The Development of the Producing-Center Cotton Textile Industry in Japan between the Two World Wars

Takeshi Abe

The principal objective of this study is to show in summary fashion the mechanisms for development in the producing-center cotton textile industry as it existed in Japan from the Panic of 1920 right up to the time immediately prior to the strengthening of cotton industry controls when the country was put on a war footing (hereafter, this period will be referred to as "between the wars"). Perhaps a few words of explanation are needed at the start in regard to this industry.

It is, I believe, a well-established fact that the cotton industry, especially the spinning and weaving segments of it, occupied an important place in Japan’s economy before World War II. This was particularly true after it passed through the World War I boom years, when it entered its maturity as an industry and supplied cotton cloth in large quantities not only to the domestic market but also to markets overseas.

1 This study is a revised summary of the main points (supplemented with several observations) I made in my book Nihon ni okeru sanchi men’orimono gyō no tenkai [The development of the producing-center cotton textile industry in Japan] (Tokyo University Press, 1989).

2 This includes the period of approximately one year, beginning from the spring of 1919, that was called "the postwar boom."
The cotton industry in modern Japan is divided into two large business groups: those who combine both spinning and weaving of cloth, and those who specialize in weaving cloth. It is these latter weavers who make up the producing-center cotton textile industry. The former group, which began developing in the 1890s, consisted of large-scale mills equipped from the first with power looms and keen on the latest mechanized technology. The latter group, in contrast, boasted of a history going back into the Tokugawa period; although the creation of “manufacture” is said to have gone ahead in a small fraction of the regions from the late Tokugawa period, the overwhelming majority of weavers were, at least until about the time of the Russo-Japanese War, part of a putting-out-system cottage industry, in which members of farming households, using hand looms and working in their spare time, wove cotton cloth that was collected by merchants.

This system did not seem to lend itself easily to a factory-based industrialization. It was also common for large numbers of cotton cloth producers, merchants, and processors to become concentrated within a relatively small area, thus forming what were called cotton-textile producing centers. The characteristics of the producing-center cotton textile industry, with its concentration in a specific area of small and medium-sized cotton cloth producers along with related businesses, have not changed fundamentally even down to the present day, except that after the Russo-Japanese War and the World War I boom, the industry moved toward a factory structure. In many of the producing centers the construction of small and medium-sized factories equipped with power looms increased markedly from that period; on the other hand, the cottage industry that relied upon hand looms began to decline, as did “manufacture,” and these classical representatives of indigenous industry for the most part metamorphosed into small and medium-sized manufacturing industries.

Now, it is held in academic circles in Japan that small industries such as the producing-center cotton textile industry formed the lower stratum of a dual structure from the 1920s on, and that, in stark contrast to the combined spinning-weaving businesses and other such large enterprises that made up the upper stratum, the small industries were characterized by low productivity and low wages.3 In the

3 For the dual structure of the Japanese economy, see Kōnosuke Odaka, Rōdō shijō bunseki [Analysis of the labor market] (Iwanami Shoten, 1984).
cotton textile industry in 1933 very small businesses of fewer than 5 workers made up 91.0% of the total of 53,642 producing premises, with an average total annual output per premise of 13,100 yen; in contrast, the figure for the spinning industry, which was made up principally of large enterprises, came to 2,116,200 yen. Also, the average wages per worker in the cotton textile industry and in the spinning industry, respectively, were 212 yen and 247 yen, with a value-added productivity of 1011 yen and 1900 yen, respectively. Thus it is true that there was a real gap in wages and productivity between the producing-center cotton textile industry and the combined spinning-weaving businesses.  

The correctness of the accepted view is, therefore, corroborated by the above data, but that does not lead to the immediate conclusion that the large-enterprise sector developed and the small-and medium-enterprise sector was stagnant or declined. While it is true that the large-enterprise sector in the dual structure did develop, growth in the other sector was marked by diversity and complexity; in the producing-center cotton textile industry, while there were many centers that stagnated or declined, there were also a considerable number of areas that produced a succession of businesses whose output increased remarkably, and in some cases whose scale of operations expanded strikingly.  

Now, it is not sufficiently known that the producing-center cotton textile industry on the whole made outstanding progress between the wars. In 1914 “producing-center cotton cloth” ranked sixth in the mining and manufacturing industries in total output, behind cotton yarn, raw silk, military weapons, iron, and coal, at 77,062,000 yen; in 1919 it was third, behind raw silk and cotton yarn, at 595,642,000 yen. And it maintained its high ranking in later years as well: fourth (at 382,039,000 yen) in 1929, after raw silk, cotton yarn, and iron, and still fourth (at 573,221,000 yen) in 1937, after iron, cotton yarn, and military weapons.  

4 The data is based on Kōjō tokei hyō [Factory statistical tables] and Shōkōshō tokei hyō [Ministry of Commerce and Industry statistical tables].

5 Hereafter I shall refer to cotton cloth produced by producing-center weavers as “producing-center cotton cloth” and that produced by the combined spinner-weavers as “combined cotton cloth.”

6 Abe, Nihon ni okeru..., p. 3.
Such progress in the producing-center cotton textile industry owed much to the expansion of new markets both domestically and abroad. It would be no exaggeration to say that prior to World War I the industry relied almost exclusively on domestic demand, the only exception being the weaving of narrow white cotton cloth for the Korean market. Even after the great war the domestic market remained an important basis for the industry's continued existence, but about this time new cotton cloth markets took shape within the country to add to the previous markets. To be specific, because advances in printing techniques made it possible to cut wide cotton cloth into the traditional narrow strips, and because the lifestyles of people in Japan kept moving towards Westernization, the domestic demand for wide cotton cloth—previously hardly ever used within Japan—went on growing.

