5-2-3. Customers

The manufacturers were questioned as to which of the following: North America, Europe, Japan, other countries, and the domestic market, they stressed as target markets. Table II-5-5 shows the findings. The table shows the responses of the 18 companies responding out of the woven fabric and knit sewn garment manufacturers, in accordance with the five market classifications. The results do not include sweater manufacturers.

Table II-5-5. State of Customers of Companies Visited

	Breakdown of customers (%)					Size of manufacturer	
Manufac-turer	N. America	Europe	Japan	Others	Domestic	No.of sewing machines	No. of employees
A	50	40	6	4	-	1,600	2,430
B	10	60	25	5	-	1,350	1,900
C	50	42	8	-	-	1,200	1,700
D	22	70	2	3	3	800	5,000
E	39	60	-	-	-	750	800
F	30	30	30	10	-	700	750
G	10	80	10	-	-	600	1,020
H	70	2	2	11	15	270	400
I	70	20	5	5	-	180	220
J	60	20	10	10	-	180	250
K	-	85	15	-	-	250	500
L	-	70	30	-	-	300	400
M	-	75	25	-	-	108	250
N	-	40	60	-	-	n.a.	120
O	-	15	60	5	20	116	200
P	-	21	43	7	29	600	1,000
Q	5	5	45	5	40	1,000	1,800
R	-	5	24	1	70	1,500	1,200

In so far as we view the manufacturers shown in Table II-5-5, it would seem that manufacturers with North America as one of their customers do not place that much weight on exports to Japan. Of the 18 companies responding, 10 gave North America as

an export destination. The percentage of sales of those 10 companies to Japan was less than 10% in almost all cases. At the same time, the percentage of sales of those 10 companies to Europe was over 30% in almost all cases. This shows that the weight of sales to Japan of these 10 companies is low.

From the results of the interviews, it was felt that manufacturers could be roughly divided into those which emphasized a combination of North America and Europe as targeted export regions or a combination of Europe and Japan.

The manufacturers targeting a combination of North America and Europe for their exports were seen as mostly being relatively large in size. Over half of these manufacturers had over 600 sewing machines and over 750 employees engaged in production of sewn garments. As opposed to this, the manufacturers targeting a combination of Europe and Japan for their exports were mostly smaller than the manufacturers exporting to the U.S. Manufacturers stressing exports to North America are believed to be doing so due to the large size of order lots and moderate demands as to quality, which allows them to pursue large scale production systems aiming at the effects of mass production.

A general trend seen in export destinations is a large emphasis placed on Europe. all of the 18 companies listed in the table were exporting to Europe and of those, 14 were exporting over 20% of their production volumes to Europe. This trend may also be seen in the export statistics of Thailand. According to the Foreign Trade Statistics of Thailand, the regional shares of apparel exports in 1987 were 34% for the EC and Scandinavia, 21% for the US., 3.5% for Japan, 18% for the Middle and Near East, 5.9% for the NIEs and ASEAN, and 19% for others. The percentage of exports to Europe has been rising the most.

In general, the Japanese market is said to be more difficult to tackle than the other markets. This is due to the following reasons:

[1] The severity of the demands on quality.

[2] The small size of ordered lots.

[3] The poor prices offered despite this.

[4] The long time required before orders are decided on.

According to one manufacturer engaged in large scale mass production, if there were sales channels other than in Japan, it would give priority to those. Considering the fact that it has adopted a large scale production system aimed at the mass production effect, accepting orders from Japan which are small in lot size and tough on quality would not pay off. As a result, the manufacturer would not find this attractive. Therefore, that manufacturer reportedly is careful about the following points when accepting orders for Japan:

[1] It checks whether the buyer is easy to deal with as a business partner. In particular, it checks if the buyer is one which causes trouble about defects in quality which need not be fussed over.

[2] It checks if there are problems in production in the item being inquired over.

On the other hand, Japanese buyers claim that there are structural features of the distribution system which force them to be tough on quality. In the case of products for Japan, the buyer's markup is at most 30%, making it difficult for them to absorb costs in the case where defective products arise. Therefore, they say they have to be hard in their quality demands. As opposed to this, with brand name products for Europe or the U.S., the buyer's markup is a high 80% and covers the cost of defective goods, so those buyers are not as fussy about quality as Japanese buyers, it was said.

Despite production for Japan being reputedly hard to tackle, most of the manufacturers visited seem to be working to increase their sales channels to Japan. Behind this are the dual needs of production and purchasing, i.e.:

[1] The companies cannot expect to increase the volume of their exports to the U.S. and European markets due to the quotas of multilateral agreements.

[2] With the appreciation of the yen, Japanese distributors and garment companies are starting to engage in consignment production and purchasing overseas.

5-2-4. Procurement of Materials

(1) Sewn garment manufacturers

Personal interviews were held with sewn garment manufacturers on the state of procurement of materials. Responses were obtained from 19 companies on the rate of use of imported materials and domestic materials. The results are shown below:

Table II-5-6. Procurement of Materials by Sewn Garment Manufacturers

Manufacturer	Imported materials	Domestic materials	Product export ratio	No. of sewing machines	No. of employees
A	70	30	100	1,600	2,430
B	15	85	30	1,500	1,200
C (*1)	10	90	100	1,350	1,900
D (*1)	1	99	100	1,200	1,700
E	3	97	60	1,000	1,800
F	20	80	97	800	5,000
G	20	80	100	750	800
H (*1)	0	100	100	700	750
I	50	50	100	600	1,020
J	85	15	85	270	400
K (*1)	5	95	100	250	500
L	25	75	100	180	250 (*2)
M	0	100	80	116	200
N	5	95	100	108	250
O	0	100	0	n.a.	120
P	0	100	1	90	100
Q	0	100	0	30	40
R	0	100	0	n.a.	20
S	(Supplied by customer)		n.a.	14	9

Note: *1. There is weaving or knitting division in same company or in company under same management and materials are supplied from same.

*2. There is sewing company in group.

In so far as the manufacturers visited show, there is a tendency for the relatively large sized sewn garment manufacturers to import their materials. However, companies

C, D, H, and K in the table are large in size and yet do not import much materials. Company C has its own in-house weaving division and Company D its own knitting division and these have adopted integrated production systems able to handle everything from the production of the base materials to the production of the finished garments. Further, companies H and K are supplied with materials from knitting companies run by the same management.

The manufacturers which import materials gave as their reasons the fact that the materials designated by customer specifications are not produced domestically or that the price of domestic materials is higher than imports. From one large sized manufacturer, it was heard that the procurement price was sometimes cheaper by 10 to 15% in the case of imports of materials. At that company, the ratio of imports of materials was 35% four years ago, but has now grown to 70%. The reason for this is that when engaged in production of mostly orders of large lot sizes, it tries to reduce production costs by taking advantage of differences in prices of materials.

The comparatively small sized manufacturers are seen as tending strongly to purchases of domestic materials. The reasons for this are considered to be that when there are defects in materials or differences from the specifications ordered, imports take more trouble to deal with than domestic materials, that buyers tend to place orders for products based on materials procurable in Thailand when dealing with small and medium sized manufacturers, etc.

(2) Sweater manufacturers

Personal interviews were held with sweater manufacturers on the state of procurement of materials. Responses were obtained from five companies on the ratio of use of imported materials and domestic materials. The results are shown below. The manufacturers responding featured high ratios of import of materials of 70% or more. Cotton yarn and 100 percent acrylic yarn can be procured domestically, but at the present time the price of domestic yarns reportedly is about 10% higher than imports.

Table II-5-7. Procurement of Materials by Sweater Manufacturers

Manufacturer	Imported materials:	Domestic materials	Product export ratio	No. of knitting machines	No. of employees
A	98	2	100	450	750
B	70	30	100	800	1,000
C	98	2	100	300	260
D	70	30	100	500	938
E	100	0	100	600	900

5-2-5. Employment and Use of Subcontractors

(1) Environment for use

Regarding use of workers, the large and medium sized manufacturers reported they had an easy time assembling sewers and other general workers. On the other hand, some of the small manufacturers indicated there were difficulties for them. When a worker looks for his own job, he feels that when there are a large number of workers in the factory, that factory can guarantee a stable amount of work and therefore his own work will not run out. In this regard, the small manufacturers are in a disadvantageous position in employment. Therefore, small manufacturers find it important to offer fringe benefits such as dormitories and meals to secure their workers.

The medium and large sized manufacturers speak of the ease of employment of general workers, but point to difficulties in employment of production engineers, mechanics, chief class workers for cutting processes, patterners, etc. Reportedly, with manufacturers all currently expanding their production capacities, there is considerable scouting of manpower going on in these occupations. Efficient process planning, improved operating rates of machinery, improved yield of materials, etc. are important elements in securing competitiveness in mass production factories and for this reason alone the manufacturers recognize the importance of the right personnel in these occupations. Further, along with increases in production, some managers were seen as considering reevaluation of the production systems, but the difficulty in obtaining engineers seems to have become a bottleneck in this.

(2) Wage systems

Many of the companies visited adopted the system of piece rates for wages to their sewers and knitters, which constitute a large block of their workers. Some of the manufacturers used a basic rate with elements of a piece rate incorporated therein so as to maintain the quality of the products above a certain level. In this system, they guaranteed a minimum wage to their unskilled workers and then added a piece rate as they skill improved. Manufacturers handling lots of several thousand jackets etc. paid all their workers on a salary basis. In production of small lots of diverse items, there is a large variety of work involved, so it becomes difficult to establish a rational rate and the rates are set after or during the production.

Under the piece rate system, the general thinking is that the workers take responsibility for their own work and there is thus no problem in quality. With piece rates, however, the workers tend to be interested in putting out as much as possible, so it seems that while a certain level of quality can be secured, it becomes difficult to obtain

improvements in quality beyond that. In other words, once the workers learn enough to produce products of a certain level of quality, they are seemingly not interested in doing better quality work.

(3) Use of subcontractors

Table II-5-8 shows the state of utilization of subcontractors among the 22 sewn garment manufacturers visited which responded to our inquiries.

The general trend among manufacturers giving responses is, in the case of the larger scale factories, not to use subcontractors that much. Companies with over 600 sewing machines, with the exception of companies O and P, had not incorporated subcontracting into their production systems. The reason given for not using subcontractors by one manufacturer is that the small sized factories serving as subcontractors are difficult to control and therefore it is difficult to meet the demands for high quality of the buyers when using them. Further, places using the piece rate system are able to flexibly adjust the labor costs to meet with changes in the size of orders received, so seemingly do not give much consideration to use of subcontractors as a means for adjusting their production capacities.

On the other hand, the manufacturers using subcontractors as part of their production capacities had less than 300 sewing machines. In using subcontractors, however, there were manufacturers which had the policy of not contracting out products for which there were high quality product specifications from the buyers and manufacturers which had the policy of not sending out work to places not having 40 to 50 sewing machines. Further, among the medium sized manufacturers, there was a place which made it a point to let out some sort of work or another to several subcontractors at all times so as to secure a number of subcontractors which would cooperate with it when it received an order which it could not handle with its own facilities.

Company P had the policy of making positive use of subcontractors for mass production of export products. This company was set up to do the product planning and design, materials procurement, cutting, product inspection, packing, and shipment by itself and organized subcontracting factories with 200 to 300 workers so as to deal with the most troublesome sewing process. It contracted out 25,000 workers' worth of work per month. At the present time, this stands as an exceptional case, but this may be one means for Thai garment manufacturers to expand their capacities.

If a small or medium sized manufacturer decides from now to start exporting, it will have to spend some time obtaining the trust of buyers and opening up sales channels. So long as there is potential demand for Thai garments, however, a company

which can export using existing sales channels under a contractor-subcontractor system could expect to save much time in increasing the volume of its exports.

Table II-5-8. State of Usage of Subcontractors by Sewing Companies

Manufacturer	Usual use of subcontractors	No. of sewing machines	No. of employees	Produce export ratio	Detail of use of subcontractors
A	None	1,600	2,430	100	--
B	None	1,500	1,200	30	--
C	None	1,200	2,800	100	--
D	None	1,200	1,700	100	--
E	None	1,000	1,800	60	--
G	None	750	800	100	--
H	None	700	750	100	--
J	None	600	1,020	100	--
K	Yes	600	1,000	71	--
L	Yes	500	700	100	--
M	None	90	100	0	--
N	None	14	9	n.a.	--
O	Yes	1,350	1,900	100	Part of sewing
P	Yes	800	5,000	100	Almost all sewing
Q	Yes	270	400	85	Use of 5 firms for sewing
R	Yes	250	500	100	20 to 30% of sewing
S	Yes	180	250	100	40 to 40 sewing machines subcontracted, 2 to 3 firms
T	Yes	180	220	n.a.	Part of sewing
U	Yes	116	200	80	Use of 2 firms for sewing
V	Yes	108	250	0	Overflow of sewing work
W	Yes	30	40	0	50 persons' worth of sewing work
X	Yes	n.a.	20	0	Part of sewing

5-2-6. Expansion of Production Capacity

Personal interviews were held on what plans manufacturers had for expanding their production capacities within the coming two to three years. The results of the personal interviews with the sewn garment manufacturers are shown in Table II-5-9. Responses were obtained from 19 companies. Of these, 13 were planning or executing some sort of expansion. Reflecting the leaping growth in garment exports in these past few years, these manufacturers are now aggressively investing so as to increase their production capacities.

Seven out of the 19 companies, however, did not have any plans for expansion of production in the coming two to three years. These manufacturers, with the exception of company N, were all relatively small manufacturers with less than 100 sewing machines. Company N has a manager who also runs a production plant for knits and he plans to give priority to capital investment in a related dyeing factory. Therefore, he will for the time being prefer to streamline the garment plant based on reevaluation of the production system rather than expanding production capacity.

In promoting expansion of the production capacity of the Thai garment industry, care must be taken of the following two points:

[1] Industrial production of garments requires a minimum workforce of about 50 workers and about 30 sewing machines in terms of production scale. In the companies set up in Thailand by Japanese firms, there may be seen cases where the companies started operations with production systems based on about 50 sewing machines and then gradually expanded. Further, even when setting up a production system for subcontracting, the minimum requirement is a production scale enabling industrial production.

[2] In the future, the trend will be for an increase in orders of small lot sizes and large varieties. In consideration of this, it will be important to augment the manufacturers with diverse, small run production systems. Manufacturers with large scale mass production systems tend strongly to take on orders of large lot sizes and low quality demands so as to maintain stable operations, so cannot easily compete in a market of small lot sizes and large product varieties.

