

## **4.4 Present Situation and Problems of Private Textile Companies**

### **4.4.1 Activity Areas of Private Companies**

As pointed out in 4.1.3.1, private companies play a major role in knitting, weaving, dyeing/finishing, and sewing processes by using imported synthetic fibers and yarns, and cotton yarns, and some of them export clothing to the EU, the U.S., and neighboring countries. Overall, they are larger than state-owned companies in terms of employment and sales.

### **4.4.2 Present Situation of Operation**

The study team visited 34 companies and found that many of them were managed under a policy giving priority to quality and had strong vitality. In export business, they thoroughly examine the market requirements and trends, and strive to build up and adjust internal resources to meet customers' demand (quality, price, and delivery). They have staff in charge of exports, who have appropriate language skills and marketing expertise. These efforts and capabilities distinguish the private companies from state-owned companies. A small number of state-owned companies do manufacture exportable products but do not have expert staff.

From the corporate visit, major findings obtained from comparison with state-owned companies are as follows:

- The number of workers is relatively small.
- The "5S" is thoroughly practiced.
- Quality control and facilities management are firmly in place.
- Many factories are clean and well-designed.
- High export ratio
- Long-term relationships with foreign customers
- Large companies operate welfare facilities including cafeteria, medical clinic, mosque, and child care centers.
- Highly computerized
- Many companies have a policy that gives the priority to quality.

Overall, the private companies have strong vitality and export capabilities, and they are expected to play a very important role in Syria's efforts to develop the textiles and clothing sector into one of the country's major exporting industries.

#### **4.4.3 Present Situation of Textile and Clothing Companies**

Private companies in the textile and clothing industry, particularly those exporting their products, can be classified into the following types. Note that the following discussion is limited to the companies the Study Team visited, which are listed in Table 4.1-1. As the field survey was primarily concerned with the export potential of textile products, small- and medium-sized companies were not covered.

##### **(1) Companies exporting clothing which is made from Syrian cotton**

These companies make a variety of products such as knit products, jeans and terry towel by using Syrian cotton and export these to the EU, the U.S., and neighboring countries.

##### **1) Cotton knit products**

Bawadekji, Habi Tex, Chebib, Industry and Commerce Tissue, and Syrian Cotton Development export knit products made of Syrian cotton. The first three companies have their own dyeing lines, while the other two do not.

Export destinations are the EU and the U.S. Most of these companies export more than 90% of their products. Export volume are in the range of between 3,000 and 10,000 units/day/company, or 100-2,000 tons/year/ company. Spun yarns from Lattakia and Hama are used as their raw material.

Habi Tex operates a new, large factory designed for export production, and exports almost all of its products to the EU. Chebib has the latest knitting and dyeing lines and excellent technical capabilities.

Syrian Cotton Development makes and exports most of its knit products for children to the U.S. The company pursues volume sales with small profits and quick return, and believes that sales to the EU do not produce profits due to the small volumes involved. It boasts that it has cost competitiveness in

children's clothing and can compete with products from China and Bangladesh. (Children's clothing do not have to meet very high quality requirements and have a lot of embroidery and ornamentation, which creates an opportunity for Syrian companies to capitalize on labor cost advantages.)

They do not sell products in the domestic market, because the market is very small and each transaction is relatively small while selling expenses including collection costs are high.

Bawadekji operates large-scale, integrated production lines consisting of knitting, dyeing, and sewing processes. It sells products to major brands, including Puma, Adidas, C+A, and Marks and Spencer, and employs 400 workers. Its management policy gives priority to quality, rather than price and sales volume. For quality control, it maintains production equipment capable of meeting customers' needs and also laboratory testing equipment.

Its laboratory is equipped with a shrinkage tester for sewed products and fastness testers (including Vervide) which, according to the company, serves as a risk hedge against strict quality requirements by Marks and Spencer. Shrinkage determines product value and needs to be carefully controlled. The company keeps the shrinkage rate below 5% and controls fastness very well. A computer system is used to store and search color batch history. It also has the ability to produce various parts and components for facility maintenance.

## 2) Jeans

Jeans make up a sizable market in the country, which also supports exports. Kouefati exports around 10,000 jeans made of Syrian cotton to neighboring countries, including Jordan, Lebanon, and Kuwait. It purchases fabrics from Sabbagh & Sharabati and other companies, and dyes, stone washes, and sews them for sales. It is active in sales promotion by holding a fashion show at a large hotel in Aleppo.

Load is the first company in the sewing industry to obtain ISO 9002. It operates high-grade jeans shops throughout the country. It started own production at a new, well-designed factory a year and half ago. It originally

planned exports and faced a sudden import ban on fabrics (including fabrics to be exported as sewn products).

### 3) Cotton towel

Adel About Shaar & Son a terry towel manufacturer exports 80% of its products to Germany, France, and Saudi Arabia. Pakistan, Bangladesh, and China are major competitors in the export market, but the company maintains that its products are high grade and compete with those from Turkey, Indonesia, and Portugal. Syrian products also enjoy quota-free status. It exports 1,000 tons annually and plans to boost production.

Raw material is purchased from Al Waleed and Idleb, and dyeing is subcontracted to outside shops.

Syrian cotton is suitable for towels, and production is expected to grow in future.

### (2) Exports of clothing made by using imported materials

Exports of clothing made by sewing imported fabrics and accessories are rapidly growing in the country, and many companies have been expanding their capacities.

The Study Team visited a number of companies including Riad Seif Majed Zayed & Sons ("adidas"), Seif Bros. (SEIF 400), Assia, Asseel Co. for Industry and Trade, Amal Samha Co. ("Benetton"), Abdel Ahad Bros., and Hamwi & Kalai Co. ("Load"). "adidas" and "Benetton" are international brands. While "adidas" is used for exported products, the use of "Benetton" is limited to domestic sales. Asseel uses the name of a Spanish partner which provides technical assistance by printing "under the supervision of Lovable." Other companies use their own brands or original brands.

The companies the Study Team visited are full of energy and control product quality properly. In particular, "adidas" computerizes production data to monitor the output and daily production efficiency against demand.

Companies in this category range between 100 and 1,100 persons in employment, and "adidas" is largest. Export destinations are the EU, Saudi Arabia, the U.S., and the UAE.

Product types are very diverse for "adidas" and "Benetton," while other brands are concentrated on men's clothing, including suits, trousers, shirts, and sweaters. Some export children's clothing.

One exception is Asseel which specializes in production of women's underwear including brassieres, girdles, and body suits, and exports approximately 40% of its products to the EU.

Assia exports approximately 80% of its products to the U.S. The fact that different companies seem to have different export markets seems to come from their business history, i.e., a company has made a success in exporting to a certain country or area, rather than by business strategy. Similarly, sales channels to foreign companies seem to have established and expanded as a foreign company has found a Syrian company with a high quality reputation within the country.

If a quality problem occurs in clothing exports, substantial loss is suffered by both manufacturers and foreign buyers, who therefore must establish mutual confidence in product quality. In fact, the Syrian companies which have successful export businesses have built long-term relationships with foreign partners on the basis of mutual confidence in quality. Thus, clothing exports cannot be increased quickly unless by forming partnerships with foreign companies who will also provide the necessary capital.

(3) Integrated manufacturers having spinning, weaving, and dyeing processes

Sabbagh & Sharabati is an integrated manufacturer of fabrics for jeans by operating spinning, weaving, and dyeing processes. Its factory, which came on stream in 1995, has the latest and most automated line of its type.

In addition, Deiry also has an integrated line of spinning, weaving, and dyeing processes, but the study team did not have the opportunity to visit it.

#### (4) Textured yarn

"Modern Industry and Commercial" imports polyester POY from Turkey, Taiwan, and Italy and produces approximately 7,000 tons of DTY annually. 80% of DTY produced is shipped to knitters in Aleppo (raschel, warp knitting) and 20% to knitters in Damascus (circular knitting and weft knitting). Consumption of woven fabrics is smaller than that for knit production.

#### (5) Woven fabrics of polyester FY

In the Klaseh Weaving Industry Zone, Aleppo, there are around 200 weaving shops, which operate Jacquard machines for synthetic fabrics (2-8 units each) 24 hours per day, mainly by family members. Fabrics are made of synthetic FY for warp and synthetic FY or cotton for waft. They are mainly dyed black and are used for native dress. In this area alone, 27 million meters of synthetic FY (6,000 tons) are consumer annually.

#### (6) Dyeing

There are many dyeing companies in Aleppo and Damascus, which provide service on a commission basis. Most of them have high temperature/pressure dyeing machines for synthetic fabrics and yarns. In fact, dyeing companies are a good indicator of their upstream and downstream processes, revealing the general structure of the textile and clothing industry. A large number of dyeing machines for synthetic fabrics in Syria indicates the popularity of synthetic fibers and fabrics in the country.

Processing capacities of the dyeing companies range between 2-15 tons per year, with employment ranging between 40 and 160 persons.

They handle all types of synthetic fibers (polyester, nylon, acrylic, and blended yarn) and fabrics (woven fabrics, knit, brushed fabrics, and wide fabrics). Polyester/cotton blended yarns are imported from China and Indonesia, polyester FY from Taiwan and Hong Kong, and the U.S., and acrylic fibers from Korea.

Dyed fabrics are used for curtains, furniture, interior decoration, scarves, towels, and sweaters, in addition to clothing. In particular, surprisingly large

volumes are used for furniture and interior decoration, which seem to come from the wide use of traditional ornaments and embroideries.

Dyed fabrics or textile products are exported to the EU and neighboring countries including Lebanon and Saudi Arabia.

It should be noted that many factories do not treat effluent properly, Many have the view that effluent treatment cannot be handled by an individual company and collective treatment is required under the assistance of the government, as done in the industrial estate. Bahra has a full-scale treatment plant of the coagulating sedimentation type

#### (7) Blanket and velvet

Sabbagh imports dyed acrylic staples and produces 1,300 sheets of blanket per day at a modern factory, 40% of which are exported. It is now building a new factory, jointly with Saudi Arabia and Korea, to produce blankets for export to Saudi Arabia.

Sabbagh also produces velvet from polyester and cotton at a rate of 1,500m/day, 40% of which is exported.

#### (8) Non-woven fabrics

Rankoushi & Dankkak operates the largest factory of non-woven fabrics which produces 2,000-3,000 tons annually, mainly polyester SF-based non-woven fabrics. They are used for mattress and lining for interior decorations and are exported to the EU, Saudi Arabia, Lebanon, and Jordan.

### **4.4.4 Major Problems Related to Private Textile Companies**

#### **4.4.4.1 General**

General problems commonly observed among private companies in Syria are as follows.

##### (1) Dominance of family management limits growth pace

Private companies in Syria are basically family concerns, rather than joint stock companies owned by a large number of investors. Most of the companies are managed by their founders and relatives. Together with the

undeveloped financial system, they can only grow within their own financial resources.

They can become unstable if any conflict or trouble occurs between the members. Generally, it is difficult to develop a family concern to a large organization with global presence.

## (2) Lack of foreign investment

Rapid development is difficult unless foreign companies with established markets invest in the country. In Asia which offers a strong advantage in low labor cost, foreign capital and local enterprises have been joining hands to drive rapid growth of various industries including the clothing and apparel industry. However, Syria lacks such dynamism and development potential is limited.

### 4.4.4.2 Major problems facing private sewing/exporting companies

Exports of clothing and apparel products require mutual trust between the producer (seller) and the marketing company (buyer) as apparel sales are often affected by time-related factors. If the producer supplies out-of-date (mediocre quality) products or fails to deliver products within a specific period, considerable loss will occur on both sides. Generally, the foreign company (buyer) which intends to purchase apparel products in a country tries to avoid the risk by investing in a local company or sending its engineers to the company in the form of technical assistance. However, in Syria where there is no equity participation by foreign partners, the producer must assume the entire responsibility. Under these circumstances, it takes some time to build a trusting relationship between the manufacturer and the buyer.

Successful apparel exporters in the country have presumably established their reputations for quality, firstly in the domestic market, then among foreign buyers who have gradually increased orders. Without foreign direct investment, the apparel industry in the country must repeat this slow process of finding customers, which results in slow growth of the entire industry and places it in an unfavorable position to compete with other countries.



#### **4.4.4.3 Major problems related to exports of clothing made of Syrian cotton**

##### **(1) Unstable supply of high-grade spun yarns**

Cotton spinning is almost exclusively carried out by state-owned companies. They tend to export high grade spun yarns as it offers advantages in volume sales and receipts of foreign currency, rather than selling to the domestic market where a majority of transactions is made in small lots which take time and costs money to collect payment.

This happened in 1997, when Lattakia's combed yarns (high grade spun yarns) were all exported despite strong demand among domestic private companies. Moreover, imports of cotton spun yarns are banned.

These circumstances strongly discourage private companies to expand their apparel export business by using Syrian cotton. Foreign buyers are equally facing the risk of unfulfilled orders. So far as the government has chosen to monopolize the spinning sector, it must assume responsibility to assure supply to private companies. Unless stable supply is warranted, there is little prospect for expanding exports of apparel products by using Syrian cotton.

##### **(2) The quality of cotton spun yarns is left in the hands of state-owned companies**

As spinning is virtually monopolized by state-owned companies and there is no competition among spinning mills in terms of quality and price, private companies exporting cotton clothing are forced to rely on state-owned companies for quality of spun yarns, the principal material. This again discourages private companies to expand their business significantly.

In fact, state-owned spinning mills often fail to deliver spun yarns to companies on schedule, or spun yarns from different mills are delivered causing variations in dyeing results.

At present, spinning licenses are granted to manufacturers having integrated processes from spinning to dyeing. For apparel exporters, the spinning business is not feasible due to large investment and high risk.

### **(3) Issues related to international cotton price**

Cotton prices in Syria are determined on the basis of production cost, regardless of international market price. As a result, when the international market price rises, cotton clothing exports from Syria can enjoy benefits. On the other hand, Syrian products lose competitiveness when the international market price drops. This is a very risky situation which private and foreign companies want to avoid.

#### **4.4.4.4 Issues related to government import control on clothing materials**

In late July 1997, the government suddenly banned imports of fabrics for jeans, including those used for exports of sewn products. This will seriously affect apparel exporters as well as their customers, and abrupt import or export controls should be avoided to ensure steady development of the industry.

#### **4.4.4.5 Issues related to dyeing operations**

Effluent treatment is a heavy financial burden on a single company, and collective treatment needs to be promoted under joint efforts between the government and the private sector.

### **4.5 Present Situation and Problems of Textile Industry Using Cotton and Synthetic Staple Fiber**

#### **4.5.1 Industrial Structure by Process**

The basic structure of the textile industry using cotton and imported synthetic staple fiber (SF) is shown in Figure 4.1-6. It was further divided into substructures for cotton (Figure 4.1-2) and synthetic SF (Figure 4.1-4).

Raw materials are mainly cotton, amounting to around 75,000 tons in input. Spinning is carried out solely by state-owned companies. State-owned companies also manufacture blended yarns, but production is very small as input of synthetic fibers is limited to 2,500 tons.

Around 20,000 tons of synthetic spun yarns are imported. 70% of imported synthetic spun yarns are acrylics. Thus, blended yarns of cotton and synthetic fibers imported are estimated at around 6,000 tons.

Knitting, weaving, dyeing and finishing, and sewing of spun yarns are partly done by the state-owned companies, but mostly done by private companies. Although it is certain that the percentage of yarns knitted in the fabric making process (following spun yarns) is higher than woven fabrics, the accurate figure is unknown.

Woven and knitted fabrics made of synthetic SF are imported on the order of 4,600 tons.

In summary, approximately 87,000 tons of clothing are produced from cotton and synthetic SF in the country, the largest production figure in the textile sector. Of total, 60,000 tons are consumed locally, and 18,000 tons are exported mainly in the form of clothing according to the country's textile statistics.

#### **4.5.1.1 State-owned companies**

A company employing cotton and wool processes is described either as a cotton or wool processes, depending on which has more specific weight content. It means that a company having cotton process can be treated as part of the wool industry or vice versa. And a cotton dyeing and finishing process can be described as part of the integrated textile company, since there is no company specializing in that processing. For further details, refer to ANNEX-1 "Present Situation and Problems of State-owned Companies".

##### **(1) Companies specialized in spinning (9 companies)**

###### **1) Lattakia Spinning Company, Lattakia (13)**

- a) A smooth operation thanks to the latest production machinery basic production technology is embedded.
- b) Laboratory equipment is No.1 in Syria. Quality and factory management is good.
- c) All production in 1998 will be for export.

2) Jableh Spinning Company, Jableh (14)

- a) Low quality combed yarn due to worn out machinery of combing line.
- b) Much is expected of the large scale spinner. They need to improve technology and quality.
- c) Modernization plan including renewal of combing line and technical assistance is important.
- d) Much enthusiasm in quality control and marketing.

3) Al Waleed Spinning Company, Homs (17)

- a) It is essential to stabilize quality, production and cost and to develop specialized product range to become competitive.

4) Hama Cotton Yarns Company, Hama (23)

- a) Production management, operation efficiency and quality is acceptable.
- b) It is important to keep on the current quality and process control on the obsolete machines.
- c) Outdated machinery remains, which is the major problem.

5) Idleb Spinning Company, Idleb (24)

- a) It is necessary to upgrade the quality of OE yarn.
- b) It is necessary to establish a system of production management and education and training.

6) Hassakeh Spinning Project, Hassakeh (26)

- a) Planned production cannot be achieved due to difficulty to secure workers.
- b) It is difficult to maintain the same level of technology and operation due to the above reason.
- c) Adverse affect on the morale of workers by considerable machine stops and frequent taking out of the machines.
- d) Radical measures to reconstruct the company are needed.

7) Al Furat Spinning Company, Deir Ezzor (27)

- a) It has much the same problem as Hassakeh.

8) Idleb New Project, Idleb (25)

- a) New project already installed, awaiting company formation and start up.

9) Jableh New Project, Jableh (15)

- a) New project awarded to China. Construction work will start soon.

(2) Combined spinning and weaving company (1 company)

1) Al Shahba Spinning and Weaving General Company, Aleppo (21)

- a) Small scale ring spinning, OE spinning and weaving.
- b) Improvement of preparatory machinery of spinning has not yet contributed to the yarn quality up. Better production management by help of technical assistance is expected.
- c) Comparatively new weaving requires restoration of production management.

(3) Companies specialized in weaving (1 company)

1) Lattakia Weaving Company, Lattakia (12)

- a) The problems are as follows
  - A. Technology old-fashioned
  - B. Structural problem of air jet loom. Bad quality and no other choice than replacement.
  - C. Many loom stop due to lack of parts. Very low operation efficiency.
  - C. Inferior quality of received yarn.
  - D. Restoration of sales/market (Only bags producible due to above reason. Necessary to change product mix oriented for clothing).

(4) Companies of integrated processes of spinning, weaving and dyeing processing (5 companies)

1) Maghazel Spinning and Weaving Company, Damascus (6)

- a) Low grade yarn adversely affecting weaving and processing quality
- b) The management of product development, quality upgrading and suitable pricing that match customers is inadequate

- c) It is necessary to enlarge its product range
- 2) Homs Spinning and Weaving Company, Homs (16)
- a) Spinning (small scale and worn out) and weaving (worn out) is problematic
  - b) Level of dyeing technology is above the average
  - c) To be specialized in dyeing, scrapping the spinning machinery and renovating weaving is one idea
- 3) United Industrial Commercial Company (Al Khomasieh), Damascus (19)
- a) Low grade quality of products due to worn out machinery, low technology level and lack of quality-oriented mentality
  - b) It is necessary to upgrade the quality of yarns for inner consumption
  - c) Merchandising and marketing plans linked to users are required
- 4) United Arab Company for Industry (Dibs), Damascus (20)
- a) Worn out spinning and dyeing machinery. Dyeing machinery not be able to cope with the processing of wide width cloth.
  - b) Reinforcement of marketing for reduction of stock.
  - c) Partial replacement of weaving machinery and full scale modernization of processing machinery is required. Reconstruction of management strategy to be specialized in the mid-stream of weaving and dyeing by further enhancing of technology and quality
- 5) Syrian Company for Spinning and Weaving, Aleppo (22)
- a) Medium scale cotton integrated mill.
  - b) Low quality of products due to delayed modernization.
  - c) To activate the company by such measures as to be specialized in weaving and dyeing, production of fabric for clothing and upholstery, commission processing base for other state-owned and private companies in Northern Syria.
  - d) Streamline the production flow between the company and Al Shahba.

**(5) Knitting and clothing making companies (underwear manufacture, 2 companies)**

**1) Al Shark Underwear General Company, Damascus (1)**

- a) What is urgently needed is market development. As many order should be pulled in to avoid the machine stop.
- b) It is necessary to develop segmented commodities using combed yarn of good quality.
- c) It is necessary to establish a system for design, quality and quick response to respond to market needs.
- d) Serious competition on price and quality with the private companies in the market place.
- e) To replace the worn out dyeing machinery which influences the quality of cotton underwear.

**2) Arab Underwear's General Company, Aleppo (3)**

- a) Found in much the same situation as Al Shark

**(6) Companies of knitting and clothing making (sock manufacture and others, 1 company)**

**1) General Synthetic Yarns Crimping and Stocking Company, Damascus (5)**

[Sock department]

- a) Promising commodity adding value to Syrian cotton
- b) It is necessary to expand market by further upgraded quality

[False twist yarn department]

- a) Promising commodity can expect big demand for false twist yarn in Syria and from import substitution
- b) It is a key factor to be competitive with the product quality of the private manufacturer in terms of technology and quality

[Specially processed yarn]

- a) Mercerized yarn and cotton sewing yarn is a promising "niche"-natural commodity
- b) It will be of further interest to go into more value-added sewing thread and lace yarn.

(7) Company of ready-made garment making (2 companies)

1) Syrian Company for Ready-made Garment (Waseem), Damascus (2)

- a) It has a typical structural problem as seen in other state-owned ready-made garment manufacturers, as follows
  - A. State-run textile distribution organization such as Sunduss Organization and Al Tajeda Organization cannot furnish the company with sufficient orders for running it efficiently.
  - B. Tender system for import of raw materials is not suitable for prompt acquisition and does not permit flexible contact of the company with suppliers of raw materials.
  - C. Almost all capable technicians and skilled workers are taken away by the private companies owing to pay differentials.
  - D. No specific overseas customers and no chance of access to overseas markets.

2) Industrial Company for Ready-made Garment, Aleppo (4)

- a) It has the same structural problems as Waseem. Women's wear factory was closed in 1996.
- b) It should analyze the possibility of commission sewing business from Europe in order to avoid stock increases caused by sales stagnation.
- c) Machinery introduced in the company establishment has been worn out. No laboratory in the company.



#### **4.5.1.2 Private company (Cotton and synthetic)**

The details of the clothing industry are described in Chapter 4.4, this Chapter does not describe the industry.

(1) **Private spinning, weaving and dyeing integrated companies (cotton and synthetic SF)**

Sabbagh and Sharabati is operating most modern factories in Syrian for jeans fabrics production and is the biggest manufacture of jeans fabrics. (Refer to Table 4.1-1)

Other integrated factory is Dairy, but the Team could not visited the factory.

(2) **Private weaving and dyeing companies (cotton and synthetic SF)**

Balalo has weaving and dyeing facilities mainly for jeans. (Refer to Table 4.1-1)

(3) **Private knitting (dyeing) and clothing companies (cotton and synthetic SF)**

Bawadekji, Habi Tex, Chebib, Industry and Commerce Tissue, and Syrian Cotton Development are doing this field of business. Some of them do not have dyeing facilities. (Refer to Table 4.1-1)

#### **4.5.2 Quality, Productivity and Cost**

##### **4.5.2.1 Quality**

Detailed results of analysis of samples obtained in Syria are summarized in 4.9. The outline of the quality is as follows:

(1) **Cotton Spun Yarn**

The analysis and evaluation of 8 samples from 7 factories were made by the Japanese Spinners' Inspection Foundation in conformity to Japan's inspection standards and in comparison to the collected data of yarn inspection of Japan spinners.

- 1) The analysis shows good quality for Lattakia and Hama, but the yarn quality from other factories was low, judged from Japanese inspection standards. This is attributable to the outdated and worn out machinery as well as lack of effort in upgrading yarn quality in the situation that little attention was made to the quality of yarns of coarse counts.
- 2) Analysis of samples certified that both carded and combed yarns of the two best companies had almost the same high quality as those of Japan
- 3) Jableh Spinning, one of the four companies producing combed yarn, appears to have tried to upgrade their quality, but it is yet inferior to Hama and Lattakia. However, by further efforts, it will be able to come closer to these two companies.
- 4) Analysis data on Hassakeh, Al Furat, Homs and Al Khomasieh stress yarn emphasized their low quality. The Quality of products of Dibs, Al Ahlieh, Syrian Company and Al Shahba were similar to the above four factories, which was observed during the factory diagnosis visits. It can be concluded, therefore, that the quality of Syrian yarn is generally poor.

## (2) Woven Fabrics (Cotton)

The analysis and assessment of 5 samples of 3 factories (Dibs, Maghazel, Al Khomasieh) was made by the Japan Cotton & Staple Fiber Fabric Inspecting Institute Foundation, on the basis of the inspection standards of gray fabric in Japan.

- 1) Frequency of defects caused by yarn defects (filling breakage, slub yarn)
- 2) The width of fabric differs from factory to factory. It ranges from 80 cm to 136 cm. In addition, such fabrics cannot match the standard fabrics in the international market which have widths of 91.4 cm (36 inch), 114-115 cm (44/45 inch) and 152 cm (60 inch)
- 3) Flat weave using coarse yarn features yarn unevenness and slub yarn. The open construction fabrics do not give a high class appearance. Such constructions as oxford, twill, fancy cloth and dobby fabric will add to the impression of high quality to the fabric
- 4) Gray fabrics made by the state-owned companies are judged difficult to export due to their poor quality. It was confirmed at the time of the factory diagnosis that the qualities of gray fabric of Syrian Company, Al Shahba, Al Ahlieh and Lattakia Weaving were equal to those of the above

3 factories. On the other hand, the private weavers are producing higher quality fabric than the state-owned companies.

### (3) Dyed Woven Fabrics (Cotton)

The analysis and assessment of the 12 samples of 4 factories (Dibs, Maghazel, Homs and Al Khomasieh) was made by the Japan Cotton & Staple Fiber Fabric Inspecting Institution Foundation in pursuance of Japan's inspection standards of processed fabric.