Another thing: cotton cloth was, obviously, a valuable export item. After outstripping cotton yarn in export totals in 1917, it ranked along with raw silk as one of the two main export items. Led by cotton cloth, the export of other cotton products continued to expand from this point in time, and in 1933 Japan pulled past England in the world market to become the No. 1 cotton-cloth exporting country. Unaffected by the decline (in 1930–1931) in the silk-reeling industry under the influence of the Shōwa Panic, cotton cloth took over as king of export items in 1934. The percentage of "producing-center cotton cloth" among this fast-growing export item was extremely high. While the estimated figure for the amount of "producing-center cotton cloth" in the total amount exported in 1914 is no more than 30%, in 1918 it exceeded 50%. This fell to about 40% in the years between the second half of the 1920s up to the Showa Panic, but it went up to 48.2% in 1932 and after that followed an upward trend that saw it around 60% from 1935 on.

What shouldered the main burden of such development in the producing-center cotton textile industry were the few producing centers, alluded to earlier, that continued increasing their output in remark-

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7 The width of the fabrics used in making traditional kimonos in Japan was approximately 36 cm, but textile fabrics several times wider were used in Europe, the United States, and most other countries. The former cloth is called narrow cloth in Japan, and the latter is called wide cloth.

able fashion. The next sections will explain in detail what they were.

REGIONAL PATTERNS IN THE COTTON TEXTILE INDUSTRY

What I wish to do here is provide an understanding of the national milieu in which the producing-center cotton textile industry developed, from the Russo-Japanese War up to the period between the wars. The positions occupied by the various cotton-textile producing centers within Japan's cotton textile industry, and even in the cotton industry as a whole, and the changes that took place in them, were ascertained by collecting basic data relating to the principal producing centers in the country and then analyzing those figures. Similar attempts have been made in some studies published previously. Yet projects dealing with the period between the wars have not been published, and a considerable number of studies discussing the Meiji and early Taishō periods contain some methodological problems. For example, in most cases they consider the data on the cotton textile industry broken down by prefectures and given in the *Nōshōmu tōkei hyō* [Agriculture and Commerce Ministry statistical tables] as approximately reflecting the true state of the producing-center cotton textile industry, then proceed straightway to an analysis, but because these statistics as a general rule also include figures for "combined cotton cloth," it is dangerous to draw from them any direct conclusions about developments in the producing-center cotton textile industry. Most earlier works also sought the producing centers they would undertake to analyze through introductory outlines of histories of regional industries, and their research ended with descriptions of these centers on the basis of materials such as prefectural statistical papers. On

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the basis of such a method the selection of producing centers tended to become arbitrary, and descriptions of the centers were apt to be inadequate.

With a view to overcoming such problems I adopted as my principal rules of thumb the following procedures.

(1) I decided I would investigate, as a general rule, four years: 1914, which preceded the boom years of World War I; 1919, the year of the "postwar boom"; 1929, which came at the end of the 1920s, when most industries were unable to break out of the recession; and 1937, which immediately preceded the full implementation of wartime controls on all industries.

(2) When I found that "combined cotton cloth" figures had been included in cotton-cloth output totals given in Nōshōmu tōkei hyō and Kōjō tōkei hyō, I would exclude them before estimating "producing-center cotton cloth" output totals by prefecture, for the top 10 prefectures.

(3) I would select the principal cotton-textile producing centers according to the following plan: a) I would seek, from the statistical papers of the 12 prefectures abstracted by the process described in (2) above, the cotton-cloth output totals, by district and city, for the years 1914 and 1937, taking as a rule only data on pure cotton textiles (hence I would exclude figures for silk-cotton blends); b) from the Menshi bōseki jijo sankōsho [Reference work on cotton-yarn spinning] published by Dainippon Bōseki Rengōkai [Japan Cotton Spinners' Association] and statistical papers from all the prefectures, I would search out the proportion of looms the combined spinner-weavers owned out of the total number of looms in operation in the districts and cities in 1914 and 1937, and those regions in which almost all the cotton cloth was produced by the spinner-weavers I would eliminate; c) for the remaining districts and cities I would look for the presence of a weaving industry association in which the principal members were weavers who specialized in weaving, and those regions where I could not find such associations would be excluded; d) the geographical limits of a cotton-textile producing center would be deter-

10 In the case of the Nōshōmu tōkei hyō I corrected several mistakes in totals, etc., by revising the figures in the light of data mainly provided by prefectural statistical papers.

11 A detailed explanation of the elimination procedure is given on pp. 20–22 of Abe, Nihon ni okeru....
mined by taking as norm the jurisdictional area of the above weaving industry association, also taking into consideration district or city mergers or abolitions, and the name customarily given the producing center would be adopted; e) I would exclude any producing centers that did not fulfill one of these two conditions: that their “producing-center cotton cloth” output totals for 1914 were at least 1,000,000 yen, or for 1937 were at least 5,000,000 yen.

The producing centers chosen after the above procedures had been gone through are shown in figure 1. I believe that the principal producing centers in the period that forms the object of this study are almost without exception included in this figure.

(4) In regard to shifts in output totals for the 27 producing centers selected under (3), the markets for their products (in concrete, the ratio between domestic demand and exports), the makeup of their products, their scale of operations (the proportion of total working places with 10 workers or more), and technological level (the proportion of power looms out of total loom numbers), I would try to collect data whose reliability was high.

The results of (4) can be synthesized by saying that cotton-textile production-centers in the period between the wars fall into four types:

I. Producing-centers that moved aggressively into a switch to factories and power looms very quickly after the Russo-Japanese War, during the period between the wars switched their principal product from domestic-oriented narrow white cotton cloth to wide white cotton cloth, and, while producing large quantities of a small variety of cotton fabrics in comparatively large-scale factories, continued to increase their output. Chita in Aichi Prefecture and Sennan in Osaka Prefecture are included in this type; Nagoya in Aichi Prefecture and Senboku in Osaka Prefecture are thought to belong here as well. Hazu in Aichi Prefecture might also be included in this type.

