

The Impact of the Great Depression on Korean Silk Industry

S. Y. Ryu (柳尙潤)

Seoul National University, Republic of Korea

e-mail: ryusangyun@gmail.com

Silk or raw silk was one of the leading agricultural commodities in interwar world trade. It accounted for 4.4 per cent of total agricultural exports in 1929, which was higher than that of rice.¹ The impact of the Great Depression did not bypass this leading commodity. Its prices in major markets were halved during 12 months after the U. S. stock market crash.² Several literatures have pointed out the sharp decline in raw silk price as one of impressive examples of “agricultural crisis” or “depression” along with that of wheat or rice.³ However, a little has been analyzed about silk, as they preferred to deal with necessary goods rather than luxury goods.

Silk has received attention mainly in Japanese literatures, since it used to be a major export item in interwar Japan. Various impacts of the “Silk Crisis” on Japanese economy have been studied, such as changes in trade balance, industrial structure and rural economy. Although these studies are detailed, they hardly transcend the national border. A few of them included Chinese or Korean silk industry, but their interests were confined to overseas expansion of Japanese filatures.⁴ Comparative analysis of impacts of the Great Depression may have not been tried with regard to silk.

Korean silk industry provides a good counterpart for comparison. It may be easily regarded a part of Japanese silk industry. In fact, it was subordinated to Japanese silk industry and developed along with that since the beginning of Japan’s colonial rule of Korea. When the Great Depression began, both of them faced the same market situation. Their responses, however, were different. Whereas Japanese silk industry declined since the “Silk Crisis,” that of Korea sustained growth until 1934. What made the difference? They stood on different ground: different rural economy, different industrial structure, different markets, etc. Among these was legal distinction. Japanese laws did not automatically apply in Korea, and the colonial government could make its own laws. It would be interesting to observe divided paths of the same industry in different economic and legal background.

¹ Kindleberger (1986), table 6.

² Between October 1929 and October 1930. Comparison based on monthly data in *International Yearbook of Agricultural Statistics, 1932-33*.

³ For example, *The Agricultural Crisis*; Kindleberger (1986); Rothermund (1996).

⁴ For example, Fujii (1987).

World Silk Market and the Great Depression

At the beginning of the 19th century, China, Italy and Japan were three major supplier of the world silk market. China exported 59 million kilograms of raw silk, Italy exported 44 million, and Japan 28 million in 1900.⁵ In the first decade, however, Japan overtook the other two competitors and became the biggest exporter. While exports from China and Italy stagnated in the 1920's, those from Japan grew rapidly as more and more Japanese raw silk were absorbed in a country far across the Pacific Ocean, the United States of America. Several literatures have tried to analyze the reason why they had followed different paths.⁶ Ma (1996: 339-340) pointed out that U.S. silk weaving manufacturers demanded raw silk which was "very even and uniform in quality" and Japanese products met the condition.

Figure A1 is a rough illustration of world silk market at the dawn of the Great Depression. There were three (or four including Korea) major exporters and five major importers.⁷ In a sense, however, only two giants did exist: U.S., the world largest importer, and Japan, the largest exporter. U.S. was also big market for Chinese silk industry,⁸ though its share was about 15 per cent.⁹ Compared to U.S. market, import markets in European countries were much smaller and had different taste: they preferred Italian and Chinese raw silk rather than Japanese.

The Great Depression drastically reduced world silk demand. As was seen in markets of other agricultural goods, the impact was severe in price rather than quantity, due to inelastic supply. Figure 2 shows sharp decline in silk price in markets world wide. Each price was more than halved in late-1929 and 1930. What is interesting is that the speed of price decline was different. The price of Chinese (and Italian) silk fell down earlier than that of Japanese silk. Compared to the price level before the U.S. stock market crash, Chinese silk became 54 per cent cheaper in May 1930, whereas the price of Japanese silk fell by only 18 per cent. It means that the U.S. silk market was, in the short run, divided into two: one big market for Japanese silk and the other small one for the others. These two markets seemed to have faced demand shock at the same time. However, Japanese government and exporters tried to support the price by stockholding as shown in figure 3. They succeeded for only several months. Finally, the price of Japanese silk also converged to low level. Delayed price decline was much severer and it was called as the "Silk Crisis" in Japan.

Difficulty of price support by stockholding was caused by the nature of raw silk. Whereas wheat or rice is necessary good, it is luxury good and income effect should be heavier. Considering elastic demand of luxury good,

⁵ Federico (1997), table AII.

⁶ Eng (1986); Ma (1996); Federico (1997).

⁷ Countries were selected by Federico (1997), except Korea.

⁸ Although it seems that U.S. market is bigger than French market for Chinese silk industry in figure A1, other statistics tells the other way round.

⁹ Based on monthly consumption data shown in figure 3, the share of Chinese silk in U.S. market was 10 to 15 per cent between 1925 and 1929.

heavier demand shock can still lead to similar degree of price decline. However, price support needs much more stockholding than in necessary goods.¹⁰

Another interesting difference is at quantity. U.S. imports decreased very slowly though they were unstable in the Great Depression. Japanese silk export to U.S. maintained the pre-depression level. However, Chinese and Italian silk export to world market declined, especially since 1932, as shown in figure 1. It seems that silk markets in major European countries contracted since that time. According to Federico (1997), silk consumption in France and Germany was more than halved in 1930-34 compared to 1925-29.¹¹ Reduced export of Chinese silk was partly caused by its withdrawal from U.S. market as shown in figure 3.

Different Impact on Silk Industry in Japan and Korea

The *Silk Crisis* occurred in June 1930 was a turning point of silk industry in Japan. Every index showed rapid growth until 1929. For example, annual growth rate of raw silk production was 7 to 12 per cent between 1924 and 1929. After the silk crisis, however, it reduced to 0.6 per cent in 1930. Raw silk production rather decreased in 5 out of the next 10 years. Cocoon production and mulberry farm area showed more distinct trend as seen in figure 4. Various efforts of the Japanese government and producers' associations were not able to reverse the downward movement. For luxury good, demand shock can hardly be neutralized by actions of supply side, as mentioned above.

