The dual relationship between the cotton industry and indigenous textile manufacture in modern China

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Abstract

The purpose of this paper is to analyze the relationship between the modern cotton industry and indigenous textile manufacture in modern China at the beginning of the twentieth century. Since the 1890s, the cotton-spinning industries in China (Shanghai) and Japan developed rapidly. Meanwhile, indigenous textile manufacture in China had developed in rural areas since the Ming and Qing dynasties. It is a widely known fact that the influx of machine-spun yarn had a direct impact on indigenous textile manufacture. However, we need to remember that the influx of machine-spun yarn was caused by the fluctuations of the cotton market. The development of the cotton-spinning industry led to an increase in demand for raw cotton. At the same time, spinning companies that began producing finer yarn (above No. 20 count) came to require long-staple cotton rather than short-staple cotton. These fluctuations in the cotton market had various influences on the cultivation of raw cotton and indigenous textile manufacture in China. Focusing on the farmer’s responses to the fluctuations of the cotton market, in this paper I examine primarily the dual relationship formed between the modern cotton industry and indigenous textile manufacture.

Keywords: Modern China, indigenous textile manufacture, cotton industry, cotton market

JEL: N55; N65

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Preface

There are many studies of the Chinese cotton textile industry for various periods in history. After the thirteenth century, indigenous textile manufacture spread rapidly in China. The advantages of cotton fibers were recognized and appreciated by Chinese consumers and cotton became the main material for clothing for much of the Chinese population. During the Qing Dynasty, the Yangtze Valley became the major center for the production of hand-woven cotton cloth. This became known as Native cloth. The rural households had a strong tendency to perform all production stages required for the final product, namely, growing cotton, spinning the raw cotton into yarn and weaving the yarn into cloth. Rural households grew or bought cotton and they used the fiber material to weave cloth. In traditional China cotton textiles were manufactured by individual families functioning as production units. The basic motivation to engage in weaving was self-consumption. Yet such cloth gradually came to be sold or exchanged for other commodities in local markets. Yet, even by the 1930s, the putting-out system had not taken hold. Thus we call this system indigenous textile manufacture, where Native cloth was exported to domestic markets and some were exported overseas. Total output increased considerably as demand rose and the Native cloth market expanded during the Qing dynasty.

However, a turning point came with the influx of machine made cotton materials. The import of cotton materials from Europe began in the middle of the nineteenth century. Moreover, the import of Indian cotton yarn began in the 1880s, and Japanese cotton from the 1890s and the cotton-spinning industry grew rapidly in Shanghai at the same time. As a result, indigenous textile manufacture and the modern cotton industry coexisted in this period.

I plan to ask here: what kind of relationship formed between the modern cotton industry and indigenous textile manufacture?

Previous research has pointed out that the import of foreign textiles stimulated the Chinese to transform their own textile production at home and the influx of machine
made cotton materials led to the decline of indigenous textile manufacture\(^1\). In fact, some provinces soon lost their positions as the key centers of cotton textile production and became cloth-deficient areas. For example, indigenous textile manufacture declined in regions such as Southern China (Amoy in Fukien and Canton in Kwangtung provinces) and traditional yarn production disappeared in many districts\(^2\). However, recent research has thrown new light on the influence of the influx and revealed that the influence of the influx of cotton materials from Europe on indigenous textile manufacture was limited, while the influx of cotton yarn from other regions within Asia had a greater impact on indigenous textile manufacture\(^3\). After the influx of machine made yarn, peasants in farm villages began to switch from hand-spun yarn to machine-spun yarn in order to weave new Native cloth. The substitution of raw cotton with machine-spun yarn was especially strong. Scholars came to stress the ability of Chinese handicraft textiles to survive in rural areas. By the early 1920s, one third of yarn production in China emanated from the hand-spinners and by the 1930s this dropped to a quarter, which continued to stress a high level of resilience\(^4\). In other words, the influx of machine-spun yarn from the 1880s did not lead to the decline of handicraft production.