II. Producing-centers that moved into a factory system and into power looms after the Russo-Japanese War or from the boom years of World War I, switched from the weaving of narrow striped cotton cloth for the domestic market to the production of such special products as yarn-dyed cotton cloth for the export market, and, while producing small quantities of a large variety of cotton fabrics in factories of a slightly smaller scale than those in Type I, continued to increase their
Fig. 1. Principal Cotton-Textile Producing Centers

<table>
<thead>
<tr>
<th>#</th>
<th>PRODUCING CENTER</th>
<th>DISTRICTS (GUN) AND CITIES (SHI) BELONGING TO THE CENTER (IN 1937)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sano</td>
<td>Tochigi Pref.: Aso-gun/Shimotsuga-gun/Tochigi-shi/Ashikaga-gun/Ashikaga-shi</td>
</tr>
<tr>
<td>2</td>
<td>Kita-Saitama</td>
<td>Saitama Pref.: Kita-Saitama-gun</td>
</tr>
<tr>
<td>3</td>
<td>Kita-Adachi</td>
<td>Saitama Pref.: Kita-Adachi-gun/Kawaguchi-shi/Urawa-shi</td>
</tr>
<tr>
<td>4</td>
<td>Tokorozawa</td>
<td>Saitama Pref.: Iruma-gun/Kawagoe-shi</td>
</tr>
<tr>
<td>5</td>
<td>Enshū</td>
<td>Shizuoka Pref.: Hamamatsu-shi/Hamana-gun/Inasa-gun/Iwata-gun/Shūchi-gun</td>
</tr>
<tr>
<td>6</td>
<td>Higashi-Mikawa</td>
<td>Aichi Pref.: Hoi-gun</td>
</tr>
<tr>
<td>7</td>
<td>Hazu</td>
<td>Aichi Pref.: Hazu-gun</td>
</tr>
<tr>
<td>8</td>
<td>Sanshū</td>
<td>Aichi Pref.: Nukada-gun/Okazaki-shi/Hekikai-gun/Higashi-Kamo-gun/Nishi-Kamo-gun</td>
</tr>
<tr>
<td>9</td>
<td>Bishū</td>
<td>Aichi Pref.: Niwa-gun/Haguri-gun</td>
</tr>
<tr>
<td>10</td>
<td>Bisai</td>
<td>Aichi Pref.: Ichinomiya-shi/Nakajima-gun</td>
</tr>
<tr>
<td>11</td>
<td>Nagoya</td>
<td>Aichi Pref.: Nagoya-shi/Aichi-gun/Nishi-Kasugai-gun</td>
</tr>
<tr>
<td>12</td>
<td>Chita</td>
<td>Aichi Pref.: Chita-gun/Handa-shi</td>
</tr>
<tr>
<td>13</td>
<td>Ise</td>
<td>Mie Pref.: Kawage-gun/Anō-gun/Tsu-shi/Suzuka-gun</td>
</tr>
</tbody>
</table>
output. Included in this type are Enshū in Shizuoka Prefecture, Higashi-Mikawa in Aichi Prefecture, Banshu in Hyōgo Prefecture, and Imabari and Yawatahama in Ehime Prefecture. Though Tokorozawa in Saitama Prefecture and Bingo in Hiroshima Prefecture were later in turning to factories or to power looms than the above centers, and Kojima and Ibara in Okayama Prefecture would pour all their efforts into the production of the single variety of cotton cloth called koku-ra (duck cloth), I would be inclined to include them all in this type because they have so many points in common with the above centers.

III. Producing-centers whose alterations in output totals were stagnant in nature, even though they moved to factorization and power looms. Of the 27 centers that make up the total, 9 fall into this category.

IV. Producing-centers that were behind in shifting to factories and power looms even into the 1930s, where cottage industry or very small manufacture were in an overwhelming majority, where traditional products for the domestic market such as kasuri (splashed-pattern) or mekura-rajima (blue-stripe cloth), demand for which went on declining, con-
continued to be woven on hand looms and the like, and whose position as a cotton-textile producing center markedly continued to decline. Sano in Tochigi Prefecture, Kita-Saitama in Saitama Prefecture, Matsuyama in Ehime Prefecture, and Kurume in Fukuoka Prefecture are included in this type.

DEVELOPMENT BETWEEN THE WARS

As a result of the above research it would be fairly clear that producing centers in types I and II achieved remarkable development in the period between the wars, but here I would like to push the investigation further and show, with some concrete examples, why development was possible for these two types of producing centers at that time. From figure 2 it can be seen that producing centers belonging to these two types showed a conspicuous increase in output, yet the mechanisms for growth were different for each of them.

1. PRODUCT STRATEGIES

Type II producing centers brought into play an ability to respond quickly to diverse demand from both domestic and overseas markets and to develop products, and they developed by raising their added value. For example, Banshū, a center that produced narrow striped cotton cloth for the domestic market, was stimulated by the drop of the yen exchange rate after the Great Kantō Earthquake in 1923 and the activities of industrial laboratories (to be discussed below) to begin serious production of products for export, and throughout the