When silk industry in major countries started to decline in the early 1930's, it continued growth, or at least didn't reduce in Korea, which was the fourth largest exporter in world silk market. Because Japanese "Empire" didn't impose duty on trade goods between Japan proper and its colonial territories, and Korean currency was supported by one to one convertibility with Japanese yen, Korean silk industry faced the same price condition with Japanese counterpart. Nevertheless, as shown in figure 5 and 6, cocoon and raw silk production in Korea increased until 1934. As for mulberry farm area, the Silk Crisis stopped rapid growth of the late 1920's, but actual acreage remained unreduced under the Great Depression.

Although Korean silk industry was big enough to be a quarter of Italian counterpart in 1930 and about 70 per cent since 1934 in raw silk production, as shown in table 1, it has received little attention by researchers because of its full dependency on Japanese silk industry. Korean raw silk was not exported directly to U.S. or European countries, but exported first to Japan, qualified as an "export" silk there, and re-export to U.S. via Kobe or Yokohama port. It means that Japanese export in table 1 contained Korean silk, but its portion was less than 5 per cent. Korean silk industry was

¹⁰ See figure A3.

¹¹ See figure A2.

only marginally important as a part of giant industry in Japanese “Empire.” In world view, however, Korea was still the fourth biggest exporter, next to Italy.

As mentioned above, the year of 1934 was a turning point to Korean silk industry. What happened then? Temporary restoration of silk price by virtue of *yen* devaluation stopped in the end of 1933. Some media called it as the *Second Silk Crisis*. Japanese government returned to the gold standard system in January 1930 and the exchange rate was fixed to 49.375 dollars per 100 yen, as shown in figure 7. However, it faced severe resistance by various businesses under the Great Depression. Among them was silk industry, which suffered from overseas demand contraction. Finally, new government declared to come out of the gold standard in December 1931, and the exchange rate fell down sharply. Raw silk price in *yen* was restored to some degree during several months in 1932 and 1933, because of *yen* devaluation, and partly due to temporary upward trend in New York silk price. Since the late 1933, however, New York silk price fell down again to low level.

The significant impact of the Second Silk Crisis was the elimination of hope for better tomorrow. The *first* Silk Crisis occurred while Japanese government tried to support the high value of *yen* to be a member of international gold standard system. People thought *yen* devaluation could make things better, and it was true though temporarily. The Second Silk Crisis deprived of expectation of price restoration. Silk industry in Japan and Korea could not help but find a way to survive under low price level.

What made the difference?

Since the beginning of Japan’s colonial rule of Korea in 1910, Korean silk industry developed as subordinated to that of Japan. In fact, development of sericulture and silk reeling industry in Korea were initiated by market integration, encouragement by the colonial government, and establishment of factories by Japanese companies. In the first decade of colonial rule, the colonial government encouraged sericulture and export of cocoons to Japan. In the 1920’s, however, several Japanese reeling companies started to establish steam filatures in Korea, which decreased export of cocoons and increased that of raw silk instead. As mentioned above, Korean raw silk exported to Japan was tested again there and exported overseas, to U.S. market.

Divided paths of Korean and Japanese silk industry in the early 1930’s are well illustrated in figure 8. In Japanese silk industry, hand-reeling got more impact although it accounted for 10 to 15 per cent in the 1920’s. Steam-reeling stagnated, but didn’t decrease. In Korea, on the contrary, both steam- and hand-reeling expanded at least until 1934. Hand-reeling in Korea was as important as steam-reeling. The proportion of raw silk produced by hand-reeling was

more than 30 per cent, as shown in table 2.

In Korea, steam-reeling was for overseas market, and hand-reeling for both export and domestic consumption. The term *domestic* in this context has double meaning: non-overseas and non-factory. Table 3 shows large amount of cocoon was not *sold* in Korea. It was possible because lots of Korean women in agricultural sector used their part-time labor for domestic reeling and weaving. According to statistics, they had only one basin for reeling per household, which means there was few market for raw silk as an intermediate good. The works of sericulture, reeling, and weaving were not divided in domestic production.

That's why such an event as "the 1881 *Nanhai* weavers' riot" didn't occur in Korea. In major places of silk industry in China, there existed many weavers separated from agricultural sector. Since Chinese raw silk became exported to European countries, weavers had difficulty acquiring cocoons, which farmers liked to sell to steam-reeling filatures with higher price, and eventually attacked nearby rural communities with anger.¹² In Korea, even after Japanese filatures started to buy Korean cocoons to export raw silk, there was no room for conflict between cocoon (or silk) producers and weavers because they were the same agricultural households. Instead, they expanded mulberry farm and raised more silkworms. They sometimes allocated different amount of cocoons for between selling to filatures and weaving their own fabrics.

The Silk Crisis, the sharp decline in raw silk price also lowered the price of cocoon. Korean sericulture households responded to this changing market situation. They didn't quit like their counterparts in Japan, but decided not to sell their cocoons or hand-reeled silk and to produce silk fabrics instead. The price condition was favorable to silk fabric production in the early 1930's, as shown in figure 9. Table 3 shows increase in "non-sale" cocoon and hand-reeled raw silk, since the Silk Crisis. Silk fabric production, which was almost equivalent to domestic production at that time, also increased.¹³ In Japan, however, steam-reeled raw silk which could not be exported and should be domestically consumed increased and they crowded out hand-reeled silk, as shown in table 2. Hand-reeling was *marginal* in Japanese silk industry.

Why hand-reeling, and domestic production of silk fabric, was important in Korea? It was because of the backwardness of silk industry and government regulation in Korea. In the late 1920's, when steam filatures were established by Japanese silk-reeling companies in most provinces, there were less than hundred reeling factories in Korea, most of which were owned by Japanese. It is hard to say that Korean silk industry was developed by "national" capital. To attract Japanese capital, colonial government made regulations which favored big filatures. Those

¹² Eng (1986), pp.1-3.

¹³ In fact, in the early 1930s, so called "democratization" of silk was advanced in Korea due to lowered price. Silk fabric imports from Japan also increased and the degree of self-sufficiency never rose.

regulations were different between provinces, but the same transaction system of raw cocoon was setup by them: the “Special Sales.” The term *Special Sales* was used in media although it was officially categorized as “buyer-specified and previously engaged joint sales,” or “private-contract transaction” in short.¹⁴ Under the *Special Sales* system, buyers and sellers of raw cocoons in a certain province gathered in advance. In fact, big filatures rather than cocoon merchants were favored as buyers and sellers were represented by province farmers’ association. In the meeting, the price was determined and each county was allocated to a certain buyer.¹⁵ The designated buyer should buy all cocoons which farmers wanted to sell, in given period and place.

