

The Shandong Economy in Relation to Germany and Japan

—1910s–1930s—

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This article discusses the socioeconomic change that took place in the region of Shandong 山東 Province, China during the 1910s, 20s and 30s, focusing on its economic relations to Germany and Japan as described mainly by Japanese surveys conducted in the region at that time.¹⁾

The Shandong region, which has been enjoying rapid economic development since the turn of the century, has been able to do so based on the development realized in pre-World War II times, beginning with the German occupation of Qingdao 青島 and under the Japanese, who took over in place of the Germans from the outbreak of World War I. One of the major aims of this article is to investigate the significance of the German and Japanese presence in the region in terms of its economic development.

The research to date on the Shandong region at the time in question includes a systematic treatment by Zhang Yufa in a volume contained in the series published by Academia Sinica on modern Chinese regional studies, a joint study on the economic history of Qingdao from the viewpoint of imperialist aggression, Pomeranz' research focusing on the pre-modern development of inner Shandong and its decline during modern times, the theoretical work by Zhuang Weimin on the rise of market economy in the region, another joint study attempting to comprehensively cover social and cultural change that took place in modern Shandong, and a group effort describing in gazetteer fashion the changing face of Shandong society during the era of Republican China (1912–1949).²⁾

Although all of the above research cannot ignore the presence of Germany and Japan in the region, most of the viewpoints contained therein fall within the context of criticizing the policies of imperial aggression implemented by the two countries. In other words, this research

cannot satisfactorily explain the problems that the Shandong economy encountered under the different influences of these two countries and is thus unable to show the different changes it underwent. On the other hand, in the field of Japanese economic history and Sino-Japanese economic relations, there are Yanagisawa Asobu's study of Japanese residents of Qingdao, Hagiwara Mitsuru's examination of Japanese interests in Shandong, like railways, mines, and so on.³⁾ Although such studies have their own value in clarifying Japanese interests and activities in Shandong, they do not give the Shandong region the comprehensive historical treatment it deserves. This article tries to reassess the economic history done in Japan from the viewpoint of Shandong regional history.⁴⁾

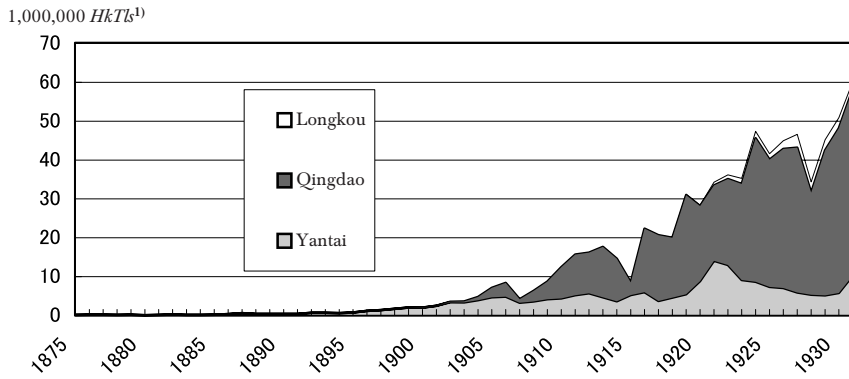
One final problem encountered when doing research on modern Shandong is what source materials to use. Prior to the 1930s, when fieldwork was more or less taken over by Chinese investigators, the most detailed work done on the actual socioeconomic conditions of Shandong was done by Japanese investigators, not only in the capacity of successors to the German leaseholds in there, but also as a contestant for economic and political control over the entire region of North China. Consequently, we have been left with over one hundred survey reports and statistical collections published in Japanese by such agencies as the Civilian Administration Section of the Qingdao Garrison. One more aim of the present article is to attempt the first verification of the data contained in these sources as reliable information.

1. General Overview

From the mid-19th century on, Shandong achieved high levels of economic activity due to its abundance of natural resources in land and sea agriculture (wheat, soy bean, cotton, peanuts, salt production) and the mining of coal and metal ore, facilitated by a north-south inland canal system in the west and coastal shipping routes in the east.

With the opening of the port of Yantai 煙臺 (Zhifu 芝罘) in 1861, the establishment of the German leaseholds in 1898⁵⁾ and the Japanese occupation of Qingdao following World War I, Shandong entered a new era of economic relations with other regions of continental China as well as foreign powers. Shandong's economic development process is exemplified by Figures 1 and 2, which sum up trends in direct foreign trade based on Chinese maritime customs reports.

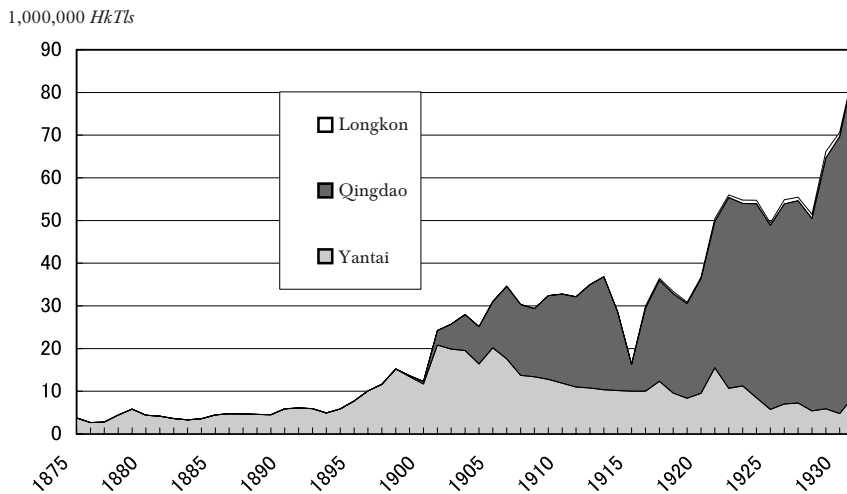
Figure 1 Trends in Shandong Foreign Exports: 1875–1931



Note 1: one liang (Haikuang Tael) = 37.68 g of silver.

Source: Chinese maritime customs annual reports.

Figure 2 Trends in Shandong Foreign Imports: 1875–1931



Source: Chinese maritime customs annual reports.

1) 1861~1897

It was in 1861 that direct trade with foreign countries began in Shandong, but this activity had no significant influence on the state of the region's economy. Rather, the real meaning of the opening of Yantai was the rapid growth in coastal trade, including steamship transport,

with such products as sugar, tea, paper, tung oil and flax being imported from South China and soy beans, soy bean products, herbal medicine, etc. being exported.⁶⁾ At the same time, the region's inland canal-related trade and irrigation projects declined, mainly as the result of growing government indifference.⁷⁾ While the resulting transition from inland- to coastal-driven commercial activity led mainly to the expansion of imports from other regions, along with some new products from Shanghai, it had little effect on the local economy as a whole.

2) 1898~1913

After the German land-lease agreement of 1898, the amount of foreign trade conducted mainly at the Port Qingdao increased by leaps and bounds. While initially most of the growth came on the import side, around 1910, exports began to pick up and stimulate further growth in imports. In fact, the foreign currency flowing into the region due to increasing exports enabled the Shandong economy to expand imports. However, exports did not consistently reach the high level of imports, resulting in a huge balance of payments deficit. One solution to the deficit problem was the large amount of German investment capital generated by the land-lease treaty, which will be dealt with in greater detail in the next section.

3) 1914~1945

The year 1914 saw the occupation of Qingdao by Japan and its expropriation of the former German interests there.