12 Historical studies of the cotton textile industry between the wars have at long last been receiving attention. Two recent representative works are Tōru Fukumori, "Momen oroshiurishō ni okeru kōyō kankei no tenkai" [The development of employment relations in the cotton cloth wholesale trade] (Keieishigaku, vol. 25, no. 4, 1991) and Takanori Matsumoto, "Ryōtaiseinkanki Senboku kigyō ni okeru orimono kōjō keiei no dōkō" [Trends in textile mill operations within the Senboku textile industry during the 1920s and 1930s] (Keieishigaku, vol. 26, no. 4, 1992). In the present discussion I am relying on my own research; for more on Sennan and Banshū, please refer to my work, cited in note 1, Nihon ni okeru..., and on Imabari see my article "Senkanki ni okeru chihō sangyō no hatten to kumiai, shikenjō" [The development of regional industries between the wars and associations and laboratories], in Kindai Nihon Kenkyūkai, ed., Kindai Nihon kenkyū 13—Keizai seisaku to sangyō [Journal of Modern Japanese Studies 13: Economic policy and industry] (Yamakawa Shuppansha, 1991).
Fig. 2. Variations in Cotton Cloth Production Totals in the Principal Producing Centers

(1) Type I

<table>
<thead>
<tr>
<th>Period</th>
<th>Sennan</th>
<th>Chita</th>
<th>Senboku</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1915</td>
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<td></td>
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<tr>
<td>1920</td>
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<tr>
<td>1925</td>
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<td></td>
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<tr>
<td>1930</td>
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<td>1935</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1937</td>
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<td></td>
<td></td>
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</tbody>
</table>

UNIT = ¥1,000,000

(2) Type II

<table>
<thead>
<tr>
<th>Period</th>
<th>Enshū</th>
<th>Banshū</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1915</td>
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<td></td>
</tr>
<tr>
<td>1920</td>
<td></td>
<td></td>
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<td>1925</td>
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<tr>
<td>1930</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1937</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

UNIT = ¥1,000,000


rest of the 1920s it specialized in the production of shimamitsuaya (striped drill); then in the 1930s it developed and continued increasing its output of a huge variety of export-oriented dyed cotton cloth for use in things such as sarongs, zephyrs, kikois (loincloths for males in Mombasa, Kenya), saris, and damask tablecloths. Enshū, too, until the
1920s directed its main efforts into the production of narrow striped cotton cloth for the domestic market, but in the 1930s it ranked along Banshū in the field of export-oriented dyed cotton cloth. And Yawatahama is also reported to have turned to extensive weaving of export-oriented dyed cotton cloth.

In contrast to these three producing centers that switched to export-oriented production, there also were producing centers that pushed forward product development in quick response to changes in domestic demand resulting from a more Westernized lifestyle as well as a raising of lifestyle levels. Higashi-Mikawa, for example, began production of kawariaya (twill and cord) in the boom years of World War I, then in the mid-1920s began weaving flannel and interwoven cloth for children’s clothes, to become one of the leading producing centers in the country in each of these three categories.

Besides the above, there were centers that carried out slightly special product switches of their own. Kojima had been weaving Kokura for sashes and skirts since the late Tokugawa period, as well as sanada (tape) and unsai (cotton drill), but after the Russo-Japanese War it switched to production of taitaisu for China, and then after the boom of the World War I years and around the time of the 1920 Panic it switched again to producing kokura for uniforms for elementary and high-school children, and in these areas it ranked with Ibara as a major producing center. Imabari continued to produce flannel, which had been its main line since the 1890s, in large quantities, but in the 1920s it became as renowned as Banshū as a center of shimamitsuaya production, and from the 1920s to the 1930s it also plunged into the

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13 Hiroaki Yamazaki, “Ryōtaisenkanki ni okeru Enshū orimoneyo no kōzō to undō” [Structure and movements in the Enshū textile industry between the two great wars] (Hosei University Faculty of Business Management, Keiei shirin vol. 6, nos. 1–2, 1969).


production of towels.

Type I producing centers, on the other hand, started out with the production of domestic-oriented narrow white cotton cloth, and in most cases switched in the period between the wars, and especially the 1930s, to the production of such wide cotton cloth as shirting, baft, and coarse cloth. Still, the production techniques for wide white cotton cloth were simple, and many former narrow white cloth production-centers of Type III, such as Sanshū, Bishū, Ise, Matsuzaka, and Minami-Kawachi, were also venturing into it. Also, the principal products among the “combined cotton cloth” weavers in 1929 were shirting (53.7% [of the total production for that year]), coarse cloth (10.3%), and cloth strips (9.9%), while in 1937 they were shirting (64.7%), cotton drill (11.5%), and coarse cloth (9.0%). Thus broad white cotton cloth was a product that had to face competition not only among producing centers but also with the “combined cotton cloth” producers.

There was not as great a demand from Type I producing centers to have the ability to develop products, but they were required to carry out widespread cost-lowering exercises in order to win out over the tough competition. In the case of Sennan, which led the way among other Type I centers in achieving high growth through export initiatives from the 1920s, the important factor in strengthening its cost competitiveness was a rationalization of production in which the key was the use of wide power looms in the weaving process.

Now, one would expect that abundant funds would be necessary in order to effect rationalization. On this point let us look at the case of a representative weaver in Sennan, Obitani Shōten. Obitani had 776 narrow power looms in 1921; its fixed assets including these looms were completely covered by owned capital, of which the nucleus was 500,000 yen of paid-up capital. A huge amount of surplus cash was also produced. The reason why it had such an abundance of owned capital in the early part of the period between the wars is, as the following profit ratios (= current-term pre-depreciation profit divided by \([\text{preceding-term paid-up capital} + \text{current-term paid-up capital}] \div 2\)) in the boom years of World War I show, that capital accumulation jumped quite sharply. In 1914 it was 14.7%, in 1915 387.3%, in 1916 2,449.1%, in 1917 2,648.5%, in 1918 2118.5%, in 1919

17 Dainippon Bōseki Rengōkai [Japan Cotton Spinners' Association], Menshibōseki jijō sankōsha.
1067.6%, and in 1920 a minus 268.4%. Obitani, however, was vigorously trading in futures during the boom period on speculative cotton yarn, and despite the fact that it suffered a heavy blow from the 1920 Panic, it succeeded in scraping through the Panic by imputing a considerable portion of the losses incurred from trading in cotton yarn futures to cotton-yarn merchants in Osaka City, such as Toyo-shima Shōten and Iwata Shōji, from whom it had been purchasing large quantities of cotton yarn.