- 1) Shrinkage lengthwise after washing is outside the standard value in all four factories tested
- 2) The creases after washing are also remarkable
- 3) Color fastness is good
- 4) Products of those state-owned companies cannot compete for export business because of their quality. The qualities of dyed fabrics of Syrian Company, Al Shahba and Al Ahlieh were identical to those of the above 4 factories, at the time of the factory diagnosis and later when their products were analyzed in Japan.

### (4) Dyed Knitted Fabrics (Cotton)

The analysis and evaluation of the samples were made by Toyobo Apparel Technology Information Centre, according to the general inspection standards of Japan's apparel industry.

- 1) Analysis of dyeing properties of T-shirts made by Al Shark has shown defective dimensional stability (shrinkage, etc.). The quality of dyed knitted fabrics of the state-owned companies is not good due mainly to the obsolete machinery in use.
- 2) Analysis of dyeing properties of products of private makers has shown better shrinkage and form stability than Al Shark. Though it is difficult to conclude from a few tests, it can be deduced that the private knit dyers are giving good quality, as many knitters are testifying.

## **(5) Clothing (Cotton)**

The yardstick of analysis on the samples is the same as the above (4).

- 1) The tested garment samples of both public and private makers are assessed as non-exportable, because of rough sewing technology or finishing. As for the sewing quality of the Industrial Co. for Ready-made Garment, they have some technical and raw material problems such as tough handling of used fabric and unrefined silhouette of finished garments.
- 2) It was confirmed at the time of visiting the factories that the private garment manufacturers who made some achievements in export like Bawadekji, were making well qualified and exportable products, though their samples were not tested.

### **4.5.2.2 Productivity and cost**

#### **(1) Productivity**

- 1) The productivity of state-owned garment companies are generally low, because
  - a) The equipment of cotton spinning, weaving and processing is operated at low ratio because of frequent stoppage by breakdown or maintenance, as the majority is so superannuated and it is difficult to secure spare parts.
  - b) Frequent warp breakage on the loom which lowers the loom efficiency because of low quality cotton yarn.
  - c) Not so many orders for processing, as the old machinery cannot process the dyeing of wide cloth.
  - d) No existence of severe labor control as in the private sector.
  - e) Many unskilled labors.
- 2) The productivity of private knit apparel and garment makers are generally high, because
  - a) Existence of unceasing orders by aggressive sales activity
  - b) Efforts to curtail manufacturing cost, reducing employees to raise the productivity per capita
  - c) Efforts to raise the machine productivity by introduction of computer system or replacement of machinery

- d) Production management aiming at raise productivity, such as adoption of piecework system by computer

(2) Cost

- 1) Factory diagnosis revealed that in the manufacturing cost, raw material accounts for 58%, labor cost 20% and overhead 12% in United Arab Company and raw material 67%, labor cost 17% and energy cost 7% in Jableh Spinning company.
- 2) Comparison of manufacturing cost of ring yarn by countries is shown in Table 4.5-1. For the figures of raw material cost of Syria, the result of one spinning company was cited. The average of per cent of four companies were cited for the amount of other items.

**Table 4.5.1 MANUFACTURING COST OF RING YARN**

Item	US\$ per 1kg of yarn					
	Italy	Japan	Thailand	India	USA	Syria
Waste cotton	0.46	0.47	0.47	0.38	0.42	0.3
	9%	8%	10%	9%	8%	5%
Labor	0.89	1.00	0.10	0.05	0.53	—
	17%	18%	2%	1%	11%	14%
Energy	0.23	0.59	0.23	0.33	0.18	—
	4%	10%	5%	8%	4%	5%
Auxiliary material	0.13	0.17	0.17	0.12	0.14	—
	2%	3%	4%	3%	3%	8%
Others (depreciation, etc.)	1.29	1.17	1.23	1.37	1.54	—
	25%	20%	27%	32%	31%	—
Raw material	2.27	2.32	2.31	2.04	2.15	2.20 (1)
	43%	41%	51%	47%	43%	68%
Total	5.27	5.72	4.51	4.29	4.96	100%
	100%	100%	100%	100%	100%	(2)

Source: Monthly Report of Japan Spinners Association

Hearing data of the Team

Note : -

- (1) Cost of raw material of 1 spinning company.
- (2) Average of 4 spinning companies.

## **4.6 Present Situation and Problems of Textile Industries Using Imported Synthetic Filament Yarns**

### **4.6.1 Industrial Structure by Process**

The basic structure of the textile industry using imported synthetic filament yarns (FY) is shown in Figure 4.1-3. Raw materials are synthetic FY textured yarns and synthetic FY, 50,000 tons of which are imported (polyester and nylon). The amount is fairly large, equivalent to approximately 80% of cotton input to the textile industry. These materials are mostly processed by private companies into knitted clothing; however, weaving of FY is done in large scale in Klaseh Industry Zone in Aleppo. As dyeing of synthetic fibers is difficult than cotton and requires special high-temperature and high-pressure dyeing equipment, private companies in Syria have these dyeing equipment and dyeing capacity is sufficient.

As a very small amount of synthetic FYs is exported, 52,000 tons are presumably consumed within the country. The figure represents around 60% of cotton and synthetic SF consumed locally.

### **4.6.2 Domestic Consumption and Export**

Domestic uses of polyester FY are the national costumes of Jacquard woven fabrics, curtains, furniture, upholstery, and scarves. It is reportedly exported to neighboring countries and Russia. Syria's export statistics show 3,000 tons of synthetic FY exports (around 6% of total production).

Nylon is consumed within the country to manufacture socks and stockings.

The share of synthetic fibers in total consumption (synthetic fiber ratio) is very high at 52-54%, compared to the world average of 40%. One of the reasons for this is the high consumption of synthetic FY. The reasons of high consumption of synthetic are estimated to be the dry climate of Syria and demand for national costume.

### **4.6.3 Domestic Production of Synthetic Fibers**

Among synthetic fibers consumed in Syria, FYs hold the highest share, of which polyester is largest (20,000 to 30,000 tons). Nylon accounts for most of the remaining share.

Polyester consumption will increase with growth of future textile consumption. As a result, local production of polyester FY may be considered. It is very difficult, if not impossible, to compete with large-scale production of synthetic fibers in Asia, in terms of price and quality, because domestic consumption of Syria is comparatively small and raw materials for synthetic fibers are not produced in Syria.

## **4.7 Present Situation and Problems of Textile Industry Using Wool**

### **4.7.1 Industrial Structure by Each Production Process (Present Situations and Problems)**

#### **4.7.1.1 State-owned companies (wool)**

For further details, refer to ANNEX-1 "Present Situations and Problems of State-owned companies.

#### **(1) Worsted spinning, weaving and dyeing companies (2 companies)**

##### **1) Al Ahlieh Company for Spinning and Weaving, Aleppo (9)**

- a) Very versatile and large-scaled integrated mill using wool, polyester, cotton waste.
- b) But, wool top cannot be procured, so the worsted spinning equipment has been idle for long time. It is necessary to take measures for wool purchase with seriousness.
- c) It is required to streamline and rationalize the production flow spreading over two factories.

##### **2) General company for modern industry, Damascus (8)**

- a) This is an integrated factory of not only wool but synthetic long staple fiber
- b) It is found in the same situations as Al Ahlieh

**(2) Carpet spinning and manufacture (wool, 3 companies)**

**1) General company for wool, Hama (11)**

- a) An effort to increase the proportion to use Syrian wool, decreasing the usage ratio of New Zealand wool is required, but there is not established system to develop the "wool" in Syria.
- b) The government is required to tackle with the improvement of Syrian wool.
- c) It is necessary to maintain a close contact with the user carpet manufacturers.
- d) No.1 Mill has equipment problem (old-aged) and No.2 Mill also has problem of both equipment and management. Modernization is required.

**2) General company for carpet, Damascus (7)**

- a) Short staples coming off, hairiness, dull color and hard feeling are degrading the carpet quality.
- b) Streamline policy of both Sweida and Damascus factories. To cope with the export by introducing computer-controlled jacquard looms.
- c) It is necessary to develop new products using yarns other than Nm3/15.
- d) Close contact with the supplier, Hama Wool is required.

**3) Aleppo General Company for Silk Weaving, Aleppo (10)**

- a) Synthetic carpet will be difficult to compete with the private sector
- b) To increase the production share of wool carpet which is monopolized by the state-owned companies is necessary
- c) The will to develop cotton goods is praiseworthy

**4.7.2 Quality, Productivity and Cost (Wool)**

**4.7.2.1 Quality**

**(1) Raw wool**

- 1) Syrian wool has many burrs and hairy staples, which causes lower spinning quality



- 2) Stained wool much mixed lowers the grade of yarn and restricts the dyeing ability
- 3) It does not have whiteness which the wool has by nature, but yellowish tone
- 4) It feels harsh by handling it. Good handling feeling which the wool has by nature is not found in the Syrian wool
- 5) Small crimps and shallow depth of waving
- 6) The above defects generate yarn breakage, neps and hairiness. As such, New Zealand wool is mixed a great deal in order to increase whiteness, give better spinning property and upgrade the dignity of yarn

## (2) Spun wool

The sample of wool spun yarn (Syrian wool 100%, for carpet use, Nm 3/15, dark green, hank finished) was tested and analyzed in Japan. Its evaluation is summarized as follows ;

- 1) Harsh and tough handling, many foreign matters attached, neps and burrs scattered, thus degrading the dignity of yarn.
- 2) Fibers twin each other. This is possibly caused by long hairiness generated and variation of fiber length.
- 3) It can only be died into dark color because of poor whiteness.

## (3) Carpet

- 1) Its handling is not bad, but it generally lacks pliability and flexibility. Many wastes are coming off from the pile. Such defects degrade the carpet quality.
- 2) Partial dyeing speck is observed.

### 4.7.2.2 Productivity and cost (wool)

#### (1) Productivity

- 1) The spinning in general suffers from low work ratio and productivity due to the machines poorly maintained caused by non-availability of spare parts
- 2) Low operation ratio due to difficulty to secure the imported raw material
- 3) It takes much time to prepare new jacquard design by manual punch card
- 4) Job hopping and poaching of skilled labor

## **(2) Cost**

- 1) The proportion ratio which the raw material cost accounts for in the production cost is high (70-80%). It is necessary to curtail the cost by 20%, in order to be internationally competitive

## **4.8 Present Situation and Problems of Textile Industry Using Silk**

### **4.8.1 Industrial Structure by Each Production Process (Present Situations and Problems)**

#### **4.8.1.1 State-owned companies**

##### **(1) Silk reeling**

- 1) Draikeesh Natural Silk Company, Tartus.
  - a) Present cocoon purchase price from farmers are too high.
  - b) Machinery are too old and their precision is not maintained.

### **4.8.2 Quality and Production Cost**

#### **4.8.2.1 Quality**

Silk yarn quality is not uniform, due to following reasons.

##### **(1) Sericulture problem**

Silkworm breeding is carried out mostly by individual farmer instead of mass and collective system.

##### **(2) Industry problem**

Silk yarn production facilities are fairly old and accuracy of machines are not maintained.

#### **4.8.2.2 Production cost**

Production cost is too high at the moment due to the following reasons.

- (1) International standard cocoon price is US\$ 2.62/kg while Syrian price, owing to the present cost pile-up system is US\$ 4.83/kg.
- (2) One line of reeling machine require minimum 90,000 kgs/year of cocoon, which is not secured. (The production in 1977 is estimated to be 42,000kgs.)

### **4.9 Test Results and Analyses of Textiles**

Raw cotton and textile samples collected in Syria were tested in Japanese authorized laboratory and the results of testing are attached in ANNEX-2.

#### **4.9.1 Raw Cotton**

Two cotton samples from Cotton Bureau and four cotton samples from three spinning mills were tested by Japan Spinning Inspecting Foundation (JSIF) by using HVI inspecting machine. The HVI's output was shown in Table 4.9-1.

The following is a summary of test results:-

- 1) Leafy cotton is sometimes used in the domestic spinning mills, but this will adversely affect a quality of yarn.
- 2) Except Aleppo 33/1, Syrian raw cotton is not suitable for yarns of Ne 40 or finer.
- 3) Aleppo 33/1 has enough fiber strength.
- 4) Micronaire of all samples are good, ranging in a level between for coarse and medium count yarns.
- 5) Both whiteness and yellowishness are at the standard level. But some samples show yellowishness a little .
- 6) As for color grading, Aleppo 33/1 is regarded as "SM" and others as "M", which are judged "proper" for each seed.
- 7) Aleppo 33/1 has enough estimated Lea Strength, but others are generally weak.
- 8) It is concluded that Aleppo 33/1 is a well qualified cotton exportable with sufficient staple length, strength and other good properties. As for Aleppo 40 and other seeds, they have lower quality than Aleppo 33/1. Leaf trashes are scattered in the fiber, and their staple length is not suitable

for spinning yarns of middle and fine yarn counts, and other properties are inferior to the Aleppo 33/1. They will be traded with lower prices than Aleppo 33/1, when exported.

## **4.9.2 Cotton Yarn**

### **4.9.2.1 Summary of test results**

Table 4.9-2 shows Japan Spinners' Inspection Foundation (JSIF)'s test results on 8 yarn samples collected from the state-owned spinning companies. The table includes average figures of all Japan made yarns tested by JSIF in 1996 for a comparison purpose.

Special features of Syrian spun yarns are as follows:-

- 1) Coefficient of count variation was large, not corresponding to its indication
- 2) Variation in yarn count was also large
- 3) Except for Lattakia's yarn which is equivalent to Japanese yarn, the single yarn tensile strength was not enough
- 4) CV% of the single yarn tensile strength of Hassakeh's, Homs's and Jableh's yarns were poor
- 5) U% of yarn irregularity by samples was shown in Table 4.9-3. Lattakia's carded and combed yarn and Hama's carded yarn showed fairly good results which were equivalent to the Japanese ones but others were poor in general
- 6) IPI of Lattakia's and Hama's yarns were all right but others were not
- 7) Outside appearance (yarn irregularity, leaf trash and neps) was compared with a standard sample. Yarns from Lattakia and Hama showed a good appearance but others were poor

### **4.9.2.2 Test results by company (cotton yarn)**

#### **(1) Lattakia Spinning Company**

The laboratory test of Lattakia's yarn (Ne 32 combed) demonstrated its actual yarn count as Ne 28.3 (Coefficient of yarn count difference:-11.5 % and Variation in yarn count: 4.3 %) which was very poor compared to Japanese standard of around 1 %. This needs to be improved urgently, if the export of

quality combed yarn is a core of export strategy. Test results of other characteristics were mostly all right, equivalent to the Japan made yarns.

**(2) Jableh Spinning Company**

Jableh's combed yarn of Ne 32 was tested and its results as to the coefficient of count difference, tensile strength, U %, thicks and neps of IPI were much inferior to the above Lattakia's yarn. In Japan, this yarn is regarded as carded yarn, not combed yarn.

**(3) Hama Cotton Yarn Company**

Hama's combed yarn Ne 30 was tested. Except for the coefficient of count difference (-4.0 %) which was very poor, other data were almost the same as the Japanese yarn. Outside appearance was also good. Tensile strength of this yarn was superior to the Japanese one.

**(4) Hassakeh Spinning Project**

An actual count of Hassakeh yarn was Ne 23.9 against its nominal count of Ne 26, which was far from qualification in respect of coefficient of count difference. In addition, the results of test on variation of strength, U %, outside appearance were also poor and IPI was inferior to Lattakia's yarn.

**(5) Al Furat Spinning Company**

Al Furat yarn was also disqualified in respect of U % and outside appearance (yarn irregularity). IPI (especially thicks) was also high and in general, it was judged as low quality yarn.

**(6) Homs Spinning and Weaving Company**

Homs's yarn was also disqualified, as it showed very poor characteristics in such respects as coefficient of count difference, variation in yarn count, variation in yarn strength, U %, outside appearance (yarn irregularity, trash and neps). It sometimes showed abnormal results which make it difficult to use this yarn for clothing.

**(7) United Industrial Commercial Company**

The yarn of Ne 16 from the above company was tested and results were generally poor. It was also disqualified in respect of its coefficient of count difference, variation in yarn count, U % and outside appearance.

**4.9.3 Gray Fabric**

**4.9.3.1 Summary of test results**

Five samples of gray fabrics taken from three companies were tested by Japan Cotton and Staple Fiber Inspecting Foundation (JCSFIF). The results are shown in Table 4.9-4. Out of five samples, four were judged as C-class and one as B-class. Such defects as reed mis-draw (including double warp), double pick, broken pick and slub yarn were found on more than two samples. There were both spinning defects and weaving defects. (According to the custom of trade in Japan, the gray and dyed fabrics graded as "B" "C", mean substandard commodities which cannot be sold at normal price).

**4.9.3.2 Test results by company (cotton gray fabric)**

**(1) Maghazel Spinning and Weaving Company**

Two gray canvas fabrics were tested. Both were judged as C-class with defects of poor yarn quality (leaf trash, coarse yarn and neps), frequent slub yarn and broken pick. In addition, there were some defects of weaving such as double pick, double warp, reed mis-draw and float over whole width.

**(2) United Industrial Commercial Company (Al Khomasieh)**

Two gray fabrics were tested. Quite a few reed mis-draws and one broken streak as well as slub yarn were found on the one sample, thus judged as C-class. The other was judged as B-class, although it has a lot of slub yarn.

**(3) United Arab Company for Modern Industry (Dibs)**

The gray fabric has defects of temple, thus judged as C-class without a question.

## **4.9.4 Dyed Fabric**

### **4.9.4.1 Summary of test results(dyed fabrics)**

Laboratory test on dyeing and finishing fabrics of 12 samples collected from four companies were carried out by JCSFIF as tabulated in Table 4.9-5.

Special features on test results are as follows:-

- 1) All samples had good color fastness
- 2) Shrinkage of warp direction were very poor as 3-9
- 3) There were some rope crease after washing
- 4) All dyeing and finishing defects were attributable to the defects coming from the previous process
- 5) Pigments for printing is not suitable as it had created roughness on fabric surface. It is recommended to use reactive or vat dye instead
- 6) Through visual check on appearance, there were some, printing irregularity, unevenness and insufficient penetration of pigments

The of shrinkage and rope crease seem to be as a result of out-dated machinery. Thus, it is advised to employ a scouring and bleaching range to remove these defects. Since all tests showed good color fastness, Syria was considered to possess an appropriate dyeing technology. Therefore, by employing more latest dyeing and finishing machinery, these dyeing and finishing defects will be removed to a great extent.

### **4.9.4.2 Test results by company (dyed fabrics)**

#### **(1) Maghazel Spinning and Weaving Company**

Maghazel's two printed fabrics were assessed as C-class, with having such weaving defects as broken warp and weft.

#### **(2) Homs Spinning and Weaving Company**

Four printed fabrics (two by Naphthol dye, one by reactive dye and one by pigment resin color) were tested in Japan. Although there were some defects such as two spots of color unevenness, one spot of stain and one spot of skewing, color fastness and shrinkage percentage were good. But, there were abundant defects relating to the yarn or gray fabrics such as double warp,

slub yarn, reed mis-draw, etc. which consequently resulted in poor finishing regardless of its technology.

**(3) United Industrial Commercial Company (Al Khomasieh)**

There were quite a few reed misdraw, thus all three samples of dyed and printed fabrics were judged as C-class. In addition, there were some broken warp and skewing (19.3 %). As for dyeing defects, color fastness and water absorbency were all right, but shrinkage percentage of 8-10 was very bad.

**(4) United Arab Company for Modern Industry (Dibs)**

Two yarn dyed fabrics were tested. One sample had good results in respect of color fastness and shrinkage percentage but it had a lot of leaf trash. The other one was also good except for some slub yarn in dyed yarns. (As these samples were not finished, shrinkage percentage and repellency were not possible to test). It seems that quality of tested fabrics were in a acceptable level regardless of old machinery used for processing them.

#### **4.9.5 Clothing**

##### **4.9.5.1 Summary of test results (clothing)**

**(1) Laboratory test**

The laboratory test on four apparel samples collected from both the state-owned and the private companies were carried out and the results, summarized below, were shown in Table 4.9-6.

- 1) Color fastness seems to be generally OK
- 2) Washing test showed a poor result. Especially, such defects as shrinkage, deformation, crease, puckering were observed after washing. These defects were mainly attributable to the fabrics used. But it was observed that the private companies are using better quality fabrics than the state-owned companies
- 3) In conclusion, one fabric by a private company was qualified but the other three were not



## **(2) Apparel technology**

The following samples were collected from the state-owned and the private companies for checking the level of Syrian apparel technology:-

(From the state-owned companies)

- Diver's suits (1 No.): by Syrian Company for Ready-made Company
- U-neck shirt (1 No.): by Al Shark Underwear's General Company
- Briefs, round-neck shirt, running shirt and T-shirt (4 Nos): by Arab Underwear's General Company
- Baby's coverall (1 No) and T-shirt (1 No): by Syrian Cotton Development

(From the private companies)

- Full-neck shirt (1 No): by Khalil and Tujjar Company (private)
- Stockings and socks (6 Nos in total): by General Synthetic Yarns Crimping and Stocking Company

All of the above samples were carefully inspected and examined by Toyobo Apparel Technology and Information Company of Japan, with comments as follows:-

- a) the ends of sewing threads not finished
- b) meander of seam
- c) defects in fixing sleeve and collar (thick seam, puckering, waving)
- d) level difference at the seam
- e) defects in fixing buttons and name plates
- f) poor making and trimming in general
- g) not finishing yarn ends of internal jacquard's snarl yarn of socks

### **4.9.5.2 Test results by company (clothing)**

#### **(1) State-owned company (clothing)**

##### **1) Al Shark Underwear's General Company**

U-neck shirt of Al Shark was inspected in Japan as follows:-

- a) Washing test proved such defects as shrinkage of arm hole, twisting of bottom line, crease and seam puckering e occurred conspicuously
- b) It has enough breaking strength
- c) Fastness for washing and sun light were all right
- d) Apparel technology was not sufficient as there were some dis-symmetry U-neck collar, thick seam, conspicuous slant form

- e) From the above, the shirt was assessed as B-class or C-class which was not suitable for exports

## 2) Arab Underwear's General Company

Four samples; T-shirts, running shirt, round-neck shirt and briefs, were tested in Japan. Quite a few defects such as uneven seam, puckering, tacking, thick seam, waving, stain, crease, not-finished yarn ends, etc. were found, thus all are judged as C-class. (Rank of assessment of sewn goods: A; quality exportable to the developed countries, B; quality exportable to the developing countries, C; quality not exportable).

## 3) General Synthetic Yarn Crimping and Stocking Company

One sample of stockings and six of socks were tested in Japan. The following defectives were observed:-

### a) Socks

- unevenness of sock hole
- not finished internal jacquard yarn ends (this defective is very serious, as it prevents from smooth insertion of foot)
- snarl seam
- poor seam linking
- mixing of slub yarns
- stain

### b) Stocking

- poor gathering of spandex yarns
- not finished yarn ends at the top and bottom where spandex yarns were used

From the above, all samples were judged as C-class and not suitable for the export market.

## 4) Syrian Company for Ready-made Garment

Driver's suits as a sample was collected from this company and tested in Japan. After its washing test, seam puckering and form stability were good, but many shrinkage and crease were observed in general. Although, color fastness to

washing and to light were below the standard, color fastness to friction and sweat were all right. The specific features are as follows:-

a) In general

- not finished yarn ends (this may be due to non-availability of automatic ends cutting machine)
- no ironing in the medium of finish process
- many snarl seam

b) As for a jacket

- defect in fixing collar (partial gathering, etc.)
- defect in fixing sleeve
- defective position of cuffs button
- remained chalk mark

c) As for a trouser

- instability of belt form due to thin inner cloth
- unevenness of joints of leg holes
- unsuitable material for pockets (mesh type), etc.

Overall assessment was C-rank.

(2) Private company (clothing)

1) Khalil Tujjar Company

T-shirt made by Khalil was tested. Although some defects in crease and seam puckering were found, stability of form and shrinkage percentage were all right by which it was judged as qualified. Color fastness was good, although there were some bleed. As for apparel technology, the following problems were observed and thus it was regarded as C-class:-

- defect in fixing collar
- defect in fixing top tape
- not finished yarn ends
- not finished puckering (waving)
- defect of seam joint of inner sleeve

Although the fabric itself has a standard quality, the shirt is not an export quality due to poor apparel technology.

## 2) Syrian Cotton Development

T-shirt from this company was also tested in Japan and it resulted in not good crease, puckering and fabric strength. The wet friction color fastness and color melting were below the standard. Its color fastness to washing was bad, even if it was black color. The property of used fabric was assessed as C-grade.

The following points were observed through visual inspection by apparel experts on two samples (cover-all and T-shirt):-

### a) Cover-all

- Gather-tack seam at arm hole was improper
- Button at thigh (gripper) was too solid
- No reinforcement for button fixing was used
- Overall assessment C-grade

### b) T-shirt

- Taping at the neck was quite unusual and not understandable
- Seam at the shoulder joint was uneven and rough
- There was snarl seam at pockets
- Yarn ends were not properly finished
- Glossy surface finishing by the ironing

## 4.9.6 Wool and Silk

### 4.9.6.1 Wool

- 1) The sample of Syrian washed wool brought back to Japan was tested. Its result is referred to 4.2.2.3 (5).
- 2) Analysis was made on wool spun yarn Nm 3/15 for carpet use (yarn dyed in dark green, hank finished of Syrian wool 100%). Please refer to 4.7.2.1 (2) for its evaluation.
- 3) Please see 4.7.2.1 (3) for the evaluation of analysis of carpet of wool 100% (blended with New Zealand wool).

#### **4.9.6.2 Silk**

The raw silk sample got in Syria was analyzed. (For details refer to ANNEX-2)

- 1) It proved to be of 49d on an average. Its use is presumed to be for carpet:
- 2) Many major defects and above all super major defects
- 3) It proved to be D-grade. It is in the category "knotted silk"

Table 4.9-1 HVI TEST RESULT OF SYRIAN COTTON

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
	Leaf trash grade	Leaf trash area %	No. of leaf trash	Staple length (inch)	Staple length uniformity	Strength gf/tex	Elongation (%)	Micro-naire	Reflectance (whiteness)	Yellowness	Color grade	Presumed lce strength
Aleppo 40	1	0.14	20	1.09	82.4	30.0	6.7	5.0	77.4	8.4	31-1	205
Aleppo 33/1	1	0.15	7	1.16	84.1	34.0	6.7	4.5	80.9	8.1	21-1	234
Cotton received by Al Furat No.1	2	0.34	44	1.11	81.9	31.8	6.6	4.9	77.1	7.7	31-2	211
" Al Furat No.2	1	0.18	26	1.11	82.0	28.6	6.2	5.1	76.2	8.0	31-2	199
" Hassakeh	1	0.04	9	1.06	81.0	28.8	6.3	5.2	77.0	9.1	31-3	194
" Hama	1	0.05	6	1.17	84.5	33.6	6.7	4.6	75.3	7.9	41-1	228

Tested by Japan Spinners Inspecting Foundation

Note. -

- ① 2 is too leafy.
- ③ The less, the better.
- ⑥ Normal is >30.
- ⑨ The more, the more white.
- ⑩ Normal is 7~8.
- ⑪ 21-SM, 31-M, 41-SLM. Better -1 > -2 > -3
- ⑫ The more, the better. 210~220 is desirable for spinning Ne 40S.