Table II-5-9. Plans of Sewn Garment Manufacturers Visited for Expansion of Production Capacity

Present production capacity			Plans for expanded production capacity		
Manu-facturer	No. of sewing machines	No. of employees	Yes/No	Details and state of progress	Product exports
A	1,500	1,200	Yes	200 sewing machines to be added to separate factory. Under order.	Yes
B	1,200	1,700	Yes	Expansion of production capacity by 15%	Yes
C	700	750	Yes	Adding 100 workers. Employment tests underway.	Yes
D	650	1,000	Yes	Construction of new factory	Yes
E	600	1,000	Yes	Construction of new factory. In construction on 7 rai site.	Yes
F	500	700	Yes	Establishment of finishing line, addition of 200 sewing machines	Yes
G	270	400	Yes	Expansion of production capacity at present site	Yes
H	200	300	Yes	Construction of new factory. Construction in 1989.	Yes
I	180	250	Yes	Addition of 50 to 100 workers. Within few years.	Yes
J	108	250	Yes	Addition of 200 sewing machines. Within few years.	Yes
K	---	---	Yes	Construction of new factory.	Yes
L	n.a.	20	Yes	Replacement of embroidery machinery	No
M	600	1,020	In study	Study of location of expansion of production facilities.	Yes
N	250	500	None	First streamlining by reevaluation of production system.	Yes
O	116	200	None	---	Yes
P	90	100	None	---	No
Q	45	58	None	---	No
R	30	40	None	---	No
S	14	9	None	---	Yes

5-2-7. Price Competitiveness

A large garment manufacturers visited for this survey stated that the price competitiveness of Thai garments was not as high as expected by buyers. Roughly speaking, if the price of a product in South Korea is US$10, buyers expect in view of the low wages of workers in Thailand that it will be US$8 to 9 there, i.e., 10 to 20% lower. In actuality, however, products of Thailand are reportedly only about 5% cheaper. It is true that wages in Thailand are about one-third or so that in S. Korea, but the costs of materials is 10 to 15% higher in Thailand than in S. Korea and this weakens the price competitiveness. At the present time, exports of garments are growing from Thailand not because the price of Thai products at the present time is more attractive, it has been analyzed, but because it is expected that costs in S. Korea and Taiwan will rise in the future and buyers are increasingly seeking out the possibilities of obtaining products from Thailand.

The percentages of materials costs and personnel costs in the shipment prices from Thai garment manufacturers were asked for in personal interviews with the manufacturers visited. Responses were obtained from 16 companies, as shown in Table II-5-10.

Table II-5-10. Composition of Shipment Price of Sewn Garment Manufacturers

Sewn garment manufacturers

Manufacturer	Material costs	Personnel costs	No. of sewing machines
A	65	20	1,600
B	60-65	n.a.	1,500
C	60	n.a.	750
D	40-50	n.a.	700
E	35-40	20	600
F	70	15 (*1)	600
G	65-70	n.a.	300
H	60-70	n.a.	250
I	70	n.a.	180
J	70-80	20-25	108
K	75	n.a.	90

Sweater manufacturers

Manufacturer	Material costs	Personnel costs	No. of sewing machines
L	65	35 (*1)	450
M	50	20-25	340
N	50	20	800
O	40-50	20	300
P	45	n.a.	500

Note: *1.Percent on cost base.

Most of the sewn garment manufacturers had a range of 60 to 80% materials costs. These manufacturers were producing mostly products in the low price range. The companies D and E had materials expense ratios of 35 to 50%, much lower than other sewn garment manufacturers. This is believed to be due to the fact that both companies were producing relatively high sales price items and therefore featured different price compositions than the other companies.

Since most manufacturers have large materials expense rates of 60 to 70%, if the price of procurement of materials is higher than that of manufacturers in S. Korea and Taiwan, the impact on the price competitiveness should be great. If the price of materials were 10% higher than in S. Korea and Taiwan, this difference would have to be absorbed by reductions in the manufacturers' profit margins or else higher shipment prices set. In actuality, however, it is difficult to pass on such costs to the price and profits have to be foregone.

Among the sewn garment companies, there are differences seen in the ratios of materials expenses between the large production scale manufacturers and medium and small ones, in so far as the manufacturers surveyed show. The three companies in Table II-5-10 with over 750 sewing machines had materials ratios of 60 to 65%, while the five companies with less than 300 sewing machines had ratios of 65 to 80%, in the high zone. The following three possible reasons may be considered for this:

[1] *The manufacturers with large production scales tend to work with large* production lots and also procure large amounts of materials and therefore can purchase them at more advantageous conditions compared with medium and small sized manufacturers.

[2] The small sized manufacturers are easily forced to accept severe prices in price negotiations with buyers and as a result the ratio of materials costs in the price rises.

[3] There is a tendency for larger burdens of management, facilities, etc., the larger the scale of production, and the ratio of materials costs in the price falls comparatively.

5-3. Problems and Countermeasures

Expansion of exports will require augmentation of production capacities, but if the method of production used up until now is merely increased as it is, stable, long-term export growth will probably be difficult.

Up until now, most export garment manufacturers have concentrated on production for the U.S. and Europe. The orders have tended strongly to be for low price items of large lot sizes and the export manufacturers have set up supply systems tailored to this. In the future, however, to further increase exports, management will have to be able to handle the following market environment:

[1] The consumers in key export markets like the U.S., Europe, and Japan already have sufficient garments. To stimulate the desire of these consumers to purchase garments, it will be important to offer a more diverse line of products of better quality. Therefore, importers will be increasingly placing orders with manufacturers which can produce smaller lots of a greater variety of products than ever before.

[2] To further increase the volume of exports, it will be important to increase exports not only to markets such as the U.S. and Europe, where there are quota restrictions, but also nonquota markets. In particular, it will be important to tackle the Japanese market, the largest among the nonquota markets. Orders from Japan, however, are generally small in lot size and severe in demands on quality.

[3] At the present time, the export garment manufacturers of Thailand are competing with manufacturers in countries like China or Caribbean countries which can make use of even cheaper labor. In particular, competition is seen in fields of mass production items of low price and quality. The Thai export garment manufacturers are inferior compared with these companies in these countries in terms of labor costs and further are not superior to them in the price of materials procured. Therefore, they are in a disadvantageous position in price competitiveness and therefore will find it important to strengthen their nonprice competitiveness in areas such as delivery, quality, and the ability to handle small lot sizes and diverse types of products so as to set themselves apart from companies of competing countries.

The introduction of production systems suited to the above market environment and the expansion of production capacities of export manufacturers may well lead to quantitative and qualitative shortages in production control staff, patterners, machinery

maintenance personnel, and other human resources and in machinery and equipment. In particular, it will take time to train the necessary personnel, so such training is urgent. If matters are left as they are, not only will the expansion of the production capacity required to meet the demand secured by Thai garment manufacturers be hindered by personnel shortages, but that precious demand may also end up going to other supply sources.

Therefore, it will be essential to devise measures to accelerate the training of personnel and to promote the introduction of production systems suited to the future market environment. These measures should focus on the following:

[1] Promotion of the introduction of computer aided design systems (CAD) so as to raise the productivity of pattern production and marking. This will enable an increase in the number of production items and impart adaptiveness to short delivery orders despite shortages of patterners and small lot sizes.

[2] Promotion of techniques of formation of production processes able to deal with changes in the market environment, quality control, setting of suitable types and input amounts of machinery and equipment, labor management, etc.

[3] Promotion of a higher level of knowledge about machinery and equipment and promotion of the introduction of machinery and equipment contributing to the establishment of production systems suited to the market environment.

[4] Promotion of the introduction of computers for part of the management work, e.g., production and sales. This will impart flexibility in management to increases in the number of orders and the diversification of the content of orders.

[5] Promotion of the dissemination of maintenance techniques for machinery and equipment and of the increase of maintenance personnel in accordance with the increase in the amount and types of future machinery and equipment.

6. The Current State of the Industries of Competing Nations

6-1. The Apparel Industry in South Korea

6-1-1. Industry Outline

(1) History

In the course of Korea's industrialization the textile industry has helped sustain the country's economic growth in its role as a major export industry. The textile industry began to expand rapidly when it was classified as an import substitution industry under the first Five-year Economic Development Plan which was implemented in 1962. Since the implementation of the second Five-year Plan the apparel industry has expanded rapidly as a strategic export industry due to various policies providing assistance to the industry, such as tax refunds and export finance subsidies granted by the government.

During this period the apparel industry has aimed at achieving growth through expansion, and exports to large markets overseas has replaced the production of goods for the domestic market as the industry's main strategy.

Companies are selecting growth, and therefore exports, as their main targets instead of profits, and special emphasis has been placed on the export of mass-produced goods.

However, the further tightening of quotas by textile importing countries and gains made by other developing countries since the early 1980s have forced certain changes to be made to apparel exports which had up until that time relied upon their price competitiveness.

These measures have consisted of: 1- opening up markets in countries which do not impose import quotas, and developing items which are not subject to quotas for export to countries imposing quotas; 2- transforming the industry into a capital and technology intensive industry by raising automation ratios etc, as a means of countering the export offensives by other countries which are hard on Korea's heels; and 3- establishing a diversified small lot production system and developing design and fashion in order to meet trends in demand in advanced countries. In addition, although the appreciation of the won since September 1986 has raised export prices, increases passed on to prices have been kept to about 50%. The financial situation of small and medium apparel companies has deteriorated as manufacturers have had to absorb the balance of the increase in costs.

(2) The Position of Manufacturing Industries

As a strategic export industry and also as an industry which has a high capacity to absorb employment, the apparel industry has played a leading role in the country's economic growth. But the rapid progress which has been made in heavy chemical industries in recent years has been accompanied by a gradual decline in the importance of the apparel industry in the manufacturing sector. Namely, whereas in 1976 the apparel industry accounted for 7.0% of the total added value of the manufacturing sector, this had decreased to 5.8% by 1985.

Yet, the proportion of textile exports comprised by apparel increased from 53.1% in 1980 to 58.8% in 1987, thus showing that the apparel sector is playing an increasingly important role in textile exports.

6-1-2. Production Structure

(1) Size of Companies

In responding to the changes in demand which have occurred on the apparel markets in advanced countries the Korean apparel industry is making efforts to move away from its past production system of mass producing a small variety of mainly standard items to diversified small lot production and to shortening delivery time. This change has been accompanied by a growing proportion of small and medium enterprises within the industry. While in 1977 large companies with a work force of 500 or more employees accounted for 2.7% of all companies within the apparel industry, their numbers have since decreased and in 1986 they comprised 1.3% of all sewing manufacturers and 0.6% of all knit manufacturers.

However, if companies are classified on the basis of whether they produce for the domestic market or the export market, companies producing for export employ 88% of the total work force, despite the fact that in terms of actual companies with offices there are more companies which produce for the domestic market.

(2) Machinery and Equipment

As of 1987 there were some 278,800 sewing machines for industrial use (this figure has been provided by the Korean Textile Industries Federation) with a ratio of 1 machine per 1.3 workers. Although in terms of numbers this is on an even level with those of advanced countries, there is nevertheless the fact that many of the machines are out-of-date. It is said that 39.6% of all sewing machines for industrial use within the industry are still being used despite having exceeded their useful life.

A look at automation ratios using just 1986 data shows that Korea's ratio is still lower than that of the United States and Japan.

Table II-6-1. International Comparison of Automation Ratios

	Automated cutting technology				Automated sewing technology			
	Automation ratio (%)		Processing speed (pieces/hour)		Automation ratio (%)		Processing speed (pieces/hour)	
	Shirts	Men's suits	Shirts	Men's suits	Shirts	Men's suits	Shirts	Men's suits
Korea	0	10	40	1.3	20	2	30	0.5
Japan	10	35	80	1.3	20	15	40	0.5
U.S.A.	30	70	100	0.7	30	20	50	0.7

Source: "Structure and Policies of the Textile Industry", published by the Industrial Research Institute, 1986

(3) Productivity

Changes to the number of companies, employees, and the value of production in the knitting and weaving and apparel industries are shown in Table II-6-2.

Changes in the sizes of single companies in the knitting and weaving and apparel industries and the value of production per individual worker are shown in Table II-6-3.

Table II-6-2. Changes in Production

(Units: Companies, persons, 1.0 million won)

	1971		1976	
	Knitting and weaving	Apparel	Knitting and weaving	Apparel
No. of companies	738	3,169	781	3,002
No. of employees	60,002	63,135	66,927	204,437
Production value	54,589	62,428	221,071	665,770
	1981		1986	
	Knitting and weaving	Apparel	Knitting and weaving	Apparel
	949	2,811	1,825	4,687
	54,159	21,209	60,094	267,354
	605,615	1,937,718	1,329,703	3,385,245

Source: Economic Planning Institute

An international comparison of worker productivity is provided in Table II-6-4.

Table II-6-3. Production per Individual Employee

(Units: persons, 1,000 won)

	Per individual company					
	Employees		Production		Production per individual employees	
	Knitting and weaving	Apparel	Knitting and weaving	Apparel	Knitting and weaving	Apparel
1971	81	20	73,967	19,700	943	1,086
1976	86	68	283,061	221,776	3,303	4,650
1981	57	75	638,161	702,140	11,402	9,437
1986	33	57	728,604	772,476	22,127	12,666

Source: Economic Planning Institute

Table II-6-4. *International Comparison of Labor Productivity for Shirts* (1986)

(Units: pieces/8 hrs, person)

South Korea	Japan	Taiwan	?	Great Britain	West Germany
25	35	26	29	50	45
(100)	(140)	(104)	(116)	(200)	(180)

Source: Korean Textile Manufactures Export Association

(4) Wage Levels and Number of Days Worked

The average monthly wage for garment industry workers has increased annually since 1981 when it stood at 116,913 won. It had increased to 224,280 won by 1987. However, this level of wages is lower than levels for textile-related industries, not to mention manufacturing industries. For instance, in 1981 the average monthly wage for the apparel industry stood at just 66.4% of that for manufacturing industries (176,176 won), 86.2% of that for the textiles, apparel and and leather industries (135,677 won), and 81.1% of the monthly wage for the textile industry (144,196 won). This trend has continued, and in 1987 the average monthly wage in the apparel industry was equal to 67.1% of that for manufacturing industries (328,696 won), 87.4% of that of the textiles, apparel and leather industries, and 80.8% of that for the textile industry.

A look at the number of days worked shows that workers employed in the apparel industry work an average of 24 to 25 days a month, which is roughly the same as that for manufacturing industries and other textile industries.

