

Chapter V

Experience of Development of Small and Medium Enterprises in the Textiles and Sewing Industry

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1. Outline of the Sewn Textile Goods Manufacturing Industry (Small and Medium Enterprises)

The objective of this study is a survey of the textile and sewn textile goods industries, but for the following reasons emphasis has been placed on the sewn goods industry.

The underlying objective of the work is to identify examples of successful endeavors in Japan that would be of reference to developing countries, and in this context it is the sewn goods industry that is by far the more relevant and useful.

Wearing apparel and sewing account for a majority share of textile trade, and the typical pattern is one of developing countries exporting textile goods to the more advanced ones.

Further, relatively little investment is required for the sewn textile goods industry, that is economically efficient at a scale much smaller than that of high level production of textiles proper. Hence it is a suitable industry for promotion of small businesses including microenterprises or cottage industries.

Sewn textile products offer developing countries a chance to use labor resources to increase the value added of exports, a matter of no small importance to those countries.

1.1 Overview of Japan's Textile Industry

a. Development process of the textile industry from 1945 on

The textile industry was a leader in contributing to postwar exports but a swift increase in imports in recent years has resulted in Japan becoming a net importer. In examining the development of the industry since 1945 the following major changes are found to have taken place.

During that period, small and medium scale enterprises (SMEs) were of great importance to those changes. By way of providing "examples of success" in this study report, it is deemed significant to take up these changes as deserving the attention of many developing nations.

- In 1946 a three-year Textile Industry Reconstruction Plan was formulated.
- In 1946 exportation of sewn goods using cotton imported from the U.S. began.
- In 1949 textile exports were valued at ¥ 650 million.
- In 1950 demand for textiles increased following the outbreak of the Korean War. Exports rose to ¥ 350 million in 1951. Major export products were shirts, blouses and

silk handkerchiefs.

- In 1952 demand collapsed when the war virtually ended and operation of spinning mills were forced to reduce operation. Emergency measures were adopted by the government to offset the impact on SMEs in the sector, and in overall terms production cutbacks were enforced.

- Since 1954, the Japanese Ministry of International Trade and Industry has taken the initiative in adoption of "voluntary restraints" on low-price exports to North America in fear of import restriction by the importing countries.

- Exports continued to rise, however, and in 1955 were \$43.5 million. Exports rose especially on the strength of the "dollar blouse". As a byproduct of this, restrictions on imports were imposed in the U.S.

- The Japanese government began to monitor exports of cotton goods to North America in 1956.

- A Short-Term Trade Agreement (STA) with the U.S. was signed in 1961 regarding cotton goods exports.

- This was supplanted by a Long-Term Trade Agreement (LTA) the following year covering world trade in cotton goods.

- A temporary decline was seen in 1960 when the U.S. economy dipped but owing to increased exports of synthetic textiles and procurement related to the Vietnam War exports of sewn goods increased and reached the level of \$213.6 million in 1970.

- Japan's foreign reserves in 1971 were \$15.2 billion and the surplus on the trade account was \$7.8 billion, both record highs.

- A textile agreement, which restricts the export from Japan, with the U.S. was signed in 1972. It covered cotton, woolen and synthetic fiber products.

- The Japanese government purchased excess capacity from the industry after this agreement and funds were provided for the textile industry on an emergency basis.

- In 1973 the GATT multilateral agreement on textile trade was signed.

- Also in 1973 Japan's imports of textiles surpassed exports by \$600 million level and Japan became a net importer of textiles in this year. Apparel imports rose to the level of ¥ 129 billion. China, South Korea and Taiwan were the major supplier countries.

- A policy paper on the textile industry in the seventies was drafted in 1973. It called for a shift away from labor-intensive production to knowledge-intensive production, improvement of distribution systems, and modernization.

- During 1974 exports of textile goods on a quantity base declined 55% against the previous year and the textile industry applied for government protection as a recession-hit sector.

- Thereafter, the floating of the yen and its appreciation as well as catching-up in the textile goods market by other Asian countries forced the Japanese industry to enter a phase of marked structural transformation.

- The most recent "Vision for Textiles" policy paper adopted by the government calls for acknowledgement of and response to free market forces, strengthening of international competitiveness, and creation by technological innovation of new business opportunities.

- In 1998 imports totaled 2.6 trillion of which 1.9 trillion was for apparel.

A more detailed summary of the evolution of the industry and policy is provided below in c.

b. Export and Import of Textile Products, and Production Values

A brief survey of the postwar history of Japan's textile industry (including apparel, that is, sewn goods) from the viewpoints of trade and domestic production follows.

i) Imports of textile goods

The value of imports of textile goods by Japan is shown in Figure 1-1. A sharp increase in the value of imports can be seen accompanying the appreciation of the yen.

Major import items at the outset of the period examined were textile materials (cotton, wool, etc.) but subsequently imports of apparel increased in keeping with the improvement of living standards and income, and with a rise in domestic labor costs.

Because the share of labor costs in total cost of production of apparel is high, this decline in the price competitiveness of Japanese industry was matched by a sharp increase in imports from lower-cost countries, notably China and several Asian countries.

At present the annual value of these imports amounts to about ¥ 2 trillion or about ¥ 6 trillion in terms of the retail market value.

Imports have exceeded exports since 1986, and at present are about three times the value of exports; the annual deficit in trade is about ¥ 1.8 trillion.

China provides about 63% of imports, followed at a distance by Italy, 8.2%; Korea, 5.2%, the USA, 4.5%, and Thailand, 2.5%.

ii) Textile goods exports

The level and trend of Japan's textile goods exports are shown in Figure 1-2 (in yen) and Figure 1-3 (in dollars). The sharp increase in exports by the early 1980's and the sharp cutback in exports following appreciation of the yen are shown clearly in Figure 1-2.

As shown in Figure 1-3, dollar-denominated exports are rising. The bulk of exports is made up of raw materials and yarn for synthetic textiles, while secondary products (including apparel) account for less than a quarter of the total. Some of the exports include fabrics that are to be re-imported as apparel.

With regard to exports of apparel, a sharp rise was seen in exports of secondary processed goods (including apparel) during the period from 1946-71 (Figure 1-2, Figure 1-3). Growth of exports stopped, however, in 1972.

Since 1981, as shown in Figure 1-4 (showing dollar-denominated data), apparel as a sub-category of secondary processed goods clearly shows a decline in export value.

Apparel exports contribute only about one-twentieth of the total textile goods exports. Major export items are outerwear, shirts, foundation garments, hosiery and

scarves. The most important export destinations are the USA, Taiwan, China, Hong Kong and Western Europe.

iii) Apparel production

The value of apparel production in Japan since 1974 is shown in Figure 1-5. A sharp decline in demand is evident since 1991, owing to the economic downturn (bursting of the bubble) and the appreciation of the yen.

Comparing the value of production in 1991 and 1998, production values showed declines to 66% of the earlier value for all apparel. Outerwear, and shirts and blouses, that together account for about three-quarters of production, declined to 60-69%, underwear and baby wear declined to 85-89%, and nightwear and working wear declined to about 37%.

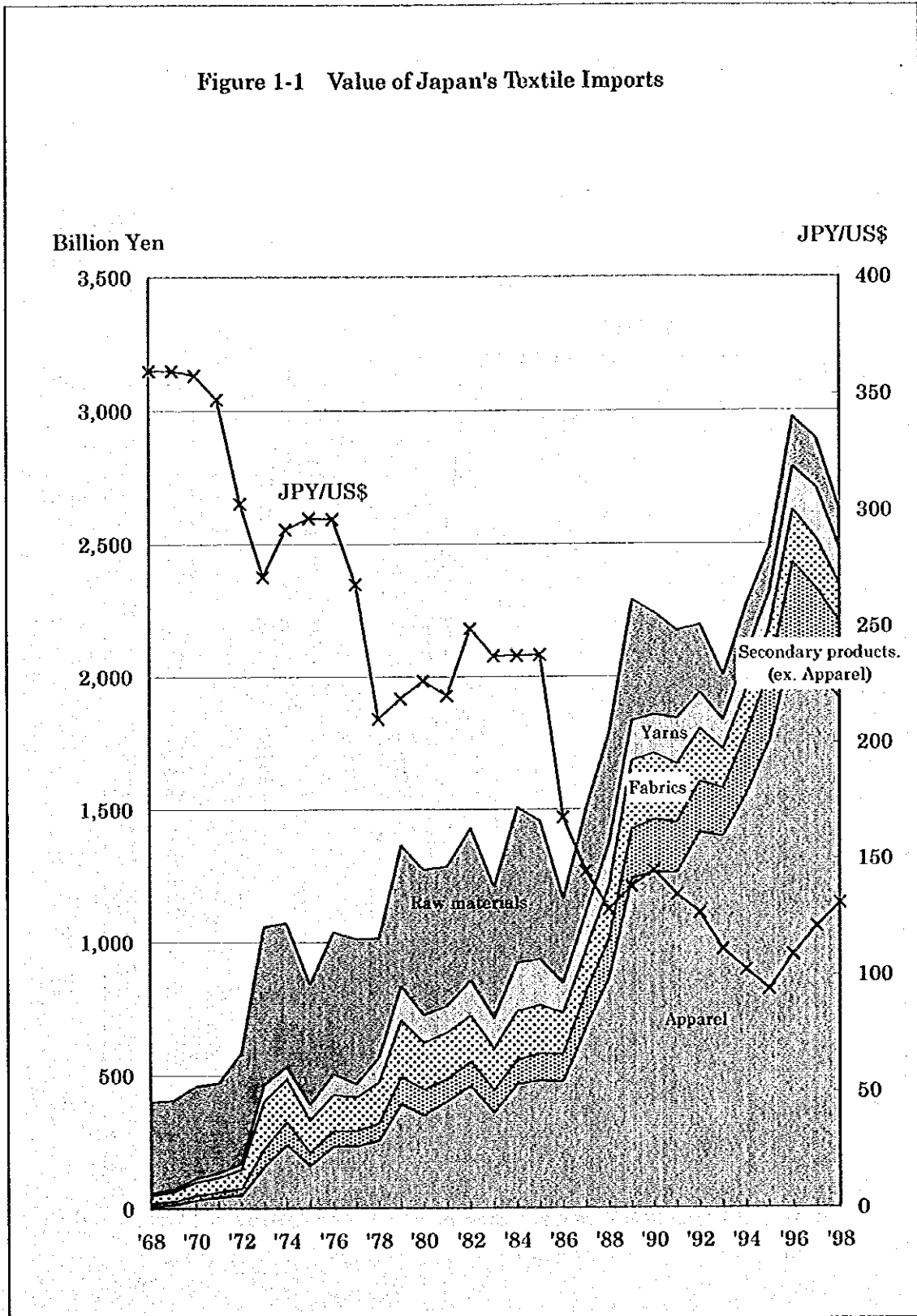
The economic downturn has taken a heavy toll in the industry; many companies have failed or have voluntarily shut down.

iv) Import ratios for apparel

Import ratios (quantity based) for major apparel items are shown in Figure 1-6. Ratios are high for sweaters and cardigans, and men's and women's slacks, and are lowest for sportswear, hosiery, and skirts.

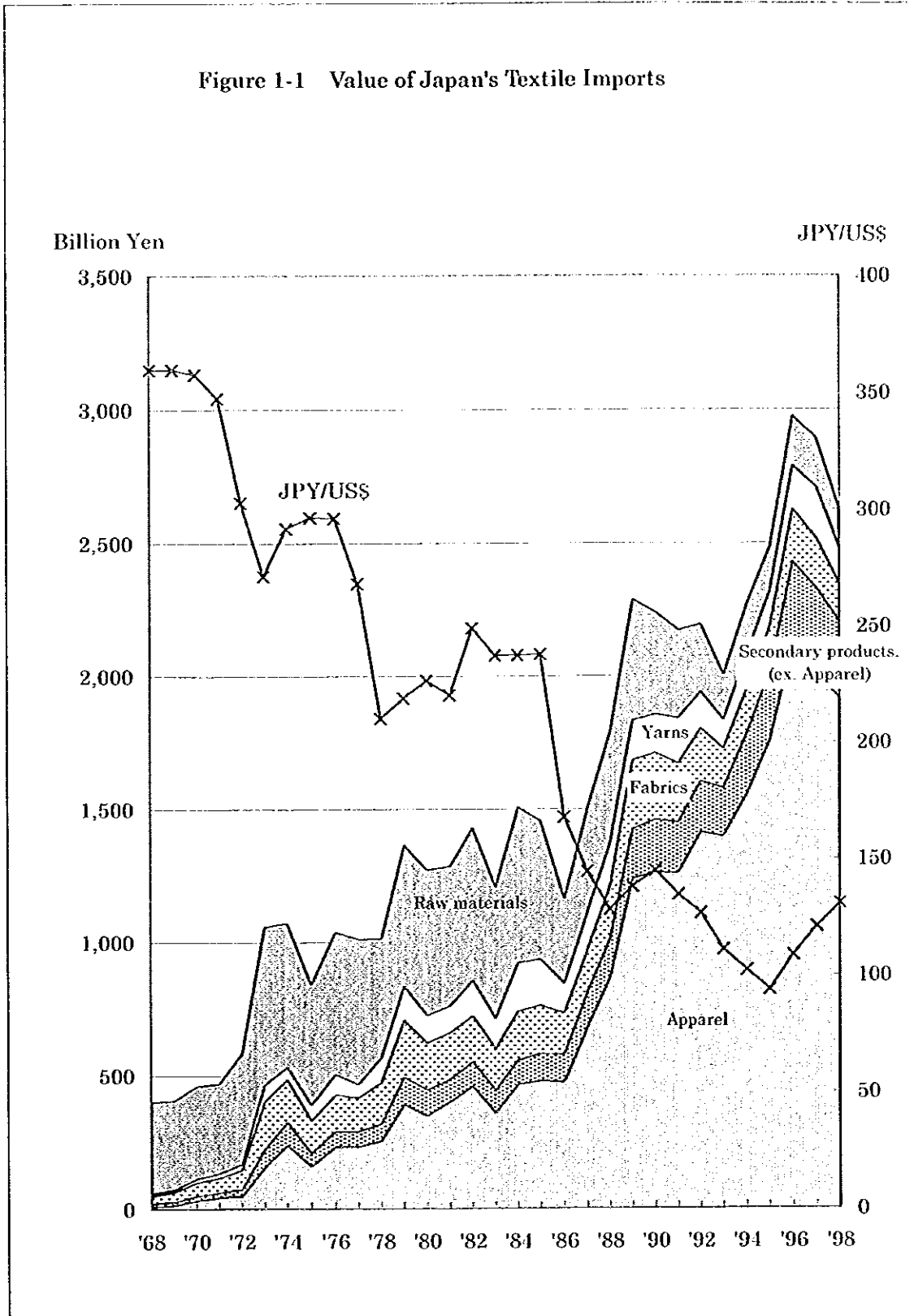
Sweaters and cardigans can be competitively produced by deploying a large workforce using hand-operated machines, and Japan's highly automated factories cannot compete with that method. The import ratio for this category has approached 90%.

Figure 1-1 Value of Japan's Textile Imports



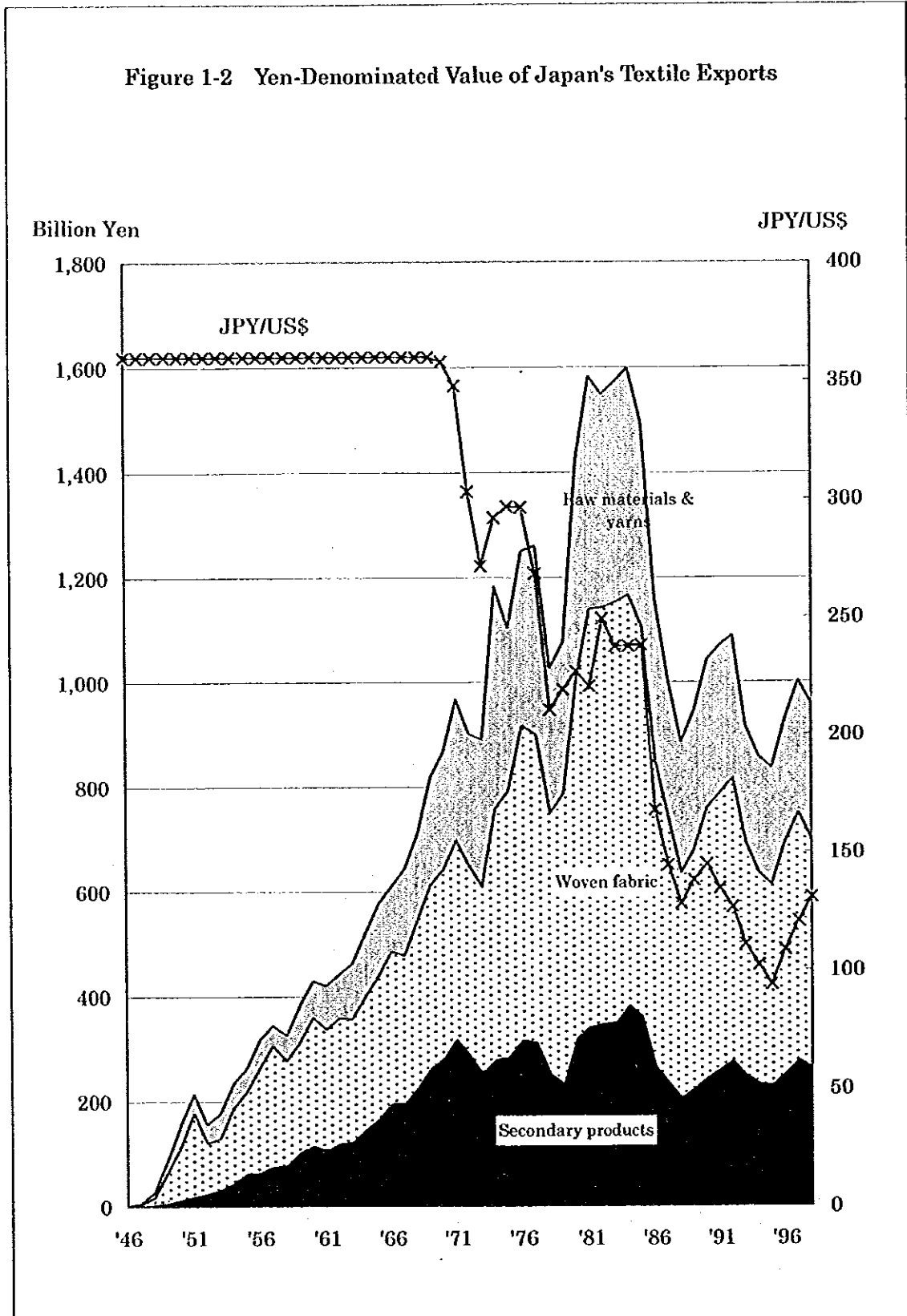
Source : Textile Handbook. (Japan Chemical Fibers Association)

