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*The Rise and Fall of Cotton Weaving Districts in the Late-Tokugawa-era  
1750-1880: Cotton and the Peasant Economy*

*1. Introduction*

It was around 1400 that the cotton goods began to prevail in Japanese society. The provision of the cotton goods in those days, however, was totally dependent on the import from Korea and China, and the consumption of them was limited to the upper class as well as the special use such as the battle dress for soldiers. It was not until the transplantation of cotton cultivation in the 16<sup>th</sup> century that the consumption of the cotton goods became popular among the people. The development of the domestic cotton growing enabled domestic cotton cloths to get the import substitution moving, and changed the contents of peoples' clothing having been based on the hemp or ramie<sup>1</sup>.

The next turning point appeared around 1860, immediately after the Opening of the Ports. Under the forced free trade regime, the foreign cotton goods swiftly flew into the Japanese market, affecting the domestic consumption of the clothing. However, the influx of the foreign cotton goods should not simply be regarded as the blow to the domestic production. Although the persistent increase of the total amount, the largest imported goods transformed from cloth to yarn in the 1870s. Before the transplantation of mechanized factory system in the latter half of the 1880s, a kind of import substitution had been in progress.

Either change indicates that the cotton production in early-modern Japan closely related to the development of the peasant economy. The introduction of the cotton production was initiated by the prevalence of the cotton cultivation in the rural areas, combining the production and the consumption in the household economy. The Japanese case clearly differed from the European countries in this point which failed to transplant the cotton cultivation. The peasant weavers also played the key roles to respond to the Opening of the Ports, swiftly introducing the imported yarns for the weaving.

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<sup>1</sup> Nagahara, Keiji *Choma, Kinu, Momen no Shakai-shi* (The Social History of Ramie, Silk and Cotton), Yoshikawa Koubunkan, 2004.

In the next section, we will look over the feature of the consumption by peasant households. The third section discusses the production side focusing on the peasant-weavers in the rural area. The fourth chapter explore the divergent trajectories of the cotton weaving districts after the Opening of the Ports. The fifth section is a summary.

## 2. *From ramie, hemp to cotton: changing the contents of the clothing in Tokugawa-period*

The clothing of the people after 16<sup>th</sup> century onward in Japan could be characterized as the process moving from hemp, ramie to cotton<sup>2</sup>. In fact, the consumption of the cloth made of hemp or ramie became very small in the 20<sup>th</sup> century. However, it is noticeable that this transformation was not the simple process changing their purchasing objects from hemp cloth to cotton cloth. Let's look at the contents of clothing in Akita district, located in northeastern region of Japan, in the first half of the 19<sup>th</sup> century. Since there was no cotton cultivation, nor cotton weaving for market in this region, the inflow data in table 1 was almost equivalent to the contents of the procurement by the people for clothing. Therefore, we can assume that the provision for the clothing of the people in Akita district were consisted of cotton cloth, raw cotton and used cloth, together with the hemp and ramie cultivated in this region.

**Table 1 Provision for clothing (Annually, average of 1808-1810, Akita region)**

	Goods	Amount	Unit	Note
Inflow	Cotton cloth	174,397	Tan	1 tan was approximately 4 square meter
inflow	Ginned cotton	6,400	Gan	180,000tan in cloth
inflow	Used cloth	117,101	Mai	Mai is approximately equivalent to tan
domestic	Ramie,Hemp	105,161	Kin	84,000 tan in cloth
	Population	450,000	Person	45,000 was the samurai

The striking fact that table 1 reveals is the low proportion of the cotton cloth. Assuming that the per capita consumption of the cotton cloth was one *tan*<sup>3</sup>, which was apparently under-estimation for the ruling class and the relatively wealthy merchants or farmers, more than half of the population should have procured their clothing other than purchasing cotton cloth.

<sup>2</sup> Although silk was important in Japanese clothing history, the consumption of silk was limited to the ruling class or wealthy upper classes.