Special Sales suppressed cocoon merchants and the emergence of small reeling and weaving factories. Buying and selling of raw cocoon except the Special Sales was restricted. It was like a barrier for manufacturers without big money. Only two cities, Kyōngsōng (or Kējō) and Taegu (or Daikyu) were outside of the system and had *free* markets. Almost half of reeling factories in Korea were located in them in 1930. Reeling was polarized to domestic hand reeling and big steam filatures by the particular sales system.

The system favored big steam filatures. They had less difficulty in purchasing raw materials than their counterparts in Japan, where cocoon market was rather competitive. In Japan, as shown in table 4, there were thousands of reeling factories and hundred thousands of weaving factories, and most of them were very small. After the Silk Crisis, the advantage of big filatures in Korea silk industry became apparent. As shown in figure 10, Korean cocoon price decreased *more* than Japanese price did. The Special Sales system was utilized to suppress cocoon price in Korea. In terms of raw material costs, Korean silk industry had merit than its counterpart in Japan. In addition, curtailment of operations was agreed in Japan since the Silk Crisis, which was delayed until July 1935 in Korea. These relative advantages made some Japanese silk reeling companies buy or establish filatures in Korea, even after the Silk Crisis.

Summary

The impact of the Great Depression differed between industries or countries although it was severe everywhere. Silk industry was one of the hardest-hit industries because silk was luxury goods and its demand decreased by income decline. World silk price tumbled and global silk trade contracted since the U.S. stock market crash. However, its impact varied between major export countries. Japan, which had been the largest silk exporter since the 1910’s, suffered less damage than China and Italy, at least in terms of trade and production quantity. Nevertheless, Japanese silk industry

¹⁴ “Kaitorijin Shitē Yōyaku Kyōdō Hambai” or “Zuii Kēyaku Torihiki” in Japanese.

¹⁵ In fact, what was determined was a coefficient not the price. Actual price in transaction was varied in accordance with the silk price.

started to decline since the Silk Crisis.

Korean silk industry, which was almost a part of that, followed different path. It continued to develop, or at least didn't decline until 1933 or 1934. At that time did occur another sharp decline in silk price, the Second Silk Crisis, although it was less severe than the *first* one. Few literatures have been interested in this event and its impact on silk industry. Korean silk industry has been ignored since it is much smaller than its counterpart in Japan. However, detailed look at its trend highlights another significant event in silk industry.

Comparative analysis of silk industry in both regions under the Great Depression also provides interesting topics, such as economic backwardness or economic effect of regulations. In a sense, the declining phase of a certain industry tells as much as its initial development. The Special Sales system in Korea was really *special* and made the developing silk industry follow different path than in any other major silk export country or region. Was it inevitable, or did it help develop the industry? It will be another interesting topic. Divided paths of the industry in different economic and legal background could also provide implications in the present wave of global depression.

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Table 1 Raw silk production in Japan, Italy and Korea, 1925-1938

(in thousand kilogram)

Year	Japan	Italy	Korea
1925	31,066	5,977	405
1926	34,130	5,221	533
1927	37,051	5,405	726
1928	39,692	5,974	888
1929	42,347	5,589	1,050
1930	42,619	5,261	1,324
1931	43,811	5,393	1,433
1932	41,590	2,965	1,524
1933	42,161	3,284	1,596
1934	45,243	3,124	2,126
1935	43,732	2,982	1,909
1936	42,327	2,812	1,885
1937	41,875	2,860	1,910
1938	43,152	2,738	2,160

Source: Federico (1997), table AVI; *Sanshigyō Yōran*; *Chōsen no Sanshigyō*; *Chōsen no Mayu ni Tsuite*.

Note: Raw silk production in China is unknown.

Table 2 Raw silk export and domestic consumption by reeling method in Korea and Japan, 1925-1938

(in thousand kilogram)

Year	Korea				Japan			
	Steam		Hand		Steam		Hand	
	Export	DC	Export	DC	Export	DC	Export	DC
1925	252		47	106	26,164	954	136	3,812
1926	353		84	96	26,400	3,900	176	3,654
1927	483		136	107	31,192	1,813	111	3,935
1928	616		190	82	32,878	2,567	78	4,169
1929	733		244	73	34,491	3,204	366	4,286
1930	868		342	113	28,194	9,978	446	4,001
1931	942		339	152	33,355	6,112	279	4,065
1932	976		21	526	32,775	4,987	117	3,711
1933	1,113		6	477	28,988	9,622	46	3,505
1934	1,254		76	796	30,332	11,594	54	3,263
1935	1,173	27		709	33,155	7,800	110	2,667
1936	1,184	38		663	30,114	9,347	115	2,751
1937	1,251		144	514	28,231	10,516	313	2,815
1938	1,293	98		769	28,525	11,716	26	2,885

Source: *Chōsen no Sanshigyō; Chōsen no Mayu ni Tsuite; Sanshigyō Yōran.*

Note: Korea-hand includes *Zakuri* and Korean old-fashioned. Japan-hand includes *Zakuri* and double. DC or domestic consumption is calculated by production minus export. Since no statistics are available on raw silk export by reeling method in Korea, I assume that every steam-reeled raw silk was exported in the year when export exceeded production by steam-reeling, and otherwise, no hand-reeled raw silk was exported.

Table 3 Cocoon sales in Korea, 1925-1938

(in thousand kilogram)

Year	Sale	Non-sale
1925	6,636	2,278
1926	7,119	2,793
1927	7,576	3,527
1928	8,325	3,744
1929	11,026	4,129
1930	10,860	6,497
1931	11,275	6,801
1932	10,921	7,618
1933	14,512	6,371
1934	9,781	13,208
1935	11,044	10,274
1936	12,884	9,687
1937	13,666	8,872
1938	11,121	10,773

Source: *Chōsen no Sanshigyō*; *Chōsen no Mayu ni Tsuite*.

Note: “Non-sale” means self-consumption.