Moreover, previous research estimated that the output of cotton cloth reached its peak in the late 1920s, at a level double that of the 1870s\(^5\). But there is a sign of extension in aggregate output. This output includes the two parts of handicraft production. The first is indigenous textile manufacture in rural areas, and the other is indigenous textile manufacture in city. The latter grew up from the beginning of the

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twentieth century in places including Gaoyang and Guangzhou. In many cases, the local government encouraged the industry and the quality of cotton cloth produced was higher than that of Native cloth. The former sector supplied the peasants in the farm villages Native cloth and new Native cloth, whilst the latter supplied wealthy people in the city the cloth called ai-kuo-pu (Aiguo Bu) and so on. Native cloth and new Native cloth were produced by using low count yarn (less than 16 count), whilst ai-kuo-pu was produced by mixing 20 count yarn as the woof with 42 count yarn as the warp. There was a big difference between the former and the latter. This paper does not deal with the latter as part of indigenous textile manufacture.

Generally speaking, decline in handicraft production is inevitable at some point in time. The natural solution would then be the replacement of Native cloth by machine made cloth. New inventions lead to an imbalance between the modern cotton industry and indigenous textile manufacture. The handicraft sector could not compete with the modern urban industrial sector with price and quality (and productivity). Due to the overwhelming technological superiority of machine spinning, the handicraft sector generally would decline.

However, it is certain that indigenous textile manufacture did not decline during our period. The whole developing pattern of indigenous textile manufacture was unique in many significant ways, reflecting institutional factors existing in Chinese society, geography and climate.

From this viewpoint, I would like to clarify the handicraft sector in the middle Yangtze Valley and highlight the relationship between the modern cotton industry and indigenous textile manufacture in modern China.

1 Machine-made cotton material and indigenous textile manufacture

The influx of machine-made yarn

Prior to the Qing dynasty, the middle Yangtze Valley was one of the major cotton producing areas. The production of cotton yarn and cloth in traditional China was

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carried out by peasants. Peasant households grew cotton and then sold it to the weavers in the lower Yangtze Valley (Jiangnan) through commercial channels. At the same time, Native cloth produced in Jiangnan was exported to the middle Yangtze Valley. In the early Qing dynasty, import substitution of Native cloth took place. Cotton spinning and weaving became popular production activities and Native cloth production expanded in the middle Yangtze Valley. In Hubei province, especially, Native cloth and cotton production increased and they were sold both within the province to Hubei province and in surrounding areas including Hunan and Sichuan. In Hunan and Sichuan, most farmers were not self-sufficient in cotton. Households in the cotton-deficient villages had to draw on a supply of raw materials from the cotton-surplus villages, and wove Native cloth using cotton imported from Hubei.

However a turning point came between 1890 and 1900. The import of the machine-made yarn increased considerably in Hankou (located in the middle Yangtze Valley and Hubei province), which was an important treaty port second only to Shanghai. This caused peasants to switch from using domestic and hand-spun thread to standardized and machine-made yarn to weave cotton cloth using out-dated handlooms.

Table 1 and 2 show the imports of yarn in treaty ports in the Yangtze Valley. In this period, Indian yarn gradually disappeared from the cotton yarn market in Hankou. At the same time Japanese yarn enjoyed a boom: it competed successfully with Indian yarn and Shanghai yarn in the Hankou market. By the 1900s many Chinese rural weavers had shifted from home spinning to the use of imported yarns for handicraft weaving. The cloth woven by machine-spun yarn was called new Native cloth.

Why did the peasants switch from hand-spun yarn to machine-spun yarn for weaving new Native cloth? Previous research pointed out that the expansion of the export of agricultural products contributed to the spread of machine-spun yarn to farm villages.

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9 Kuroda, *Tyūkateikoku*. 

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Japanese trading companies purchased raw cotton and sold the yarn\(^\text{10}\). In Hubei province, the export of raw cotton increased from around 1895. Because of this, peasants lost the raw material they used to weave cloth and instead had to purchase machine-made yarn to continue production. In other words, yarn flowed to farm villages in return for raw cotton.

