and shipping companies with capital of more than 10,000 yuan, and banks with capital more than 50,000 yuan (in 1933 1 dollar = 3.5 yuan). We do not include banks in our analysis. Du (1991, 2019) compiled the data largely from first-hand statistics released by the Chinese government and supplemented it with data from the Japanese government, industrial surveys, and second-hand studies conducted by other historians. To ensure high data quality, we cross-check the information with another high-quality, independently constructed source (Chang, 1989) and find that the records are similar.

The data on firm entry provide the most comprehensive record of industrial growth in China before 1949. Although annual information on firms' exit and scale is not available, the use of firm entry is more suitable to our setting, the birth of a country's industrial sector with expectations of a boom in new firms instead of an expansion of incumbent firms. The use of firm entry to capture industrial development is common in other studies on early twentieth-century China.[43]

B.1.2 Industrial census in 1933

We obtained industrial data from 1933 from the only industrial census conducted in China before WWII. This original data provide detailed information on firm-level production, but

[43] Recent studies that adopt this strategy are Bai (2019) and Liu (2020).

have never been published. We use existing data aggregated at the county level by Liu (1937) as the main dependent variable.

The central government of the Republic of China initiated the industrial census. The Institute of Economic and Statistical Research (*Zhongguo jingji yanjiusuo*) administered it for the National Resources Commission. The data were collected between April 1933 and October 1934, and the calculations were completed in May 1935. The full survey covered 1,206 firms in 15 provinces; the city of Shanghai was surveyed separately as it was an industrial harbor with 1,229 factories. Two selection criteria were used to build the sample: firms that (1) used primary power and (2) had more than 30 workers. It excluded munitions factories, power plants, mints, and film makers. The original survey included 171 items, such as information on organization, capital, land area, source of power, machinery, input, output, workers, and wages.

The surveyors received comprehensive training before their departure to each county. This training consisted of explanations of detailed terms in the forms and provided models of machinery, principal materials, and input. The surveyors were equipped with standardized weights and measures and detailed maps of each province. Once they arrived in a county, the surveyors contacted the provincial government for a full list of factories. They then went to individual counties to check the factories' names and addresses. They visited individual firms to fill out the request forms, using detailed questions about the firms' production processes. The surveyors spent at least half a day in each firm. They contacted the Institute by mail about their process at least once a week. The Institute double-checked the collected data to ensure consistency.

The report, published in two sets, only has aggregated information. The first set is for individual industries, consisting of inputs and outputs by industry, and the second set contains input and output information at the county level. We derive our main dependent variable of industrial output in 1933 from the county-sector report and use the industry-level report to construct input–output linkages.

Scholars of Chinese economic history recognize the high quality of this census. Liu and Yeh's (2016) seminal work on China's growth in accounting describes the census as "the only survey of its kind before the War," which "is the decisive reason for limiting our estimate to that year (1933)."[44] They praise the survey's coverage: "[w]hile there are undoubtedly some

[44] Liu and Yeh (2016), page 32.

omissions, they probably consist mostly of small handicraft workshops."[45] TThe director of the survey, Dajun Liu, who holds a degree in economics and statistics from the University of Michigan and a professorship at Tsinghua University, characterizes its quality as comparable to contemporary ones conducted in the U.S. and Europe. Based on the census, Ou (1933) and Liu and Yeh (2016) conduct their studies on China's economic growth, which laid the foundation for later work on China's industrial sector in the early twentieth century, such as Chang (1967) and Rawski (1989).

B.2 Data on munitions Factories

Fan (2003) collected and calculated data on the establishment of and investment in each munitions factory. Fan (2003) gathered the original information largely from memorials to the throne and supplements missing terms using data from newspapers, local gazetteers, and personal records. For each firm, Fan (2003) reports total investment and investment in machinery for the years 1874, 1884, and 1894. We aggregate total investment for munitions factories and machinery.[46]

Fan's (2003) study provides the most comprehensive data thus far on investment in munitions factories. However, as some of the reported expenditures were based on estimates due to a lack of records or inconsistency in measures, the investment data may have measurement errors. We use the instrumental variable approach to solve this problem.

C Construction of the Political Network of Zeng Guofan

To construct Zeng Guofan's political network, we first collected his writings from the most comprehensive collection of his work, *Zeng Guofan Quanji* (The Complete Works of Zeng Guofan, hereinafter the Complete Works) (Zeng, 2011). This comprises 31 volumes of his writings; 10 volumes contain his correspondence with colleagues. To avoid reverse causality between the program and his correspondence, we only consider his correspondence *before* the program, from 1841 to 1860, which gives us 2,238 letters and 267 correspondents. We further restrict our selection of politicians to those who became provincial governors between 1861 and 1894 and thus had the authority to make decisions on military investments. The list of provincial

[45] Liu and Yeh (2016), page 429.