Table 4.9-2 TEST RESULT OF SYRIAN COTTON YARN

	Jableh CM32	Lattakia CM 32	Hama CM 30	Japanese yarn CM 30	Lattakia CE 32	Homs CE 24	Al Furat CE 20 *	Hassakeh CE 24 *	Al Khomasih CE 16	Japanese yarn CE 20	Japanese yarn CE 30
Yarn count (Ne)	30.3	28.3	28.8	-	33.0	19.9	21.8	23.9	14.8	-	-
Yarn count disparity ratio (%)	-5.3	-11.5	-4.0	-0.9	+3.1	-17.1	+9.0	-0.1	-7.5	+0.4	-0.5
Coefficient of variation (CV) of yarn count (%)	1.1	4.3	2.6	1.4	1.4	4.1	2.5	2.3	4.1	1.3	1.5
Tensile strength (gf)	251.4	354.1	366.8	315	240.1	364.3	363.4	299.3	590.2	426	292
CV of tensile strength (%)	12.8	6.6	8.9	7.6	10.2	15.3	9.3	20.6	12.8	8.4	9.0
Elongation (%)	6.8	5.8	6.8	6.3	4.8	8.1	6.4	6.6	7.7	6.5	6.1
Twist per inch (TPI)	20.9	22.8	18.4	20.4	23.1	22.7	19.1	17.6	16.4	17.0	21.5
CV of TPI (%)	5.9	3.5	3.7	4.6	4.8	7.2	4.5	5.3	5.3	5.4	4.9
U%	14.9	10.5	10.5	10.6	14.0	21.9	16.9	17.9	17.5	12.5	13.1
IPI (pcs/200m) Japanese yarn - pcs/1000m	6	0	0	0	8	113	28	25	18	8	13
	41	1	1	8	16	298	136	137	115	64	117
	100	4	10	14	26	415	81	215	142	87	291
Fluff indicator (3mm. per 10m)	302	181	98	210	170	162	187	138	137	138	157
Appearance **	3-1	1-1	1-1	1-3 2-3	2-1	*** >3-1	>3-1	>3-1	>3-1	-	-
	2-1	1-1	2-1	1-4 2-1	3-1	>3-1	3-1	>3-1	>3-1	-	-

Tested by Japan Spinners Inspecting Foundation

Note :-

1. \* Yarn count is assumed due to no indication in the cop.
2. \*\* ex. 2-1 ..... Number of sample tested.  
..... 1 is best, then 2, 3, >3.
3. \*\*\* >3 means "worse than 3".
4. CM = combed, CE = carded
5. An average figure of tested Japanese yarns is cited for reference.

**Table 4.9-3 U% OF YARN UNEVENNESS**

Company/Yarn count/U%				Assessment
CM 30	Should be less than 11.5			
	Jableh	CM 32	14.9	bad
	Lattakia	CM 32	10.5	good
	Hama	CM 30	10.5	good
	Japan	CM 30	10.6	good
CE 30	Should be less than 14.5			
	Lattakia	CE 32	14.0	good
	Japan	CE 30	13.1	good
CE 20	Should be less than 13.5			
	Homs	CE 24	21.9	bad
	Hassakeh	CE 24	17.9	bad
	Al Furat	CE 20	16.9	bad
	Japan	CE 20	12.5	good
CE 16	Should be less than 12.5			
	Al Khomasieh	CE 16	17.5	bad

Note : -

Standard value is based on ("From Cotton to Fabric '95"), Japan Spinners Association Foundation, 1995

**Table 4.9-4 TEST RESULT OF GRAY FABRIC**

	Maghazel cotton canvas	Maghazel cotton canvas	Al Khomasieh 14×14/15×14	Al Khomasieh 16×12/18×13	Dibs
Reed misdraw	1			1	
Double pick	2	1			
Float over whole width	many				
Broken pick	many	1			
Slubs	many		many	many	
Reed streak				1	
Temple defects					1
Double warp		2			
Defective yarn		○			
Evaluation (grade)	C	C	B	C	C

Tested by Japan Cotton & Staple Fiber Fabric Inspecting Institute Foundation





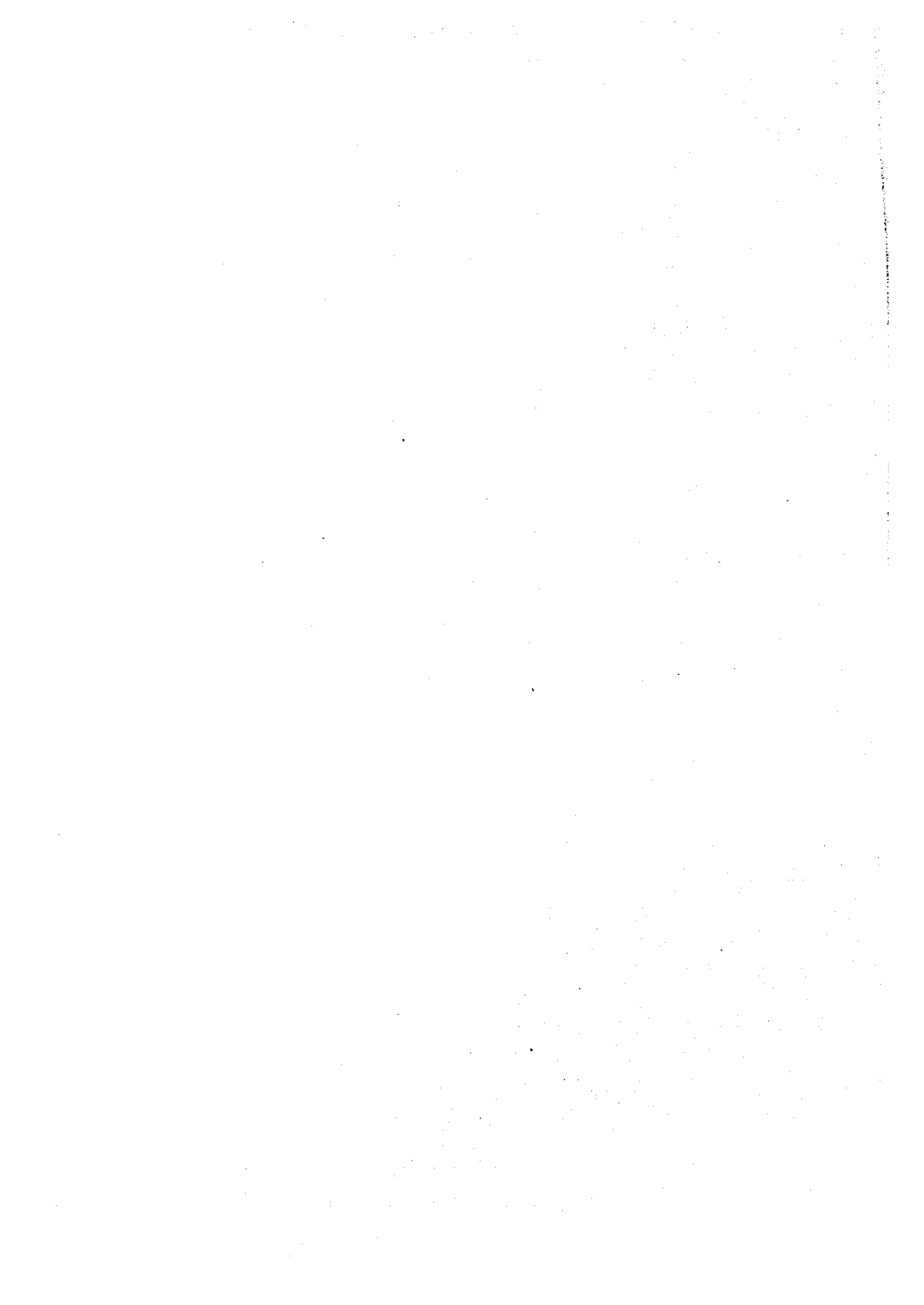
Table 4.9-5 TEST RESULT OF DYED FABRIC

	Standard for assessment	Maghazel cotton print	Meghazel cotton print	Homs cotton print (flower)	Homs cotton print (navy blue)	Homs cotton print (flower)	Homs cotton pigment print	Homs cotton print	Al Khomaisieh dyed drill (dark green)	Al Khomaisieh dyed drill (dark green)	Al Khomaisieh cotton print (flower)	Dibs yarn dyed	Dibs yarn dyed
Color fastness to light (grade)	more than 4 (more than 3 for light color)	more than 4	more than 4	more than 4	more than 4	more than 4	more than 4	4	more than 4	more than 4	more than 4	more than 4	more than 4
Color fastness to washing (grade)													
Shade change	more than 4	5	5	5	4	5	5	5	4-5	4-5	5	5	4-5
Staiping to cotton	more than 3-4	5	5	5	4-5	5	5	5	4-5	4-5	5	5	5
Staiping to silk	"	5	5	5	4-5	5	5	5	4-5	4-5	5	5	5
Color fastness to perspiration (grade)													
Acid shade change	more than 4	5	5	5	4-5	5	5	5	4-5	4-5	5	5	5
Acid staining to cotton	more than 3-4	5	5	5	4-5	5	5	4	4-5	4-5	5	5	4-5
Acid staining to silk	"	5	5	5	4	5	5	3-4	4	4-5	5	5	4-5
Alcarine shade change	more than 4	5	5	5	4-5	5	5	5	4-5	4-5	5	5	5
Alcarine staining to cotton	more than 3-4	5	5	5	4-5	5	5	3-4	4-5	4-5	5	5	4-5
Alcarine staining to silk	"	5	5	5	4	5	5	3-4	4	4-5	5	5	4-5
Color fastness to rubbing (grade)													
Dry	more than 4	4	4	4	2-3	4	4-5	5	4-5	4	4	5	4-5
Wet	more than 3 (2-3 for dark ccolor)	3-4	3-4	4	2	4	2-3	3-4	3	3	3-4	4-5	3-4
Shrinkage (%)													
Warp	less than 2%	6.9	7.1	7.7	4.2	7.7	3.1	0.9	7.9	8.8	9.9	3.0	15.1
Filling	"	3.7	3.3	3.5	2.7	3.5	3.5	0.3	1.4	1.0	0.1	1.6	14.8
Water repellency (point)		0	0	0	0	0	0	0	0	0	0	0	0
Identification of dyestuff		Naphthol	Naphthol	Naphthol	Naphthol	Naphthol	Naphthol	Naphthol	Naphthol	Naphthol	Naphthol	Vat	Vat
Appearance													
Double warp		2		2	2	2	10						
Warp breakage		1	1							1			
Slub yarn		many	many	many		many		many	many	many	many		many
Broken pick			1										
Lashing in filling					3								
Continuous blots					○								
Bias filling							8%				19%		
Dyeing speck							light	light					
Misdraw								3	10	6	3		
Leaf teash												many	

Tested by Japan Cotton & Staple Fiber Fabric Inspecting Foundation







**Table 4.9-6 TEST RESULT OF CLOTHING**

	Al shark U-neck shirts (White)	Syrian Cotton Development T-shirts (black)	Khalil & Tujjar Full neck T- shirts (navy blue)	Syrian Ready-made Garment Driver pants (navy blue)
<b>Washing test</b>				
Shrinkage	bad (1)	good	good	bad
Form stability	bad (2)	bad (6)	good	good
Wash & wear	bad (3)	bad (3)	bad (3)	bad (3)
Seam puckering	bad (4)	bad (7)	bad (7)	medium (10)
Bursting strength	good (5)	good (8)	good (9)	—
Assessment	disqualified	disqualified	border line	disqualified
<b>Color fastness test</b>				
to washing				
color shade	5	4	4	3-4
staining cotton	5	4-5	4-5	3-4
cotton/polyester	5	4-5	4-5	4
liquied	5	2	4	3
to rubbing				
dry		4	4-5	4-5
wet		1-2	2	2
to perspiration (alkaline)				
color shade		4-5	4-5	4-5
staining		3-4	4-5	3-4
to light (20 hrs)	3	4-5	4-5	3-4
Flushing		3	3	4
to chlorine	4-5	3-4	4-5	3

Tested by Toyobo Apparel Technology & Information

Note : -

- (1) Shrinkage lengthwise
- (2) Convolution of hemming bottom
- (3) Crease 2-3
- (4) 2-3
- (5) 7.0 kgf
- (6) Convolution of lower sleeve and bottom edge
- (7) 3
- (8) 4.49 kgf
- (9) 6.65 kgf
- (10) 3-4

## **4.10 Marketing and Distribution of Textile**

### **4.10.1 Distribution System**

The Distribution system in Syria is rather primitive and simple. The General Organization for Textile Products (SANDUS - a public sector company) runs about 95 shops of their own all over Syria, and sells about 1 billion SP a year of made-up garments.

There are several famous private companies, who manufacture their own brand garments and sell mainly through their own chain shops. Textile made-up goods for daily use manufactured mainly by private sectors companies are generally sold by retail shops in the Souq and in towns. Wholesale and/or agency systems exists, but is not common as in Japan.

Large orders such as for military clothing, wheat/sugar bags for food processing etc., mainly for government use or state owned companies are delivered directly from the public sector textile companies to the end users.

Numbers of small home based firms, weak in finance and having no connection with foreign suppliers, rely for their material imports on trading companies. Trading companies import large quantity at a time, store them in free zone and distribute them to customers upon requirement. NASIGE (Textiles General Foreign Trade Organization, a public sector company) used to be the only importer in Syria a decade ago. It is functioning now only as an issuing organization of import licenses with a 2.5% charge.

Delivery is generally by small trucks all over the country.

### **4.10.2 Marketing**

Syria has not experienced advanced competitive marketing as seen world markets particularly in the fields of modern fashion nor does it to make highly sophisticated garments. This means that modern marketing techniques have not been required or practiced in the textile field. No specialized companies or organizations such as trading companies or market research companies exist in

the field of "marketing" in Syria. The usual procedure of business, namely, negotiation on price and quantity seems to be the only prevailing marketing requirements.

Lack of correct statistical data seems also to be an obstacle for modern marketing. Advertising is practiced on TV, radio, newspapers, magazines and billboards.

#### **4.10.3 Delivery**

There is comparatively low awareness in the public sectors whereas claims against late delivery are quite common among Souk merchants, especially when related to the seasonal garments. A penal code does exist in principle in public sector factories for delays and other failures such as late delivery of products, but whether this system is effective in forcing companies to keep to delivery timing and performance is doubtful.

### **4.11 Competitiveness of Syrian Textile Products**

#### **4.11.1 Competitiveness Survey of Syrian Textile Products**

Questionnaire survey involving overseas customers of Syrian products was attempted but found to be difficult to conduct due to the small number of overseas customers. An alternative method of combining price survey, sample evaluation on quality, and performance survey data of the Syrian textile companies, governmental and private, was conducted as follows:

- 1) Price data from GOTI and a survey of the private sector
- 2) Quality checked by testing samples obtained through visits to companies
- 3) Performance and delivery survey of Syrian textile companies made in parallel with a survey of export promotion measures and supporting services.



#### 4.11.2 Price Competitiveness on Cotton Yarn

Syrian cotton yarn prices are determined by the government. As of March 1997, Syrian 20/1 price was US\$ 2.90/kg ex-works, which was J.Yen 333.50/kg at the prevailing exchange rate of J.Yen 115/US\$. Ocean freight and other charges in rough estimate was J.Yen 60 per kg making the delivered price in Japan around J.Yen 390. The quoted price in April, at the Osaka Commodity Exchange for October delivery was J.Yen 377/kg (US\$ 3.28/kg) delivered to the local users. Syrian cotton yarn prices are, therefore, seemingly in the acceptable range even for the Japanese customers, as long as the exchange rate stays stable, although exports with the current unstable quality, packing and delivery, would be quite difficult.

#### 4.11.3 Wool carpet

The wool carpet ex-factory price in Syria is fixed by government, and was SP 1,060/m<sup>2</sup>, as of March, 1997. Recent price of bottom quality wool carpet (even for which the "wool mark" was the minimum condition, i.e. minimum wool weight is 900 gr/m<sup>2</sup>) was about BF (Belgian Franc) 570/m<sup>2</sup> FOB (J.Yen 1,880/m<sup>2</sup> at J.Yen 3.30/BF 1). Price of Syrian carpet, SP 1,060/m<sup>2</sup>, becomes J.Yen 2,710/m<sup>2</sup> ex-factory at the official exchange rate of SP 45/US\$, which is clearly far higher than the Belgian price. The export of wool carpets from Syria is, therefore, not worth considering.

Huge amounts of investment took place and mass production is carried out in Belgium with computer operated modern machines, with mass export going on to all over the world. Many developed countries, including Japan, withdrew from machine (double face wilton) made carpet production, due to high wages. And uncompetitiveness. Presently, Belgium is the largest exporting country. Japanese imports of carpets is around 2.7 million square meters, J.Yen 4.6 billion, from Belgium (import figures include wool, viscose rayon, acrylic, polypropylene, etc.).

#### **4.11.4 Export Competitiveness of Private Textile Sectors**

Private textile sectors consist of small number of top and medium class companies and the a vast numbers of low/bottom class home-based enterprises. Top/medium class companies are well established, guided by capable management and having a strong financial base while the low/bottom class companies are mostly individual persons or home-based enterprises, generally with little financial power, education/training and experience. Under such situation, the private textile exporting enterprises are classified into two categories of competitiveness; high and low.

##### **(1) High class Private (Small in number)**

Imports and exports were previously monopolized by state-owned enterprises. After liberalization of the import-export policy, private companies were allowed to enter into import-export businesses themselves. The high class private companies seem to be doing quite well with their strong financial base, experience and good connections with western countries.

With their main capital abroad, they can import facilities and materials almost freely. Authorization to put 75% of foreign currency obtained through export at their disposal also made them aggressive to expand their own manufacturing and export business. Being financially strong themselves, even the lack of export promotion measures or supporting system by the government does not affect them much.

##### **(2) Low class Private (Numerous)**

Soon after the collapse of the former Soviet Union, the Syrian government encouraged the export of textile products to Russia on a large scale. In such circumstances a number of small home-based factories with a single knitting machine or a sewing machine etc., had been established and registered. They are small in size, weak in finance, unaccustomed in overseas trade, but also less quality-conscious.

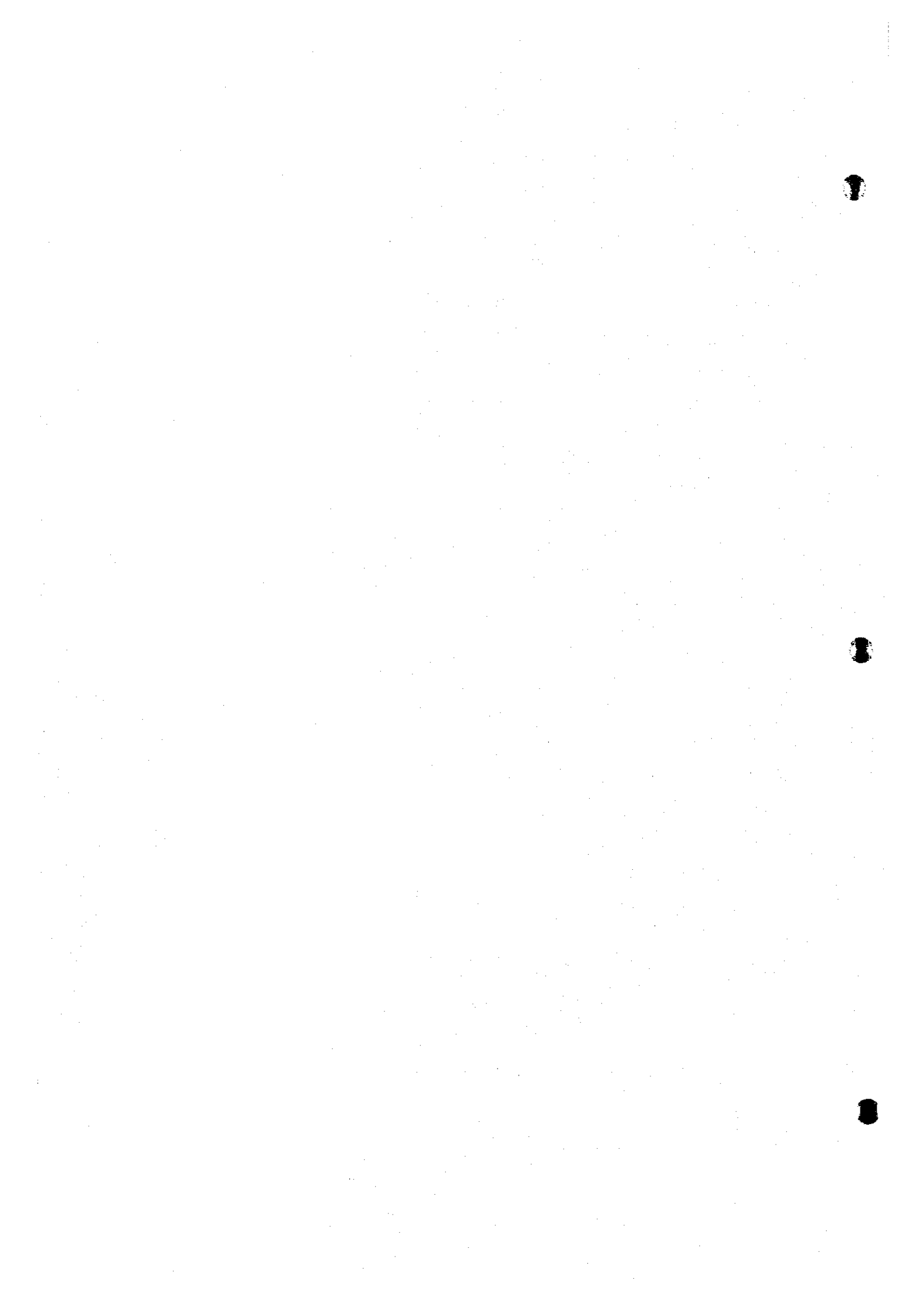
Some of the large trading companies are helping those small private companies, to import yarn or fabric and financially supporting them (by granting usance in payment terms). This system could be expected to grow

in the future for exports if trading companies can organize small private companies to manufacture exportable quality products. At present, there is limited export volume from this class.

### (3) Private Trading Companies

They play a role in the field of imports rather than exports at the present. They import yarn and fabrics mainly for the low quality textile factories, and help them with usance payment. 75% authorized foreign currency for the private sectors is unfortunately about 8-10% more costly due to the fixed rate system here. They use this 75% foreign currency and open L/C from Syria, mainly to import fabrics where the cost competition is less keen. Cost competition is much keener on yarn, and imports are mainly depending on their overseas capital.

## **5. Supporting Services for the Textile Industry**



## 5. Supporting Services for the Textile Industry

### 5.1 Present Status

#### 5.1.1 Chamber of Commerce/Chamber of Industry - Aleppo and Damascus

Chambers are split into the Chamber of Commerce and the Chamber of Industry in Damascus and Aleppo. In other cities, however, they are unified as the Chamber of Commerce and Industry. They are situated in the centers of both cities for easy access for business and industrial people.

They function as communication channels between the government and the private sector in co-operation and are active in addressing private sector issues to government as well as issuing Certificate of Origin to exporters. Other services include training courses for ISO9000 and assisting the Textile and Clothing Development Center cosponsored by UNDP.

The members are subject to the payment of annual fees, and approximate numbers of members are as follows:

	Damascus			Aleppo
	City	Urban	Total	
Chamber of Commerce	15,000	10,000	25,000	22,000
Chamber of Industry	-	-	3,700	6,000

\* Chamber of Commerce includes large numerous numbers of small shop keepers and individuals. The Chamber of Industry includes small home-based enterprises.

Each Chamber has a Board of Directors with 18 members, 12 elected from the private sector and 6 from the public sector with re-election every 4 years. The chairman and vice-chairman are elected from among the board members, thus, usually elected from the private sector.

The number of members is very large in every Chamber, and includes small units such as tiny shop keepers, or home-based enterprises such that the needs

among members are wide ranging. Some classification of members would be beneficial.

For example, there are about 3,500 textile industry members in the Aleppo Chamber of Industry which can be classified from capital/number of employees as about 60 large sized, about 160 medium size, about 1,800 small sized and 1,500 tiny sized businesses.

Their function is important in the fact that they are the only effective route of communication between the government and the private sector. While many members strongly demand a freer economy, the government tends to be cautious of freeing private activities too fast, hence the Chambers have a delicate but important role to play for the national economy.

### **5.1.2 Commercial Ports**

There are three major seaports in Syria: Lattakia, Tartus and Banias. Banias is mainly used for crude oil and other oil products, and virtually no textile products. Lattakia is the largest seaport. The largest proportion of total cotton and textile products is exported via Lattakia.

There are many land border ports in Syria. The major land ports for textile shipments are Bab Al Hawa for truck and Midan Ekbas for railroad. Most import and export textile cargoes are processed at custom offices in Free Zones in Aleppo and Damascus. For air cargo shipments, the main port is Damascus airport.

### **5.1.3 Custom Offices**

Custom offices are located at all of the commercial ports and free trade zones, with custom brokers at major points of clearance to facilitate the procedures. Export and import procedures are established and a collection of related laws and regulations is published. The procedures are geared to controlling imports and ensuring custom duty collection. In the case of exports, a bank form has to be completed to ensure that 25% of the foreign currency receipts to be withheld and converted to local currency is registered in addition to the normal custom procedure.

#### **5.1.4 Free Trade Zone**

There are six Free Trade Zones in Syria: Damascus, Damascus Airport, Adra, Lattakia, Aleppo and Tartus. Goods imported to Free Trade Zones are not subject to import duty or import regulation by Syria except for a few items such as arms, narcotics etc. The import value of all the free zones in 1996 was 292 million S.P., while export value in 1996 was 360 million S.P.