Table II-6-5. Average Monthly Wage & Working Days

(Units: Wage: won; Working days: dyas)

	All industries		Manufacturing industries		Textiles, apprel & leather		Textiles		Apparel	
	Wage	Working days	Wage	Working days	Wage	Working days	Wage	Working days	Wage	Working days
1981	212,477	24.6	176,176	24.8	135,677	25.4	144,196	25.7	116,913	25.0
1982	245,981	24.8	202,117	24.9	153,938	25.4	164,438	25.8	132,932	24.9
1983	273,119	24.8	226,790	25.0	172,282	25.5	183,093	25.8	150,867	25.0
1984	296,907	24.8	245,261	25.0	184,600	25.4	195,558	25.9	165,237	25.0
1985	324,283	24.7	269,652	24.9	201,158	25.4	213,235	25.8	178,546	24.9
1986	350,965	24.8	294,485	25.0	220,868	25.5	235,669	26.0	194,545	25.0
1987	386,536	24.9	328,696	25.0	252,272	25.6	272,756	26.0	220,428	24.6

Source: Department of Labor

(5) Training Methods for Workers

There is no public organization which trains skilled workers or technical staff for the apparel industry. Though there are textile industry courses at four-year colleges and dressmaking courses and dyeing and weaving courses at two-year colleges (professional schools), there is no specialist training organization which provides direct training in sewing techniques. On rare occasions sewing-related courses are included in the curriculum for training technical workers operated by the Vocational Training Corporation, but such courses are extremely few. As a result, it is common for individual sewing manufacturers to seek female workers with a junior high school education and train them for the first 3-6 months. Workers with an education higher than junior high school level who are put to work after 3-6 months of training are valued highly within the industry.

(6) Raw Materials

One factor behind the considerable growth which has taken place in the domestic sewing industry is that it has been possible to obtain a stable supply of the majority of raw materials from domestic sources. It is on the basis of this that mass production has been made possible.

However, there has been a slow response to the changes in fashions in apparel which occur all the time in advanced countries and in the diversification of raw materials and raising quality standards in order to meet trends towards higher quality in textile products. Also, because related secondary materials industries have always operated under a system which mass produces a small variety of items they tend to dislike small orders for raw materials resulting from the trend towards diversified small lot production, and this is hindering the supply of raw materials to the apparel industry.

In regard to quality for materials as well, there are a number of problem areas as colors vary from lot to lot, the feel and shine of materials vary, dyeing techniques for patterns, etc are not very good, there is unevenness in thickness and width, and there are differences in length. These all contribute to lost time in sewing and present obstacles in regard to prime cost and raising productivity levels. There is also an unevenness in quality for secondary materials as well, and the small size of manufacturers means that because they lag behind others in their capacity for developing technology and developing new products which are needed in order to raise technical levels a delay is caused in meeting the trend towards a wider range of materials.

As for knit yarn which is used in the knit sector, there is a wide range of spinning yarns, filament yarns and fence yarns available, and though the demand and supply situation varies from year to year there appears to be an increase in supply. However, as

for the supply of raw yarns, it has not been possible to keep pace with changes in a new demand structure despite efforts made on the part of raw yarn manufacturers. Also, the monopolistic production (e.g. acrylic yarn) by some manufacturers has meant that there are difficulties in obtaining a continuous supply of some special yarns. In addition, there is the effect which the high cost of raw yarns has had in lowering export competitiveness, and the obstacles caused by the deficiencies of materials which are hindering the development of new products and efforts to raise the quality of products.

Table II-6-6 shows the prices of basic raw material imports and the domestic wholesale price of intermediate raw materials supplied locally.

Table II-6-6. Domestic Price of Intermediate Raw Materials

Item	Unit	'85 12	'86 12	'87 12	1	2	3	Remarks
Nylon	c/lb	125	125	145	145	145	150	Factory level
Polyester	"	87	90	90	90	90	95	(excludes added value tax)
Polyester	"	69	68	68	68	68	68	
Acryl	"	73	78	78	78	78	78	
Viscose	"	184	184	229	243	243	255	
Acryl spinning	"	126	136	156	156	156	156	
Pure cotton yarn	s/?	420	420	530	530	530	530	
Cotton cloth	s/yd	0.46	0.51	0.62	0.63	0.63	0.63	
Woolen cloth	"	6.50	7.00	9.50	9.50	10.00	10.50	
Nylon taffeta	"	0.30	0.40	0.45	0.45	0.46	0.46	

Source: Korean Textile Industries Federation

Table II-6-7. Import Price of Basic Raw Materials

Item	Unit	'85 12	'86 12	'87 12	1	2	3	Remarks
Carprolacgam	s/ton	1,359	1,350	1,800	1,800	1,800	1,800	CIF
T.P.A.	"	680	595	590	600	600	600	CIF
E.G	"	385	340	455	555	685	720	"
AN monomar	"	720	535	965	965	965	965	"
Wood pulp (for use in fiber)	"	495	529	635	680	635	680	spot price
Raw cotton (SLM1 1/16)	c/L	57.00	54.00	61.80	55.65	58.53	60.65	"
Raw wool (66'S)	S/kg	5.35	5.60	12.20	13.20	14.95	15.90	"

Source: Korean Textile Industries Federation

Table II-6-8. Wholesale Price of Main Textile Products

		Pure cotton yarn 23s kg	Polyester yarn (D) Lb	Cotton mixture fabric Cotton 35% Polyester 65% yd	Woolen cloth 60s No.s yd	Mixed fiber fabric yd
1984		1,927	868	399	12,273	--
1985		1,856	856	405	12,263	2,120
1986		1,899	857	811	12,146	2,241
1987		2,067	848	1,100	12,394	2,309
1987	1	2,061	860	1,100	12,273	2,309
	2	2,101	860	1,100	12,273	2,309
	3	2,139	860	1,100	12,273	2,309
	4	2,066	860	1,100	12,273	2,309
	5	2,055	860	1,100	12,273	2,309
	6	2,051	846	1,100	12,273	2,309
	7	2,049	839	1,100	12,273	2,309
	8	2,049	839	1,100	12,273	2,309
	9	2,051	839	1,100	12,273	2,309
	10	2,054	839	1,100	12,273	2,309
	11	2,054	839	1,100	13,000	2,309
	12	2,071	839	1,100	13,000	2,309

Source: Bank of South Korea

6-1-3. Price Competitiveness

(1) Wages

The progress made in industrialization and the healthy state of the economy are reflected in the recent high rates of increase for wages in Korea. Wage levels for production work are noticeably high.

Table II-6-9. Percentage Increase in the Average Wage for the Korean Textile Industry ('87)

(Unit: %)

	Average	Foreman class	Management	General employee (office work)	General employee (production work)
Manufacturing	10.0	7.4	8.7	9.5	10.3
Textile	8.9	6.8	8.6	8.9	10.0

Source: "Wage Settlement Index", Productivity Headquarters (1987)

The average annual percentage increase in labor costs in the textile industry for the period from 1980 through to 1986 was 14.29%. A breakdown shows that the rates of increase for the dyeing (18.93%), knit (18.14%), synthetic fiber (17.00%), weaving (16.63%), and apparel (14.35%) sectors were higher than average.

Table II-6-10. Increase in Labor Costs for Korean Textile Industries

(Unit: won/month)

	'80	'86	Average annual increase (%)
Textile industry average	135.9	302.8	14.29
Synthetic fiber	147.2	377.5	17.00
Cotton spinning	137.4	277.3	12.42
Wool spinning	158.3	273.8	9.56
Weaving	135.0	339.8	16.63
Knitting	118.9	323.2	18.14
Dyeing	138.3	391.3	18.93
Apparel	116.9	261.4	14.35

Note: Labor costs = wages+miscellaneous costs+bonuses+welfare costs+ retirement allowance+other special allowances
Source: Bank of South Korea

The cost of wages in the apparel industry rose at an average annual rate of 2.42% for the period from 1979 through to 1986. This is higher than the 2.26% average annual increase recorded for the textile industry during the same period.

Table II-6-11. Labor Productivity, Wages, Wage Cost Index for the Textile Industry

		1979	1986	Average annual increase (%)
Labor productivity index	Textile	100	176.1	8.42
	Apparel	100	179.5	8.72
Wage index	Textile	100	205.9	10.87
	Apparel	100	212.2	11.35
Wage cost index	Textile	100	116.9	2.26
	Apparel	100	118.2	2.42

Source: "An Analysis of Company Operations", Bank of South Korea

Table II-6-12 provides an international comparison of textile industry average annual wages as at the end of April 1987. Wages for the various countries have been converted into US dollars. A comparison of average hourly wages with the Korean rate set at a value of 100 reveals that the rate in West Germany is 7.3 times that of Korea's, Italy 7.2 times, Japan 6.8 times, the US 5.2 times, and France 5.6 times. In contrast to these high rates, the average hourly wage for countries such as Indonesia, Sri Lanka, China, the Philippines, and Thailand are much lower.

Table II-6-12. International Comparison of Textile Industry Wages

(wages per hours)

	Local currency	Exchange rate	US $	Index (Korea=100)
South Korea	1,495	844	1.77	100
United States	9.24	1.00	9.24	522
France	60.94	6.10	9.99	564
West Germany	23.80	1.83	12.98	733
Italy	16,545	1,306	12.67	716
Argentina	2.46	1.54	1.60	90
Brazil	20.50	22.75	0.90	51
China	0.85	3.72	0.23	13
Hong Kong	15.09	7.81	1.93	109
India	8.39	12.86	0.65	37
Indonesia	331	1,644	0.20	11
Japan	1,758	147	11.99	677
Pakistan	6.34	17.31	0.37	21
Philippines	11.60	20.50	0.57	32
Sri Lanka	8.88	28.85	0.31	18
Taiwan	71.23	34.12	2.09	118
Thailand	15.04	25.73	0.58	33

Data: Werner International (USA)
Note: Exchange rate are April 1987 rates

(2) Changes in the Manufacturing Cost Structure

A comparison of the manufacturing cost structures for textile industries in 1981 and 1986 shows that in the case of the apparel industry, of direct costs the cost of outside production rose 2.2 percentage points from 13.1% in 1981 to 15.3% of total costs in 1987. Labor costs rose 1.0 percentage point during the same period. This is attributable to higher increases which were recorded in salaries and wages compared to other costs.

(3) Apparel Industry Hourly Wages

The average hourly wages of workers engaged in the apparel manufacturing industry as of July 1988 are shown in Table II-6-13.

Table II-6-13. Hourly Wages

	No. of days worked	Hours worked monthly	Monthly wage (won)	Hourly wage (won)	Hourly wage (in dollars)
Average	24.6	228.8	251,054	1,097	1.52
Men	24.7	225.0	352,237	1,566	2.16
Women	24.5	230.2	211,876	920	1.27
Production work	24.5	231.7	218,148	942	1.30
Men	24.5	230.9	266,355	1,154	1.59
Women	24.4	231.9	205,615	887	1.23
Office work	25.0	215.2	406,222	1,888	2.61
Men	25.0	215.9	486,491	2,253	3.11
Women	24.9	213.9	273,928	1,281	1.77

Note: $1 is calculated as being worth 723.80 won
Source: Department of Labor

6-1-4. Non-price Competitiveness

(1) Technology

It has long been the tradition in Korea that anyone is able to sew, and it is therefore thought that anyone can make clothing provided they have the materials and a sewing machine. This resulted in virtually no research being undertaken into productivity and the technical aspects of sewing. However, as exports of textile products, and apparel in particular, started to increase in the 1960s steps were made to undertake research and analysis in technical areas such as consumer tastes, productivity, and price.

The technology of sewing factories in Korea was such that it consisted of no more than a reliance on the skills of workers. But with the increasing use of automation, unmanned machines and robots as a result of recent advancements in the electronics industry, technology, which uses micro processor systems, such as ancillary machinery and equipment, is being used within the apparel industry. In addition to the introduction

of this sort of technology, the raising of skills is another basic task being undertaken by the industry.

In advanced countries steps are being taken to develop automated sewing systems using computers and to computerize production management. However,the majority of Korean manufacturers face difficulties in introducing systems to their operations due to a lack of funds and a lack of technological capacity.

The majority of skilled workers are those who have had an education up through junior high school level, and have therefore received no formal education in basic know-how, manufacturing technology and control technology related to apparel. As their education consists solely of experience and the skills that they have acquired at out-dated work sites it is difficult to raise skills, undertake research and development and to develop production technology which makes use of modern equipment.

As far as training staff is concerned, despite the fact that companies, schools and industry groups each provide their own type of training, in most cases the sort of education provided is out-dated and therefore out of touch with reality and unsuitable in many ways. There is also a lack of awareness of the importance of training workers by providing them with education.

As can be seen above, there are three main problems presently facing the sewing industry in Korea: 1- a lack of modern equipment and technology; 2- insufficient investment put into training staff; and 3- the lack of an organization which specializes in promoting apparel industry technology.

The situation in regard to technology is described below.

1) Design and pattern-making technology

There are 3,000 companies in Korea which employ five or more full-time workers. (Although a statistical survey of the mining and manufacturing industries put this number at 2,000, this figure covers only companies which were operating over the period of several months when the survey was conducted. Industry sources estimate that there are a further 1,000 companies.) Of these 3,000 companies only those in the top 10-12% employ their own professional designers and pattern-making staff.

2) Cutting technology

It has been pointed out by the industry that once decisions have been made in regard to design and pattern the ensuing cutting technology is not that difficult. It is recognized, though, that Korea lags behind advanced countries when it comes to cutting technology which minimizes the amount of material used when there are colored designs and patterns on the original cloth.

3) Pre-sewing treatment technology

The pre-sewing treatment process has a considerable effect on productivity during the sewing process. It is thought that Korea does not have any particular problems in regard to technology related to this process.

4) Sewing assembly technology

During the 1960s when the textile industry was undergoing rapid growth there were problems with regard to the value of products due to out-moded sewing assembly technology. However, as a result of stringent checks carried out in the production process which were implemented due to changes in lifestyle brought about by a higher national income and a change in consumer preference towards higher quality, considerable improvements have been made in this process so that there are no longer any problems of particular importance. (Industry opinion.)

5) Finishing technology

There was a time when it was said that the finishing off of Korean apparel was poor. This was not so much the result of insufficient finishing technology as the way in which production was carried out at the time by using mass production systems for low priced goods.

Due to assistance from both within and without Korea in recent years and an increasing awareness within the industry of the importance of finishing, there do not seem to be any particular problems in the area of finishing technology. However, there are still some manufacturers which mass produce low priced goods and which do not attach much importance to finishing.