Anyway, between 1922 and 1925 Obitani Shōten abandoned the handling of narrow white cotton cloth for the domestic market and switched to large-scale production of the wide white cotton fabrics of satin and twilled cloth for the export market, repeatedly increasing the number of its wide power looms and continually expanding its scale of operations. The capital needed for equipment investment in the 1920s, being in excess of the range of depreciation that occurred in the process of activating export-oriented production, was being supplied from the large amounts of owned capital; since there was no capital increase during the 1922–1925 period, and increases in reserve funds were also slow, we can say that the returns from the World War I boom years are what supported a considerable portion of equipment investment in the 1920s. The equipment investment that went ahead rapidly from 1931 was also financed from owned capital (again having exceeded depreciation limits), but, unlike the 1920s, the replenishment of internal reserves that accompanied the activation of production made such self-financing possible.

Though I have not been able to obtain other examples besides Obitani of profits gained during the World War I boom years and reactions to the 1920 Panic, it is a confirmed fact that most of the comparatively large-scale weavers that belong to Type I were covering equipment investment in the period between the wars with owned capital.18

2. SCALE OF OPERATIONS

Next, as opposed to Type II producing-center weavers, who maintained their statuses as small and medium businesses even though they converted to power-driven factories, in Type I producing centers the operating scales of the weavers were as a general rule grander. Thus,

18 Abe, Nihon ni okeru..., pp. 91–93.
for example, the percentages (of the total number of weaving establishments) of those that owned at least 50 power looms in the years 1929 and 1937 were, for Enshū in Type II, 4% and 7% respectively, while for Sennan, in Type I, the percentages were 35% and 37%. In addition, in the case of Type I centers some of the upper-level weavers ("producing-center big weavers") achieved rapid growth, as is shown in table 1.

These differences between the two types could be due mainly to differences in the products made. According to data from around 1950, it is generally held that the appropriate factory scale for wide white cotton cloth is from 150 to 200 power looms. In the Type I producing centers, where the main product was wide white cotton cloth, because the appropriate scale of factory was bigger by reason of production technology, the weavers generally owned large-scale factories, and some of the upper-level weavers, who had abundant capital resources at their disposal, went on increasing their scale of operations quite markedly, though this was done through increasing the number of branch factories. In Type II producing centers, however, because special cotton cloths were being produced that were incompatible with production in large quantities within large factories, the weavers remained small or medium businesses.

3. The Organized Character of the Producing-Centers

In the export-item producing centers of Type II, industrial laboratories and industrial associations became indispensable links within the producing-center structure in the period between the wars, and the organized character of the producing centers was heightened quite conspicuously. Most of the industrial laboratories were organs set up by prefectural governments, but the industrial associations were professional bodies set up throughout the country in accord with the Jūyō Yushutsuhin Kōgyō Kumiai Hō [Important Export Products Industrial Associations Law] of 1925 and the Kōgyō Kumiai Hō [Industrial

19 Ibid., p. 62.
20 This is a term I have coined.
22 I include within this term the industrial laboratory branches, dyeing and weaving laboratories, and industrial training schools that are mentioned later, as well.
Table 1. “Producing-center Big Weavers” in the Cotton Textile Industry in Japan between the Wars

<table>
<thead>
<tr>
<th>Producing center</th>
<th>Weaver</th>
<th>About 1923</th>
<th></th>
<th>About 1936</th>
<th></th>
<th>B / A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Power looms A</td>
<td>Plants</td>
<td>Power looms B</td>
<td>Plants</td>
<td></td>
</tr>
<tr>
<td>Sennan</td>
<td>Obitani Shōten</td>
<td>866 (300)</td>
<td>—</td>
<td>3,708 (3,708)</td>
<td>6</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>Nakabayashi Menpu</td>
<td>588 (—)</td>
<td>3</td>
<td>2,306 (—)</td>
<td>4</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>Kumatori Orimono</td>
<td>1,000 (500)</td>
<td>5</td>
<td>1,165 (—)</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Kawasaki Menpu</td>
<td>1,158 (124)</td>
<td>3</td>
<td>1,154 (508)</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Minami Orimono</td>
<td>200 (—)</td>
<td>3</td>
<td>911 (911)</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>Senboku</td>
<td>Morita Shokufu</td>
<td>81a (—)</td>
<td>1a</td>
<td>1,860 (—)</td>
<td>1</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>Kubosō Shokufu</td>
<td>— (—)</td>
<td>—</td>
<td>1,758b (—b)</td>
<td>5b</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Ōtori Shokufu</td>
<td>600 (200)</td>
<td>3</td>
<td>1,316 (984)</td>
<td>4</td>
<td>2.2</td>
</tr>
<tr>
<td>Chita</td>
<td>Nakashichi Momen</td>
<td>524 (216)</td>
<td>2</td>
<td>1,624 (1,288)</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Okatoku Shokufu</td>
<td>280 (100)</td>
<td>1</td>
<td>1,592c (1,592c)</td>
<td>6c</td>
<td>5.7</td>
</tr>
<tr>
<td>Average no. power looms per each “combined” weaver</td>
<td>1,024 [610]</td>
<td>—</td>
<td>1,339 [808]</td>
<td>—</td>
<td>1.3 [1.3]</td>
<td></td>
</tr>
</tbody>
</table>

1. Compiled from Abe, Nihon ni okeru..., table 4-1. Figures for “combined” weavers rely on Dainippon Bōseki Rengōkai, Menshi bōseki jijo sankōsho.
2. The weaver company names are those current in 1936. Long dash (—) means the data is not known.
3. Sennan weavers are the top five on the basis of number of power looms about 1936. Senboku and Chita weavers are those that had one thousand or more looms about 1936.
4. Numbers in parentheses ( ) indicate wide-loom numbers.
5. Figures within [ ] brackets indicate loom numbers after figures for Tōyōbō, Kanebō, and Dainihonbō have been subtracted.
6. a = figures for about 1924; b = figures for about 1934; c = figures for about 1934–1935.
Associations Law] of 1931, and they were able to carry on such operations as product inspection, control (concretely, limiting production of designated products), and joint action (such as collective buying of raw materials, building of cooperative processing plants, collective sale of products, and lending of funds to members).