All Free Trade Zones have Custom Offices, and most of the imports overland through northern border posts like Midan Ekbas and Bab Al Hawa are cleared in the Free Trade Zone in Aleppo. There is a plan to establish an extension of the Free Trade Zone in Lattakia port with an area of 100,000 square meters.

The main problem is the lack of incentives to locate a factory or plant in the Free Trade Zones. For instance, the cost of electricity is higher in the Zones than outside. A clear industrial development policy is required if the government wishes to induce foreign investment into Syria by means of Free Trade Zones. At present, the Zones seem to be places for temporary storage or duty-free shopping, not for industrial development.

#### **5.1.5 Bureau of Statistics**

This organization reports to the Prime Minister's office, with 14 branches in each province. Each branch office has 20-30 staff. Data collection is usually done on a monthly basis. All state-owned sectors are covered, and the private sector is covered by a sample survey. Fiscal and monetary data are obtained from the Ministry of Finance.

Statistics issued include GDP, employment, population, external trade, and services. The bureau tabulated Input/Output data in 1993 as a part of the GDP statistics. The responsibility of the Bureau is to compile the statistical data. The State Planning Commission is in charge of analyzing the statistical data compiled by the Bureau of Statistics.



Rough figures relating to textile products are available in the Statistical Abstract issued annually by the Bureau. More elaborate data are needed for use in marketing and management planning.

Reliable statistical data is the basis of all corporate planning for management, marketing, production, etc. Reliable statistical data covering the state-owned sector and the private sector of the Syrian textile industry may be organized as part of a basic computerized infrastructure. The organization in charge of data collection, administration and analysis may be an entirely new organization, or be placed within GOTI, the Bureau of Statistics, the Chambers of Commerce or Industry, the Ministry of Economy, or the Ministry of Industry. The issue should be studied and decided upon by the Syrian government.

#### **5.1.6 Foreign Trade Center (FTC)**

This organization is in charge of the quality certification of cotton yarn and products for export. Quality certification of raw cotton is done by the Cotton Bureau in Aleppo. All cotton products processed in Syria must use Syrian cotton. Yarn and products containing 50% or more of cotton, produced by state-owned factories or private factories, are to be quality-checked by the FTC when exported. The certificate of FTC is required for export custom clearance. The total number of staff is 60, which includes 6 cotton specialists in the laboratory and 5 sample collectors.

The laboratory can test tensile strength, uniformity, number of twist, yarn count, weight, etc. Buyers designate the tests required. Cotton yarn is exported mainly to Italy, Germany, France and Switzerland. Most of the equipment is for testing cotton yarn.

#### **5.1.7 Cotton Bureau**

The organization comes under the Ministry of Agriculture and is located in Aleppo. Its main duties are the study of cotton growing and production technology, quality certification of cotton and cotton waste for export. The bureau is planning to introduce a new variety which has a 5% higher yield than the current varieties.

As the world cotton market today requires HVI testing equipment, the Bureau will have to install these instruments at the earliest opportunity.

#### **5.1.8 Cotton Marketing Organization**

The cotton Marketing Organization is responsible for the distribution of cotton for local usage, and exports of cotton to the international market based on the export certificate prepared by the Cotton Bureau.

Cotton waste from the ginning process is also distributed by the Organization. Waste of higher quality is sold to Syrian private companies, and that of lower quality is exported. Waste from the spinning process is sold directly by spinning companies, partly for export and partly to private spinning companies.

Distribution of cotton among the public sector companies is done at the end of August every year by gathering the requirements of each company for the next year in terms of tonnage plus specifications. The variety of cotton such as Aleppo-33/1 is not specified in the requirements of each company and allocation thereto, but grade and fiber length are specified. The supply of better cotton varieties is usually less than demand, so requirements are often not satisfied.

The price of cotton for domestic usage is determined by the Supreme Agricultural Council every year based on the production cost. The export price naturally has to follow the world market price.

#### **5.1.9 Industrial Testing and Research Center (ITRC)**

The center belongs to the Ministry of Industry and established in 1973. Testing of industrial materials and products, together with technical guidance are the main responsibilities of the center. To make the wide-use of quality control techniques is also the responsibility of the center. One JICA expert had been dispatched to the center.

Technical guidance for textile companies is also provided, but production technology is not covered. There is a laboratory for textiles open to both state-owned and private factories.

Supporting services available for industries including the textile industry are:

- 1) Seminar
- 2) Vocational Training
- 3) Technical Guidance
- 4) Testing
- 5) Measurement
- 6) Supply of Technical Information

ITRC is in charge of export quality checking of both state-owned and private sector textile products other than cotton yarn and fabric. The demarcation with FTC, which is under the Ministry of Economy, is to be studied.

#### **5.1.10 The Syrian Arab Organization for Standardization and Metrology (SASMO)**

SASMO was established in 1969, under the Ministry of Industry, for industrial standardization and technical guidance.

Services available are:

- 1) Bimonthly seminars on standardization
- 2) Technical consultation for exporting companies, mainly on overseas standards
- 3) Industrial standards
- 4) Supply of technical information
- 5) Technical Training Courses (planned)

At urgent issue that needs addressing is the lack of qualified staff.

#### **5.1.11 Universities**

There are four university level institutions in Syria: in Damascus, Aleppo, Latakia and Homs. There is no faculty for textile engineering in the four universities. Engineers in textile companies are recruited from other engineering fields such as mechanical engineering, chemical engineering etc.

When there is a specific need for special training, overseas universities are the only option choice at present.

There is a plan to introduce a course in textile engineering at Homs University with an intake of 100 students per year in addition to the petroleum engineering, chemical engineering and food engineering faculties already present. The project is not proceeding due to the lack of qualified professors and staff.

#### **5.1.12 Intermediate Institutes**

There are 120 institutes in Syria in various fields of specialty. Under the Ministry of Industry, there are 9 institutes. For the textile industry, there are two in Syria: one in Damascus and the other in Aleppo.

##### **(1) Damascus**

The intermediate Institute of Textile Industry in Damascus was established in 1969 based on Law 245. The Institute is supervised by the Highest Council of the Intermediate Institute and the Directorate of the Intermediate Institute related to the Ministry of Higher Education. The Institute is administered by the Ministry of Industry and the Directorate of Vocational Training.

The students are secondary school graduates. They receive a salary as government employees, and they are to work in the public sector for six years after graduation. Courses of four terms over 2 years are standard. On the job training starts after the 2nd term. After finishing the course, trainees are assigned to factories under the Ministry of Industry. The total number of students is 400, 200 in each grade. There are 50 teachers, 80% of whom are on loan from GOTI companies. After the two year training period, a certificate of "technical assistant" is issued to the textile specialist the fields of specialization are as follows:

- 1) Spinning
- 2) Weaving
- 3) Dyeing, printing and finishing
- 4) Sewing for garment manufacture

In the institute the weaving machines are in good condition but dyeing facilities and the laboratories are ill-equipped, and need new equipment.

The building, lecture halls and equipment are clean and well organized. Management of the Institute in Damascus seemed excellent.

## (2) Aleppo

Intermediate Institute of Textile Industry in Aleppo was established in 1987 together with the Vocational Training Center. Unlike the Institute in Damascus, students do not receive a salary from the government, hence there is no obligation to work for a certain period in GOTI factories. The curriculum is similar to that of Damascus. Lectures are held four days a week and job training is done 2 days each week in factories. The total number of students is 85. The number of teachers is not clearly set. They come from the neighboring Vocational Training Center as required, most being assistant engineer class.

Training equipment is outdated or non-existent. A basic management plan seems to be necessary before planning any updating of equipment.

### 5.1.13 Vocational Training Centers

There are Vocational Training Centers in four cities in Syria: Damascus, Homs, Deir Ezzor and Aleppo. There is a new center under preparation in Lattakia. There are textile courses in all four centers.

Courses in Damascus Center are as follows:

- (1) A 9-months fast course to train any applicant to be a semi-skilled labor.
- (2) A two year standard course for students with 9th grade certificates for skilled labor.
- (3) A two year special course sponsored by companies for specialized skills as required.

The Aleppo Center was established in 1958. Total staff number is 150, and 15 are for textile course. Courses are similar to those held in Damascus. The

training facilities are outdated, and have not been in use for the last 5 years. On-the-job training is carried out in factories outside the center.

Aleppo Center has no students in textile courses at present. There were 150 in 1976, and the number dropped to 2 in 1994. In Aleppo, the textile industry is considered unattractive due to heavy work load and lower salary compared with other industries. The situation might have a serious effect in the future for the availability of trained labor for the private textile industry in the Aleppo area. A careful study, involving textile companies who are the recipients of the graduates of this center, will have to be made before starting any study to reinforce equipment to the center.

## **5.2 Activities of UNDP, EU, and JICA Experts**

### **5.2.1 UNDP**

#### **5.2.1.1 Ongoing projects**

- 1) Support to trade policy and export promotion (special focus on textiles, garments, and trade information).
- 2) Introduction of informatics into secondary education.
- 3) Textile and Clothing Development Center (in Damascus and Aleppo).
- 4) Quality assurance assistance - ISO 9000
- 5) Introduction of computer managed maintenance system (CMMS) into Syrian industrial sector.

#### **5.2.1.2 Textile and clothing development center project**

The purpose of the center is to tackle the technical matters, not the policy matters. In August-September, the Team visited the center in Aleppo, which, with 5 new staff was starting its activities. The Team also visited the center in Damascus, which is in the premises of "adidas" company. The scope of the project is as follows:

- 1) To establish Textile and Clothing Development Centers in Damascus and Aleppo.
- 2) UNDP contributes US\$ 400,000, Chamber of Industry in Damascus and Aleppo each contributes SP 1,320,000.

- 3) Project period is 3 years, thereafter, the Center is expected to be financially independent and managed by the private sector.
- 4) The Center is to be managed by private sector companies, without governmental interference.
- 5) The Center's main functions include, textile and clothing design, color optimization, work study, cost analysis, marketing and information.
- 6) The center will install CAD/CAM equipment, with training by experts.

The center has great potential for assisting the private textile industry, and, with capable and enthusiastic management and staff, seemed to qualify for one of the candidates for continued financial assistance by the Chamber of Industry and foreign governments as well. In Damascus, the Center started activities similar to those of the Aleppo Center in the premises of "adidas" Company.

#### **5.2.1.3 ISO 9000/Computer managed maintenance system project**

GOTI's Al Furat Spinning Company (Deir Ezzor) will be the location. The consultation on ISO 9000 started in April, 1997. The work is formally under the jurisdiction of SASMO, and UNDP is performing the work as SASMO has no staff. One food processing company will be chosen for the ISO 9000 project.

#### **5.2.2 Syrian European Business Center (SEBC)**

SEBC was established in July, 1996. The 4th protocol between Syrian government and the EU budgeted ECU 9million for a business sector assistance program. The project is managed by Price-Waterhouse of the USA.

As a 1st step, free diagnostic studies are to be carried out for 30 companies in 6 sectors. The 2nd step work involves recommendation through experts, and the 3rd step of the diagnostic study will be fee based. The main targets are the companies planning to find export products and those planning to produce products currently being imported. Also, a program to establish a database of textile companies in Syria is under way.

The EU decided a new policy for the Mediterranean countries in June, 1995. The policy targets are a common peace, stability, mutual prosperity and human

resources development in Euro-Mediterranean area. The final target is to establish a Mediterranean Free Trade Zone. The activities will start based on bilateral agreements, and eventually aim at the unification of the area. SEBC is one of the projects in the above grand scheme.

As a first step, bilateral agreements with each country are to be promoted, through technical cooperation to strengthen competitiveness under free trade, and trade promotion, plus harmonization of standards. There is a lack of expert business service in Syria. MEDA program handles loan and risk capital for private companies.

### **5.2.3 JICA Experts**

There were three (3) Japanese JICA experts stationed in Syria as of March, 1997. Two of the experts left Syria by the time of the Draft Final Report. The remaining one is scheduled to leave in early 1998. The JICA experts centered their efforts in quality and productivity improvement and ISO 9000 guidance, and were effective in starting enlightenment of the importance of basic discipline such as "5S" activities and QC circle of Japan. Although JICA experts cover far more than just the textile industry, one in the textile field assigned to an organization such as Ministry of Industry or the Chamber of Industry would benefit the Syrian textile industry.

The JICA experts program covered the following:

- (1) Industrial Development, Productivity Improvement including the "5S" campaign at ITRC. (up to June, 1997)
- (2) Industrial Development, Management Consulting and ISO 9000 program at the Ministry of Industry.
- (3) Quality Control program at the Prime Minister's office. (Up to July, 1997)

### **5.3 Points to be Improved**

Supporting services for industry usually includes standardization, testing, quality control, productivity improvement, human resources development, technical guidance, technical information, etc. Technically, there are institutions to provide those services in Syria, however, institutional backing, budget and

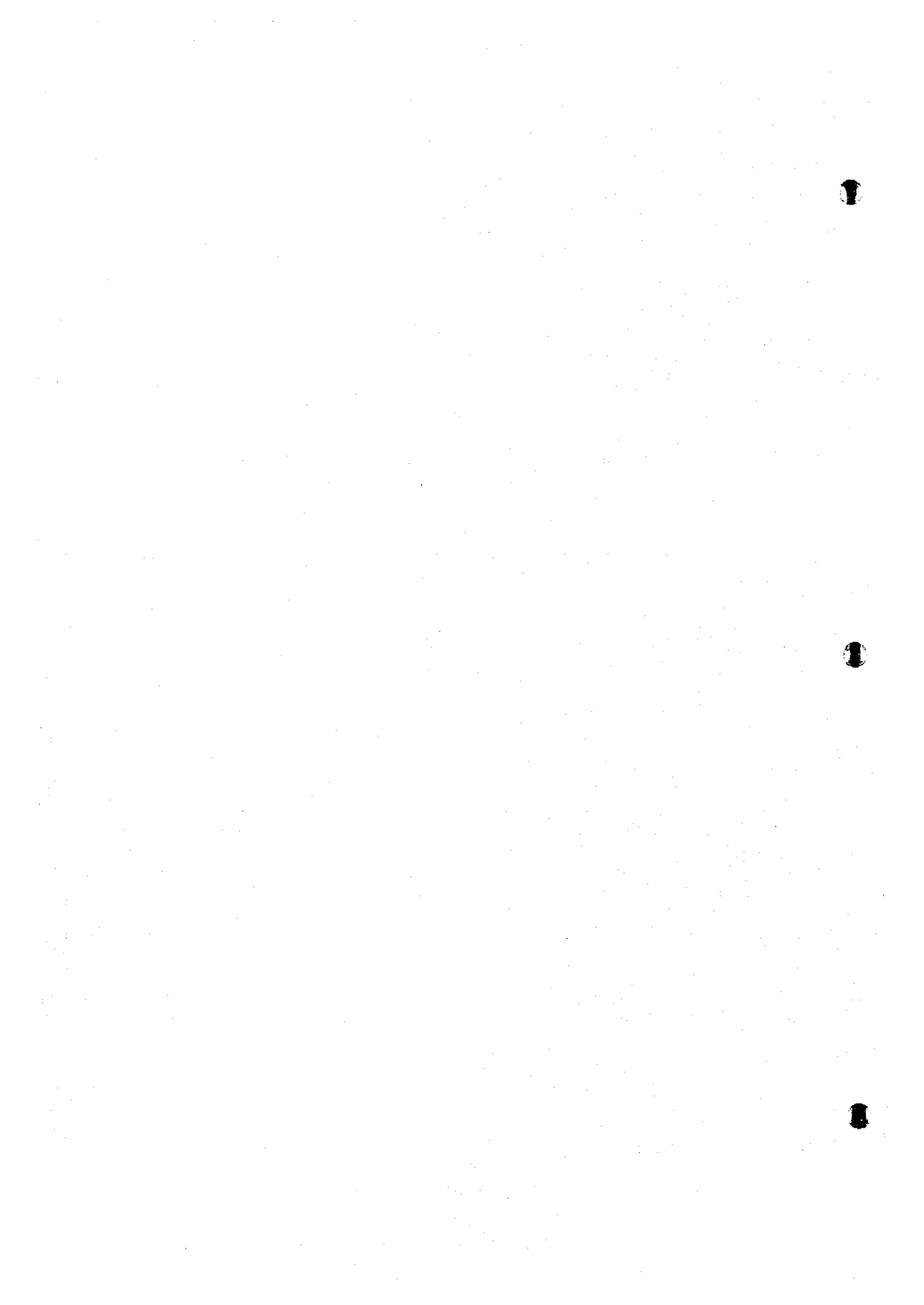


staffing are insufficient and need to be improved. The Team discussed the matter with the Syrian authority, and chose priority projects as mentioned in the Chapter 11.

The status of the Syrian industry requires in addition, institutional infrastructure such as measures for export promotion; tax exemption on export earnings, export finance, export credit insurance, export marketing, improvement of competitiveness by upgrading quality, and acquisition of ISO 9000. An important point is the establishment of a general direction and policy, and all subsequent policies and measures are to be in coordination with the basic policy. For instance, in the present situation in Syria, the export promotion policy and export taxation seem to be contradicting each other. To realize an important aim such as the conversion into a market economy system, export promotion or promotion of industry, the establishment of an organization higher than ministerial level is adopted in some countries such as Saudi Arabia, to avoid ministry level conflicts, and to expedite the execution of actions and projects.

Another important measure for the development of the industry is the inducement of foreign investment. Along with the setting up of a legal background to induce foreign capital investments in Syria, which should be as attractive as those of neighboring countries, should be the establishment of free trade zones/export processing zones with single-window services is a popular measure. If free trade zones/export processing zones are established with incentives such as lower utility cost, better communications and free import-export arrangements, they could also be utilized as industrial estates to develop domestic industry in Syria, even if foreign investors do not come as originally planned. This matter covers not only the textile industry, but also all Syrian industry. The Team will not elaborate on this report.

## **6. Supply and Demand Forecast**



## **6. Supply and Demand Forecast**

*This chapter analyzes the current worldwide supply and demand situation concerning textiles and clothing followed by forecasts, and presents the result of analysis of current textile and clothing consumption trends in Syria, together with textile supply and demand forecasts.*

*World textile and clothing demand is expected to grow at an annual 2.4% rate of until 2000. Production of synthetic fiber, particularly in Asia, has been steadily growing to more or less the same level as cotton production in 1995 and is expected to surpass this after this time.*

*As for trade, clothing exports increased share compared to fiber and fabric, and are dominated by countries offering low labor costs such as China. This trend is likely to accelerate in future to reflect the fact that labor accounts for the major portion of clothing production cost.*

*Current consumption data on textiles and clothing in Syria were estimated on the basis of statistical data obtained from countries exporting these products to Syria. Then, the supply and demand forecasts were made by using the revealed consumption structure by material and form.*

### **6.1 Worldwide Textile and Clothing Supply and Demand Analysis and Forecast**

Supply/demand forecasts are conducted by various organizations. These results are referred to in this report. The names of the organizations are described in the Tables and Figures.

#### **6.1.1 World Supply and Demand Analysis and Forecast by Region and Material**

##### **6.1.1.1 By region**

World demand for textiles and clothing is expected to reach 48.5 million tons in 2000, with an annual average growth rate of 2.4%. Regional breakdown (Figure 6.1-1) shows that Asia holds the highest share. In fact, demand in Asia (except for Japan and West Asia) will grow at the highest rate of 4.5%. Within the region, China (including Taiwan) dominates (Figure 6.1-2). Strong growth of demand in Asia reflects high population growth and the

surge in textile and clothing consumption per capita in Southeast Asia, the fastest growing region. (Note: Current demand in the former USSR and Eastern Europe, as estimated from statistics, has dropped to one half of the 1987 level. Demand in the region started to decline sharply in 1991. Nevertheless, some point out that the difference of approximately 2.6 million tons is unexpected large.)

#### **6.1.1.2 World demand analysis and forecast by material and region**

World textile and clothing demand forecast by material (Figure 6.1-3) indicates that synthetic fiber demand would exceed cotton in 1995-1996 and gain the largest share. The trend is expected to continue in future as synthetic fiber demand will grow with increased production, especially in Asia.

Regional breakdown of cotton demand (Figure 6.1-4) shows that China, the U.S., the EU, and Eastern Europe are major consumers. Cotton is primarily used for clothing, approximately 66% in the U.S. and 54% in the EU (1995).

Regional breakdown of synthetic fiber demand (Figure 6.1-5) indicates dominance of the U.S., China, and the EU. Note that the U.S. demand comes from non-clothing consumption; while demand for clothing use represents around one fourth of total, carpet and industrial use accounts for two-thirds.

#### **6.1.1.3 Textile and clothing consumption per capita**

Per capita consumption of textiles and clothing (Figure 6.1-6) is approximately 7kg on world average. The largest consuming country is the U.S. (28-29kg) due to high demand for non-clothing applications. Per-capita consumption in Syria is at more or less the same level as the world average.

#### **6.1.1.4 Synthetic fiber ratio**

The share of synthetic fiber as a percentage of total textile and clothing consumption (synthetic fiber ratio) has been on the rise worldwide, from 22% in 1970 to 36% in 1980 and 39% in 1990, and is forecast to reach 42% in 2000 (Table 6.1-1). The rapid growth of synthetic fiber demand mainly comes from price competitiveness created by volume production, high functional

performance, and notable growth of demand for non-clothing use. Strong demand spurs increased production, particularly in Asia.

### **6.1.2 World Textile Fiber Production**

In world textile and clothing production, output of synthetic fiber has steadily been growing. It reached the same level as cotton production in 1995 and is expected to outpace the latter thereafter. (Figure 6.1-7)

Geographical distribution of cotton production (Table 6.1-2) indicates that China, the U.S., India, the former USSR and Eastern Europe, and Pakistan account for approximately 80% of world production. Production growth has been slowing down since 1990.

As for production of synthetic fiber (Table 6.1-3), notable growth is observed in Asian countries.

### **6.1.3 World Textile and Clothing Trade Analysis and Forecast**

#### **6.1.3.1 World mill consumption**

Measured by the volume of fiber processing - mill consumption (production of filament and fibers + import volume - export volume, i.e., input of filament and fibers to spinning, weaving, and knitting), Asia accounts for one half of the world total (Figure 6.1-8), and in particular, China represents one fourth. In other regions, mill consumption in the U.S. grows, while remaining unchanged in the EU, declining in Japan, and plummeting in the former USSR and Eastern Europe. In the U.S. and the EU, mill consumption is slightly decreasing or maintaining the status quo, and future mill consumption, however, is likely to decline as new investment in fiber processing equipment, a key indicator of future production activity, decreases.

As for mill consumption for synthetic fiber, Asia (except for Japan) will account for around 46% of the world total (Figure 6.1-9). Within Asia, China has the highest share of 17%, followed by Taiwan, Korea, ASEAN countries with 7-10% (Figure 6.1-10). As final demand for synthetic fiber in Asia is expected to reach around 6 million tons in 2000, a surplus of 2.8 million tons

compared to mill consumption of 8.8 million tons will be processed and exported as fibers, fabrics, and clothing.

### **6.1.3.2 World textile and clothing exports and imports**

The present situation and future forecast of world exports and imports of textiles and clothing by major exporting and importing countries (Figure 6.1-11) reveals that clothing accounts for an extremely high percentage of textile and clothing trade, dwarfing fibers and fabrics. Clothing is mainly exported from Asian countries to the U.S., the EU, and Japan.

Clearly, increased concentration of textile processing capacities in Asia is accompanied by expansion of textile and clothing (fibers, fabrics, and clothing) trade on a world basis. Of the three sectors, clothing controls a dominant share and shows strong growth (Figure 6.1-12). Note that the figures are shown on a tonnage basis, and clothing's share on a value basis is estimated at around 60%.

Clothing exports are expected to grow at an annual 5.5% and will account for two-thirds of textile and clothing imports by industrialized countries in 2005.

### **6.1.3.3 Major textile and clothing exporting and importing countries**

Instead of analyzing exports and imports in absolute number, net exports/imports ("input of textile and clothing" to the country's textile industry - "domestic consumption") help understand the current situation of a particular country's textile industry more clearly.

#### **(1) Major exporting countries**

Most countries with large net exports (Figure 6.1-13) are found in Asia, with China being on top. Outside Asia, Turkey is a major exporter. The top seven net export ranking countries have a combined share of 90% and they clearly dominate world textile and clothing exports.

Compared to the figures in 1990, while Korea's exports have remained relatively flat, China, Pakistan, India, Thailand, Indonesia, and Turkey have

boosted net exports, thus establishing firm positions as major textile and clothing exporters.

## (2) Importing countries

Countries showing large net imports (Figure 6.1-14) include the EU, the U.S., Japan, the former USSR, Mexico, and Saudi Arabia. The large figures of Saudi Arabia come from the absence of local production and sizable amounts of textiles and clothing bought and brought out by travelers. Japan, a net exporter as of 1980, turned into a net importer in 1990, and imports have been increasing since then.

## (3) Self-sufficiency index

The major exporting and importing countries were further analyzed on the basis of a self-sufficiency index (SSI: (mill consumption)/(amount of fiber available for home use)) (Figures 6.1-15, 16)

Among exporting countries, Pakistan and Thailand show a high SSI, while Korea's SSI is in decline.

In all the importing countries, including the EU, the U.S., and Japan, SSI has been declining year after year. As these countries are losing international competitiveness in the textile industry, particularly clothing, SSI is expected decrease further. Notably, Japan has experienced a rapid decline in SSI, from 111 (i.e., the country's exports represented 11% of domestic consumption) in 1980 to 66 (i.e., imports accounted for 34% of domestic consumption) in 1993.

### 6.1.3.4 Comparison of labor costs in world textile industries

Hourly labor costs of world spinning and weaving industries were compared (Figures 6-17, 18). Measured by a ratio to that of China which is the largest clothing exporter, Japan is 66, Germany 57, the U.S. 32, Taiwan 16, and Turkey 12. Clearly, the figures reflect the fact that the clothing industry which has high labor content tends to concentrate in countries where labor cost is relatively cheap. (Labor costs account for 35-50% of total production costs in clothing and 15-20% in textiles.)



### **6.1.3.5 World trade organization (WTO) Issues**

Since 1974, world textile and clothing trade has been managed under the Multi Fiber Arrangement (MFA). In the wake of rapid growth of imports, however, major importing countries began to control imports by means of bilateral arrangements with exporting countries and import quotas.

The Uruguay Round, started in September 1986, ended in December 1993 and gave birth to the WTO in 1995. At the same time, the Agreement on Textiles and Clothing came into effect to replace MFA.

