

Cotton and the Peasant Economy: Response to the “Foreign ‘Superior’ Fiber” in the Early Modern Japan

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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 16th 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 ramie or hemp¹. The Japanese case clearly differed from the Northwest European countries in this point, which failed to transplant the cotton cultivation. As we will see in the following section, 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 peasant household economy.

The next turning point appeared around 1860, immediately after the Opening of the Ports².

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

² Tokugawa government had banned the international trade for about 200 years with the exception of the restricted trade by Dutch and Chinese via Nagasaki, the port city in the western edge of

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 cotton 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. The peasant weavers played the key roles to respond to the Opening of the Ports, swiftly introducing the imported yarns for the weaving.

Thus, 'peasant' seems to play a significant role to respond to the "foreign superior fiber" in early modern Japan. The purpose of this paper is to consider the formation of the 'cotton society' in Japan in relation to the development of the peasant economy. In the next section, we will look over the feature of the cotton 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, paying attention to the continuity and change of both production and consumption sides. The fifth section is a conclusion.

From ramie, hemp to cotton: changing the contents of the clothing in Tokugawa-era

The clothing of the people after 16th century onward in Japan could be characterized as the process moving from hemp, ramie to cotton³. However, it is noticeable that this

Japan.

³ Although silk was important in Japanese clothing history, the consumption of silk was limited to

transformation was not the simple process changing their purchasing objects from hemp cloth to cotton cloth. There were several ways for the households in the rural areas, which occupied the major part of the whole population, to fill the demand of clothing other than purchasing the fabric, especially in the first half of the Tokugawa-era. Though we can hardly obtain the data in 17th and 18th century, some 19th century data on relatively backward region can be utilized to suggest the diversity of the clothing life prevailing in the former part of Tokugawa-era.

The first data set is the inflow figure to Akita district, located in northeastern region of Japan, in the early 19th 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 in those days 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 ramie and hemp 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	<i>tan</i>	1 <i>tan</i> was approximately 4 square meter
Inflow	Ginned Cotton	6,400	<i>gan</i>	180,000 <i>tan</i> in cloth
Inflow	Used Cloth	117,101	<i>mai</i>	<i>Mai</i> is approximately equivalent to <i>tan</i>
Production	Ramie,Hemp	105,161	<i>kin</i>	84,000 <i>tan</i> in cloth
	Population	450,000	Person	45,000 was the samurai (warrior class)

The striking fact that table 1 reveals is the low proportion of the cotton cloth. Assuming

the ruling class or wealthy upper classes.

that the per capita consumption of the cotton cloth was one *tan*⁴, 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.

The consumption of hemp or ramie was one source of their clothing. Peasant household ordinarily ran the whole production processes, namely cultivation, spinning and weaving, in self-use basis. It shows the fact that the traditional way of clothing that dominated the ordinary people 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. The spinning and the weaving processes were included in the households, being run by the female member in self-sufficient basis. Thus, depending on the trans-regional distribution of the ginned cotton, self-sufficient way of clothing partly continued in the peasant households.

The case of Ni'ikawa district shows that this combination could be 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 trans-regional market in the first half of the 19th century. Since the cotton was not cultivated in this area, the material, usually ginned cotton, was imported from Kinai and

⁴ *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.

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 them into the cloth. The interesting fact was that the pay for these peasant spinner-weavers were not by money but by the payment in kind, namely ginned cotton.

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

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

As Table 2 shows, the amount of cloth produced from these payments of ginned cotton reached to 12.8 tan per household annually. Since 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, supplying 39.4 tan to the market and 12.8 for her own family⁵.

⁵ The merchant that provided ginned cotton before hand collected the cloths. This widely prevailed transaction form in this district was called *natagae* (cotton changing).

Thus, the peasant household in relatively backward region in 19th century, and presumably more widespread area in the former half of the Tokugawa-era, involved the spinning and weaving process within their household. It was the distribution of the raw or ginned cotton in the nationwide market that enabled these households to engage in the domestic production of cotton yarn and cloth. At the first stage of the transplantation, cotton cultivation was introduced to any areas where the peasants tried to change their clothing from ramie or hemp to cotton. The cotton cultivation was closely combined with the spinning and weaving within a single household at this stage. However, the geographical distribution of the cotton cultivation became concentrated to the specific areas where the natural environment, such as climate and soil, as well as the social condition, accessibility to the transportation for example, suited to the market oriented cotton cultivation⁶. In fact, documents of a merchant revealed the constant distribution of the ginned cotton from Nara region, one of the prominent cotton cultivation areas in the western part of Japan, to the widespread regions in Kanto and Tohoku, eastern and northeastern part already in the 17th century⁷. The nationwide distribution of the raw material was a particular phenomenon to cotton compared with the ramie or hemp whose whole production process, from cultivation to weaving, were usually practiced within a single peasant household in the self-sufficient basis.

