

Changes in textile industrial agglomeration under globalization: a case study of the denim jeans district¹⁾

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Abstract This paper investigates Japanese textile industrial agglomeration under the influence of globalization. Each textile district in Japan has problems because of mass-produced cheap imported goods from China, which became more common after the 1990s. The Japanese apparel market overlaps with 90% of the clothing manufactured in and imported from China. As a result, small and medium-sized Japanese companies, whose work involves dyeing, sewing, washing, and sales, have been weakened by this competition. Okayama prefecture is one of the most famous apparel manufacturing districts in Japan. The Kurashiki-Kojima area is known as “the birth place of Japanese denim jeans products.” Many denim manufacturing companies are headquartered in Kojima, even though big national jeans makers have closed their domestic factories to develop factories abroad. In this paper, we find out why these areas have remained competitive despite being weakened after the big companies went abroad. We conclude that a company coordinating Tokyo’s or Osaka’s apparel companies with a sewing company in Kojima can make business in this area more brisk.

Key Words Textile industry, Industrial agglomeration, Jeans products, Globalization, Medium- and small-sized firms

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2. History of the Okayama industrial district
3. Conversion in high-priced jeans
4. Local division of labor in the jeans industry
5. The existence of a coordinating company in Kojima
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1. Introduction

In this paper, we research the textile industrial district in Kurashiki-Kojima from the viewpoint of historical change. Our findings and data are based on field studies from 2010 to 2012 in Kurashiki. This paper comprises the following parts: Section 2 examines the implications of historical developments in the Okayama textile

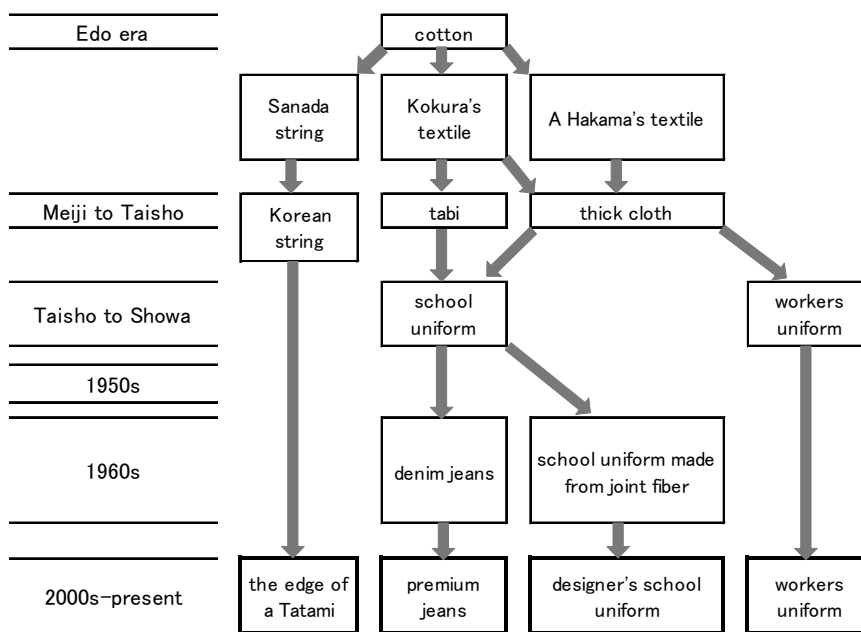


Figure 1 The history of Okayama's textile industry

Source: The author created this figure with referenced for the Okayama Economic Research Institute, 1993.

industry. Section 3 shows that small and medium-sized enterprises have avoided the high-value jeans market, while major manufacturing companies develop their products overseas. Section 4 demonstrates the importance of the small and medium-sized enterprises and reveals that local divisions of labor exist in the denim jeans industry. Section 5 analyzes a coordinating company whose purpose is both introducing the subcontract firms to apparel companies and proposing denim jeans production to them. Section 6 discusses the conclusion of our field research.

2. History of the Okayama industrial district

This section investigates historical developments in the textile industry at Okayama, one of the most famous apparel manufacturing districts in Japan²⁾. According to the Census of Manufacture, between 1995 and 2000, Okayama was the second largest prefecture in terms of the Japanese apparel industry after Osaka. Okayama plays a considerable role in Japanese apparel production. In this area, not only the apparel industry but also related industries such as textiles, sewing,

and washing process flourished. Many firms that are independent of wholesalers operate businesses from design to production to sales (Tatemi 2005).