Figure 1-1 Value of Japan's Textile Imports



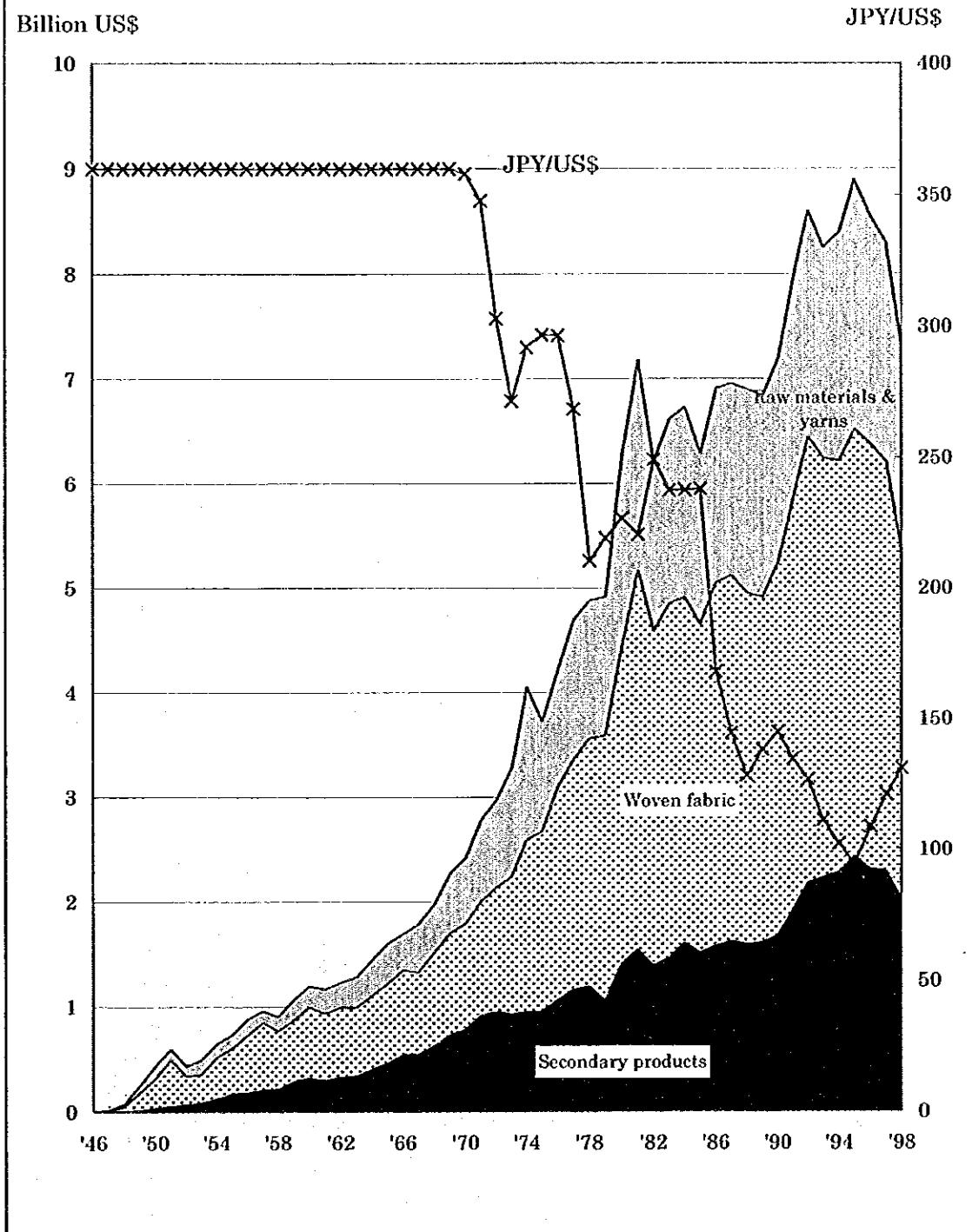
Source : Textile Handbook. (Japan Chemical Fibers Association)

Figure 1-2 Yen-Denominated Value of Japan's Textile Exports



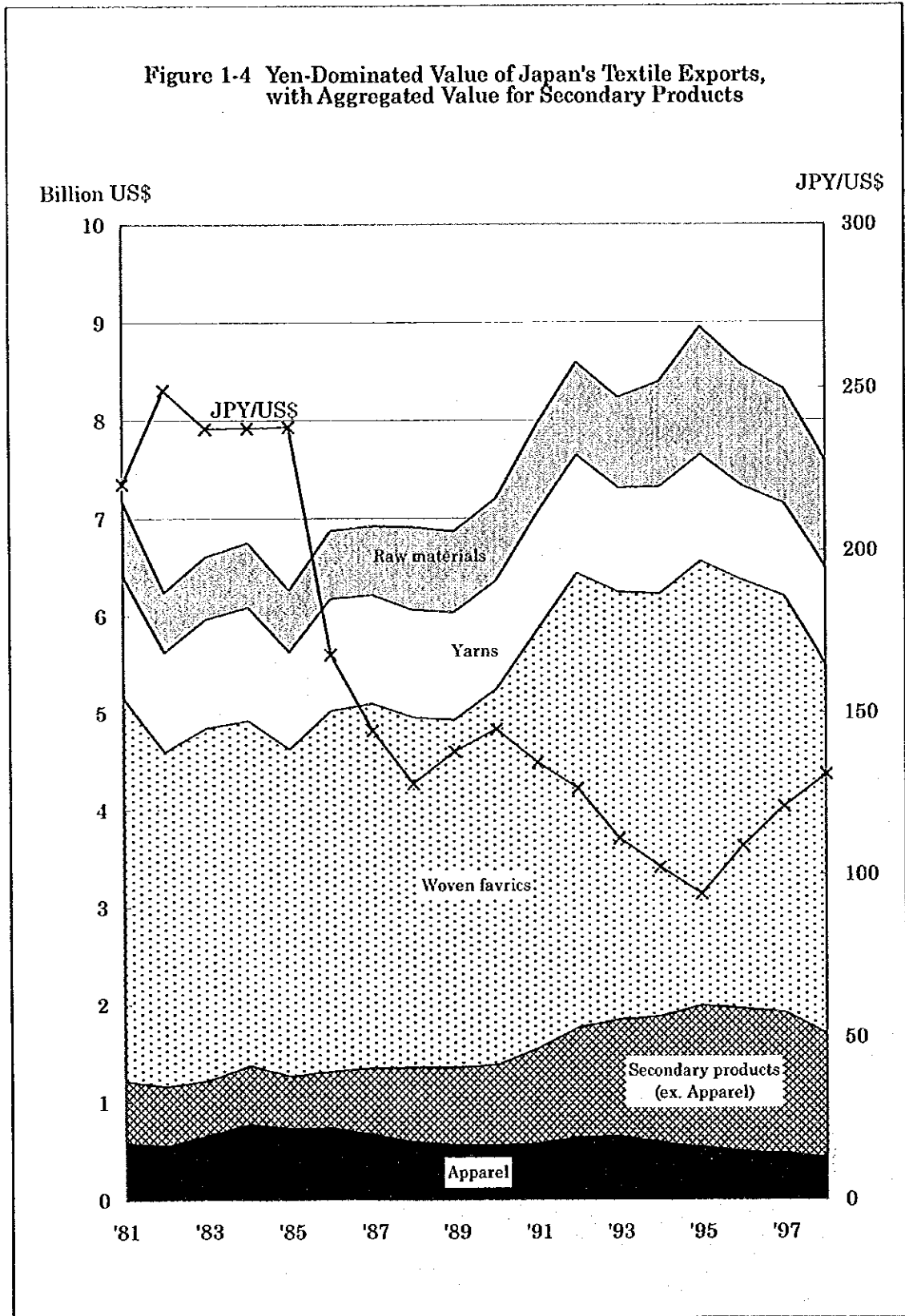
Source : Textile Handbook. (Japan Chemical Fibers Association)

Figure 1-3 Dollar-Denominated Value of Japan's Textile Exports, with Aggregate Value for Secondary Products



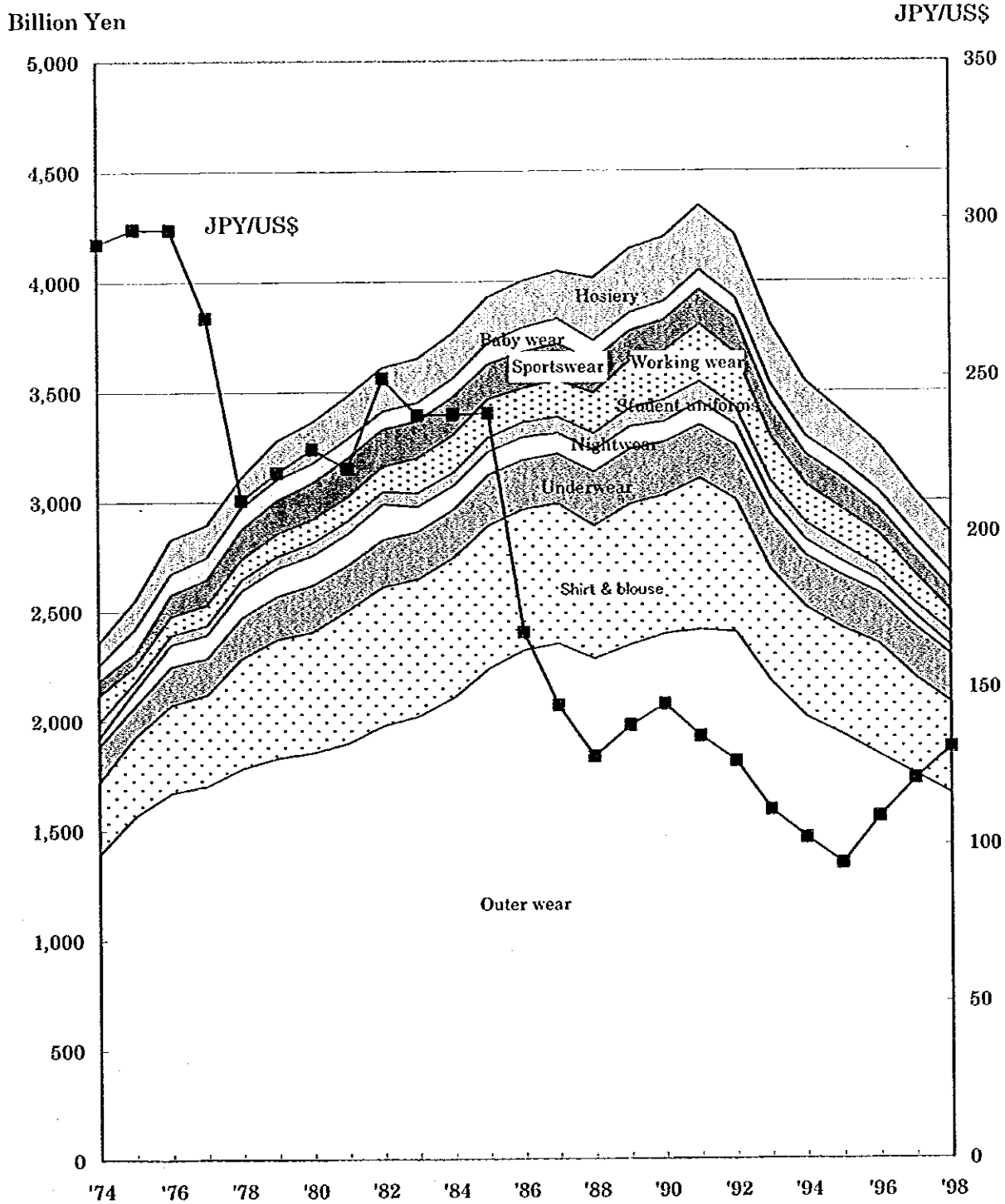
Source : Textile Handbook. (Japan Chemical Fibers Association)

Figure 1-4 Yen-Dominated Value of Japan's Textile Exports, with Aggregated Value for Secondary Products



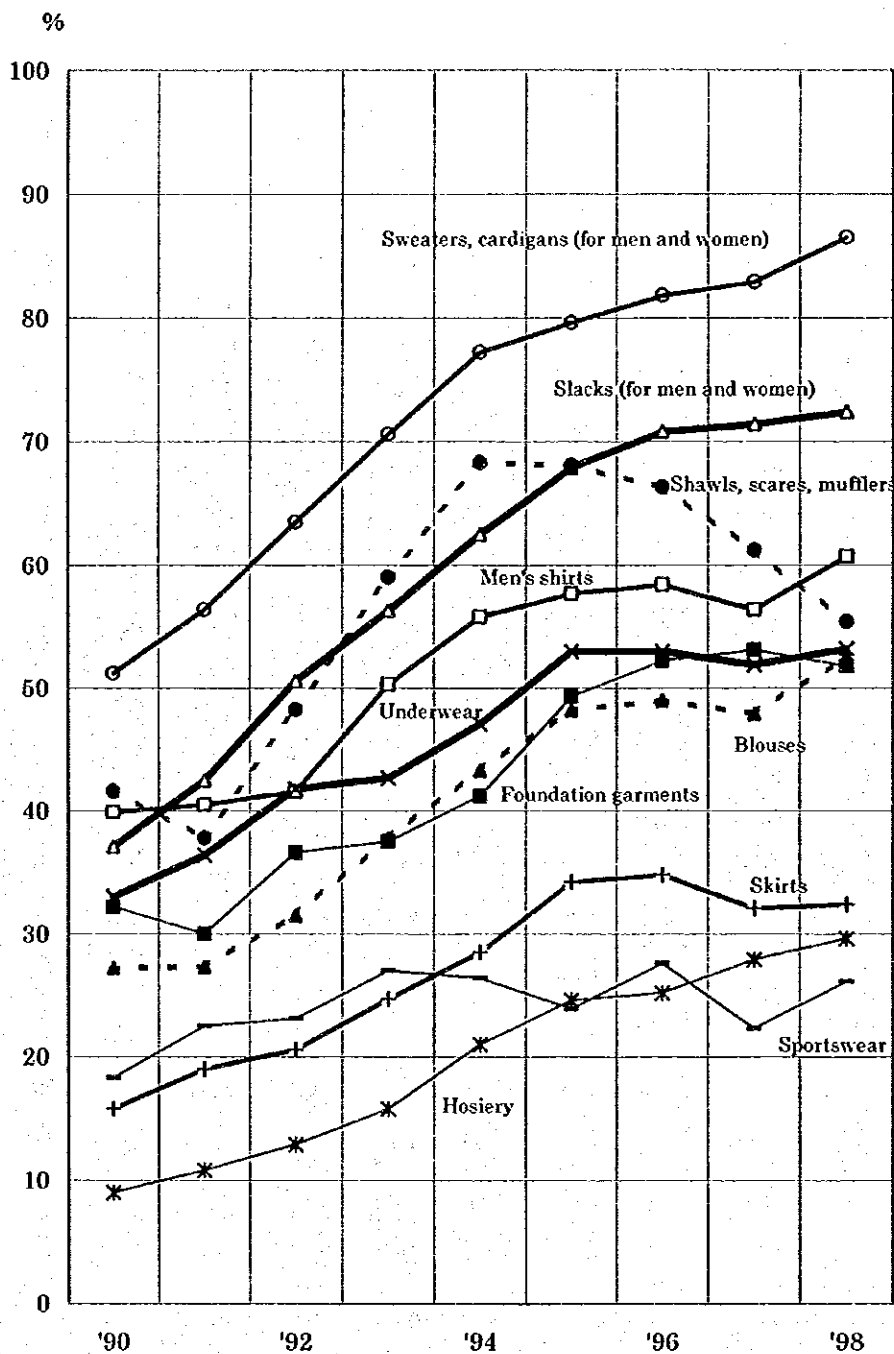
Source : Textile Handbook. (Japan Chemical Fibers Association)

Figure 1-5 Value of Japan's Production of Apparel



Source: Textile Handbook. (Japan Chemical Fibers Association)

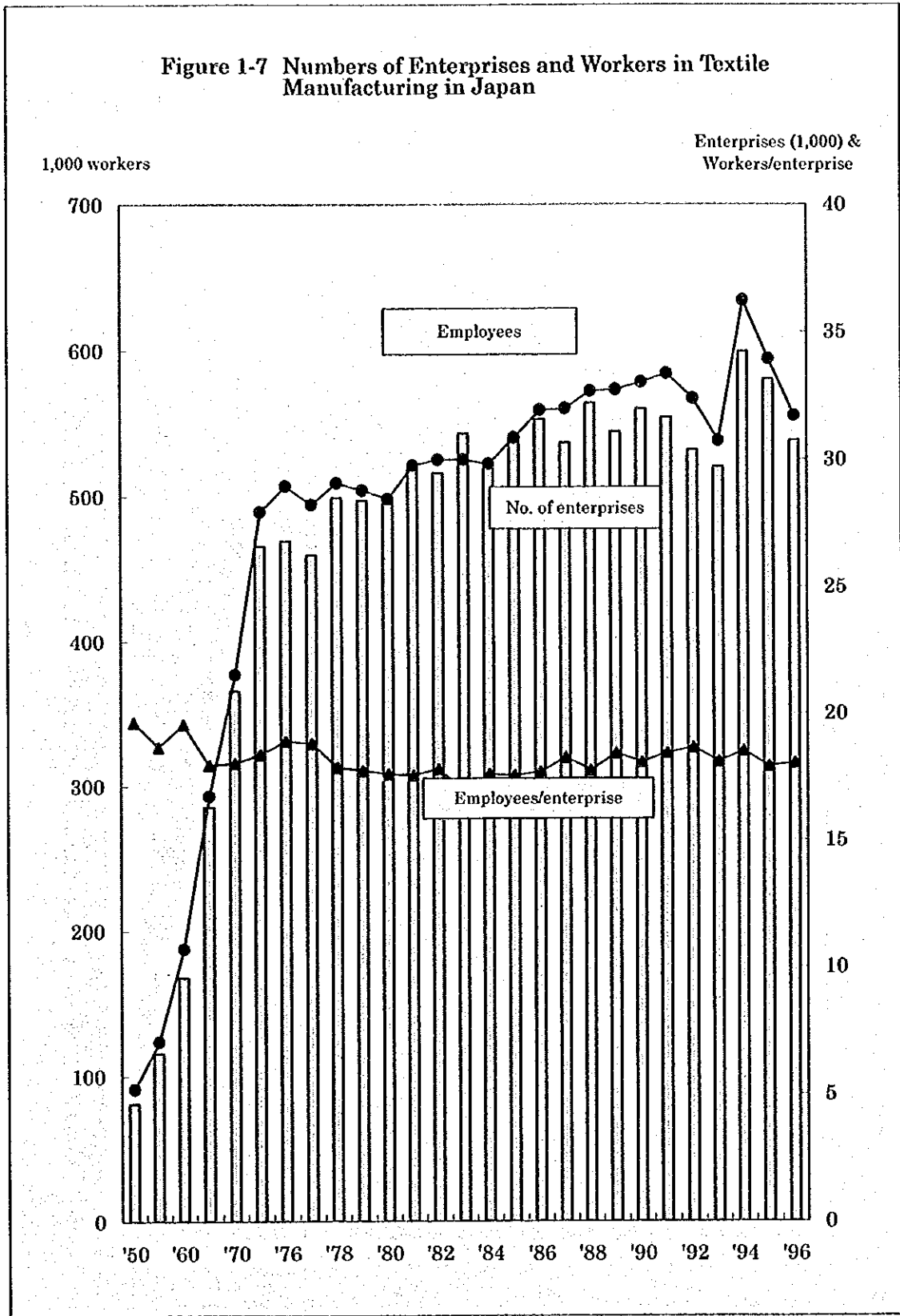
Figure 1-6 Export Ratios* of Major Clothing Categories Exported by Japan (Quantity base)



*Export ratio = $(\text{Exports}) / [(\text{Domestic production}) + (\text{Imports})]$;
domestic production exclusive of goods for export.