[46] Fan (2003), Appendix 5. Several large munitions factories (for example, Jiangnan Zhizaoju, Jinling Jiqiju, Huaijun Xingying Zhizaoju, and Tianjin Jizhiqi), which had more detailed original data, have displayed investment in finer categories (including separate reports of expenditures on salaries and raw materials) and more frequently.

governors is obtained from Wei (2013). Provincial governors in the Qing Dynasty were *Xunfu*, although some provinces also had *Zongdu*, who ranked higher than *Xunfu* and governed one or more provinces. We consider both *Xunfu* and *Zongdu* as provincial governors. We then perform textual analysis to extract all movement-related letters as follows. First, we randomly choose 100 letters and read them to extract generic keywords related to the movement: gunpowder (*huoyao*), ammunition (*ziyao*), cartridge (*zidan*), bomb (*zhadan*), firearm (*huojian*), steamship (*lunchuan*), cannon (*pao*), gun (*qiang*), and machine (*jiqi*). Then, we search the letters using these keywords and obtain 277 letters. We mark these letters as movement related. Finally, we use the number of movement-related letters written by provincial governors in each province to measure their proximity to Zeng Guofan. We focus on movement-related letters, as Zeng Guofan discussed Western technology in them and they are closely related to our subject of study.

D Discussions of the Efficiency of the SSM

We find that the SSM had a positive effect on industrial growth and led to the formation of clusters of civilian industries in the long term through multiple mechanisms. The existence of external economies of scale, however, does not imply that the program was the most efficient way of promoting private industries. In fact, historians have long questioned the efficiency of military investments during the SSM. As this program sought to boost national defense, factories were usually under government supervision and did not seek to maximize profits (Feuerwerker, 1958; Perkins, 1967; Fan, 2003). In addition, the relatively capital-intensive military sector was not consistent with China's labor-abundant comparative advantage. After private firms were allowed to enter the market, the textile industry became China's leading industry until WWII (Rawski, 1989), suggesting that investments in the textile sector might have yielded higher returns than in the military sectors.

To better understand the SSM's efficiency in promoting industrial growth, we compare this program to other similar programs, such as Japan's Meiji Restoration in the nineteenth century and China's industrial programs implemented after 1949. Given that the aim of the SSM was to strengthen the military sector, this comparison cannot be used to evaluate the efficiency of the program *per se*, but can help understand the conditions required for industrial policies to be effective.

The Meiji Restoration started in 1868, a few years later than the SSM, but was much more influential and marked a turning point in Japan's economic growth. Previously, Japan was an agrarian economy dominated by a fragmented political structure. The Restoration began in the military sector, as did the SSM, but involved much more profound reforms such as rapid technological adoption, political centralization, state-led investments in railroads, the expansion of universal primary education, and tax and land reforms; the movement made Japan an industrialized economy by the early twentieth century (Perkins and Tang, 2017). From 1874 to 1895, Japan's industrial sectors experienced rapid growth; its total factor productivity growth rate was 1.46% in the non-primary sector from 1885 to 1889 and remained high until 1940.[47]

There are numerous discussions about why Japan and Imperial China, which initiated similar military reforms, achieved such different results. Recent studies show that the public and private sectors both provided assistance to industrial firms during the Meiji Restoration; the state played an essential role in the expansion of railroads (Perkins and Tang, 2017), and private parties facilitated financing and technological adoption (Tang, 2011, 2013). By contrast, the Imperial Chinese state prohibited the entry of private firms before 1895. A recent study attributes the salient effect of the Meiji Restoration to its successful political centralization, which was possible due to Japan's small size compared to China (Koyama, Moriguchi, and Sng, 2018). Our analysis suggests that in decentralized Imperial China, officials' personal connections and attitudes played a major role in the establishment of munitions factories.

We also compare the SSM with other nationwide industrial programs that were implemented in the People's Republic of China: the "156 Million-Rouble Plants" in the 1950s and the "Construction of the Third Front" Program in the 1960s; we base this on recent studies by Heblich, Seror, Xu, and Zylberberg (2021) and Fan and Zou (2021). The three programs, which took place in the same country, faced similar geographic conditions and cultural environments. Yet, the above studies find a spillover effect on private industries and improvements in productivity, whereas we find limited spillovers before 1895 and no positive effects on productivity.

Differences in the political environment may explain the divergence between the SSM and later industrial programs. The SSM was initiated by provincial officials and lacked coordination across different provinces, whereas the later programs were top down, implemented by a

[47] Detailed statistics are obtained from Fukao, Makino, and Settsu (2020). During this period, real GDP increased by 150% in the mining and manufacturing sectors, 100% in the construction sector, and 63% in the trade, service, transportation, and communication sectors.

much stronger central government, and had a more stable and supportive domestic political environment. Therefore, both of the later programs involved not only the transfer of machinery, but also large investments in human capital and technology. These factors might have contributed to the more salient effects of these later industrial programs.

