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# **Information Strategy by Government and Response of Weaving Districts: Expansion of Silk Fabric Export from the late 19th to 20th Century Japan<sup>1</sup>**

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## **1. Introduction**

In the context of ‘East Asian Miracle’ or the recent economic development of East Asia, what could we learn from Japanese experience, i.e., rapid export growth? In this paper, information strategy and activity of government in the early phase of industrialization will be discussed as one of the most important factors which helped to solve the problem of asymmetric information as well as quality problem of export product which is often main issue in developing economies. To show how Japan solved such problems a century ago would offer contemporary developing economies suggestions as to shift higher phase of development.

Among information strategy by Government, Consular Reports are reputed to be an important channel of information for the development process in modern Japan. For domestic producers, particularly in the local area, the cost of receiving information on a foreign market was much higher in the past. To receive information such as

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<sup>1</sup> Please do not quote without author’s consents. I would like to thank all the participants at the Global History Workshop: Cross-regional Chains in Global History (December 13-15, 2007, in Osaka) for valuable comments and suggestions. I especially appreciate Professor Kazuko Furuta for her thoughtful comments as discussant for my paper and Professor Kaoru Sugihara for his excellent research impressed me with the importance of informational infrastructure. Members of research meeting of COE program in Hitotsubashi University also gave me helpful comments for revising this paper. This research was partially supported by the Ministry of Education, Science, Sports, and Culture; Grant-in Aid for Scientific Research (B) 17330048. Needless to say, all the remaining errors are the sole responsibility of the author.

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reputation, sales, and preferences, the use of Japanese export goods in foreign markets was indispensable for them to win against the competition, but the accessibility to foreign markets was too limited. As Kaoru Sugihara discussed, this paper shows one interesting case where “informational infrastructure” played an important role in export growth and long-term economic growth (Sugihara 1994)<sup>3</sup>.

In this paper, I will focus on the functions of Japanese Consular Reports in the export growth of Japanese *Habutae*. *Habutae* was a plain white silk textile that was dyed or printed after weaving. Although the Japanese people wove *Habutae* before the ports opened in the middle of the 19<sup>th</sup> century, *Habutae* as export goods needed to be thin, plain, and uniform. Further, exporters had to respond to large orders. In this sense, we can say it was a new kind of textile: simple, an intermediate goods like raw silk. During this time, Exporters first experienced the mass production of intermediate goods as well as exported their products to new markets.

In reference to Japanese *Habutae* exports, half a century ago, William W. Lockwood discussed the two main influences of the foreign market on technological change in Japanese industry. He explained as follows: “First, the export trade not only enlarged certain industries, but it promoted a greater regional concentration of production in the neighborhood of the great port cities of central Japan.... The second influence of the foreign market on technological change in Japanese industry was connected with the character of the export demand. In general, as we have seen, Japan tended to export manufactures of the same general type as those used extensively by her own people. But there was one broad difference which prevailed over a wide range of products. Within many industries the foreign demand was directed toward goods of more uniform specification and standardized design than those produced for the home market.” (Lockwood 1955, p.373). He added to the second influence: “...the export demand was also concentrated largely upon goods of more standardized construction and finish than those sold in the home market, but not necessarily of better quality—often the reverse. Exported silk fabrics, for example, were chiefly habutai, crepe, pongee, satin, and other wide materials of simple design. By contrast, fancy goods were woven mainly for Japanese use...” (Lockwood 1955, p.374).

We know the export growth promoted a greater regional concentration of production called “sanchi,” in Japanese, or industrial district. Industrial cluster is defined as the condition where a large number of related firms exist in a relatively

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<sup>3</sup> According to Sugihara, the definition of “informational infrastructure” is the institution and organization needed by entrepreneurs and the public when they understand, accumulate, and utilize information; in particular, such a system offers varied information to entrepreneurs and the public for free or with a small charge (Sugihara 1995, pp.65–66).

narrow district and this cluster has an effect or function that exceeds the simple sum of all numbers (Itami, Matsushima, and Kikkawa ed. 1998, pp.2–3). However, not only are there clustering firms but also externality. In many industrial clusters, there are core firms that coordinate firms, institutions, and organizations. For example, trade associations, industrial experiment stations, and technical schools played important roles in clusters. In this paper, an industrial cluster as well as institutions or organizations within it will be emphasized as important players in receiving information from Consular Reports.

The second argument posed by Lockwood is more important to the discussion in this paper. For example, there was great contrast between the varieties of consumer goods produced for home use. Export goods required more uniform quality and design. We, as people in the 21<sup>st</sup> century, know it was a natural thought process. In other words, how did Japanese local producers recognize the ‘demand gap’ between the domestic and foreign markets? If a crisis occurred during *Habutae* exports to the foreign market, how was it transmitted to domestic players and resolved by them?

In this paper, by investigating the information on export goods in the Consular Reports, I apply thorough consideration to the quality issues that occurred in the foreign market. There reasons for emphasizing the export of *Habutae* in the Western market in this paper are as follows. First, *Habutae* was one of the most important export goods in the early period of Japan’s industrialization. Second, the destination or market of *Habutae* was a new market for exporters, with different uses, needs, and preferences. Third, it is a good example that the Consular Reports seemed to promote the organic performance of local producers through offering crucial information for export growth. Forth, it might be most important here, we could find the growing roles of states as institutions to contribute to the flows of information and commodities. Investigation on the relation between the export growth of *Habutae* and information strategy by government will lead us to find one of the important factors which realized ‘East Asian miracle’.

The character of information from Consular Reports must be mentioned here<sup>4</sup>. It was public and open information, neither closed nor limited to particular members. In this sense, it can be called public goods. Today, we live in the world where communication networks and informational technologies are well developed. A lot of information far from Japan can be available so easily and quickly. Therefore,

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<sup>4</sup> On this point, I owe much to Professor Kazuko Furuta for her perceptive comment indicating the importance of distinction between open information and closed one when we consider the function of information for economic actors.

information as public goods does not look like valuable any more. But we should not forget that such information was so valuable and hard to obtain in those days. Such public goods was crucial for industrial districts not only because they could never approach it by themselves but also because sharing the same open information between members contributed to quality of their products. As I will mention later, *Habutae* was not dealt by trademark but district name. That's why they all had to know open information as well as they industrial district had to behave itself as if one firm. I would like to claim that it is so crucial for developing economies to establish machinery to gather information and to circulate it to the hinterlands.

The next section shows the export growth of *Habutae* and problems caused by the sudden growth of *Habutae* exports according to the Consular Reports. In addition, I will introduce the Japanese Consular Report as historical material. In the third section, using information from the Consular Reports, the manner in which the industrial cluster, as a group of local producers, resolve the problems regarding *Habutae* exports will be discussed. The Fukui area is mainly emphasized here because it was the leading *Habutae* district that accounted for 50 per cent of *Habutae* production in Japan at the beginning of the 20<sup>th</sup> century. Almost all of the *Habutae* produced there was exported (Hashino 2007a, chapter 1). Their early introduction of power looms has been explained mainly by cost effectiveness (Minami and Makino 1983); I attempt to explain that they were required to produce export goods with uniformity and standardization. Furthermore, the name of the Consular Reports has often changed in Japan—*Tsusho Isan*, *Tsusho Ihen*, *Tsusho Hokoku*, and so on. However, I unify them as “the Consular Reports” hereafter.