These observations indicate the particular effect of the introduction of the cotton cultivation to the early modern Japan. Beside the preference of the quality itself⁸, the

⁶ The classical paper by Furushima, Toshio explored this issue.

⁷ Hayashi, Reiko, *Edo Tonya Nakama no Kenkyu* (A Study of Merchant Guild in Edo), Ochanomizu Shobo, 1967.

⁸ Yanagida, Kunio, *Momen Izen no Koto* (Things before Cotton) is a classical study from the folklorist's point of view discussing how the texture of the cotton strongly attracted the Japanese

economic advantage of the cotton over ramie or hemp derived from the labour saving nature of the fiber. According to the estimation by Keiji Nagahara, the labour input for producing the cloth from raw ramie per *tan*, including spinning and weaving, reached nearly ten times more than that of cotton cloth⁹. Therefore, the introduction of cotton resulted in the saving of the labour for clothing, especially the women's task. The saved labour for clothing could be devoted into the agricultural work of the peasant household. On the other hand, 17th century, namely the early Tokugawa era, was the period that the Japan's peasant household took their roots in the farming villages adopting the labour intensive technology of agriculture based on the family workers in their households¹⁰. The introduction of cotton, therefore, might have contributed to the development of the labour intensive agriculture run by peasant household through the reallocation the female family labour from clothing to agriculture.

The commercialization of cotton cultivation can also be recognized in this context. The 'superior' nature of cotton, quality itself as well as labour saving effect should have been attractive to the peasant household. The nationwide distribution of cotton cultivation in the early Tokugawa era clearly reflected their desire for cotton. On the other hand, since the cotton cultivation was suitable to the labour intensive technology, the peasant household in the advantageous area for cotton began to devote their resources largely into cotton. The geographical concentration of cotton cultivation based on the comparative

people.

⁹ Nagahara, *Ibid.* p212. Although the ramie or hemp was more durable than cotton, the labour saving nature of cotton cannot be denied.

¹⁰ Hayami, Akira, "Introduction: The Emergence of 'Economic Society'" in Hayami, Akira, Osamu Saito and Ronald Toby eds. *Economic History of Modern Japan Vol.1 Emergence of Economic Society*, Oxford University Press, 2004.

advantage of the location progressed in these circumstances. As we mentioned above, the distribution of the goods related ramie and hemp were scarce. The ramie and hemp did not create the commercialized activities of farming households, which differed from the story of linen in the early modern Europe¹¹. In Japan, it was cotton that urged the widespread commercialization of the clothing, with contributing to the formation of the peasant society based on the labour intensive agriculture.

The division of labour among the cotton production processes progressed gradually in this setting, since the peasant tended to involve the various economic activities besides agriculture within the household in order to exploit fully its family labour. Distribution of the least value-added goods, raw cotton or ginned cotton, to the consumer seems to have been the reflection of this aspect. It can be characterized as the particular combinations of the market orientation and the self-sufficient activities in the course of the development of the peasant economy. The next stage of the development can be seen as a nationwide distribution of the cotton cloth woven by peasant-weavers in the latter half of the Tokugawa era.

The peasant weavers in the cotton producing districts

¹¹ There were several districts that produced market-oriented hemp cloths such as *Nara Sarashi* (bleached white cloth) or *Oumi Sarashi*. The latter producing district was even supplied with yarn made of hemp or ramie by Tonami region more than 300 kilometers off. However, the amount of these goods was far smaller than cotton. In fact, differed from cotton goods, they were not listed as the prominent items distributed by way of Osaka, the distributing center in Tokugawa period, in the early 18th century (Hiroshi Shimbo and Akira Hasegawa, “The Dynamics of Market Economy and Production”, Hayami, Saito and Toby eds. *Ibid.*)

In the advanced weaving districts the division of labour between spinning and weaving had been progressed at least in the 19th 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 farming 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. 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 was the consequence of the lack of sufficient labour source for family farms rather than the choice for specializing in non-agricultural works, since the one-person households, which were almost equivalent to the widows, occupied high proportion in 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 family labour being kept in the households. The shortage of lands did not result in giving up the cultivation, namely specializing in non-agricultural occupations, but 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 nearby distribution centre, namely the entrance of the nationwide markets. Thus, the advanced cotton-weaving district was composed of the strategic peasant households and the active distribution system. Recalling that the family strategy of the peasant household could not have realized without the provision of cotton related sideline jobs, we may assume that the cotton production worked as the soil for the development of the peasant economy.