Despite the original Japanese ambitions being nipped in the bud by the 1922 agreement to return the leasehold to China, Japan's presence in the region for the eight years from 1914 to 1922 exerted a profound influence on the local economy. The end of World War I and the recession that followed brought temporary stagnation to Qingdao trade, but from the mid-1920s on, it was growing again under the combination of Japan's presence and domestic economic development, and began to stimulate the industrial sector and the local economy as a whole. While the expansion that took place during this time will be dealt with in more detail in Sections 3 and 4, it should be mentioned here that this period was also marked by the creation of a large trade deficit, which foreign investment from Japan and remissions from workers who had migrated to Manchuria helped balance. The object of the present article is to analyze the second and third periods as turning points in the economic development of Shandong.

2. German Economic Influence

As to the economic aspects of German operations in Shandong, centering around Qingdao,⁸⁾ first, efforts were made to build an urban industrial infrastructure and a coastal and railway transportation network. Qingdao, which was equipped with streets, running water and electricity, became the regional center for the offices of German and other foreign merchant houses and banks, and the home of a “large-scale” port for large overseas freighters connected with a “small-scale” port for the traditional coastal junk trade. Another important development was the construction (completed in 1904) of the Shandong Railway connecting Qingdao with the provincial capital of Jinan 濟南 400km away. Between 1905 and 1913, while the number of passengers riding the line increased by 160%, the amount of freight transported tripled (Table 1), indicating a rapid expansion in commodity distribution between Shandong’s inland regions and the coast.

Secondly, the German occupation was marked by industrialization geared towards the manufacture of exports, including the construction of light production facilities for silk reeling, chicken egg powder processing and peanut oil extraction,⁹⁾ most of which was exported to earn foreign currency to finance more importing (Figure 3). Qingdao soon surpassed Yantai as Shandong’s premier foreign trade port (Figure 4) on the strength of its highly competitive export-oriented industrialization, which the Germans profited from, in part to defray the total cost of managing the Qingdao leaseholds. The Germans also built a shipyard to repair its Navy’s warships, a railroad yard to assemble and repair train-cars on the Shandong line, in addition to a brewery, meat processing plant, etc. to meet the everyday demands of the foreign population, not only in Qingdao but in port towns all along the China coastline. The shipyard and the railway yard played an important role in providing the basic conditions for the development of the machine industry to foster industrialization.¹⁰⁾

Next, there was the adoption of measures to exploit traditional Chinese commercial networks. At first, as the Germans authorities did not seem to be interested in the important function of the network, “promoting commerce in Qingdao became completely hopeless.”¹¹⁾ However, in April 1902 the Qingdao government made a policy change to approve the establishment of the Chinese-operated Qingdao Commercial Bureau to support the activities of local merchants. At the

Table 1 Trends in Shandong Railway Passenger and Freight Transport: 1905–1931

	Passengers	Freight (in tons)
1905	803,527	310,482
1906	846,840	381,649
1907	896,027	409,430
1908	828,735	486,981
1909	641,279	696,200
1910	654,128	769,192
1911	909,065	717,189
1912	1,230,043	852,001
1913	1,317,438	946,610
1914	NA	NA
1915	1,117,760	874,896
1916	1,666,860	1,074,158
1917	2,065,654	1,287,769
1918	2,159,940	1,511,058
1919	2,545,268	1,733,376
1920	2,945,132	1,074,672 ¹⁾
1921	3,272,078	1,904,229
1922	3,777,054	2,093,815
1923	3,664,721	2,013,477
1924	3,992,994	2,284,935
1925	3,650,300	2,063,367
1926	3,435,939	1,635,355
1927	3,550,875	2,128,274
1928	3,070,194	2,460,500
1929	3,671,134	2,214,125
1930	3,734,731	2,052,206
1931	3,272,454	2,599,308

Sources:

1916–19; *Chintao Shubigun Minseibu Tetsudobu Jigyo Gaikyo*, 1920, pp. 12–14.

1915; *Minguo Shandong Tongzhi*, p. 1579 (Original source: *Jiaotongshi*, Transport volume).

1920; *Shina Kotsu Tokei Shusei Testudo hen*, (Mantetsu Chosabu, 1939) pp. 238–239.

1921; Decennial Report 1912–1921, (China maritime customs) p. 224.

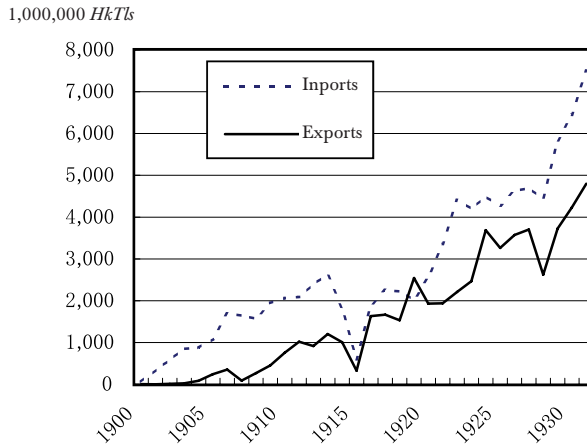
1922–32; Decennial Report 1922–1931, p. 452.

Note 1: This figure seems to be a misprint in the source.

1921; Decennial Report 1912–1921, p. 224.

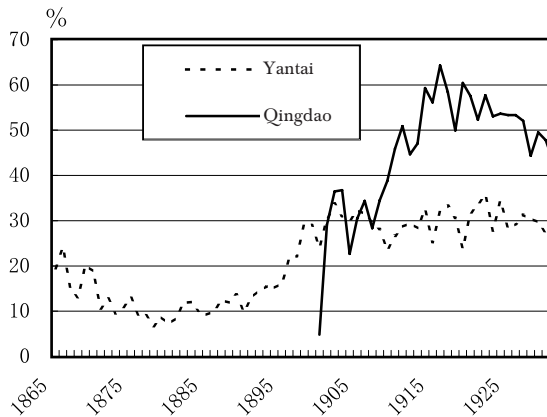
1922–32; Decennial Report 1922–1931, p. 452.

Figure 3 Trends in Qingdao Foreign Trade: 1900–1931



Source: Chinese maritime customs annual reports.

Figure 4 Share of Foreign Trade in Total Trade of Yantai and Qingdao: 1865–1931



Note: Total trade includes domestic trade.

Source: Calculated from customs annual reports.

same time, regarding business conditions related to Chinese merchants, the bylaws instituted by “the Bureau can make appropriate plans to develop business activity” (Article V). According to the Bureau’s bylaws, it was established as an advisory commission of the Qingdao government

(Article I) to mediate commercial and financial disputes and assist in the drafting of economic promotion measures (Article V). Originally the establishment of the Bureau was a result of the reorganization of the Civil Department of the Qingdao Government in order to take Chinese demands into greater consideration.¹²⁾ The Bureau consisted of twelve members: six local merchants, three from other provinces, and three compradors of foreign trading companies.¹³⁾ While Asada's research based on the German sources argues that the Bureau was an attempt by the German authorities to incorporate a wealthy portion of Chinese society into their colonial regime,¹⁴⁾ the Chinese interpretation tends to look at the Bureau as an advisory commission, as mentioned above, but also as the precursor to the Qingdao Chamber of Commerce.¹⁵⁾ In fact, we should consider the Qingdao Commercial Bureau had have a dual character: one being an attempt by the German Authorities to involve Chinese merchants in the colonial rule; the other a ploy by Chinese merchants to form their own organization independent of the colonial authorities. By 1910 it had become apparent that the Bureau was not functioning well as a colonial administrative agency, so the German authorities reduced the commission's members from twelve to four, appointing two from the Qiyuan Huiguan 齊燕會館 (the merchant association of Shandong and 河北 Hebei), one from the Sanjiang Huiguan 三江會館 (the merchants association of Jiangsu 江蘇, Zhejiang 浙江 and Jiangxi 江西) and one from the Guangdong Huiguan 廣東會館 (the merchants association of Guangdong).¹⁶⁾ The reorganization meant that the Qingdao government officially recognized the role of the network centering around the Associations (*huiguan*) formed by Chinese merchants from the same "hometown" and the influence they exerted on local business communities. During that same year, the Chinese merchants of Qingdao formed their own Chamber of Commerce (Qingdao Shangwu Zonghui 青島商務總會, later Qingdao Shanghui 青島商會) in response to the Qing Dynasty's economic promotion program. Here we see Qingdao moving in the same direction and as quickly as the likes of Shanghai in forming modernized economic associations building upon the accomplishments realized during the era of the Commerce Bureau.¹⁷⁾ Although proceeding in a rather roundabout way, the Germans finally adopted policies that both utilized Chinese commercial networks and helped them to work more effectively. Japan, who would take Germany's place on Qingdao, also recognized at the time that both the German authorities and the Chinese merchants understood the necessity of a collabora-

tive policy and that it was one of the keys to Qingdao's growth under German rule.¹⁸⁾