From the past to the present, small and medium-sized firms in Okayama have survived, even while experiencing bankruptcy and discontinuance of business. Hence, Okayama's textile-apparel industrial district has such a long history (Figure 1).

The origin of Okayama's apparel district dates back to the Edo era, when the most important product was *tabis*, traditional socks worn with a kimono. Before the Edo period, Kojima was an island floating on the Setouchi Sea. After land reclamation, Kojima had excessive salt residue and hence, was unsuitable for rice cultivation. Under such conditions, salt production and cotton plantations prospered. There was a custom of visiting the Kompira Shrine in Shikoku and the Yuga Shrine in Kojima in the Edo period, and while there, people purchased string for repairing their *tabis*. In the Meiji and Taisho eras, manufacturing firms of *tabis* amounted to 400 houses throughout the Okayama prefecture and 110 houses in the Kojima area. This is the origin of the textile industrial agglomeration in Okayama.

In addition, we can point to the existence of the school uniform industry in the Taisho and Showa eras, which helped create the industrial district. In the Taisho era, Japanese people stopped wearing the

clothes of *wafuku* and began wearing Western clothes. School uniform production amounted to 9,600,000 by seven major companies of the Okayama prefecture in 1937. Okayama prefecture accounted for about 90% of the national quantity of production and was called "the kingdom of school uniform."

After World War II, the Japanese denim jeans industry flourished. While Japan's economy experienced rapid growth, some clothing makers began producing jeans products. Because of the controlled economy in wartime, the school uniform shifted to military uniform production. After the war, fewer children wore school uniforms and hence, school uniform production reduced. After the 1950s, nylon replaced cotton as a primary material as part of the so-called "synthetic fiber revolution." As a result, major fiber makers systematized small and medium-sized enterprises (*keiretu*), and after that the integrated system of production from raw material to finished product in the Kojima was extinguished. Some companies that separated from a major manufacturer's organization began to produce jeans. Maruo Clothing, originally a small company in the Kojima area, imported U.S. sewing machines and manufactured original jeans. Maruo Clothing became a company whose annual turnover was around 10 billion yen in only 10 years. Table 1 shows the top ten clothing manufacturers in Japan in 1981:

Ranking	Companies	Location	sales (100 million yen)		
			1981	1980	The ratio of the previous year
1	Maruo Clothing	Kurashiki	157	165	95
2	Bobson	Okayama	153	145	105
3	Edwin	Tokyo	150	135	110
4	Levi's	Tokyo	130	105	122
5	Wrangler Japan	Tokyo	115	108	105
6	Japan Half	Kyoto	60	52	-
7	Big Horn	Fukuyama	57	47	120
8	Sato Apparel	Hiroshima	55	57	96
9	Blue Way	Hiroshima	50	54	92
10	Takaya Apparel	Ibara	48	47	103

Table 1 The ranking of the jeans manufacturing companies in 1981
Source: Kawai, 1983.

3. Conversion in high-priced jeans

In this section, we will investigate the reasons for the survival of small and medium-sized enterprises, despite the impact of the overseas relocation of factories. We confirmed that Okayama's smaller firms have survived by shifting to

the high-priced jeans market, or "premium jeans."

In Okayama, the production system of dyeing, textiles, sewing, and washing process was established in the 1970s. As a result, production rose approximately above 60 million jeans in 1981 and 70 million in 1987 (Figure 2). We called this

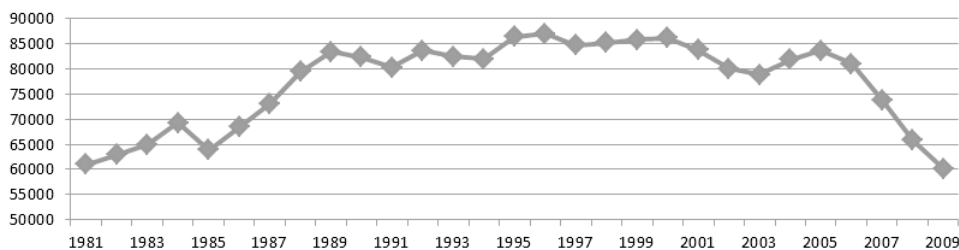


Figure 2 The amount of domestic jeans products, 1981-2009 (1000th place)

Source: Japan Senken Shinbun, 2006

Note: A company that has not participated in Japan jeans conferences, such as UNIQLO, is not included.