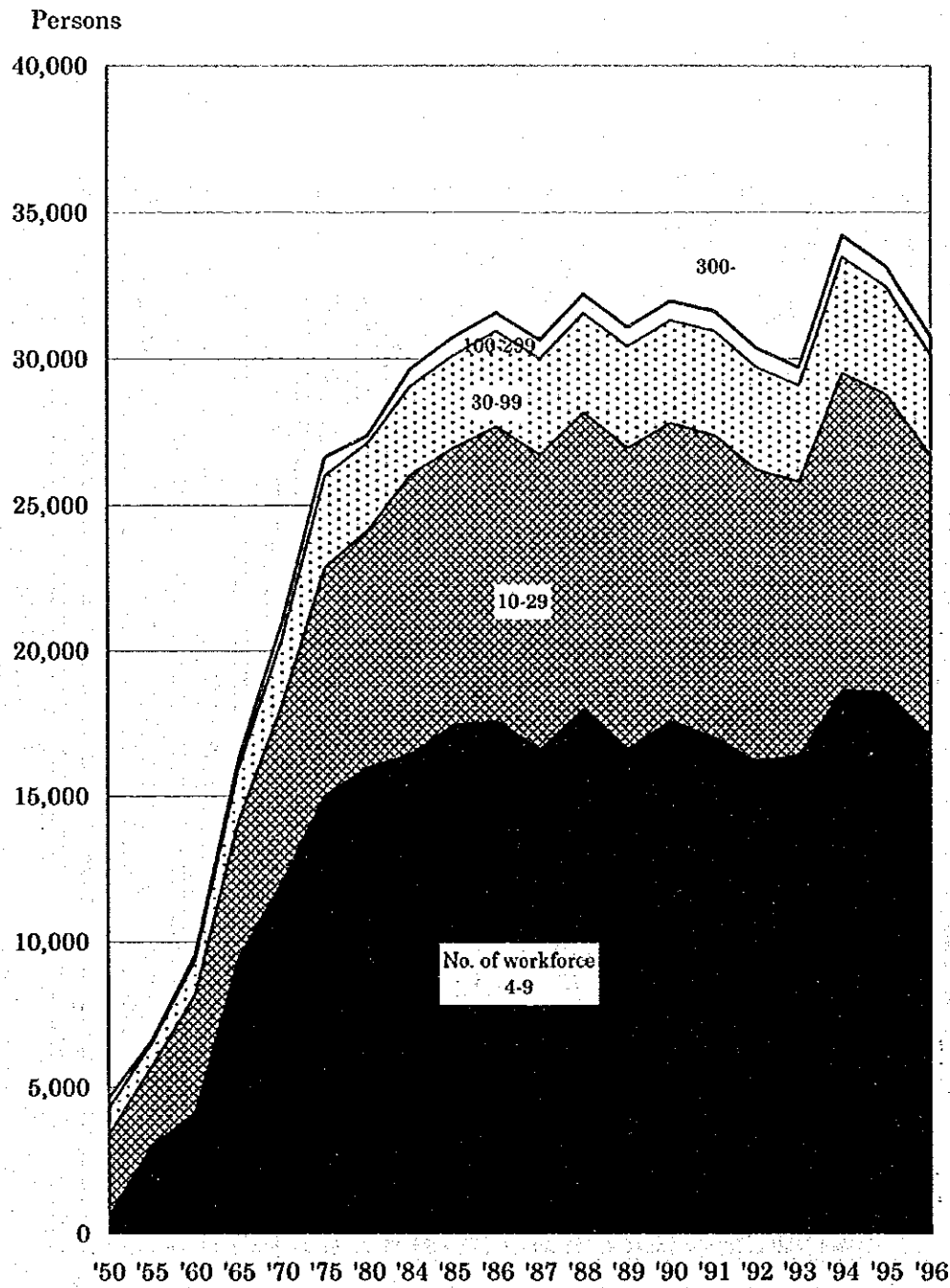
Source : Textile Handbook. (Japan Chemical Fibers Association)

Figure 1-7 Numbers of Enterprises and Workers in Textile Manufacturing in Japan



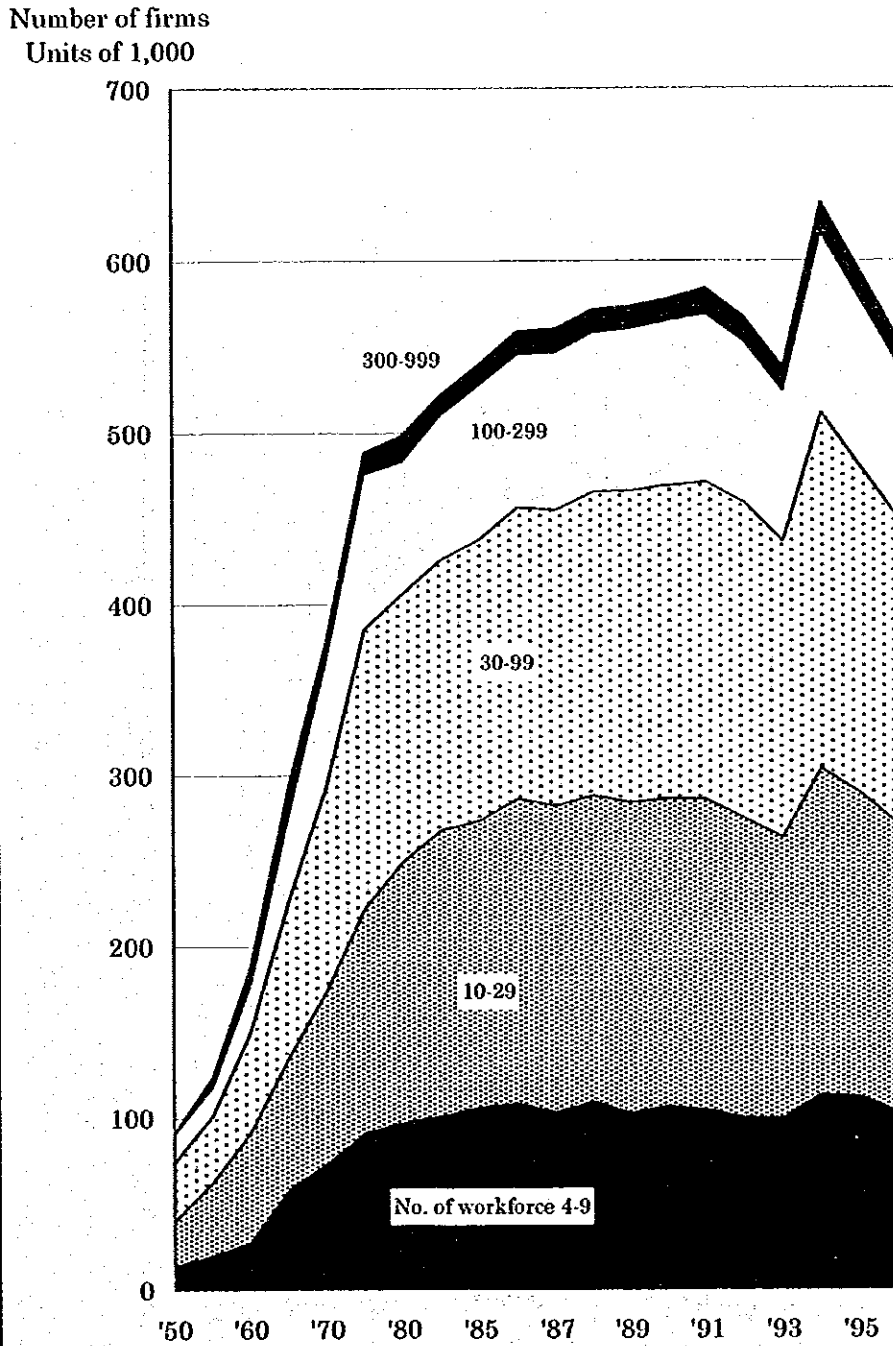
Note: Only enterprises of four or more workers are included.
 Source: Apparel Handbook (Seni Sangyo Kozo Kaizen Kyokai)

Figure 1-8 Number of Enterprises by Size of Workforce, Engaged in Apparel and Other Textile Product Manufacturing in Japan



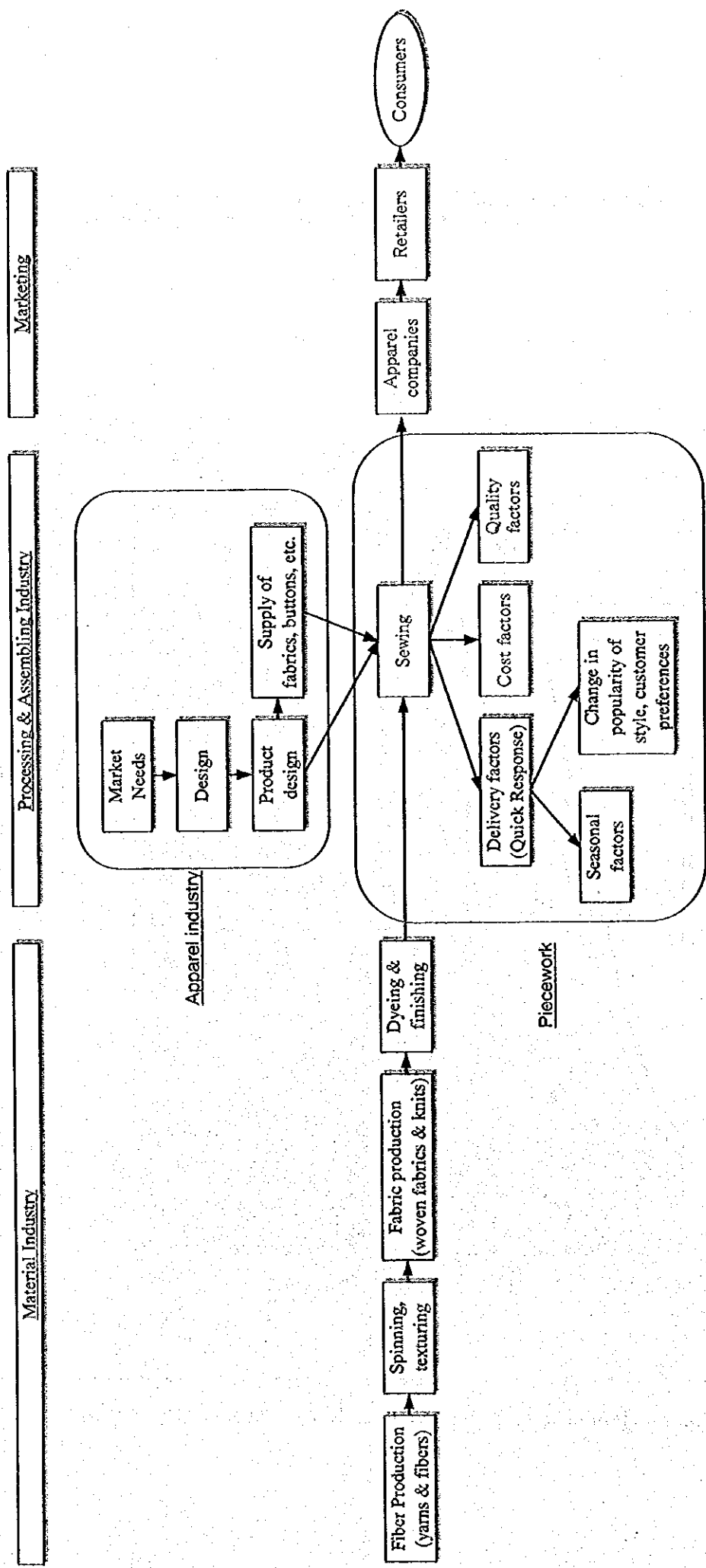
Source: Apparel Handbook (Seni Sangyo Kozo Kaizen Kyokai)

Figure 1-9 Number of Firms by Size of Workforce, in Apparel and Other Textile Product Manufacturing in Japan



Source: Apparel Handbook (Seni Sangyo Kozo Kaizen Kyokai)

Figure 1-10 Schematic Diagram of Production of Sewn Textile Products, Japan



The fashion cycle for slacks is long, and for this reason as well as technical factors this product is relatively suitable to mass production, in contrast to upper wear. This type of product can be made on speculation (without having firm orders) at little risk and is the apparel item that is most suited to overseas production. By way of contrast the fashion cycle for scarves is short and this type of item is suitable for small-lot production; it is more appropriate for domestic production.

The import ratio for hosiery is low. The reason for that is an extremely high degree of automation of production equipment for pantyhose, while socks are made according to a small-lot, large-variety pattern. For both, it is difficult for imports to compete with domestic products.

The import ratio is low for sportswear because of the special market demand for high-function characteristics. Special fabrics and accessories are easier to obtain in Japan, which is another reason that domestic production is viable.

c. Evolution of policy for SMEs (primarily in the sewn goods production sector)

The policies adopted by the government for SMEs in the textile industry particularly related to sewn goods since 1946 are as described below. Reference should also be made to the timeline given above of overall policy and industry evolution.

- In 1946 a three-year Textile Industry Reconstruction Plan was formulated.
- In 1947 exportation of sewn goods using cotton imported from the U.S. began.
- In 1952 demand collapsed when the war virtually ended and operation of spinning mills were forced to reduce operation. Emergency measures were adopted by the government to offset the impact on SMEs in the sector, and in overall terms production cutbacks were enforced.
- In 1956 the Small Business Promotion Fund Subsidy Law was passed to provide a means for supplying investment capital to SMEs in general. The funds were more for modernization than for investment in joint-use facilities. In the textile industry, 47% of the funds through this law were used for replacing old equipment with new equipment (the average for all industries was 29%).
- To protect the SMEs in the industry from adverse effects of the voluntary restraints on exports to North America the Japan textile Exporters Federation successfully campaigned for passage of the Small and Medium Business Stabilization Law. Beginning in 1958, the federation monitored production controls allowable and set up to combat the forces of recession in the industry, starting in 1958.
- Factories had to be closed when the weakness in the U.S. economy led to a collapse of exports to that country in 1960; during this period about ¥ 100 million of credit was obtained from a SME-specialized financial institution to help cover the costs of labor in the industry.
- Also in 1960 the textile goods manufacturing industry was recognized under a temporary law for promotion of SMEs. Through these laws, assistance became

available for export promotion, measures to offset the effects of trade liberalization, and improvement of the structure of the industry. Companies availed themselves of dispatched expert advisers, training programs and R&D support, through the use of subsidies.

- A SME promotion finance system was established in 1961 and under it the sewn goods sector was authorized to receive support for development as an export industry. Firms in the sector were able to obtain credit from the Small Business Finance Corporation and other SME-specialized financial institutions.

- In 1963 a law for promoting the modernization of SMEs was passed. The following year the garment sewing sector was recognized as qualifying for help under this law. The main policy of the law was subsidies for joint activities of enterprises, and also included industry-wise modernization policies and modernization of the facilities of each enterprise.

The subsidies to joint ventures were conducted by the Small and Medium Enterprise Agency (for textile industry, the Textile Industry Restructuring Agency). The subsidies under the law were available for joint ventures in an industry-generated modernization plan. Plans of the sewn textile goods industry were greatly reduced, however, when the industry was hit by the effects of export restrictions to the U.S.

Later, the following changes were made to the law. The main policies of the law were similar to those of high growth of Japanese economy, and the average scale of businesses in the sewn textile goods industry was so small that the industry could not readily take advantage of benefits available under the law

- Another program was created in 1964 to recognize industries that made special contributions to the growth of exports. (The similar programs were started in 1957.)

- In 1965 a tax rebate for exports was adopted whereby import duties on raw materials were in effect no longer paid.

- Then, in 1967, the Small Business Promotion Corporation (following SBPC), a public body, was created. This was in part a relation to the results of credit supply under the earlier SME promotion finance scheme.

- When structural improvements in the industry were to be made by gathering a number of firms at the same location, in an industrial park, the former system could not cover all of the high costs for development of the park, while the funds and creditworthiness of the SMEs themselves were not sufficient for them to participate in an industrial park without outside support.

- The SME promotion finance scheme was dissolved, and the SBPC was created as a way of improving and changing the means of assisting the SMEs under those circumstances. The Textile Industry Restructuring Agency was created.

- A temporary law for the textile industry was promulgated in 1967. The sewing goods industry made efforts to promoting far-reaching structural reform such as modernization of the equipment, expansion of corporate size, and improvement of traditional transaction arrangements.

- Emergency measures were required in 1972 when it became necessary to assist firms that had lost export sales to the U.S. The support was in the form of low-interest, long-term loans totaling ¥ 7 billion and purchasing of excess sewing machines for ¥ 3.8 billion that were scrapped in order to optimize production capacity. (16,914 machines

were scrapped by 343 companies.)

- During 1970 structural improvement measures were implemented for those companies in the export sewn goods industry. The selection criteria of the industry for the measures were as follows. The company could demonstrate capacity to improve productivity, had faced an emergency situation in regard to structural reform, or were included in an industry- (or subsector-) wide program for reform.

Incentives were provided through depreciation rules, assignment of priority in lending using public funds, and a preferential interest rate.