Table A1: List of Munitions Factories

Name	Location	Foundation Date	Total Investment (10,000 taels)
*Jiangnan Zhizaoju**	Shanghai	1865	1337.259
*Jinling Jiqiju**	Jiangning	1865	308.587
*Fuzhou Chuanzhengju**	Min Xian	1866	1312.156
*Tianjin Jiqiju**	Tianjin	1867	782.769
*Huaijun Xingying Zhizaoju**	Tianjin	1867	238.541
*Xi'an Jiqiju**	Chang'an	1869	6.800
*Fujian Jiqiju**	Min Xian	1869	19.966
Lanzhou Jiqiju	Gaolan	1871	57.032
Yunnan Yangpaoju	Kunming	1872	0.500
*Guangdong Jiqiju**	Panyu	1873	251.871
*Zhejiang Jiqiju**	Renhe	1874	22.444
*Hunan Jiqiju**	Changsha	1875	10.205
Lanzhou Huoyaoju	Gaolan	1875	35.000
*Shandong Jiqiju**	Shandong	1875	95.277
*Sichuang Jiqiju**	Chengdu	1877	100.875
Kuche Huoyaoju	Kuche	1878	28.300
Akesu Zhizaoju	Wensu	1879	42.100
*Fujian Huoyaoju**	Min Xian	1880	2.500
Guizhou Yangpaoju	Guizhu	1880	0.800
*Dagu Chuanchang**	Tianjin	1880	148.835
*Jinling Yanghuoyaoju**	Jiangning	1881	80.235
*Ningbo Zhizao Junxieju**	Yin Xian	1881	0.300
Jilin Jiqiju	Fengtian	1881	129.347
*Zhejiang Huoyaoju**	Renhe	1882	8.600
Lvshun Chuanwu	Jinzhou	1882	269.643
*Shenjiying Jiqiju**	Wanping	1883	150.000
Yunan Jiqiju	Kunming	1883	36.000
Tainan Jiqiju	Tainan	1883	2.210
*Shuishi Jiqichang**	Wendeng	1883	12.620
*Suigongjun Xingying Zhizaoju**	Wendeng	1884	15.878
*Hubei Jiqiju**	Jiangxia	1884	2.680
*Shanxi Xinhuoyaoju**	Yangqu	1884	4.600
Taiwan Jiqiju	Taiwan	1885	50.907
*Hubei Qiangpaochang**	Hanyang	1890	134.700

Note: Munitions factories with * were in the sampled provinces.

Table A2: Ever-Treated Sample

	(1)	(2)
	Panel	Cross-sectional
	# New-Entry Firms (logged)	Industrial Output
$I(MF_{it} \geq 0)$	-0.016	
	[0.020]	
Military Investment		0.275
		[0.801]
County FE	Y	
Year FE	Y	
Pref $\times$Year	Y	
Controls $\times$ Decades	Y	
Selection		Y
Pref FE		
Adjusted R^2	0.780	0.528
N	1,280	16

Notes: *** p<0.01, ** p<0.05, * p<0.1. This table restricts the sample to the 16 treated counties, only including the selection criteria as controls. Column (2) uses the bootstrap standard errors.

Table A3: Impact of Munitions Factory Establishment on Industrial Firms (Capital)

	Capital of New Entry Firms		
	Total	Private Firms	Gov-Supervised Firms
	(1)	(2)	(3)
$I(MF_{it} \geq 0)$	3.239***	2.900***	0.692***
	[0.575]	[0.537]	[0.171]
Controls	Y	Y	Y
County FE	Y	Y	Y
Pref $\times$ Year	Y	Y	Y
Adjusted R^2	0.279	0.279	0.071
N	114,560	114,560	114,560

Notes: *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is the total capital of new-entry firms at the county-year level in natural logarithmic form (plus 1). $I(MF_{it} \geq 0)$ is a dummy variable that equals 1 when county i had built munitions factories by year t. Standard errors are clustered at the prefecture level.

Table A4: Spillover Effects

	(1)	(2)	(3)
	Full sample	Drop Treated Counties	
	Industrial Output		
Military Investment	0.578***		
	[0.218]		
Distance (Military Firm)		0.001	
		[0.003]	
$I(adjacentMilitaryInvestment) > 0$			0.120
			[0.810]
Controls	Y	Y	Y
Pref FE	Y	Y	Y
Adjusted R^2	0.330	0.235	0.235
N	1432	1416	1416

Notes: *** p<0.01, ** p<0.05, * p<0.1. All results are OLS estimates. The dependent variable is industrial output value in 1933 in natural logarithm form (plus 1). *Military Investment* is military investment from 1861 to 1894 in natural logarithmic form. *Distance (Munitions Factories)* is the distance between each county and its nearest county with military investment. $I(adjacentMilitaryInvestment) > 0$ is a dummy variable that equals 1 if military investment took place in adjacent counties. Standard errors are clustered at the prefecture level.

Table A5: Exclusion Restrictions

	(1)	(2)	(3)	(4)
	In 1880	(1851–1880)	In 1911	In 1905
	Pop (density)	Pop Growth Rate	# Newspapers	# Key Officials
Instrument	-0.171	-0.005	0.286	0.073
	[0.962]	[0.014]	[0.382]	[0.060]
Controls	Y	Y	Y	Y
Prov FE	Y	Y	Y	Y
Adjusted R^2	0.670	0.643	0.584	0.425
N	207	207	206	206

Notes: *** p<0.01, ** p<0.05, * p<0.1. All results are OLS estimates at the prefecture level and control for provincial fixed effects. The dependent variables are population density in 1880, population growth rate from 1851 to 1880, the number of newspaper per capita in 1911, and the number of key officials in 1905. The independent variable is the instrument variable as described in Section 4.2. *Controls* includes the baseline control variables listed in Table 3, aggregated to the prefecture level. Standard errors are clustered at the prefecture level.