Table 4 Silk reeling and weaving factories by number of employees in Japan, 1924

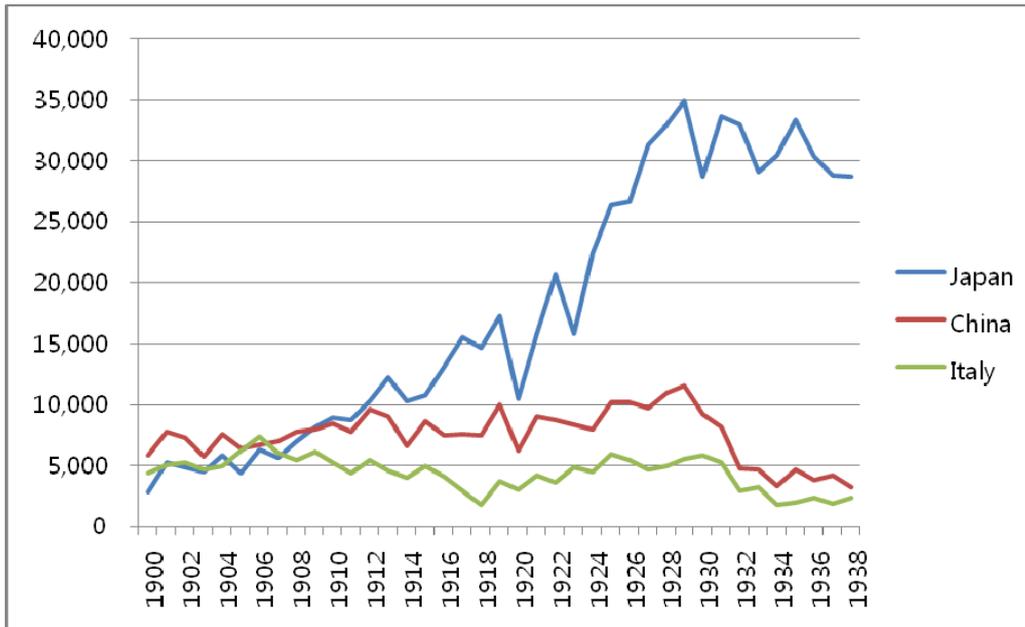
(number of factories)

	Reeling	Weaving
5-10	1,579	9,796
10-15	281	16,809
15-30	1,000	24,929
30-50	572	17,583
50-100	897	26,383
100-500	1,861	42,227
500-1000	320	10,222
1000-	300	19,554
Total	7,654	235,268

Source: *Kōjō Tōkēbyō*.

Figure 1 Raw silk exports, 1900-1938

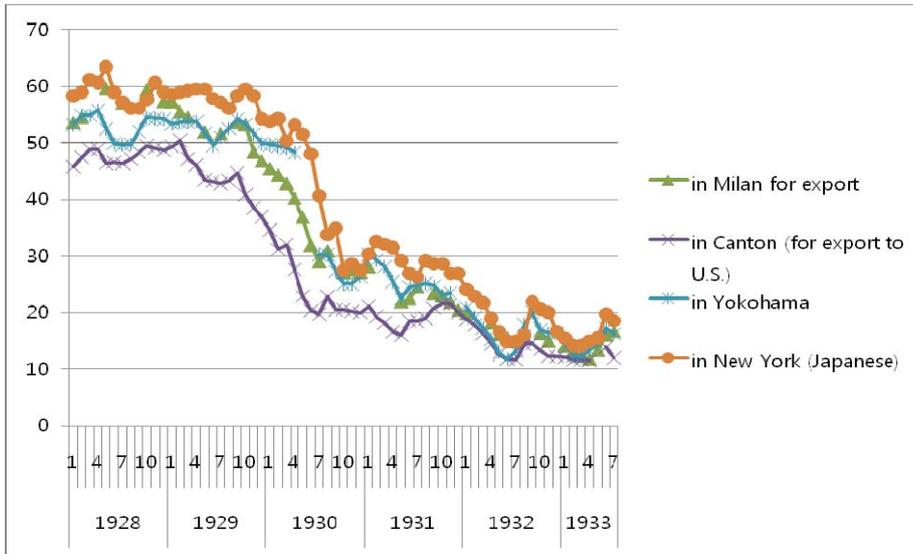
(in thousand kilogram)



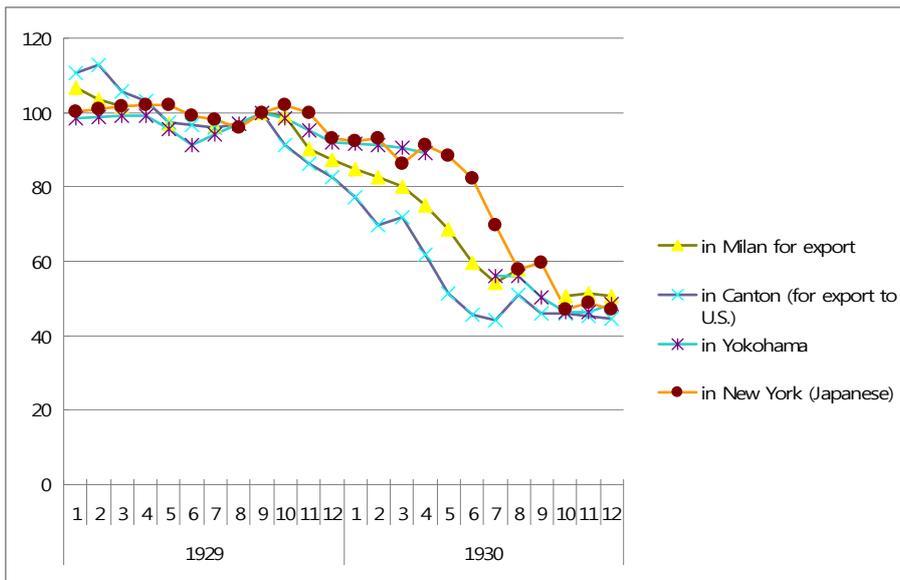
Source: Federico (1997), table AII.