<sup>3</sup> *Tan* is the unit for cloth widely used in Japan. Idealistically, it is the cloth sufficient for making the one piece of traditional Japanese dress, *kimono*. Normal size of one *tan* is about 0.35 meter wide and 11 meter long.

The consumption of hemp or ramie was one source of their clothing. The production processes; cultivation, spinning and weaving, were ordinarily run by same peasant household in self-use basis. It shows the fact that the traditional clothing before the introduction of cotton still hold a certain part of the clothing, especially in the areas where cotton cultivation had not taken the root. Moreover, this tradition of self-use production of the clothing could be seen in the phase of cotton consumption. As table 1 shows, purchasing the raw cotton was the major source of clothing for the peasant households. In fact, the amount of distribution of raw cotton in the domestic market exceeded that of cloth and yarn in the 18<sup>th</sup> and 19<sup>th</sup> century in Japan. Whereas there progressed the commercialization of cotton cultivation through the geographical concentration based on the comparative advantage of the location, the spinning and the weaving processes were included in the households, being run by the female member in self-sufficient basis. It was one of the particular combinations of the market orientation and the self-sufficient activities shown in the peasant economy in Tokugawa-era.

**Table 2 Production, payment in kind and consumption  
of cotton cloth in peasant household  
(Ni'ikawa district, middle of the 19th century)**

	Amount	Unit	Note
<b>(Whole district)</b>			
Annual production for sale	1 million	Tan	1 tan = 4 square meter
Number of household engaged in weaving	25,381		
<b>(Per household)</b>			
Annual production for sale	39.4	Tan	1 monme=3.75 gram
Payment in kind (gined cotton)	1280.5	Monme	
Annual production for self consumption	12.8	Tan	
<b>(Working days per tan)</b>			
Spinning	2	day	
Preparation	1	day	
Weaving	1	day	
Total	4	day	
<b>(Annual working days per household)</b>			
Production for sales, per year	157.6	day	
Production for self consemption, per year	51.2	day	
Total	208.8	day	

The case of Ni'ikawa district shows that this combination was seen even in the district where cotton cloth was produced for the market. Ni'ikawa was one of the representative cotton producing districts, selling more than one million *tan* of plain cotton cloth to the domestic market in the first half of the 19<sup>th</sup> century. Since the

cotton was not cultivated in this area, the material, usually ginned cotton, was imported from Kinai and Setouchi, the western part of Japan, and distributed to the peasant households. The female members of the household spun the cotton into the yarn and then wove into the cloth. The interesting fact was that the pay for these peasant spinner-weavers were not by money but the payment in kind, namely ginned cotton. As Table 2 suggests, the amount of cloth produced from these payment of ginned cotton reached to 12.8 tan per household. As the average number of the household member was slightly less than 5, the payment of ginned cotton might have coincided with the demand for clothing in the each household. The average household devoted one woman for about 7 months to prepare the clothing for the household members, providing 39.4 tan to the market<sup>4</sup>. As it is revealed that the ramie or hemp cloth required more than a month for spinning and weaving per tan, the introduction of cotton increased the significant increase of productivity in clothing, and enabled the peasant to combine the market oriented production of cotton with the self sufficient consumption of cotton within the single household.

### *3. The peasant weavers in the cotton producing districts*

In the advanced weaving districts, however, the division of labour between spinning and weaving had been progressed at least in the 19<sup>th</sup> century. Izumi district (southern part of present Osaka Prefecture), which produced plain grey cotton, was one of the representatives of this kind. The existence of various types of merchants, dealing cloth, yarn and raw cotton respectively, reflected the division of labour among the production processes. It is also noticeable that these merchants resided in the villages. They mediated the transaction between producers, for example spinners and weavers, and also dealt with merchants in the distributing centre, selling the cloth woven in the village or purchasing the materials for the production in the village. Thus, the advanced weaving district can be characterized by the lively activities of the merchants within the area.