Table A6: Balance Check Between Early- and Late-Established Munitions Factories

	(1) Before 1872	(2) After 1872	(3) Unconditional diff.	(4) Conditional diff.
Panel A: Selection Criteria				
Foreign Enclaves	0.71	0.25	-0.464**	
	[0.18]	[0.11]	[0.208]	
Prov/Pref Capital	0.86	0.88	0.018	
	[0.14]	[0.09]	[0.160]	
Foreign Firms (Before 1860)	0.14	0.06	-0.080	
	[0.14]	[0.06]	[0.132]	
Distance (Coastline)	179.07	254.20	75.133	
	[122.99]	[78.65]	[143.986]	
Distance (River)	2.01	2.54	0.534	
	[1.09]	[0.53]	[1.068]	
Distance (Coal)	281.30	256.55	-24.747	
	[76.44]	[61.91]	[106.749]	
Distance (Iron)	14.27	40.81	26.538	
	[12.05]	[9.52]	[16.497]	
Panel B: Confounding Factors				
Political Importance (General Important)	0.00	0.13	0.125	0.122
	[0.00]	[0.09]	[0.131]	[0.078]
Political Importance (Important)	0.14	0.69	0.545**	0.102
	[0.14]	[0.12]	[0.205]	[0.125]
Political Importance (Most Important)	0.86	0.19	-0.670***	-0.224
	[0.14]	[0.10]	[0.179]	[0.155]
Protestantism	29.42	20.33	-9.088	-4.209
	[6.90]	[2.92]	[6.296]	[6.597]
Longitude	117.46	116.63	-0.829	-1.523*
	[1.52]	[1.17]	[2.045]	[0.746]
Latitude	32.57	32.48	-0.088	1.796
	[2.04]	[1.23]	[2.299]	[1.751]
Distance (Treaty Port)	70.62	117.55	46.938	-0.939
	[60.34]	[33.03]	[63.685]	[53.320]
Distance (Courier Roads)	38.44	57.39	18.955	28.421
	[18.19]	[29.86]	[47.203]	[32.250]
Distance (Battlefield)	142.76	283.10	140.341	35.789
	[128.70]	[73.05]	[139.016]	[43.886]
Soil Suitability for Cotton	5.27	5.65	0.384	0.429
	[0.45]	[0.37]	[0.642]	[0.485]
Soil Suitability for Tea	6.87	7.55	0.681	0.212
	[0.82]	[0.33]	[0.731]	[0.567]
Soil Suitability for Soy	6.21	6.03	-0.184	-0.193
	[0.35]	[0.35]	[0.580]	[0.459]
Soil Suitability for Wheat	5.87	5.79	-0.084	-0.069
	[0.36]	[0.25]	[0.450]	[0.339]
Soil Suitability for Yam	7.86	7.86	0.000	-0.065
	[0.14]	[0.09]	[0.165]	[0.162]
Taiping Rebellion	0.57	0.50	-0.071	-0.216
	[0.20]	[0.13]	[0.236]	[0.177]
Political Instability	2.43	1.50	-0.929	-1.593*
	[0.69]	[0.35]	[0.697]	[0.800]
Distance (Copper)	65.18	76.98	11.798	33.758
	[18.21]	[26.29]	[41.930]	[30.397]
Historical Textile Center	0.00	0.00	0.000	0.000
	[0.00]	[0.00]	[0.000]	[0.000]
Distance (Railroad)	131.08	98.36	-32.718	-10.316
	[81.01]	[46.80]	[88.525]	[42.135]
N	7	16	23	23

Notes: This table reports the balance checks between treated counties with munitions factories established before and after 1872 when *Zeng Guofan* died. Panel A shows the comparison of the selection criteria. Panel B compares the confounding factors after controlling for the selection criteria.

Table A7: Total Factor Productivity

	(1)	(2)	(3)	(4)
	OLS		2SLS	
	Industrial Output			
Military Investment	0.597***	-0.022	0.578***	-0.027
	[0.099]	[0.021]	[0.218]	[0.019]
K		0.944***		0.941***
		[0.057]		[0.051]
L		0.274***		0.279***
		[0.102]		[0.093]
Controls	Y	Y	Y	Y
Pref FE	Y	Y	Y	Y
Adjusted R^2	0.330	0.994	0.330	0.994
N	1432	1432	1432	1432

Notes: *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is industrial output value in 1933 in natural logarithmic form (plus 1). *Military Investment* is military investment from 1861 to 1894 in natural logarithm form. *K* and *L* are the total amount of capital and the number of workers at the county level, respectively, both in natural logarithmic form (plus 1). Standard errors are clustered at the prefecture level.