In addition, it is well-known that Japanese trading companies such as Mitsui Bussan adopted a strategy of buying raw cotton and selling finished yarn at the same time\(^\text{11}\). They bought products directly from the farms and sold the yarn to them in return\(^\text{12}\). They could exploit their position as one of the largest buyers of most lines of Chinese products, the most important being cotton. It was essential for the Japanese cotton-spinning industry to enter overseas markets from the 1890s in order to expand their production. So buying cotton and selling yarn at the farms were two sides of the same coin and importing Chinese cotton and expanding yarn production were linked.

Because the price of raw cotton was higher than before, there was an incentive for peasants to grow cotton, sell it and to buy machine-spun yarn. As a consequence, many peasants began to use machine-spun yarn as the material to weave cotton cloth. There was a sharp decline in hand-spinning toward the end of the nineteenth century and the beginning of the twentieth century. But sometimes the change was not permanent and production reverts to the previous pattern. In some cases, producers switched from machine-spun yarn to hand-spun yarn\(^\text{13}\). The greatest cause of the conversion was the ratio between cotton and yarn price.

When cotton price was more expensive, the peasants sold their own cotton in the local market and selected machine-made yarn as raw material to weave cotton cloth\(^\text{14}\). In contrast, when yarn price was more expensive, they used their own cotton as raw material to weave cotton cloth. In fact, even in the 1940s, the conversion from

\(^{10}\) China. Imperial Maritime Customs, *Returns of trade at the Treaty Ports and Trade Reports*, Hankou Shashi Trade Returns, 1903, p. 200.

\(^{11}\) Soejima, ‘Nippon bōsekigyō’.

\(^{12}\) Kuroda, *Tyūkateikoku*.


\(^{14}\) Tokyo higher Commercial school (Tokyo Kōtō Shōgyō Gatsūkō), *The reports about the raw cotton in Central China (Tyūshinchihō Menka Hōkokusho)*, 1908, p. 20.
machine-spun yarn to hand-spun yarn based on market fluctuations still took place in some areas. This meant that machine-spun yarn could not completely take the place of hand-spun yarn. Even after the influx of machine-spun yarn, rural households in Hubei maintained not only weaving but also cotton spinning as a subsidiary undertaking. In this manner the hand weaving industry survived.

With the influx of machine-spun yarn, peasants could choose several alternatives to weaving cotton cloth. The domestic production system did not alter greatly with the influx of machine-spun yarn. This shows that the influence of influx of machine-spun yarn on handicraft production was very limited and contributed little to the decline of handicraft production. In other words, the orthodox theory which stated that the rapid growth of the cotton industry directly impacted on Chinese handicraft textiles is not sufficient in explaining the relationship between the modern cotton industry and indigenous textile manufacture. The explanation for this puzzling relationship must be found outside the orthodox interpretation.

Other important trends also occurred in connection with the influx of machine-spun yarn. One of them was that cotton production in farm villages directly impacted on the handicraft production. In the next section, I will investigate the influence that the fluctuation of the cotton market had on handicraft production.

2 The modern cotton industry and Cotton production

Cotton market

In addition to local consumption, the cotton market in Hankou was greatly boosted by sizable annual exports to Japan. After the conclusion of the Shimonoseki Treaty, Japanese trading companies expanded their business to the middle Yangtze Valley, especially Hankou, and began the local purchase of raw cotton. Along with the growth of the spinning industry in Shanghai, Hankou cotton was exported to Shanghai from around 1900. Although Shanghai remained as the leading cotton market, Hankou gradually became the most important target for Japanese trading companies.

Hankou was not only one of the largest centers cotton markets. But it was also a transit point where most cotton merchants had to stop when shipping from Hubei
province to interior locations. In the middle Yangtze valley, raw cotton was collected in Hankou from a large number of widely scattered localities.

Figure 1 and 2 shows the cotton distribution in the middle Yangtze Valley in the 1900s and the 1910s. Cotton exports increased from 200,000 piculs to 400,000 piculs. In 1900s, cotton was collected from the local districts, while the export of Shashi cotton and Shanxi cotton increased in 1910s. Development of the export market for cotton coincided with dramatic changes in East Asian cotton industry.