6) Production management technology

Even if automated equipment and the latest in equipment using CAD/CAM were to be introduced to the sewing sector, production management technology is a prerequisite for linking this equipment to increased productivity and higher quality levels. Production management technology is generally put under the control of mid-level controllers (production staff).

But in Korea's case, compared with a wide range of other industries the standard of mid-level controllers employed in the apparel industry is considerably lower. This is attributable to the problems faced in holding on to good staff due to the small size of manufacturers operating within the industry. While equipment and the development of materials is vital for the Korean apparel industry today, the task of improving the quality of those in charge of production management control is more important.

7) Technology for repairing sewing machinery and equipment

According to the industry there are no particular problems at the present time in relation to repair technology. However, if the sewing process is to be automated and computerized it will be necessary to provide training in technology required for repairing machinery and equipment. It should be possible to raise the level of repair technology if the Small and Medium Enterprises Promotion Corporation increases its activities related to the provision of training in the latest in technology.

(2) Methods for Developing Design

The top 10-12% of manufacturers producing for the domestic market produce their goods by adapting designs and patterns taken from popular overseas brands and goods designed by famous designers to meet Korean conditions. The small-scale manufacturers which comprise the majority of remaining producers reproduce, adapt or copy existing goods.

The recent improvement in the national standard of living and changes in housing has prompted some manufacturers, particularly in the women's clothing industry, to carry out product planning using their own designs.

As for exports, more than 90% of goods exported are manufactured under the OEM system. A further 5% are produced for export under license, and the remainder are brands produced independently by individual companies. This means that 95% of apparel exports are produced using designs and patterns provided by buyers and overseas manufacturers. There has recently been a call within the industry to export goods with original designs and which are manufacturers' own brands. It is in this connection that industry groups are becoming more and more active in inviting well-known designers from abroad to give seminars.

(3) Delivery

After quality delivery is the second most important element in non-price competitiveness. The Korean apparel export industry has a fairly good reputation as far as meeting delivery dates is concerned. Of course, there are some export manufacturers, including small manufacturers, which make a bad impression overseas due to delays in delivery, and it has been said that this phenomenon occurred in 1986 and 1987 in particular when there was a boom in textile exports. Noticeable in orders for exports in recent years are diversified small lot orders in place of orders for a small variety of mass produced goods as used to be the custom, and demands for a quick response, or shorter

delivery time. Steps taken in order to meet these changes include the liberalization of imports by the government.

(4) Developing Export Markets & Marketing

Assistance provided to export companies in Korea consists mainly of assistance with export finance under which loans worth a certain amount are made according to a company's export performance.

Means of developing new overseas markets include placing advertisements in overseas public relations journals published by export-related organizations such as the Korean Trade Association and the Korean Trade Development Corporation, and by referrals to Korean manufacturers made by the overseas offices of these organizations. In addition, the Textile Export Association, an organization which represents the textile industry, sends missions overseas to open up new markets by exhibiting Korean-made goods in textile exhibitions.

6-1-5. Exports

(1) Apparel Exports

Apparel exports have continued to increase every year since 1980 when they were worth a total of $2,662,650,000. In 1987 they were worth $6,893,050,000, which represented a 37.3% increase over the previous year. While the proportion of total exports comprised by apparel exports dropped slightly between 1980 and 1987, decreasing from 15.2% to 14.6%, in terms of the proportion of textile exports apparel increased from 53.1% of the total in 1980 to 58.8% in 1987.

Table II-6-14. Ratio of Apparel Exports

(Unit: $1,000)

	Total Value of exports (A)	Export Value of textiles (B)	Export Value of apparel (C)	Rate of Increase/Decrease (%)	Ratio of exports (%) B/A	C/A	C/B
1980	17,504,862	5,014,323	2,662,650	-	28.6	15.2	53.1
1981	20,992,645	6,185,807	3,532,735	32.7	29.5	16.8	57.1
1982	21,616,138	5,924,541	3,447,427	Δ2.4	27.4	15.9	58.2
1983	24,222,519	6,050,839	3,777,673	Δ2.0	25.0	15.6	62.4
1984	29,244,862	7,078,531	4,098,000	21.3	24.2	14.0	57.9
1985	30,283,122	7,004,336	4,074,106	Δ0.6	23.1	13.5	58.2
1986	34,714,470	8,734,365	5,021,878	23.3	25.2	14.5	57.5
1987	47,280,927	11,717,819	6,893,050	37.3	24.8	14.6	53.8

Source: Yearly editions of the Yearbook of Trade Statistics published by the Customs Agency

(2) Types of Exports

The greater part of Korean apparel exports are items exported under the OEM system, with goods made under license and original brands accounting for a very small proportion of exports.

In the case of OEM exports, it is very rare for buyers to provide the fabric. It is therefore most common for export contracts to be concluded based on the condition that the goods be made from fabrics produced by domestic textile manufacturers which are based on samples provided by the buyer.

Although some buyers give fabric samples to textile manufacturers directly which are then made up, samples may also be supplied indirectly by apparel manufacturers. According to the industry, the method of supplying samples directly is used in 20% of cases, with the indirect method used for the remaining 80%. When samples are provided indirectly in this way it is common for buyers to carry out tests on the woven fabric before it is made into apparel items.

In the case of exports produced under license, trade-mark rights or patents are obtained from overseas manufacturers, and the domestic manufacturers then produce the goods independently for export. In such cases it is usual to have contracts which stipulate that a certain percentage of total sales is to be paid over in royalties.

For exports which are items produced according to a company's own brand, samples of apparel are sent to buyers who then place orders for exports. However, because there is still a poor capacity for product planning this method of exporting accounts for a very small proportion of total exports.

(3) Export Channels

The 90% of all apparel exports which are exported under the OEM system are exported to the United States, Japan, Canada, and European countries. The 5% of items are produced under licenses obtained mainly from France and Italy, and they are exported to different regions such as Southeast Asia and the Middle East. As for exports of original brands, most are exported to developing countries with the remainder being exported to advanced countries.

(4) Export Price

Since 1986 exports have become less profitable due to the appreciation of the won and the increase in wages which resulted from the labor disputes of 1987. Consequently, although exporters are having to raise the export unit price the harsh reaction with which this has been met by buyers has meant that exporters are not able to raise their prices by as much as they would like. As a result, there have been instances where small-scale apparel

manufacturers have gone out of business. The apparel industry puts the break-even point for exports at around the $1/730-700 won level. But with the won having appreciated to the 700/$1 level by October 1988 many exporters are engaging in deficit operation. In 1988 the Department of Commerce and Industry conducted an export production survey of 1,276 exporters which focussed on export profitability. According to the report on the survey the appreciation of the won was by far and away the largest factor in the worsening of export profitability for textile exports, followed by increases in the cost of raw materials and secondary materials, and the increase in labor costs.

(5) Product Development and Design

As has already been mentioned, the continued high percentage of OEM exports at around 90% has meant that Korea lags behind other countries in regard to the development of original products and in creating fashionable designs. The growing interest shown by both the public and private sectors in producing products that have a higher added value, which has accompanied the worsening of international competitiveness, has prompted a recognition of the importance of design and fashion. A look at changes which have occurred within the textile industry shows that in the past when there was a shortage in the supply of textiles the attitude adopted towards design and fashion was one of apathy. But this has since changed as consumers today are showing a high degree of interest in products with a high added value and in fashionable designs. The industry is seeking the financial assistance from the government for the concentrated development of the design and fashion industry, training designers, developing product planning capacity, and for establishing a Fashion and Design Center, all of which it sees as being very important.

(6) Developing Overseas Markets & Marketing

In the past it has largely been the government and individual industry organizations which have made a significant contribution to the promotion of exports from all of Korea's export industries including the textile industry by setting export targets for each region, holding trade fairs aimed at diversifying markets, and sending industry trade missions overseas, among other activities.

In 1986 the increase in exports due to the cheap won, low interest rates and the low price of raw materials which were influenced by the appreciated yen and other factors led to a surplus in Korea's international balance of payments. This high level of exports prompted the United States and other advanced countries to put pressure on Korea to open up its markets, pressure by the US to revalue to won, and the acceleration of the appreciation of the won (the won rose by 87% in 1987 and 15.8% in 1988). In addition

to these developments the nationwide labor disputes which began in the latter half of 1987 resulted in a 19% wage hike in 1987 and a 14-15% wage increase in 1988. With the increase in the price of imported raw materials the situation had reversed itself so that there was now a high won, high interest rates, and high prices for raw materials. These changes in the environment have led to a worsening of business and to a growing incidence of companies setting up operations overseas in light industries such as the textile industry. Setting up operations overseas is an attempt to find a solution to these problems in place of the more passive methods of trying to encourage exports by setting export targets for individual markets and individual items, participating in trade fairs, and sending trade missions overseas which are no longer able to provide basic solutions.

Table II-6-15 shows the situation regarding the setting up of operations overseas by companies belonging to the textile industry.

Table II-6-15. Amount of Investment and No. of Companies per Region

	Dec. 1987	Mar. 1988	Jun. 1988	Sept. 1988	Dec. 1988	Remarks
Central America	27	28	31	35	38	
North America	5	6	6	7	7	
Asia	9	9	10	12	16	
Oceania	10	11	11	11	13	
Europe	0	0	0	1	1	
Total	51	54	58	66	75	
Amount invested	26,658	28,408	30,907	38,400	47,531	(Unit: $1,000)
Rate of increase over previous year-end		5.9%	13.7%	29.4%	47.1%	
No. of companies (amount)		(6.6%)	(15.9%)	(44%)	(78.3%)	

Source: Korean Textile Industries Federation

6-1-6. Outlook for Setting up Operations Overseas

Although the objectives of investing overseas vary from region to region, it holds the advantages of making it possible to evade barriers imposed by quotas by exporting via a third country, increase sales by establishing an overseas affiliated firm, make use of low labor costs, secure raw materials at cheap prices, and secure new channels for gathering information.

It is anticipated that greater investment will be made in the Southeast Asian region (low costs, competitiveness for medium to low grade products), North America (evasion of trade protection), and the EC.

6-2. The Apparel Industry in Taiwan

6-2-1. The Apparel Industry Today

(1) History

The development of the textile industry in Taiwan started in earnest in 1953 with the implementation of the first Four-year Plan. The government at that time designated the textile industry as a priority development industry in a bid to stabilize the people's livelihood and to decrease the drain on foreign currency. It took steps to encourage imports of spindles and raw materials etc. Textile production continued to expand from this time through the 1960s, and by making use of a cheap and plentiful work force the apparel manufacturing sector increased its exports of mainly knitted sweaters and cloth garments.

However, the worsening labor shortage and the sharp increase in wages which have taken place since the 1970s led to a gradual decrease in price competitiveness. This prompted the apparel industry to introduce high grade industrial sewing machines and automated machinery in order to raise its technical capacity and to make production more efficient. Moves by importers of Taiwanese-made apparel to impose stricter import quotas and the changes in the demand structure in those countries also forced the industry to act quickly in strengthening its price competitiveness by using a higher grade and also a wider range of materials, and by improving its product planning capacity. The appreciation of the Taiwanese currency which began with the G5 Meeting in September 1985 has accelerated such moves. Furthermore, the Taiwanese yuan has appreciated at a higher rate than the currencies of its competitors Hong Kong and South Korea, and this has resulted in a large decrease in Taiwan's export competitiveness. In addition, quotas on overseas markets, trends towards a wide range of products in small lots, and a shortening of delivery time have had the effect of decreasing the production efficiency of existing production systems. They have also raised production costs. This has prompted some apparel manufacturers to shift their production bases to other countries.

(2) The Position of Manufacturing Industries

In 1976 production by the whole of the textile industry accounted for 23% of total production for Taiwan's manufacturing industries. However, this has since decreased and has accounted for 17% of total production during the 1980s. The proportion of production comprised by the apparel manufacturing sector has also decreased, as it dropped from a level of 14.1% in 1984 to 12.9% in 1986. It is likely that this drop has

been accelerated since 1986 due to the appreciation of the Taiwan dollar against the U.S. dollar.

As for exports, the proportion of total exports comprised by textile products dropped sharply from 38.1% of total exports in 1976 to 16.6% in 1987. In terms of individual items, the ratio of secondary products has decreased while yarn, cloth, and textile raw materials have increased. It is thought that the drop in secondary products has been caused by steps to shift production bases to overseas countries. As for imports, imports of natural fibers and raw materials for some multi fibers (acryl etc) have continued at a high level.

6-2-2. Production Structure

(1) Size of Companies

According to survey material on the general situation in the commercial and industrial sectors in Taiwan put out by the Executive Council's Bureau of Statistics in February 1988, at the end of 1986 there were 3,440 apparel manufacturers and 3,680 production plants. Of these plants 3,047 (82.80% of the total) were located in Taiwan Province, 562 (15.27%) in Taipei city, and 71 (1.93%) in Kaoshun.(It should be noted that the island of Taiwan is divided into three main administrative zones; the cities of Taipei and Kaoshun, and Taiwan Province, all of which are under the direct control of the Executive Council. Taiwan Province comprises of 16 prefectures, including Taipei Prefecture, and 5 cities.)

The survey also found that there were 3,244 knit manufacturers with 3,439 plants. 3,033 of these plants were located in Taiwan Province (88.19% of the total), 337 in Taipei City (9.80%), and 69 (2.01%) in Kaoshun.

A look at the size of companies on the basis of operating assets, annual turnover and the number of employees reveals that of the 3,440 apparel manufacturing companies there are only 278 (8.08%) which have operating assets valued at more than 40,000,000 yuan, and there are 2,179 (63.34%) which have operating assets valued at less than 1,000,000 yuan. As for annual turnover, 582 (16.91%) have an annual turnover of more than 40,000,000 yuan, and 1,705 (49.56%) have a turnover of less than 1,000,000 yuan. 67 (1.95%) manufacturers have 300 or more employees, and 1,341 (38.98%) have less than 10, thus indicating that many apparel manufacturers are quite small.

(2) Machinery and Equipment

Apparel manufacturers use many types of equipment, and what is more, equipment is always being improved. Table II-6-16 shows equipment operated by 1,143

sewing manufacturers and manufacturers belonging to the Sewing Industry Association current for the end of 1987.