Table A8: Mechanisms: input–output Linkage (2002 Census)

	(1)	(2)	(3)	(4)	(5)	(6)
	Full	Port	Non-port	Full	Port	Non-port
	Industrial Output Value in 1933					
Military Investment × Input Linkage	0.126***	-0.003	0.126***			
	[0.020]	[0.017]	[0.020]			
Input Linkage × Port	1.361***					
	[0.232]					
Military Investment × Input Linkage * Port	-0.129***					
	[0.026]					
Military Investment × Output Linkage				0.090***	-0.015	0.090***
				[0.030]	[0.021]	[0.030]
Output Linkage × Port				0.964***		
				[0.230]		
Military Investment × Output Linkage × Port				-0.105***		
				[0.036]		
County FE	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Adjusted R^2	0.511	0.632	0.375	0.505	0.632	0.373
N	8592	300	8292	8592	300	8292

Notes: *** p<0.01, ** p<0.05, * p<0.1. All results are OLS estimates. The dependent variables are industrial output value in 1933 in natural log form. *Military Investment* is military investment from 1861 to 1894 in natural log form. *Input Linkage* and *Output Linkage* denote linkages between other industrial sectors and the manufacturing sector, calculated from the 2002 industrial census of China. *Port* is a dummy variable that equals to 1 if a county had a treaty port from 1840 to 1930. Standard errors are clustered at the prefecture level.

Table A9: Mechanisms: Foreign Firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	[1841,1916]		[1895,1916]		[1905,1916]		In 1933	
	OLS	IV	OLS	IV	OLS	IV	IV	
	log(1 + # Foreign Firm)						Industrial Output (1933)	
Military Investment	0.042***	0.001	0.044**	-0.009	0.042***	-0.006	0.577***	0.579***
	[0.016]	[0.010]	[0.017]	[0.015]	[0.015]	[0.013]	[0.217]	[0.212]
Log (1 + # Foreign Firm)([1861,1894])							-0.100	
							[2.076]	
Log (1 + # Foreign Firm)([1895,1916])								0.113
								[1.161]
Pref FE	Y	Y	Y	Y	Y	Y	Y	Y
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Adjusted R^2	0.624	0.570	0.417	0.274	0.427	0.277	0.330	0.330
N	1432	1432	1432	1432	1432	1432	1432	1432

Notes: *** p<0.01, ** p<0.05, * p<0.1. The dependent variables are the entry of foreign firms in different stages and industrial output value in 1933, both in natural logarithm form. *Military Investment* is military investment from 1861 to 1894. # *Foreign Firm ([1861,1894])* is the total number of foreign firms established during the SSM. # *Foreign Firm ([1895,1916])* and # *Foreign Firm ([1905,1916])* are the total number of foreign firms from 1895 to 1916, and from 1905 to 1916, respectively. *Controls* include the baseline control variables listed in Table 3. Standard errors are clustered at the prefecture level.