In this period the price of raw cotton also was rising. For example, the price of general cotton in Hankou was rising from about 15 Haikuan taels per picul in 1900s to 20 Haikuan taels by 1913.

The growth in demand for cotton in East Asia and the steep rise in the price of cotton provided incentives for Chinese farmers to produce cotton. Chinese peasants long had knowledge about cotton production. It is well known that ordinary peasants participated regularly and actively in the market by trading a considerable percentage of their output. They acquired various types of product information from local (periodic) markets, which was then reflected in their production decisions. Local markets functioned as a place where farmers could search for information. Through this mechanism, they were capable of controlling a stable and adequate quantity to meet demand.

As a result, the increase in demand for raw cotton and the rise in the price of cotton in the cotton market contributed to the expansion of cotton production. There were two methods to increase cotton production. According to one report, many rural households increased the land area to plant cotton. According to other historical materials, they switched from other crops to raw cotton, thus increasing output. Many records exist to

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18 China. Imperial Maritime Customs, *Returns of trade at the Treaty Ports and Trade*
prove this. Conversely, when demand for raw cotton fell and hence the dip in the price of cotton, they decreased the land area for cotton and switched to other crops. Peasants could react flexibly to changes in the market.

American cotton

The most remarkable change that took place in the middle Yangtze Valley at the beginning of twentieth century was that the American cotton market was created in Hankou. No record has hinted that Hankou was such an important center of the American cotton market, although many researches have indicated there was the raw cotton market in Hankou.

American cotton was generally defined as long-staple cotton and was the raw material to produce thinner yarn of more than No. 20 count, while Native cotton was short-staple cotton and the raw material to produce yarn lower than No. 16 count.

Until 1890, nearly all the yarn that the Japan cotton-spinning industry produced was lower than No. 16. Native cotton planted in China was suitable for spinning low count yarns and was exported to Japan and Shanghai. From 1891, No. 20 count yarn was produced and production expanded. In 1916, production of yarn above No. 20 count surpassed that of yarn lower than No. 16 count. From around 1910, the Shanghai cotton-spinning industry also began to produce yarn above No. 20 count. In particular, from 1911, the Japanese-owned Naigai Cotton Trading Company began production of No. 20 count yarn. Following Naigai’s example, other companies also began to produce yarn above No. 20 count, blending Native cotton and American cotton. In the East

Reports, Hankou Shashi Trade Returns, 1910, p. 249: Mitsui Library (in Mitsui Bunko), Minutes of branch manager meeting in 1904 (Mitsui Bussan Shitenchōkaigi Gijiroku), p. 41.

19 The production of the yarn lower than 16 counts in the Japan cotton spinning industry in 1916 was 891,862 pieces and yarn more than 20 counts was 919,875 pieces. (Noboru Yamaguchi, Cotton in China and the problem concerning about customs duty (Shina no Menka to Kanzeimondai), 1917, pp. 28-29.)

20 China. Imperial Maritime Customs, Returns of Trade at the Treaty Ports and Trade Reports, Shanghai Trade Returns, 1913, p. 765.


22 ‘The spinning industry in China (Shina Bōsekigyō)’, Dainippon Bōsekirengōkai Getūpō, No280 (Dec. 1915), p. 29.
Asian market the demand for long-staple cotton was expanding more rapidly than that of Native cotton. In short, a new market for long-staple cotton emerged within the East Asian cotton market, in addition to the previous short-staple cotton market.

As a result of this development in the cotton-spinning industry, cotton came to be imported from the U.S. Yet, at the same time Chinese peasants also began to produce American cotton.

Hankou was the starting point for the dispersion of American cotton breeds. American cotton was introduced into this region in the 1890s. The government, local government and Japanese trading companies imported cotton seeds from the U.S. in large quantities and distributed them to peasants or merchants\(^\text{23}\). They attempted to produce American cotton from these seeds.