The target was to improve international competitiveness by optimizing the scale and system of production and operation of the enterprises

To attain the target, modernization of the equipment, improvement of traditional transaction arrangements, and improvement of quality, by means of joint ventures and merger of the enterprises. Also, it was stressed that the modernization must be done by the majority of the enterprises of the industry.

Over a period of five years the plan was for use of ¥ 15.7 billion, but when the textile trade agreement was signed with the U.S. these plans had to undergo review and revision, and were greatly reduced in scale.

- The foregoing experiences led to the following reflections on textile industry structural reform efforts. It was concluded that joint sales, and curtailment of production, had been successful, but the business environment was not favorable to efforts to increase the scale of firms and concentrate production to a greater extent. A need was identified for reforms that encompassed the entire textile industry including sewing and distribution systems which must be greatly improved.

- Structural reform policies were adopted in 1973. The underlying principle was to shift from being labor-intensive to being knowledge-intensive, to improve distribution and promote modernization.

- Three years later a law was passed to help companies change their line of business, as the economic and business environment had become so difficult. In the textile industry, the subsectors of outerwear, shirts and blouses, and undergarments were designated as qualifying for assistance under this law. The law is characterized as follows:

- Target of the enterprise was each individual enterprise, not the group as in the law for promoting the modernization of SMEs.

- Incentives were overall, not limited to business transformation.

- To assist enterprises who were planning to transform business by themselves. The percentage of clothing and other textile goods manufacturers entering the market in 1977 in comparison to 1972 was 14.0% and leaving the market was 13.0%. (Source: The Small and Medium Enterprise Agency: White Paper on Small and Medium Enterprises, Japan, 1980)

- The Small Business Promotion Corporation Law provided various benefits. Through the medium of the Textile Industry Restructuring Agency, created in connection with this law, the following results were obtained over the period of 32 years from 1967 to 1999.

	Expenditures in Billions of Yen	Share in Percent
Credit guarantees	83.8	59.7
Scrapping of equipment	39.3	28.0
Assistance to production regions	9.0	6.4
Information services	6.2	4.4
Human resources development	0.7	0.5
Technical guidance	1.4	1.0
Total	140.4	100.0

Until 1990, the main activities of this Agency were credit guarantees for the procurement of structural reform fund, and scrapping equipment. Since 1990, the main activities have shifted to information services.

In June 1999, the Agency was integrated with Japan Small Business Corporation, and Small Business Credit Insurance Corporation Enterprise and newly organized Japan Small and Medium Enterprise Corporation. This Corporation is an executive agency of comprehensive policy for small and medium enterprise.

1.2 Position and Role for the Sewn Goods Industry

a. Scale of the sewing industry

The sizes of sewing establishments (employing four or more persons) in Japan is shown in Figure 1-7 to Figure 1-9. As shown in Figure 1-7, there are 31,000 enterprises employing 555,000 persons (i.e., on average 18 per establishment).

Nearly all establishments have 299 or fewer workers. (The exact figure for industry as a whole is 97.3%). Using the definition of an SME as having under 300 workers would make this industrial category clearly in the SME sector in its entirety.

Further, more than 86% of the total number of establishments have 29 or less workers, and those workers account for 48.8% of all workers in the industry. In short, many sewing establishments employ 29 or fewer workers.

Moreover, the ratio of establishments with 1-3 workers is shown in the table below. It was particularly high in the 1955-60 period, but declined rapidly after 1965. The share of establishments with 1-9 workers, however, has been steady at about 25% since 1950, demonstrating that the sewn textile goods industry in Japan is dominated by a large number of small firms.

The smallest firms also make use of subcontracting, whereby housewives do work at home; if these home workers are included then the share of very small scale establishments would be even higher than reported.

**Distribution of Apparel and Other Textile Manufacturing Firms
by Number of Employees (%)**

	Employees/Firm						
	1-3	4-9	(subtotal 1-9)	10-29	30-99	100-99	300-
1950	12.7	13.1	25.8	25.3	32.9	16.1	
1955	14.2	13.6	27.8	29.7	26.7	11.8	3.9
1960	10.8	13.0	23.8	30.2	27.8	13.1	5.0
1965	5.9	18.6	24.5	24.7	29.3	16.0	5.5
1970	6.4	18.0	24.4	24.9	29.5	18.4	2.7
1975	6.7	17.4	24.1	25.0	31.2	17.3	2.4
1980	7.1	18.0	25.1	28.4	29.3	14.4	2.8

Source: Ministry of International Trade and Industry "Industrial Statistics Table"

b. Position of the sewn goods industry in the structure of production of the textile industry

The relative position of the sewn goods industry is shown schematically in Figure 1-10. The textile industry is in the materials industry category, and production encompasses spinning, yarn processing, fabric production, and dyeing and finishing. The products of those processes are sent to be cut and sewn in the apparel industry that belongs to the assembly and processing category of manufacturing.

Much of the work in the sewn goods industry is done as piecework. The apparel industry incorporates as key components or aspects design and product planning, speed (also referred to as QR or Quick Response), high cost consciousness, and strong quality orientation.

A major issue which the industry now faces is how to move away from piecework, and it appears that this is behind the attempt of some sewn goods makers to expand into the apparel industry, by undertaking design and product planning work on their own, and developing sales channels.

c. Process of growth and decline of the sewn goods industry

Expansion of the sewn textile goods industry took place during the years through 1975.

Exports, in yen, of secondary textile products (including apparel) had increased rapidly up to 1971 but there has been little growth since then and now minor year-to-year declines are evident (see Figure 1-2). There has been At the same time clothing imports have made rapidly inroads (Figure 1-1).

The growth of imports has been high since 1987 and growth continues as of this writing. During this period, particularly from 1988 to 1995 there was a strong effort by Japanese companies in the sewn goods industry to invest offshore (Figure 1-11).

The value of apparel production in Japan is as shown in Figure 1-5 rose up to 1991, but fell sharply starting in 1992. The major reasons for the slackening of production are the appreciation of the yen, and the reaction after bursting of the

bubble economy.

Value added data for Japanese makers of apparel and other textile products are shown in Figure 1-12 where a tendency to rise can be seen, but there has been essentially no further improvement since 1992.

Reviewing the process of growth and decline of the industry, we can state that starting in 1946 there was a period of extraordinary development as a contributor to the export effort, but growth stagnated after 1972 when the yen, floated, began to appreciate, and export controls were imposed.

Since 1992, production has declined and the present value of industry output is about two-thirds that of 1991. During the past 50 years the industry has experienced great change and upheaval.

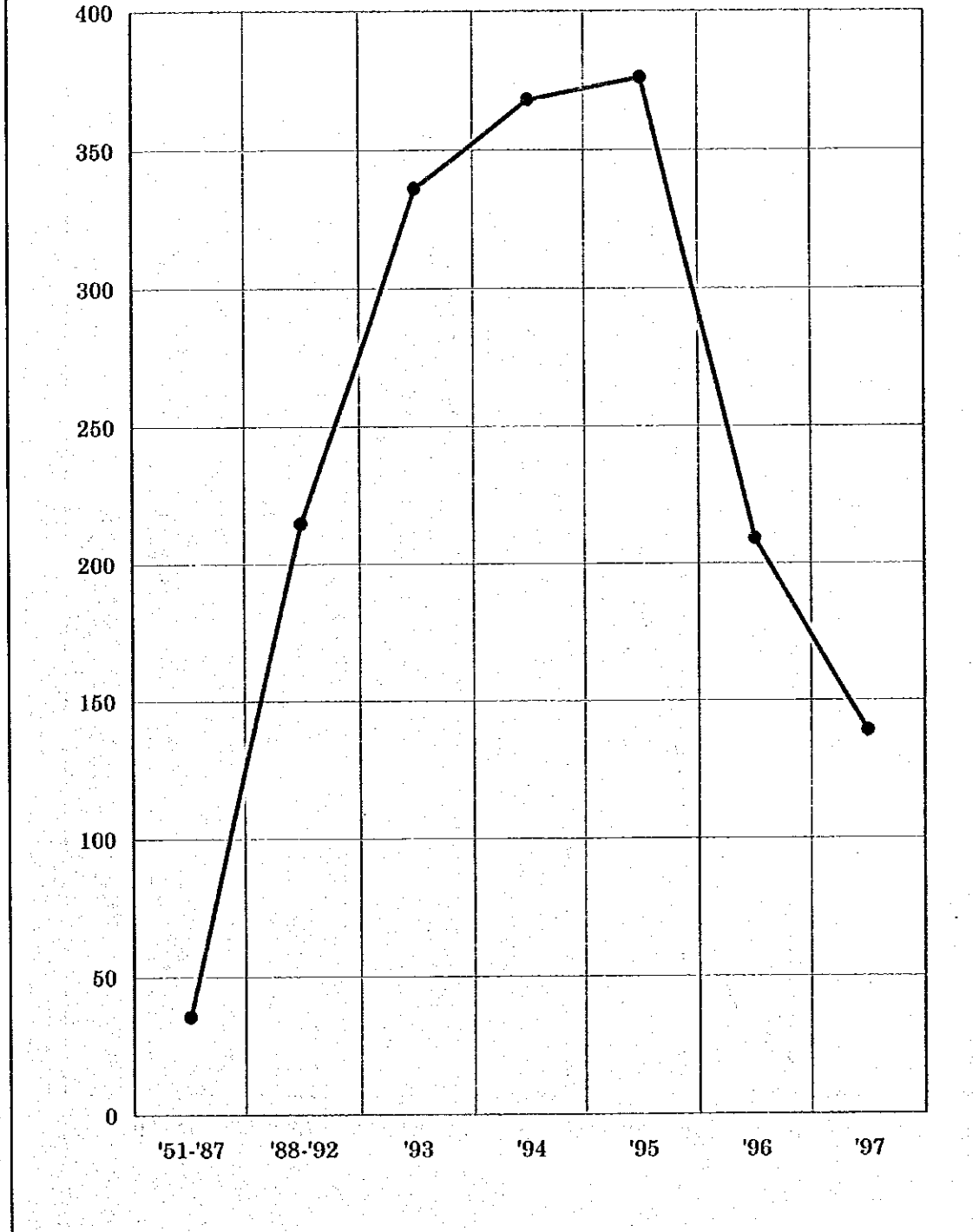
d. Role of the sewn goods industry within the textile industry

A schematic diagram of the domestic sewn goods industry is shown in Figure 1-13. Demand in the domestic market for sewn goods is met by a combination of domestic production and imports. Annual production is now about ¥ 3 trillion and imports are valued at about ¥ 2 trillion (both as of 1998).

Most domestic production is done by SMEs (having fewer than 300 workers). Major products are outerwear, shirts and blouses, women's wear made on a QR basis in small lots of many types for sale at the high end of the market, men's suits made to order or semi-order-made and using advanced production technology, products using new materials or incorporating use of advanced technology such as no-iron shirts, pantyhose made with low labor costs component due to highly automated production equipment, and general apparel (although import ratios for the latter are high).

Overseas production (imports) tend to be of goods for which there is latitude regarding delivery schedules and timing, or clothing for which the labor cost component is high; these criteria apply to the entire range of apparel.

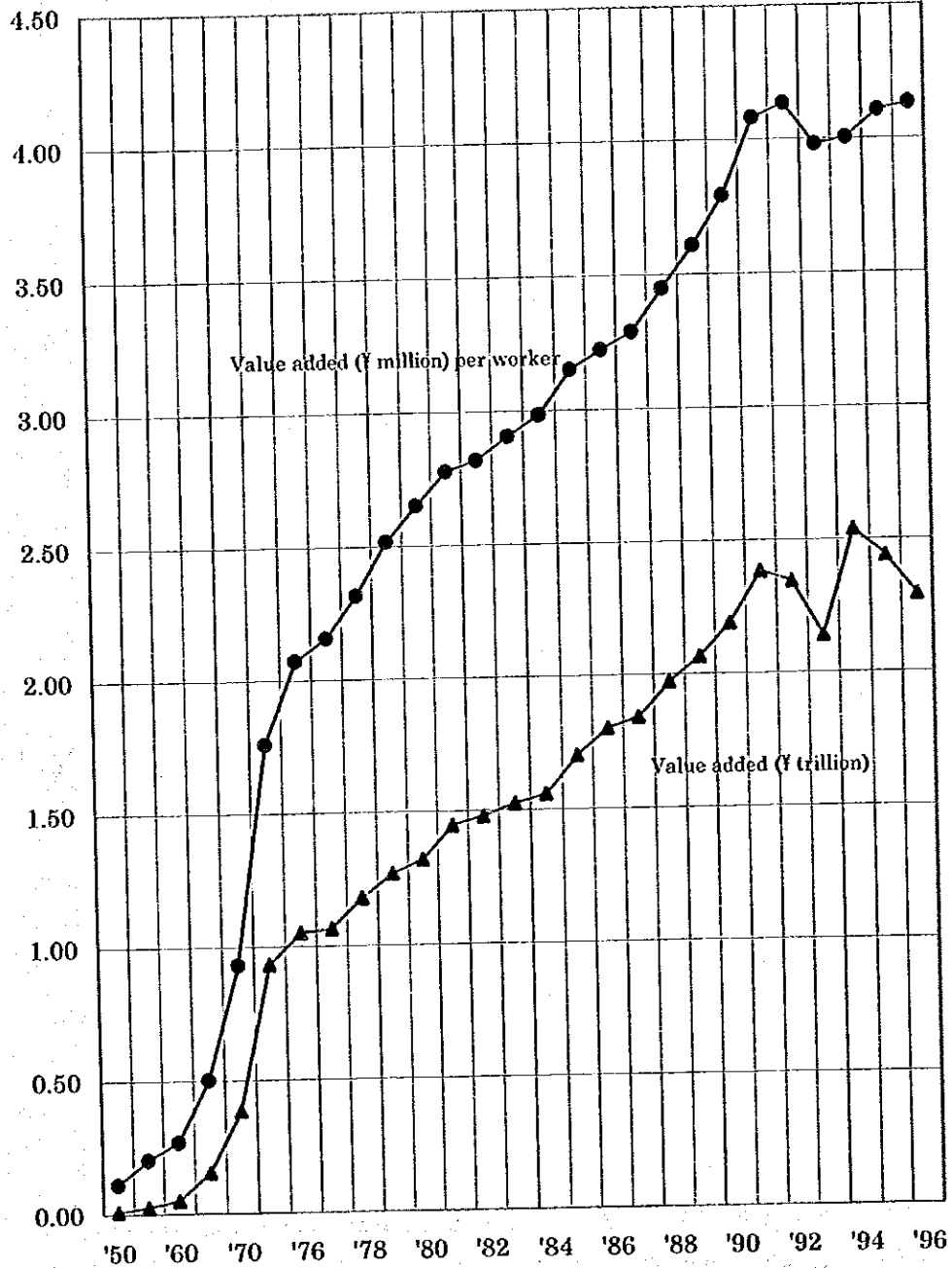
Figure 1-11 Number of Annual Instances of Japanese Textile Manufacturers' Overseas Expansion



Source: Apparel Handbook (Seni Sangyo Kozo Kaizen Kyokai)

Figure 1-12 Value Added of Apparel and Other Textile Product

¥ million/worker



Source: Apparel Handbook (Seni Sangyo Kozo Kaizen Kyokai)

Figure 1-13 Role of the Domestic Sewn Textile Products including (SMEs) in the Textile Industry

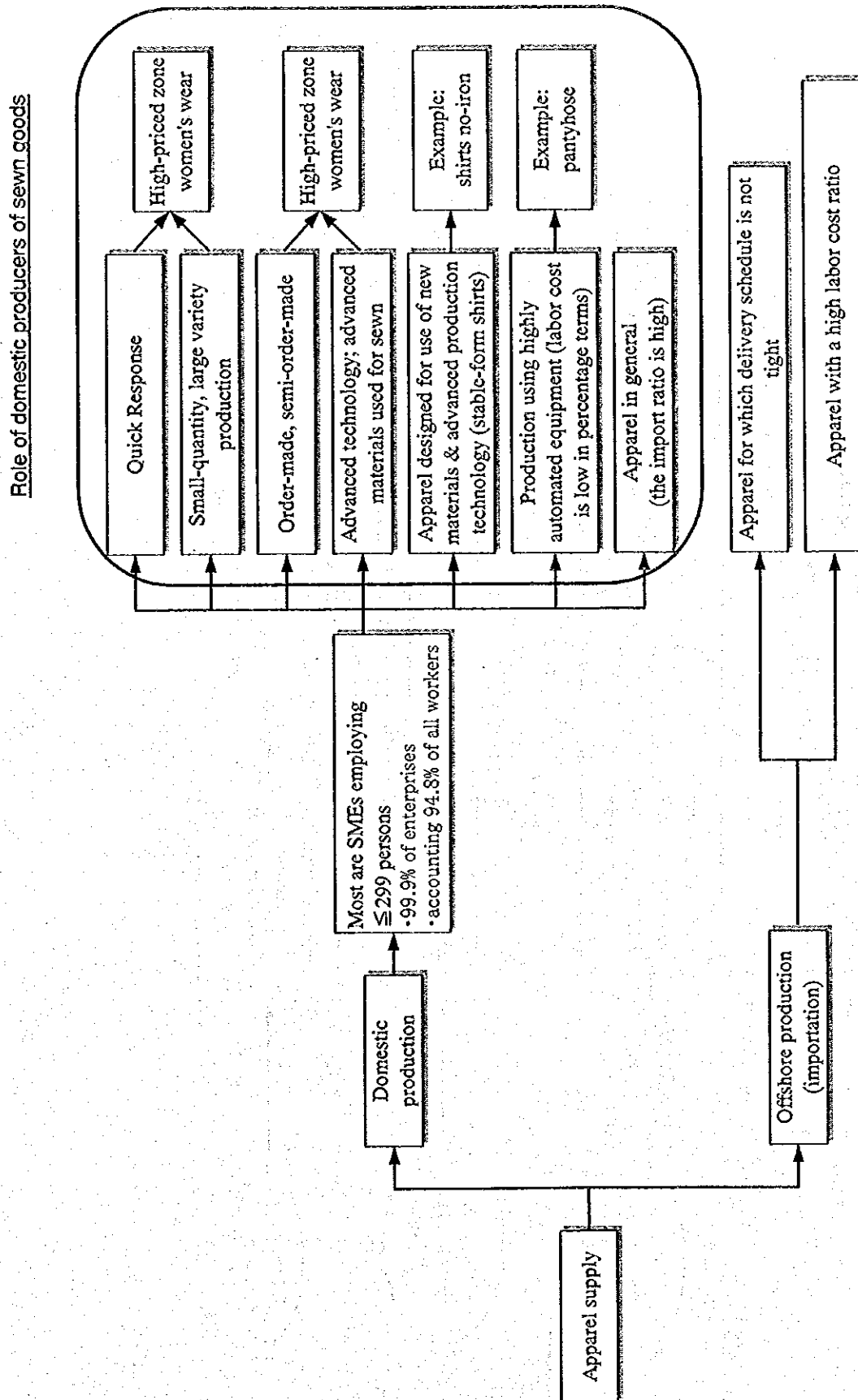
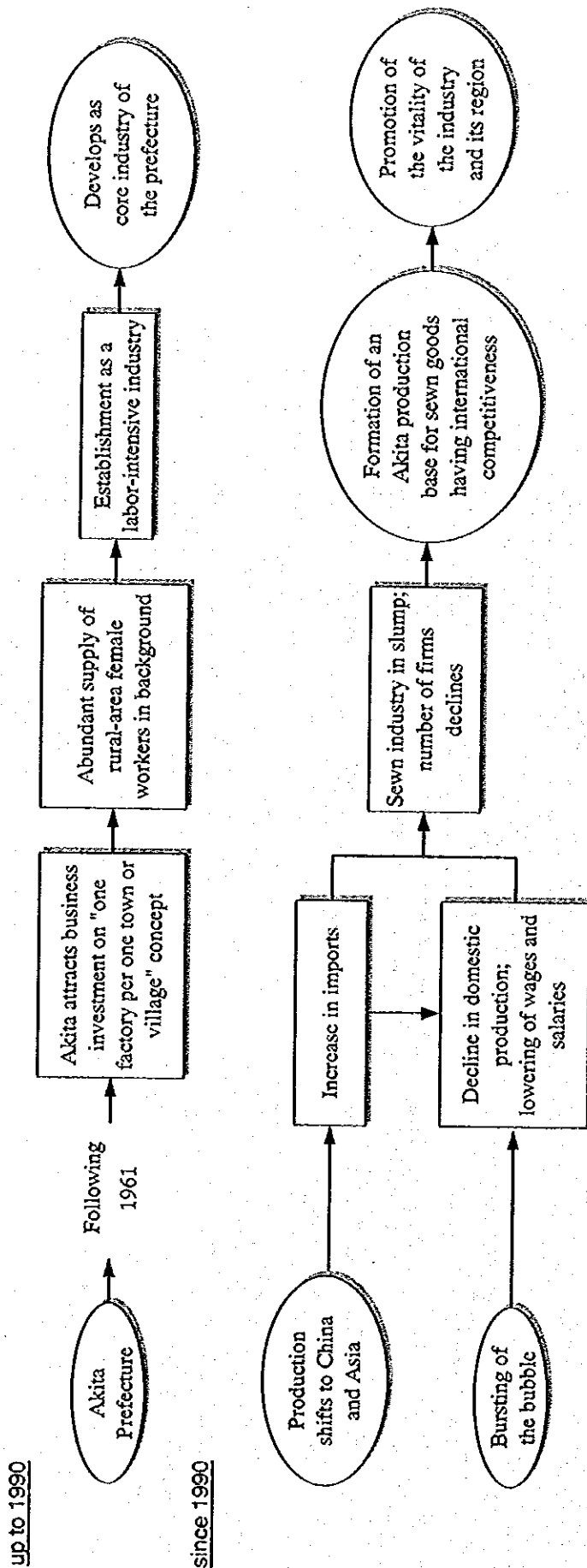