The new agreement is designed to serve as the international rules for the next ten years (up to January 2005) until the textile and clothing sector is integrated into GATT and liberalized. It sets forth transition to GATT in three steps (started in January 1995, continuing in 1998, and ending in 2002), including the percentage of GATT incorporation under retained MFA regulations.

Nevertheless, the steps may not proceed smoothly in the cotton producing countries. Production of cotton is an important part of agriculture, where protection of farmers is a national priority. For other countries which do not produce cotton, the textile industry often constitutes a major economic base by employing a large number of workers through a range of segments from production of filament and fibers, and the following processes such as weaving, knitting, dyeing and finishing, and sewing. Also, the steps toward liberalization of the textile trade, the integration to GATT, are based on the import volume in 1990. The liberalization process of the clothing trade is likely to be slower than expected. As a result, some take a pessimistic view on the process unless overall trade between exporting and importing countries grows.

Note that the EU grant Syria a special license "Europe-1" for textile trade, which enables Syria to export textiles to the EU without quotas restrictions and import duties.

### **6.1.3.6 Current situation and future outlook for textile and clothing trade of major exporting and importing countries**

Together with the analysis of current situation of textile and clothing trade, current situation and future outlook for major exporting and importing countries are reviewed and summarized as the basis of projecting future trade patterns.

#### **(1) U.S. (See 6.3.4 (4))**

In the textile industry, the percentage of the material cost decreases while that of the labor cost increases as one moves downstream (clothing). The distribution cost also increases in the downstream segment. As a result, industrialized countries with relatively high labor costs are unable to show competitiveness in clothing production.

The U.S., the world's largest cotton producer, imports cotton products (spun yarn, fabric, and clothing) and exports cotton.

Under the basic pattern in world textile and clothing trade, it is recognized in the U.S. that:

- a) The industry will not be able to fend off imports by import controls alone, such as MFA
- b) As a cotton producing country, the U.S. is expected to protect farmers
- c) As the labor costs are high in the U.S., cost competitiveness alone is not enough to compete against international competitors
- d) Domestic production will increasingly move to regular products (In the U.S. with high labor cost, high grade products cannot be produced cost competitively, and the industry concentrates on regular products.)

In this recognition, the industry makes intensive investment in quick response (QR) where it can have strength by setting the following objectives:

- a) To collect customer information accurately and quickly; and
- b) To supply products tailored to customer requirements within a short period of time.

Furthermore, efforts are being made to strengthen competitiveness by improving productivity through capacity upgrading, streamlining physical distribution and inventory control systems, and slimming the labor force.

As domestic production is shifted to regular products, high-grade products are increasingly imported from the Far East. Further, by joining of Mexico and Canada to NAFTA (North Atlantic Free Trade Area), the imports from these countries are increasing.

Finally, the U.S. textile industry produces more for non-clothing and industrial applications, which have a high growth potential.

(2) The EU (See 6.3.4 (1))

While actions contemplated by member countries are different, Comite International de la Rayonne et des Fibers Synthetiques (CIRFS) has expressed the following views and visions:

- a) Technological innovation (development of fibers with new features and functions)
- b) Procurement of raw materials from neighboring countries (Turkey, former East European countries, and Mediterranean countries)
- c) Strengthening of competitiveness with China and other competitors by using an Outward Processing Trade (OPT) approach under the formation of the Wider European Trading Area
- d) Building of QR and just-in-time shipping systems (development of the QR system for customers within the EU region to leverage geographical proximity)
- e) Creation of new markets (functional apparel and industrial materials)
- f) Corporate restructuring

It should be noted that the EU is still under expansion. In January 1996, Turkey joined the EU's Customs Union and has been expanding textile and clothing trade with the EU. In future, the EU intends to promote trade liberalization with other neighboring countries.

The EU expects the expansion to increase imports of textiles and clothing from new member countries, while increasing exports of other products to those countries, thereby leading to the expansion of trade within the region. These newly joined countries have a competitive edge over Asian countries on account of their proximity to the major single market, so that they will thrive as OPT operators relying on geographical advantage and can, therefore, effectively compete with low cost Asian countries.

### (3) Japan

Japan had increased textile exports considerably; however, since 1986, due to the hike in the yen, imports of textiles have been increasing rapidly. Of the increase in imports, clothing formed the major part, and to the contrary imports of raw materials such as cotton and wool fiber have been decreasing (Figure 6.1-19).

This indicates that Japan, due to higher labor costs, has lost international competitiveness in clothing manufacturing and in the processing of raw cotton and wool to textile products. As a result, Japan's trade balance in textiles has been in deficit since 1987 and reached a massive 18.3 billion US\$ in 1996 (Figure 6.1-20).

Adaptation efforts in Japan are being progressed on two fronts; the domestic industry and overseas production bases. Rapid growth of Japan's imports, particularly clothing, reflects the fact that Japan has started to rely on foreign sources for supply of regular, low-cost products as well as fashionable high-grade (brand) products. More precisely, the domestic industry has lost price competitiveness on regular products due to high labor cost, while it is unable to establish strength in product differentiation and production of brand products as domestic competition is based not on design and planning but on price and quality.

As for regular products, Japanese companies are moving to transfer their know-how on production management and quality control to their overseas production bases, particularly Asia. On the other hand, network organizations are being developed by incorporating production, distribution, and design functions to encourage production differentiation which entails QR

and small lot production. At the same time, the reinforcement of the QR system and rationalization of distribution systems are under way.

Note that despite rapid growth of textile and clothing imports, Japan has not initiated control under the MFA.

#### (4) China

China is the world's second largest cotton producer, but it experiences shortages of both cotton and synthetic fiber due to strong domestic and export demand. This situation is expected to continue for some time. Filament and fibers imported to the country are made into fabric and clothing. While fabric exports are on the rise, clothing exports are halted by quotas restrictions of importing countries. Nevertheless, it will maintain its current status as the major producer and exporter of textiles and clothing.

#### (5) Taiwan and Korea

Both countries have rapidly expanded textile and clothing exports rapidly. Economic development, however, has resulted in higher labor costs and weaker competitiveness, creating structural changes in the textile industry.

In Taiwan, while synthetic fiber and fabric production and exports are still thriving as the second largest synthetic fiber producing country, exports of cotton products are on the decline. Clothing production has lost much of its international competitiveness for various reasons, including the rise in labor cost, pollution control measures required for dyeing and other processes, and increasing difficulty in land acquisition. Now, Taiwanese companies are rushing to move their production facilities to China, Malaysia, the Philippines, and Vietnam.

Korea's exports of filament and fibers grew considerably to become the fourth largest producer in the world. On the other hand, cotton spinning and weaving operations have lost competitiveness, and production capacities are moving to China, Vietnam, and India. Fabric exports are leveling off to countries setting import quotas, so that companies are focusing on exports to China. Clothing production capacities are also transferred to overseas at a

fast pace, accompanied by rapid growth of clothing imports. The increase in the transfer of plants is said to have caused textile employment to drop from 561,000 in 1990 to 424,000.

#### (6) ASEAN

Among ASEAN countries, Thailand, still enjoy robust exports of textiles and clothing, while clothing production is being transferred to neighboring countries with low labor costs, including Bangladesh, Laos, Myanmar, Cambodia, and Vietnam. In Indonesia, which enjoyed an export boom, high increases in minimum wage (46% in 1994 and 21% in 1995) have eroded international competitiveness to give a halt to export growth. The government has taken steps to revitalize exports, such as the attraction of foreign capital and the reduction of import tariff on raw materials used for export goods.

#### (7) Pakistan

As the fifth largest cotton producing country, Pakistan boosted exports of cotton spun yarns and fabrics quickly. However, it failed to invest in midstream sectors such as dyeing and finishing and make quality control efforts, while it continued exports of cotton spun yarns and fabrics at low prices. Today, it is facing flattening exports.

To reinvigorate exports, the government initiated incentive measures such as import liberalization of textile machines, and the three-year relief of taxes on imports and exports of cotton and cotton spun yarn. Note that Pakistan was subject to an anti-dumping tariff imposed by Japan - a major importing country - in August 1995.

Clearly, Pakistan is required to reinforce downstream sectors and shift its export focus to value added products.

#### (8) Vietnam and Bangladesh

In both countries, the clothing industries are based on all imported fabrics and accessories for exports is emerging and exports have soared accordingly. In

1995, Vietnam exported \$800 million worth of garments, and Bangladesh \$2 billion.

The major reason for high growth is that both countries attracted manufacturers from neighboring countries which face import quotas limitations, not to mention cheap labor costs.

#### (9) Turkey

In 1995, Turkey surpassed China in clothing exports to the EU (on a value basis) to become No.1 in the world. On a volume basis, it was second to China. In other words, Turkey exports products with higher unit prices than China does. Turkey joined the EU Customs Union in 1996, under which the EU has lifted quota restrictions on textile and clothing imports from the country. Clothing exports formed the major part of all textile exports from Turkey from 1987 to 1992 (Figure 6.1-21)

In November 1996, however, the EU imposed an anti-dumping tariff on Turkey, together with other countries including China and Egypt, for their gray fabric imports.

#### (10) Former Eastern Europe

Romania and Poland are expanding exports swiftly as the EU's OPT operators and are replacing the Asian countries, Morocco and Tunisia. Many products manufactured at the EU's OPT bases are relatively high in unit cost. Further growth is expected in future.

Of the EU's imports of textiles, average prices of the imported textiles to the EU are comparatively higher than those of other exporting countries. In future, the Former Eastern Europe will increase exports to the EU, based on the advantages of close proximity to the EU, and the affinity and political stability of these countries.

#### (11) Morocco and Tunisia

The two countries export large amounts of apparel products to the EU. Textile Intelligence has recently estimated their combined share of the EU's OPT imports at around 45% (Fig. 6.1-22). This is more or less the same

level as Eastern Europe which has rapidly emerged as a major OPT base. In fact, although apparel exports from Tunisia and Morocco continued to show steady growth in recent years, Eastern Europe has recently outpaced them in growth rate (Fig. 6.1-23).

According to textile and clothing production data on Tunisia (Table 6.1-4), apparel products reached 182 million units in 1996, an increase of 170% over the past decade. On the other hand, spun yarns, woven fabrics, and knitted products have grown at a much slower rate, indicating the country has focused on clothing exports.

Note that countries exporting large amounts of clothing to the EU, including Poland, Hong Kong, Turkey, Romania, as well as Tunisia and Morocco, also import textile products (yarns and fabrics) in large quantities from the region. This clearly suggests that companies in clothing exporting countries have close relationship with those in importing countries in terms of capital, technology, and other aspects (Table 6.1-5). In fact, clothing companies in the two countries have alliances with textile companies in the EU, and the governments encourage them to do so.

#### (12) The United Arab Emirates (UAE)

In Dubai, UAE, there is a Free Trade Zone where exports of clothing are carried out on a large scale. The fabrics used for sewing clothing are mainly of synthetics and are imported from Korea, Japan, Thailand, Indonesia and India. The clothing produced is exported to Germany, England, the U.S.A., Eastern Europe, Middle East and Africa. Exports were 23,000 tons/year with a value of 200 million US\$/year.

The reasons for growth are as follows:

- 1) No strikes
- 2) Wages are low; they use workers from Sri Lanka
- 3) Line system in manufacturing
- 4) When setting up a clothing manufacturing company the following advantages prevail:-
  - Readily available finance
  - Simpler procedures for handling bureaucratic formalities



- Foreign firms can establish 100% owned operations
- 5) Infrastructure is modern
- 6) Industrial zones are well located near airports and ports
- 7) Abundant shipping capacity
- 8) Low freight costs

**Table 6.1-1 SHARE OF SYNTHETIC FIBER OF TOTAL FIBER CONSUMPTION (Forecast In 2000)**

(%)

	USA	Japan	W. Europe	China & Taiwan	E. Europe	World Total
Synthetic Fiber (%)	56.8	45.6	44.1	37.1	31.7	42.3

Source : FAO  
Japan Chemical Fibers Association, Textile Handbook

**Table 6.1-2 PRODUCTION OF COTTON IN THE WORLD BY COUNTRY**

(1,000 ton)

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 <sup>a)</sup>
China	4,547	5,672	4,508	3,739	4,341	3,850
USA	3,376	3,835	3,531	3,513	4,281	4,412
India	1,989	2,053	2,380	2,095	2,380	2,198
Former USSR	2,640	2,400	2,084	2,143	1,955	1,901
Pakistan	1,638	2,180	1,539	1,368	1,479	1,870
Others	4,809	1,560	3,943	4,037	4,259	4,999
World Total	18,999	20,700	17,985	16,895	18,695	19,230

Source : ICAC "Cotton : World Statistics 95/10"  
a) estimate

**Table 6.1-3 PRODUCTION OF SYNTHETIC FIBERS  
IN THE WORLD BY COUNTRY (1992-95)**

(1,000 ton)

	1992	1993	1994	1995
USA	2,981	3,016	3,193	3,186
Taiwan	2,043	2,123	2,296	2,405
China	1,772	1,980	2,406	2,362
Korea	1,455	1,581	1,673	1,847
Japan	1,445	1,361	1,394	1,386
Germany	826	763	813	756
India	538	604	682	730
Indonesia	423	412	567	605
Italy	601	557	617	580
Former USSR	657	594	582	562
Mexico	425	406	418	495
Thailand	299	333	403	457
Turkey	330	347	369	418
Spain	257	240	274	252
Pakistan	119	166	232	228
Brazil	219	235	245	206
Others	1,813	1,766	1,910	1,956
<b>World Total</b>	<b>16,203</b>	<b>16,484</b>	<b>18,074</b>	<b>18,431</b>

Source : Japan Chemical Fibers Association, Textile Handbook

**Table 6.1-4 PRODUCTION IN TUNISIA OF MAIN TEXTILE AND CLOTHING, 1986-96**

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Spinning Sector ('000 tons)	25.0	26.0	27.5	31.8	35.5	36.5	32.5	33.3	36.6	43.0	36.1
Weaving Sector (million m)	95.0	100.9	100.2	108.3	118.5	115.5	117.0	107.0	109.0	127.0	142.0
Knitwear ('000 tons)	9.2	10.4	10.9	12.5	16.4	17.4	16.5	18.0	24.4	30.9	21.5
Clothing (million pieces)	68.0	74.0	85.0	99.0	112.0	121.0	134.0	154.0	169.0	167.0	182.0

Source : Internationalization of European Textiles and Clothing Production, Special Report No.2643, Textile Intelligence

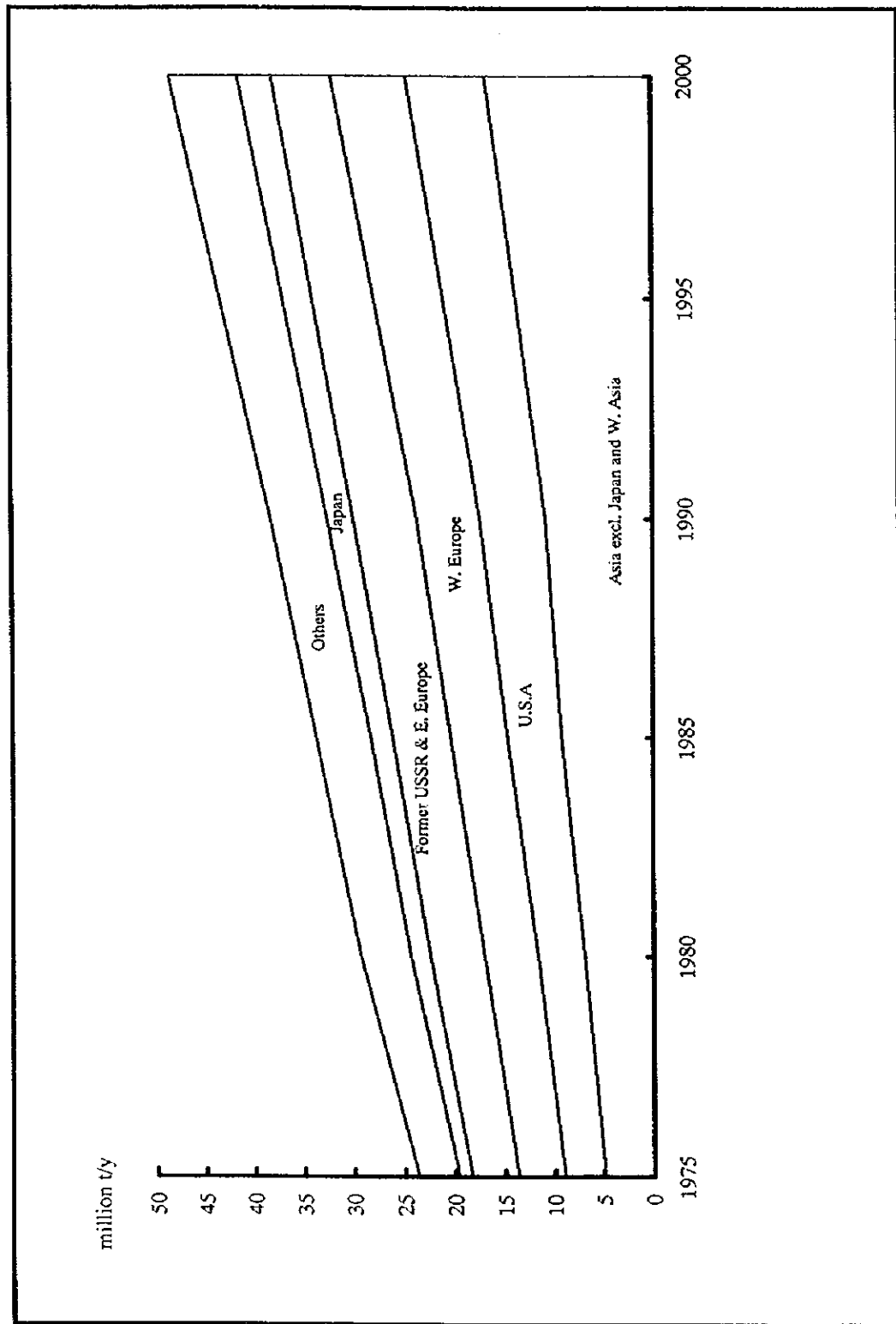
**T6.1-5 LEADING COUNTRIES OF EU TEXTILE EXPORTS  
AND EU CLOTHING IMPORTS**

(Ecu million)

EU Textile Exports		EU Clothing Imports	
Poland	1,596	Poland	1,610
Tunisia	1,026	Tunisia	1,881
Turkey	911	Turkey	3,423
Morocco	902	Morocco	1,672
Hong Kong	755	Hong Kong	2,493
Romania	716	Romania	1,149

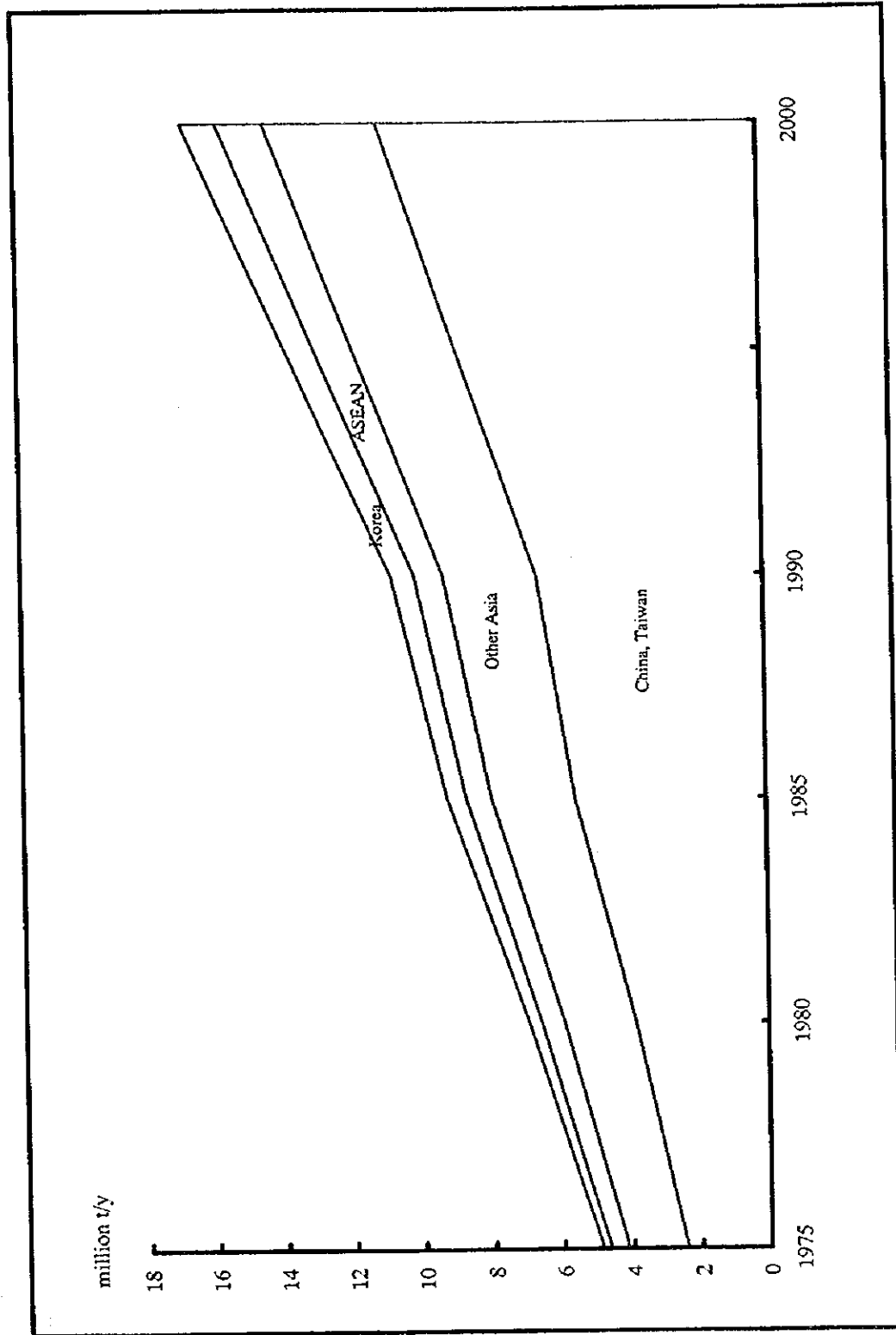
Source : OETH, 1997; Eurostat  
Internationalization of European Textiles and Clothing Production,  
Special Report No.2643, Textile Intelligence

Figure 6.1-1 TOTAL FIBER DEMAND IN THE WORLD BY REGION (1980-2000)



Source: Japan Chemical Fibers Association

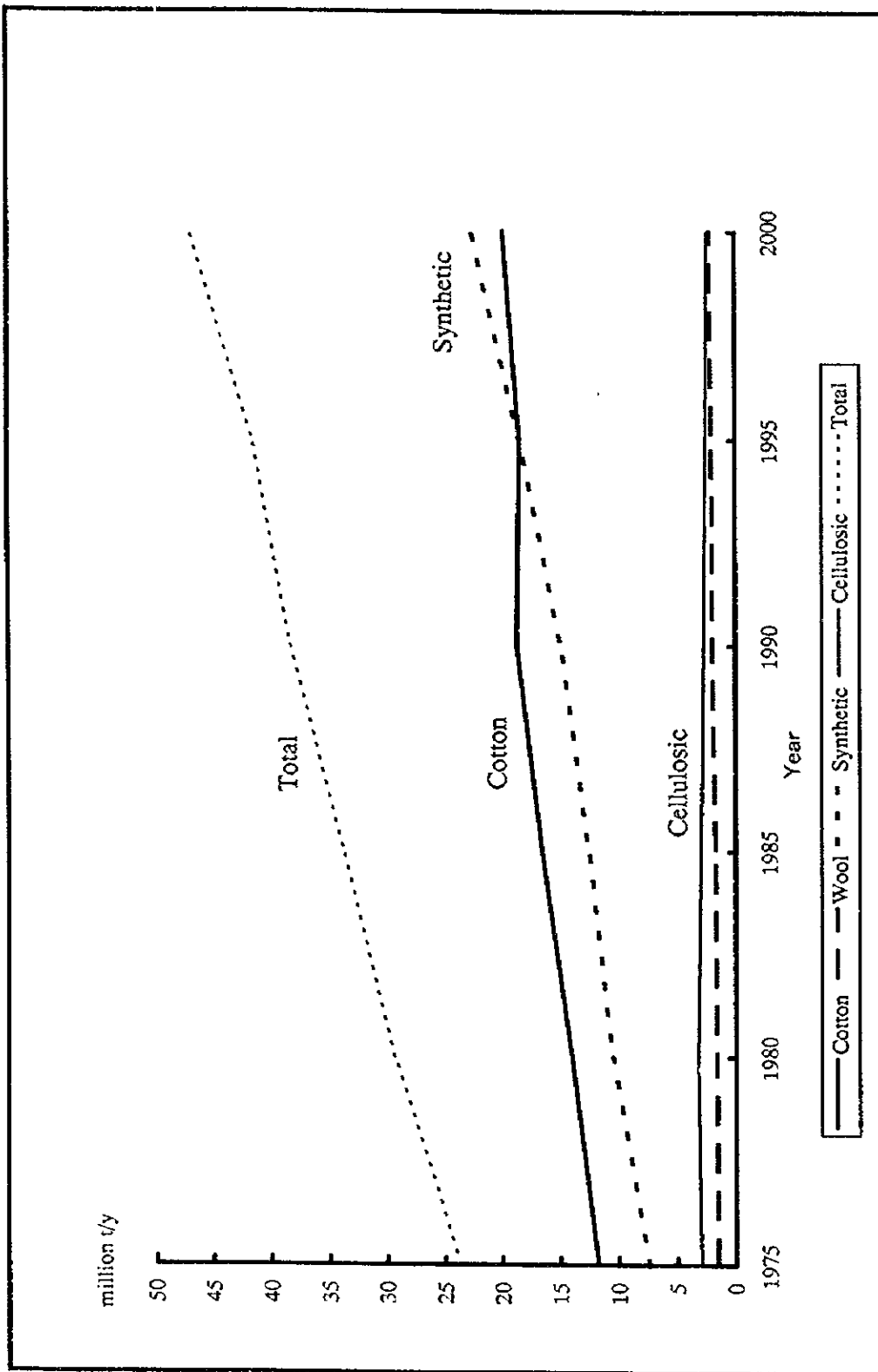
Figure 6.1-2 TOTAL FIBER DEMAND IN ASIA (Excl. Japan and W. Asia)



Source: Japan Chemical Fibers Association

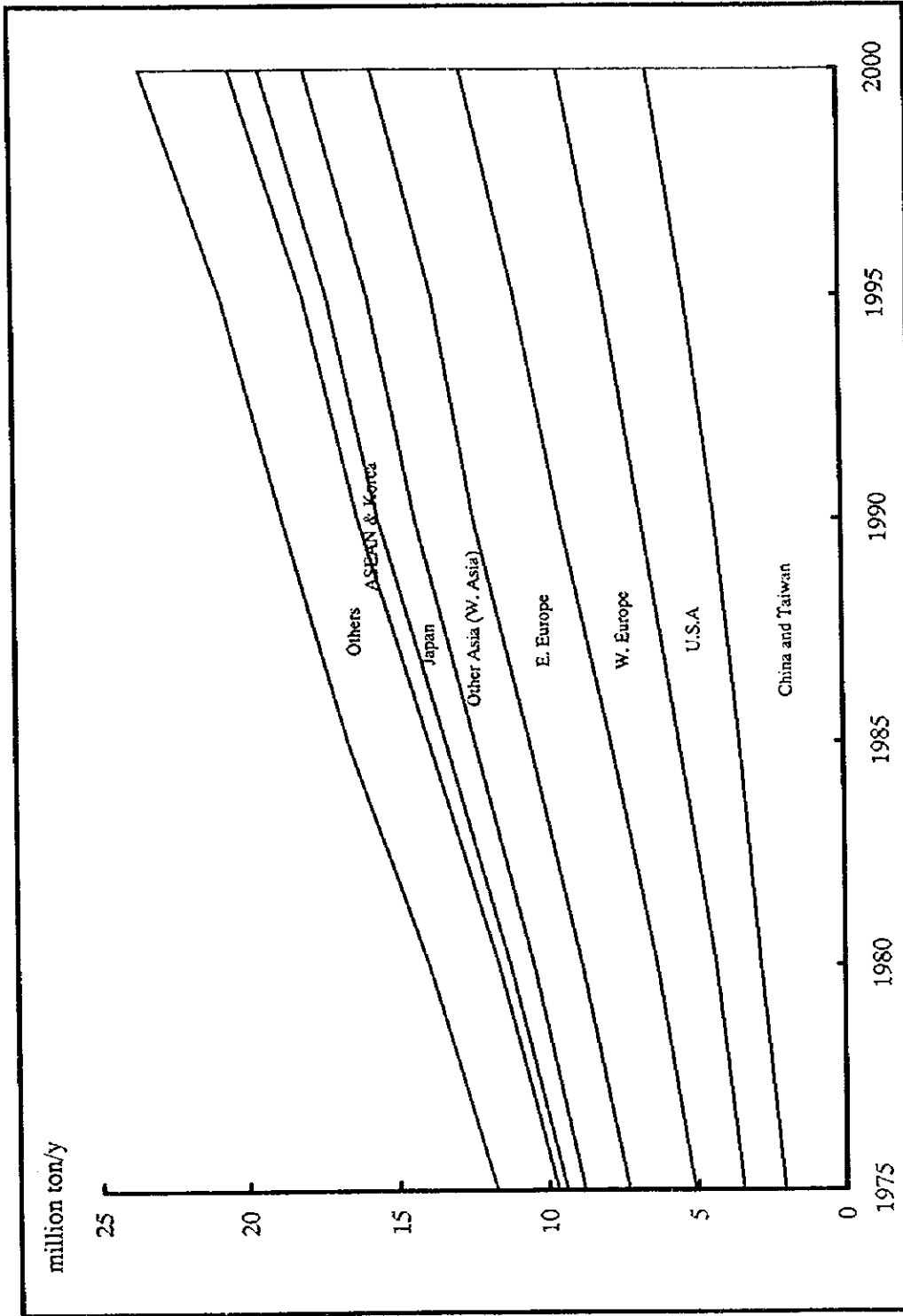
\* Other Asia = India, Pakistan, Viet Nam, Cambodia, Laos, etc.