It is not unreasonable to assume therefore that as soon as American cotton was introduced to that area, peasants could switch to American cotton production. Yet, American cotton often degenerated and would lose the length of fiber. Since there were few knowledgeable experts able to supervise the planting of American cotton seeds, the whole experiment turned out to be a failure. The fiber length of Native cotton was short, between 3/4 to 7/8 of an inch, and the fiber length of degenerated American cotton was about 7/8 to 1 inch, compared to the staple lengths of 1 to 1 and 1/8 inches for American Upland cotton, 1 and 1/4 to 1 and 3/4 inches for Egyptian cotton, and 1 and 1/2 inches for Sea Island cotton. The quality of American cotton was between Native cotton and American Upland cotton. Shanxi cotton (a type of American cottons) was of the highest quality in China and had finer fiber which could be spun into 35 and 36 count yarn\(^\text{24}\).

Moreover, the market price of American cotton had not been high enough to warrant a broad switch from Native cotton production. Eventually, by about 1910, Native cotton (short-staple cotton) was more expensive than American cotton in local markets.

In addition, as previously mentioned Native cotton was suitable for producing


handicraft textiles, while American cotton was not suitable for manufacturing Native cloth. The fibers of American cotton were too thin to be spun into yarn in the farm villages and could only be employed as padding materials. Therefore, peasants did not increase the production of American cotton and preferred producing Native cotton. Consequently, at first the scale of the American cotton market was limited.

However, from about 1910, the market for American cotton became extremely active and expanded. Takebayashi Company, one of the Japanese trading companies, began to purchase American cotton in the Hankou market\(^25\). When they purchased raw cotton in the Hankou market, Japanese trading companies preferred American cotton over Native cotton.

From around 1905, the staff of Japanese trading companies spent time traveling to various parts of the Yangtze Valley to collect information on raw cotton production. Japanese trading companies began to go directly to cotton producing areas and began to purchase cotton directly from the local farmers and markets\(^26\). They aimed to purchase from cotton producing areas so that they could procure American cotton\(^27\). To acquire plenty of American cotton, they sometimes lent farmers money in advance to enable them to cultivate American cotton.

Another important factor was the promotion policy adopted by the government. The Qing central government and several provincial governments distributed seeds to farmers and merchants and tried to let farmers produce American cotton. In many cases the operation was continued into the Republican period.

A few favorable conditions encouraged households to produce more American cotton than Native cotton. The planting of American cotton moved inwards thereafter, but only in slow steps. But it is also true that by 1920 a better type of cotton was spreading in the Han river valley and the middle Yangtze valley. American cotton production spread to the cotton-producing districts in Hubei province and Hunan province, and even to

\(^{25}\) A temporary industry research bureau (Rinjisangyōtōsak'yoku), *A field study of raw cotton in China (Shina no Menka ni kansuru Tyōsa)*, No. 2, 1919, p. 24.

\(^{26}\) Mitsui Library (in Mitsui Bunko), *Minutes of branch manager meeting in 1907 (Mitsui Bussan Shitenchōkaigi Gijiroku)*, p. 316.

\(^{27}\) A temporary industry, *A field study*, p. 123.
Shanxi province. In addition, some spinning companies in Shanghai began to use American cotton to produce the yarn above No. 20 count from around 1913.28

In the case of Shanxi province, American cotton cultivation was taken up in regions that were producing poppy as a staple.29 Soil was fertile and suitable for growing American cotton and poppy. The rising demand for cotton induced many peasants to shift their land from poppy to raw cotton. Especially, in Shanxi province, the production of American cotton expanded.30 Table 3 shows the increase of American cotton production.

In the case of Weinan, Gaoling and Jingyang, it seems that the switch from Native cotton caused expansion of American cotton cultivation. This shows there was an increase in American cotton-producing districts and a decrease in Native cotton-producing districts. In addition, as in the case of Xiayang, Gaoling, Jingyang, Tongguan and Heyang, the yield per acre of American cotton was greater than the yield per acre of Native cotton. This also gave an incentive for farmers to produce American cotton.

As we see in the case of Tongguan and Heyang, most Native cotton was used to weave local cotton cloth. But most American cotton was sold to Hankou.31 This shows that American cotton was different from cotton used at home. In other words, Native cotton and American cotton were used in a different way.