Figure 2-1 Development of a Regional Sewn Goods Industry, and Current Issues



2. Examples of Successful Development in the Sewn Goods Industry

2.1 Outline; Case Study of Aomori and Akita Prefectures' Industries

a. Definition of a successful example

The working definition of a successful case used here is: "Well-timed, appropriate support from public agencies that accelerates the development process of an SME that is already attempting to make progress."

Moreover, because the intention is to provide useful information for developing countries, the category of industry selected must be one that is comparable to situations in such countries.

This meant examples of success that employed sophisticated technology, special materials (silk, leather, etc.) special products (kimonos, etc.) or luxury items must be excluded from consideration.

Further, as noted in Section-1, although subsidies were provided to the sewn goods industry in the early stage of postwar development, official measures taken such as export restraints and assistance in scrapping of equipment were different from measures taken for other industries. The main effort for promotion of the industry was taken at the levels of prefecture, city, town and village.

b. Development and Present Conditions of sewn Goods Industry in Aomori and Akita Prefectures

i) Attraction of industry (investment)

Japan's sewn goods industry shifted domestic bases of production to Northeastern Japan (Aomori, Akita, Iwate and Fukushima prefectures) where labor costs are lower than elsewhere in the nation and labor supply was abundant, so that production could compete with imports from China and other Asian countries.

The case study of a successful example selected for presentation here is that of the Aomori and Akita prefectures that achieved good results to efforts to attract industry to the prefectures. Other prefectures as well sought to attract investment. The reasons for selection of these two are as follows.

- First, the two prefectures are relatively remote from the capital region and its metropolitan centers, so the prefectural governments saw the need for making a specially strong effort on their own to overcome the disadvantages they had in terms of supply and shipment of materials and products.
- Second, the sewn goods industry did not require a large investment for production plant and equipment, and had high labor absorption capability.

The prefectures undertook screening, whereby they selected target companies on the basis of the scale of the company, scale of its capitalization, employment and other factors. Preferential treatment was offered to those companies thereby selected.

ii) Development of the sewn goods industry and present issues

Akita's experience since 1961 is similar to what was done on this occasion and can be used here as the steps taken by the two prefectures.

Matters related to Akita's attraction of new investment by the sewn goods industry, and present issues confronting the industry, are depicted in Figure 2-1.

During 1961, when Japan entered a high-growth phase, the Law for Promotion of Industrial Development of Lagging-Development Regions was passed, and the National Income Doubling Plan was announced.

These encouraged Akita Prefecture to aggressively attract industry and particularly sewn goods companies, on the basis of a one plant per one town or village idea, whereby the abundant female labor in rural areas could be employed.

The result was that the labor-intensive sewn goods industry came to be the prefecture's core industry by 1992. But in the early 1990s, the economic boom ("bubble") ended, and production was shifting to China and other Asian countries, reducing demand for Akita products.

Domestic production of sewn goods declined, wages in the industry fell, and wholesome companies experienced stagnation of their sales, and others had to shut down.

The prefecture thereupon decided to utilize the Akita Prefecture Apparel Industry Promotion Council (established in 1986) as the launch pad for activities that would restore international competitiveness to the prefecture sewn goods companies and invigorate both the industries and the local economy.

c. Attraction of sewn goods companies, and results thereof

i) Phase up to 1992

The numbers of sewn goods companies attracted to the two prefectures is shown graphically in Figure 2-2. During the 1960s, Akita succeeded in attracting six companies annually in the sewn goods industry.

Little was achieved subsequently until 1984-89, during which period about six more companies per year were attracted. After 1990, however, no new companies came in.

Aomori, even further north than Akita, started efforts at attracting investment during the 1980s and by 1989 succeeded in attracting 40 firms.

The results as shown in Figure 2-3 give the number of enterprises in the garment industry in Akita as 933, employing 27,179 persons and producing goods valued at ¥ 107.8 billion. In terms of shares of The clothing industry accounted for 24.0% of enterprises, 23.2% of employees, and 6.8% of manufacturing output of all of Akita's industry.

ii) At present (1997)

The industry could not avoid a contraction, however, as demand fell once the bubble burst at the end of 1990 and imports began to increase. In 1997 there were 722 establishments (77% of the number in 1992), 19,268 employees (71%) and shipments were valued at ¥ 77.8 billion (72%).

In 1997, eighty-four sewing establishment were attracted to Akita Prefecture (11.6% of total Akita's sewing establishment), the number of employees was 5,425 (28.2%), and shipments were ¥ 24.4 billion (31.4%).

The low requirement for fixed investment made it easier to reduce or stop production and in overall terms about 30% of the industry was lost in about five years.

Further, the number of workers per establishment attracted in the sewn goods industry in the prefecture was 2.4 times as high, and shipments were 2.7 times as high, as those of the same industry as a whole (1997).

Thus the attraction of the new establishments was certainly successful in terms of creating jobs.

The methods used to achieve this success are described in 2.(3) in this report.

2.2 Topics and Future Directions for the Sewn Goods Industry (Aomori, Akita)

a. Current issues and problems confronting the sewn textile goods industry

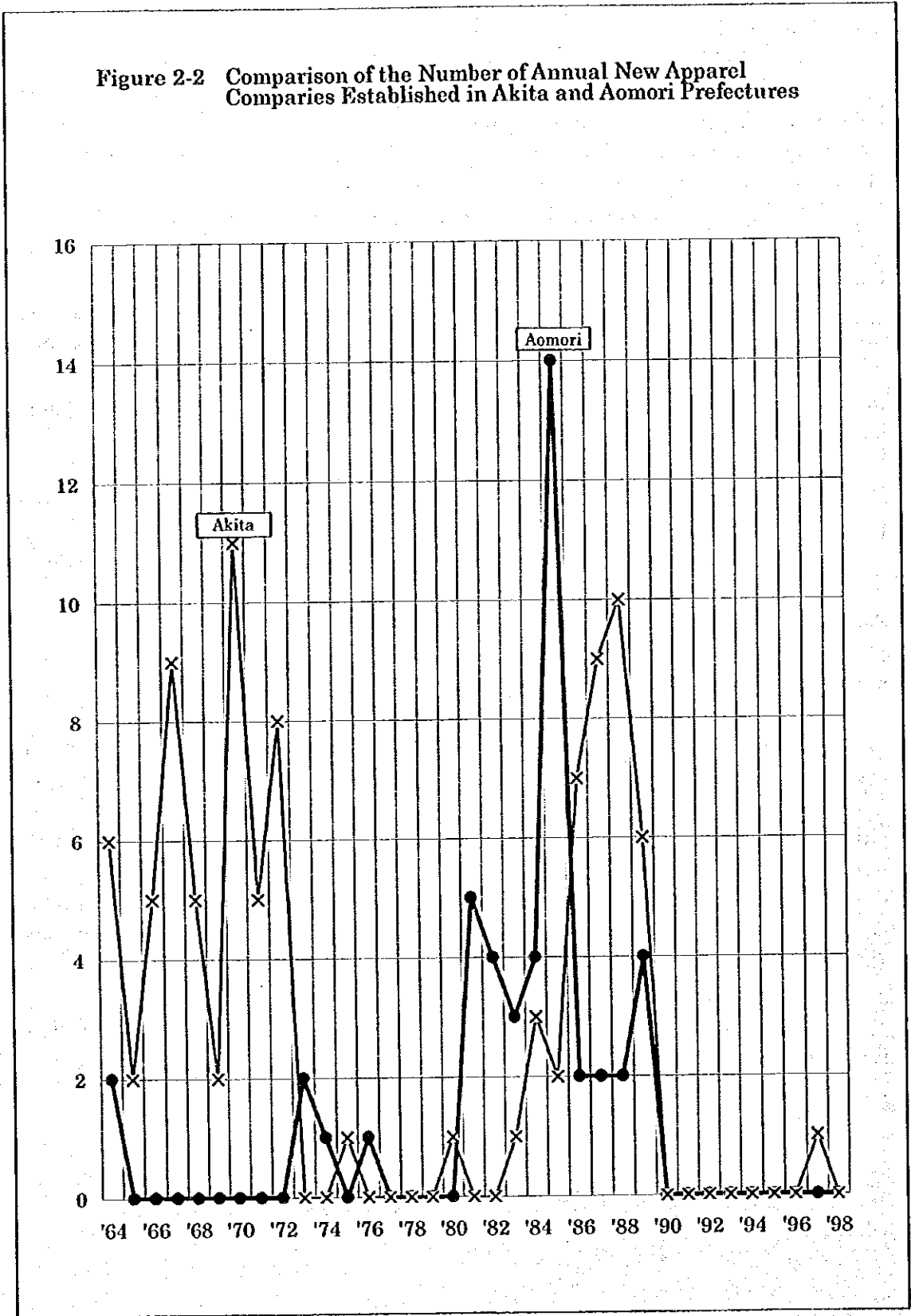
National policy for the sewing industry is shown in "A policy paper on the textile industry in the Seventies" and in "Vision for Textiles" policy paper.

The following are examples of implementation of broad policy not at the national level but at the level of local governments (prefectures, Aomori and Akita in particular).

Present conditions and issues for the sewn goods industry are schematically shown in Figure 2-4. This is confined to the two prefectures under study, but since 1992 the decline in production of sewn goods has been a problem for the entire sewn goods industry nationwide.

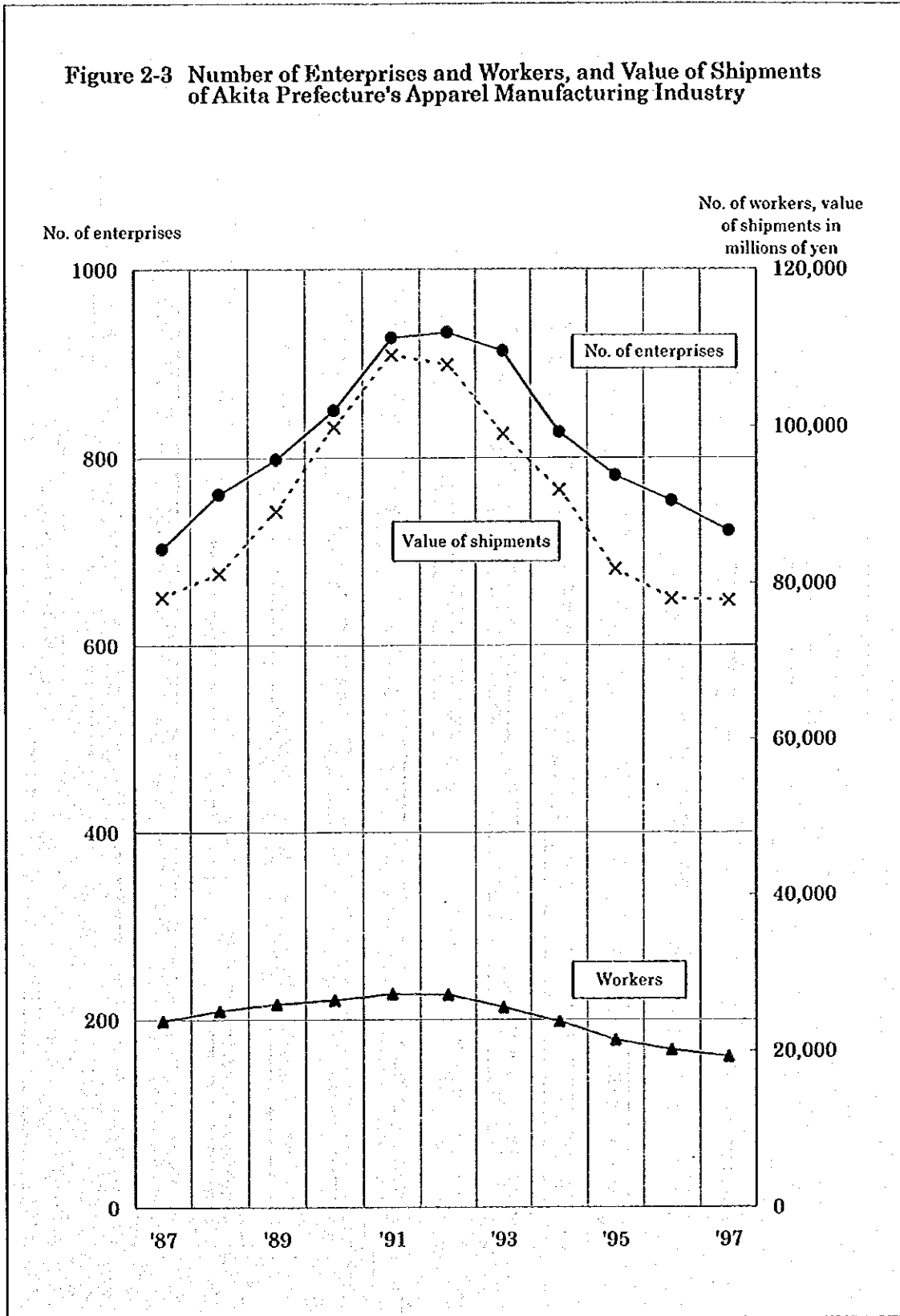
The subheadings for the following explanation conform to the inter-related items shown in the figure 2-4.

Figure 2-2 Comparison of the Number of Annual New Apparel Companies Established in Akita and Aomori Prefectures



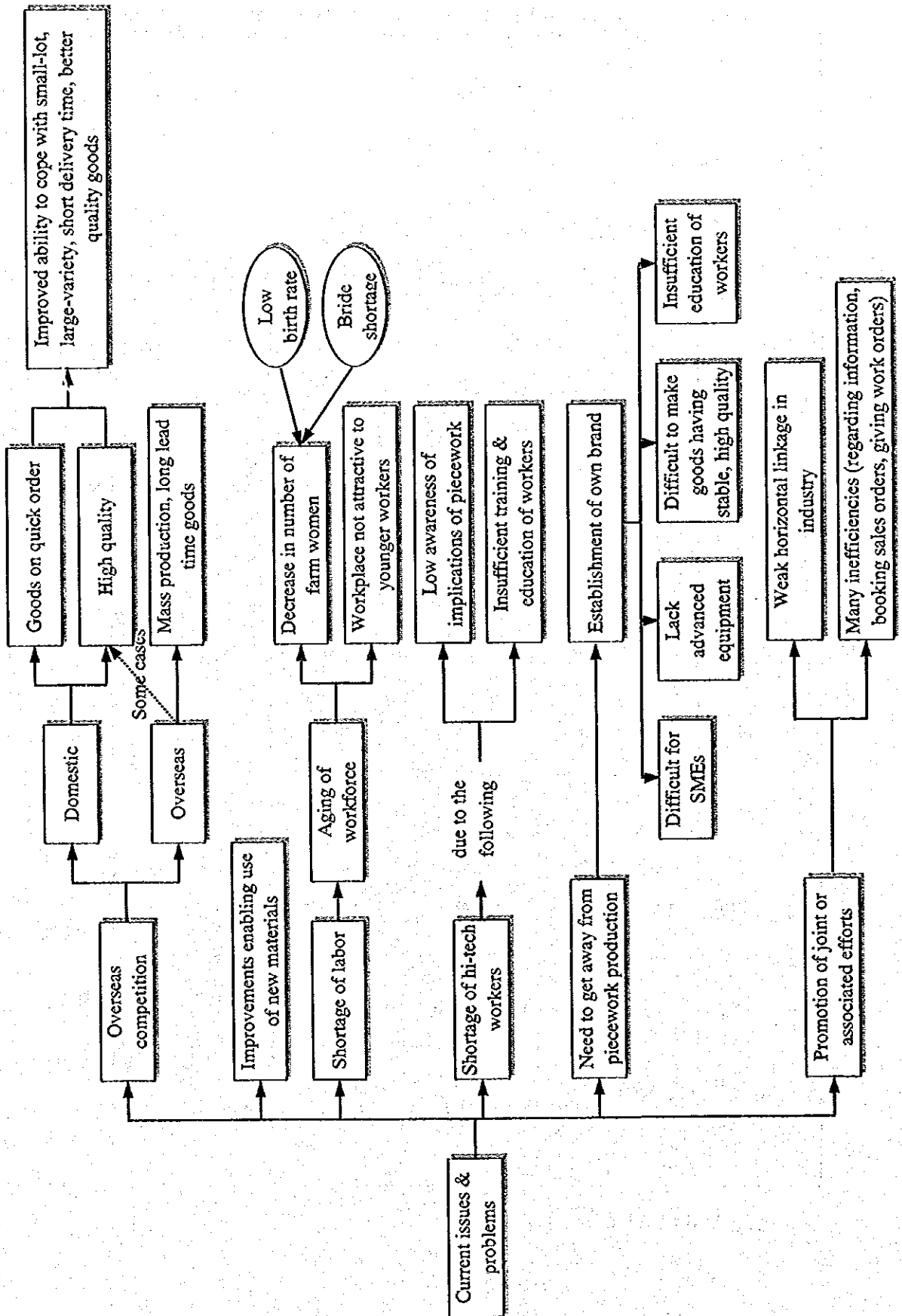
Source: Akita and Aomori Prefecture

Figure 2-3 Number of Enterprises and Workers, and Value of Shipments of Akita Prefecture's Apparel Manufacturing Industry



Source: Akita Prefecture

Figure 2-4 Schematic Analysis of Current Issues and Problems Confronting the Sewn Textile Goods Industry



i) Overseas competition

Production of sewn goods abroad has increased in recent years, as noted, including production by Japanese companies of high-volume items or items (often the same as high-volume items) for which short and precise delivery schedules are not essential, while these companies have concentrated their domestic efforts at capability for quick response to market conditions, items for which the duration of time to delivery is short, quality requirements are high, or price is high.