Belonging to a labor-intensive industry sweater manufacturers are situated downstream in the textile industry. Although they use a wide range of equipment for production, the main types of equipment they use are horizontal knitting machines and circular stitching machines. 411 sweater manufacturers covered by the survey taken at the end of 1987 had a total of 20,643 horizontal knitting machines. This represented a slight drop of 0.6% over the number for the end of 1986 when there were 20,767 machines. The appearance of automatic knitting machines and computer-operated horizontal knitting machines has had a considerable impact on production, and a fair number of automatic knitting machines have been introduced. Nevertheless, manually operated knitting machines are not replaced by new machines with high production levels as items made by manually operated machines have a smooth feel and are suited to the production of high grade products. Both types of machines are therefore seen to have their own particular merits. In terms of numbers, although manually operated knitting machines are by far the majority they are decreasing gradually year by year.

According to statistics provided by the industry, in 1987 manually operated machines accounted for 62.81% (12,965 machines) of the more than 20,600 horizontal knitting machines, and this represented a decrease in 128 machines over the level for the previous year. As for automatic knitting machines, there were 6,018 semi-automatic machines in 1987, or a decrease in 28 machines over the 1986 level, and there were 1,244 fully automatic machines, a decrease of 6 machines. There were 416 computer-operated horizontal knitting machines in 1987, which represented an increase of 38 machines (10.05%) over the 1986 level.

Table II-6-16. Equipment Statistics for Apparel Production

Equipment	Year	Number	Share (%) by Period of Use of Machinery and Equipment				
			Less than 1 year	1-3 years	4-5 years	6-10 years	More than 10 years
Pattern cutter	1985	52	29	56	10	4	1
	1986	52	28	56	10	4	2
	1987	52	29	56	10	4	1
Tentering machine	1985	102	23	54	11	11	1
	1986	104	23	54	11	11	1
	1987	105	23	54	11	11	1
Cutting machine	1985	3,790	-	-	-	-	-
	1986	4,778	-	-	-	-	-
	1987	4,867	-	-	-	-	-
Sewing machine	1985	86,174	14	42	21	17	6
	1986	87,122	14	42	21	17	6
	1987	85,070	14	42	21	17	6
Overlocker	1985	23,451	15	41	23	14	7
	1986	23,913	16	41	23	14	6
	1987	23,493	17	41	22	14	6
Special sewing machine	1985	22,576	12	38	23	20	7
	1986	22,965	13	39	22	19	7
	1987	22,659	12	39	22	19	8
Automated sewing machine	1985	478	24	44	12	15	5
	1986	478	23	45	12	15	5
	1987	491	25	44	12	14	5
Pressing equipment	1985	8,706	-	-	-	-	-
	1986	9,595	-	-	-	-	-
	1987	9,695	-	-	-	-	-

Source: Spinning Products Development Association

(3) Work Force

1) Employee Structure

According to government statistics there were 120,019 workers employed in the apparel industry as of the end of 1987. This represented 5.21% of the 2,305,747 workers employed in manufacturing industries, and a decrease of 8.55% from the 131,241 workers engaged in the apparel industry at the end of 1986. Men employed in the cutting, pressing, packaging stages and in control-related work accounted for 24.50% of the total, with women employed on production lines accounting for the remaining 75.50%. As for the ratio of administrative staff to production staff, 11.84% of employees were engaged in administrative worked compared to 88.16% engaged in production work. The majority of those employed in administrative work were men, with 15.45% of all male employees engaged in this area compared to 10.67% for female employees.

2) Working Hours & Wages

It is most common for apparel manufacturers to work to a single operation system, and there are only a few who work to a three-shift system as is common in the weaving sector upstream. Overtime work is undertaken when necessary. As of the end of 1987, employees worked an average of 26.6 days a month (the average for manufacturing industries was 25.6 days), and they worked an average of 211.4 hours a month (200.5 hours). Employees in the apparel industry worked an average of 13.7 hours of overtime work a month (15 hours), and an average of 8.5 hours a day (8.4 hours). There was little difference in the number of hours worked between the sewing industry and manufacturing industries.

As for wages, there was a considerable gap between wages for the sewing industry and manufacturing industries due to the fact that the former employs a large number of female workers who are not required to have any special skills. There was also a considerable gap between apparel industry wages and the average for the textile industry in general. As of the end of 1987, the average monthly wage for workers engaged in manufacturing industries was 15,671 yuan, compared to 16,242 yuan for the textile industry and 12,552 yuan for the apparel industry.

3) Productivity and Worker Mobility

The percentage increase in productivity in the apparel industry has decreased due to the recent labor shortage. Although this phenomenon is being seen in all industries in Taiwan, it is particularly noticeable in the apparel industry. Based on a value of 100 for 1981, the average wage index for manufacturing industries was 132.15 in 1985, 145.411 in 1986, and 159.52 in 1987. The productivity index for the same years also grew as it was 121.44, 134,12, and 147.96 respectively. However, whereas the average wage index for the apparel sector rose from 136.65 to 154.82 to 166.16, the productivity index grew at a smaller rate as it increased from 76.40 to 77.18 to 82.89.

Changes to the industrial structure have led to rapid development in the service industry, and the increasing number of workers who have left the garment industry for the service industry over the past two years has caused some problems for the garment industry. Although manufacturers have been adopting all sorts of methods for filling vacancies these efforts have been to little avail. Measures have also been taken jointly by the industry and universities, an honorarium paid to those referring potential employees to jobs, and improvements have been made in employee welfare benefits, but these have not been sufficient to solve the problem. The situation is such that those wishing to get jobs can do so without having to meet any special requirements.

(4) Raw Materials

Materials used within the apparel industry can be divided into main materials and secondary materials. In general, cotton, wool, synthetic fibers, fabrics, etc, come under main materials, and buttons, zippers, and materials used for packaging are classified as secondary materials.

Main Materials

Printed knit fabric required by manufacturers of knitted garments is supplied by knit cloth manufacturers upstream so that imports of printed knit fabric are few. According to the Industrial Production Statistics Monthly which is put out by the Department of Economics, in 1987 47,479 tons of knitted fabric was produced, with sales at 47,459 tons. These figures represent a 9.24% drop in production and a 9.16% drop in sales over the level for the previous year. Production of plain fabrics stood at 1,184,189,000 square meters, and sales at 1,152,640,000 square meters in 1987. This represented a 10.08% decrease in production and a 12.08% decrease in sales over the previous year. A large proportion of plain fabric is imported, and according to one industry organization they account for more than 95% of all fabric imports. In general, domestically produced fabric is used in ordinary plain fabric garments. Fabrics for use in garments for which a special grade of quality and special processing is required are imported from advanced countries, and fabrics for low-priced goods are imported from Asian countries due to cost considerations.

The import price has been greatly affected by the substantial appreciation of the NT dollar, and the import price for all types of plain fabric had already dropped by a margin of between 14.76% to 15.83% by 1987. With the 1981 import price set at a value of 100, the import price for all plain fabrics was less than 100 in 1987.

6-2-3. Competitiveness

(1) Price Competitiveness

1) The Cost of Raw Materials

The raw materials used in knit garments, garments made from plain fabrics, and sweaters account for a large proportion of the prime cost, so that movements in the price of raw materials have an extremely significant impact on production costs for garments.

Despite there being no raw cotton or sheep's wool in Taiwan, manufacturers of artificial fibers have been making advances, and in terms of their production of polyester fiber Taiwan ranks third in the world behind the United States and Japan.

As a result, spinning products made in Taiwan are largely products made from artificial fiber, or products made from mixed spun fabric made mainly from artificial fiber. These products are rated highly on the international spinning market.

As a result of stable low oil prices during the past several years the shipping price of the various kinds of petro-chemical raw materials has stayed at more or less the same level. Although the price of PTA, used in the manufacture of polyester fiber, rose sharply in 1988 due to a worldwide imbalance in demand and supply, the price of other petro-chemical products has remained stable, and there have been neither upward nor downward movements in the price of artificial fibers.

The price of yarns through to types of fabrics have therefore stabilized, with a slight drop in price being seen in some cases.

Using T/C grey (45 'S, 110x 76 "47") as an example, it dropped in price from 22 yuan (NT$) per yard in January 1987 to 18.5 yuan per yard in December 1988, but has subsequently risen back to 20 yuan per yard (January 1989).

The price of acrylic yarn, which is used in the manufacture of sweaters, has dropped. As for other materials, only polyester processed yarn, used for knitted products, has increased in price due to an increase in market demand.

Artificial fiber made in Taiwan is highly competitive on the international market, and this is a major factor behind the competitiveness of Taiwanese-made garments on the international market.

With the relaxation of some restrictions governing trade between Taiwan and mainland China in the middle of 1988 permission has been given for indirect imports (imported via third countries) of raw cotton and sheep's wool. Consequently, if steps are taken to import cheaper raw materials from mainland China in place of raw materials which have up until now been imported from the United States and South Africa, the cost of raw materials for garments made in Taiwan will drop considerably and this will in turn strengthen their competitiveness.

2) Wages

The garment industry is a labor-intensive industry and wages comprise the second largest element in production costs after raw materials.

Salaries and wages in Taiwan have risen due to changes in the social environment and because of labor shortages. The average monthly wage per individual worker increased 4.2 times between 1975 and December 1987, with an average annual increase of 42%.

The expansion of production activities which has taken place as a result of increased consumption, frequent outbreaks of labor disputes, the large increase in the salaries of public servants, an increase in surplus funds, a sharp increase in land prices,

and healthy increases in exports which have accompanied the lifting of martial law in mid-1988, and the promotion of public investment projects have contributed greatly to raising the awareness of workers in regard to wage increases.

Wage increases stemming from these sorts of circumstances are not connected to increased productivity, and it would seem that this trend for higher wages will continue for some time yet. This has made it essential for the garment industry to counter the shortage in labor through mechanization.

Table II-6-17. Worker's Average Monthly Income

(Units: upper column: NT$/lower column US$)

	1984	1985	1986	1987
Storeman	10,450	10,760	11,298	11,524
	261	269	297	384
Cutter	10,800	11,125	12,793	13,232
	270	278	337	441
Machinist	13,200	13,600	14,280	14,708
	330	340	376	490
Foreman	21,450	21,880	22,098	22,540
	536	547	581	751
Presser	12,000	12,463	14,332	14,608
	302	311	377	486
Packer	10,670	10,880	11,424	11,652
	266	272	300	388
Product inspector	9,350	9,540	10,017	11,017
	233	238	263	367
Manager	22,000	22,440	23,562	24,033
	550	561	620	801

Note: Rates for US$1 are NT$40 in 1984, 1985, NT$38 in 1986, and NT$30 in 1987.
Source: Taiwan Knitting Industries Association

3) Cost of Equipment

The Taiwan garment industry has been actively renewing equipment as a means of responding to the intensification in market competition which has occurred in recent years. This has led to the wide use of computer systems. The introduction of CAD/CAM has resulted in savings in labor, time, and cloth materials. The industry is proceeding with the introduction of automated equipment in virtually every area, and at the same time as providing a means for dealing with wage increases this is raising the level of technology, such as quality control standards, and this in turn is also contributing to the maintenance and improvement of the competitiveness of its products.

Although the recovery of funds invested in equipment is comparatively slow, small and medium-scale manufacturers are also actively introducing the latest in equipment due to the huge benefits to be gained.

Table II-6-18. Prime Cost Structure for Apparel Manufacture (Average)

	(Component ratio %)
Raw materials	42
Wages	35
Secondary materials	10
Equipment	3
Energy	1
Management and business expenses	9
Total	100

Source: Data provided by the Apparel Manufacturers Association (industry organization)

(2) Non-price Competitiveness

1) Exchange Rate

The Taiwanese apparel industry is an export industry, and the recent rise in the exchange rate between the Taiwanese currency and the US dollar has had a serious impact on the industry.

The sharp appreciation in the yuan has hit the industry particularly hard, and the situation during the last few months of 1988 through to January 1989 was such that some export industries were offering a rate of 25 yuan to one US dollar. There are those who say that it would be most difficult, and also impossible, for the apparel industry to accommodate this sort of rate.

2) Export Quotas

Export quotas for textile products exported to the United States, the EC, Canada etc, are the lifeline for Taiwan's apparel exports, and the new measures taken by government authorities recently have had a considerable impact on the industry. The main points contained in these measures are described below.

a) When a manufacturer's average annual export price for a particular item is lower than the average for the whole of the country for that item a reduction is made in the quota allocated to the manufacturer for the following year.

On the other hand, when the average annual export price is higher than the average the quota for the following year is raised. This means that by retaining their quotas manufacturers are not able to build up business by exporting at moderate prices.

b) The quotas are based on quantity, and manufacturers must voluntarily export high-priced goods due to the limit placed on export volumes.

Also, because in the case of some items the quotas are allocated on the basis of single bidding for the export price, manufacturers which export products with a high unit price receive priority in the allocation of quotas, and this is encouraging the production and export of high grade products.

c) Because quotas for popular items (for instance 645/6 exported to the US) cannot be raised any higher manufacturers are being encouraged to export products with a high unit price by developing new fashions, fabrics made out of new materials, and yarns.

3) Improvements in Production Technology

The most important tasks confronting the garment industry is to reduce costs, develop new products, and to produce high-price products. There is therefore a high level of interest in introducing computer systems in particular.

A large part of investment being made in equipment by the industry is being directed at this area. This goes a long way to solve production technology-related problems as the introduction of such equipment makes it possible to save 2-4% of a roll of cloth and it has also made it possible to diversify designs.

4) Design Development

In the past, few problems arose in regard to design development as the production and export of apparel was carried out on the basis of specifications designated by those placing the orders. However, a trend has recently emerged whereby more energy is being put into independent sales rather than order production. At the present time, there are a growing number of incidences within the industry where license production is being undertaken by forming tie-ups with designers with high international reputations, well-known brands, and stores.

The introduction of well-known brands is still in the initial stage. The ultimate goal is to introduce into Taiwan all the necessary steps, such as the development capacity to design these sorts of brands as well as distribution methods.

Hong Kong has already become a production base for world renowned brands, and Taiwan is attempting to following its example.

A considerable amount of effort is being put into design development both at the manufacturer level and at industry level. For instance, at the Spinning Products Design Center which has been established by the Republic of China Spinning Products Development Committee (a joint venture foundation formed between the Department of Economics and the industry) guidance is provided for raising the standard of design technology and for the production of high grade products. Regular seminars and

exhibitions are also held in a bid to raise quality standards for raw materials, designs, secondary materials, accessories etc.

Organizations representing separate items (associations belonging to the industry) are also undertaking many activities such as holding seminars on design for their members.

In addition, the majority of the five-year women's junior colleges (for junior high school graduates) two- and three-year women's colleges (for high school graduates), 20 other junior colleges and 204 technical high schools are taking steps to provide training by establishing courses in design.

5) Adjustments to Production Systems

The enactment of the Labor Standards Law in July 1987 has resulted in adjustments being made to production systems within the apparel industry.