The case of Xianyang is particularly interesting. It shows that in cultivating American cotton, farmers acted on their own initiative and found out how to grow it for themselves. This suggests that they switched to American cotton and took the initiative to expand production. In Shanxi Native cotton production decreased and American cotton increased. As a consequence, American cotton cultivation increased considerably and reached about 600,000 piculs in 1914.32 As an export port for this cotton Hankou

28 China. Imperial Maritime Customs, Returns of trade at the Treaty Ports and Trade Reports, Hankou Shanghai. Trade Returns, 1913, p. 765.
29 For American cotton in Shanxi province, see Setobayashi, ‘The Cotton Improvement’.
30 Tōru Daidōji, Shina Shanxi province Weiheheiya no Menka ni kansuru Tyōsa, 1918, p. 5.
31 Daidōji, Shina Shanxi province, p. 4.
32 Daidōji, Shina Shanxi province, p. 3.
contributed greatly to this expansion.34

Shashi was the most important cotton producing district in Hubei province. By the beginning of the 1900s, most peasants produced Native cotton.35 However, from the end of the 1900s, they began to produce American cotton.36 According to one estimate made by Mitsui, more than about 50 percent of the cotton producing districts in Shashi (one of the most important cotton-producing districts in Hubei province) was devoted to American cotton in 1915.37

The rise in the price of cotton in the cotton market contributed to the expansion of American cotton production. For example, in December in 1918, the price of Shanxi cotton was 30 Haikuan taels per picul, Shashi cotton 25.8 taels and Native cotton 23.4 taels.38 Shanxi cotton was American cotton, whereas Shashi cotton contained both American cotton and Native cotton. Therefore, the price of Shashi cotton was lower than that of Shanxi cotton. However, the price of both was higher than Native cotton. This led to expansion of the American cotton production.

In addition, the exports of American cotton also increased. By the 1900s, the share of American cotton was less than that of Native cotton. However, it gradually expanded and in 1915 the percentage of the export for American cotton increased to more than 60%.39

As a result, the farmers could produce American cotton by themselves in response to the growing demand. This shows that peasants reacted flexibly to changes in the market and even the development of the spinning industry in East Asia.

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33 Daidōji, Shina Shanxi province, pp. 1-2.
34 Masataka Setobayashi, ‘Distribution of raw cotton in the middle and upper Yangtze Valley in late Qing and early Republican China (Sninmatumin yōsukōtyūyōryūiki niokeru Menkaryutū), Society and Economic history, 77/6 (Mar. 2006), p. 21.
35 China. Imperial Maritime Customs, Returns of Trade at the Treaty Ports and Trade Reports, Shashi Trade Returns, 1902, p. 183.
36 A temporary industry, A field study, p. 24.
38 ‘The condition of the cotton, yarn and cloth market in Hankou (Hankou Menka Ito Nuno Shikyō), Dainippon Bōsekirengōkai Getūpō, No314 (Oco. 1918).
39 Mitui Library (Mitui Bunkozou), The Hankou Branch, the material for a branch manager meeting in 1919, p. 8.
Conclusion

Until the influx of foreign textiles and machine-spun yarn into the country in the nineteenth century, Chinese indigenous textile production changed little. The rapid spread of the machine-spun yarn in the second half of the nineteenth century led to changes in the raw materials, but not in the process uses to weaving cotton cloth.

The expansion of the yarn production led to change of cotton production in farm villages. In this period the Japan and Shanghai cotton-spinning industries developed rapidly, increasing the demand for raw cotton. In particular, production of yarn above No. 20 count created a demand for long-staple cotton, in addition to the previous demand for short-staple cotton. Peasants not only increased Native cotton production but also began to produce American cotton, which was then exported to Shanghai and Japan. They could react flexibly to the fluctuations of the market and contributed to the development of the spinning industry. This is the reason that Chinese handicraft textiles resisted pressure from both imported goods and the products of modern mills within Asia.