Recent technological advances at overseas production bases, however, have made it possible for overseas factories to produce high quality in goods for which delivery schedules have some leeway, and for them to produce high-price goods as well.

The present issues confronting domestic industry in this context are how to improve capabilities regarding small-lot, large-variety production, assuring better QR and shortening delivery times, improving quality and producing high-price items.

ii) Improvements enabling use of new materials

The growing importance of fashion as a market factor and an increase in demand for garments made of new materials impose requirements on all aspects of production.

The sewn goods industry has no choice but to acquire the ability to work with new materials developed by domestic textile companies if they are to survive in the stronger competition that has developed.

In order to sew fabric made of the new materials, accumulation of knowledge of how to work with those materials, introduction of high performance sewing machines, and technological improvements are being made.

iii) Shortage of labor

The companies that opened factories in Aomori and Akita confront the same medium- to long-term problems there that are found elsewhere in Japan regarding labor supply: aging of the workforce, a decline in young female rural workers, migration of young persons who complete high school to urban centers, and, in general, a shortage of suitable workers.

SMEs also have been obliged to adopt a 40-hour work week, that is disadvantageous to them relative to large companies. Although the trend is for a decline in domestic demand for products from these factories, that in turn reduces labor demand, in absolute terms there is a shortage of low-cost labor.

iv) Shortage of hi-tech workers

Through the present production in the industry has been based on piecework, without due regard to what changes in the competitive environment mean for that practice, and consequently the industry has failed to develop workers with hi-tech skills. This situation is a barrier to reform and progress away from the piecework

system.

Fostering of workers who also have planning, sales and designing capabilities in addition to high-tech skills are being made under cooperation with technical educational schools, technical supporting organizations, textile manufacturers and retailers.

v) Need to get away from piecework production

As a means of improving competitiveness against imports, firms in the industry are making their own efforts to shift away from doing sewing as directed by apparel makers and towards development of their own brands, and integration both forward (marketing) and backward (design).

In doing this, however, they are restrained by the limitations often inherent to SMEs, and the lack of sophisticated production equipment.

This makes it difficult to produce high quality goods on a sustained basis. Inadequate education of employees also is part of the problem.

vi) Promotion of joint or associated efforts

The requirements of the age are such that individual firms in the industry (doing piecework) are no longer viable as independent firms. Unless inefficiencies are eliminated by means such as joint or associated efforts by related firms, in areas such as information, seeking production orders, and purchasing raw materials or supplies, not many firms will be able to survive.

Weak inter-firm linkages are hampering adoption of such arrangements.

b. Issues confronted by the sewn goods industry, and future measures

Figure 2-5 shows a schematic arrangement of the issues that the industry is confronting, and future or anticipated measures. Most subheadings below correspond to the items in the figure.

Sewn textile goods production has been shifting within the developing countries to those countries offering progressively lower labor costs (or greater comparative advantage in labor cost). During the 1960s, exports from South Korea and Taiwan rose, but growth thereafter shifted to Thailand, Indonesia, and now is strong for China, Bangladesh, Sri Lanka and Viet Nam.

The countries that are losing production in this industry are in the same position as Japan was in that they face the need to carry out structural reforms and take other measures on behalf of the industry.

Thus, the recent and current situation in Japan, and Japan's experience, should be of considerable value to those countries.

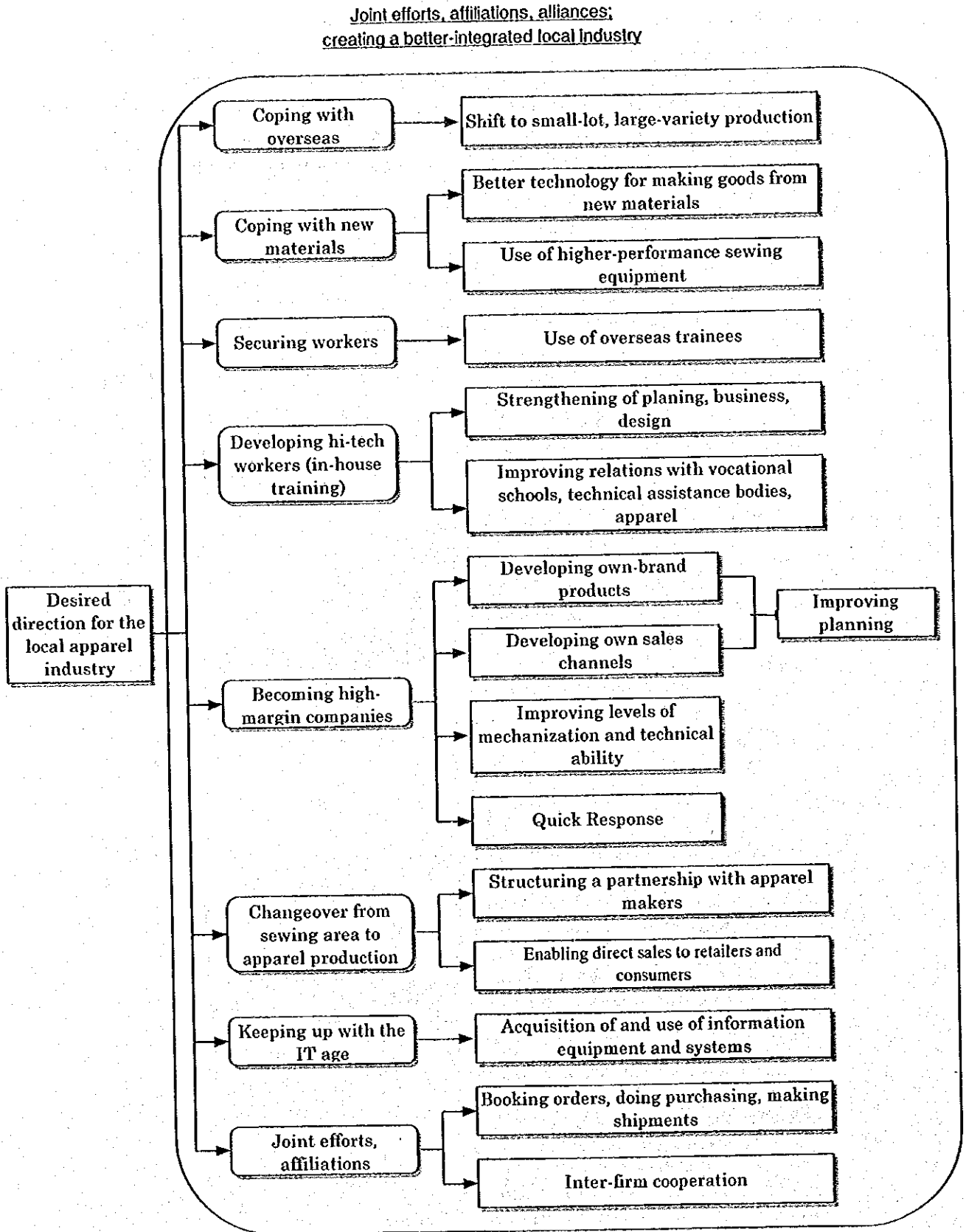
On the basis of the assumption that Japan should not be totally dependent on overseas sources of supply of apparel but should retain a certain percentage of domestic market supply capacity within her own borders, the following measures must

be taken.

If efforts are made by individual piecework-production companies acting on their own none of these measures can be successful. All of the measures require joint efforts, cooperation, localization, and sharper definition of the industry as a coherent, integrated part of the communities (Aomori, Akita) to which they belong.

The prefectural governments, the Aomori Small Business Promotion Corporation, the Aomori Prefecture Apparel Industry Federation, and the Akita Prefecture Apparel Industry Promotion Council implemented or led implementation of the measures.

Figure 2-5 Issues Confronted by the Sewn Goods Industry, and Future Measures



i) Coping with overseas competition

A shift is needed in the direction of production characterized by these factors: small-lots and wide varieties of goods; quick response to market requirements or conditions; shorter delivery times; higher quality, and higher price.

This amounts to a large number of operational requirements. The ultimate objective is to be able to do all the work to make even a single item of clothing.

ii) Coping with new materials

A large and increasing number of materials are in use as a result of the influence of fashion. It is necessary for domestic industry to be able to work with the new materials, as a means of differentiation relative to overseas competitors.

Many of the new materials are thinner than those they replace, making them difficult to handle in the production process.

Without having an accumulated body of experience, productivity in working with these materials will be low. Necessity therefore exists for establishing in the factories and production processes the advanced technology needed to efficiently work with the materials.

Improvement or development of employee skills, introduction of high-performance equipment to the production line, and fundamental study of the new materials are being undertaken.

iii) Securing workers

Even taking into account the declining trend in domestic production of garments to decline, the sewn goods industry still confronts a shortage of low-priced labor.

To counter this problem, the sewing industry as a whole (nationwide) has arranged through the Japan International Training Cooperation Organization (JITCO) to bring 2,000 short-term trainees to Japan.

They stay for three years, working as trainees the last two after a year at studying the Japanese language and other subjects. The number of such trainees is expected to increase in the future. Other measures to be taken would include providing day care centers and food service facilities at the production plants.

iv) Developing hi-tech workers (in-house training)

Unless hi-tech workers are available the industry will not be able to succeed in advancing to higher-margin operation and achieve a conversion from merely executing orders to companies that can plan, make and market products.

Advanced skills in such areas as product planning, design and merchandising through the use and cooperation of vocational schools, industrial advisory agencies, manufacturers, and retailers are being undertaken.

v) Becoming high-margin companies

Profitability can be improved if the companies are capable of developing and managing their own brands, and developing their own sales channels.

In order to do these things the companies must improve their planning capabilities. Development of several brands has been begun under the auspices of the Akita Prefecture Apparel Industry Promotion Council.

Studies are also being made of changes in mechanization for attainment of higher production efficiency, improvement of technological levels, and improving the organization of production and product distribution in order to attain higher QR ability.

vi) Changeover from accepting piecework to making special products that can sell

The fundamental pattern of conducting business must be modified. Companies must change from passively accepting orders to be fulfilled by piecework to actively planning, designing, producing and marketing their own special products.

To do this, the companies must hire and develop designers, patternmakers, and acquire ability in selecting fabrics, to the extent that they can expand their business activities and create products that can be sold to apparel makers as concepts backed by production capability.

In the industry it is said that there are many designers and patternmakers who know little about sewing.

But companies experienced in sewing can go back to the apparel makers and explain that if a certain design is modified in a certain way, it can be sewn better, faster, or cheaper.

This would mean an improvement in the status of the companies in the industry. Attainment of partnerships with apparel makers through advances such as this will be one step towards strongly establishing capacity to plan, design and then merchandise for retail (including direct) sale of clothing.

vii) Acquisition and use of information and equipment and systems

The distribution (wholesale and retail trade processes) and production of goods is becoming increasingly information-intensive. Equipment and software not now in hand must be acquired and improved or replaced from time to time.

This is particularly important if for example the industry wishes to attempt direct sale of its goods via the internet.

viii) Inter-firm cooperation

Study is being made of cooperation among firms for booking orders, purchasing, and shipment of finished goods, as a means of reducing waste. Joint use of facilities and equipment is also being studied.

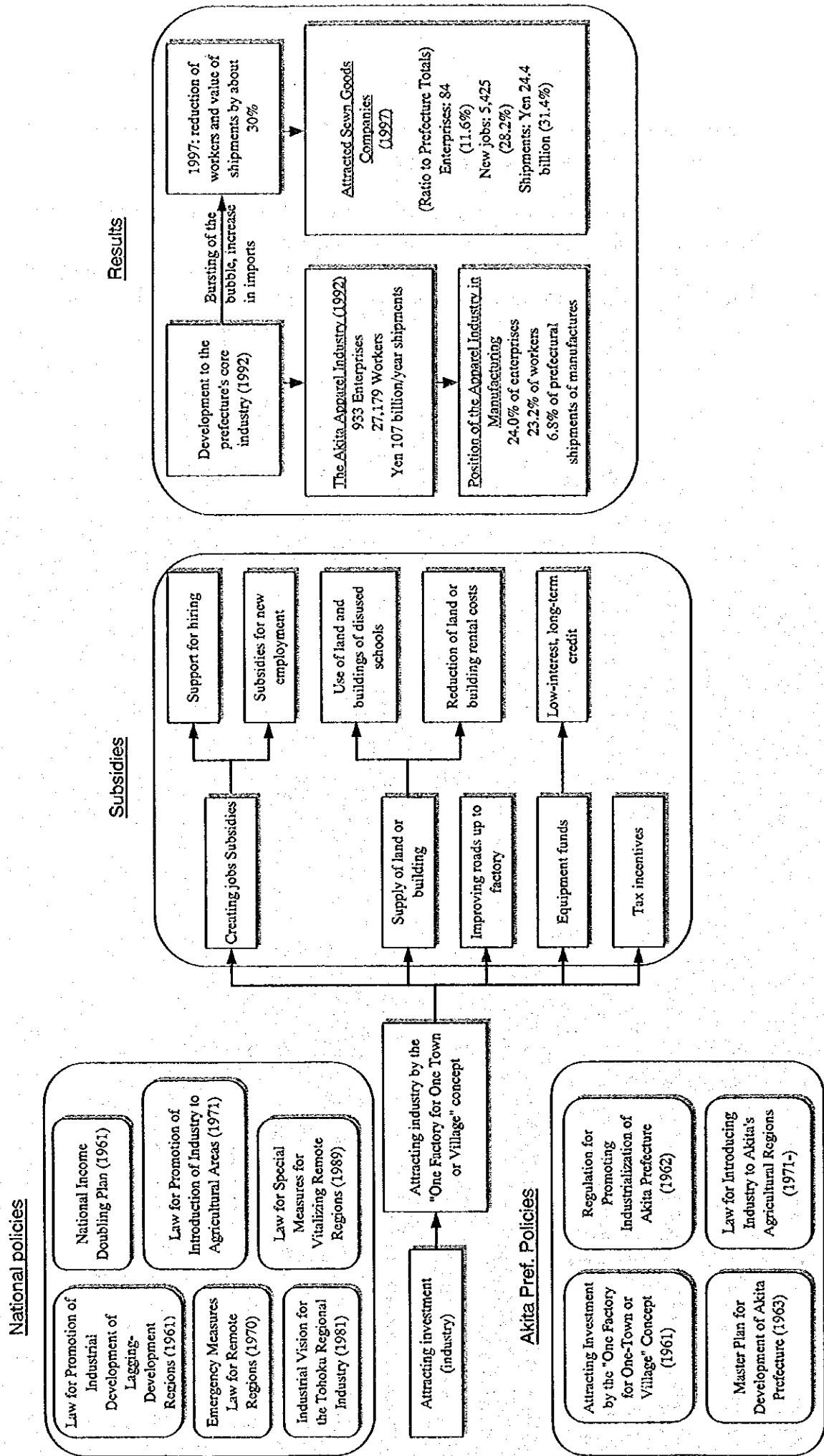
2.3 Examples of success in development of the sewn textile goods industry: Attracting new investment (Aomori, Akita Prefectures)

A schematic representation of the process whereby two prefectures succeeded in attracting new investment is provided as Figure 2-6.

This effort was based on the concept of "one factory for one town or village" for which support was provided by the national and prefectural governments.

Details are as below, with subheadings keyed to the figure.

Figure 2-6 Examples of Successful Development of Small & Medium Enterprises:
The One-Factory, One-Town or Village Concept



a. Attraction of investment on the basis of the "one factory for one town or village" concept

i) National policy related to the attraction of industry

National policy related to the attraction of industry on the basis of the "one factory for one town or village" concept was formed in 1961, the year that the Law for Promotion of Industrial Development of Lagging-Development Regions was passed and the National Income Doubling Plan was announced.

At the time, the central government thus had new policies for promotion of regional economies. Thereafter the following policies were announced with the objective of promoting the economic and industrial development of remote and agrarian regions: Emergency Measures for Remote Regions (1970), Law for Promotion of Introduction of Industry to Agricultural Areas (1971), Industrial Vision for the Tohoku Regional Industries (1981), and Law for Special Measures for Vitalizing Remote Regions (1989).

ii) Policies for attracting investment

Parallel to the national policies, the Akita Prefecture government in 1961 formulated "one factory for one town or village" concept as a way of attracting investment.

The prefecture, in the following year, passed an industrial development regulation, and the year after that adopted a master plan for development. In 1971 the Plan for Introducing Industry to Akita's Agricultural Regions was adopted and is still in force.

iii) The "one factory for one town or village" concept

The policy of promoting "one factory for one town or village" was vigorously promoted by the national, prefectural and local governments as a means of attracting industry to economically underdeveloped rural or provincial districts.