The case of Banshū will help illustrate how things worked. The Nishiwaki branch of the Hyōgo Prefecture Industrial Laboratory (in 1933 this branch became known as the Hyōgo Prefecture Nishiwaki Dyeing and Weaving Laboratory) was opened in 1921, and within a couple of years it began encouraging the production of export-oriented cotton cloth. The important stimuli for this course of action were the fall in the yen exchange rate after the Great Kantō Earthquake and the switch by Banshū to becoming an export-oriented producing center. The branch laboratory had hardly been established before it was also pushing for the eradication of slipshod manufacture, something that had become a serious problem in the early 1920s. In 1923, in response to the leap in export-oriented production, it carried out research on the technique of adjusting the operations of wide-cloth looms, and in 1925, when the Banshū Ori Seiri Ryō Kumiai [Banshū Woven Goods Sorting and Use Association] was started for the purpose of conducting the sorting that was indispensable for export-oriented cotton cloth, the laboratory was in charge of experimental research on sorting textiles and practical guidance to producers. In all these endeavors the laboratory achieved excellent results.

For most of the 1920s Banshū weavers continued to specialize in the production of shimamitsuaya, but the head of the Nishiwaki branch laboratory from 1922, Tarō Yoshida (1885–1938), saw this as risky, and from November 1929, for over four months, he travelled in Singapore and the Dutch East Indies to investigate the demand there for Banshū fabric, and to collect samples of foreign-made cotton cloth. After his return he was convinced that the products that would be most desired were striped sarongs, textiles of cotton mixed with rayon, and textiles of rayon, and he urged weavers, through wide distribution of samples, to move into production of these. In the early 1930s the branch laboratory embarked on the development of zephyr and kikoi fabrics. From October 1933 Yoshida was sent by the prefectural government to travel for three and a half months
through Southeast and South Asia and the Middle and Near East: to Singapore, Bangkok, Penang, Rangoon, Calcutta, Madras, Bombay, Aden, Cairo, Suez, Port Said, Alexandria, Izmir, and Istanbul. As a result of this trip, besides collecting samples of textiles, he decided the market in Asia, where import restrictions against Japanese cotton cloth had become notable, ought to be given up as a lost cause, and he pushed for the cultivation of a variety of new products for markets in the Middle and Near East and Africa. Spurred on by Yoshida's firsthand information, Banshū proceeded even further in the direction of a product-diversification strategy. Furthermore, the laboratory increased its efforts in technological guidance to weavers in the late 1920s and through the 1930s, starting in 1928 a year-long training course in dyeing and weaving limited to a quota of 15 males that was continued, with reorganizations and expansions, for the rest of the period between the wars, and the graduates of these courses were warmly welcomed by the weaving companies.

Banshū (like many other textile producing centers) had had, by the way, several professional associations existing within its territory from the earliest years of the twentieth century, as a result of prescriptions of the 1900 Jūyō Bussan Dōgyō Kumiai Hō [Important Products Professional Associations Law]. These associations carried out product inspection, and, during the 1920 Panic, a curtailment of operations, the lowering of wages, and the submission of requests to the Bank of Japan for financing assistance. Banshū Ori Dōgyō Kumiai [Banshū Weavers Association], in particular, was active in the 1920s in the employment of dyeing specialists, the specification to weavers of dyes, the encouragement of bleachers to use pressurized boiling kiers, the establishment of the first industrial association to run a proper sorting plant (Yūgen Sekinin Banshū Ori Seiri Riyō Kumiai [Banshū Woven Goods Sorting and Use Association, Ltd]), the encouragement of weavers to adopt electrical power, and so on. Compared to other textile producing centers it was probably far more active. These types of functions were, however, gradually taken over by some industrial associations established around the year 1930.

The biggest project for Banshū's industrial associations in the early years was the shimamitsuaya control put into effect from November 1930 with the powerful assistance of the Ministry of Commerce and Industry. While this project, aimed at large numbers
of small and medium-sized weavers throughout the country but especially in Banshū, Imabari, Sennan, and Wakayama, ended in failure, the end result was that businesses connected with Banshū weaving that had been specializing in shimamitsuaya production were willy-nilly placed under the regulation of the industrial associations. During the favorable conditions that obtained after the reembargo on gold export in late 1931, the industrial associations used their regulatory powers in energetically promoting joint operations, and they strengthened the export competitiveness of the Banshū cotton textile industry. The first thing the associations did was to expand the sorting operations under their direct management that they had been carrying out from almost the start of their existence. Banshū Ori Kōgyō Kumiai [Banshū Weaving Industry Association], which ran the sorting plant that in 1932 employed 300 workers, in that same year closed down the other five businesses engaged in sorting operations within its jurisdictional boundaries and took over exclusive control of the operations. Other associations also strengthened their roles in the dyeing and bleaching industries. Several of the associations directly managed dyeing and bleaching plants as well, but Banshū Ori Kōgyō Kumiai, which did not run these operations, obtained the cooperation of the Nishiwaki Dyeing and Weaving Laboratory in the years 1934 and 1935 to make public the results of tests on the actual costs of the principal dyes, and in this way it was able to check the dyeing businesses that had been making exorbitant profits. This action led to the purchase of dyes and chemicals on consignment from 1935 on. And from the same year the Association signed a special agreement with a leading cotton-yarn merchant in Osaka City, Maruei Shōten, and began buying from them cotton yarn and rayon yarn as requested by members.