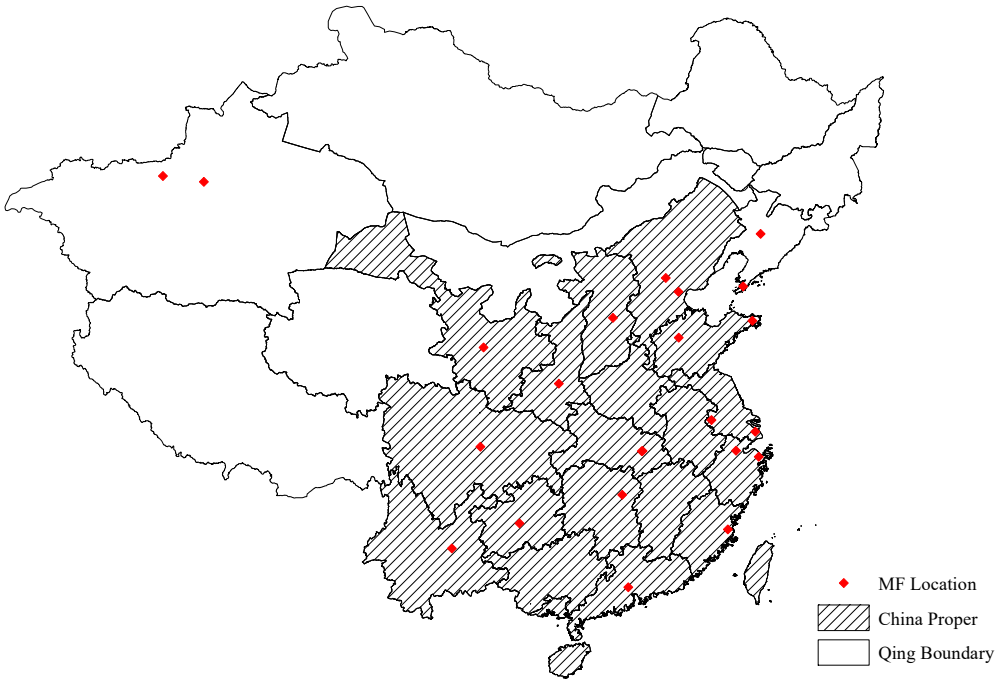

Figure A1: Locations of Munitions Factories

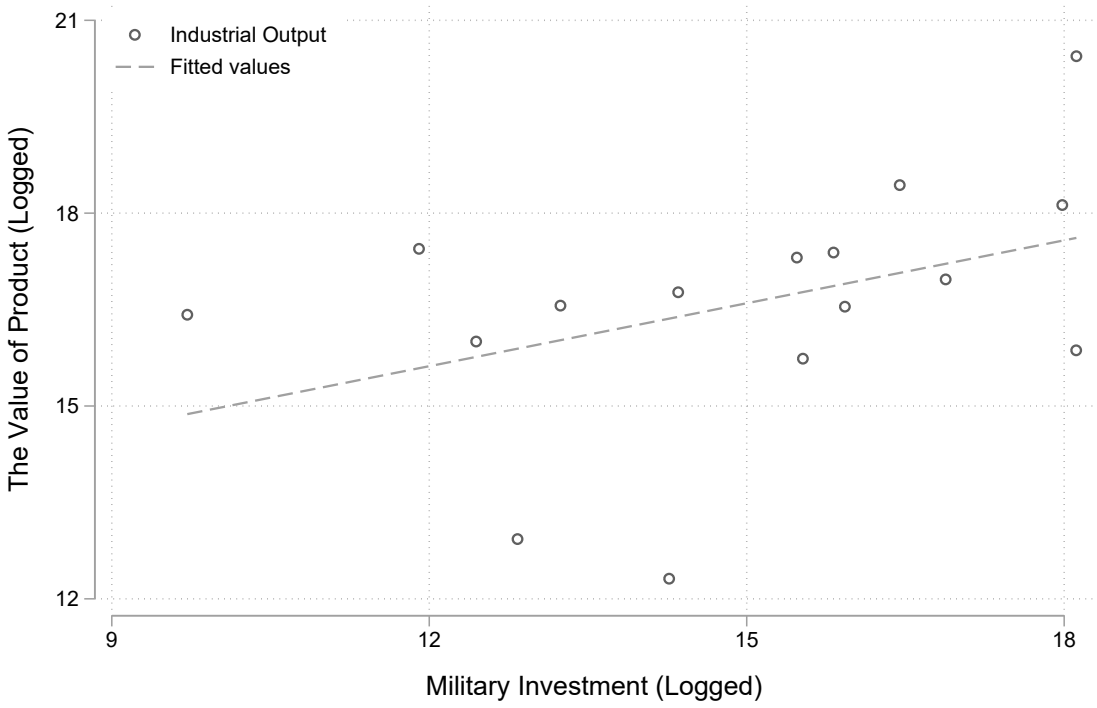

Figure A2: Correlation between Military Investment and Industrial Output Value

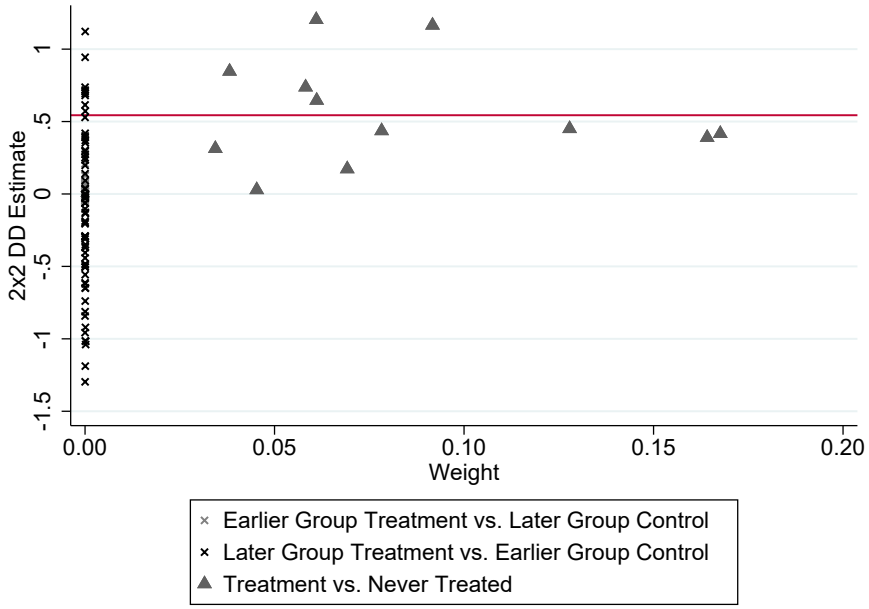

Figure A3: Goodman-Bacon decomposition