Figure 2 Monthly price of raw silk in major world markets, Jan.1928-Jul.1933

(in golden franc)

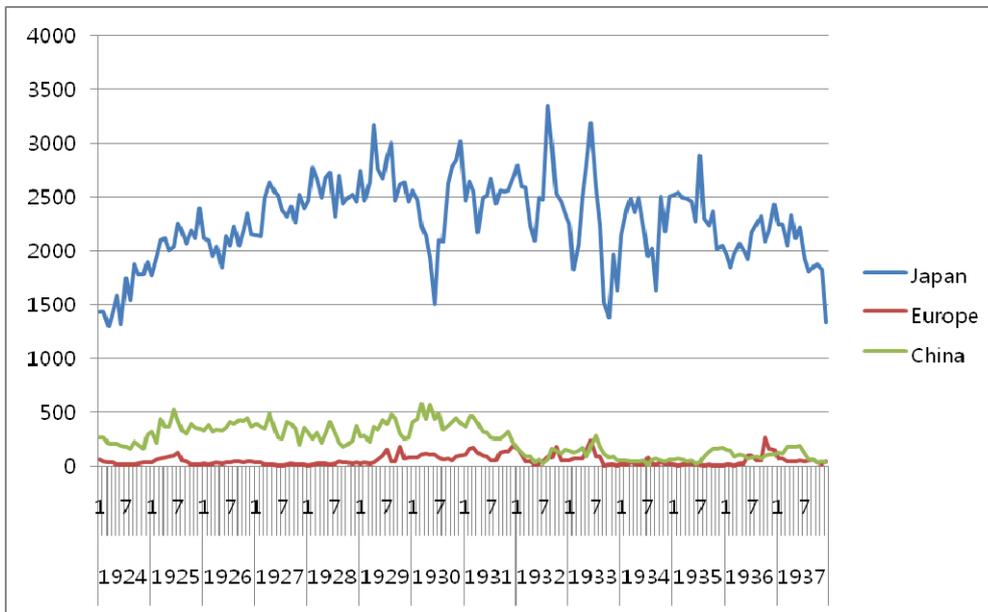


(Jan.1929=100)



Source: *International Yearbook of Agricultural Statistics, 1932-33.*

Figure 3 Monthly (apparent) consumption of raw silk in U.S. by origin, Jan.1924-Dec.1937
(in thousand kilogram)

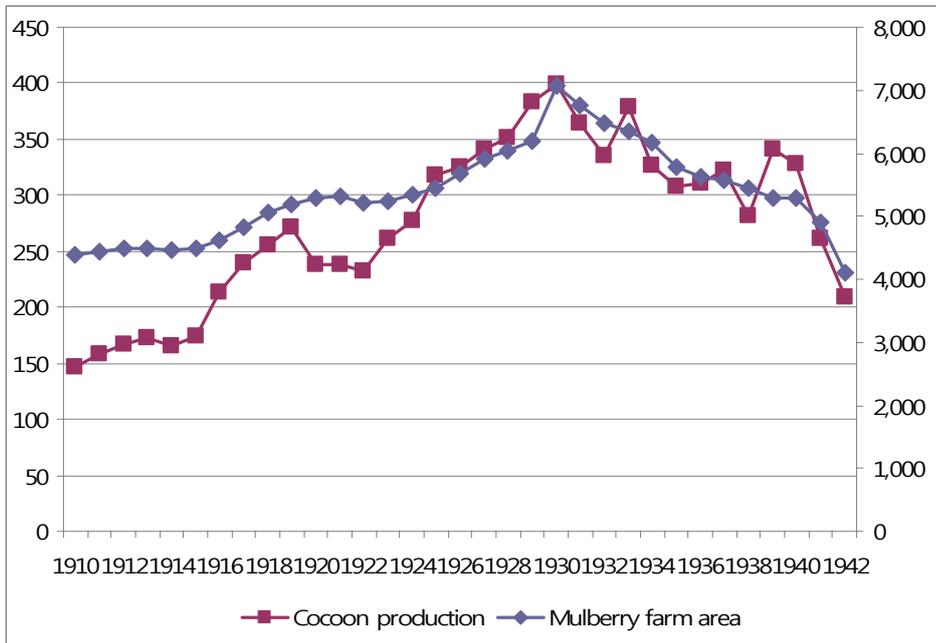


Source: *Sanshigyō Yōran*.

Note: Seasonally adjusted by Eviews.

Figure 4 Cocoon production and mulberry farm area in Japan, 1910-1942

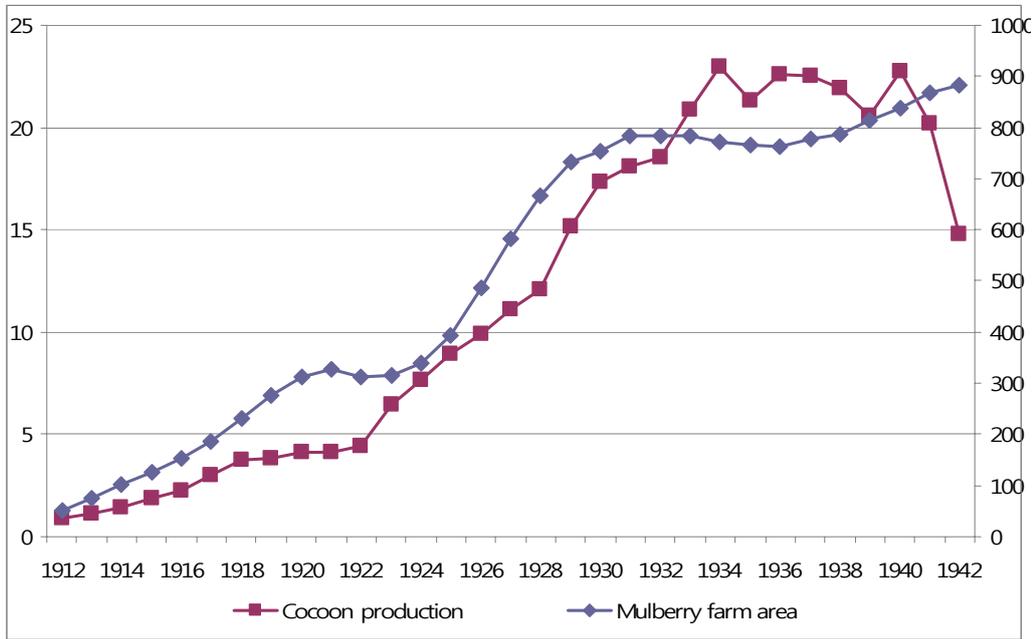
(in million kilogram, in million square meter)



Source: *Sanshigyō Yōran*.