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

Per capita area of cultivation (Family member ;age 15-60 + longterm employee) (hectare)	Number of households	Proportion of tenanted land (%)	Number of 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 lands (Number of household allocating the members to the work / Total number of households in each stratum)						
	Yearly contracted work (living in)		Side line job			Other businesses (%)	Daily works (%)
	Male (%)	Female (%)	Total (%)	Spinning (%)	Weaving (%)		
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

Continuity and change after the Opening of the Ports

The beginning of the international trade from 1859 onward had the great impact on the cotton industry in Japan. In fact, the increase of 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 cotton cloth to the domestic cotton 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 cotton market 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 industry¹². 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 spun yarn from the yarn market. The cotton cultivation 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 a certain part of the peasant households. It was the appearance of cheaper as well as suitable 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 that 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

¹² The discussion on the re-organization of the cotton producing districts is mainly based on Saito, Osamu and Masayuki Tanimoto, "The Re-organization of indigenous industries" in Hayami, Saito and Toby eds. *Ibid*.

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 (=Ettchu) 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 recall 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 The amount of inflow of imported cotton yarn

Name of places	Distribution of imported yarn	Type of weaving districts
Yamato	3,866	Plain(3), Various cloth
<i>Musashi (including Iruma)</i>	<i>3,000</i>	Plain(3), Various cloth
Kozuke	2,402	Various cloth
Shimotsuke	2,100	Various cloth
Echigo	1,912	Various cloth
Nagoya	1,764	Plain(3), Various cloth
<i>Izumi</i>	<i>1,591</i>	Plain(3)
Iyo	1,087	Plain(3), Various cloth
Bizen	709	Various cloth
Awa	475	Various cloth
Ki' i	417	Plain(3), Various cloth
Chikuzen	278	Various cloth
Harima	269	Plain(2), Various cloth
Suou	266	Plain(2), Various cloth
Bingo	206	Plain(2), Various cloth
Aki	138	Plain(2)
<i>Ecchu (Ni'ikawa)</i>	<i>92</i>	Plain(2)
Izumo	77	Plain(2)
Kawachi	57	Plain(2), Various cloth
Houki	16	Plain(1)
Inaba	11	Plain(1)

Plain (1); Producing plain cloth declining in the early 1870s.

Plain (2); Producing plain cloth declining in the 1880s.

Plain (3); Producing plain cloth developing from the 1870s onward.

Various cloth; 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 were carried out 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 noticeable¹³. According to the documents of Takizawa family, a yarn merchant in Iruma district (belong to Musashi, Saitama prefecture at present), which was the newly developed district in the latter half of 19th 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 for them to obtain the imported cotton yarn. Thus,

¹³ Tanimoto, Masayuki, "Who Marketed Imported Textile: The Japanese Case" in Sugiyama, Shinya and Linda Grove eds. *Commercial Networks in Modern Asia*, Curzon Press, 2001.

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.

It is also noticeable that the shirting occupied a large part of imported cotton cloths from England and sheeting, namely the typical plain cloths without any pattern and design. In fact, the proportion of “grey shirting” in the whole imported cotton cloths reached 70 to 80 % in the 1870s in Yokohama, the largest treaty port in the early Meiji Japan. On the other hand, there was considerable number of districts producing “various” cloths among the newly developed producing districts, which eagerly introduced imported cotton yarn, as table 4 shows. Though a word “various” cloth designates all fabrics other than undyed, plain cotton cloths, the major products in this category consisted of cloths with patterns, which were created by the combination of dyed yarn.

We may draw out an interesting point from this observation. Recalling the discussion emphasizing the significant role of printed calico in the cotton trade between the Subcontinent India and Britain, the difference of the contents of cotton trade is worth noticing¹⁴. What caused this difference? Was it the mere reflection of the differential of purchasing power between the west and the east, or did the cultural preference work as a decisive factor?

Although the further exploration should be carried out to answer these questions from the viewpoint of global history, it is apparent in Japan’s context that the contents of the cotton

¹⁴ Prasannan Parthasarathi, *The Transition to a Colonial Economy ; Weavers, merchants and Kings in South India 1720-1800*, Cambridge University Press, 2001, etc.

trade reflected the existence of the production of “various”cloths. In fact, the growth rate of production of “various” cloths was estimated to exceed that of plain cloth after the Opening of the Ports. Iruma, which we mentioned above concerning the role of yarn merchant in the district, was one of the districts that promoted the increase of the production of this kind¹⁵. Then, what was the driving force of this expansion besides the introduction of new material?

**Table 5 Weaving and agiriculture in the peasant household
(c.1875, Kitano village in Iruma district)**

Value of grain production* per household (Yen)	Number of grain producing households	Production of striped cotton cloth		
		Number of households	Turn rate of households (%)	Value of production per producing household (Yen)
100-	5	2	40.0	77.6
50-	35	15	42.9	31.4
40-	17	6	35.3	62.3
30-	27	14	51.9	16.1
20-	40	19	47.5	35.3
10-	51	22	43.1	57.5
Less than 10	43	6	14.0	36.1
No production	2	1	50.0	112.5
Total	220	85	38.6	41.1

Note) * involves rice, barley,wheat,millet, beans and potatos,
but excludes tea and cocoon.