On the other hand, we should notice the fact that there were no clear division of labour between agriculture and “cotton industry” even in Izumi district. These particular behaviors were based on the labour allocation within peasant households. Table 3 shows how “cotton industry” embedded in the peasant economy in the middle of 19<sup>th</sup> century. Over 80 % of households in the village, named Udaotsu-mura, were engaged in works other than cultivation as well. Even though a third of households was not engaged in cultivation, it might had been the consequence of the lack of sufficient labour source for family farms, rather than the choice for specializing in

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<sup>4</sup> The cloths were collected by the merchant that provided ginned cotton beforehand. This widely prevailed transaction form in this district was called *watagae* (cotton changing).

non-agricultural works, since the one-person households, which were almost equivalent to the widow, occupied high proportion of them. The large part of the households combined the industrial works with the cultivation of tenanted land that was not sufficient to make use of the labour forces being kept in the households. The shortage of lands did not result in giving up the cultivation, namely specializing in non-agricultural occupations, but the involving of the non-agricultural activities in the household as sideline works. The cotton related works, spinning and weaving as well as cotton growing, were suitable to this strategy of the peasant household. The female members of the household were engaged in spinning and weaving, and also took part in the agricultural works in the busy season. The distribution system run by merchants in the villages worked to provide the peasants with these job opportunities through connecting the village to the distribution centre, namely the entrance of the nationwide markets. Thus, the advanced cotton weaving area was composed of the strategic peasant households and the active distribution system. The strategy of the peasant household could not have realized without the provision of cotton related sideline jobs. In that sense, the cotton production worked as the soil for the development of the peasant economy in Tokugawa Japan.

**Table 3 Occupational situation of peasant household (1843, Udaoutsu-village, Izumi district)**

Per capita area of cultivation (Family member ;age 15-60 + longterm employee)  (hectare)	Number of Housholds	Proportion of tenanted land  (%)	household members (age 15-60)	
			Average (person)	One person household (%)
4.0--	1	62.5	1.00	100.0
3.5--	1	50.0	2.00	
3.0--	1	46.2	4.00	
2.5--	4	56.5	2.50	
2.0--	16	46.7	2.69	12.5
1.5--	31	54.6	2.52	16.1
1.0--	44	62.6	3.20	6.8
0.5--	54	87.5	2.72	11.1
less than 0.5	37	91.8	3.14	
No cultivation	90		2.00	38.6
Total	279	63.9	2.59	18.6

  

Per capita area of cultivation (Family member ;age 15-60 + longterm employee)  (hectare)	Works other than cultivation of their own run land (participated household/ total household in each stratum)						
	Employed for long term		Side line job				
	Male (%)	Female (%)	Total (%)	Spinning (%)	Weaving (%)	Other businesses (%)	Wage works (%)
4.0--							
3.5--							
3.0--							
2.5--			50.0	25.0	25.0		
2.0--			50.0	37.5	6.3	6.3	6.3
1.5--			83.9	67.7	12.9	12.9	32.3
1.0--	6.8	6.8	90.9	72.7	15.9	15.9	36.4
0.5--	9.3	1.9	94.4	64.8	33.3	18.5	44.4
less than 0.5	35.1	13.5	91.9	56.8	32.4	18.9	35.1
No cultivation	34.4	15.6	74.4	58.9	25.6	16.7	10.0
Total	18.6	8.2	82.1	60.6	23.7	15.8	26.2

#### 4. *The impact of the Opening of the Ports*<sup>5</sup>

The beginning of the international trade from 1859 onward had the great impact on the cotton industry in Japan. In fact, the increase of the English cotton cloth reached to occupy over 30 % of the domestic market for cotton cloth in the early 1870s. Noticing this phase of trade, it might not be unreasonable to imagine the destructive effect of the trade on the indigenous cotton industry. However, the proportion of the imported to the domestic cotton cloth demand began to decrease in the mid 1870s and fell around 10% before 1880. Since the amount of imported cloths increased until 1880, the drastic fall of the occupation rate reflected the expansion of the domestic market

<sup>5</sup> This section is mainly based on Saito, Osamu and Masayuki Tanimoto "The Re-organization of Indigenous Industries" Hayami, Akira, Osamu Saito and Ronald Toby eds. *Economic History of Modern Japan Vol.1 Emergence of Economic Society*, Oxford University Press, 2004.

itself. On the other hand, the import of cotton yarn exceeded the cloth during the latter half of the 1870s. This transformation, from importing finished goods to intermediate goods, suggests the structural change in the producing aspects. How the cotton industry developed in the autarky Tokugawa Japan responded to the new environments after the Opening of the Ports?