Figure 5 Cocoon production and mulberry farm area in Korea, 1912-1942

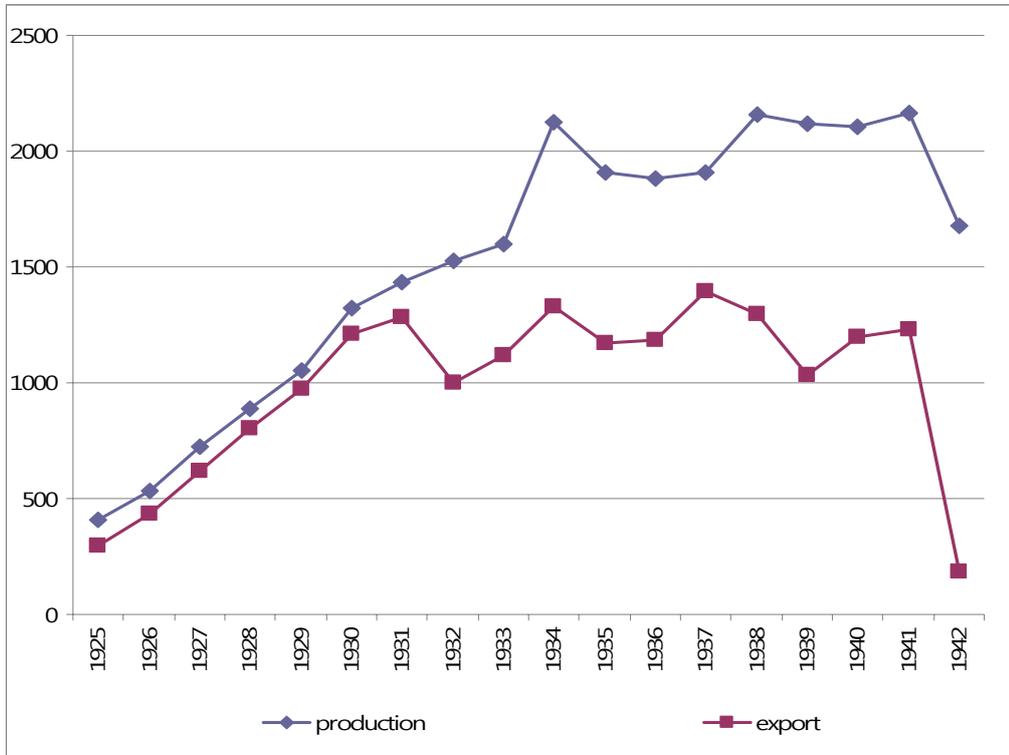
(in million kilogram, in million square meter)



Source: *Chōsen no Sanshigyō; Chōsen no Mayu ni Tsuite* .

Figure 6 Production and export of raw silk in Korea, 1925-1942

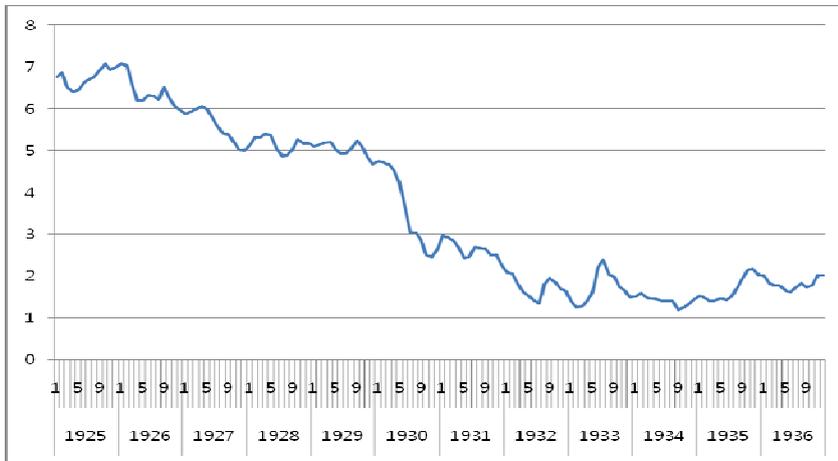
(in thousand kilogram)



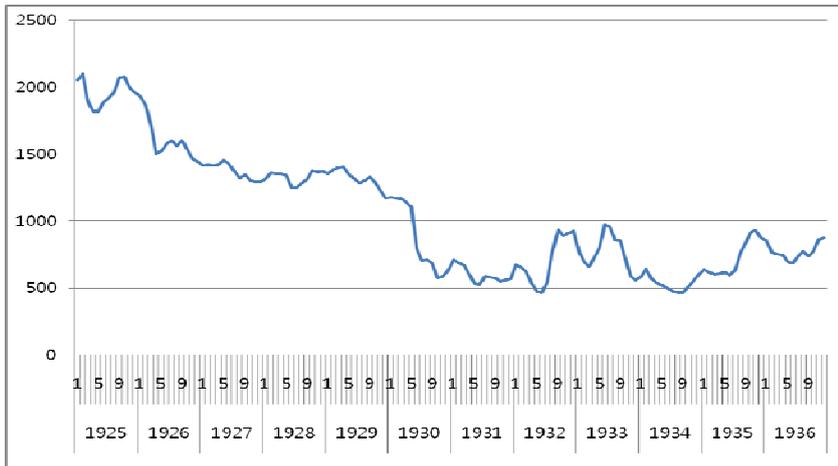
Source: *Chōsen no Sanshigyō, Chōsen no Mayu ni Tsuite* .

Figure 7 Raw silk price in New York and Yokohama, and the exchange rate of *yen*, Jan.1925-Dec.1936

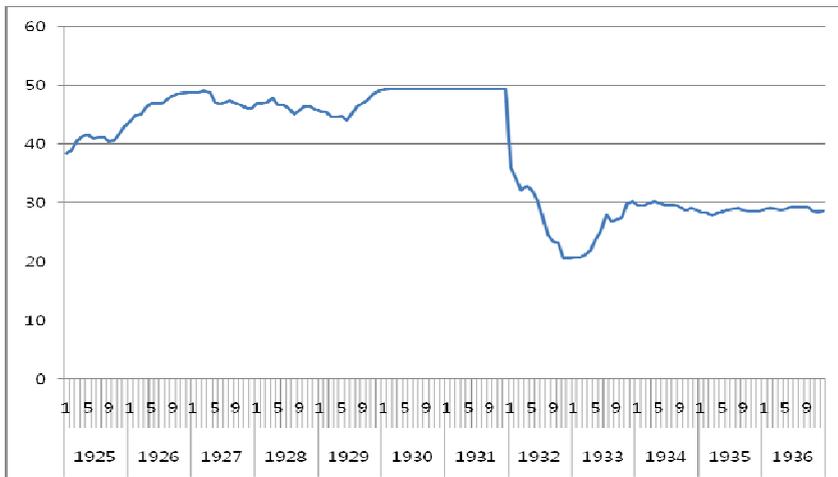
(New York, in dollar per pound)