The activities of industrial laboratories and industrial associations can be found throughout most of Type II producing centers. In Imabari, for example, the Ehime Prefecture Training School opened in 1922 offered a two-year training course in dyeing and weaving for a maximum of 40 students, as well as short-term in-service training courses aimed at dyers and weavers. In addition, it also provided practical guidance for people in these occupations and conducted experimental research aimed at promoting the production-center.

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23 Not all of the Sennan region, but the region from present-day Izumi-Sano City and southwards, which was producing dyed processed cotton cloth and towels for export.
Toshiharu Sugawara (1891–1958), a technician who led the activities of the Training School and later took over as head in 1932, was successful in the 1920s in producing high-grade towels using dobbies and then Jacquard looms, as a result of which Imabari’s towel output increased dramatically. After the Training School was reorganized into the Ehime Prefecture Dyeing and Weaving Laboratory in 1934, its significance as a place for nurturing technicians was nearly completely lost, but technological research related to towel production continued, and it came to oversee a whole series of Jacquard-related operations such as patterned designs and the manufacture of pattern sheets. It also promoted the development of new products such as rayon textiles. Obtaining information from trading companies in the large cities in regard to demand for export-oriented wide textiles and towels, and information from large-city department stores and the Nippon Taoru Kōgyō Kumiai Rengōkai [Japan Federation of Towel Industry Associations] in regard to domestic demand for towels, the Dyeing and Weaving Laboratory produced samples accordingly and distributed them to dyers and weavers. The Imabari region had Imabari Orimono Kōgyō Kumiai, which had been established in 1930 to replace the Imabari Orimono Dōgyō Kumiai. While there are many points still unclear about this organization, it is known that it owned processing facilities for cotton cloth and towels, and that it gave powerful support, through financial aid, to the activities of the Dyeing and Weaving Laboratory.

In Enshū, also, from before World War I the Shizuoka Prefecture Hamamatsu Industrial Laboratory was responsible for introducing new technology connected with the textile industry, and after the war it continued its activities over a wide area: setting up textile-industry-related associations; establishing Eikyūsha, a pioneer manufacturing-industry association covering important export products; setting up companies to engage in the processing of textiles; conducting market surveys; and developing products. Then in the 1930s, when the activities of manufacturing-industry associations intensified in all parts of the country, Enshū became involved in joint operations such as nationwide regulation of cloth for sarongs and the like, and joint dyeing, bleaching, sizing, printing, or sorting projects.24

24 See Yamazaki, “Ryōtaisekanki ni okeru Enshū orimono gyō no kōzō to undō.”
As is clear from the above, then, in the period between the wars industrial laboratories in Type II producing centers were much more than organs for experimental research; they were bases for developing new products and sources of a steady supply of technicians. The industrial associations, also, by energetically promoting joint projects, were a second indispensable link in the structures of the producing centers. Their various contributions were all services that individual small and medium-sized weavers could not easily provide themselves, and there is no denying that the activities of these laboratories and associations were strong determinants of the success of Type II producing centers.

In Type I producing centers, however, the situation seems to have been just the opposite. The powerful weavers in this type of producing center concluded separate contracts with cotton-yarn and cotton-cloth merchants and spinning companies that were extremely advantageous as far as accumulating their own capital was concerned, and by carrying out fearless rationalizations to fit their own circumstances they achieved rapid growth.

Obitani Shōten in Sennan is said to have joined in the mid-1920s (during the continuing recession) with Ichitarō Ichihashi of Yagi Shōten, eminent cotton cloth merchant in Osaka City, and with Kiyoshi Inoue of Kanegafuchi Bōseki (Kanebō), one of the leading giant spinning companies in the country, in a division-of-labor scheme in which Obitani used Kanebō yarn to weave five-shaft satin fabric, which Kanebō then processed in its Yodogawa plant, said to have been the biggest in the East, and which Yagi Shōten then exported to East Asia. In this way Obitani became able to produce and sell large quantities of cotton cloth. In Senboku, Kikusaburō Morita [Morita Shokufu] started a similar scheme around 1929; it wove calico using yarn from the large spinning company Kureha Bōseki, and then exported it through the powerful Osaka trading company Itō Chū Shōji, which had close ties with Kureha (Itō Chū is said to have sold 30% of Morita’s cloth, and the cooperation between these three companies is said to have continued beyond World War II days).

Large weavers in both Sennan and Senboku made agreements with certain spinning companies from the middle of the 1920s, so that they could have a portion of the spindles of these companies used to make yarn exclusively for their use. What this meant, for example, is
that they could have 20-count yarn drawn out to 21 or 22 count, or even sometimes as much as 24 count, and while there would be no appreciable difference in the quantity of raw cotton used when they had 20-count yarn drawn out to 21-count yarn, there would be a substantial lowering of the cost to the weavers of the cotton yarn purchased if, for example, they received 21 meters of yarn instead of the 20 meters they would ordinarily have received. Internal documents confirm that transactions of this sort did in fact take place in Obitani Shōten in the 1930s, but it is said that similar things were done by Nakabayashi Menpu [Nakabayashi Cotton Cloth] and Kawasaki Menpu in Sennan, and Morita Shokufu [Morita Woven Cloth], Kubosō Shokufu, and Ōtori Shokufu in Senboku as well. When one considers the fact that between the wars the price of cotton yarn accounted for over 80% of total expenditure in the production of wide white cotton cloth, it is certain that the acquisition of thinner yarns was a great boost to the growth of the large weavers.