## **2. Japanese *Habutae* Quality Issues Revealed in the Consular Reports**

### **(1) Export Growth of *Habutae***

As Figure 1 shows, the export of Japanese silk fabrics, *Habutae* in particular, has rapidly grown since the 1890s. In *Nippon Boeki Seiran* (1935)—the *Foreign Trade of Japan: A Statistical Survey*—figures of export goods appear from 1868 to 1933. Figures of silk fabrics considered as “other silk fabrics” first appear in 1868 as well; however, no breakdown of the other silk fabrics is given. We can find the figures for *Habutae* and crepe since 1890 and that of *Kaiki* (silk fabric) since 1896. Since articles concerning the export of handkerchiefs to the United States as well as *Kaiki* for Jinsen (Korea) appeared in the Consular Report from the 1880s, “other silk fabrics” in *Foreign Trade of Japan* contained these kinds of fabric. Figure 1 shows that Japanese silk fabric

exports from 1890 were the same as *Habutae* exports. *Habutae* exports grew rapidly with the start of production in Fukui, the leading district of *Habutae* exports. In the 1900s, the export of *Habutae* grew stagnant, then, reached its peak in the boom during the First World War. In contrast to the decline of *Habutae* exports, that of crepes, pongee, and “Fuji” silk began to increase after the 1920s.

As I mentioned above, *Habutae* as an export fabric can be regarded as a new kind of silk article export, even though it has been woven since the Tokugawa period (Uchida 1960, p.168). For export, it had to be made very light, even, and uniform. Additionally, consumers required it to be as cheap as intermediate goods. In the United States as well as the United Kingdom, *Habutae* is used for ladies’ dresses, blouse materials, linings, trimmings, and many ornamental purposes (Crowe 1909, p.33). Producers had to use raw silk reeled not by hand but by instruments and had to weave using a handloom with a flying shuttle as an efficient machine. Kiryu, one of the most popular silk weaving districts located in the northern part of Tokyo, was the first district to produce *Habutae* as an export fabric in Japan. They produced and exported it in 1878 to the United States. In Kanazawa, they started production of *Habutae* by learning from Kiryu. Production of *Habutae* for export spread immediately. For example, Kawamata in Fukushima prefecture, Fukui, Toyama, and Tsuruoka in Yamagata prefecture started it in 1886, 1887, 1889, and 1894, respectively. Above all, during the Sino–Japanese War (1894–5) when the domestic market was not active, *Habutae* was produced repeatedly. We should not forget that each district specialized in a different kind of *Habutae*: a thick one was called *omome* (heavy; it means the fabric is rather thick) and a thin one called *karume* (light or thin). The *Habutae* produced in Fukui was *omome*, while Kawamata’s was *karume*. *Omome* and *karume* were quite different in use as well as appearance.

## **(2) What Were the Consular Reports?**

First, let me explain the character of the Consular Reports as historical material, which is the basis of this paper. Today, we can read the Consular Reports as a reprinted edition. To examine the history of the system of Consular Reports and the character of this material, a reprinted edition of “Commentary” is quoted below.

Consular Reports are economic and trade reports sent by consular residents abroad to their home country. They can be considered Consular Reports on trade and commerce. In the 19<sup>th</sup> century, Consular Reports came to be recognized as an important pillar of export strategy in the process wherein European Continent countries, and the United States as a latecomer, attempted to catch up with the advanced nation of Britain.

In our country, they can be positioned as one of the main economic policies that supported the industry promotion policy for rapid industrialization.

The collection of these materials is the very product of information organization that was intended and realized by the Ministry of Foreign Affairs. This collection of materials comprise the first half of a large volume of Consular Reports that were reprinted....(Takashima 1988)<sup>5</sup>.

It was after the Meiji Restoration (1868) that the consular system was deployed on a full scale. The consul's main duties were the protection and supervision of Japanese passengers as well as investigation and reporting on the trade and commercial situation of products exported from Japan. There were some cases wherein a local merchant was appointed as an honorary consul. In the late 1880s, the Ministry of Foreign Affairs requested the installation of a consulate in the Philippines, Singapore, Kuangtung, Marseilles, Liverpool, Bremen, and so on with the intention of competing with European products to sell textiles and miscellaneous goods as industrial commodities in the Asian market.

In 1875, the Ministry of Foreign Affairs specified the jobs of consul general, consul, and vice-consul: "(They are) resident at each foreign harbor and grasp the work of foreign trade and care of the Japanese people who live in the country." The process of informing the Ministry of Foreign Affairs with the Consular Reports was completed in the following year. Since the consul was expected to collect commercial information as well as play the role of export merchant, the Consular Reports include not only routine reporting concerning the trade situation but also export marketing information.

Until the Ministry of Foreign Affairs established the information organization of the Consular Reports circa 1880, the mode of the official announcement of the Consular Reports was not fixed. Since they were released through media such as official notices, newspapers, and bulletins, the volume of information was limited. After the "official gazette" was started, it published the Consular Reports as well as briskly reproduced them for mediation. *Tsusho Ihen*, *Tsusho Hokoku*, and *Tusho Isan* were those Consular Reports that the Ministry of Foreign Affairs edited and officially announced. The circulation of a *Tsusho Hokoku* (commercial report) was 1200 copies, and 780 of them were distributed to domestic/foreign public government offices, newspaper publishing companies and magazine houses, overseas establishments, and so on. The remainder was distributed to the candidate bearing the postage burden. Further, if

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<sup>5</sup> Later in this section, the history of the Consular Reports system as well as the character of the materials will be quoted from this article.

somebody had a doubt about the article and required further investigation, replies were supposed to be made through the Research Bureau of the Ministry of Foreign Affairs. Thus, it should be remembered that very fine correspondence was carried in the transfer of overseas commercial information for domestic commerce and industry. Due to cost reduction, the official announcement of the Consular Reports was made through the official gazette at that time. In 1893, it was published as *Tsusho Isan*, and from May 1895, it was published twice a month; three times a month in 1897; and abolished in the same year. The Consular Reports were succeeded to *Tsusho Koho* (commercial official report), *Nikkan Kaigai Shoho* (daily foreign commercial report), *Shukan Kaigai Keizai Jijo* (weekly overseas economy situation), and *Gaimusho Tsushokyoku Nippo* (daily report by Office of International Trade, the Ministry of Foreign Affairs Office) until 1943.