These exports were accompanied by the influx of machine-spun yarn. The dual relationship shown in Figure 3 was formed between the cotton industry and indigenous textile manufacture. Spinning mills supplied machine-made yarn to farm villages and farm villages supplied raw cotton to the spinning mills. In other words, a second relationship seems to have been formed between cotton and yarn. However, the continued development of the spinning industry contributed to further expansion of American cotton production. Figure 4 explains this complicated relationship. Here peasants produced both Native cotton and American cotton. When the price of American cotton was higher, cultivation of American cotton would increase at the expense of Native cotton. In fact, in 1915, more than half of the cotton exported from Hankou was American cotton. Peasants could sell American cotton and at the same time buy cheap yarn. This shows that peasants produced American cotton and sold it to acquire yarn to weave cotton cloth. In sum, there was no relationship between American cotton and yarn.

The basic motivation of the domestic industry was self-sufficiency. Peasants
continued to produce Native cotton to sell or to weave Native cloth, as well as padding materials. Therefore, when the demand for American cotton decreased or the price of American cotton was not high enough, cultivation of American cotton would decrease and Native cotton increase. At that time, peasants could choose Native cotton as raw material to weave cloth or sell it and choose machine-made yarn. In fact, from 1919, the demand for American cotton decreased and the price of American cotton was not higher than that of Native cotton. The spinning industry rapidly expanded from 1919 to 1921 and most cotton was sold not to Japan but in the Chinese domestic market. During that period, peasants produced more Native cotton and subsequently started to produce American cotton again.

In other words, in responding to the fluctuations of the cotton market, peasants could always choose the more profitable option, and doing so increase or decrease the percentage of each type of cotton and choose which type of raw material to use to weave cotton cloth. This shows that the dual relationship developed through the medium of the cotton market. As a result, indigenous textile manufacture could survive. The dual relationship underlined the mechanism for their survival.
Table 1 Imports of Indian yarn in the middle Yangtze Valley (in picul)

<table>
<thead>
<tr>
<th>Year</th>
<th>Hubei</th>
<th>Sichuan</th>
<th>Hunan</th>
<th>Total</th>
<th>Chongqing</th>
<th>Changsha</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1896-1900</td>
<td>39,468</td>
<td>67</td>
<td>13,041</td>
<td>52,576</td>
<td>211,528</td>
<td>264,104</td>
<td></td>
</tr>
<tr>
<td>1901-1905</td>
<td>59,854</td>
<td>716</td>
<td>13,589</td>
<td>74,158</td>
<td>301,009</td>
<td>256</td>
<td>375,423</td>
</tr>
<tr>
<td>1906-1910</td>
<td>66,914</td>
<td>0</td>
<td>9,820</td>
<td>76,734</td>
<td>312,984</td>
<td>1,378</td>
<td>391,096</td>
</tr>
<tr>
<td>1911-1915</td>
<td>10,521</td>
<td>0</td>
<td>5,214</td>
<td>15,735</td>
<td>150,149</td>
<td>1,065</td>
<td>166,949</td>
</tr>
<tr>
<td>1916-1917</td>
<td>4,635</td>
<td>0</td>
<td>11,545</td>
<td>16,180</td>
<td>127,894</td>
<td>1,280</td>
<td>145,353</td>
</tr>
</tbody>
</table>

Sources: China. Imperial Maritime Customs, Returns of Trade at the Treaty Ports and Trade Reports, Hankow, Ichang, Chungking, Shasi, Changsha Trade Returns, 1896-1917.

Table 2 Imports of Japanese yarn in the middle Yangtze Valley (in picul)