What happened were the drastic re-organizations of the industry. The re-organization included the two phases, one of which was the restructuring of the processes in the cotton industry, namely the three divided processes of cotton growing, spinning and weaving. The most serious pressure was imposed to the spinning. The importation of the cotton goods almost ruled out the domestic hand span yarn from the yarn market. The cotton growing also damaged by the importation of cloth and yarn, but it preserved the market for a while as the self-use spinning and weaving continued in the peasant household. It was the appearance of cheaper cloths that ruled out the self-use production of cloths, and the cloths made of imported yarn became the main substitutes for the self-use production.

The other phase of re-organization of cotton industry related to this new wave of cotton weaving. Unlike the imported cloth, imported yarn which came from England at the early stage and was followed by Indian yarn in the next stage, provided weaving districts with the opportunity to survive, or even the chance to develop. The relative low price of machine made imported yarn enable the weaving districts to realize the competitive price against imported cloth, as well as to develop a new kind of cloth whose quality was different from that made of hand span yarn. The import substitution of the cloths, together with the expansion of the cloths market in the 1870s, can be accounted for by the response of these weaving districts.

However, this process involved the great divergence for individual weaving districts. A significant number of prominent weaving districts in Tokugawa period declined during 1860 to around 1880, while the newly developed districts increased their production. What made these divergences? Table 4 shows the fall and rise of the weaving districts closely related to the amount of imported yarn flew into the each district. It reveals that Ni'ikawa (=Etchu) district, that produced over one million tan in the Tokugawa period and preserved its production in the 1870s, introduced relatively the smallest amount of the imported yarn in the latter half of the 1870s, and decreased its production rapidly in the 1880s. Contrastively, Izumi district, that became the representative weaving district in the 1880s onward, ranked as the top group in this table. It is obvious that the introduction of the imported cotton yarn played a key role to determine the trajectories of the weaving districts, and as we remind the features of the production processes of these two districts, the diversity in responding to the new intermediate goods seemed to be attributable to the difference

of the production structure of individual districts.

**Table 4 Amount of inflew imported yarn (ca 1878-1879)**

Name of places	Distribution of imported yarn (Kin=450gram)	Types of weaving districts
Yamato	3,866	P(3), V
Musashi(Including Iruma)	3000	P(3), V
Kouzuke	2402	V
Simotsuke	2100	V
Echigo	1912	V
Nagoya	1764	P(3), V
Izumi	1591	P(3)
Iyo	1087	P(3), V
Bizen	709	V
Awa	475	V
Ki'i	417	P(3), V
Chikuzen	278	V
Harima	269	P(2), V
Suou	266	P(2), V
Bingo	206	P(2), V
Aki	138	P(2)
Ecchu(Including Ni'ikawa)	92	P(2)
Izumo	77	P(2)
Kawachi	57	P(2), V
Houki	16	P(1)
Inaba	11	P(1)

Source) Documents of chamber of commerce (Tokyo and Osaka)

Note) P(1):Producing plain cloth declining in the early 1870s

P(2):Producing plain cloth declining in the 1880s

P(3):Producing plain cloth developing from the 1870s onward

V:Producing various types of cloth (striped, ikat etc.)