It would be useful to determine the character of the materials in the Consular Reports. Although the format was changed over time, plenty of local information, such as the market situation, reputation of Japanese export goods, political economy, and legal proclamations, was included. According to Takashima (1988), we can neither know how the consul received information nor determine how to analyze this information at all. It seems that the consul took export products around single-handedly to gauge their reputation, requested the public opinion of leading merchants, and collected information based upon his experiences when he went on a field trip. However, in many cases, the sources of information were local newspapers, magazines, and public reports. Additionally, the relationship between the local area and Japan was always included in the Consular Reports. Therefore, it can be said that Japanese export goods were objectively evaluated in the Reports by overseas consuls based on the large volume of information that they collected.

The famous research on the Consular Reports is Tsunoyama ed. (1986), which examined their character as historical material and investigated the export growth of a particular industry associated with them. There are numerous stimulating researches relevant to this paper in the current book that attempt to consider the relation between export growth and the Consular Reports. For example, researches on the overseas expansion of Japanese shipping (by Kunio Katayama) and the export of matches (by Toshihiro Sugimoto) were trials investigating the industrial growth resulting from the Consular Reports.

In particular, we can find valuable suggestions from Imazu's research on technical subjects with regard to industrial products in the abovementioned book. According to his research, in the phase of early industrialization, Japanese industrial



products were required to possess some fundamental conditions as international goods, namely, uniformity, design, robustness, and packaging. Further, the development of an administrative system, such as the introduction of industrial property rights, enforcement of a weights and measurements system, and establishment of an examination institution, were required in Japan (Imazu 1986, p.181). These points that Imazu pointed out directly pertain to the second subject argued by Lockwood as above.

### **(3) The Reputation of Japanese *Habutae* in the Consular Reports**

How was the local reputation of *Habutae* exported from Japan? The quality problems caused by Japanese manufacturing goods occurred repeatedly during the industrialization process, both in the domestic and foreign markets. The Consular Reports were sent as claims from foreign markets to the local Japanese producer. The claims for *Habutae* will demonstrate a good example. Some articles from the Consular Reports will help us to understand how and to whom information on the local claim was transmitted.

The *Habutae*-related article in the Consular Report from the 1900s is summarized in the following five points: (1) inferior quality, (2) faults in inspection organization and credibility of the certificate, (3) errors caused by using low technology such as handlooms, (4) incorrect business practice, and (5) complaints about specific brands, or in other words, complaints about *Habutae* made in specific districts<sup>6</sup>.

First, let us focus on *Habutae*'s problem of inferior quality. We can find vague expressions in the Consular Reports, such as "coarse," "poor quality" and "flawed;" however, the consul pointed out tangible quality problems.

These can be roughly divided into two problems: those considered to have been generated during the weaving process and those that occurred during the scouring and finishing process. With regard to the former issue, the consul pointed out that Japanese *Habutae* had the following problems: lack of uniformity in width, length, and selvage (Appendix 2, 4–19), unevenness caused by rough weft, different thickness in one fabric<sup>7</sup>, lack of weft and warp, lack of uniformity in weaving yarn, and coarse woven fabric. Since the latter issue was related to the scouring process, lack of washing, low quality soap used in washing, dirt and spots (Appendix 14, 16–18) were pointed out, and an

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<sup>6</sup> I usually call it *Sanchi Brando* (district brand) in Japanese. In general, *Habutae*, as a product, was named for the weaving district where it was produced, and was particularly given the old name of the district. For example, since a part of Fukui was called *Echizen* before the Meiji Restoration, people called their product "*Echizen Habutae*." Similarly, we have *Kaga Habutae* made in Ishikawa and *Uzen Habutae* in Yamagata.

<sup>7</sup> It is called *dan* in Japanese; some are thick and others are thin, even within a single fabric.

increase in weight due to starching was also regarded as problematic (Appendix 5,6,11). *Habutae* as a material was printed and finished at its destination. However, as Appendix 4 shows, “In the process of black dyeing here, grey and white spots emerged on both selvages of fabric at the same intervals;” in many cases, low quality problems were not found until they were dyed or printed. During dealings, faults were often concealed.

As the dyeing process required the removal of starch, *Habutae*, starching was greatly despised (Appendix 5–7). Occasionally, starching increased the weight of *Habutae* to 20–30 per cent<sup>8</sup>. Kozo Kameda demonstrated how a merchant increased the weight of *Habutae* by adding magnesium (Kameda 1998). According to Appendix 11, “Originally, *Habutae* with starching was started for producers or brokers to produce or sell using a shortsighted policy. Local importers and dyeworks never order such products;” the consul reported that it was the fault of merchants and manufacturers in Japan.

Next, with the problems regarding inspection and the certificate, the consul suggested a better method of inspection (Appendix 1,2) as well as demonstrated the dissatisfaction with the current inspection system (Appendix 12, 13, and 18). Suggested methods of inspection were as follows: to adopt an official weight for *Habutae*, to reject conferring the certificate for illicit goods weighted by sugar or salt, to grade appropriately for flawed *Habutae*, to disqualify dirty or faded *Habutae* from passing inspection, and to guarantee the length of *Habutae* (Appendix 1). These suggestions are related to the actual problems detailed in (1) and (2). In other words, *Habutae* that did not meet the standards suggested above was often exported.

With regard to the dissatisfaction with the current inspection system, the consul indicated that certificates stamped in Japan were not credible. In short, this means *Habutae* with apparently low quality was graded “A.” For example, facts infer that *Habutae* with the following faults received a grade A: lack of weaving uniformity; unevenness of weaving yarn, such as using both thick yarn and knotted silk; lack of warp or weft; adhesion of soap dregs in the scouring process<sup>9</sup>; and yellow stains and wrinkles. The consul strictly pointed out that this was due to unfair inspection (similar to Appendix 18 and 16). Thus, there was a succession of complaints for implausible certificates issued by each *Habutae* district due to inconsistent inspection levels and categories.

Other problems originating from technology were caused by using handlooms

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<sup>8</sup> Similarly, *doba*, which increased the weight of *Habutae* by containing moisture, was regarded as problematic.

<sup>9</sup> It was called “cloud.”

to weave *Habutae* in early 1900s. According to a report from a consular resident in Chicago, “The reason why Japanese *Habutae* lacks uniformity of density of weft is that it is hand-woven. The appearance is not perfect. This uniformity is more noticeable after the process of dyeing. That is because the weaver wove strongly near her hands and weakly farther away from her hands” (Appendix 8). It is reported that hand-weaving causes nothing but a lack of uniformity in fabric as well as low quality.

It is interesting that the same indication can be found in the report below by, Mr. Yoshio Takanose, an overseas business trainee<sup>10</sup> who was sent to France.