Figure 6.1-3 TOTAL FIBER DEMAND IN THE WORLD BY FIBER



Source: Japan Chemical Fibers Association

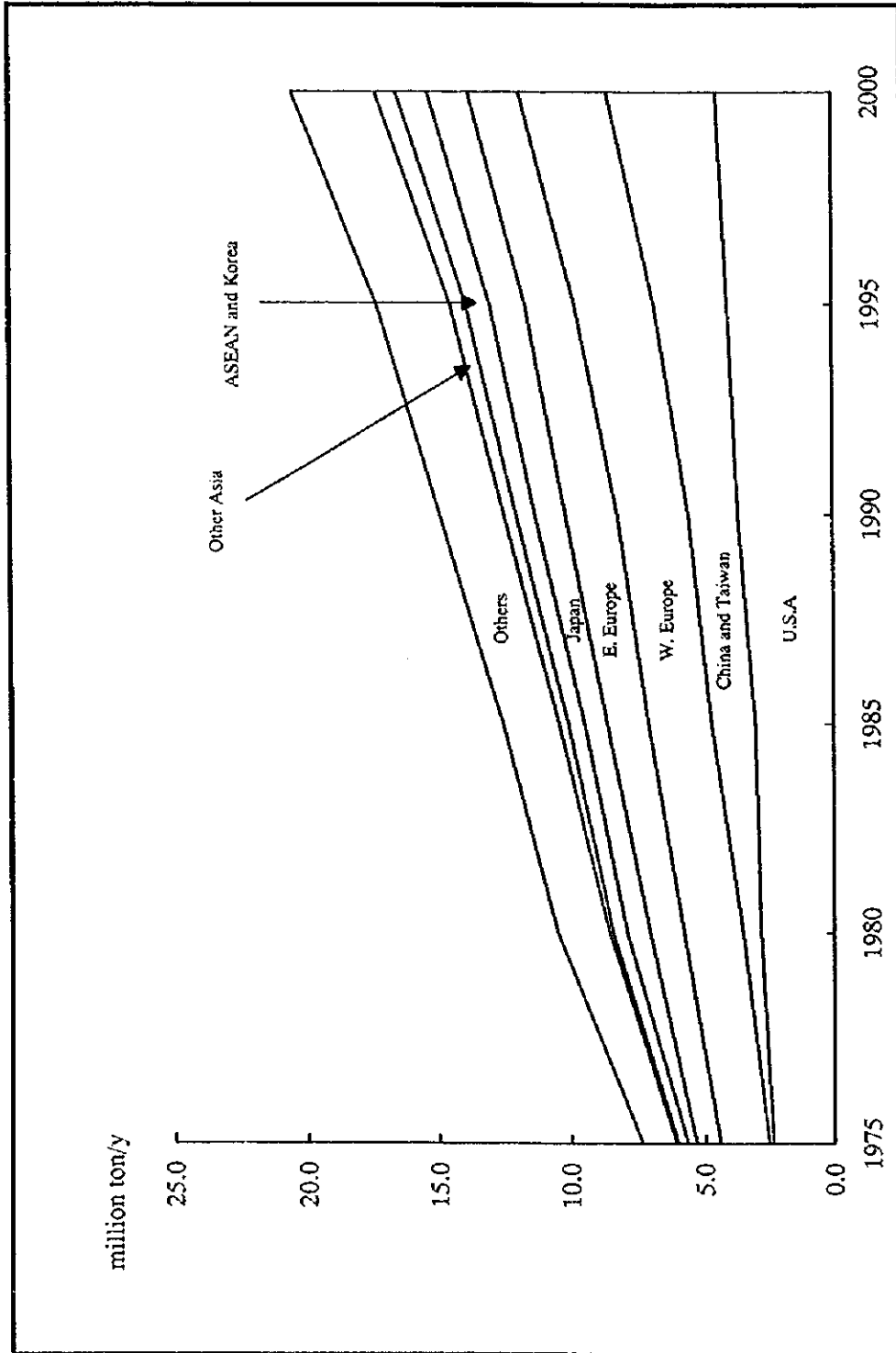
Figure 6.1-4 COTTON DEMAND IN THE WORLD BY REGION (1975-2000)



Source: Japan Chemical Fibers Association

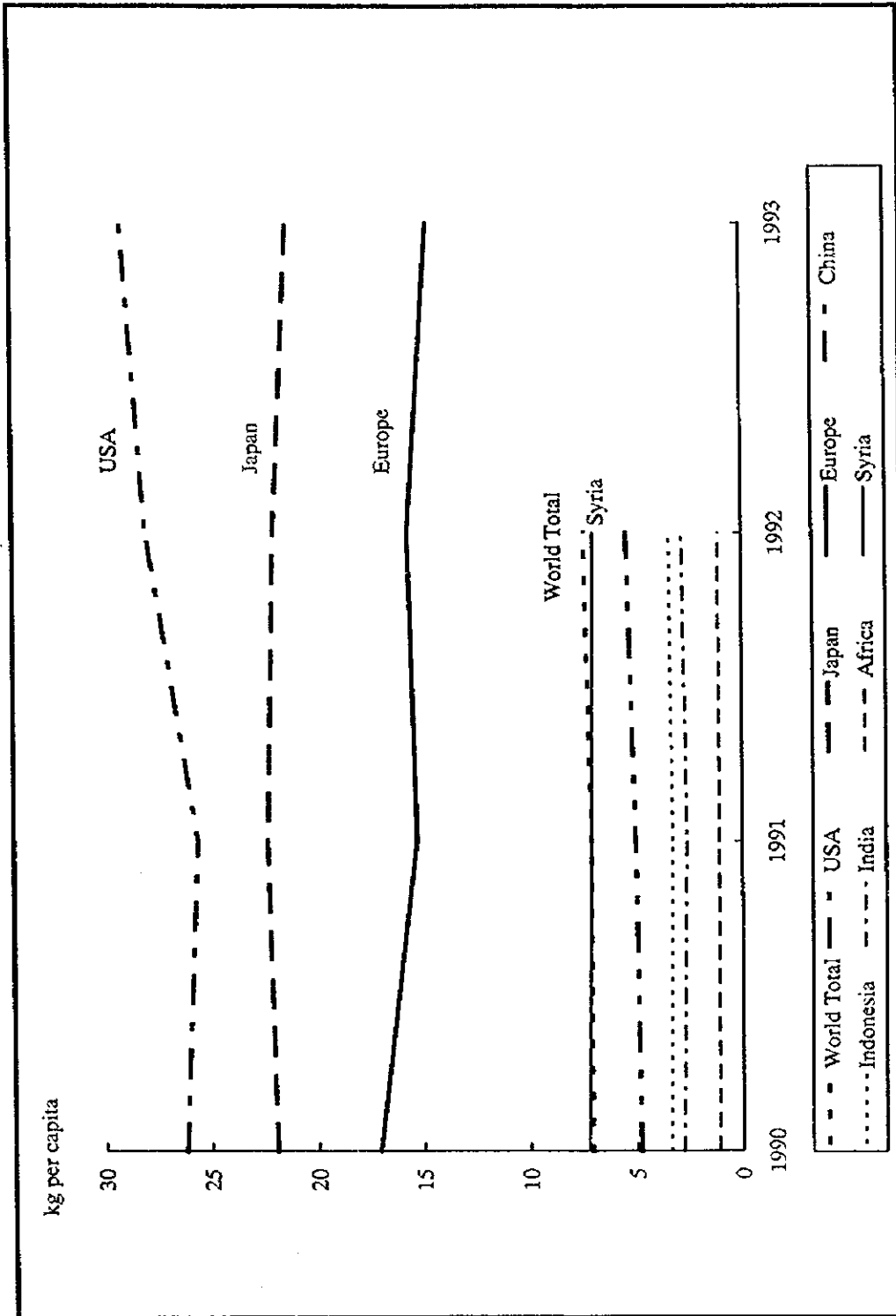


Figure 6.1-5 SYNTHETIC FIBER DEMAND IN THE WORLD BY REGION (1975-2000)



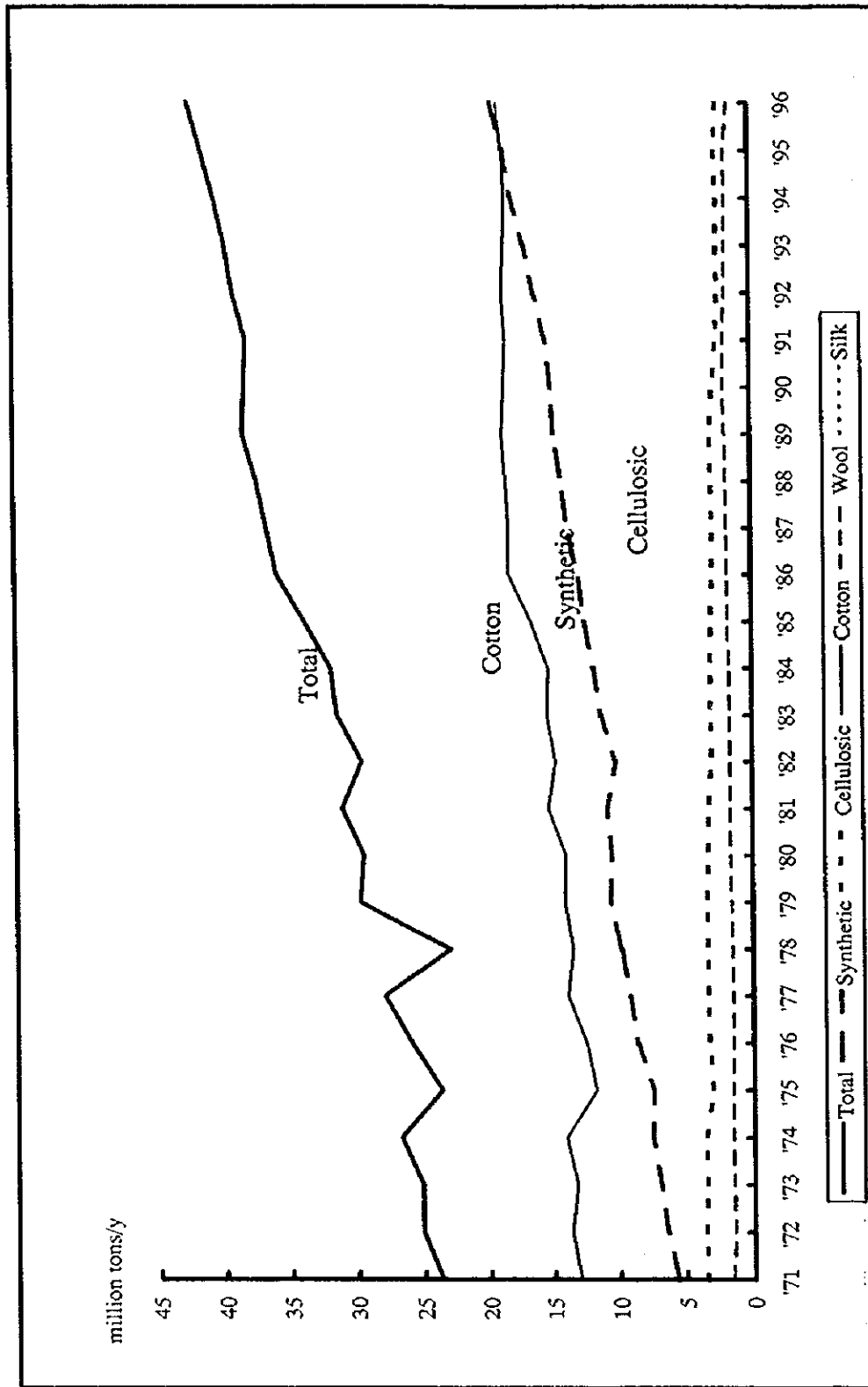
Source : Japan Chemical Fibers Association

**Figure 6.1-6 PER CAPITA FIBER CONSUMPTION OF THE SELECTED COUNTRIES AND THE WORLD (1990-1993)**



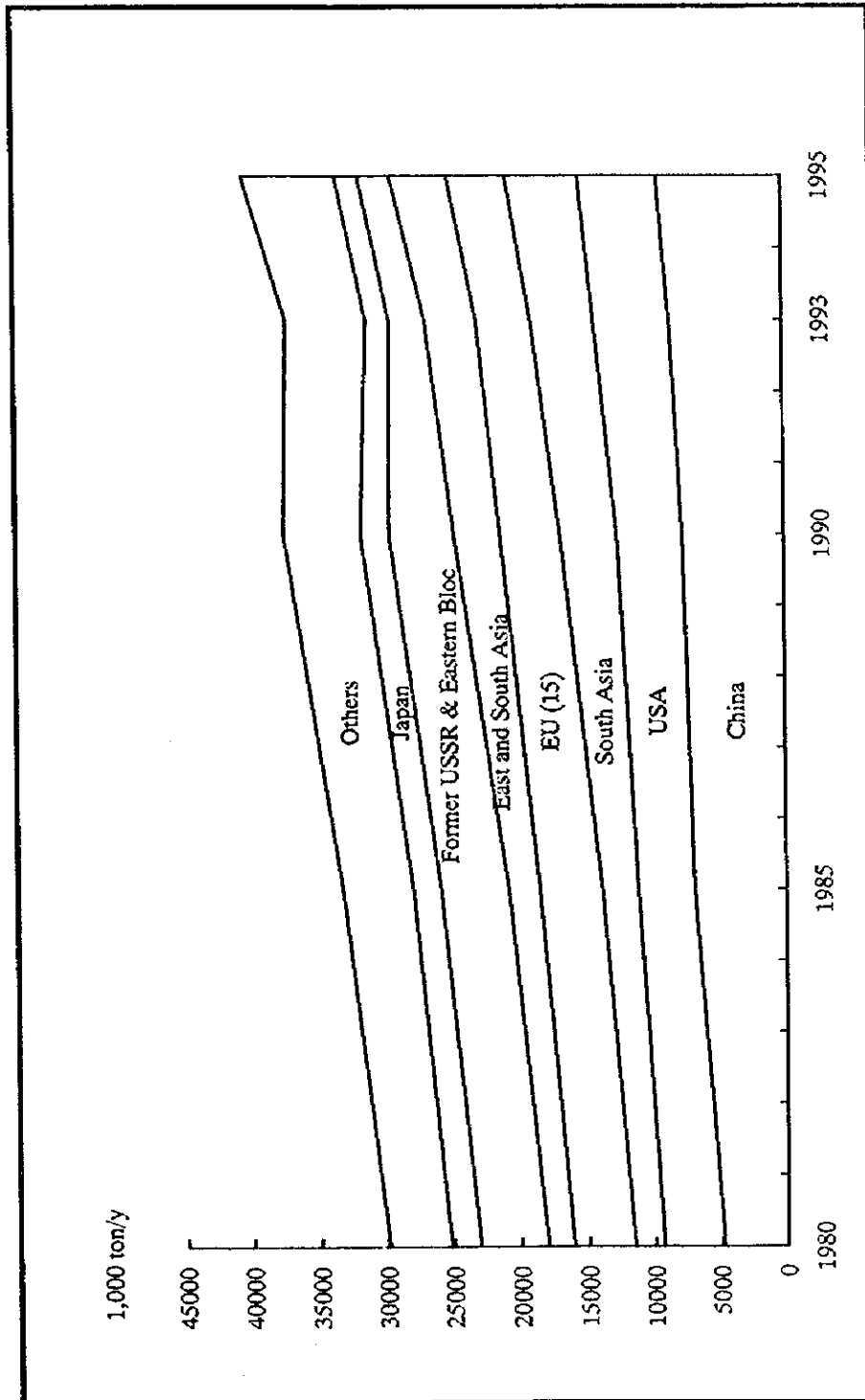
Source : FAO

Figure 6.1-7 PRODUCTION OF FIBERS IN THE WORLD



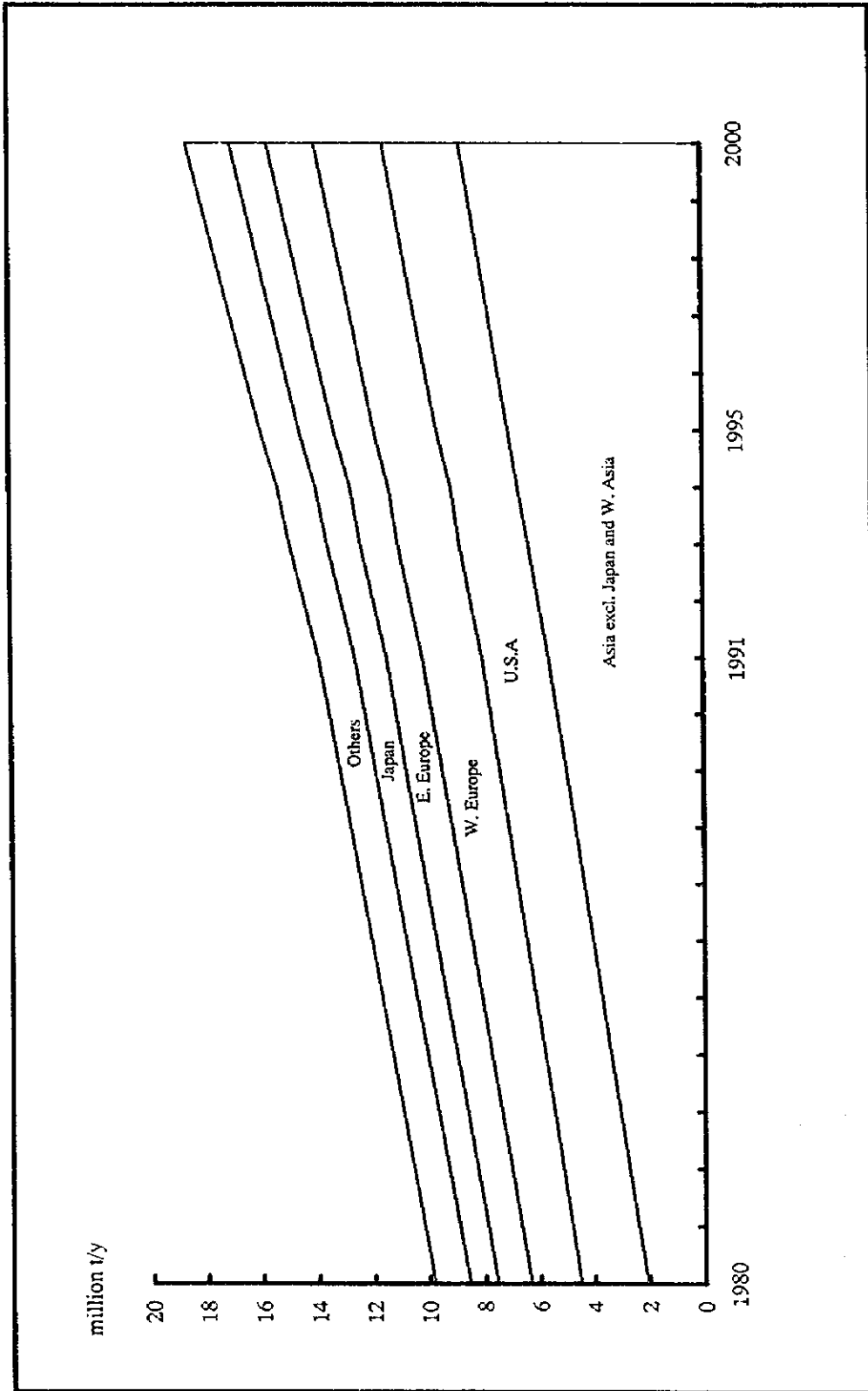
SOURCE: IFAFI FIBER ORGANIZATION

Figure 6.1-8 MILL CONSUMPTION OF FIBERS BY SELECTED MAJOR COUNTRIES AND REGIONS, 1980-95



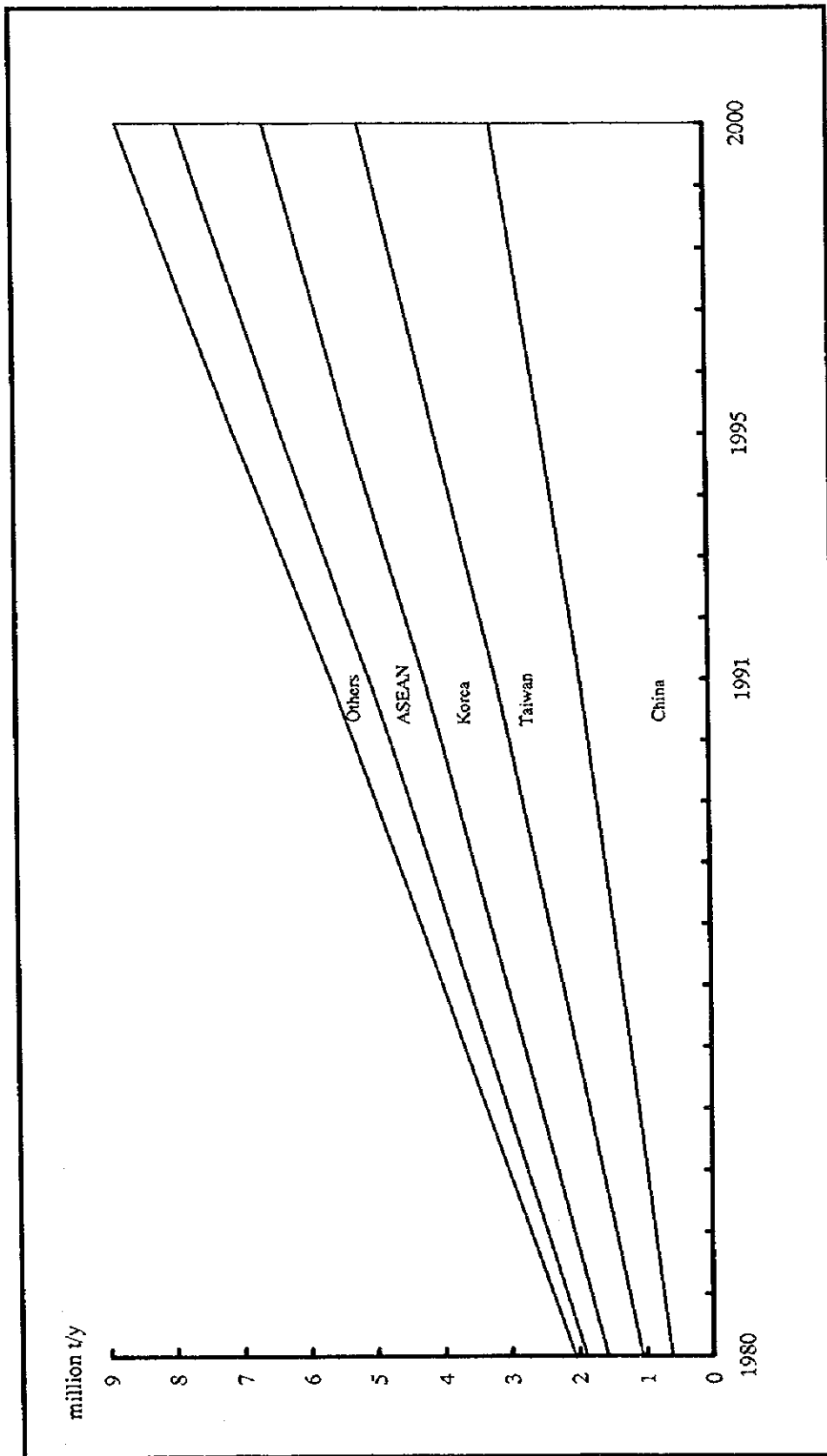
Source : FAO  
Textile Outlook International March 1997