Finally, the number of German civilians residing in Shandong was not very large. According to a census taken by the colonial authorities during May 1910, the Chinese population of Qingdao numbered 34,180, as opposed to only 1,531 Germans and 167 Japanese among the 1,809 foreign residents.¹⁹⁾ The Chinese research reveals that there were 3,863 foreign residents in Qingdao during the German occupation, including 2,275 German troops among the 3,806 German residents.²⁰⁾ In any case, the German civilian population involved in economic activity in the Shandong region was extremely limited when compared to the later Japanese population of up to 20,000, indicating that there must have been great differences in the ways by which the two countries chose to rule the region. According to one Japanese observer who surveyed the management conditions of the Shandong Railway Co. (including its mining operations) immediately after it fell into Japanese hands during the First World War, the most important point to focus on is the extremely small number of [German] nationals involved in the management of the Shandong Railway and its mining operations: namely, 61 on the railway and 71 in mining and coal sales. When compared to the 12,914 Japanese employed by the South Manchurian Railway Co. as of March 1914 in terms of the 8:1 capital investment difference between the two companies (the South Manchurian Railway 240 million yen, including corporate debentures; the Shandong Railway 30 million yen), the personnel differential of 100:1 shows a great difference between the two enterprises. This situation is due to the difference between the two companies' management styles. Their [German] management aiming at return on their capital, our [Japanese] projects emphasizing national development. When we take over the operations of the Shandong Railway, if we try to adopt the austerity measures of the Germans, that will be no problem. However, if we try to adopt their employment practices, then it will be impossible to avoid defying our nation's destiny.²¹⁾ In other words, despite the fact that both railways were basically corporations created under national policy for the purpose of regional development, tremendous differences existed in the employment opportunities offered to the nationals of those countries in their management, due to the difference between Germany's profit maximization strategy and Japan's "dedication to national development." The above-quoted source does not go into what exactly "dedication to national development" entails, but it is clear

that there were many Japanese at the time who shared, along with the government and its 21 demands made to China in 1915, the idea that further development of the domestic economy depended on the expansion of Japanese interests onto mainland China, including Manchuria and Shandong. Therefore, while the analysis quoted above deserves more investigation as to its ideological accuracy, there is no doubt that there were in fact large differences between Germany and Japan in their respective attitudes regarding the regional development of Shandong, attitudes which ultimately determined how many of their citizens were to reside there.

Before concluding this section, let us look briefly at the relationship of the Japanese to the Qingdao/Shandong economy during the last years of the German occupation, the beginning of the 1910s, during which important changes were occurring in that economy. It was a time during which Japanese economic influence was growing in the region in such roles as customer and foreign commodity trader. Given a growing economy at home, Japan was forming a base of economic and personal relations through its expansion into Manchuria after the Russo-Japanese War (1904–5). It is also necessary to examine if such changes stemmed from the preconditions for the Japanese attack on German troops at Qingdao during the First World War and the ambitious moves by Japan to occupy Shandong.

3. Development Under Japanese Influence

Following the outbreak of World War I, the Japanese army launched an attack on German forces at Qingdao in defiance of Chinese demands to the contrary and was able to occupy Qingdao and the territory along the Shandong Railway. China's retroactive acceptance of the occupation was part of the 21 demands of 1915, which would last for eight years until the Washington Conference of 1921–2 decided that the region would be placed under Chinese sovereignty; but even thereafter Japan would continue to exert tremendous influence on Qingdao society.

The economic characteristics of Japan's colonial occupation of Shandong are mainly three-fold. First, an industrialization-oriented economic development program was inaugurated, through which large-scale industrial areas would be created and the freight capacity of the Shandong Railway greatly enlarged. The Japanese military regime decided that the areas around Sifang 四方 and Cangkou 滄口 to in the north-

ern suburb of Qingdao proper would be developed into an “industrial zone,” purchased the arable and marsh land there, prepared the infrastructure, then offered it at cheap prices to Japanese manufacturers who would agree to relocate there. At the time, land in the Osaka-Kanzaki 大阪神崎 region, one of Japan’s main cotton manufacturing regions, was valued at 30 Japanese yen per *tsubo* (3.3 square meters), while industrial sites in Qingdao were valued at 0.80 yen per *tsubo* at a rate of 0.10 yen per year for rent.²²⁾ Take for example the scale of land held by Japanese cotton spinning firms that relocated to Qingdao. According to the detailed agreement reached between Japan and China at the time of Qingdao’s return to Chinese sovereignty, the firms had not only been guaranteed a thirty-year lease on 553,000 *tsubo*, but also owned a combined total of 134,000 *tsubo* that they had developed themselves. Of this approximately 230 hectares of land, one maker commented, “There is enough land there to expand existing facilities many times over.”²³⁾ In addition, large sums were invested in the main means of material distribution, the Shandong Railway. Between 1914 and 1921, the number of steam engines were increased from 46 to 94 and freight cars from 1,152 to 1,515.²⁴⁾ In sum, as Hagiwara mentioned in his paper, “Compared to the exploitative nature of the German management style depending on rudimentary equipment and cheap local labor, the Japanese aimed at a more long-term interest style in accord with hopes for the perpetual occupation of the region.”²⁵⁾ Other industrialization measures included the reconstruction and expansion of coal extraction along the Shandong line²⁶⁾ and a 500% increase in electricity output compared with the pre-WWI era.²⁷⁾

Secondly, industrialization took on a meaning different from that during the German occupation in the development of light industries producing commodities geared to markets in the Shandong region.²⁸⁾ Taking cotton yarn as an example, compared to the 15,000 tons imported annually into Qingdao on the eve of World War I, between 1918 and 1923, over 30,000 tons per year were being produced domestically by seven new factories constructed (six Japanese, one Chinese) on the outskirts of Qingdao, almost eliminating imports (Table 2, Figure 5). Estimates for the 1930s indicate that Shandong had achieved self-sufficiency by that time in cotton yarn manufactured by machine (Table 3). It is interesting where the yarn was distributed. According to the railway transportation statistics, most of it was transported to such destinations as Changyi 昌邑, Gaomi 高密, Weixian 濰縣 and Zhoucun 周村 (Table 4).