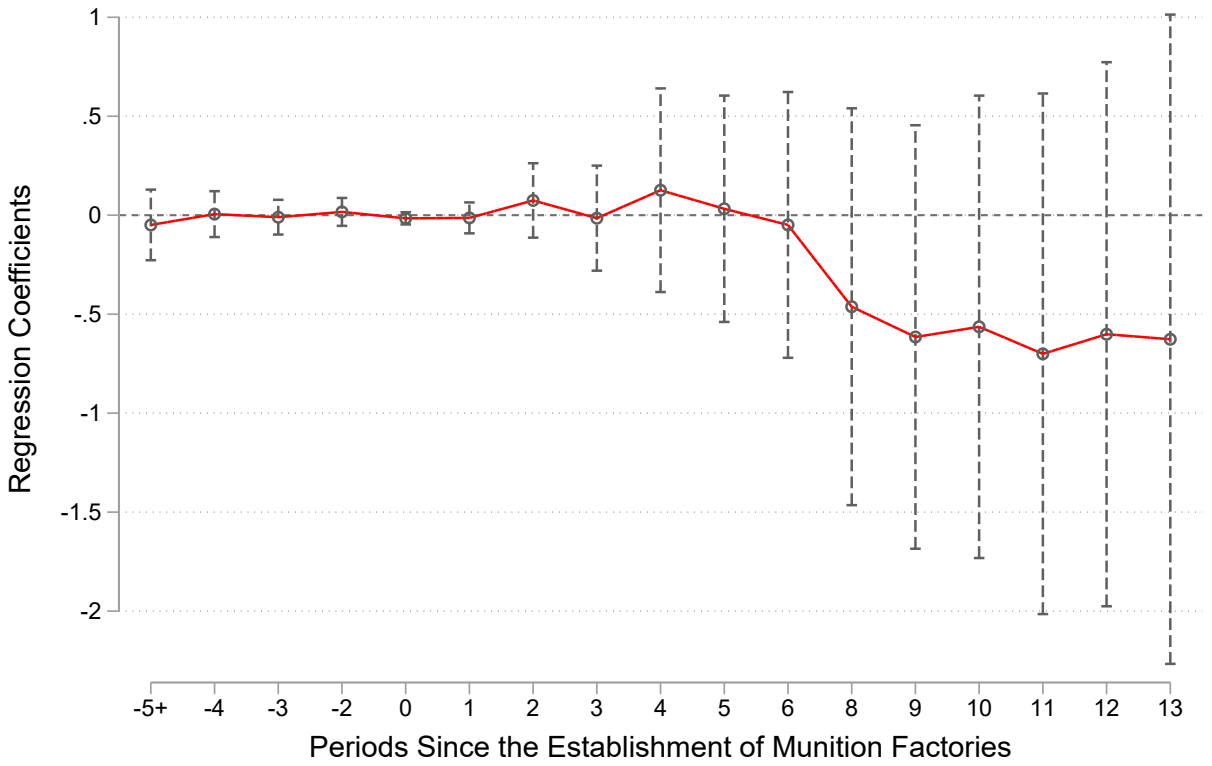

Figure A4: Dynamic Effects of Military Investments on Industrial Development: 16 Treated Counties

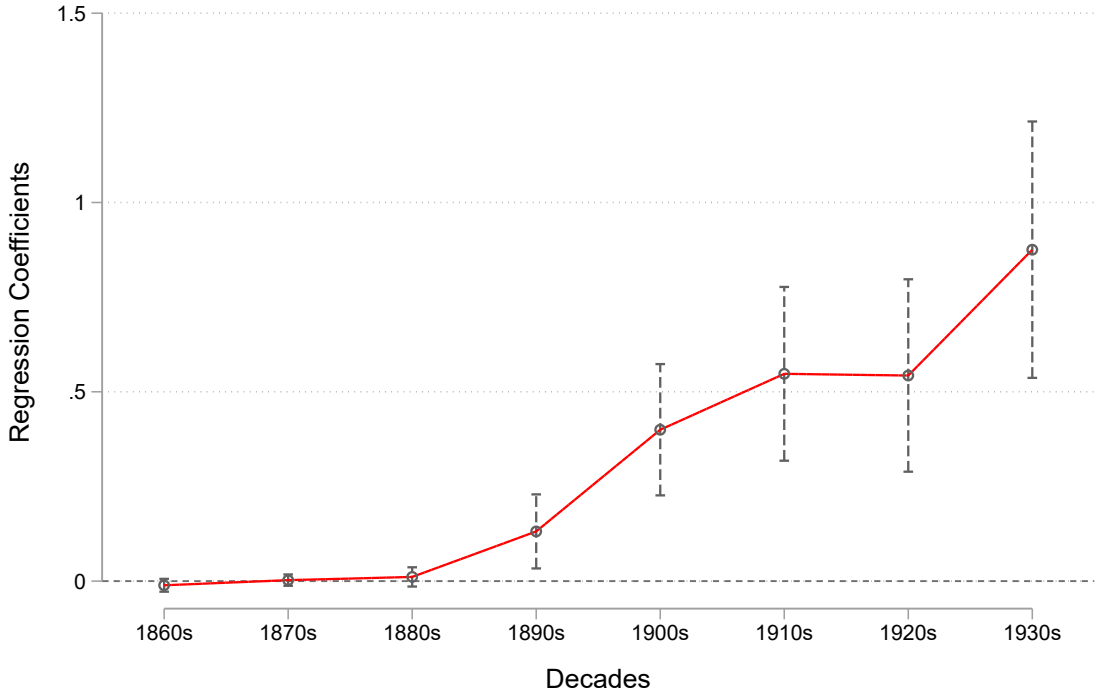

Figure A5: The Effects of Military Investments on Industrial Development by Decade (1860–1937)