Figure 6.1-9 MILL CONSUMPTION OF SYNTHETIC FIBERS IN THE WORLD BY REGION (1980-2000)



Source: Japan Chemical Fibers Association

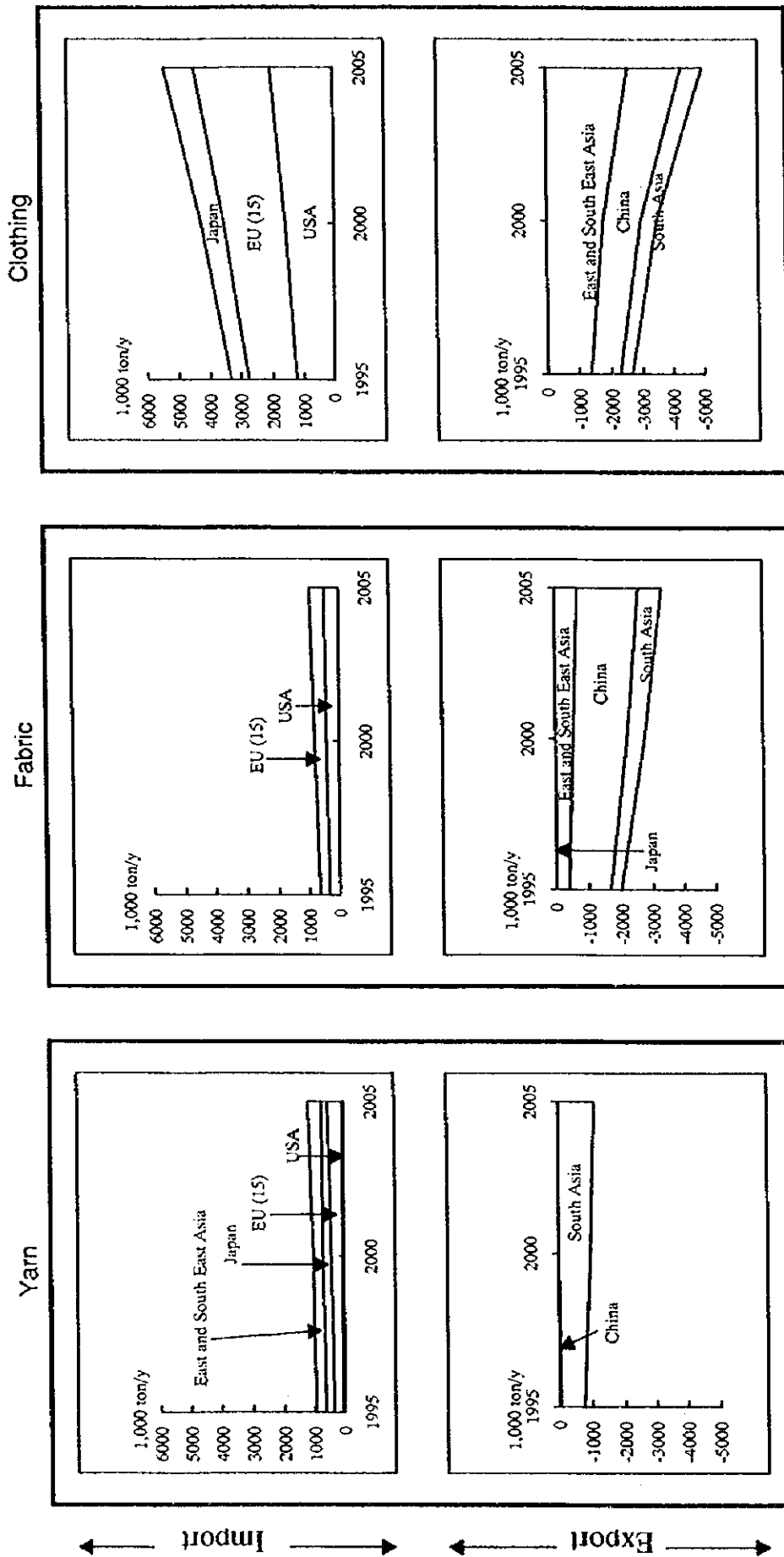
Figure 6.1-10 MILL CONSUMPTION OF SYNTHETIC FIBERS IN ASIA (excl. Japan and W. Asia)



Source: Japan Chemical Fibers Association

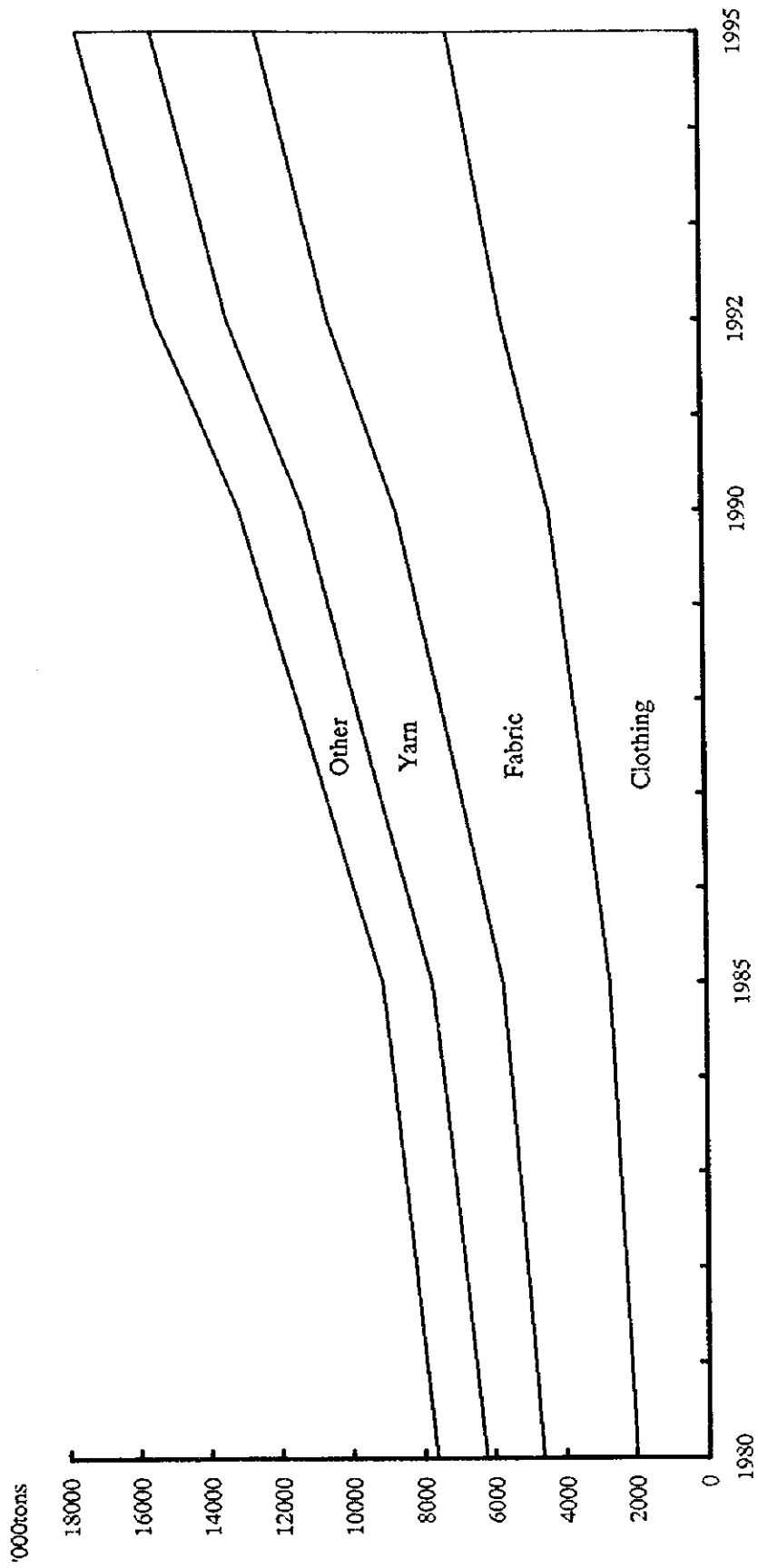
\* Other Asia = India, Pakistan, Viet Nam, Cambodia, Laos, etc.

**Figure 6.1-11 IMPORTS AND EXPORTS OF YARN, FABRIC AND CLOTHING FOR MAIN TRADING COUNTRIES AND REGIONS (1995-2005)**



Source : Textile Outlook International, March 1997

Figure 6.1-12 WORLD TRADE IN YARN, FABRIC, CLOTHING AND OTHER TEXTILE MANUFACTURES, 1980-95

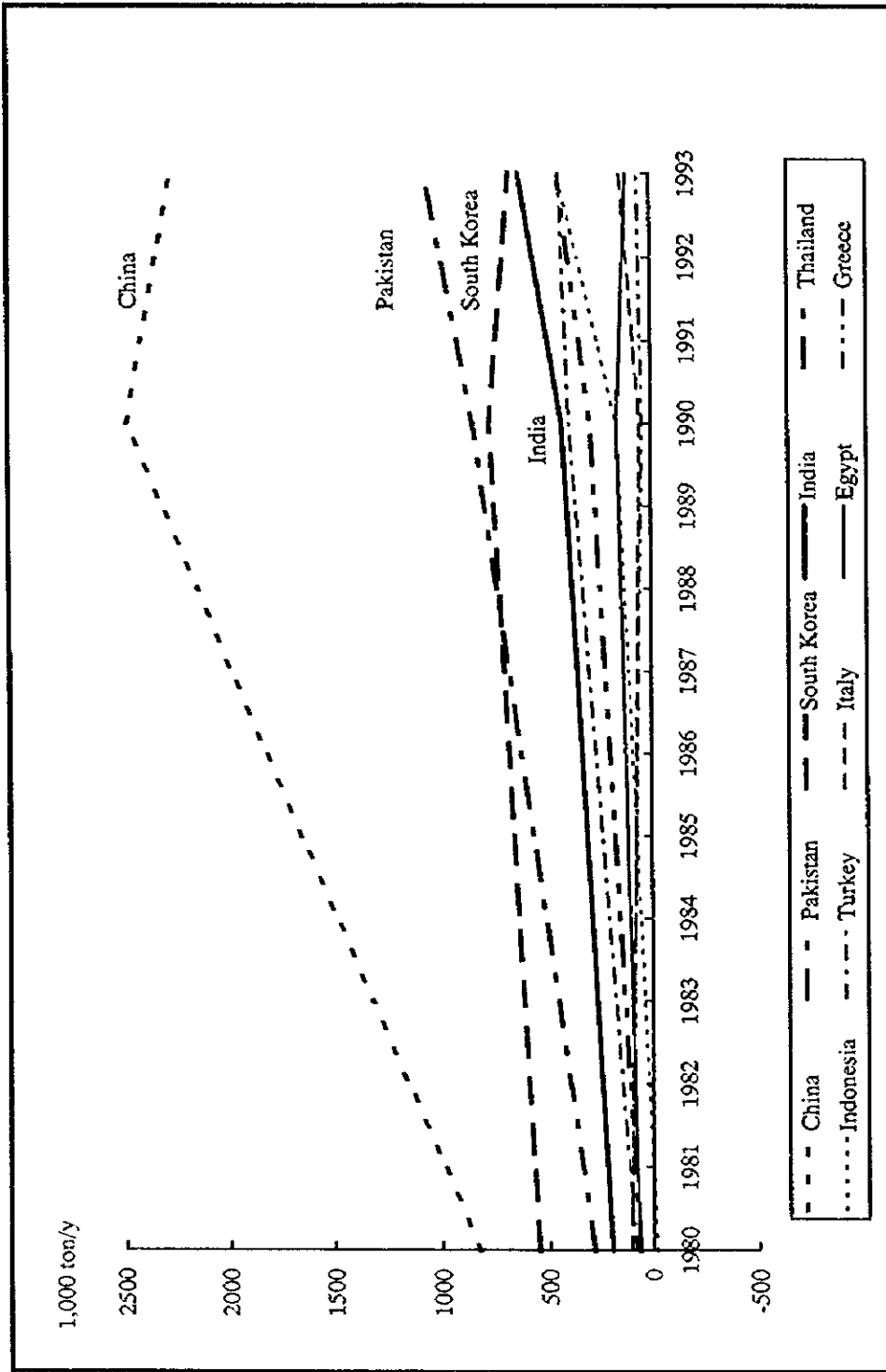


Source: Textile Outlook International, March 1997

Note: Other includes carpets, felts, tyre-cord fabrics, blankets, curtains, etc.

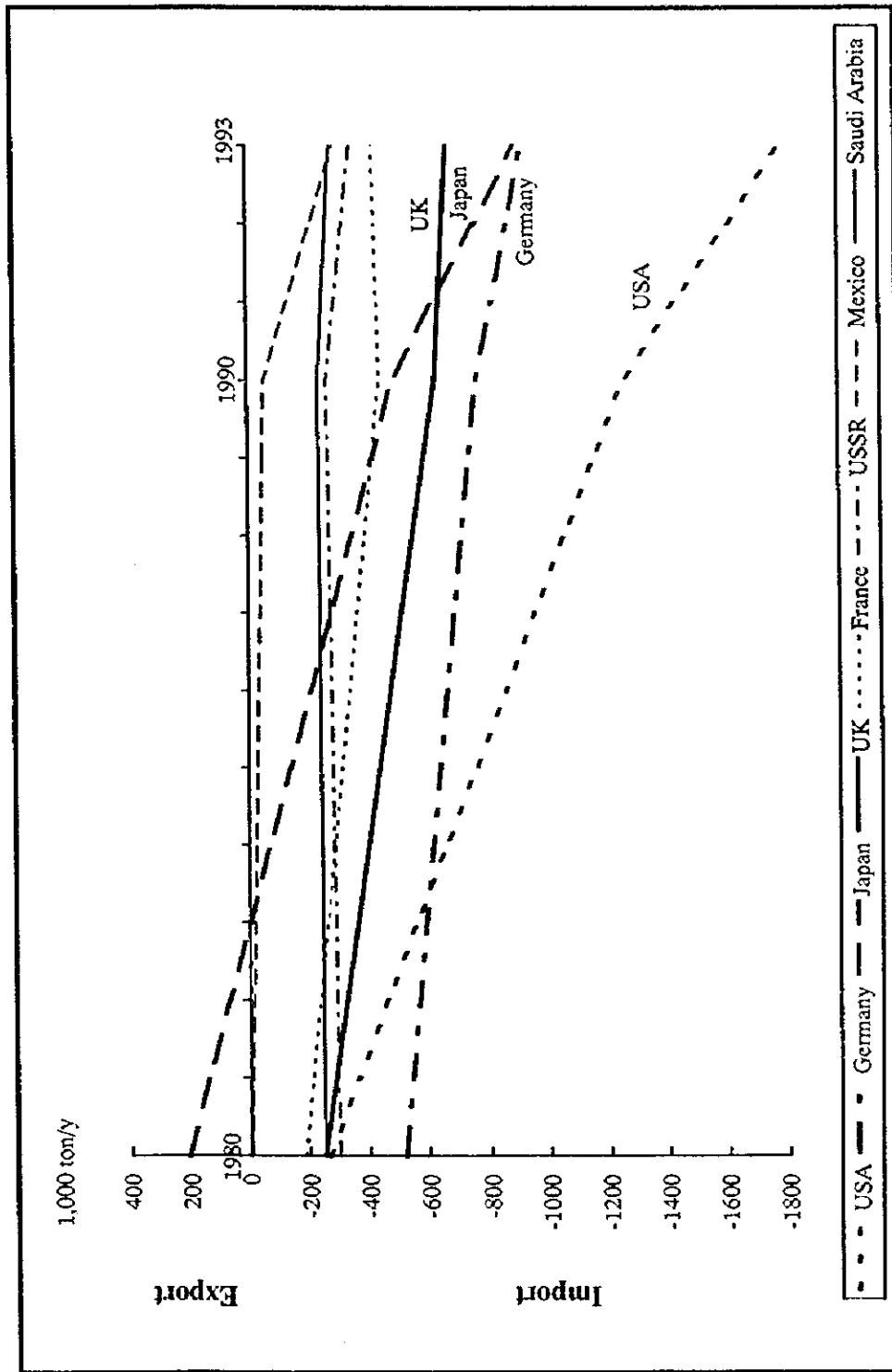


Figure 6.1-13 NET EXPORTS OF MAIN EXPORTING COUNTRIES OF TEXTILES AND CLOTHING



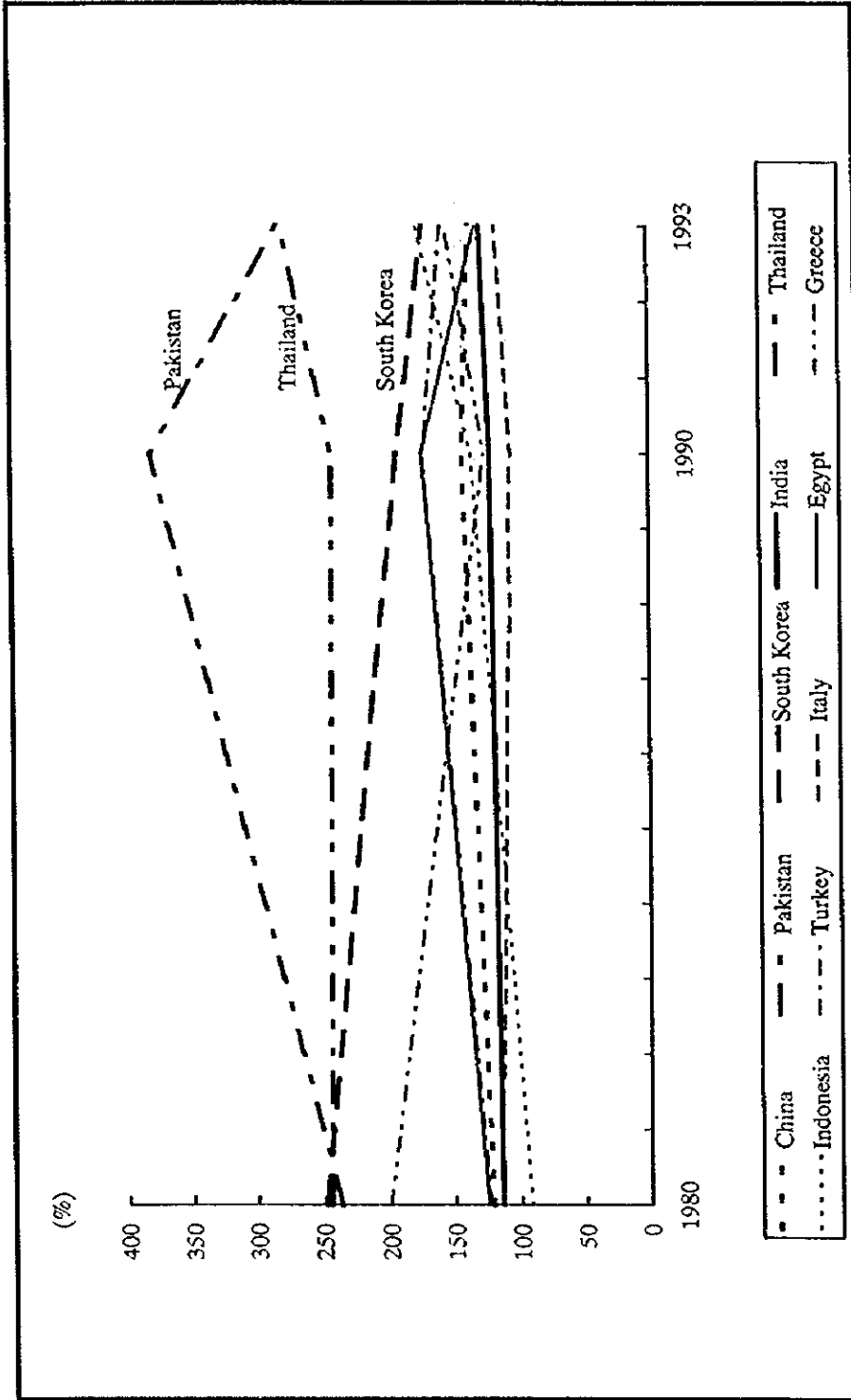
Source : Textile Outlook International March 1997.

Figure 6.1-14 NET IMPORTS OF MAIN IMPORTING COUNTRIES OF TEXTILES AND CLOTHING



Source : Textile Outlook International March 1997

Figure 6.1-15 SELF-SUFFICIENCY INDICES OF MAIN EXPORTING COUNTRIES OF TEXTILES AND CLOTHING

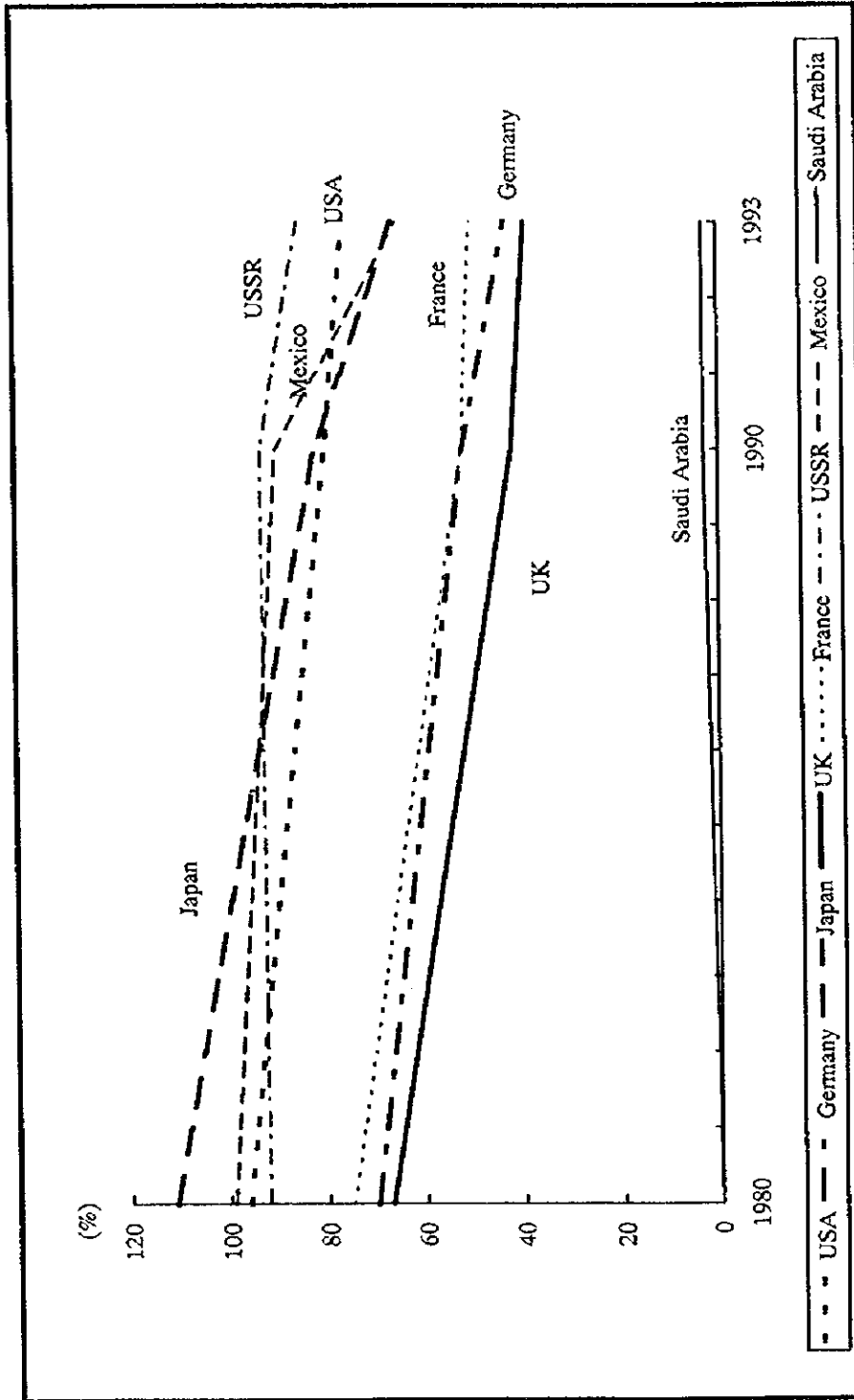


Note : Self-sufficiency index (%) :