Table 2 Cotton Yarn Supply and Demand Trends in Qingdao: 1912–1936(in thousand tons)¹⁾

Year	Production (a)	Foreign Imports (b)	Domestic Imports (c)	Foreign Exports (d)	Domestic Exports (e)	Local Demand ²⁾
1912	0.0	14.4	1.2	0.0	0.0	15.6
13	0.0	16.8	1.7	0.0	0.0	18.5
14	0.0	12.9	0.9	0.0	0.0	13.8
15	0.0	5.2	0.1	0.0	0.0	5.3
16	0.0	15.1	2.2	0.0	0.0	17.3
17	0.0	14.0	5.4	0.0	0.0	19.4
18	0.9	7.0	8.0	0.0	0.0	15.9
19	2.1	3.3	7.1	0.0	1.1	11.4
20	5.6	4.6	3.8	0.0	0.8	13.1
21	7.7	5.0	5.6	0.0	0.2	18.1
22	10.7	7.6	6.1	0.0	0.5	24.0
23	24.0	4.4	4.6	0.1	0.7	32.2
24	33.9	3.0	2.4	0.3	2.6	36.3
25	31.2	2.5	1.8	0.3	6.5	28.7
26	37.5	0.8	0.9	0.4	6.7	32.1
27	36.0	0.2	0.6	3.8	10.2	22.8
28	36.0	0.1	2.1	1.8	11.2	25.1
29	23.5	0.2	9.3	0.1	4.8	28.1
30	32.8	0.0	13.3	0.3	5.4	40.5
31	32.5	0.0	11.8	1.2	5.6	37.6
32	37.5	0.0	8.7	0.1	3.4	42.7
33	39.5	0.0	4.0	3.1	4.2	36.2
34	38.2	0.0	5.2	0.7	3.5	39.2
35	40.9	0.0	2.6	1.6	1.1	40.9
36	38.7	0.0	2.2	1.5	10.5	29.0

Notes 1: Calculated from 1bale = 181.44kg = 0.18144 tons.

2: Local Demand = a + b + c - (d + e).

Sources:

Production Figures

1918; *Chintao no Kogyo*, p. 16.1919–22; *Keizai Shuho*, no. 34 (Chintao Nissho, 1923).1923; Estimated from *Kobe Kosho 24-nen Chosa Hokoku*, p. 257.1924–28; *Kobe Kosho 29-nen Chosa Hokoku*, p. 155.

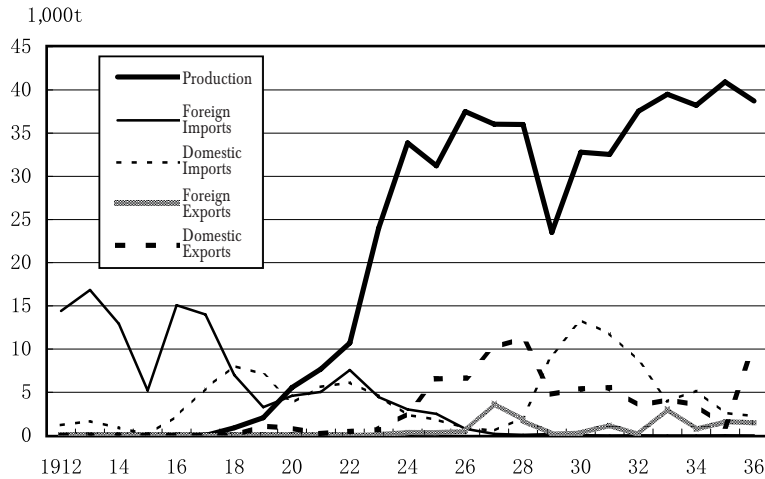
1929; Estimated from the previous year's 8-month production figures for Japanese mills and Huaxin Mill's 1929 production figure.

1930–32; *Santo Bosekigyo no Gaikyo*, p. 52. *Huaxin 40-nian*, p. 30.1933–36; Materials from Japanese capitalized cotton spinning mills in China. *Huaxin 40-nian*, p. 30.

Other Figures

China maritime customs reports. Chintao-ko Boueki Tokei Nenpo.

Figure 5 Cotton Yarn Supply and Demand Trends in Qingdao: 1912–1936



Source: See Table 2.

Table 3 Estimated Supply and Demand Trends for Machine-Use Cotton Yarn in Shandong: 1931–1936 (kun = 181.44kg)

	Qingdao			Jinan	Shandong Supply ¹⁾	Shandong	(a+d)
	Production (a)	Incoming (b)	Outgoing (c)	Production (d)		Consumption ²⁾ (e)	
1931	179,299	58,812	29,637	21,340	229,814	NA	87.3
1932	206,918	46,652	19,233	25,052	259,389	NA	89.4
1933	217,307	20,382	24,804	20,528	233,413	NA	101.9
1934	209,317	27,091	20,635	23,085	238,858	242,000	97.3
1935	225,365	12,322	54,826	23,000	205,861	206,000	120.6

Notes 1: Supply = a+b-(c+d).

2: Based on makers' estimates.

Source: Santosho no Boseki-gyo to Men-ori narabi Senshoku-gyo, in *Keizai Jiho*, no. 7, (Chintao Nissho, 1936). Revised in part by the author.

These destinations formed a cotton weaving region which had introduced an improved foot-operated loom during the 1910s and was producing a “new version” of traditional cloth woven from machine-manufactured yarn, and a good deal of it was being transported out of the region. Since in the case of Gaomi, other routes besides the Shandong Railway may have been used for finished products, the available statis-

Table 4 Arrivals and Departures of Cotton Yarn and Cloth along the Shandong Railway: 1915–1920 (tons)

Station		1915	1916	1917	1918	1919	1920
Qingdao	Yarn Depart	13,179.0	14,981.3	12,075.0	16,089.9	7,469.5	14,593.6
	Arrive	3.3	77.1	105.0	1,378.0	2,814.2	3,475.0
	Cloth Depart	5,883.0	5,513.2	4,576.1	5,247.5	2,016.9	3,467.8
	Arrive	55.8	501.5	150.6	179.7	137.3	306.8
Jinan	Yarn Depart	314.1	82.9	120.0	173.2	148.1	856.6
	Arrive	5,352.4	7,608.6	5,893.1	7,101.6	1,126.7	293.5
	Cloth Depart	560.0	299.6	98.3	186.7	264.6	802.7
	Arrive	5,539.6	6,131.4	4,739.5	4,914.2	1,597.8	2,564.5
Changyi	Yarn Depart	0.0	6.1	0.4	0.9	0.8	9.5
	Arrive	1,135.8	1,509.5	977.4	1,163.2	841.5	2,799.7
	Cloth Depart	948.3	944.3	929.4	800.2	573.6	919.0
	Arrive	78.9	37.7	33.2	6.6	86.7	167.5
Gaomi	Yarn Depart	0.1	1.3	1.5	0.8	1.5	8.3
	Arrive	782.4	431.8	428.6	646.6	586.4	1,444.8
	Cloth Depart	5.6	1.3	1.6	7.4	1.2	3.1
	Arrive	28.3	20.0	31.2	75.7	48.5	112.7
Weixian	Yarn Depart	9.8	10.1	65.8	29.1	9.8	12.1
	Arrive	2,943.4	1,730.1	1,884.5	2,752.6	1,089.9	3,076.1
	Cloth Depart	241.7	262.5	207.0	294.9	114.3	716.4
	Arrive	1,003.8	204.6	158.6	393.5	464.8	864.3
Zhoucun	Yarn Depart	44.9	21.1	15.4	37.7	10.6	88.9
	Arrive	2,053.8	940.8	1,024.0	1,207.6	290.5	1,716.4
	Cloth Depart	834.4	547.8	80.9	128.2	99.8	335.8
	Arrive	1,627.7	391.1	500.8	900.0	228.8	1,243.5

Source: *Santo Tetsudo Hacchaku Kamotsu · Chintao-ko Kisen Yushutsuunyu Kamotsu Hinmei-betsu Ruinen Tokai-hyo: 1915–1920*, (Chintao Shubigun Minseibu Tetsudobu, 1921).

tics may be understated. Cotton manufacturing was not the only import-substitute industry producing to meet domestic demand during the Japanese Occupation. As shown in Table 5, as of 1919 medium and large-scale factories capitalized at over 50,000 yuan (Chinese dollars) included flour, salt and match milling.