In Japan, *Habutae* is produced in a factory system compared with production of other fabric. However, in general, many of them are produced in the domestic system using handlooms<sup>11</sup>. This causes a lack of uniformity in materials as well as in the manufacturing process....This incomplete production system creates numerous faults... (Noshomusho Komukyoku ed. 1911, p.55)

This follows the opinion that the domestic organization of production has caused reduced product quality. He argues that uniformity of the product would be attained by introducing machines and that monitoring the manufacturing process under the factory system is necessary to improve the quality of the product. However, with regard to hand-weaving production, domestic production under the putting-out system has not necessarily caused lower quality; instead, it has been rather efficient under particular conditions (Hashino 2007b). It was an interesting suggestion from overseas that factories with power looms would be better equipped to produce *Habutae* as material. This report offers another possibility for mechanization of weaving process.

With regard to business practices concerning (4), the consul pointed out that sample dealing was problematic since they exported not only products that were quite different from the sample but also those of inferior quality (Appendix 9). Dealings with goods started with “thing dealings,” which then developed to sample dealings, brand dealings, trademark dealings, and maker dealings. At the end of the 19<sup>th</sup> century, it reached the stage of brand dealings globally (Imazu 1986, p.198). In the case of *Habutae*, the formation of the growing industrial district also refers to that of the district

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<sup>10</sup> The overseas business trainee system was established by the Ministry of Agriculture and Commerce in 1897; a part of the plan was aimed at export expansion. Candidates who passed an examination became subsidized overseas trainees and stayed abroad for 3 years. It continued for 30 years until 1928 and approximately 850 trainees were dispatched.

<sup>11</sup> His original sentence was “not using handlooms” but it must be an error in place of “using handlooms.”

brand. People named the product for the popular district in which it was made, for example, *Kaga Habutae*, *Echizen Habutae*, *Kawamata Habutae* and *Uzen Habutae*. This differed greatly from the fact that each raw silk manufacturer eventually provided an original trademark for exported goods to the United States. The complaints against the *Habutae* made in specific districts were mentioned above in (5) (Appendix 3, 5–7, 12–13, 15, 17–18). For example, *Echizen Habutae*, which was marked grade A and exported to France, had quite different qualities between products (Appendix 12). Among *Kawamata Habutae*, not only were inferior goods graded A but they also had pasting problems (Appendix 18, 5–7). Repeated claims to the district brand meant that the brand dealings could not be developed to trademark dealings. Additionally, it meant that there existed nothing but a lack of credibility for the district brand in the market. How did *Habutae* districts attempt to solve the abovementioned problems?

### **3. How Did *Habutae* Districts Respond to the Consular Reports: Case in Fukui District**

#### **(1) What the Consular Reports Revealed**

In the previous section, five pattern problems of what the Consular Reports revealed were fully observed. The problems seemed to be mutually related. At the same time, what happened in the *Habutae* district? How did they attempt to solve the problems revealed by the Consular Reports? Weaving, scouring, finishing, and inspection prior to shipping was done in each *Habutae* district and problems arose in those processes.

The abovementioned five pattern problems can be further summarized in relation to the source “actors.” With regard to (1)—quality problems—the factory or weavers could have played a role in the problems during the weaving process. The same relationship can be found between scouring problems and the scouring factory. Trade associations might have caused the problem of (2). With regard to (3)—the organization of production and technology—it might have been decided by each producer, but a specific type of organization or technology might easily have been preferred within the same district. The business practice of (4) was a matter between a broker and merchant in a port city in Yokohama. Problems with the district brand can be regarded as being caused by a trade association or district as a whole.

In response to the Consular Reports, the *Habutae* district had to improve the weaving process and scouring method and tighten up the inspection system to regain the trust of the district brand in the market. Therefore, the *Habutae* district must have

considered responding to the Consular Reports by restructuring the institution as well as their organization. One way was to improve the scouring method and the other was to strengthen inspection: monitoring of the manufacturing process and selection through inspection. Monitoring the manufacturing process was promoted to solve technical or technological problems. In other words, both were deeply related. Furthermore, it seems that the public sector such as the local and central governments played a complementary role to solve or prevent “the failure of community,” where the inspection function did not work well because of collusion between acquaintances. Then, I will examine the case of the Fukui district where *Habutae* production was the most prosperous in Japan.

## **(2) Monitoring the Production Process: Development of Scouring under the Law**

The Consular Reports particularly highlighted the problems in the scouring process. First, why were they generated? Second, how were they resolved? In 1887, when *Habutae* weaving started in Fukui City, there were no scouring factories at all. Therefore, the ordinary dyeworks tried to scour *Habutae* in response to the demand, but they could not do it perfectly (Fukuiken Kinuorimono Dogyo Kumiai 1921)<sup>12</sup>. Then, they asked Kyoto to scour their *Habutae*. Since the process was time-consuming and expensive, they learned the scouring method from the Kiryu district next year. With the growth of *Habutae* exports, scouring factories increased to 14 within the prefecture in 1893. The problem caused by increasing the number of scouring factories grew: among scouring factories, the scramble for jobs was intense. As a result, it is said that the reduction in scouring quality was caused by over-competition.

In order to solve these problems and protect mutual interests between factories, scouring factories organized *Renshinkai* (association), enacted agreements, and asked factories engaged in this industry to join this organization. *Renshinkai* contracted with *Kenseikai*, an association of *Habutae* traders, to inspect the scoured *Habutae* for quality in the presence of both members every month. If illicit *Habutae* was discovered, the concerned scouring factory was dismissed from the *Renshinkai*, and a notice of “purchase refusal” from the factory was raised in front of the *Kenseikai* member’s shop. They tried to stop fraud and eliminate dishonest people. Simultaneously, this seems to function as the traders’ monitoring weaving factories. That is, monitoring must be effective in preventing injustice, such as increasing weight with moisture or other substances, between the scouring and weaving factories. *Renseikai*’s activity was positive enough to send people to Kyoto and Kiryu to learn the steam scouring method.

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<sup>12</sup> The description in this section and the subsequent section owes much to this article.

Additionally, in order to remove the problem caused by the rapid increase in scouring factories, some of those factories came to establish limited partnerships and started price competition with other individual factories.

As *Habutae* was traded by weight, an increase in quantity through moisture became a serious problem, particularly at the turn of the century. It was said to be done by unscrupulous domestic merchants. Therefore, in response to this problem, the trade association of weavers established the “entering rule of standard weight,” which was enacted on July 1, 1903. This method is as follows. During the inspection of *Habutae*, they had to enter its weight for dealings. In consideration of dryness and moisture at the time of inspection, the current weight of the *Habutae* was entered, and it could not be increased or decreased. The *Habutae* that was being dried sufficiently was entered with a figure added from 1 *monme*<sup>13</sup> to 3 *monme* to the current weight per 100 *monme*. On the other hand, the *Habutae* that was not dried sufficiently was returned to the scouring factory and re-drying was ordered.