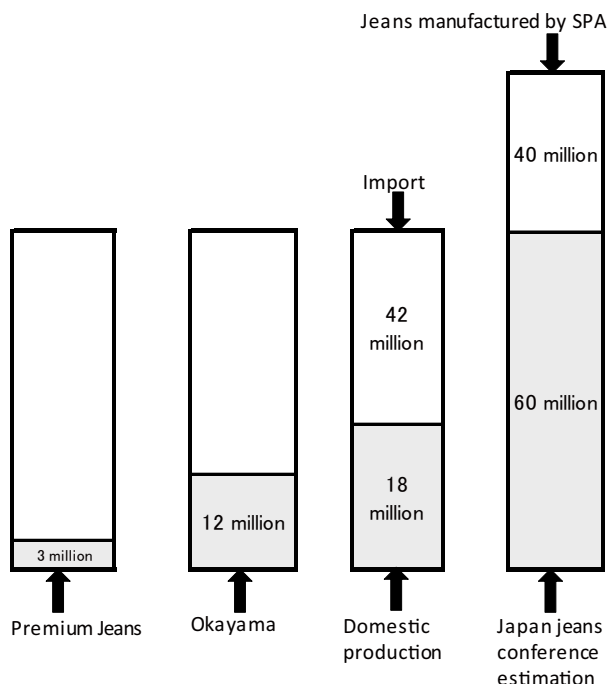


Figure 3 The outline of the jeans market in Japan (2009)
 Source: Japan Senken Shinbun, 2006 and author’s hearing survey.

period “expansion term” in Japanese jeans market. After that, the market began to reach a saturation point. Major national brand makers began to relocate their factories to take advantage of low-cost labor. After the 1980s, the jeans market is characterized by the following two points:

First, we can characterize the second half of the 1980s as a period of arrangement and reduction of factories by major national brand makers. For example, Bobson and Big John, which are among the most famous national jeans makers, found a new factory in Yamaguchi prefecture in 1985 and 1989, respectively. The purpose was to explore more low-cost labor in that area.

In addition to this, Big John and Bobson established subsidiaries at Hong Kong and Shanghai in 1989 and 1995, respectively. As a result, the number of workers committed to domestic clothes and textiles (including denim jeans products) decreased. Moreover, the number of companies in these industries decreased. According to the Economic Census, in 1991, the peak of the number of companies engaged in manufacturing clothes or textiles was in Okayama. The peak of the number of workers in that industry was in 1986. Thereby, the amount of jeans produced in Japan decreased after 1996 (Figure 2).

Second, we can characterize the jeans

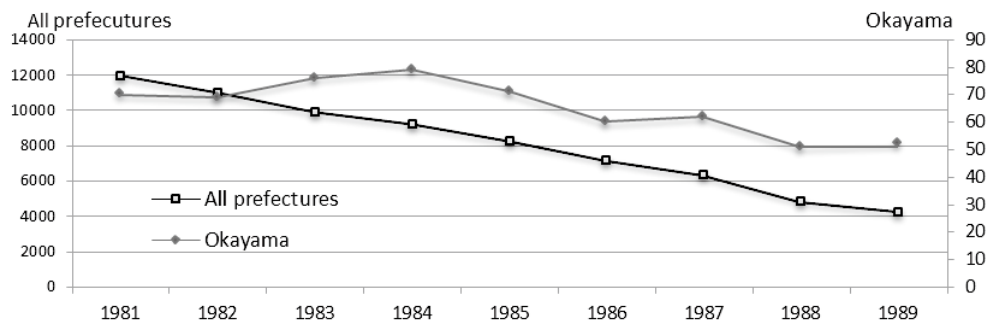


Figure 4 The number of companies engaged in dyeing (Okayama and all prefectures)
Source: Economic Census, 1981-2009.

market after the 2000s as the pioneering phase of a premium-jeans market. Many consumers began to love vintage finishing, and preferred a used-looking style. It became typical for manufacturers to perform decoloring and stone washing on the jeans before customers wore them. There are many types of jeans in the Japanese market. The small and medium-sized enterprises in Okayama began to specialize in these various types of jeans after the period of globalization. This period changed

managements strategies, making these companies more competitive in the jeans market. Domestic jeans production stood at about 18 million units in 2009. Okayama accounted for approximately 66.9% (about 12 million products) of them (Figure3). In addition, Okayama’s share of the textiles of denim and the washing process was about 80-90% of the national total.