Manufacturers have introduced automated equipment for integrated production in order to get around the regulations imposed by the law as much as possible and to avoid disputes between labor and management. Manufacturing companies which have not yet introduced this sort of equipment are placing more orders for outside work. However, this latter method poses difficulties in relation to the control of quality and the delivery.

6) Delivery

Contract infringement and delays used to be common in shipment (exports), but such cases have gradually decreased due to restrictions and measures taken by authorities in regard to trade disputes. One factor behind this decrease is the trend in apparel exports towards expensive and diversified small lot products and the decrease in cheap products which are more susceptible to accidents.

7) Quality Control

Quality control laws and regulations have been established and these come under the jurisdiction of the Product Inspection Bureau affiliated to the Department of Economics (the equivalent of Japan's Ministry of Trade and Industry). These laws and regulations comprise the basic laws which cover quality control for the various industries. They stipulate that production plants producing for export must receive certification for grades of quality control for prescribed items and processes. The different grades which have been established are A, B, C, and disqualified. Only products made in plants which have been certified as A or B plants are permitted to export. Therefore, if plants which have not been approved for export receive export orders they have to place those orders in approved plants until they are given the opportunity to pass the inspection when it next takes place one year later.

In recent years 80-90% of those inspected have qualified for export certification, thus showing that substantial improvements are being made in quality control.

8) Market Surveys and Marketing

Market surveys and marketing used to be the Taiwanese apparel industry's weakest point. But as has already been mentioned, steps are being taken to break away from order production and exports through the voluntary efforts of both manufacturers and industry.

There is a growing number of companies which are obtaining overseas data through the offices of the Trade Development Association and through industry groups. There has also been an increase in the number of instances where survey organizations are contracted to undertake various types of market surveys.

Trade missions and business talks which are sponsored jointly by the Department of Economics, the Trade Development Association, and various industry organizations are held two to three times a year.

In the course of 1989 the apparel industry intends to send two trade missions to Japan and to hold 6 exhibitions in Tokyo, Osaka and other cities.

9) Trends in Overseas Production

Manufacturers are required to receive permission from the Department of Economics Investment Committee if they wish to invest overseas. Statistics held by the committee show that approval for overseas investment was given twice in 1984, once each in 1985, 1986, and 1987, and in 1988 no approvals had been made up until September.

The appreciation of the NT dollar and the labor shortage have resulted in Taiwanese apparel manufacturers losing their competitive edge against mainland China, South Korea and developing Asian nations. In one related example, a well-known knitted sweater manufacturer announced that it would be closing down its operations in the second half of 1988. There are some manufacturers which are taking steps to set up operations in Southeast Asia and in mainland China, but as the Taiwanese government prohibits investment in mainland China there is no official investment in China as yet. According to manufacturers, the main purpose of investing in the mainland is to produce low-priced apparel for export to the American market.

6-2-4. Export Trends

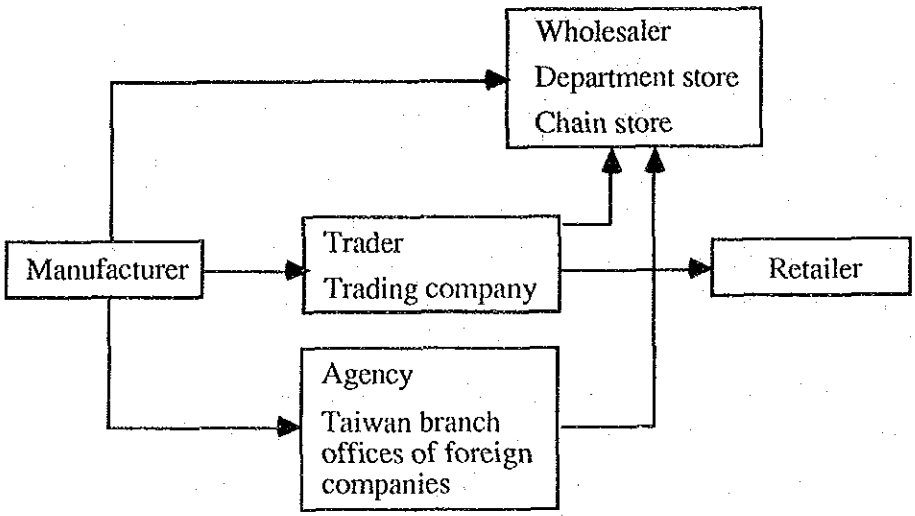
(1) Situation

The bulk of apparel manufactured in Taiwan is exported with very little sold on the domestic market. According to customs clearance statistics and association statistics, exports to the United States comprise more than 50% of total exports, and this suggests

that efforts made in recent years to diversify export markets have not been very successful.

(2) Export Channels

Diagram of Export Channels



In the past, direct exports by manufacturers were uncommon and most exports were carried out through Japanese trading companies and other traders. But direct trade between manufacturers and buyers is increasing in an attempt to raise profits. In other words, supermarkets and department stores in importing countries are no longer using importers, but either place orders with manufacturers directly, or they establish branch offices or purchasing offices in Taiwan. These moves have made relations between manufacturers and buyers much closer.

Also, despite efforts by the government to encourage manufacturers to establish their own brands, the majority of manufacturers in Taiwan produce under the OEM system. Although recently there are some which are carrying out production under license by collaborating with well-known overseas manufacturers, the percentage of exports comprised by manufacturers' own brands is extremely small.

(3) Export Price

During the past two to three years apparel exports have decreased by a considerable amount due to the significant appreciation of the NT dollar. Manufacturers

are operating at losses and in more than a few cases they have either stopped operations or have transferred to another industry. Before the NT dollar started to appreciate in 1985, only 11% of association members were operating at a loss (according to association data), but when the average US dollar exchange rate dropped to 37.84 yuan in 1986 (compared to an average rate of 39.85 yuan in 1985) this percentage increased to 32%. It rose even further to 60% in 1987 when the average rate dropped to 28.55 yuan. By the end of 1988 the exchange rate had dropped even further to less than 28 yuan per US dollar, and this has placed manufacturers in an even worse situation.

The average unit prices for apparel exports in recent years are shown in Table II-6-19 and 20.

Table II-6-19. Average Export Price Per Unit of Apparel

(Unit: US$/1 doz.)

Year	Woolen garments	Sewn apparel
1986	80.45	51.04
1987	100.29	61.49
1988	104.22	72.15

Source: Industry organization

Table II-6-20. Export Prices per Unit of Apparel in 1987 & 1988 by Country of Destination

(Unit: US$/1 doz.)

Country	Woven fabric apparel		Knitted apparel		Woolen garments	
	1988	1987	1988	1987	1988	1987
USA	78.04	70.96	47.50	51.20	90.30	95.77
Japan	78.73	66.90	51.60	44.40	188.31	150.84
Canada	71.14	65.08	45.50	48.30	98.63	104.38
West Germany	90.21	79.02	60.10	54.80	153.92	130.37

Source: Industry Organization

(4) Product Development and Design

The majority of apparel products made in Taiwan are exported, and as production is carried out following specifications contained in the orders the industry is weak in product development and in design. However, licensed production for well-known overseas manufacturers has recently been increasing and manufacturers are now taking a more positive role in developing new products on their own.

The Spinning Products Development Association is taking steps to provide training in product development and in design in order to meet this growing trend in the industry. It has established a Textile Product Design Center for the purpose of training

designers and introducing fashions from other countries. Also, positive steps of assistance for strengthening the industry's design development capacity are being taken through cooperation with the spinning yarn industry for developing high grade yarns and raw materials, and assistance is also being provided for improving the grade of secondary materials and for training designers.

The Sewing Industry Association has established a design research study meeting for raising the level of product development and design development capacity. The association's vocational training center is also putting energy into training designers.

The sweater industry is also taking positive steps towards product development, fostering designers, and strengthening design capacity in an attempt to break away from orders for low-priced products.

As a means of providing assistance to the apparel industry for developing more markets, the government has adopted incentive measures whereby special export quotas are allocated for exports which are exported to countries without import restrictions. However, these measures have not proven very successful as the changes in the exchange rate have only resulted in moderate increases in exports to Japan and West Germany.

Small and medium-sized manufacturers do not attach much importance to overseas market surveys, and most are not able to undertake surveys without the assistance of the association. This is greatly affecting progress in product development and in opening up new markets.

(5) Developing Overseas Markets

In 1988 the textile industry was dealt a double blow by the slump on the international market and the significant appreciation of the NT dollar. It was a year when the cooperation of the Association was required for developing markets. In responding to this situation the Spinning Products Development Association has increased the number of overseas exhibitions which it plans to hold (sponsoring and also participating in) in 1989 to eleven (refer to Table 20). According to data provided by the Sewing Industry Association, following the United States the West German market is the second oldest export market for Taiwan among countries with import restrictions, and Taiwanese manufacturers have already held 12 exhibitions in West Berlin. Exports to West Germany account for 10% of all exports to countries imposing import restrictions of one sort or another. According to manufacturers, orders from West Germany are mostly orders by well-known West German manufacturers for OEM production by Taiwanese manufacturers. This situation resembles the OEM production for West German manufacturers which took place in Japan in the past, and thus suggests that Taiwan is at least one step ahead of South Korea and Thailand.

Of the eleven exhibitions to be held during 1989 4 are planned for Europe, 5 for Asia, and the remaining 2 for Thailand and the Philippines.

It would seem that exhibitions held overseas will increase in the future as efforts are made to develop new overseas markets.

(6) Competition on Overseas Markets

Although Taiwanese manufacturers' main rivals are Hong Kong and South Korea, mainland China has recently appeared as a strong rival. Assisted by low wages, apparel worth 1,668 yuan was exported from mainland China in 1986, and this amount increased five-fold in 1987. Conversely, Taiwan's competitiveness declined due to unfavorable conditions such as the labor shortage, wage rises, and the strong NT dollar, and the industry now faces the serious problem of how it will increase its competitiveness on overseas markets.

Changes will have to be made to move away from the existing system of relying on orders, but wage increases and pressure applied by the exchange rate will not make it easy to improve business. Manufacturers are therefore trying to develop overseas markets by joining forces with internationally renowned designers and well-known manufacturers and by producing well-known brands under license, and by producing high grade products they are making efforts to avoid competition with low-priced products made by developing countries.

The well-known brands which Taiwanese manufacturers are producing in cooperation with overseas companies and designers are:

Halston, Ralph Lauren, Ann Klein, Liz Claiborne, Valentino, Bill Blass, Issey Miyake, Pierre Cardin, Givenchy, Daniel Hechter, YSL, Calvin Klein, Macy, Bloomingdale, Tederated, I. Magnin, Sasson, Lord & Taylor, Neiman Marcus, Gimbels, London Fog, Lady Manhattan, Jordache, Nike, Esprit, and Levis.

6-3. The Apparel Industry in Hong Kong

6-3-1. The Apparel Industry Today

(1) History

The modern textile industry first began to grow in Hong Kong in the early 1950s. Spinning manufacturers from the mainland sought exile in Hong Kong as a result of the Chinese revolution of 1949, and this was the first step towards the development of the Hong Kong textile industry. Large numbers of refugees from the mainland at this time guaranteed a cheap labor force. For some time the industry developed with the main emphasis on spinning and weaving products. Hong Kong's share of exports to the United States expanded in the early 1960s due to Japan's voluntary restrictions on textile exports to the US, and import restrictions imposed by Great Britain, mainly on cotton cloth. From the early 1960s efforts were made to shift over to middle and high grade export products from Hong Kong's traditional middle to lower grade products in response to import restrictions imposed by textile importing nations as a result of the STA and LTA, and the emergence of Taiwan and South Korea as textile producers. As a result, rapid growth within the textile industry was seen in the apparel industry with its high added value products.

Productivity rose substantially with the introduction of automatic knitting machines in place of manually operated horizontal knitting machines. Owing to this increase in productivity, Hong Kong replaced Italy as the largest apparel exporter in the world in 1973.

However, the labor shortage and the sharp increase in wages which occurred in the early 1980s hindered the growth of the apparel industry. This brought about a change whereby Hong Kong apparel capital which was funnelled through a network of Chinese merchants began to be used for direct investment in Southeast Asia. In addition to this, moves were taken to set up operations in mainland China. Even though direct investment of Hong Kong apparel capital in China was restricted to Guangdong Province, it resulted in employment for roughly 300,000 Chinese workers, which is comparable to the 320,000 workers employed in the spinning and apparel industries in Hong Kong. However, when at the end of 1984 the United States, the largest importer of Hong Kong/Chinese-made apparel, imposed regulations concerning proof of the country of origin the method of carrying out the sewing and knitting processes in China and then carrying out the finishing process in Hong Kong which was being used for Hong Kong-made products became illegal. As a result, Hong Kong apparel manufacturers embarked upon the following three courses of action: 1- they stepped up efforts to automate the

production process; 2- increased their exports of items not subject to quotas; and 3- began to shift production plants to other countries.

The main reasons for the rapid progress which has been achieved by the Hong Kong apparel industry are: 1- as Hong Kong is a free port manufacturers can easily obtain duty-free raw materials from all around the world; 2- it has made use of the huge labor market which exists in China; 3- it has the largest quota of any apparel exporting country for exports to the United States and the EC; and 4- the exchange rate is linked to the US dollar and it is therefore in a better position than South Korea and Taiwan in regard to their exchange rates.

(2) Position of Manufacturing Industries

The textile industry is Hong Kong's largest export industry and therefore plays an extremely important role. As for employment, of the 900,000 workers employed in the manufacturing sector some 320,000 are employed within the textile industry (230,000 in the apparel industry) which is equivalent to 36% of the total work force for the manufacturing sector.

Also, in terms of trade, apparel exports passed the $10.0 billion mark in 1987 and are now worth about $11.0 billion annually (exports from Hong Kong account for $8.5 billion and re-exports $2.4 billion). However, exports to the United States which have traditionally comprised the largest share of Hong Kong's apparel exports have fallen below the 50% level, and it would appear that this trend in a decline in exports to the US has continued in 1988.

6-3-2. Production Structure

(1) Size of Companies

There are more than 8,000 companies engaged in the Hong Kong apparel industry. One characteristic peculiar to the industry is that compared to the apparel industries in Taiwan and South Korea there are a larger number of small and medium-scale manufacturers and the proportion of large-scale manufacturers has been decreasing in recent years. The number of apparel manufacturers in Hong Kong increased 5.5-fold between 1970 and 1987, while the increase in the number of employees recorded over the same period has been a 3.4-fold increase. During the same period the number of employees per manufacturer decreased from 52 to 28.