Although such treatment enabled the prevention of injustice post inspection, the problem of increasing the quantity of *Habutae* using various medicines prior to inspection still remained. In 1905, the Ministry of Commercial and Agricultural Affairs promulgated ministerial ordinance No.5, Export *Habutae* Regulatory Rules. This law prohibited an increase in quantity using magnesium, salt, sugar, and other materials specified by the Minister of Agricultural and Commercial Affairs. Thereby, trade associations and the government were united to solve the problems of (1), (2), and (5).

Moreover, an approval system was introduced to the scouring factory through the promulgation of No. 23, Export *Habutae* Scouring Method in April 1906. Prior to that, there were crude scouring methods and equipment in place. Around the time of the Russo–Japanese War, overseas demand grew, particularly orders for thick *Habutae* from Fukui. The scouring of thick *Habutae* was difficult and problematic. To overcome the difficulty of scouring, Mr. Eijiro Kurokawa shifted from charcoal fire drying to steam drying and introduced a new wringing machine from abroad; however, general scouring factories were arbitrarily equipped. *Habutae* was boiled in a Japanese basin and dried with a charcoal fire. In this case, as they were apt to throw a large volume of *Habutae* into a small basin at once, generating the crack and burn. “Cloud,” which the Consular Reports pointed out was the same as face powder, was used on the surface of scoured *Habutae* and this spot appeared more vividly after dyeing. In order to solve this problem, the Ministry of Agricultural and Commercial Affairs’ industrial experiment station, which was established by the prefecture and Fukui district (trade association), was also

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<sup>13</sup> 1 *monme* is equivalent to 3.75 grams.

united in conducting research.

However, although such a measure was taken, as shown by the Consular Reports, the complaints from overseas against scouring did not stop. Then, in order to exterminate excess competition, improve technology, and create uniformity in the product, the Fukui governor planned a merger of scouring factories. For this merger, the governor asked for the approval of 3 representatives of the scouring factory, weaving factory, and merchant, respectively. He repeated negotiations with the heads of the experimental station and the *Habutae* inspection center and a representative of the scouring factory. Thus, *Fukuiken Seiren Kabushiki Gaisha* (Fukui Prefecture Scouring Incorporated Company) was established with a subscription invitation for capital of 200,000 yen. The operation was started in 1911; 14 factories were merged at the foundation. Scale economy was realized, and economy of scope was attained simultaneously since the different kinds of fabrics were scoured separately (Nippon Kinu Jinken Orimonoshi Kankokai 1959, p.146).

Further, in 1911, a trade association organized *Kumogata Kenkyukai* (research meeting regarding cloud spots), attended by the head of the Prefecture *Habutae* Inspection Center, the president of Fukui Prefecture Scouring Inc., and *Habutae* traders and weavers as committee members. They made the following agreement to remove *Habutae* cloud spots: (i) to offer price competition, (ii) to apply a method of substance analysis of the cloud to the Industrial Section, Ministry of Agricultural and Commercial Affairs, through the prefectural government, (iii) to request the experiment station to investigate weaving *Habutae* without using wax and seaweed, and (iv) to examine the scouring liquid circulation method.

As seen above, they focused on improvement in scouring, which was highlighted in the Consular Reports. Technology and organization for scouring was improved and rearranged to solve the problem. Moreover, the close linkage between the private and public sectors, producers, merchants, trade associations, inspection center, experiment station, prefecture government, and the Ministry of Agricultural and Commercial Affairs was positively established to clear district brand name.

### **(3) The Improvement of the Inspecting Method: Selection of Product**

The Consular Reports required improvement of the inspecting standard and method. How did they resolve it? As shown in Appendix 16 and 18, why were inferior goods awarded grade A? Appendix 12 expresses the claim against *Echizen Habutae*: “Even though their difference is apparent, the fact that pine grade (grade A) was given equally to them is enough proof that the inspection is not strict.” The complaint that

their certificate cannot be trusted without strict examination implies a loss of reliance on the district brand. It was a crucial subject for the *Habutae* district not only to monitor the production process but also to select the product before shipping.

In 1893, the Fukui silk fabrics trade association improved three grade systems of pine, bamboo, and plum—equally A, B, and C—which showed the grade of the association's product inspection result<sup>14</sup>. Additionally, they forbade dealings of the product without this label from the association. It is said that it was only *Echizen Habutae* that has been bought by the association label in Yokohama in the late 1880s (Fukui Prefecture 1994, p.555). Since an inspector went to each scouring factory to inspect *Habutae*, inspection work was likely to accumulate and even the opportunity for corruption arose (Inoue 1913, p.136). Therefore, in 1893, the association established the headquarters of inspection in Fukui City and branch offices in Takefu, Awatabe, Sabae, Maruoka, Ono, Katsuyama, and Obama to inspect the *Habutae* from a scouring factory in those areas (Inoue, 1913, p.136). "Inspection standard goods" was defined and put on an inspection branch to conduct investigations based on this.

However, since the inspection of *Habutae* was not done using a fixed machine like the inspection of raw silk, many of them were macroscopic examinations by an inspector. Since the problem of varied test results arose, inspection unification became an issue. In 1895, it was planned that all the *Habutae* produced in Fukui would be inspected at the headquarters and all branches would be abolished. As they might have missed a business opportunity in areas with heavy snowfall or those far from the headquarters, occasional inspectors were supposed to be sent to areas producing more than 1000 *hiki*<sup>15</sup> a month. However, this system was not a different ordinary branch office system at all. Therefore, to prevent collusion resulting from remaining in one area for a long time, the inspectors were resident in turns for two months.

Inspection of the increase in quantity was shown in the previous section. Inoue (1913) precisely explained the inspection plan in those days. In order to eliminate

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<sup>14</sup> Interestingly, Crowe (1909), Consular Reports in Britain, introduced this idea as theoretically excellent, at the same time, criticized that this system did not work at all showing his experience. He mentioned, "...In theory the idea is excellent, as by the official inspection it is expected that a high standard will be maintained. In practice, however, it would appear that no very great discrimination is shown in affixing the stamps. Every dealer in *habutae* re-examines each piece that comes before him and classifies it again into various sub-classifications. The third quality stamp exists but is only rarely used. I have been to the examination offices in five different prefectures and I made a point of asking for one of each of the three stamps used. In only one case was the third quality stamp immediately obtainable; everywhere else the examiners had before them little stacks of first and second quality but no third stamps. This fact illustrates the attitude of the officials very clearly..." (Crowe 1909, p.42). As for the history of British Consuls and their functions, see Platt 1971.