$$\frac{\text{Mill consumption}}{\text{Final consumption}} \times 100$$

Source : Textile Outlook International March 1997

Figure 6.1-16 SELF-SUFFICIENCY INDICES OF MAIN IMPORTING COUNTRIES OF TEXTILES AND CLOTHING

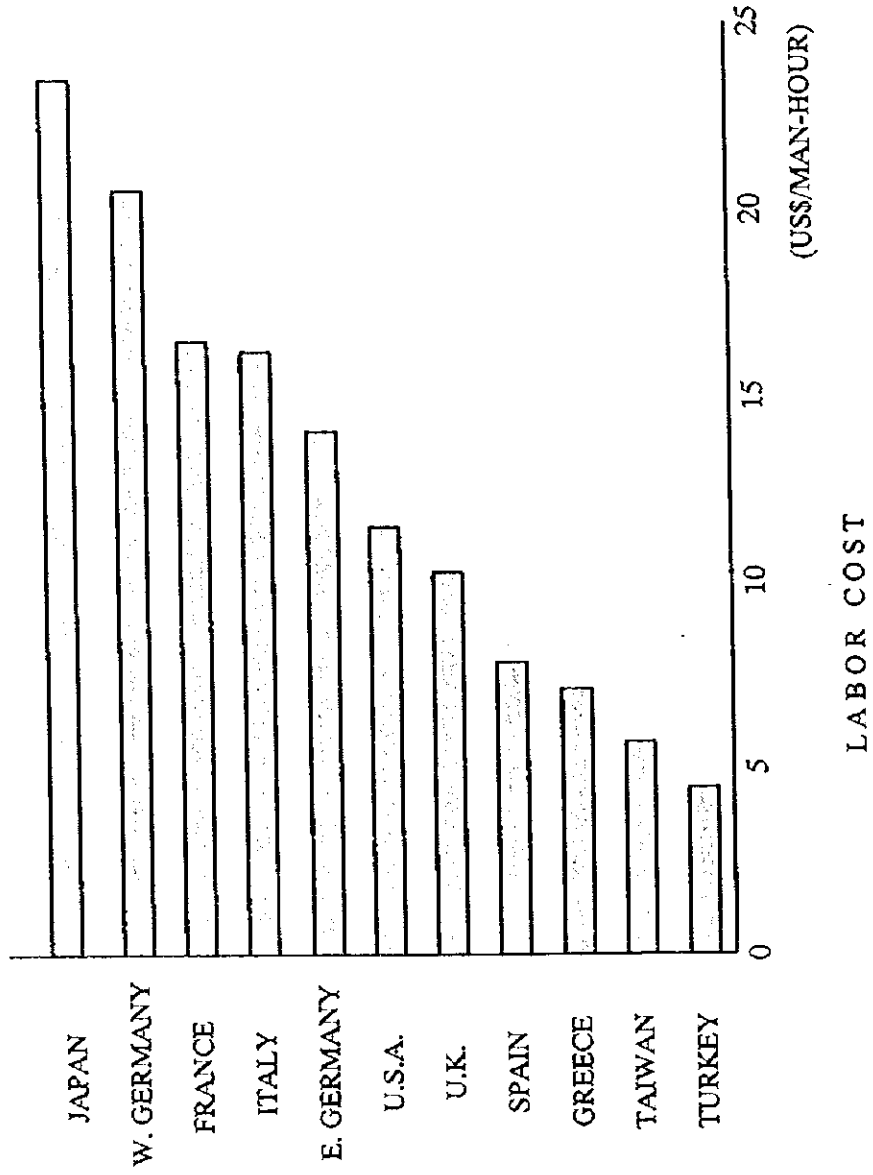


Note : Self-sufficiency index (%):

$$\frac{\text{Mill consumption}}{\text{Final consumption}} \times 100$$

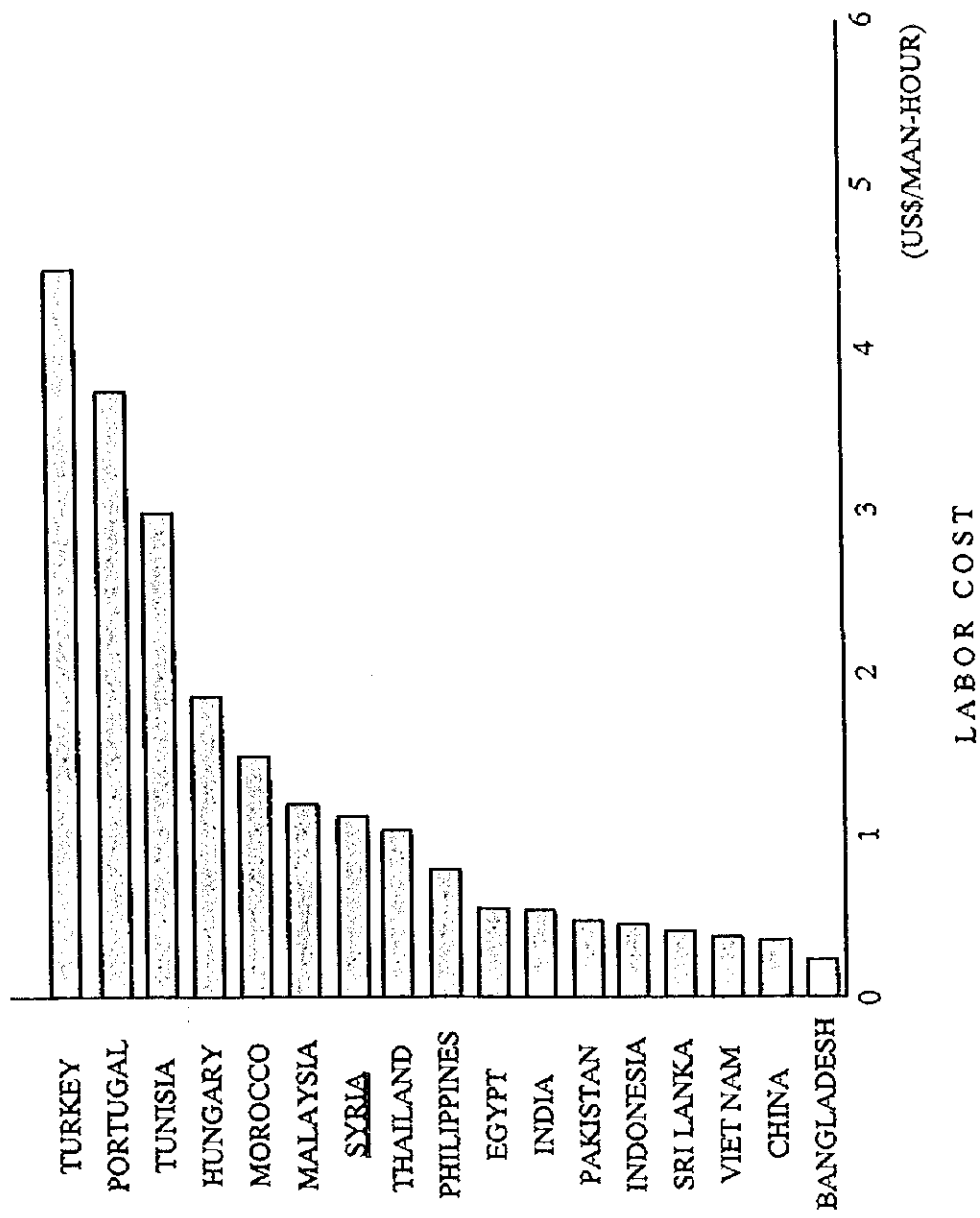
Source : Textile Outlook International March 1997

Figure 6.1-17 LABOR COST PER MAN-HOUR IN SPINNING AND WEAVING IN THE WORLD -1- (1993)



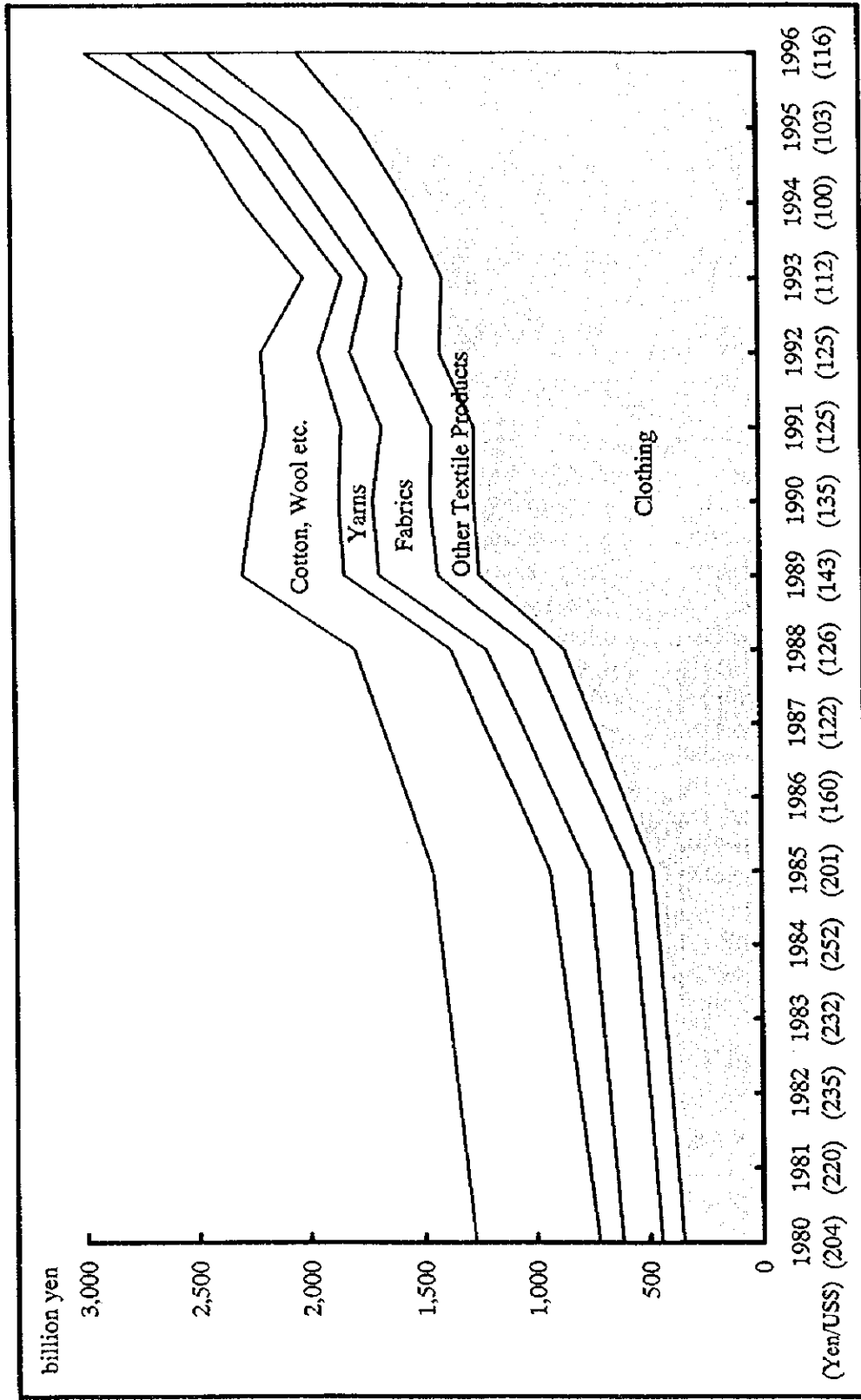
Source: Werner International

Figure 6.1-18 LABOR COST PER MAN-HOUR IN SPINNING AND WEAVING IN THE WORLD -2- (1993)



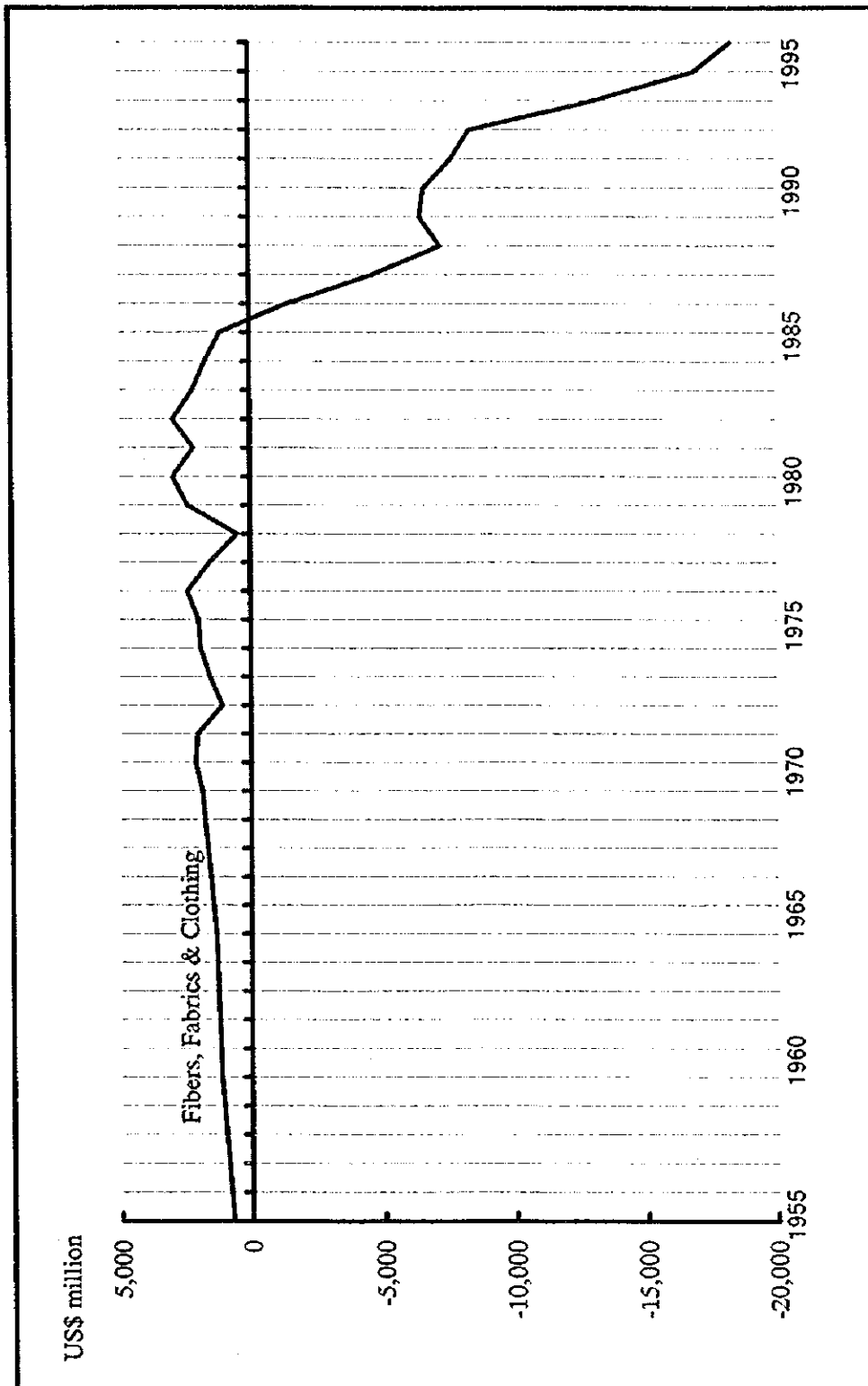
Source: Werner International

Figure 6.1-19 JAPAN: IMPORTS OF TEXTILES (VALUE)



Source: Japan Chemical Fibers Association, Textile Handbook 1997

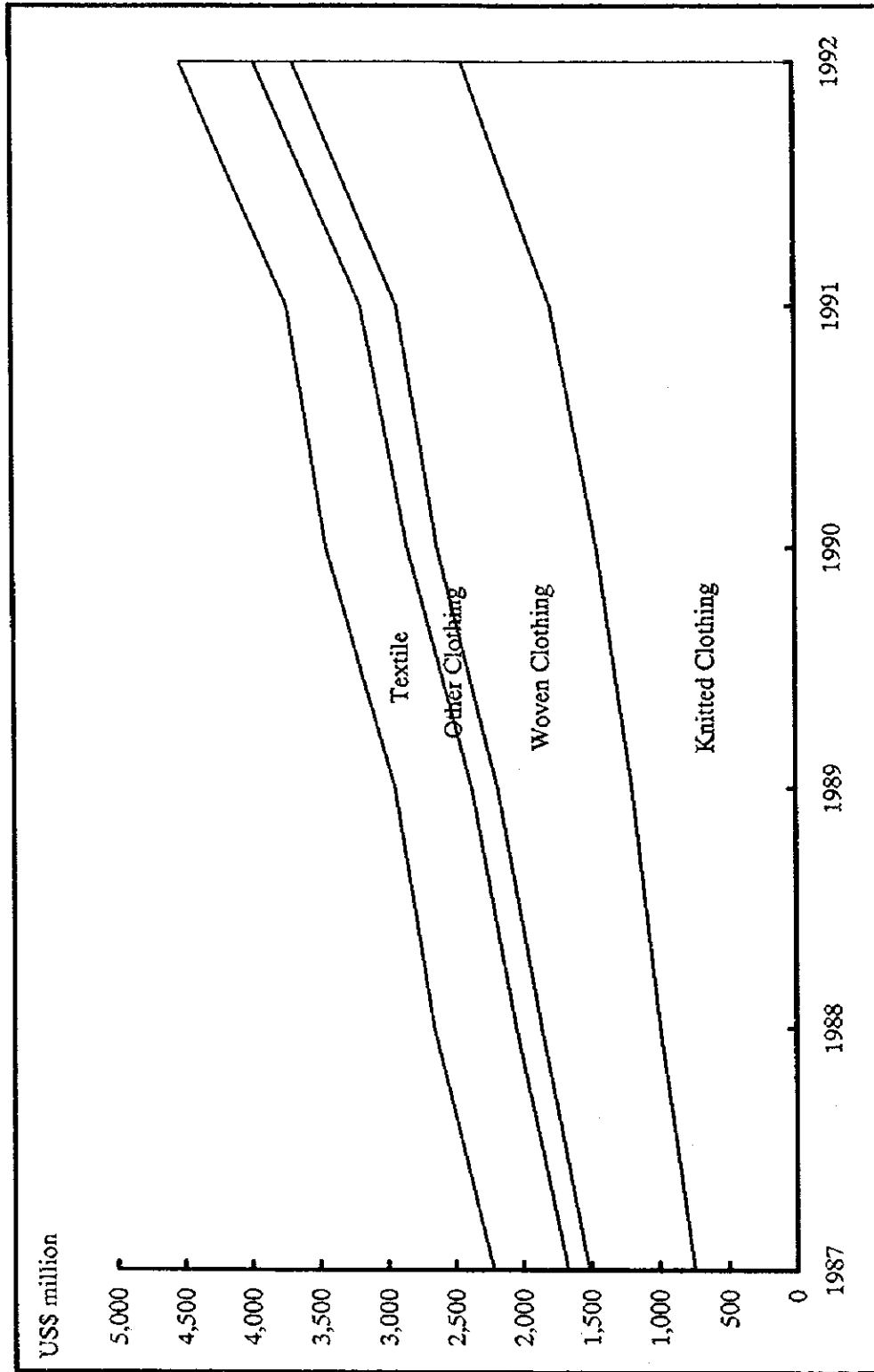
Figure 6.1-20 JAPAN: TRADE BALANCE (EXPORTS-IMPORTS) OF FIBERS, FABRICS AND CLOTHING



Source: JAPAN CHEMICAL FIBERS ASSOCIATION, TEXTILE HANDBOOK 1997

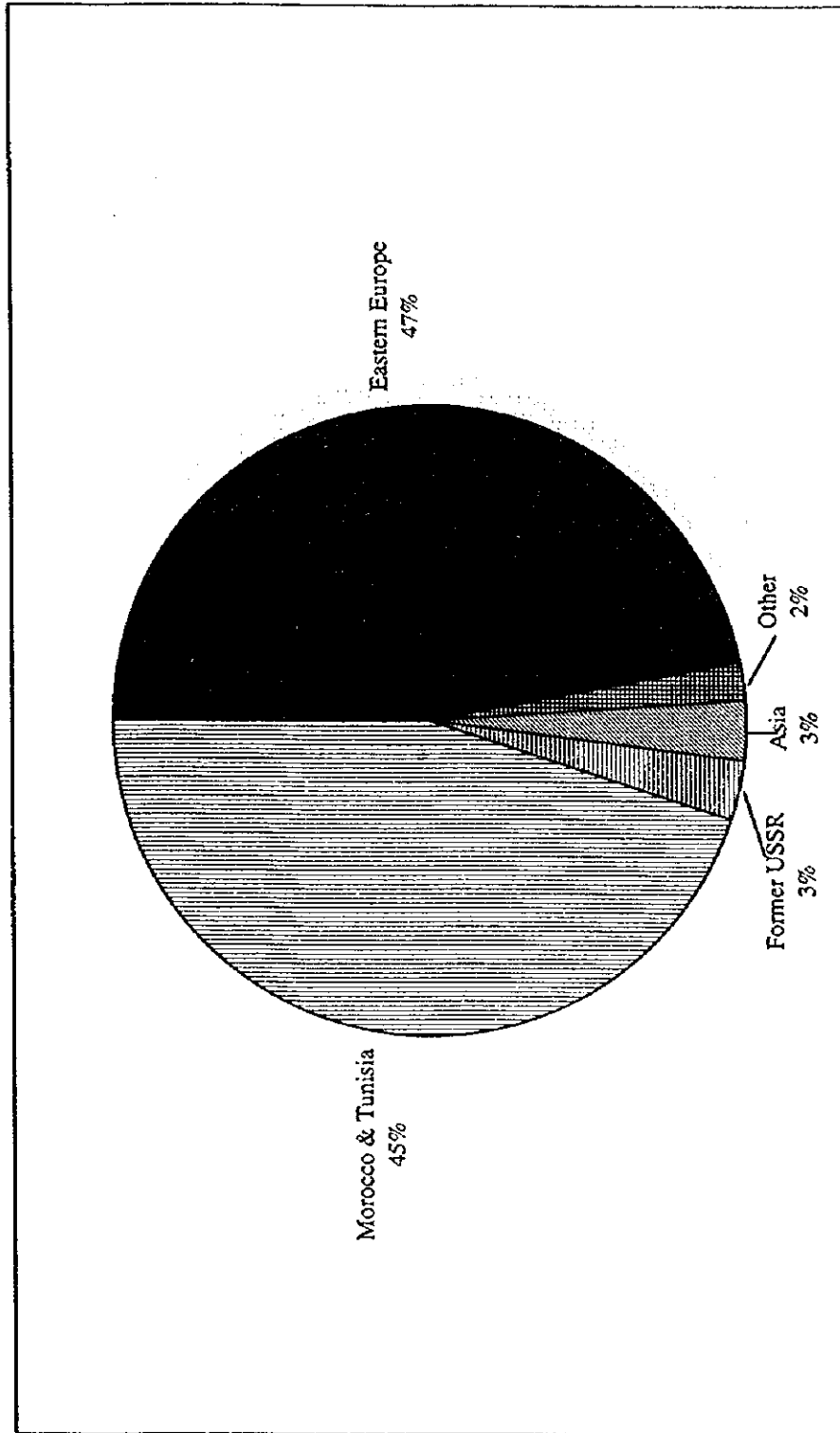


Figure 6.1-21 TURKEY: EXPORTS OF TEXTILES AND CLOTHING (1987-92)



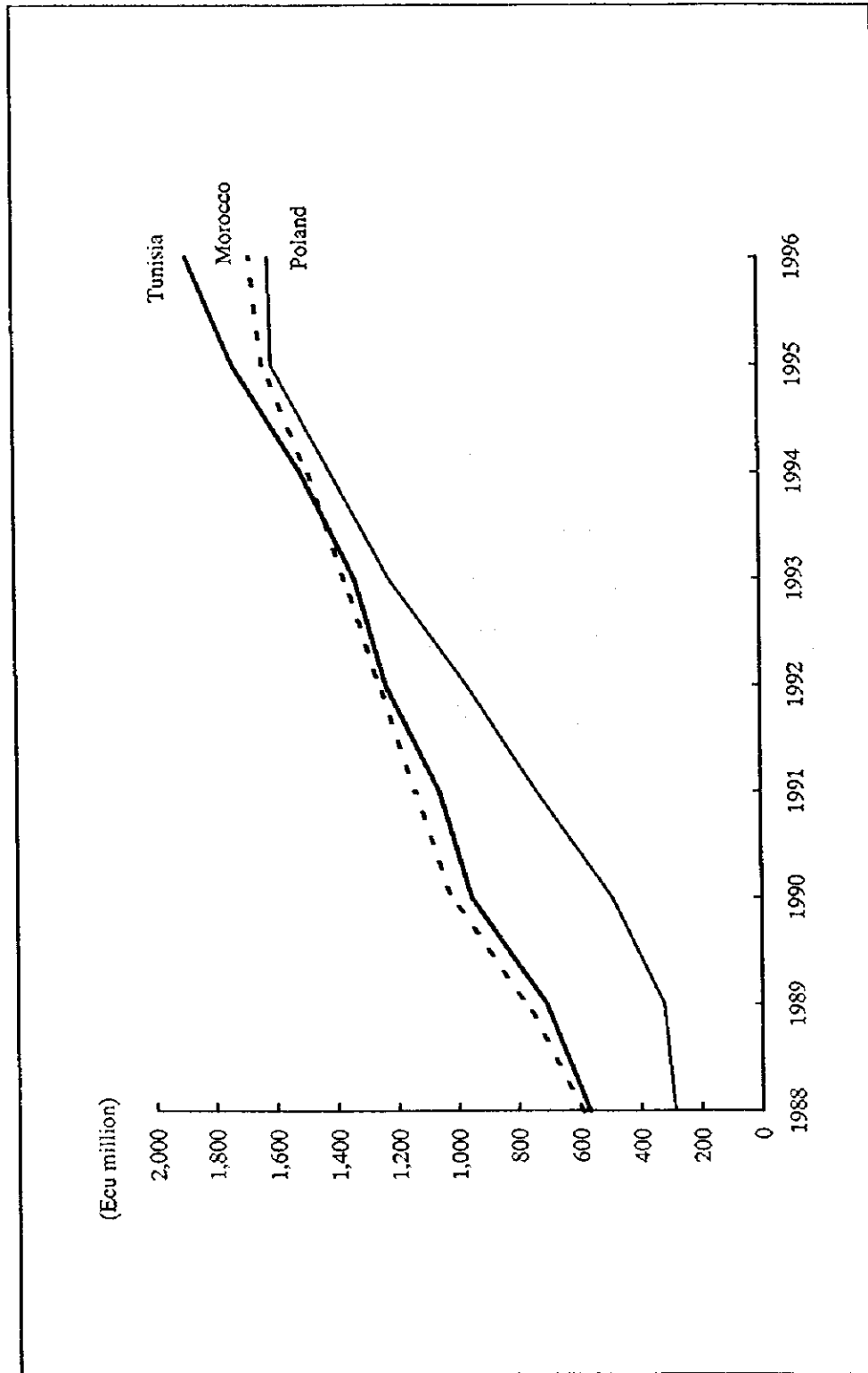
Source: TSKB

Figure 6.1-22 SHARES OF EU OUTWARD PROCESSING IMPORTS OF CLOTHING BY SUPPLYING REGION, 1995



Source : Internationalization of European Textiles and Clothing Production, Special Report No.2643 Textiles Interligence

Figure 6.1-23 EU CLOTHING IMPORTS FROM MOROCCO, TUNISIA AND POLAND 1988-96



Source : OETH, 1997; Eurostat.  
Internationalization of European Textiles and Clothing Production, Special Report No.2643, Textile Intelligence