(Yokohama, in *yen* per hundred catties)



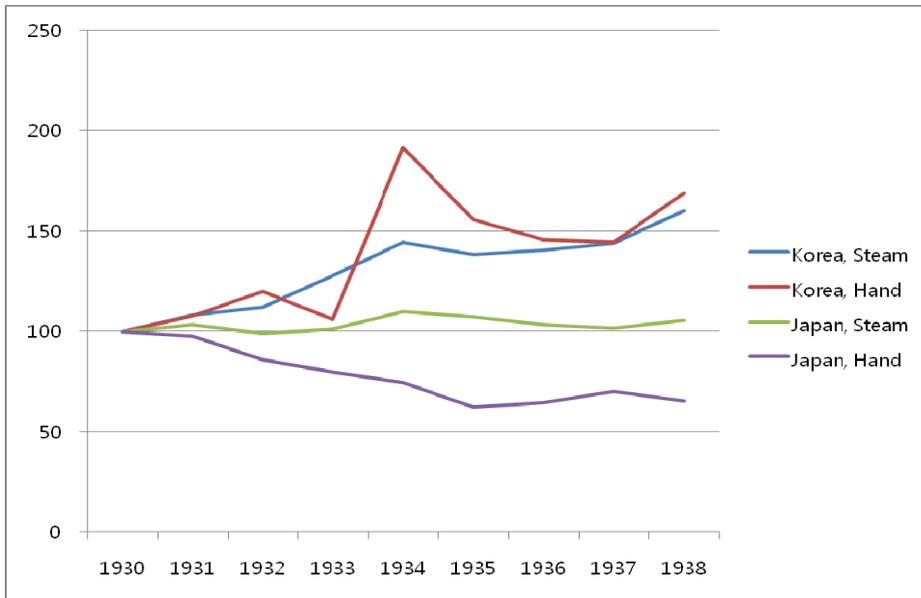
(in dollar per 100 *yen*)



Source: *Sanshigyō Yōran*.

Figure 8 Index of raw silk production by reeling method in Japan and Korea, 1930-1938

(1930=100)

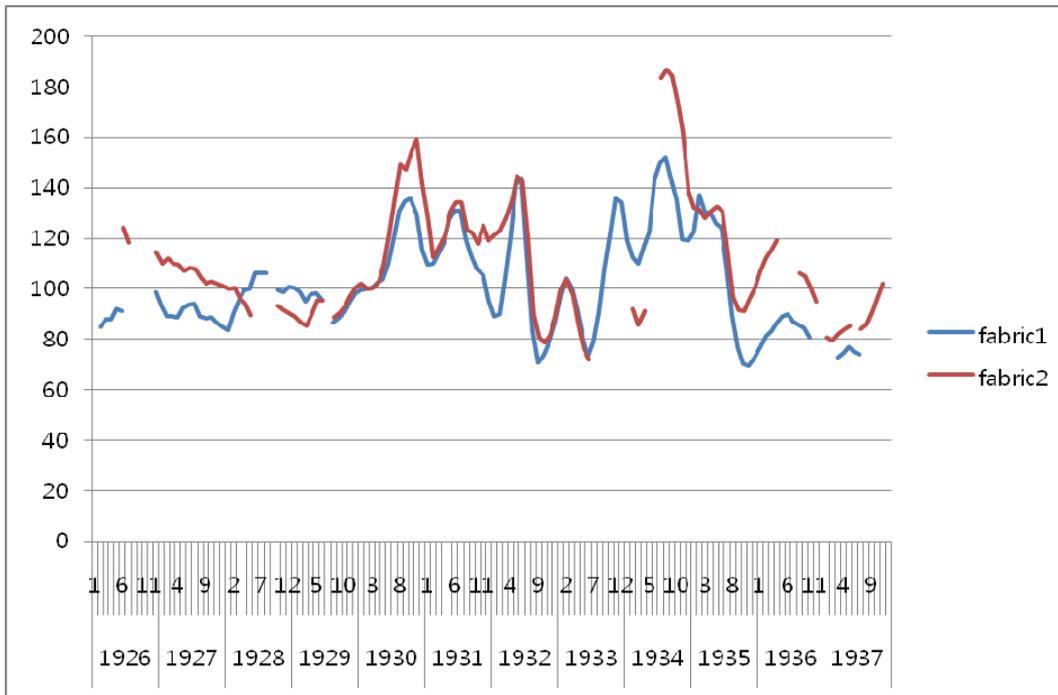


Source: *Sanshigyō Yōran; Chōsen no Sanshigyō; Chōsen no Mayu ni Tsuite.*

Note: Korea-hand includes *Zakuri* and Korean old-fashioned. Japan-hand includes *Zakuri* and double.

Figure 9 Index of price ratio of silk fabric to raw silk in Korea, Jan.1926-Dec.1937

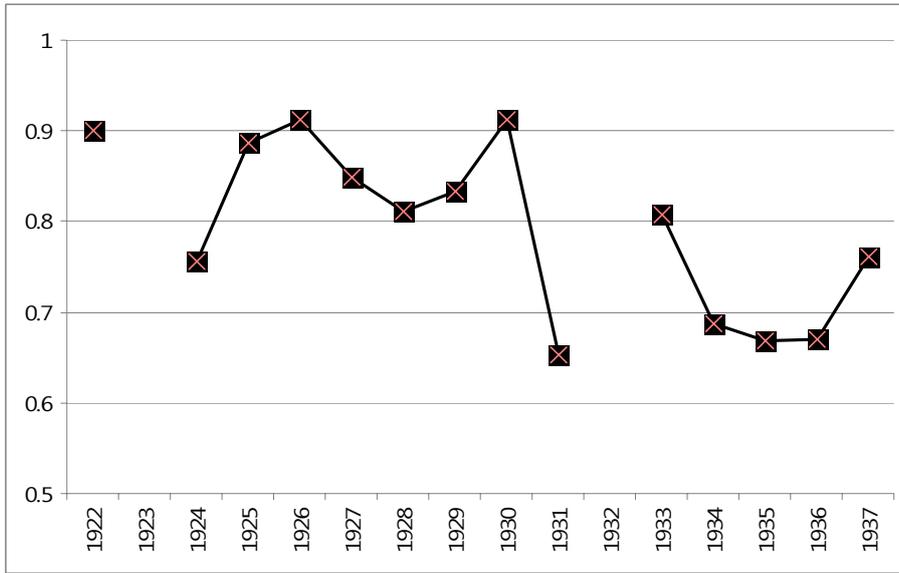
(three months moving average, Jan.-Mar.1930=100)



Source: *Kējō Shōkō Kaigishō Tōkē Nempō*.