<sup>15</sup> *Hiki* means the unit of the length of fabric. 1 *hiki* is equivalent to 2 *tan*. Fabric of 1 *tan* is 34cm of width and 10.6 m of length.



dishonest practice, they inspected the fineness of the product, the association's inspection sticker, and the scouring factory's stamp; as well as (i) no flaws, but if flaws were present, they must be noticed, (ii) exact length, (iii) exact quantity entered, and (iv) no other fraud. The standard to pass the inspection was set: high quality of weaving yarn and dyeing, excellent textile weave, and suitability for use. On the other hand, they recognized it as illicit goods if even one of the following items existed: coarse weaving yarn, good yarn with a crude textile weave, lack of uniformity of warp and weft, fine weaving but bad yarn for selvage. These items are simply what the Consular Report highlighted along with suggested solutions. In response, the trade association attempted to solve the problem by clarifying the items and standard for inspection. When the products are selected through inspection, the inspection would not be effective without standards for who conducted the inspection and how it was done. Moreover, in September 1908, the conference inspection by two inspectors were introduced to improve the objectivity of the inspection and to reply to the complaints from abroad. In 1989, the inspection of trade associations was transferred to the prefecture; 40 members accounted for inspection headquarters, 3 branches, and 2 local offices. Finally, Export *Habutae* Inspector Instructions were enacted, subsidized regarding the uniformity of the inspection of *Habutae* (Fukuiken 1994, pp.556–557).

The stricter method of selection was adopted in the Prefectural Fukui Export *Habutae* Inspection center. Any *Habutae* that was not inspected here must have been forbidden for export outside of the prefecture regardless of scouring. There were 8 inspection areas in the prefecture and the strict inspection came to be done there under the same standard. That is, strict inspection came to be conducted on each item of quality, scouring, width, length, flaws, dirt, dyeing (only for stripe *Habutae*), and weight for *Habutae* that was brought by the inspection candidate along with an application form and receipt of commission. Inspectors believed certificate and surprise inspection was introduced because it is time-consuming to loosen stitching thread. A re-finishing procedure was ordered for those that seemed to contain excessive moisture and blueness or was considered to have insufficient scouring. When *Habutae* suspected of unjust increases in quantity was tendered, it was cut and inspected using chemistry examinations (Inoue 1913, p.141). Regarding the grade of acceptable products, three grades of the conventional pine, bamboo, and plum (A, B, and C) were followed. The certificate was pasted and the inspection number was marked on the *Habutae*. The standard weight system was abolished by measuring the weight on inspection day and two inspectors stamped their job seal on it. These were all entered in red. On the other hand, *Habutae* with short length and narrow width were stamped in black (Inoue,

p.142).

Thus, inspection by trade associations was shifted to the prefectural inspection center. This meant that inspection came to be conducted by inspection equipments and methods defined by the Export Silk Fabric Inspection Regulation of the Ministry of Agricultural and Commercial Affairs. At the same time, since a part of the cost for inspection was supported by the national treasury, the trade association could avoid shortages of money for the inspection. We can find to what extent the government regarded *Habutae* as an important export product. What central government as well as local government supported *Habutae* district must have been suitable means for solving the problems of above (1), (2), (4), and (5). It seems that their support both for technology and inspection was indispensable for assisting the *Habutae* district to solve the “failure of community.”

#### **4. Concluding Remarks**

In this paper, the quality problems of *Habutae* highlighted in the Consular Reports as information strategy of the government was emphasized, and it discussed how the *Habutae* district responded to the Reports. People in the *Habutae* district sincerely received the information as poor reputation of their product and tried to resolve it in cooperation with both the central and local governments. As mentioned earlier, the consul’s market research was excellent, and let the domestic player know the conditions, preferences, and requirements in overseas markets.

Simultaneously, it seems that the Consular Reports recognized local producers as the merit of strong ties with the *Habutae* district. It was solely to maintain the good reputation of the district brand. The *Habutae* district, and more precisely, the trade association was the recipient of overseas information from the consul. The activity of the trade association was legally supported by the Ministry of Agricultural and Commercial Affairs (Yui 1964, pp.41-41). This excluded producers as well as merchants who tried to find benefits from opportunistic dealings in the expanding market.

Although trade associations attempted to make efforts to solve the problems highlighted by the Consular Reports, face-to-face relationships in the local area could be a double-edged sword: Sometimes it had a monitoring function and sometimes it caused “failure of community.” Support by local and central governments helped them with such problems. Of course, both governments helped to improve the level of technology, for example, the abovementioned scouring method. Requirements from advanced nations in those days were sent by the consul (the Ministry of Foreign Affairs) and this

information was embodied by the local *Habutae* district supported by the local government and the Ministry of Agriculture and Commerce. In this sense, as Sugihara very appropriately mentioned, the function of the Ministries of Foreign Affairs and Agriculture and Commerce could be complementary (Sugihara 1995, p.68). As Figure 2 shows, we cannot understand the activities or actors of promoting export expansion from a dichotomous perspective such as between the public and private sectors. Regardless of whether it is public or private, it can be emphasized that it was rather amazing that such a linkage of the informational infrastructure was created in a developing country in the early 20<sup>th</sup> century. Further investigation is needed to know interaction between central government and local one, which seems much different from today. In those days, local government could be called as a 'branch' of central government<sup>16</sup>. Prefectural governors were sent to each prefecture from central government before the Second World War, therefore, local government had stronger powers than we imagine from our local politics today. How did stronger local government perform for the activities of associations, local merchants and local producers? At the same time, function of local government to gather information within areas seems to have been significant for central government. We also have to investigate more on their way to gather information in local area.

The information conveyed by the consul was not only regarding export goods but also regarding production technology and organization of production. The consul could see through the heart of improvements in quality: Modernization of technology and organization was extremely important. In general, the introduction of power loom production in the *Habutae* district was regarded solely as the means of cost reduction. However, from the perspective of uniformity and evenness, cost reduction was hard to accomplish using handlooms. Further investigation is needed to consider this topic; however, we can emphasize that the concept of a global standard transmitted by the Consular Reports was highly significant to the export growth, local industrial district, and the government. In the experience of such interactions, not only one of the origins or crucial factors of 'East Asian miracle' but also good implication for contemporary developing economies that have to improve quality of their products immediately.

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<sup>16</sup> On this point, I owe much to Professor Keishi Shiratori for his valuable suggestions.

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### **Appendix: Low Quality Problems Highlighted by the Consular Reports: Case of *Habutae* (extract)**

#### 1. Faults in Inspection—Lyon, October 1900

Headline: Attention on the Inspection of *Habutae* in our Country

According to the proposal of our chamber of commerce, when the *Habutae* Inspection Center is established, if the principles of inspection written on the left are accepted, it would be convenient for dealing.

- To fix the official standard weight of the *Habutae*
- To fix the upper and lower range of the standard weight
- To refuse to issue the certificate for illicit goods that are increased in quantity through sugar or chemical salt, etc.
- To award an appropriate grade to *Habutae* that has a fault in weaving, lack of uniformity in weaving, or a flaw in selvage
- To reject dirty or yellowish articles
- To guarantee the width and length of the fabric

## 2. Low Quality and Attention—London, July 1900

Headline: Japanese *Habutae* in London

As Japanese *Habutae* came to be low quality, *Habutae* in general lost its reputation. It more or less affects the import. In the past when it was trusted, various Japanese articles in the European and American markets faced increased demand and sold well; shortsighted producers immediately produced numerous low quality articles. Brokers tried to utilize it and wanted to gain illegal profit. Many facts show these examples of loss of trust. Thus, *Habutae* was in good demand for the last couple of years, but it experienced lower quality. It is truly deplorable that they made the same mistake. If I would raise a few points concerning export, they would be (1) to fix the grade; (2) to determine the weight, width, and length of *Habutae*; (3) to demonstrate how to fold, and (4) to provide careful inspection...