Results during the 1960s were concentrated in Akita Prefecture. At this time, almost no results were obtained for Aomori Prefecture, which is even more distant from the Tokyo metropolitan region than is Akita. During the 1980s, however, there was an increase in the number of companies attracted to Aomori.

The prefecture up to that time had sent busloads of school graduates each year to seek jobs in the sewn textile industry in Tokyo's Ryogoku area. Then Akita Prefecture attracted the sewing industry in Ryogoku area as well as those in Gifu, Saitama, Chiba Prefectures.

The Tokyo office of the Aomori and Akita prefectural governments became very active in promoting their prefectures as locations for industry, and the companies that were attracted as a result were dispersed in keeping with the "one factory for one town or village" concept.

b. Subsidies for attracting investment

i) Support for hiring

Subsidies available on the basis of (a) needed to sustain employment levels and (b) needed to help create new jobs were utilized. For the latter, from ¥ 50,000 to 150,000 per person was provided to employers for the first year of employment, when emphasis is given to training rather than actual productive work.

ii) Supply of land or building space

When available and suitable, vacant land and buildings, such as (in the latter case) former schoolhouses or gymnasiums, government offices, telephone exchange buildings and the like were made available in full or part for use by the new companies.

Rent for land or building space was not charged for the initial three years of use, and if the land or buildings were purchased by the new company, the sales prices would be reduced by two-thirds.

Low-interest, long-term credit was made available for purchase of these properties.

Further, prefectural subsidies were available for modification of structures; this was based on the need to assist economic activity in remote areas.

Building materials from demolished schoolhouses were made available for use free of charge.

When factories or parking lots had to be enlarged, city planning restrictions were eased.

iii) Improving roads

The cost of improving local roads to the site of the new factories was borne by the local town or village.

iv) Low-interest, long-term credit

Availability of preferential credit for acquisition of production equipment was facilitated.

v) Tax incentives

As a tax incentive, the fixed assets tax was reduced to zero or to a quarter of the normal level for a fixed period, and kept at a level of half that of normal thereafter.

c. Results

The situation regarding the deliberate effort to attract and keep sewn textile goods companies in the region is best considered in two phases: the period up to 1992 when the industry developed into a core industry in the prefectures, and the present (after 1992) when the influx of imports and post-bubble drop in domestic demand led to a decline in production.

i) Development up to 1992

The sewn textile goods industry became a core industry in the prefectures. The economic contribution that was made was monumental.

The scale of the industry in Akita in 1992 was:

- Number of establishments: 933
- Number of workers: 27,179
- Value of shipments: 107 billion

Moreover, the position of the industry in the entire manufacturing industry of the prefecture, in 1992 was as follows. The high percentage for employment is particularly important.

- Share of establishments: 24.0%
- Share of workers: 23.2%
- Share of shipments: 6.8%

Further, another effect was the improvement of interdependence between local agriculture and fishery communities and the sewn goods companies, by means of a cycle whereby the former provided sustenance (food) and the latter provided cash income opportunities.

In the regions concerned, the expression, "we're making textile goods in the rice paddies, and making rice in the textile industry" came into use. There was a decline in the outflow of people seeking work, which was a significant benefit.

ii) At present (after 1992, in 1997)

By 1997, the seventh year of post-bubble economic weakness, there had been a decline of 30% in the number of workers and value of shipments relative to the 1992 levels.

The scale of the newly attracted firms, nevertheless, was as follows. Shares of the attracted sewn textile goods industry in prefectural totals (shown in parentheses) were about 30% for both workers and shipments value. From this it can be judged that allowing for the broader economic effects, the results of attracting new businesses to the prefecture were good.

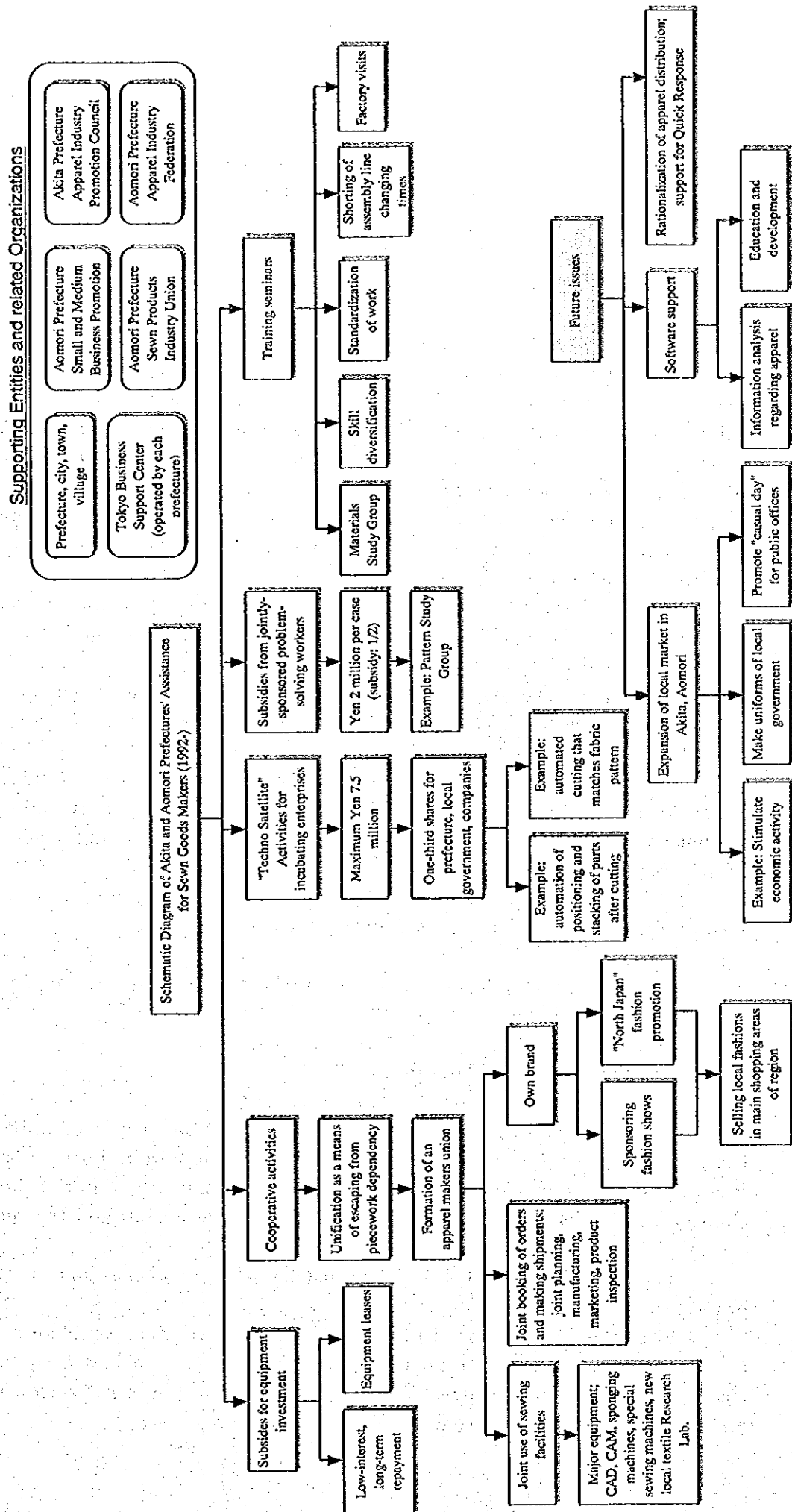
- Enterprises: 84 (11.6%)
- Workers: 5,425 (28.2%)
- Shipments: 24.4 billion (31.4%)

2.4 Examples of success in development of the sewn textile goods industry: Support systems, after 1992 (Aomori, Akita Prefectures)

For the convenience of those who use this report, the support system of the supporting organizations for the sewn products industry subsequent to 1992 is shown in Figure 2.7 as an example of success. Although the results fell short of objectives, the method of approach certainly deserves attention.

In Figure 2.3 we show the level of shipments by Akita's sewn goods industry; it is down by about 30% from the level of 1992. This alarming change has led to countermeasures by both the government and private sectors, with the former acting at all levels from the prefecture down.

Figure 2-7 Schematic Diagram of Akita and Aomori Prefectures' Assistance for Sewn Goods Makers (1992-)



The countermeasures are being led by the Aomori Prefecture Small and Medium Business Promotion Corporation, the Aomori Prefecture Apparel Industry Federation, the Akita Prefecture Apparel Industry Promotion Council, and the prefectural Tokyo Business Support Center.

i) Cooperative activities

The Apparel Companies Union has been formed as a new organization to assist the companies to move away from being passive piecework order-takers. The underlying objective of this body is to start with facilitating joint use of sewing facilities, to be followed by joint efforts at booking orders, making shipments, doing planning, engaging in production, selling the finished goods, inspecting products and ultimately possess independent brands.

Brand-related activities have already begun. There have been promotional efforts on behalf of "Aomori fashion," and fashion which matches specifically the northeastern part of Japan.

Fashion shows using company employees rather than professionals as models have been held, and plans have been studied for selling Aomori-origin fashion wear in major shopping districts in the prefecture.

An "Italian Tsugaru Apparel Study Group" has been formed and a Japan-Korea apparel symposium has been held to deepen understanding of the wearing apparel industry.

Regarding joint-use of production facilities, what is under consideration is establishment of a Textile Research Lab or similar body that would install advanced equipment that individual companies could not easily justify buying, such as CAD, CAM and sponging equipment or specialized sewing machines.

ii) Subsidies for acquisition of production equipment

Low-interest, long-term credit for purchase of equipment, or for leasing equipment, is being provided.

iii) Subsidies for research and development

By way of research and development activities on behalf of SMEs, Akita Prefecture has been providing subsidies called "Techno-satellite Enterprise Nurturing Project": the maximum amount per case is ¥ 7.5 million, which is split in three equal shares among the prefectural government, the local government, and the sponsoring company.

The following examples may be cited for what has been done in the sewn products industry.

First, there has been work at development of a device that would automatically position and stack parts after cutting. The concept originated in a company and a local university is doing the development work. The R&D have not been completed, and at least part will be reported in college student theses.

Second, work has been done on an automatic cutting device that matches patterns. This too was proposed by a company and the technical work and building of a prototype are being done outside the firm. It is reported that work is almost complete and is expected to be successful.

iv) Subsidies for joint problem-solving programs

The prefecture will support up to half of an expenditure of ¥ 2 million when four or more companies wish to use a working factory or a public testing and experimentation station for solving joint problems; the subsidy is applied to the travel and lodging expenses of an instructor, the instructor's honorarium, materials used for the training program, etc.

Examples of the use of this by the sewn goods industry include a Pattern Study Group. This involved hands-on work with patterns and cutting. The purpose was to develop understanding of why a defect in the pattern caused faulty sewing.

v) Training seminars

Training seminars have been held on the following topics.

• Textile Materials

Designers are making increasing use of new materials but sewing goods makers do not necessarily have much experience working with those materials. Study by means of seminars was identified as a way to learn more about the materials and accumulate technology; the seminar had the working objective of promoting joint knowledge of the technology.

• Multi-skilled workers

As noted above, the industry must break away from dependency on piecework and the mentality accompanying it. Training of skilled workers is one means towards that end, and it is multi-skilled workers that are needed.

These workers will have good understanding of the upstream and downstream processes, ranging from design to sewing and finally sales.

At the same time, there is need for workers having greater knowledge in "horizontal" directions rather than the "vertical" one.

• Standardization of work

Standardization of work is needed for small-quantity, large-variety production and for production based on having Quick Response. Participating companies shared their experience.

• Quick change on a sewing assembly line

A program was held for companies to share their experiences in making a quick change in the production line in accordance with requirements of small-quantity,

large-variety, QR conditions.

- **Factory visits**

To be better able to modify one's own production process, factory visits were exchanged so that each firm could learn from the others.

vi) **Future issues; needs regarding public agencies**

In addition to the above hands-on activities, the sewn goods companies have stated that the following were desired from public agencies.

- **Expansion of the local markets**

This can be promoted by construction or enlargement of parking facilities at major train stations. Local brands can be promoted within the areas of production.

Local civil servants' uniforms can be made in the prefecture where they are employed. A casual day can be declared at public offices one day a week as a means of expanding demand for clothing.

- **"Soft" support**

Success for activities by a sewn goods union of companies in selling their own brands will be greatly aided by analysis of relevant market information. This can be done by public agencies. Improved support for educational development, additional support for education and development are desired.

- **Support for improvement in the distribution sector and improvement of QR capability.**

Support for establishment of computer network systems for delivery and information among the cooperation companies is best done at the level of the prefecture.

2.5 Specific Examples of Success at the Level of the Company

The foregoing examples of success at the level of the prefecture are here supplemented by accounts of success at the micro level - at newly attracted companies and regarding the subsequent support for them.

a. **Company Y (Aomori Prefecture, a sewing company partly owned by a village)**

Company Y is owned by an apparel company, T, and the village, Y. It makes men's wear. The village succeeded in creating local jobs by attracting the company which is now flourishing. Company T has adopted the same method in Hokkaido, where it operates a factory.

i) Outline of the company

- Location: Y Village, Aomori Prefecture
- Established: March 1977
- Capital: ¥ 110 million
- Owners: Company T, Village Y
- Management: The president is the mayor (part-time) of the village
- Products: Men's order-made suits, ready-made suits, coats (mostly woolens)
- Employees: 185
- Output: 80,000 items/year
- Equipment: Main sewing machines, 135; gluing machine, 1; finishing presses, 16; CAD/CAM system, 1; sponging machine, 1
- Sales: By Company T

ii) History

Established when the mayor at the time and the Company T provided the equity, in 1977.

The objective of Village Y in investing in the company was to offset the remoteness of the village's location and curtail the outflow of workers; a labor-intensive business was desirable. Among the alternatives in the sewing industry, the choice made was to make the relatively demanding men's order-made suits.

The mayor serves as president without drawing a salary. Of the five corporate officers three are members of the village council or past members of it, and serve without pay. Two are affiliated with Company T.

Factory management: A former government official and native of the village acts as managing director of the company. The technical side of the factory is managed by an executive who is an expert in sewing at Company T.

Management is judged to be meshing well. Capable workers have been hired from the village and have been well trained. Stopping the outflow of population has been successful.

Subsidies at the time of founding: The factory building originally was a vacant schoolhouse and made up the owner's equity put up by the village.

The village has provided strong support regarding hiring, and applicants were tested at the village hall. Part of the hired workers' wages was subsidized by a central government arrangement for promotion of employment.

Current Subsidies: the village provides an annual subsidy.

iii) Operation and management

With regard to production management and management of the factory, the following may be noted.

Production is of small lots of a wide range of sizes (measurement combinations) and colors, almost as if the factory was set up to make samples. Production levels are relatively stable.

The basic view is that proper equipment and facilities should always be available and work should be highly standardized. On this basis there are plans to invest in additional automation.

An extremely high level of quality is demanded as many of the factory's products are made of Miyukikeori, or woven fabric from one of the nation's best products. It is most impressive that the workers at this factory can produce the fine quality that they do. Efforts have been made to implant the 5Ss and QC principles as basic attitudes of the workers, and to standardize the operations they make.

As to education and training, the attitudes and awareness matching the production of high-grade men's wear have thoroughly permeated the workforce and multi-skill training is being undertaken.

Business operations: Production and quality management are firmly controlled and the factory has the trust of the company's customers. Under study at present are subjects such as direct sale of single items to customers.

vi) Results

Jobs for villagers: The population of the village in 1977 was 4,200 and now it is 3,700. Of the 700 who work for pay 100 are employed at the factory. In addition to this hundred, 37 residents of Aomori City or elsewhere are employed here. The employees are considered to be the elite of the village. It is judged that the initial objective has been achieved.

b. O Producers Union (Osaka, in an officially supported industrial park since 1960)

Company O opened an industrial park in Osaka in 1960 which the Small and Medium Enterprise Agency, affiliated with the Ministry of International Trade and Industry, designated as meriting subsidy support.

This is a large facility where about 55% of total domestic production of men's wear is made. The estate has been strikingly successful as an undertaking and now is operated on a stable, prosperous basis.

As it is understood that technical factors in particular have been successful, this has been selected for presentation here as an example of successful achievement.

This park was created on the basis of the Small and Medium Business Promotion Finance Law, as a case of a joint venture by SMEs, and is a rare success among efforts by the sewn textile goods industry unusual in being a success.

Other than this park there are a number of examples of related companies forming a group at a single location, but none of them have been able to do as well as this one in accumulating technological capabilities. It is said that many of the others have been unable to cope with changes in the business environment.

i) Outline of the company

- Location: M City, Osaka Prefecture
- Established: June 1960
- Founders: Osaka men's wear wholesale and trading companies
- Capital: ¥ 222 million
- Owners: 23 companies
- Products: High-grade men's wear, suits, coats (woolen wovens and blends)
- Employees: about 2,000
- Output: About 55% of the nation's production of men's wear
- Production equipment: The 23 members of the Producers Union have in total 6,000 sewing machines. Of central importance to all companies is a facility having four lines of sponging machines for use by all of the companies. Sponging machines stabilize fabric dimensions to ensure precision in cutting. Centrally controlled small boilers are used.
- Welfare and other facilities: The Producers Union operates a dormitory, employee housing and cafeteria on a joint basis. There are joint parking facilities, a sports field and other facilities.

[Note:] Sponging is a process for treating fabric prior to cutting. The fabric to be processed does not have dimensional stability, owing to variation in moisture content and forces imported during earlier production steps. Parts cut from such fabric would not have uniform dimensions, making the sewing process more difficult and decreasing the value and grade of the sewn product. Application of steam prior to cutting stabilizes the dimensions of the cloth.

ii) History

In 1960 the Osaka government approved a consolidation proposal for men's wear producers and it was decided to locate a production base in H City.

The Small Business Agency then designated the industrial park as qualifying for subsidies. The park has capacity for 40 companies but at peak there were 36 in operation there. At present, there are 23.

The origin of this extremely large industrial park lies in the experience of a group of Osaka textile company representatives who made a study tour of America in 1952. They were amazed at the scale of America's textile industry, and decided to pool their resources and make a large industrial park.

Management of the industrial park: Each of the 23 participating companies is responsible for operation and management of their own factory.

The main common-use facilities are a sponging plant, a steam collection, supply and control system, and a technical training center. These are central functions of the park as a whole.

Other common-use facilities are shower rooms, a hall for diverse events, education and training facilities, various welfare facilities, a sports field, cafeterias, family housing, dormitories and parking lots.