Note: Fabric1 is *myōngju*, and fabric2 is *kwansa*.

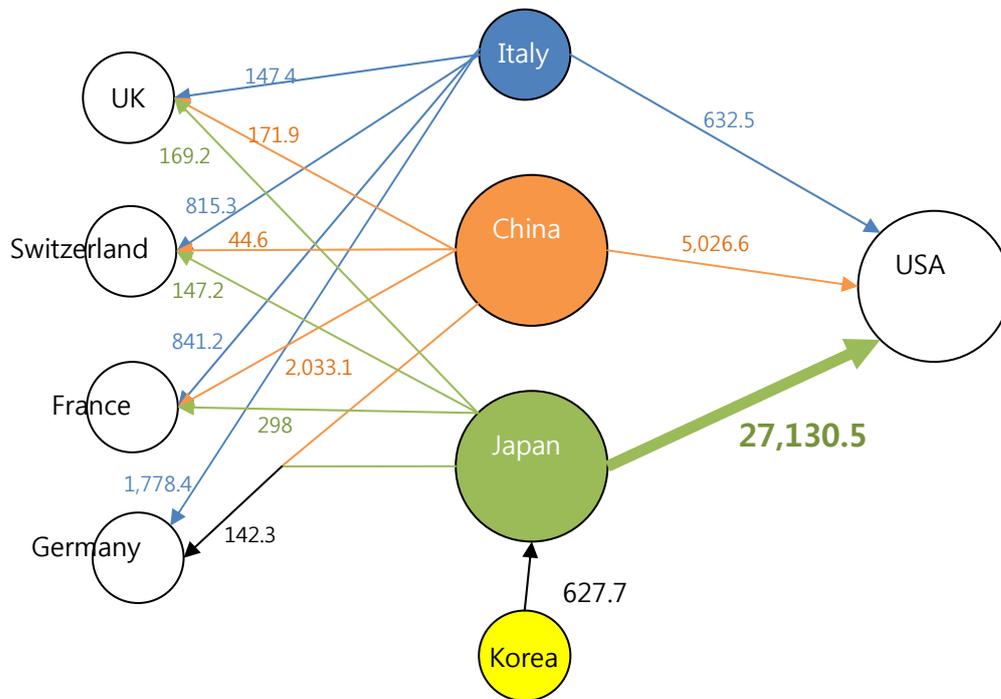
Figure 10 Price ratio of cocoon between Japan and Korea, 1922-1937



Source: *Sanshigyō Yōran*; *Chōsen no Sanshigyō*; *Chōsen no Mayu ni Tsuite*.

Note: Price ratio = unit price of Japanese high-grade cocoon / unit price of “sold” Korean high-grade cocoon.

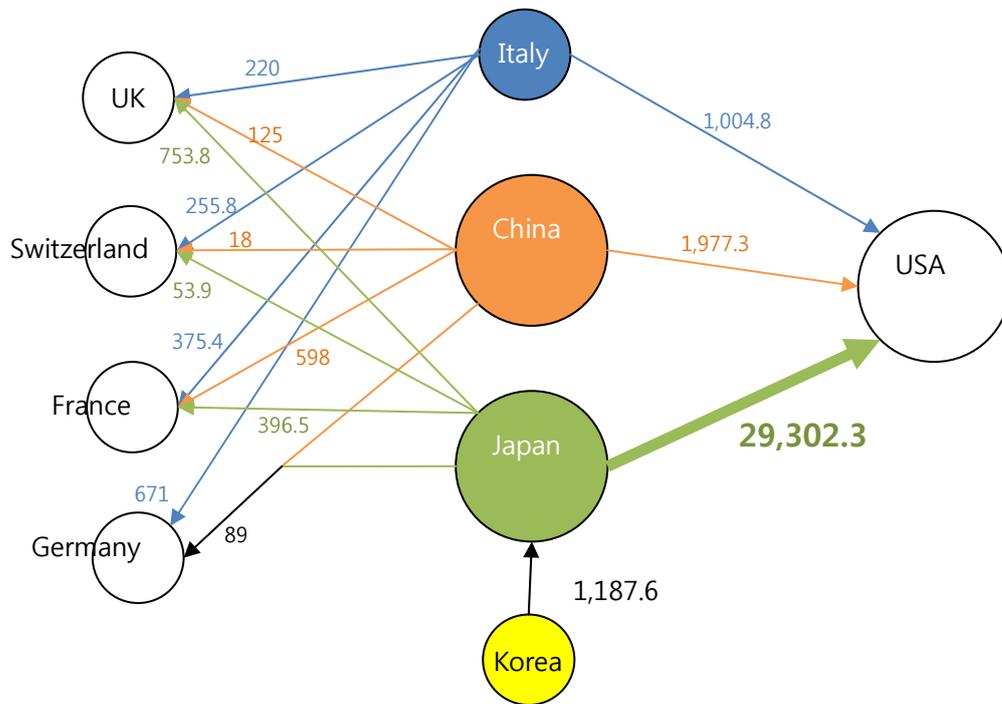
Figure A1 World silk trades, 1925-1929
 (yearly average, in thousand kilogram)



Source: Federico (1997), table AX, AXI.

Note: Each number is roughly calculated by consumption and market share in major importing countries.

Figure A2 World silk trades, 1930-1934
(yearly average, in thousand kilogram)



See figure A1.

Figure A3 Demand shift and stockholding in necessary goods and luxury goods