## 3. *Kawamata, Echizen*, Sending Inferior Articles—Bombay, April 1902

Headline: Trade Situation of Imported Silk Fabric

...Recently Japanese *Habutae* came to be coarse; I am worried about it losing its reputation. A merchant remarked the other day that since *Kawamata Habutae* is cheap, it sells very well and is full of promise. However, it would lose trust and prevent trade if they deliver inferior articles out of order. It is said that there are many silk traders who are dissatisfied with this point. Thus, *Echizen Habutae* has many faults as well...

## 4. Spot in Selvage, Damaged Articles—Lyon, September 1903

Headline: Complaints against Japanese *Habutae* in Lyon

Japanese *Habutae* imported by *Habutae* trader Soudchoux & Co. in this city was dyed black. A grey spot appeared at the same intervals in both selvages. As a result, hundred of *hiki* of *Habutae* were all flawed and they were claimed to be greatly damaged (This sample is kept in the Ministry of Agriculture and Commerce).

## 5. *Kawamata*, Terrible Increase in Quantity—Lyon, November 1903

Headline: Complaints against Japanese *Habutae* with Terrible Increase in Quantity by Import Traders in Lyon

Domestic *Habutae* import trader “Naboltz” Trading Company sent a letter to this consul, complaining against a terrible increase in the quantity of *Kawamata Habutae* and declaring a need for reform. In summary, the starching of *Kawamata Habutae* went from 8 per cent to 12 per cent until the last season. It has drastically increased over the last several months by 20 or 30 per cent, and 35 per cent in extreme cases.

6. *Kawamata*, Starching, Inferior Quality—Sydney, March 1904

Headline: Demand Situation of Japanese *Kawamata Habutae* in Sydney, Australia

Local demand for Japanese *Habutae* is very large and Osawa Trading Company imported nothing but *Habutae* from Japan. As starched *Habutae* is not popular here and does not sell at all, it has not been imported recently. Starched *Habutae* looks precise, shiny and very beautiful at a glance, but once it is washed, it suddenly loses its weight and sheen. Additionally, in general, the quality is low enough to be frayed during laundering and does not maintain its original shape. Its durability is also extremely inferior to other articles.

7. *Kawamata Habutae*, Starching—Lyon, March 1904

Headline: Demand Situation of Japanese *Kawamata Habutae* in Paris and Lyon, France

In the French market, as old customs, *Kawamata Habutae* with starching from 5 per cent to 15 per cent was traded smoothly. However, the quantity of starching of *Kawamata Habutae* heavily increased last year. In extreme circumstances, 30 per cent of shipments were starched. As a result, *Kawamata Habutae* suddenly lost trust in the local market....It is not good at all but rather is harmful to the dyeing process....Complaints against the decreasing quantity after dyeing is the worst problem...Starched *Kawamata Habutae*, particularly excessive increases in quantity due to starching causes complaints...

8. Lack of Uniformity of Weft, Incomplete Finishing—Chicago, May 1904

Headline: Demand Situation of Japanese *Habutae* in Chicago

The reason why Japanese *Habutae* lacks uniformity of density of weft is that it is hand-woven. The appearance is not perfect. This uniformity is more noticeable after the process of dyeing. That is because the weaver wove strongly near her hands and weakly farther away from her hands.

9. Low Quality; Thin Fabric; Lack of Uniformity of Width, Length, and Selvage; Folding—Ottawa, May 1904

Headline: Market Research on Japanese *Habutae* in Canada

The fault is that the fabric is too thin due to saving materials...Further, the width, length, and selvage are not uniform. Producers concerned with trust should improve these aspects. There is a bad habit for Japanese *Habutae* called “double fold”—to fold from each side and sew both sides. Traders undergo great trouble...

10. Different from Sample—Mexico, May 1904

Headline: Market Research on Japanese *Habutae* in Canada

The fault of the Japanese *Habutae* is that the quality is low and the article is different from the sample. The main point of improvement is to lower the price...

11. Increase in Quantity with Starching—New York, June 1904

Headline: Demand Situation of Japanese Starched *Habutae* in New York

There are numerous complaints against (starching) because removing starching is troublesome as well as decreases weight and lowers quality. Originally, *Habutae* with starching was started for the producer or broker to produce or sell using a shortsighted policy. Local importers and dyeworks never order such products. When it is imported to this country, specific tax is charged for silk, thus, we have to be charged for starching.

12. *Echizen Habutae*, Abuse of Certificate—Lyon, March 1905



Headline: Complaint against Japanese *Habutae* to France

Inferior articles can often be found in Japanese *Habutae* exported to this city. The certificate is not correctly graded; at the same time, they complain against incorrect stamps of approval. According to further investigation in the neighborhood, the abovementioned complaint concerned all Japanese *Habutae* except that of Kawamata. For example, regarding the two samples attached here, even though their difference is apparent, the fact that pine grade (grade A) is awarded equally to them is sufficient proof that the inspection is not strict. Nevertheless, with the stamp of approval for width and length, it is often found that the average lack of length is 1.5 yards per 1 *hiki* (1 *hiki* is equivalent to 50 yards). This is accurately proved by the account books of a certain company.

13. *Kaga Habutae*, Abuse of Certificate—Lyon, April 1905

Headline: Abuse of Certificate of Japanese *Habutae* exported to France

Again, the two samples are attached with the gold stamp of export *Habutae* from Ishikawa Prefecture. These are articles from a package that was recently cut. It is sufficient to prove that the abuse of the certificate of inspection is extremely serious...

14. Selvage, Scouring, Dirt, and Scratches—overseas business trainee in Lyon, 1905

Headline: The Fault of Japanese *Habutae* in Lyon, France

(1) weak and lack of uniformity of selvage...(2) low quality of soap used in scouring...(3) insufficient washing after scouring...(4) dirt and scratches on the fabric...

15. Inferior Quality, Weight—Lyon, May 1907

Headline: Improvement of the Harmful Influence of Producing Low-quality Articles Imported by France

Among the *Habutae* that arrived this year, we can find numerous low-quality articles...