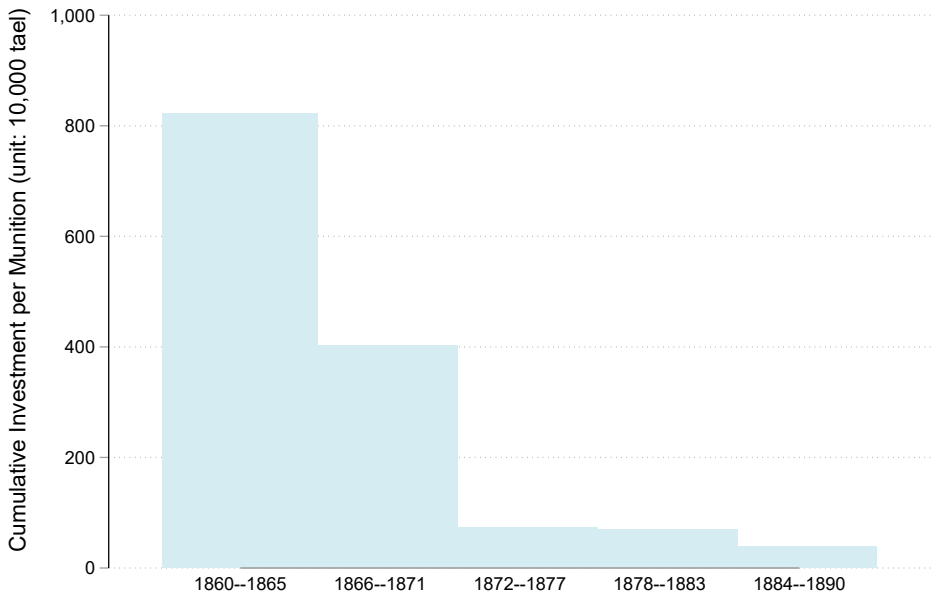

Figure A6: Average Investment in Munitions Factories by Year of Establishment

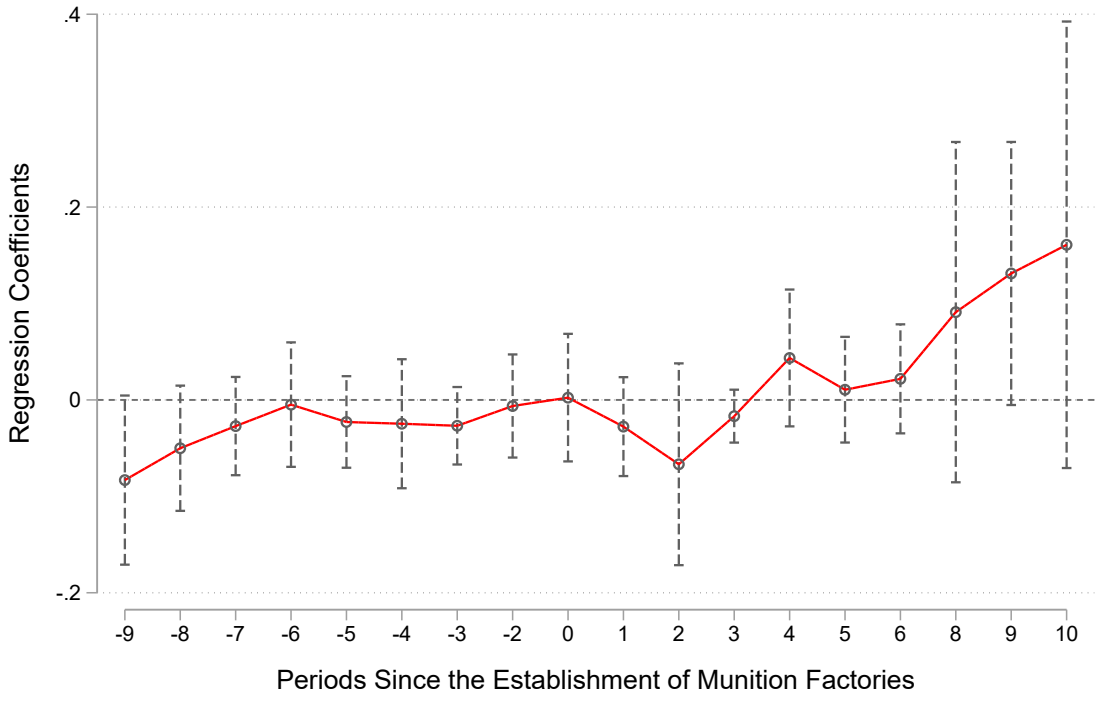

Figure A7: Dynamic Effect of Military Investments on Foreign Firm Entry (1 period = 5 years)