In the 1930s Obitani made another strategic move. While the majority of Sennan weavers were weaving wide cotton cloth on power looms either 36 or 44 inches wide, Obitani ordered large numbers of specially made power looms 34 and 40 inches in width from the Harada-shiki Shokki Kabushiki Kaisha [Harada-type Loom Inc.] and Gōmei Kaisha Hirano Seisakujo [Hirano Manufacturing Plant & Co]. By using these, Obitani was able to weave cloth of the same width as the other weavers, but enjoyed the following advantages: 1) less electric power was used; 2) because a row of these looms took up less space, each woman worker was able to look after more looms; and 3) each loom cost less.

Similarly, in 1929 Nakabayashi Menpu became possibly the first producing-center weaver in the nation to use automatic looms (having purchased 529 from Enshū Loom Inc.), and in 1933 Morita Shokufu followed suit with the introduction of more than 1,000 automatic looms.

Now, these various measures were of their nature individual reforms, not things that could be put into place by the common run of small and medium-sized weavers, who would have only limited funds at their disposal. In Type I producing centers the process of competition within the center itself would have enlarged the gaps among the weavers within that center as far as production conditions and operating scales were concerned. As a result, in these Type I producing
centers the emergence of collaboration of any sort among the businesses would have been nearly impossible, and the capacity for guidance of an industrial laboratory or the capacity for regulation of an industrial association would hardly have been able to be of much effectiveness. I think it could be generalized, then, that in the period between the wars, whereas Type II producing centers went on raising their levels of maturity as producing centers, those in Type I on the contrary allowed the organized character of their centers to be progressively lowered.

PRODUCING-CENTER COTTON TEXTILE INDUSTRY
WITHIN THE ENTIRE JAPANESE COTTON TEXTILE INDUSTRY

By way of conclusion I would like to say a few things about the place of the producing-center cotton textile industry within the cotton textile industry nationwide during the period between the wars. The dominant school of thought in Japanese scholarly circles on the subject goes something like this: 1) while large enterprises such as those that combined weaving and spinning enlarged their scales of operation and continued to increase production and sales totals, the producing-center cotton textile industry, which was made up of small and medium businesses, could not easily grow in scale and its production totals remained stagnant; 2) the reason there were no prospects of development in the producing-center cotton textile industry is that the weavers were suffering exploitation (in concrete, having high-priced cotton yarn forced on them by the cartel-type activities of the Dainippon Bōseki Rengōkai, or weavers being incorporated into the subcontract factories of the trading companies) or oppression (being forced into fierce competition with “combined cotton cloth” in markets for the same product) at the hands of the large enterprise sector; and 3) the subsistence base of the producing-center cotton textile industry was almost exclusively such poor labor conditions as low wages and long working hours.

This school of thought lumps all the businesses in the producing-center cotton textile industry together as medium/small/tiny businesses, but in fact diverse weavers are found in this industry and at least the distinction must be made between medium businesses and small/tiny businesses. It would be appropriate to refer to Type I and
Type II producing-center weavers as medium businesses, and unlike the Type III small businesses and Type IV tiny businesses, they were extremely prone to development. The commonly accepted school of thought mentioned above might apply to types III and IV. First of all, though, besides the fact that there was, according to my estimated figures, not a great difference in level between the nominal annual growth ratio of 9.3% for the national production totals of "combined cotton cloth" between 1914 and 1937 and the 9.2% figure for national production totals of "producing-center cotton cloth," types I and II producing centers achieved a remarkable growth that exceeded the level of all producing centers in the country. Secondly, there were many weavers in Type I producing centers that were large-scale and had abundant owned capital, and that, moreover, not only were not exploited by the large-business sector but, even as they drew from the latter a variety of free services, crossed beyond the bounds of medium business and enlarged their scale of operations (the "producing-center big weavers"). Thirdly, it should be noted that many of the weavers in Sennan, which belongs to Type I, avoided the fierce competition in the same market with "combined cotton cloth" by changing their main products from plain fabrics to satin and twilled cloth (as we saw in the case of Obitani). Fourthly, even in Type II producing centers, through the joint projects of industrial associations such as joint purchasing of cotton yarn, weavers were able to do business on equal terms with the large-business sector, and aided by the activities of industrial laboratories they succeeded in developing complex and diverse products that could only be made by medium or small business. All these points call for some serious rethinking regarding points 1) and 2) in the accepted theory outlined at the start of this section, and the weavers in the first two types of producing center ought to be seen as in general standing on an equal footing with the large-business sector during the period between the wars, and especially in the 1930s. As far as point 3) goes, this study has no argument with the idea that the producing-center cotton textile industry, including centers from types I and II, subsisted on the poor labor conditions mentioned there. Still, we ought to pay sufficient attention to the fact that during the period between the wars new subsistence bases were being formed, in the expanding export markets, and in the new domestic markets that accompanied changes in the lifestyles of people throughout the
nation.

In summary, it is difficult to find any of those controlling, exploitative relations between large business as represented by the combined weaving and spinning companies, and the medium-sized businesses in Type I and Type II, and it would seem that the competition in the marketplace between the two groups was not as fierce as the accepted opinion would have it. It seems that large business gave preferential treatment to medium business as being its biggest customer for cotton yarn, and refrained from making aggressive inroads into the latter's markets. Both groups should be thought of as being in a symbiotic relationship, in which medium business joined with large business to wield stiff competitive power in the world's cotton cloth markets, and this was one of the important factors bringing about the development of Japan's cotton industry in the period between the wars.

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