16. Dirt, Flaws, Methods of Weaving, Durability, Credibility of Certificate—London, August 1909

Headline: Flawed Articles of Japanese *Habutae* in Britain

I repeatedly mentioned that the quality of Japanese *Habutae* has been decreasing. In order to demonstrate the terrible quality of *Habutae* exported to the London market, I attempted to collect several samples of flaws. I would like to send them as references for the authorities and those concerned (The samples are kept in the Industrial Section, Ministry of Agriculture and Commerce). Sample 1: terribly dirty, 2: unlimited stripe flaws, 3: soap stains spread over the entire surface, 4: unlimited weaving flaws, 5–6: extremely coarsely woven, and 7: not densely woven. This sample is one sleeve of a blouse made by Fukui 6 *monme* *Habutae* which shows how much changed after a single washing. The above samples are cut off from the *Habutae*, which is all made in Fukui and graded as pine (A).

17. Flaw of *Echizen Habutae*—New York, April 1910

Headline: Low Quality of Japanese *Habutae* in the United States

Many low-quality articles in Japanese *Habutae* not only create trouble with dealers but also decline in the market. Recently, the decline has been extremely terrible. The worst is in the *Echizen omome* (thick) 7 *monme* to 8.5 *monme*....As mentioned in the previous report, the low quality of *Kawamata Habutae* has not been improved...Only the *Ishikawa Habutae* is excellent and is a little criticized....

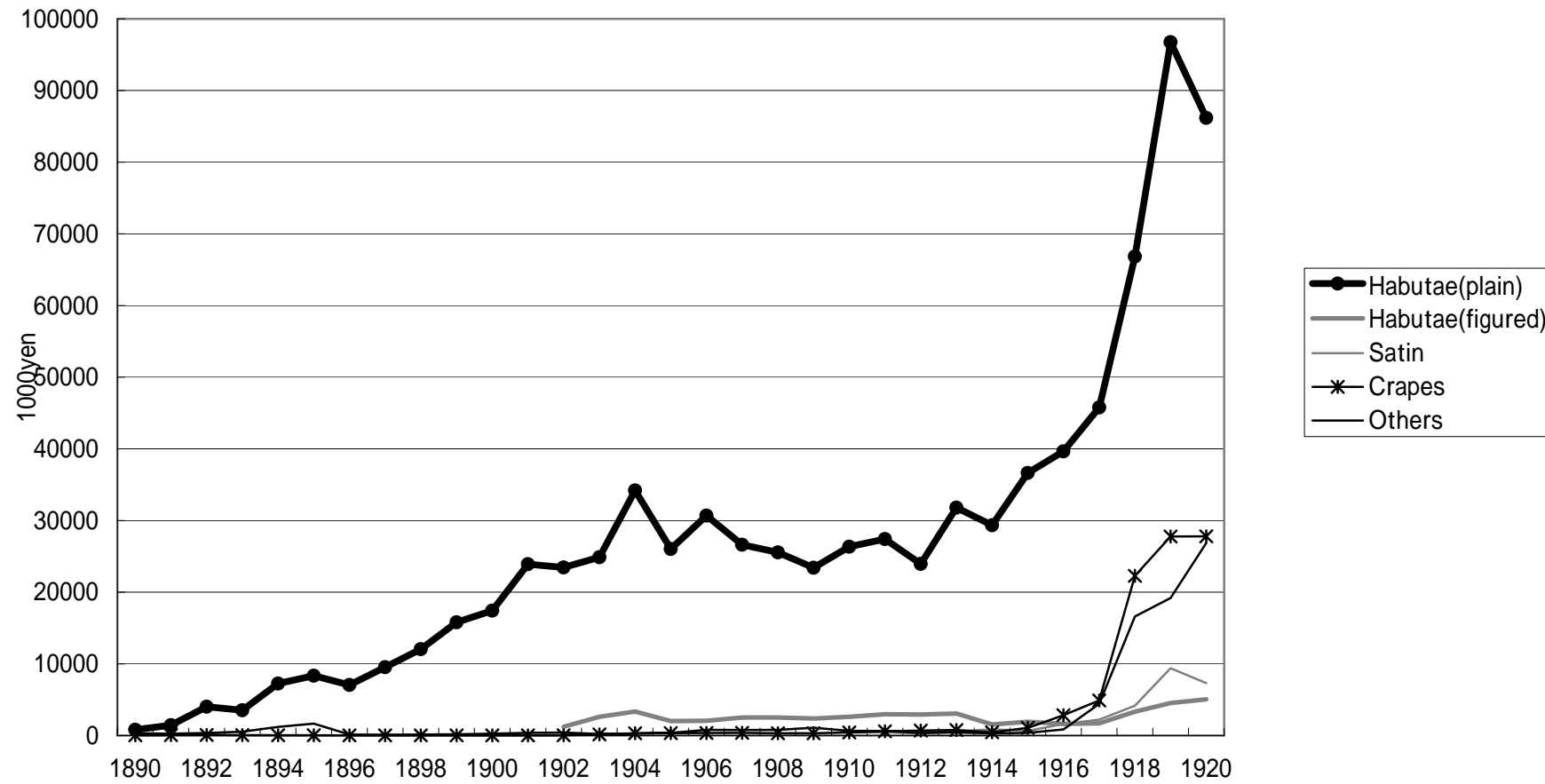
18. *Echizen Habutae*, Lack of Uniformity of Weaving; Weaving Yarn; Lack of Weaving Yarn; Dregs of Soap, Dirt and Wrinkles; Credibility of Certificate—London, September 1910

Regarding to the quality of *Echizen Habutae*, British *Habutae* trader claimed to the consul. Even though improvements can be recognized in *Karume* (thin) *Habutae* less than 8 *monme*, many *omome*, or more than 8 *monme*, *Habutae* remained as it was. Among *omome Habutae* imported here, there are inferior goods that include the following: (1) lack of weaving uniformity; (2) unevenness of weaving yarn, such as

using both thick yarn and knotted silk; (3) lack of warp or weft; (4) adhesion of soap dregs in the scouring process; (5) yellow stains; and (6) folding wrinkles in the finishing process. The fact that such inferior goods were graded pine (A) apparently shows that the inspection is not strict enough...

Source: Gaimusho Tsusho-kyoku ed.(Section of International Trade, the Ministry of Foreign Affairs ed.) 1911–1933. *Tsusho Isan (Fukkoku-ban)*, (The Consular Reports, reprinted), Tokyo: Fuji Shuppan.

Figure 1 Export of Silk Fabrics: 1890-1920 (current price)



Source: *Foreign Trade of Japan: Statistical Survey*, 1935.

Overseas branches of trading companies  
(e.g., Mitsui Bussan)

Media  
(e.g., Reuter, Toyo Keizai Shinpo)

Consuls

Overseas business trainees

Overseas commercial museums

Ministry of Foreign Affairs

Ministry of Agricultural and Commercial  
Affairs

Ministry of Education

Chambers of commerce

Local exhibitions

Commercial museums

Industrial experimental Stations  
Industrial testing stations

Vocational schools

Large companies

Local merchants  
and manufactures  
(Local trade  
associations)

<Foreign countries>

<Central government>

<Local government>

Figure 2: Informational Infrastructure in Japan around 1910 (Sugihara 1994, p.83)