<table>
<thead>
<tr>
<th>Year</th>
<th>Hubei</th>
<th>Sichuan</th>
<th>Hunan</th>
<th>Total</th>
<th>Chongqing</th>
<th>Changsha</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1896-1900</td>
<td>108,269</td>
<td>2,229</td>
<td>3,609</td>
<td>114,108</td>
<td>17,270</td>
<td>131,378</td>
<td></td>
</tr>
<tr>
<td>1901-1905</td>
<td>211,754</td>
<td>10,443</td>
<td>1,934</td>
<td>224,130</td>
<td>6,699</td>
<td>3,671</td>
<td>234,499</td>
</tr>
<tr>
<td>1906-1910</td>
<td>199,111</td>
<td>15,182</td>
<td>2,370</td>
<td>216,663</td>
<td>18,562</td>
<td>8,763</td>
<td>243,988</td>
</tr>
<tr>
<td>1911-1915</td>
<td>230,180</td>
<td>40,957</td>
<td>9,704</td>
<td>280,842</td>
<td>53,831</td>
<td>49,141</td>
<td>383,814</td>
</tr>
<tr>
<td>1916-1917</td>
<td>239,817</td>
<td>38,344</td>
<td>12,335</td>
<td>290,496</td>
<td>21,108</td>
<td>42,055</td>
<td>353,658</td>
</tr>
</tbody>
</table>

Sources: China. Imperial Maritime Customs, Returns of Trade at the Treaty Ports and Trade Reports, Hankow, Ichang, Chungking, Shasi, Changsha Trade Returns, 1896-1917.
Figure 1 Cotton distribution in the middle Yangtze Valley in the 1900s (in 10,000 picul)

Figure 2 Cotton distribution in the middle Yangtze Valley in the 1910s (in 10,000 picul)
Table 3 American cotton cultivation in Xi’an and Tongzhou about 1910

<table>
<thead>
<tr>
<th>Prefecture</th>
<th>Xian</th>
<th>The condition of American cotton cultivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xi’an</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xianyang</td>
<td>From the Guangxu period, they grew American cotton. However, the harvest was small. Just prior to 1910 most of farmers bought the book (Nonghuazhushu) and studied it. According to their research, they found that the harvest of American cotton was ten times larger than that of native cotton.</td>
<td></td>
</tr>
<tr>
<td>Lintong</td>
<td>Local craft of weaving was more and more prosperous and cultivation of American cotton was increasing.</td>
<td></td>
</tr>
<tr>
<td>Weinan</td>
<td>In Weibei, cultivation of American cotton was expanding. Previously all kinds of cotton were native cotton. However, in recent years, cultivation of native cotton was decreasing and American cotton was increasing. Output in south Weihe was not much greater than Weibei.</td>
<td></td>
</tr>
<tr>
<td>Gaoling</td>
<td>Previously all kinds of cotton had been native cotton. But because the harvest of American cotton was greater than that of native cotton, most farmers switched to American cotton and they increased cultivation greatly.</td>
<td></td>
</tr>
<tr>
<td>Jingyang</td>
<td>Previously all kinds of cotton had been native cotton. But because the harvest of American cotton was greater than that of native cotton, most farmers switched to American cotton and they increased cultivation greatly. Every year, they produced more than thousands piculs.</td>
<td></td>
</tr>
<tr>
<td>Liquan</td>
<td>In south east Liquan, farmers cultivated more cotton. Recently they have begun to produce American cotton and they increased cultivation greatly.</td>
<td></td>
</tr>
<tr>
<td>Tongzhou</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tongguan</td>
<td>There were three kinds of American cotton in Tongguan. It seemed that the harvest of American cotton was greater than that of native cotton. The fiber of native cotton was soft and farmers could spin the fiber. So most of them did not sell the cotton.</td>
<td></td>
</tr>
<tr>
<td>Heyang</td>
<td>There were two kinds of cotton, native cotton and American cotton. All cotton was produced in north east Heyang. Native cotton was rigid and suitable for home spinning but the harvest was less. American cotton was soft and the harvest was greater.</td>
<td></td>
</tr>
</tbody>
</table>
Figure 3 The dual relationship (the 1900s)

Farm villages
- Indigenous textile manufacture
- Raw material to weave
- Native cotton

Japan and Shanghai
- The cotton industry
- Spinning industry (low count yarn)

Figure 4 The dual relationship (the 1910s)

Farm villages
- Indigenous textile manufacture
- Raw material to weave
- Native cotton
- American cotton

City
- Indigenous textile manufacture
- Raw material to weave

Japan and Shanghai
- The cotton industry
- Spinning industry
- Low count yarn
- High count yarn

Cotton market
- Indian cotton, American cotton