Table 5 shows the similar result as table 3. The turn out rates of the weaving household in the stratum classified by the value of agricultural production per household did not negatively correlate the size of agricultural production. Therefore, we can hardly find out the clear indication of the division of labour between agriculture and weaving in this table. The character of the weavers was almost same in Iruma in the 1870s as in Izumi in the 1840s. The production of striped cotton cloth in Iruma was highly dependent on the weavers embedded in the peasant household.

¹⁵ Tanimoto, Masayuki, *Nihon niokeru Zairaiteki Keizai Hatten to Orimonogyō* (The Weaving Industry and the Indigenous Economic Development in Japan) Nagoya Daigaku Shuppankai, 1998.

However, we should not miss the significant difference in the aspect of the distribution. Table 6 classifies the orders of the clothier, namely putters-out, to the peasant-weavers that consisted of the wife or daughter of the male household head. This clothier had been operating as a factor up to the 1870s, simply collecting the cloths woven by the peasant-weavers as well as a merchant in Izumi in the 1840s. The transformation occurred in the 1880s. The merchants in Iruma started to arrange the dying and warping processes of the yarn, that were procured by themselves, before they ordered the weavings process to the weavers. Looking from the viewpoint of the production side, the peasant-weavers were assigned to weave the specifically designed cloth with the yarn dyed and warped by the clothier side. This assignment should have reflected the contemporary preference of the cloth market. In other words, the clothier was trying to bring the market information into the production process. In fact, table 6 reveals that the clothier arranged numerous varieties of designs by engaging in the preparation process. The production organization certainly evolved in this aspect. It was the organizational evolution of the production system in the broader sense combined with the continuity of the production process, namely the weaving process, that was highly dependent on the peasant-weavers. Here we can find out the upgraded combination of the market-oriented activities and the peasant economy. This direction of the industrial development composed the significant part of Japan's economic development.

Table 6 The variation of the designs and patterns of cloths ordered by clothier
(1897 in Iruma district, *Takizawa Kumakichi* family)

Category of cloth	Total ammount of production (tan)	Proportion (%)						
Apron	6,409	58.8						
Combined with silk thread	4,038	37.1						
<i>Hakata-yūki</i>	364	3.3						
Others	85	0.9						

	Number of varieties within each category		Number of varieties in details					
	Total	Color	Pattern	Season	Material	Size	Way of weaving	
Apron	43	38	25	9	2			
Combined with silk thread	9	8	3		9			
<i>Hakata-yūki</i>	3		3					3
Others	2	1	4		1	5		
Total	57	47	35	9	12	5		3

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 labour saving nature of the cotton fiber compared with the ramie or hemp enabled the farming household to reallocate their family labour to the agricultural work and contributed to establish the ‘peasant society’ based on the labour intensive agriculture. Cotton cultivation, which was run by typically labour intensive way, was positioned as the advantageous farming in this context. The profitability of the cotton had the peasant households sell their products, namely raw or ginned cotton, in a market basis. On the other hand, purchasing the raw (ginned) cotton as the materials for self-made cloth prevailed widely in

the non-cotton growing areas, saving the cash expense of the peasants through the low value-added nature of the material trade. Thus, the introduction of cotton urged to develop the particular type of market economy, which based on the strategic behaviour of the peasant households in both producing side and the consuming side. The market-oriented manufacturing of cotton goods, mainly cloth and in some cases yarn, took place in this line of this development. The main producers were peasants that involved industrial works within their households, combining them with the agricultural tasks. The merchant in the districts 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 production processes within the cotton industry. It was the latter progress that enabled the 'advanced' districts to respond effectively to the Opening of the Ports by transforming the materials from hand spun yarn to imported machine spun yarn.

This was 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 resulted in 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 the 1880s onward based on the putting-out system, namely the improved combination of peasant household and the local merchants. Particularly, 'various' cloth-producing districts showed the significant growth prompted by the expanding demand for the designed or patterned cloth woven of the arranged dyed yarn. There can be seen the strong continuities in technology and production organization as well as the preference for the woven patterned cloth. The author has called this kind of industrial development as "indigenous development", distinguishing from the factory based "modern

industrial development”¹⁶. 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.

¹⁶ Tanimoto, Masayuki, “The Role of Tradition in Japan’s Industrialization: Another path to industrialization ” in Tanimoto, Masayuki ed. *The role of Tradition in Japan’s Industrialization*, Oxford University Press, 2006.