Thirdly, the Japanese community in Shandong grew to about 20,000 residents, mainly involved in small-and mid-scale commerce and industry, a number around ten times larger than the German community under the German Occupation.²⁹⁾ According to a census (Table 6) taken in 1919 of the working population of central Qingdao, there were 45,075 Chinese, 18,628 Japanese and 499 people of other ethnic descent. Since

Table 5 Modern Industries in Shandong with Paid-In Capital Greater than 50,000 Yuan: 1919

Type	Business	company	Location	Founded	Country	Capital	Workforce	Origin
Textiles	Cotton Yarn	Naigai Wata Cotton Co.	Qingdao	1917	Jpn.	5,000,000	524	
	Silk	Yuhoutang Silk Filature	Zhoucun	1911	Chn.	?	?	
		Hengxingde(Anchang) Silk Filature	Zhoucun	1912	Chn.	?	?	
		Suzuki Silk Filature	Zhoucun	1917	Jpn.	600,000	?	
		Tongfeng Silk Filature	Zhoucun	1919	Chn.	?	?	
		Chintao Silk Filature	Qingdao	1917	Jpn.	370,000	800	
	Leather	Tokusei Yoko	Qingdao	1916	Jpn.	50,000	23	
Food	Flour	Xingxunfu Flour Mill Co.	Jinan	1914	Chn.	160,000	55	
		Fengnian Flour Mill Co.	Jinan	1916	Chn.	250,000	40	
		Zongxing Flour Mill Co.	Qingdao	1917	Chn.	100,000	?	
		Jifeng Flour Mill Co.	Jining	1918	Chn.	300,000	60	
		Chintao Flour Co.	Qingdao	1918	Jpn.	250,000	49	
		Huifeng Flour Mill Co.	Jinan	1919	Chn.	500,000	77	
	Peanut Oil	Shinri Yoko	Qingdao	?	Jpn.	50,000	60	
		Shinsho Yoko	Qingdao	1919	Jpn.	70,000	20	Began soap making in 1915
		Yoshizawa Yoko	Qingdao	1915	Jpn.	100,000	150	
		Tairi Shokai	Qingdao	1916	Jpn.	60,000	35	
		Minemura Yoko	Qingdao	1915	Jpn.	500,000	50	Split off from Yuasa Yoko
		Yuasa Yoko, Chintao Branch	Qingdao	?	Jpn.	200,000	15	
		Suzuki Yoko, Chintao Branch	Qingdao	?	Jpn.	100,000	130	
		Mitsui Yoko, Chintao Branch	Qingdao	?	Jpn.	?	102	Headquarters in Tokyo
		Towa Yubo	Qingdao	1917	Jpn.	1,000,000	120	
	Poultry Egg Processing	Nisshi Egg Co.	Qingdao	1917	Jpn.	250,000	131	
		Oboshi Co., Chintao Branch	Qingdao	1918	Jpn.	200,000	104	Headquarters in Dalian
		Chuka Egg Processing Co.	Qingdao	?	Jpn.	250,000	?	
		Toa Egg Processing, Sainan Factory	Qingdao	1918	Jpn.	500,000	?	Headquarters in Shanghai
	Brewery	Dainihon Beer Brewery, Chintao Factory	Qingdao	1904	Jpn.	500,000	142	Took over German operation
	Ice	Dairen Ice, Chintao Franch	Qingdao	1917	Jpn.	500,000	10	Headquarter in Dalian
	Meat Packing	Kajji Yoko	Qingdao	?	Jpn./USA	800,000	300	
		Chintao Canner Co.	Qingdao	1915	Jpn.	100,000	12	
		Chintao Butchery	Qingdao	1906	Jpn.	?	?	Took over German operation
	Salt	Chintao Salt Co.	Qingdao	1917	Jpn.	500,000	?	
		Kagaku Kogyosho	Qingdao	1919	Jpn.	500,000	?	
		Dainihon Salt Co., Chintao Branch	Qingdao	?	Jpn.	?	?	Kobe headquarters founded 1902
		Toyo Salt Co.	Qingdao	1917	Jpn.	500,000	?	Headquarters in Tokyo
Sundries	Matches	Zhenye Match Co.	Jinan	1913	Chn.	200,000	900	
		Jiaodongzhongfu Match Co.	Yantai	1916	Chn.	100,000	?	
		Chintao Match Co.	Qingdao	1918	Jpn.	300,000	597	
		Santo Match Co.	Qingdao	?	Jpn.	150,000	376	
		Toro Match Co.	Qingdao	?	Jpn.	250,000	275	
Ceramics	Pottery	Nikka Pottery Co.	Boshan	1918	Jpn.	2,000,000	380	Boshan yaoye gongsi 1914
		Kosan Brick-yard	Qingdao	1916	Jpn.	58,000	?	Took over German operation
	Cement Products	Santo Kogyo Co.	Qingdao	1918	Jpn.	250,000	116	Headquarters in Dalian
Metals	Metal Processing	Hosei Co., Iron Factory	Qingdao	?	Jpn.	100,000	176	
		Tentoku Iron Factory	Qingdao	?	Jpn.	50,000	40	
	Machine Making	Santo Railway Factory	Qingdao	1901	Jpn.	?	200	Took over German operation
		Chintao Shipbuilding Dock	Qingdao	1906	Jpn.	?	?	Took over German operation
Other	Electrical Power	Power plant	Qingdao	1898	Jpn.	?	?	Took over German operation

Source: Mainly *Chintao no Kogyo*, 1919, revised based on additional sources.

Table 6 Working Population of Qingdao: 30 Sept 1919

	Japanese			Chinese			Other			Totals		
	Male	Female	Sub-Total	Male	Female	Sub-Total	Male	Female	Sub-Total	Male	Female	Sub-Total
Occupation	33	29	62	6,950	6,177	13,127	0	0	0	6,983	6,206	13,189
Agriculture	25	12	37	45	21	66	0	0	0	70	33	103
Animal Husbandry	14	6	20	8	0	8	0	0	0	22	6	28
Forestry	111	88	199	41	8	49	0	0	0	152	96	248
Fishing	90	64	154	11	7	18	0	0	0	101	71	172
Mining	26	21	47	11	1	12	0	0	0	37	22	59
Manufacturing	874	622	1,496	3,668	854	4,522	7	11	18	4,549	1,487	6,036
Construction	836	626	1,462	2,015	615	2,630	0	0	0	2,851	1,241	4,092
Commerce	3,400	2,541	5,941	10,425	2,185	12,610	52	54	106	13,877	4,780	18,657
Transportation	2,048	1,614	3,662	3,754	1,659	5,413	3	1	4	5,805	3,274	9,079
Civil Service	1,743	1,410	3,153	658	234	892	7	8	15	2,408	1,652	4,060
Freelance	461	482	943	427	160	587	10	31	41	898	673	1,571
Entertainment	40	829	869	105	241	346	0	1	1	145	1,071	1,216
Other	216	168	384	2,744	1,255	3,999	0	0	0	2,960	1,423	4,383
Unemployed	95	104	199	368	428	796	107	207	314	570	739	1,309
Totals	10,012	8,616	18,628	31,230	13,845	45,075	186	313	499	41,428	22,774	64,202

Note: According to the “preface,” this is a report of the results of a preliminary survey in preparation for the census. The work was done by 198 staff members, including personnel from the Imperial Military Police, as an exercise in census taking and statistical analysis.