Vacant sites are used by the Union for shops and apartment houses that generate rental income. There also are a small supermarket, a car wash and commercial facilities that also generate income. Money thus obtained is shared by the Union members.

Financial assistance at the time of establishment: The Union obtained 53 hectares of land, some of which had been zoned as farmland, from Hirakata City since the city government was desirous of a large industrial park being created there.

Site preparation work began in 1960, after the Small Business Agency designated the estate as qualifying for financial assistance. Funds for this were obtained from the Osaka Prefectural Government and the Ministry of International Trade and Industry, in the form of a loan having a grace period of five years and repayment thereafter over a period of ten years.

Funds for construction of family housing and dormitories were followed from the Small Business Agency under the same terms.

Subjects for future attention: The Union is interested not merely in operating and managing the park but also in working to assist its companies regarding their coping with market-based requirements regarding color, pattern and design.

There are plans for assisting the companies to improve their capabilities for product planning and technical development, in order that they will be able to supply consumers with high value-added products that properly reflect consumer preferences.

Funds are also to be used for developing improved international sensitivity so as to better understand the implications that fashion trends and changes present.

iii) Results

In many instances, the central function of an industrial park is limited to such basics as supplying utilities and treating waste water.

In the case of this particular park however, provision of sponging equipment is a more significant function that is central to the park as a whole. This equipment has

made a highly significant contribution to the performance of each company.

This equipment is a major reason the park has been a successful venture.

The reason the park has been successful is that it improved the following functions for the participating companies. The reason is not a matter merely of size.

Improved sponging: All of the companies were assured of the maximum dimensional stability of the fabric prior to cutting. Before the sponging process, the fabric is examined in detail particularly regarding moisture content, elasticity, and shrinkage.

The data of tensile strength and elongation that has been collected constitute an enormous resource, used for controlling the process and thereby ensuring the quality of cutting and the entire garment.

The sponging equipment is meticulously maintained so that operation is always stable. Maintaining dimensional stability of fabric means that the efficiency and productivity of cutting and sewing are improved. Further, the quality of the clothing is thereby well maintained, assuring that a corresponding high sales price is justified. By this means, a contribution has been made (is being made) to corporate profits.

Steam supply: The collection and supply of steam has been centralized, and control of the small boilers at each company's factory is centrally controlled but is responsive to the requirements at each factory. Advanced control technology was developed for this. By this means, the Union has contributed to rationalization of factory operation at all participating companies.

Education and guidance: In 1966 Osaka Prefecture authorized a men's wear vocational training school to be established in the park. The term of study is two years and both classroom work and factory practice work are included, so as to enable graduates to make men's suits. Lectures on general subjects are given by college instructors, while pattern making and sewing are taught by experienced persons from estate companies in the park.

This school is authorized to certify student (graduate) skill levels, and has greatly contributed to improving the abilities of park workers.

If a company were to move its factory to outside the estate it would have to construct its own sponging facility. Also, it would no longer be able to avail itself of the vast amount of data that has been accumulated and is being put to use every day.

Owing to a shift to overseas production, the number of factories in the park has declined, but those companies that remain are continuing to produce high-quality, high-margin, QR products for the men's wear market.

3. Applicability to Developing Countries and Points to consider

3.1 Sewn Textile Industry in Developing Countries

Imports of textiles by the United States, EU and Japan in 1997 are as shown below. The share of apparel in the total is high for each. Industrially developed countries have been increasing imports of textiles annually, and of apparel within that larger category.

Apparel accounts for a large share of world trade of textile manufactures.

The situation in Japan is shown in Figure 1-1; similar conditions exist in the United States and EU.

Textile Imports (1997), CIF, in US\$ Billion

	Yarn, fabric	Apparel
EU (15 nation)	54.1	80.4
United States	12.4	50.3
Japan	5.8	16.7

The source of most of the apparel imports is the developing countries as a whole. Examples of increases in export growth achievements by product type and by Asian countries as given in a recent JETRO report are as follows.

- Clothing by Bangladesh

Exports in 1997 were US\$5.16 billion of which 73% (US\$ 3.78 billion) were apparel

- Clothing by Cambodia

Of the US\$603 million of exports 64% or US\$390 million were apparel (1998). Growth of exports to the United States stands out.

- Textiles and clothing by Sri Lanka

Of the 1998 export value of US\$4.74 billion 52% was clothing.

The top largest importers of apparel in the EU group are as shown in Table 3-1.

Figure 3-1 shows the trend of apparel exports from the ASEAN group by destination. The majority is sent to the United States, EC, Japan and the Middle East.

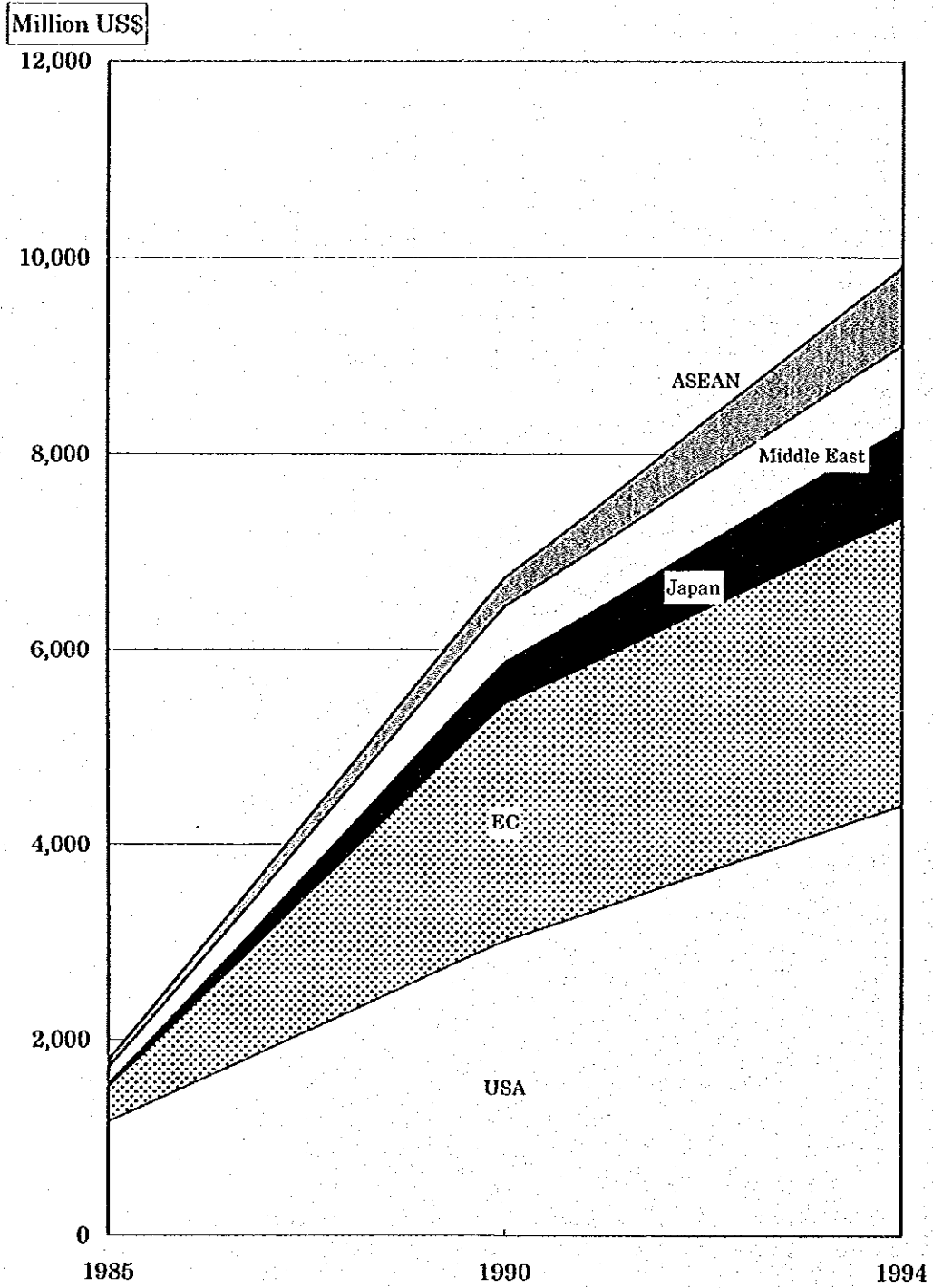
The following is a review of changes among textile goods exporter countries.

Table 3-1 EU's Top Ten Clothing Suppliers (1994)

	Pullover	T-shirts	Blouses	Dresses	Skirts	Trousers	Overcoats	Women's Suits
1	Turkey	Bangladesh	India	India	India	Tunisia	China	China
2	Hong Kong	Turkey	Hong Kong	Turkey	China	Morocco	Poland	India
3	Indonesia	China	Turkey	Hong Kong	Turkey	Hong Kong	Turkey	Turkey
4	China	India	Poland	Morocco	Morocco	Turkey	Romania	Poland
5	Bangladesh	Mauritius	Malaysia	Tunisia	Tunisia	China	Morocco	Morocco
6	Morocco	Hong Kong	Morocco	China	Poland	Pakistan	Tunisia	Tunisia
7	Mauritius	Tunisia	Sri Lanka	Poland	Hong Kong	Poland	Hong Kong	Romania
8	Korea	Morocco	Tunisia	Sri Lanka	Romania	Romania	Hungary	Hungary
9	Macao	Indonesia	China	Romania	Hungary	USA	Croatia	Slovenia
10	Taiwan	USA	Romania	Hungary	Croatia	Hungary	Slovenia	Croatia

Source : Textile Outlook International, March 1996

Figure 3-1 Export Destinations of ASEAN Clothings



Source: Research Report, Japan Chemical Fibers Association

Up to the middle of the 1970s, Japan was a substantial exporter. Thereafter, the major exporters that emerged were South Korea, Taiwan, and China, after which export activity moved to the ASEAN countries, and thence to Bangladesh, Sri Lanka, Viet Nam, Cambodia and Laos.

At present, exports by South Korea and Taiwan are declining, in the same way as Japanese exports declined years ago. They testify to the process of shifting of production to low-labor-cost countries.

Countries suffering from such a loss of industry have no resource but to undertake reforms and reconstruction. Indonesia, that has experienced such a loss, has also been hurt by devaluation of the Rupiah resulting in a major decline in apparel exports.

At the present time Indonesia is attempting not only to maintain business as it used to be and merely produce to fill orders from abroad, but also is studying how to develop national design capabilities and export goods having higher value added.

Countries such as this will benefit greatly from Japan's experience.

There are several stages in the development of the sewn textile goods industry in developing countries, and whatever the timing and duration of those phases, the countries will go through essentially the same processes as Japan has experienced.

During the years that the Japanese industry developed, the sewing machines that were used were primarily industrial machines purchased from the United States.

Many of the machines that were bought were second-hand, and it was necessary for companies to obtain allocations of scarce foreign exchange in order to import replacement parts for them.

In the developing countries of today, however, many of the machines were acquired to produce for export markets, and are of recent make. This is a significant difference between those countries at the present stage of decline or loss of production to lower-cost countries and Japan when it was at a comparative stage.

In this respect, not all of Japan's experience is relevant to these other countries.

3.2 Significance of Promotion of the Sewn Textile Industry (SME Sector) in Developing Countries

As stated above, the share of apparel in world textile trade is high and increasing. The growth of apparel exports is the growth of apparel exports from developing countries to the industrially advanced nations.

Apparel exports from the developing countries are made primarily by the following process.

Apparel importing companies plan sales of apparel according to a sales program.

The importing country acquires the fabric and accessories needed for that sales program, and sends them to the production points in the developing country.

The apparel is made (processed) and exported to the destination country.

The importing country (source of the fabric) relies on the downstream processors, the developing countries, for sewing, high downstream labor cost components. Midstream and upstream work such as involving production of yarn and fiber is retained in the country where demand is.

This is how the textile industry is divided between an importing country and an exporting country.

The reason for the expansion of apparel trade is therefore thought to be as follows.

In the case of apparel, because the labor cost component is high, production shifts from high labor cost countries to low labor cost countries. For this reason exports from low-cost countries and imports by high-cost countries grow.

It is the presence of a low-cost labor force that makes apparel exports possible and apparel exports amount to the export of labor that has added value to the imported fabric and accessories.

As is explained above in the case of attracting companies to establish production plants in Aomori and Akita Prefectures, if a labor force is present, it is relatively easy to start production operations, and relatively little investment is needed to expand output.

Further, apparel is an export industry and for those developing countries not endowed with rich natural resources other than that residing in the manual dexterity and skills of the people, production of clothing can be an excellent means of obtaining foreign currency.

Therefore, the significance of promoting the sewn textile product industry in developing countries is high.

3.3 Differences Between the Sewn Textile Goods Industries in Developing Countries and Those of Japan

Stage of development of the sewn textile industries is one of the differences between the industry in developing countries when compared to that of Japan.

The industry in Japan underwent great development up till 1975, but from then it stagnated and then started to decline. In contrast, the industry in developing countries has continued to develop during this period when Japan's industry was declining.

Thus the difference in the stage of development is great, with the industries in developing countries exporting increasing quantities to Japan while Japan's industry

struggles to preserve a presence in the domestic market for sewn textile goods and particularly wearing apparel.

The varieties produced are a second point of difference. Japan's domestic industry primarily is producing short-delivery-time, high-quality, high-price (-margin) clothing (mostly men's wear and women's wear).

The types of apparel exported from developing countries, by way of contrast, are almost all types of apparel, low in price and are not subject to tight delivery schedule requirements.

Regarding the destination of products, most of what is made in Japan is sold in Japan's domestic market, but most of the output of developing countries is exported.

Therefore there are great differences in the varieties of goods produced (some items being made in other countries are not made in Japan).

Regarding production scale, the developing countries possess large-scale facilities not present in Japan; this is linked to the type of product and market each producer nation makes and serves.

Technical level in Japan is high and the products made in Japan require the application of advanced technology. Products not requiring high levels of technology that are made in the developing countries.

Recently, however, the technological level of the latter has been rising and in the industry the opinion that there is no longer a great difference between the two has gained in strength.

Acquisition of fabric and secondary material inputs (buttons, trimming, fasteners, etc.) and especially when export products are to be produced is often difficult in the developing countries.

Companies producing sewn textile goods in developing countries often have a capital affiliation with larger companies in the importer countries or destination markets; this is not the case with Japan.

3.4 Examples of Success in Japan, and Points of Caution When Applying That Experience in Developing Countries

In view of the analysis in 3.3 immediately above, caution must be exercised in attempting to select and apply a Japanese case study to developing countries.

In the future, the center of worldwide apparel sewing operations will continue to move to countries with low labor costs, which often lack resources to support modern industrial activity. These countries are characterized by a low literacy rate among workers, poor infrastructure, and the absence of efficient customs clearance service.

The sewing of apparel products is essentially the assembly process where a large number of raw materials and parts must be put together accurately and efficiently according to instructions. The quality of sewing work, therefore, is governed by the quality of workers who are expected to understand work manuals and act accordingly.

To promote development of the sewing industry in these countries, there are a number of problems to be overcome. Some of them are related to fundamental aspects of transforming the country to industrial society, which are different from those that occurred in the development process of the Japanese sewing industry. Before applying Japan's experience, therefore, these fundamental issues need to be addressed. Unless these issues are defined clearly, it is very difficult to offer advice on how the Japanese experience can be applied.

Secondly, key success factors must be extracted from the analysis of sewing industries in various developing countries in terms of their development stage, pattern and goal.

In countries where the sewing industry has established itself as a major industrial sector, two issues need to be addressed. First of all, the industry and its growth must be sustained as long as possible to ensure its contribution to the national economy. Secondly, as the successfully sewing industry indicates that the country has achieved the first stage of industrialization, it must be effectively used as the basis of promoting the advanced stage of industrialization.

To ensure sustainable growth of the sewing industry, competitiveness needs to be raised in the key areas other than labor cost, namely quality, delivery and cost against countries that catching up with lower labor costs. For instance, quality originates from higher skills to produce apparel products that are thought to require the advanced levels of technology possessed by the Japanese industry.

As for delivery, development of infrastructure (transportation network) and the improvement (streamlining) of customs clearance procedures are determining factors and require a systematic approach. Also, development of a flexible production system and an advanced distribution network (including the use of IT) will play a critical role in enabling the industry to make quick response to the market needs. In fact, this is the area where the Japanese industry strives to establish its competitive edge.

Finally, to promote the next stage of industrialization, development of the sewing industry (downstream) needs to be extended to textile industry (upstream), such as dyeing, production of yarns, fabrics and other raw materials. For instance, if the sewing industry uses imported fabrics and other materials (buttons, etc.), the next step is to dye, cut and sew fabrics made from local materials and threads. Then, export items can be expanded to yarns and fabrics. Japan has used the textile and synthetic fiber industries as a major springboard for development of the postwar

economy by encouraging exports of sewn products, fabrics and yarns, which contributed greatly to the country's impressive economic growth.

The characteristics of the sewing industries in developing countries, as shown below, vary largely, and therefore it is necessary to design cooperation according to such characteristics.

Where it is only sewing that is being done: A classical case would be that of a producer receiving a package with all of the cut parts, accessories and supplementary materials, and the producer does nothing other than assemble and sew or attach the components.

Such cases tend to be found when the parts are provided by a foreign company, and the production company is owned only by parties from the developing country. In such a case, it is difficult to justify official development assistance.

Sewing in an integrated factory: In formerly centrally planned economies, textile product factories are often owned by the government and are integrated enterprises, engaging in spinning, weaving, knitting, dyeing, finishing and sewing as a single integrated process (or set of processes). An example is a certain large factory in Viet Nam.

There are almost no examples like this in Japan. Therefore when a case of success in Japan is to be applied where the factory in the developing country is an integrated one, special considerations must be made.

Sewing factory between the above two cases: The above-mentioned two forms of production also have a number of intermediate forms; it is necessary for there to be an inquiry made into the form of production if a Japanese precedent is to be used.

In the case of a sewn textile goods industry that starts with raw materials for textiles and adds value by producing apparel, the following should be noted. In the case, for example, of a country that produces cotton as a raw material for textiles, that country would likely either export the cotton or spin it to make yarn and fabric for export.

The objective properly would be to add value to the raw material through use of labor and to make sewn products from the domestic cotton.

The above situation is frequently seen in formerly socialist countries. Syria is one example.

Syria is a producer of cotton. It has low labor costs, and the enormous European market is not far away. Midstream and downstream industries are not developed, nevertheless, so Syria exports cotton.

The nationally-owned textile enterprise(s) that is mostly upstream and the private textile enterprises that are mostly midstream and downstream are not integrated.

It is thought that the experience gained during the past 50 years in Japan would be of great significance to a country such as Syria.