As we saw in the previous sections, there were great difference in the division of labour in cotton producing process between Ni'ikawa and Izumi. The peasant households in Ni'ikawa combined the spinning and weaving in the same household. For the peasants in Ni'ikawa, introduction of imported yarn led to the loss of their hand spinning processes. This meant lost work and signified nothing less than the producers having jeopardized the basis of their own livelihoods. Naturally, there was strong resistance to the introduction of imported yarn. On the other hand, the three production stages, cotton growing, spinning and weaving were done by different households in Izumi, accompanied by the distribution of yarn between respective households. In this case, the transition to imported yarn may have been a life-and-death matter for households producing hand-spun yarn, but for the households involved in the weaving process, who held the key to the transition in



materials, the switch from hand-spun to machine-spun imported yarn had little impact on their employment opportunities. Thus, whether the introduction of imported yarn had a beneficial or detrimental effect on those engaged in cotton textile production depended largely on one's position within the divided process, and this appears to account for the varied responses among producers.

The role of merchants in the district was also noticeable<sup>6</sup>. According to the documents of Takizawa family, a yarn merchant in Iruma district (belong to Musashi) , which was the newly developed district in the latter half of 19<sup>th</sup> century, transformed from dealing the hand spun yarn made in adjacent area in the 1850s to imported yarn transported from the distributing center Tokyo in the 1860s onward. The important fact is that Takizawa was not given credit, moreover sometimes gave the payment in advance, during the purchase process. It indicates the initiative of the local merchants in the introduction process of the imported yarn. When it comes to sales, Takizawa appeared as a credit provider to the purchasers. It seems where producers of small quantities of cotton cloth were concerned, the postponement of payments for a certain fixed period made it possible to provide them with cotton yarn. Thus, the existence of local merchants that originated in the division of production processes within the weaving districts enabled the peasant-weavers to transform their weaving material that were decisive for their survival and the development.

##### *5. Concluding remarks*

The introduction of cotton gave a great impact on the economy of pre-modern, Tokugawa Japan. It increased the labour productivity in clothing and urged to develop the market for clothing materials that had been treated in self-sufficient basis so far. However, it is noticeable that the introduction of cotton worked to form and develop the peasant society rather than advance the proletarianization of the rural society. The cotton growing was positioned as the advantageous farming in the peasant households and urged them to sell the products, raw cotton, in a market basis. On the other hand, purchasing the raw (ginned) cotton for the materials for self-made cloth prevailed widely in the non-cotton growing areas. Thus, the introduction of cotton urged to develop the market economy, which based on the strategic behaviour of the peasant households in both producing side and the consuming side. The development of manufacturing cotton goods, yarn and cloth, took place in this line of development. The main producers were peasants which involved industrial works within their households, combining it with the agricultural tasks. The merchant in the districts

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<sup>6</sup> Tanimoto, Masayuki "Who Marketed Imported Textile: The Japanese Case" Sugiyama, Shinya and Linda Grove eds. *Commercial Networks in Modern Asia* Curzon Press, 2001.

supported their activities through the formation of the effective distributing system. The growth of the production did not result in the division of labour between agriculture and cotton industry, but in the division of the production processes within the cotton industry, and the latter progress enabled the advanced districts respond effectively to the Opening of the Ports by transforming the materials from hand spun yarn to imported machine spun yarn. This is the main reason that the re-organization of the indigenous cotton weaving in the 1870s meant the selection process for districts to develop, although the re-organization of the cotton industry included the fall of indigenous cotton growing and spinning as a whole. The survived weaving districts, together with the newly-risen ones, increased their production from 1880s onward based on the putting-out system, namely the improved combination of peasant household and the local merchants, in rivalry with the cotton weaving mills transplanted from England. There can be seen the strong continuities in technology and production organization in this process. The author has called this kind of industrial development as “indigenous development”, distinguishing from the factory based “modern industrial development”<sup>7</sup>. In that sense, the development of cotton industry in pre-modern Japan had prepared not only the “industrial revolution”, but also the “indigenous development” that characterizes the economic development of modern Japan.

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<sup>7</sup> Tanimoto, Masayuki “The Role of Tradition in Japan’s Industrialization: Another path to industrialization ” Tanimoto, Masayuki ed. *The role of Tradition in Japan’s Industrialization*, Oxford University Press, forthcoming.