Source: *Chintao Shubigun Rinji Kokou Chosa: Sep. 30, 1919; Junbi Chosa Hokokusho 1*, (Chintao Shubigun Minseibu, 1920).

a residential area had been built adjacent to the city center to accommodate Japanese residents, and of course there were Chinese residents who commuted from outside the city, the Japanese residential population of the inner city was probably less than thirty percent. However, the 5,941 Japanese involved in commerce, the 3,662 in transportation and the 1,496 in manufacturing are figures indicative of the significant role being played by Japanese residents in the local economy, to the extent of creating friction with the Chinese business community.³⁰⁾

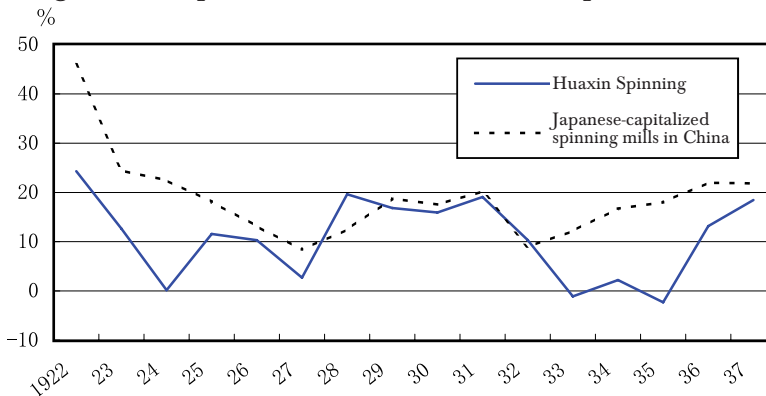
4. The Chinese and Japanese Economic Factors

Even after the end of its occupation of Shandong in 1922, Japan continued to exert influence on the region, with a community of around 10,000 residents and the presence of large enterprises, including several

cotton spinning mills.³¹⁾ However, Japanese concerns were not the only growing force in the region, for Chinese businesses also prospered in a number of various industrial sectors. The changes brought about by the new colonial government learned from the initial German mistakes, and from the very start chose to continue utilizing traditional Chinese commercial networks. The whole Chinese economy was stimulated by import-substitute industrialization much in the same manner as the development of the rural weaving industry mentioned above. In sum, during the 1920s and 30s, the relationship between Japanese and Chinese economic forces in Shandong were very complex, as we shall see below.

To begin with, we notice the competition that developed between the two forces, meaning that Japanese capital did not necessarily predominate in the relationship. For example, take the management of the Huaxin Cotton Mill 華新紡績, the only spinning mill in Qingdao financed by Chinese capital, in comparison to how the Japanese capital operated their own mills. According to Figure 6, during the late 1920s both were performing on almost an even keel. This success was made possible by efforts at opening new markets, the procurement of inexpensive raw materials and cooperative industrial relations.³²⁾ A Japanese survey report on match sales in the vicinity of Jinan, the capital city of Shandong, notes that the local Chinese-capitalized factory had managed

Figure 6 Comparison of Rates of Return on Capital: 1922–1937



Note: Calculated on the basis of gross profits and depreciation costs.

Source: Huaxin; *Huaxin 40-nian*, appendix.

Japanese mills; Takamura, *Kindai Nihon Mengyo to Chugoku*, pp. 125, 158, 203, 267.

to overcome both the competition posed by Japanese imports and Qingdao-manufactured products, to maintain a high market share in the region (Table 7, Table 8). As to the reason,

The most important reason for the slump in the sales of Japanese imports are 1) the number of matchsticks to the package coming from the Osaka-Kobe area averages only 75 ...[compared to] the 110 per package sold by Zhenye Co. 振業公司 The ratio of the matchstick breakage is also higher ...Another reason is that the matchtips are not dark red ...³³⁾

Secondly, there is the mutual interdependence aspect of the relationship. We have already seen cotton yarn being produced by Japanese mills in Qingdao, then transported to rural weavers working along the Shandong Railway. During the 1930s, the cotton dyeing industry, which took off during the 1930s, depended heavily on raw material imports from Germany, England and Japan of sulfur black, artificial indigo and aniline. In addition, the foot-operated looms and match milling equipment used by Chinese makers had initially been imported from Japan, before Chinese copies were manufactured, and almost all the wood and chemicals used in the growing Chinese match industry were still

Table 7 Estimated Match Sales Performances of Chinese and Japanese Makers in Jinan: 1920 (in tons)

	Jinan Market	Along Jinpu Line	Inland Areas	Total
Japanese	2,044	584	292	2,920
Chinese	420	1,470	210	2,100
Total	2,464	2,054	502	5,020

Source: "Sainan Shijo to Macchi Jigyo" (Chintao Shubigun Minseisho, 1920, Gaiko-Shiryokan).

Table 8 Match Operations of Mitsui Bussan's Jinan Branch: 1918-1919 (in tons)

	1 st Half 1918	2 nd Half 1918	1 st Half 1919	2 nd Half 1919
Made in Japan	1,430	644	531	403
Made in Qingdao	0	676	1,214	2,625
Total	1,430	1,320	1,745	3,028

Source: "Sainan Shijo to Macchi Jigyo" (Chintao Shubigun Minseisho, 1920, Gaiko-Shiryokan).

being imported from Japan during the 1920s.³⁴⁾ Zhenye Co., which dominated the match market in Jinan, imported most of its equipment and raw materials from Japan through Cong Liangbi 從良弼, an overseas Chinese who had lived in Japan.³⁵⁾ Shi Jingqing 史鏡清, the factory manager of the Huaxin Cotton Mill, was a graduate of the Nagoya College of Engineering.³⁶⁾

The third aspect of the relationship is mutual indulgence and conciliation. For example, the division of labor in Qingdao shipping between the “large port” for foreign freighters and “small port” for the junk trade continued under the Japanese regime, with Japanese trading companies dominating the former and Chinese merchants taking charge of the latter.³⁷⁾ In the case of cotton spinning, during the 1920s, when Japanese cotton mills in Qingdao were manufacturing mainly thicker strands of yarn, Huaxin Mill decided to produce thinner strands and established a specialty market of its own; and when the Japanese makers shifted to thinner strands during the 1920s, Huaxin shifted to twisted yarn and opened another new market.³⁸⁾ By avoiding head-on competition with the Japanese, Huaxin was able to earn profits by gaining control over specialty markets. Huaxin and the Japanese makers also cooperated in activities to improve the quality of raw cotton.³⁹⁾ Even in the match industry, which was suffering from serious overproduction, Chinese and Japanese firms formed a production and sales cartel based on evenly balanced participation.⁴⁰⁾ On the whole, Japanese economic power in Shandong was not always predominant in every case for the Shandong regional economy during the 1920s and 30s presented an environment for both Japanese and Chinese capital to grow and development in their own unique ways.

Conclusion

From the late nineteenth to the mid-twentieth century, the modern economic sector of Shandong Province went through tremendous change under the colonial interests and policies of Germany and Japan, despite differences in their respective objectives and scope. During the German occupation of the region, an industrial and urban infrastructure of railways, streets, electricity and water service was constructed, centered around a policy of export-oriented industrialization. In contrast, with the outbreak of World War I and the Japanese takeover of the German leasehold, both the region’s industrial base and the Japanese business community were greatly expanded, resulting in an intraregional

import-substitution manufacturing sector, centering around textiles and items for everyday use, like matches. After the return of Shandong to Chinese sovereignty in 1922, while the development of Chinese-financed manufacturing endeavors was widely recognized, Japan continued to exert influence on the economy. During the 1920s and 30s, Japanese and Chinese capital formed an economic relationship in Shandong that can only be described as complex, involving the aspects of competition, interdependence and mutual indulgence and conciliation. Shandong's transition from an export-oriented to an import-substitution economy is laid out clearly in the surveys conducted by Japan's Qingdao Garrison, which put emphasis on both the distribution of agricultural or handicraft products for export and the marketing of industrial products imported or manufactured in the region. The surveys were intended to gather information regarding purchasable primary materials for export promotion and establishing raw materials supplies, and also the supply of light industrial goods, both imported and manufactured in Qingdao, to rural markets for sale. These surveys provide interested researchers with enough data to trace the actual process by which the Shandong economy changed during its modern period.