Thus, the small and medium-sized enterprises in Okayama have focused on high-price jeans, which are estimated to

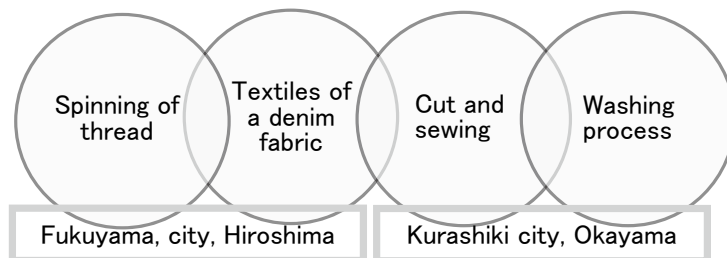


Figure 5 The division of labor between areas of jeans
Source: The author created this figure with referenced for Tanaka, 2010.

account for approximately 3 million products (Figure 3). The high-priced jeans change to a great extent through the washing process. According to the Economic Census, the number of businesses engaged in dyeing at Okayama has increased slightly recently. This contrasts with the dyeing businesses of Japan as a whole, which have been decreasing sharply (Figure 4). As we mentioned in Section 2, the technology of the textile industry was accumulating mostly in Okayama. Therefore, Okayama firms were able to pivot to the premium-jeans market.

4. Local division of labor in the jeans industry

In the previous section, we have clearly shown that the small and medium-sized enterprises in Okayama have shifted to the high-priced jeans market. In Section 4, we will investigate the structure of the division of labor in jeans production.

In general, the production process of jeans manufacturing is divided into two phases. First, the process of producing denim textiles, and second, the process of producing jeans products. Thread is first dyed by skilled worker. The denim fabric is completed by both weaving the warp and the woof with an automatic loom. After that, it is passed to sewers. The denim fabric is judged using computer aided design (CAD) or computer aided manufacturing (CAM), and sewing is carried out by a sewing machine. At the

end of production, the washing process company ensures that the product matches the customer's stylistic preferences. The used-style jeans are then shipped to jeans shops and department stores.

Thus, for the process in which denim and jeans products are made, many small and medium-sized enterprises divide and cooperate. In the Kojima area, many sewers and washing process companies are emerging (Figure 5), which is a merit of this textile district. However, a different reason exists for locating head offices in Kojima between big apparel makers and the smaller manufacturers.

Even though the major national jeans makers have relocated their factories overseas, many companies still exist with head offices in Kojima. Why is that? They are locating the head offices in Kojima in order to perform information sharing with a special contractor. In addition, after forming a plan and sewing a sample, there are cases where in the sample product is different from that imagined by the apparel maker. Then, an arrangement with a special contractor in Kojima is required. Hence, major national brand makers still remain headquartered in Kojima.

Furthermore, in case of a minor jeans maker requesting for more cooperation with a special contractor, the minor maker will place an order with an outside apparel maker because its production facility is insufficient. However, if a company is going to gain

more customers, it needs to find a market in which it does not compete directly with major manufacturers. Then, this company will want to cooperate with a local special contractor, who has high-quality technology and abundant productivity.

Finally, a company that offers sewing and expertise in the washing process requests an order from outside the area. For example, a company receives work from an apparel maker in Tokyo or Osaka. Thus, in the Kojima area, a complicated division of labor relations exists. What makes this complicated division of labor work? We will examine this issue in the next section.

5. The existence of a coordinating company in Kojima

On the basis of our field study and survey, this final section focuses on the network inside Kojima. At first, the company performing Original Equipment Manufacturing (OEM) production will be considered. This company substitutes for an apparel maker's producing function. Work is introduced to the subcontracting company in the Kojima area by Company A. Next, Company B, which is a subcontracting company of sewing processing, will be considered. Company B receives work from Company A and performs sewing services for jeans products. This section clarifies the nature of this cooperation.

5-1 Company A: the proposing OEM company

Company A has a head office in the Kojima area. The enterprise was inaugurated in 1997, and by 2010, there were 37 employees in the company. The average age of the employees is early thirties. The percentages of in-house production, in-and-outside-the-country notes production, and overseas subcontract production are 30%, 30%, and 40%, respectively. Mr. F, a founder of Company A, is the president. He became aware of the high-priced jeans sold in Osaka and Tokyo at the time when the company was founded. He believed that a small company offering various kinds of products could make a profit rather quickly. Company A does its business by partnering with a retail store.