Table II-6-21. Company Size in The Garment Industry*

Size	1980 Number of Enterprises	1980 Employees Total	1980 Enterprises Percentage (%)	1985 Number of Enterprises	1985 Employees Total	1985 Enterprises Percentage (%)	1987 Number of Enterprises	1987 Employees Total	1987 Enterprises Percentage (%)
1-4	2,465	5,778	31	2,526	5,817	30	2,399	5,662	28
5-9	1,618	10,818	21	1,659	11,106	20	1,776	11,925	21
10-19	1,362	18,433	17	1,366	18,525	16	1,438	19,550	17
20-49	1,237	39,052	16	1,357	42,856	16	1,478	47,233	18
50-99	713	49,510	9	800	55,068	10	845	58,308	10
100-199	335	45,984	4	386	52,207	5	359	48,626	4
200-499	123	33,870	2	233	35,546	3	125	34,269	2
500-999	28	18,470	*	20	13,098	*	18	12,007	*
1000-1999	10	12,692	*	8	10,018	*	6	7,339	*
2000-2999	1	2,780	*	1	2,875	*	1	2,951	*
Total	7,892	237,387	100	8,356	247,116	100	8,445	247,870	100

* Includes: Garment except knitwear & leather
leather & fur clothing
gloves except rubber & plastic

(2) Production Items

A look at the types of items which manufacturers produce shows that an overwhelming proportion of the total (70%) are engaged in the manufacture of outer garments which have a high added value. In terms of the value of production, the main types of outer garments are trousers, slacks, shirts, blouses, and T-shirts. These products comprise 57% of all apparel production.

(3) Machinery and Equipment

Table II-6-22 shows the number of machines used in the apparel industry in the years from 1980 through to 1988. However, it should be noted that these figures have been based on trade statistics due to the lack of statistics specifically relating to industrial sewing machines and knitting machines. (The figures have been arrived at by subtracting the number of re-exported machines from the total of imported machines.)

They show that although there was a sudden drop in the number of new sewing machines installed in 1986, an increase was recorded in the following year. A total of approximately 200,000 machines have been introduced since 1980. The high level of knitting machines has continued since 1984.

Table II-6-22. Net Retention of Sewing and Knitting Machines

Year	Number of Sewing Machines	Number of Knitting Machines
1980	16,335	2,538
1981	37,605	0
1982	13,503	2,464
1983	23,185	6,932
1984	23,705	10,825
1985	8,980	12,773
1986	0	9,805
1987	51,245	12,981
1988 (J-Sept)	19,548	9,025

Source: Trade Statistics

(4) Raw Materials

Imports comprise the bulk of materials used in the manufacture of textiles in Hong Kong. The largest import items are polyester and polyester/cotton, and these imports account for 70% of total imports. They are imported from Taiwan, Japan, China, and South Korea. As for cotton woven fabrics, by far the largest amount of this material is imported from China.

Table II-6-23. Imports of Textile Materials (SITC 651-655*)

(Unit: HK$ million)

Type of textile	1984	1985	1986	1987	1988 (J-Aug)
Textile yarn	10,125	10,021	12,108	15,720	9,871
Cotton woven fabrics	6,647	5,853	7,632	10,678	6,350
Man-made fibre woven fabrics	8,190	9,048	11,684	15,107	10,962
Other natural fibre fabrics	2,823	3,284	3,896	5,063	4,319
Knitted or crocheted fabrics	1,163	1,406	2,376	3,943	2,994
Total	28,948	29,611	37,697	50,511	34,597

Source: Census & Statistics Department

6-3-3. Competitiveness

(1) Price Competitiveness

1) Wages

Workers employed in the apparel industry are paid according to their output, and in August 1988 they earned an average of $475 per month. This is lower than the average monthly wage of $566 for workers employed in other manufacturing industries. (Refer to Table II-6-24)

2) Cost of Raw Materials

Although it was difficult to obtain data from manufacturers, on average raw materials comprise between 50-60% of the total manufacturing costs for apparel manufacturers.

(2) Non-price Competitiveness

1) Machinery and Technology

Despite a lack of data which shows automation within the apparel industry, it is thought that large-scale manufacturers have been actively taking steps to introduce automated machinery, including the introduction of CAM. The labor shortage and rise in wages which have occurred in recent years have led smaller manufacturers to introduce automatic sewing machines and CAD/CAM on the same level as the larger manufacturers.

Table II-6-24. Wages & Salaries in the Garment Industry in 1988

(Unit: US$)

Employee	Ave. wage per month
Pattern Grader/ Marker Maker	530
Clothing Machine Mechanic	530
Craftsmen	533
Special purpose Sewing Machine Operator	440
Make Through Operator	427
Button Sewer	380
Quality Checker	243
Packer	277
Lockstitch Sewing Machine Operator	410
Presser	460
Trimmer	230
Cutter	473
Stock Purchasing Clerk	404
Bookkeeper/Accounting Clerk	405
General Office Clerk	396
Personal Secretary	659
Receptionist	309
Shipping Clerk	438
Clerical Worker	415
General Worker	256
Messenger	315
Watchman	335
Driver	474
Clothing Operator Instructor	486
Foreman	541
Store Supervisor	636
Accounting Supervisor	761
Quality Controller	402
Salesman	596
Merchandiser	547
Production Supervisor	837
Pattern Maker	672
Coordinator	504
Supervisory workers	554

The following example of automatic machinery is for the Lai Sun Company:

* automatic collar ironing machine:	2 operators per machine
* automatic Adler cuff making machine:	1 operator per machine
* automatic Durkopp button hole making machine:	1 operator per 3 machines
* automatic Juki button sewing machine:	1 operator per 2 machines

2) Design Development

The majority of designs used in the production of apparel are designs provided by overseas buyers.

3) Delivery

It is common for it to take two months from the time an order has been placed until production has been completed. There are, however, some manufacturers which complete production within a month at the request of buyers (e.g. Laws Fashion Knitters).

4) Inspection System

As there is no official system for inspecting apparel it is usual for inspection either to be carried out according to the specifications of buyers, or to have one of the following kinds of organizations inspect products so as to avoid unfair claims:

* SGS
* Labtest Hong Kong Ltd
* Hong Kong Productivity Council
* Hong Kong Standard and Testing Center
* CMA Testing and Certification Laboratory
* Hong Kong Polytechnic Institute of Textile & Clothing

Tests are mainly performed on appearance, color fastness, strength, unevenness in color, and shrinkage.

6-3-4. Exports

(1) Export Situation

As is shown in Table II-6-25, the proportion of total apparel exports comprised by exports to the United States has been decreasing since 1984, and in 1988 (January through August) they accounted for just 48% of total exports. However, there has been no change in the reliance on exports to other countries imposing quotas, and it would appear that not much progress is being made in diversifying markets. The percentage

share of exports comprised by knitted or crocheted apparel items (SITC 845-846) has dropped from 57% to 49%. As for exports to Japan, they increased by 3% during the first 8 months of 1988.

Table II-6-25. Major Export Markets for Hong Kong Garments SITC 842-846. (in millions of HK$)

(Units: HK$ million)

Market	1984 Value	1984 (%)	1987 Value	1987 (%)	1988 (Jan.-Aug.) (%)
USA	22,446	53	29,095	49	46
Germany	5,319	13	7,944	14	16
United Kingdom	4,169	10	5,570	9	11
Canada	1,398	3	2,105	4	4
Japan	556	1	769	1	3
Others	8,456	20	13,697	23	20
Total	42,345	100	59,181	100	100

Source: Hong Kong Trade Statistics

A look at exports for the different types of apparel items shows that women's outer garments and knitted outer garments comprised a significant portion of total apparel exports (refer to Table II-6-26).

Table II-6-26. Exports of Garments (in millions of HK$)

(Unit: HK$ million)

	1984	1985	1986	1987	1988 (J-Sept.)
Outer Garments, Men & Boys, Textile	6,971	6,137	6,603	8,983	7,010
Outer Garments, W, G, & Infants, Textile	14,187	14,112	15,649	18,132	13,554
Under Garments, Textile	4,123	4,303	4,713	5,727	4,683
Outer Garments knitted or crocheted	13,027	13,052	16,251	20,581	14,382
Under Garments knitted or crocheted	4,037	3,530	4,297	5,758	4,305
Total	42,345	41,133	47,513	59,181	43,934

Source: Hong Kong Trade Statistics

(2) Export Channels

The channels used for exporting apparel are either direct orders made to production plants or orders made through trading companies depending on the size of orders handled by buyers.

(3) Export Price

Table II-6-27 shows a comparison of the export unit price for September 1987 and September 1988. Because the Hong Kong dollar is linked to the US dollar there was virtually no change in the exchange rate during this period. There was, however, an increase in the cost of imported raw materials due to the fact that there is a heavy reliance on raw material imports from Taiwan, Japan, and South Korea. By looking at Table II-6-27 it would appear that price increases were uneven and that prices were noticeably higher for products with a high added value and for which high quality standards and a high degree of fashion are required.

Table II-6-27. Average Export Prices of Garments in HK$

(Unit: HK$)

Garment	Sept. 87	Sept. 88	(%) Change
Slacks, jeans knit cotton	58.7	61.5	4.8
Dress, shirt synthetic	33.3	35.2	5.5
Slacks, jeans, not knitted	54.3	57.3	5.6
Cotton shirts	52.0	57.6	6.2
Knit wool jacket, pull	94.6	109.6	15.8
Knit cotton jacket, pull	81.0	94.5	16.7
Silk shirts	88.2	104.8	18.8

Source: Hong Kong Trade Statistics

(4) Developing Export Markets

Up until recently Hong Kong apparel manufacturers had developed mainly through the export of mass produced items to the American market. Its export competitiveness lay with the cheap labor force available in Hong Kong, but it has since lost the advantages which it once held in regard to labor costs. It has been in response to this, and also in order to get around quotas imposed on exports for the United States, that direct investment has been made in other areas, starting with investment in Southeast Asia followed by Southwest Asia and then the Middle East.

But recently Hong Kong apparel manufacturers have been aiming their sights at Japan, the largest market of all non-quota countries, and their export strategy has included holding exhibitions and spot sales in Japan, sending trade missions to Japan, and other activities.

At the present time, apparel exports from Hong Kong to Japan, with the exception of furs, account for only a small percentage of Japan's apparel imports. However, if Hong Kong utilizes the advantage it holds over Taiwan and South Korea in regard to the exchange rate and makes use of the abundant supply of labor it will have when Hong

Kong is returned to China, Hong Kong will find itself in an advantageous position over its two rivals Taiwan and South Korea.

6-4. Textile Industry Policies in Asian NIEs and Japan

6-4-1. Hong Kong's Textile Industry Policies

The Hong Kong authority has adopted a thoroughgoing non-interventionist and open economic policy, and as such has not adopted measures for assisting specific industries. But despite this policy the importance of the garment industry to Hong Kong has resulted in efforts being made to foster personnel. This year (1989) the Hong Kong Garment Center is being established in order to provide training in production technology such as cutting, etc. The center is funded by the industry and operated by the authority. With 600 sewing machines the center is said to be the largest training center of its kind in the world.

Export promotion activities are carried out by the Trade Development Center (TDC), and these consist of a wide range of promotional activities which include holding exhibitions in Hong Kong as well as in other countries, and the establishment of a fashion library for the purpose of fostering designers. Other main activities carried out by the TDC include opening up new markets and supplying information on new technologies.

Efforts are being made to open up markets in Europe and Japan as a means of correcting the trade imbalance which exists between Hong Kong and United States. As an example of export promotion activities undertaken by the TDC, in 1988 it held more than 10 exhibitions in Japan in cities such as Tokyo, Osaka, and Nagoya. The "Made In Hong Kong Apparel Fair" which is held twice yearly in Tokyo and Osaka has been rated highly for its scale and contents.

6-4-2. Korea's Textile Industry Policies

(1) Industry Promotion Policies

1) An Outline of Policy Changes

The textile industry has played an important role in the recovery of the Korean economy and has been a key industry in regard to the acquisition of foreign currency. The government has adopted generous measures of support in relation to investment in plant and equipment and export promotion in a bid to protect and develop the industry.

Up until 1966 such measures were limited to making adjustments to price and demand and supply, and expanding spinning and weaving equipment through the induction of foreign capital. But the enactment of the "Interim Measures Law for Textile Industry Equipment" in 1968 resulted in greater control and assistance. The law made the

registration of manufacturers and processors of textile products compulsory and the introduction of new and additional equipment became subject to approval. The law also made it possible for the government to put out orders banning the use of equipment and to direct manufacturers to make alterations to and scrap out-of-date equipment. Subsidies were granted and finance made available for altering and scrapping equipment.

With these sorts of adjustments to equipment, financial assistance and preferential loans offered in the case of exports, it was from about this time that the textile industry began to grow rapidly as an export-oriented industry.

In 1980 the Interim Measures Law for Textile Industry Equipment was replaced with the enactment of a new law: the "Textile Industry Modernization Promotion Law". A basic plan for modernization was set out in accordance with the law. As well as setting as its basic targets making improvements to the structure of the textile industry, raising quality levels and diversifying products, and diversifying export markets, the Korean Textile Industries Federation was also established as a public organization responsible for operating and controlling the promotion of modernization and the modernization fund. Controls and measures of assistance relating to modernization projects and the replacement of equipment were administered under this modernization fund.

However, as the emphasis of Korea's industrial policies shifted to the heavy chemical industries sector, changes have appeared in policy measures taken in regard to the textile industry.

At the end of 1985 the "Textile White Paper", containing a long-term vision taking the textile industry up to the year 2,000, was issued. Then, in 1986, the Textile Industry Modernization Promotion Law was abolished. Today, textile industry policies are included along with those for other industries in the Industry Development Law which was enacted in July 1986.

The Industry Development Law calls for the modernization of equipment and stronger international price competitiveness for all industries. As for the textile industry, the cloth industry and the dye processing industry have been designated as industries to undergo rationalization in 1987 and 1988 respectively under the law. Efforts are also being made in the areas of the development of new materials and technological development.

With the abolition of the Textile Industry Modernization Promotion Law the Korean Textile Industries Federation, which had been established under the law, was turned into a private organization.

The production and export structure of the textile industry which the government and industry organizations are aiming to create is shown in the following diagram.