Notes

- 1) This article is an enlarged and revised version of a report presented in May 2004 at Panel 11: <Socioeconomic Changes from the 1910s to the 1940s> of the "As China Meets the World: China's Changing Position in the International Community, 1840-2000" conference held in Vienna, a report delivered at panel discussions held in September of the year with Qingdao City and Shandong Provincial Academies of Social Science 青島市社會科學院·山東社會科學院 as a member of the Toyo Bunko 東洋文庫's Modern China Studies Team, and, a Japanese article published in *Shindai Shigaku* 信大史學, No. 29, 2004. I would like to take this opportunity to thank those conference participants who were so kind to take the time to comment on my reports presented in China.
- 2) Zhang Yufa 張玉法, *Zhongguo Xiandaihua de Quyu Yanjiu: Shandong sheng, 1860-1916* 『中國現代化的區域研究：山東省 (1860-1916年)』 (Chinese Modernization in Regional Perspective: Shandong Province, 1860-1916), 中央研究院近代史研究所 The Institution of Modern History, Academia Sinica, 1982; Hu Wenben 胡文本, et al., *Diguoizhuyi yu Qingdao gang* 『帝國主義與青島港』 (Imperialism and the Port of Qingdao), 山東人民出版社 Shandong Renmin Publishing, 1983; Pomeranz, Kenneth, *The Making of a Hinterland: State, Society, and Economy in Inland North China, 1853-1937*, University of California Press, 1993; Zhuang Weimin 庄維民, *Jindai Shandong Shichangjingji*

de Bianqian 『近代山東市場經濟的變遷』 (The Transition to Market Economy in Modern Shandong) 中華書局 Zhonghua Publishing, 2000; Lu Weijun 呂偉俊 et al., *Shandong Quyu Xiandaihua Yanjiu* 山東區域現代化研究 (Modernization of the Shandong Region Area), 齊魯書社 Qilu Publishing, 2002; Zhang Yufa 張玉法 ed., *Minguo Shandong Tongzhi* 『民國山東通志 (Shandong under the Republic of China), 山東文獻雜誌社 Shandong Wenxian Zazhi Co., 2002.

- 3) Yanagisawa Asobu 柳澤遊, “1920 nendai Zenhanki no Chintao Kyoryumin Shokogyo” 1920 年代前半期の青島居留民商工業 (Japanese Involved in Commerce and Industry in Qingdao During the Early 1920s), (Kurume Daigaku) *Sangyo Keizai Kenkyu* (久留米大學) 産業經濟研究, vol. 25, no. 4, 1985; *idem.*, “1910 nendai Nihonjin Boeki Shonin no Chintao Shinshutsu” 1910 年代日本人貿易商人の青島進出 (The Advance of Japanese Foreign Trade Merchants into Qingdao During the 1910s), (Kurume Daigaku) *Sangyo Keizai Kenkyu*, vol. 27, no. 1, 1986; Hagiwara Mitsuru 萩原充, *Chugoku no Keizai Kensetsu to Nichu Kankei, 1927-1937 nen* 『中國の經濟建設と日中關係：對日抗戰への序曲 1927-1937 年』 (Japan and the Building of the Chinese Economy: Prelude to the Anti-Japanese War of Resistance: 1927-1937), ミネルヴァ書房 Minerva Shobo, 2000. Other recent research includes Yamakoshi Toshihiro 山腰敏寛, “Nihon Kindai to Chintao En ni tsuite : Sono Shisan Keisei to Washinton Kaigigo no Henkan ni tsuite” 日本近代と青島鹽について：その資産形成とワシントン會議後の返還について (Modern Japan and Qingdao Salt: Capital Formation and the Aftermath of the Washington Conference), *Naruto Shigaku* 鳴門史學, no. 17, 2003; Kawabata Masanori 河端正規, “Chintao Shubigun Shihaike no Shokugyu Kaihatau” 青島守備軍支配下の食牛開發 (The Development of Beef Production Under the Japanese Qingdao Garrison), *Ritsumeikan Daigaku Jinbunkagaku Kenkyujo Kiyo* 『立命館大學人文科學研究所紀要』, no. 82, 2003.
- 4) Asada Shinji has recently published several papers on German colonial policy in the Shandong region; and although his research focuses on the German side, it contains lots of useful information for understanding the meaning of German rule over the modern Shandong economy. See Asada Shinji, “Daiichiji Sekaitaisen Izen no Doitsu no Tai Chugoku Bunka Seisaku Ron: Otto Furanke to Pauru Ro-abattsu no Ronri wo Chushin ni” 第一次世界大戰以前のドイツの對中國文化政策論：オットー・フランケとパウル・ローアバッツの論理を中心に (The Logic of Pre-World War II German Cultural Policy toward China: The Cases of Otto Franke and Paul Rohrbach), in Yamada Masaru 山田賢 ed., *Higashi Ajia Shakai Hendo ni Kansuru Kenkyu Chuka Shakai to Ryudosuru Minzoku* 『東アジア社會變動に關する研究—中華社會と流動する「民族」』 (Social Change in East Asia: Chinese Society and ‘Ethnic Circulation’), 千葉大學 (Report on the Research Projects, Graduate School of Social Sciences and Humanities, Chiba University), No. 37, 2003; *idem.*, “Koshuwan Soshakuchi ni okeru ‘Chugokujin’ (1897-1914): Doitsu Shokuminchi Ho to Shokuminchi Seisaku no Kanren kara” 膠州灣租借地における「中國人」(1897-1914)：ド

イツ植民地法と植民地政策の関連から (The ‘Chinese’ on the German Leasehold, Kiaochow [Jiaozhou] (1897–1914): The Connection Between German Colonial Law and Colonial Policy), *Rekishigaku Kenkyu* 『歴史學研究』, No. 797, 2005.

- 5) More accurately, such rights established by the Jiaozhou Bay Leasehold Treaty as the construction of a naval port on Qingdao and the Shandong Railway, along with mining development, etc.
- 6) Zhuang 庄, *op. cit.*, pp. 34–35.
- 7) Pomeranz, *op. cit.*, pp. 152, 154–178.
- 8) Asada Shinji, “Koshuwan Soshakuchi ni okeru Doitsu Shokuminchi Seisaku to Kindaika (1897–1914)—Koshuryo Sotokufu no Keizai Seisaku wo chushin ni—” 膠州灣租借地におけるドイツ植民地政策と近代化 (1897–1914)—膠州領總督府の經濟政策を中心に— (German Colonialism and Economic Modernization Policy in Jiaozhou (1897–1914)), in Honjo Hisako 本庄比佐子 ed., *Nihon no Chintao Senryo to Santo no Shakai Keizai 1914–22 nen* 『日本の青島占領と山東の社會經濟1914–22年』 (*The Effects of the Japanese Occupation on the Economy and Society of Shandong*), Toyo Bunko, 2006.
- 9) Chinese Maritime Customs, *Decennial Reports 1902–1911*, vol. 1, 1913, pp. 251–252.
- 10) *Jiao’ao Zhi* 『膠澳志』 (Historiography of the Jiaozhou Bay District), 1928, *Yange Zhi* 『沿革志』 (Historical Record) pp. 19–20 (Reprinted edition, 成文出版社 Chengwen Publishing, pp. 55–57); Chintao Shubugun Minseibu 青島守備軍民政部 *Chintao no Kogyo* 『青島ノ工業』 (Industry in Qingdao), 1919, pp. 82–85; *ibid.*, pp. 18–19, 78–82.
- 11) Chintao Shubugun Minseibu 青島守備軍民政部, *Santo Kenkyu Shiryo* 『山東研究資料』 (Shandong Source Materials), vol. 1, 1919, p. 137.
- 12) *ibid.*, pp. 138–142.
- 13) *Jiao’ao Zhi* 『膠澳志』 (Historiography of the Jiaozhou Bay District), 1928, *Yange Zhi* 『沿革志』 (Historical Record), p. 15. Reprinted edition, p. 48.
- 14) Asada, *op. cit.*, p. 8.
- 15) *Jiao’ao Zhi : Shihuo Zhi* 『食貨志』 (Economic Record), 1928, p. 83. Reprinted edition, p. 837.
- 16) According to Asada, this personnel change arose from a dispute between the colonial authorities and Chinese merchants over harbor administration. The initial appointees were Hu Guixing 胡規行, Zhu Zixing 朱子興, Ding Jingchen 丁敬臣 and Gu Chengzhang 古成章. *Jiao’ao Zhi* (Historiography of the Jiaozhou Bay District): *Shihuo Zhi* (Economic Record), reprinted edition, pp. 48, 837.
- 17) At the start, the Qingdao Chamber of Commerce consisted of twenty directors, who chose Fu Mingjun as “president” and Ding Changsheng as “vice-president.” Then the directorships were increased to thirty-two in 1916 and its leadership renamed chairman (Ding Changsheng) and vice-chairman (Cheng Xuetian). *Jiao’ao Zhi : Shihuo Zhi*, 1928, pp. 83–84. Reprinted edition, pp. 837–838. The following table summarizes the Association’s organization from that time on.