First, Company A created a production and division-of-labor system inside Kojima. Mr. F spoke to the sewers and the washing processors in Kojima. Since the major manufacturers were moving their factories overseas, the work of these Kojima companies was decreasing. Then, Mr. F introduced them to the manufacturers in Tokyo and Osaka.

Second, Company A substituted for a manufacturer's production control function. The company introduced the optimal special contractor to the manufacturer outside the area. Company A, then, took a fee from the companies whose head offices were located in Tokyo and Osaka. Outfits such as Company A are known as the "*furi-ya*" in the Kojima area. Thus, Company A connects to a special contractor and a manufacturer that

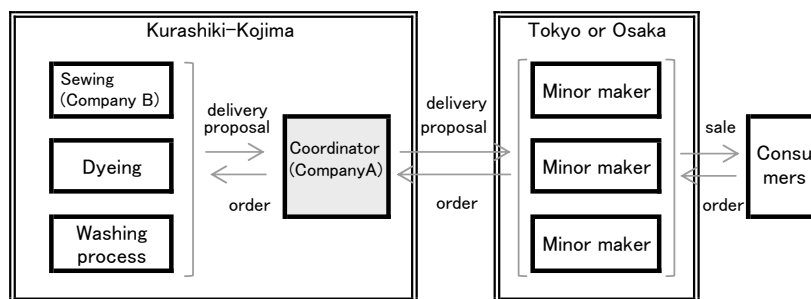


Figure 6 The role of a coordination company in Kojima

Source : The author created this figure with referenced for the Chusho Kigyo Kinyu Ko-ko Chosabu, 2003.

has moved its production overseas.

5-2 Company B: the sewing specialized company

Company B has a factory in Okayama city. The head office is located in the Kojima area, which began in 1952. Although the company had its own brand at the time it was found, it soon shifted to sewing process only. Its present customers include about 20 companies. It produces 70% at its factory and requests assistance from another company 30 % of the time. Company B has adequate sewing machine equipment, corresponding to the needs of various kinds. Moreover, it makes proposals to apparel makers. The company will take over sewing of all jeans products. Orders are received from major brand makers in Tokyo or specialty store retailer of private label apparel (SPA) companies in Italy.

The first feature of Company B is substantial sewing machine equipment corresponding to various jean products. The company has a special sewing machine

made by Union Special that is among the most famous sewing machine makers in US. Therefore, it can also respond to various orders. Moreover, it is striving to ensure that young workers can be effective immediately after a training period of three months.

In addition, Company B is performing proposal activities for companies that place an order. The company examines sample products and determines whether sewing is possible. It attempts to hold down the costs of sewing.

Finally, it advertises its functions. Young men who like jeans have gathered at Company B. The factory is open to employees beyond working hours or on a holiday for using a sewing machine freely on surplus cloth. Flyers advertise that the company providing sewing serves for the major brands of Tokyo and Osaka.

As mentioned above, Company A recommends work for Company B. Company A introduces work not only in terms of sewing subcontracts but also for dyeing and washing process. Based on its accumulated know-how, Company A performs proposal

activities for apparel makers. Recently, Company A has improved sewing technology. Overseas deployment of jeans production has reduced the number of factories. However, in the Kojima area, the coordinator who connects an apparel maker with a special contractor can thrive (Figure 6). These conditions enable small and medium-sized enterprises to produce high-priced jeans.

6. Conclusion

This paper examined the types of changes that occurred to the industrial district in Japan under the influence of globalization. The textile industrial agglomeration in the Kojima area produces various kinds of products using accumulated technology. The typical example is high-priced jeans. To conduct both the sewing and washing of various types of jeans, it is necessary to focus on the quantity of production, which is accompanied by an inventory risk for small-lot production. Small and medium-sized enterprises have survived in the premium jeans market because of the existence of coordination companies, which have introduced industrial agglomeration. In this way, small and medium-sized companies in the Kojima area have survived.

However, the coordination company is undertaking the enterprise as its own business now. Therefore, they also experience the problem of scrambling for customers. Cooperation with the Kurashiki

city office or Okayama prefecture is thus required. Moreover, the fact remains that the strong point of this area is advertising, which is a future research subject.

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Note

- 1) This work is supported by Grant-in-Aid for Scientific Research(C) from 2011 to 2014 [research number: 23530692]. In addition, this paper translates Nagata (2012) into English.
- 2) Fuse (1992) and Tanaka (2010) are typical precedence researches about textile industry in

Kurashiki-Kojima area.