Election Year	Chairman	Vice-Chairman	Members*
1916	丁長昇 Ding Changsheng	成學田 Cheng Xuetian	180
1918	成學田 Cheng Xuetian	丁長昇 Ding Changsheng	226
1920	成學田 Cheng Xuetian	隨熙麟 Sui Xilin	274
1922	隨熙麟 Sui Xilin	張立珂 Zhang Like	328
1924	隨熙麟 Sui Xilin	李佐周 Li Zuozhou	408

*The number of “*shanghao*” 商號, which included not only commercial establishments, but also corporations and factories.

- 18) *Santo Kenkyu Shiryo* 『山東研究資料』, *op. cit.*, p. 137.
- 19) Chintao Shubigun Shireibu 青島守備軍司令部, *Chintao Shubigun Dai 1 Tokei Nenpo* 『青島守備軍第1統計年報』 (Statistical Yearbook of the Qingdao Garrison, no.1), 1917, pp. 9-11.
- 20) Hu *et al.*, *op. cit.*, p. 17. That would leave 1531 German civilian residents, indicating Hu’s figures are based on the same census. Another piece of research, which puts the foreign population at 1801 in 1910 (no source cited), records an increase in that population from 600 in 1901 to 2407 in 1913. Qingdao Shi Zhi Bangongshi 青島市志公室編 ed., *Qingdao Shi Zhi : Waishi Zhi / Qiaowu Zhi* 『青島市志・外事志／僑務志』 (Historiography of Qingdao City: Foreign Relations and Overseas Chinese), 新華出版社 Xinhua Publishing, 1995, p. 119.
- 21) Rinji Tetsudo Rentai Honbu Chosabu 臨時鐵道連隊本部調査部, *Santo Tetsudo Chosa Hokoku* 『山東鐵道調査報告』 (Survey Reports of the Shandong Railway), no. 5, 1915, pp. 8-9.
- 22) Kobe Koto Shogyo Gakko 神戸高等商業學校, *Taisho 13 nen Kaki Kaigai Ryokou Chosa Hokoku* 『大正13年夏期海外旅行調査報告』 (Survey Report of a 1924 Overseas Summer Trip), 1925, p. 277.
- 23) Chintao Kyoryu Mindan / Chintao Nihon Shogyo Kaigisho 青島居留民團・青島日本商業會議所, *Santo ni okeru Hojin no Kigyō* 『山東に於ける邦人の企業』 (Japanese Enterprise in Shandong), 1927, p. 6.
- 24) Chinese Maritime Customs, *Decennial Reports 1912-1921*, vol. 1, 1924, p. 224. Hagiwara (Hagiwara, *op. cit.*, p. 201, table 7-1) used different sources to point out the same trend.
- 25) Hagiwara, *op. cit.*, p. 200.
- 26) Tomizawa Yoshiya 富澤芳亞, “Senryoki no Shisen Tanko, 1914-1923 nen” 占領期の淄川炭坑 1914-1923年 (The Zichuan Coal Mine During the Japanese Occupation, 1914-1923) in Honjo, ed., *op. cit.*
- 27) Chintao Shubigun Minseibu, *Chintao no Kogyo*, 1919, pp. 85-87. Idem, *Minsei Gaikyo* 『民政概況』 (Civil Administration Summary), 1921. Kanemaru, Yuichi 金丸裕一, “Senryoki Chintao ni okeru Denki Jigyo” 占領期青島における電氣事業 (Electrical Power Projects in Qingdao During the Japanese

- Occupation) in Honjo, ed., *op. cit.*
- 28) Liu Dake 劉大可, “Senryoki ni okeru Nikkei Kogyo Shihon” 占領期における日系工業資本 (Japanese Industrial Capital During Japanese Occupation), in Honjo, ed., *op. cit.*
 - 29) On the motivation behind the advance of Japanese business into the region, see “The Advance of Japanese Foreign Trade Merchants into Chintao During the 1910s,” in above-mentioned Yanagizawa, “1910 nendai Nihonjin Boeki Shonin …,” *Sangyo Keizai Kenkyu*, vol. 27 no. 1, 1986.
 - 30) The advance of Japanese merchants was visible also throughout inland Shandong as well. See Zhuang Weimin, “Senryoki ni okeru Nikkei Syogyo Shihon” 占領期における日系商業資本 (Japanese Commercial Capital During the Japanese Occupation) in Honjo, ed., *op. cit.*
 - 31) Qingdao Shi Zhi Bangongshi ed., *op. cit.*, p. 117.
 - 32) Kubo, Toru 久保亨, *Senkanki Chugoku no Mengyo to Kigyo keiei* 『戦間期中國の綿業と企業經營』 (The Chinese Cotton Industry and Business Management During the Inter-War Period), 汲古書院 Kyuko Publishing, 2005, Chapter 3.
 - 33) Chintao Shubigun Minseibu, *Sainan Shijo to Macchi Jigyo* 『濟南市場ト燐寸事業』 (The Manufacture and Market Conditions of Matches in Jinan), 外交史料館所藏, 1920, p. 8. This survey report is preserved in the Archives of the Ministry of Foreign Affairs.
 - 34) *ibid.*, pp. 18–19.
 - 35) 蔡吉庭・張銳 Cai, Jiting and Zhang, Rui, “Jinan Huochai Chang yu Jinan Huochai Gongye” 濟南火柴廠與濟南火柴工業 (The Match Industry of Jinan) in Shandong Sheng Zhengxie Wenshi Ziliao Weiyuanhui 山東省政協文史資料委員會編 ed., *Shandong Gongshang Jingji Shiliao Jicui* 『山東工商經濟史料集萃』 (Selected Sources Materials on the Social and Economic History of Shandong Province), vol. 2, 山東人民出版社 Shandong Renmin Publishing, 1989, pp. 242–243.
 - 36) Kubo, *op. cit.*, p. 64.
 - 37) “Chintao ni okeru Minsen Boeki” 青島ニ於ケル民船貿易 (The Junk Trade in Qingdao), in Chintao Gunseisho 青島軍政署, *Santo Kenkyu Shiryo*, vol. 2, pp. 75–114. The “small port” was built in 1906 as a German measure to promote the junk trade.
 - 38) Kubo, *op. cit.*, p. 68.
 - 39) *ibid.*, pp. 74–76.
 - 40) The cartel was officially formed in March 1936. Qingdao shi Gongshang Xingzheng Guanliju Shiliao zu 青島市工商行政管理局史料組編 ed., *Zhongguo Minzu Huochai Gongye* 『中國民族火柴工業』 (China’s National Match Industry), 中華書局 Zhonghua Publishing, 1963, pp. 106–122 (pp. 114–116 for Shandong).