Present	Direction of development (Make production structure into a dual structure)
<Mass production of medium and low priced items> * Price competitiveness * Large-scale equipment * Imbalance in growth of industries * Subcontractor-type structure of buyers * Adjustments to demand and supply & equipment * Production structure centering on apparel * Over-reliance on markets of advanced countries	<Small lot-expensive product production> * Technological development * Training of technical and design development personnel * Fostering of small and medium specialist companies * Make priority of developing weak areas * Export of special brands <Increased competitiveness of mass produced items> * Full automation of processes (Use of robots etc, to replace workers) * Expand production of non-apparel items * Expand exports to developing countries

2) Textile Industry Estates

The government has been directing its efforts towards the creation of textile industry estates and to encouraging companies to re-locate to these estates. In 1987 there were 7 industrial estates under the direct control of the government and 21 which were operated by local public bodies. In addition to this number there are a number of industrial estates which are being established and developed privately. At any rate, it would seem that in the case of the dye processing industry, an industry which is susceptible to pollution problems, the concentration of dye processing companies in dyeing estates (Banweol Estate, Bisan Estate) has proven an effective means of rationalizing the supply and disposal of water and of increasing efficiency.

(2) Export Promotion Policies

Measures aimed at promoting exports include a customs duty rebate system for raw materials used in the manufacture of exports. One particular measure of assistance

which is unique to Korea and which is proving successful is the trade finance system which was instituted in 1961. This trade finance system comprises of institutional finance supplied over a short term which provides loans required for exports and imports before the exports and imports take place. This separate institutional trade finance was set up to assist exports owing to the relatively high interest rates which are applied to general loans made to all companies in Korea. (In 1979 interest rates for loans by banks were 18.5% per annum compared to 9% per annum for trade finance, and since 1982 interest rates have been 13% and 10% respectively.)

However, today with an increase in the supply of currency and a worsening of trade friction between Korea and other countries as a result of the surplus in the balance of Korea's current account the trade finance system is playing a smaller and smaller role. In addition to the abolition of assistance with export finance for large companies in February 1988, the unit value of loans made to the small and medium companies still eligible to receive finance was decreased. (Whereas it had been 740 Won/US$ in July 1985, it had decreased to 670 Won by October 1986 and then further to 450 in February 1988.)

6-4-3. Taiwan's Textile Industry Policies

(1) Industry Promotion Policies

The Taiwanese authority has been implementing protective policies aimed at developing the economy and promoting industrialization in accordance with the country's stage of development. These measures have centered on putting in place a base for industrial development through establishing an infrastructure, and securing cheap electricity and natural fuel resources. No special policies have been adopted for actively developing and strengthening the textile industry through the enactment of related legislation, and instead the industry has been included in general policies aimed at industry. These policies contain the following main measures:

1) Tax system protection

- the preferential application of corporate tax exemptions for a fixed period and advanced depreciation as set out in the 1961 Investment Promotion Law;

Although the textile industry had originally been included among industries eligible to receive incentives, amendments made in conjunction with the development of the heavy chemical and precision industries resulted in the removal of the majority of textile items (there were a few exceptions) as preferential items.

2) Tax rebates

- Import duty exemptions for raw cotton and raw materials for synthetic fibers were included among items covered by the Textile Tax Rebate Improvements Law (1977)

Measures including import restrictions and export licenses were adopted frequently in line with changes in the situation of self-supply and internal and external demand and supply trends as they occurred in relation to synthetic fiber raw materials and synthetic fibers.

3) Promotion of the introduction of foreign investment and foreign technology

Measures have been taken to promote the introduction of foreign capital and the latest in overseas technology by enacting various foreign investment laws. These have included the Foreigner Investment Law (1954), the Technical Cooperation Law, and the Chinese Returnees to Taiwan Investment Law.

In regard to textiles, advances were made in the introduction of secondary products such as spinning and weaving, synthetic fiber, dyeing, and the sewing of knit fabrics. Recently, however, the introduction of foreign investment and technology has stopped in most areas except for new areas such as synthetic fiber raw materials.

In 1980 the Spinning Machinery Industry Development Project was implemented for the purpose of promoting structural improvements to the spinning industry (that is, for promoting joint ventures, scrap-and-build, automation, and semi-automation and making improvements to the management of operations), expanding exports (gathering information from overseas), establishing modern dye processing and high-grade sewing factories, and training technicians and workers.

However, even though the authority has been encouraging the many small-scale manufacturers in the spinning industry to expand their operations by forming joint ventures and has called on the synthetic fiber industry to cancel its plans for increasing equipment, the authority's intention is not necessarily reflected in the industries due to the failure on its part to adopt forceful measures.

At the present time, steps are being taken to open markets, free up exchange controls, reduce import duties, and encourage investment overseas in an attempt to reduce the region's huge trade surplus and its foreign currency reserves. As a result of considerable reductions in duties which were made in April 1987 the duty on yarns decreased to 4.5%, cloths 12.5%, and apparel 15%.

An overseas investment plan calls for investment in the United States to the tune of $1.25 billion and investment in Southeast Asia to the value of $150

million. In regard to Southeast Asia in particular, the plan aims to encourage investment in the region by small and medium-scale companies.

(2) Export Promotion Policies

1) Export finance

During the 1960s and the 1970s various measures, such as L/C re-finance made through the central bank, were implemented for providing preferential export finance at interest rates which were lower than general market rates. However, the criticism has been made that these measures had little practical effect due to the tightness of Taiwan's finance system at the time.

2) Export processing zones

Following on the establishment of the Kaoshun Processing Zone in 1966, a number of export processing zones have been established around the region. Certain tax exemptions are made to foreign companies situated in the zones, among which are a substantial number of textile-related enterprises.

3) Export approval system

An inspection system applied to export companies for the purpose of maintaining and improving quality standards for export items has been implemented. As well as inspecting items produced by the spinning and weaving industries etc, the system has designated certain factories as export approved factories.

4) Textile Exports Promotion Association

In 1975 the Textile Exports Promotion Association was formed by industry organizations under the direction of the authority. As a private-sector organization the association carries out various activities aimed at opening up new export markets. These activities include: 1- controlling export quotas; 2- raising quality and design standards and promoting technology; and 3- undertaking surveys of overseas markets and sponsoring exhibitions.

6-4-4. Japan's Textile Industry Policies

Since the end of the Second World War a wide range of policies affecting the textile industry have been implemented in accordance with the changes of the times. Policies for the reconstruction of industries and for the development of export industries have given way to policies centering on adjustments to production and equipment, structural improvements, opening up markets, and raising the standard of technology and

design, etc. These policies can be divided into five different periods according to their emphasis and the type of measures which they involved.

The first period was the period of reconstruction after the Second World War from 1945-1948; the second period was the period of export expansion from 1949-1965; the third was the first phase of structural adjustments which took place from around 1965-1973; and this was followed by the fourth period from 1973-1979 when the second phase of structural adjustments took place. The fifth period belongs to the '80s and is a period in which qualitative changes are being forced upon the textile industry.

A general outline of the changes which have taken place in policies related to the Japanese textile industry is provided below.

(1) First Period: Postwar Reconstruction Period (1945-1948)

During this period the reconstruction of the textile industry centered on securing adequate supplies of clothing for the people and on obtaining foreign currency. Thoroughgoing controls were imposed on textile equipment and the demand and supply and price of textile products, and efforts were made to restore equipment and to increase the number of cotton spinning and synthetic fiber manufacturers.

As equipment was restored and new and additional equipment was put in place on a large scale, funds required for introducing equipment were supplied by syndicate groups on behalf of the Reconstruction Finance Bank and the Bank of Japan.

These comprehensive control policies and financial assistance proved effective, and by 1948 the restoration of equipment to the textile industry had gotten well underway.

(2) Second Period: Export Expansion Period (circa 1949-1965)

With the recovery of the balance in demand and supply in the textile industry, controls affecting textile products and textile equipment were removed in 1950 and 1951. It is since this time that textile industry policies have centered on: 1- the expansion of exports; 2- the rationalization and modernization of the textile industry; and 3- the stabilization of the textile industry. The laws and systems on which the various types of measures being implemented today are based originate from this period.

1) Measures for the expansion of textile trade

The various types of measures which were adopted for expanding trade were aimed at: a) promoting trade; b) making adjustments to exports; and c) maintaining and raising the quality of export items.

a) The promotion of trade

The major policies and measures adopted for promoting trade are listed below:

[1] A system for linking exports to the demand for foreign currency funds for importing raw cotton, sheep's wool, and pulp for use in chemical fiber
This system proved effective in increasing the volume of textile product exports, stabilizing prices, and raising the operation levels of manufacturers. On the other hand, however, it came in for increasing criticism from the IMF and various countries due to the intensification in competition for cheap textile products and the fear of overconsumption of raw cotton which it generated. As a consequence, the linkage ratio was gradually decreased and amendments were made to the quota procedure.

[2] A foreign currency funds system for promoting exports
This system was implemented in order to encourage exports by trading companies.

[3] The formation of a joint public-private sector committee to discuss the promotion of chemical fiber exports and measures taken to encourage the establishment of an export product promotion association by industry organizations.

[4] The establishment of a textile product export conference within the Textile Bureau of the Ministry of International Trade and Industry.
The conference was divided into subcommittees which covered specific areas such as cotton cloth, wool and linen products, and secondary products. The subcommittees set export targets for each area and examined problems related to exports.

[5] Import finance for textile raw materials with Bank of Japan usance

b) Export adjustments

The enactment of the "Export Trading Law" (amended in 1953 to the "Export and Import Trading Law")

The law is aimed at prohibiting unfair export trade which obstructs the right of countries to which Japanese-made goods are exported to have their own industries, and also at establishing an orderly system for export trade. The conclusion of exporter agreements and the formation of export associations is permitted under the law in special situations.

Export associations such as the Japan Cotton Yarn Export Association were formed on the basis of the law. These associations carry out activities for

preventing unfair export trade through industry agreements related to quality, price, volume etc.

c) Maintaining and raising the quality of exports

[1] The revision and tightening up of the Export Goods Control Law

As demand for textile products with a consistently high level of quality grew on overseas markets, Japanese products became increasingly unpopular. It was in order to remedy this situation that the Export Goods Control Law was revised and subsequently tightened on several occasions. The law introduced a registration system for private export inspection organizations, raised the required standards for the different classes of goods by expanding and tightening up inspections and inspection methods used for color fastness and other checks, and established minimum standards for each country to which Japanese goods were exported.

[2] The abolition and substantial reduction of import duties imposed on dyes and pigments

These measures were taken for the purpose of increasing the use of dyes which had high color fastness levels.

[3] The establishment of the Japan Textile Design Center (1955)

The center was established for the purpose of raising the level of textile product exports by undertaking surveys and research into textile designs, preventing the violation of design rights, and by fostering high quality designs.

2) The rationalization and modernization of the textile industry

a) Modernization of equipment and machinery

After the Korean War in 1953 the world economy began to stabilize and export competition intensified. It was no longer possible for the Japanese textile industry to expand in terms of volume as it had been doing, and it became necessary to modernize textile industry equipment in order to strengthen its international competitiveness and to maintain and also expand its overseas markets. Measures of assistance related to tax and finance were adopted for specific industries and specific types of machinery.

In particular, Japan lagged behind western European countries considerably in regard to its dye processing sector- an area which is vital for raising the standard of textile products for export-, and this prompted the adoption of policies which gave priority to the modernization of equipment within the dye

processing sector. Examples of the preferential measures which were adopted are provided below:

• Specific types of machinery

[1] Import duty exemptions for important machinery such as continuous cotton spinning machines;

[2] The application of special depreciation (50% depreciation of the purchase price was allowed in the first year) for spindles and for special dye-related machines;

[3] A substantial shortening of the fixed asset depreciation period for machinery and equipment, such as chemical fiber and dyeing machinery and equipment, which becomes out-of-date quickly.

• Specific industries

[1] Dye industry

With the application of the Company Rationalization Promotion Law (enacted in 1952) modern machinery and equipment were subject to special depreciation, the level of fixed asset tax was reduced, and subsidies were granted for experimental research. (Note- the law was enacted with the objective of promoting the rationalization of key industries, and comprised of preferential tax measures and the granting of subsidies which were applied to specific industries)

[2] Chemical fiber

With the aid of finance provided by the Development Bank of Japan subsidies were granted for industrialization and applied research, and permission was given for the introduction of technology from overseas.

[3] Weaving industry

Subsidies were granted to small and medium-sized companies for modernizing their equipment through finance provided by the Small and Medium Enterprise Finance Corporation which made loans for replacing and rebuilding out-dated equipment.

b) Modernization through structural adjustments

Efforts were made to modernize the industry by making structural adjustments within the textile industry.

This consisted of paying particular attention to chemical fibers, the raw materials for which could be supplied domestically, instead of natural fibers such

as raw cotton and wool for which there was an almost total reliance on imports. The main measures taken in relation to this are listed below.

[1] The drawing up of Measures for the Development of the Synthetic Fiber Industry (1953) and other support measures
These measures consisted of making reductions and exemptions for corporate taxes and business taxes, and shortening the depreciation period for fixed assets in order to create demand and establish a mass production system for synthetic fibers such as vinyl and nylon.

[2] Measures implemented for making adjustments to the raw material sector and for securing supplies of raw materials: Measures for the Development of the Acetic Acid Fiber Industry; Measures for the Development of the Petrochemical Industry; and Measures for the Development of the Carbide Industry and the Tar Industry

As a result of these successive measures taken by the government for the development of the textile industry, preferential tax measures, finance provided by the Development Bank etc, the introduction of technology from overseas, and preferential measures for assisting with research into new technologies, gradual progress was achieved in introducing new and additional equipment within the textile industry.

c) Establishing a quality labelling system

As chemical fiber production increased it became more difficult for the general consumer, and even for manufacturers, to discriminate between different quality standards, and the situation arose where inferior goods were being sold at unfair prices. At the end of several years of investigation into setting up legislation for guaranteeing quality and fair trade the Textile Products Quality Labelling Law was enacted in 1955.

The object of the law was to safeguard the interests of the general consumer by introducing proper labelling for the quality of textile products. It stipulated that: [1] yarn, cloth, knitted fabric, and the main types of apparel made from cotton, wool, and the main types of chemical fibers are textile products which are subject to the law; [2] correct labels should be attached when making quality labels for textile products, and that the name of the labeler should be shown on the label; [3] textile products which are designated by government ordinances when the need arises must carry prescribed quality labels; and [4]

certain quality standards which are subject to compulsory labelling are required to undergo compulsory inspection.

With the enactment of the law measures were taken voluntarily by the various textile industry organizations to implement a uniform labelling system in line with the spirit of the law.

3) Stabilization of the textile industry

Adjustments to production for the purpose of stabilizing prices are inevitable in the case of the textile industry with its mass production and abrupt changes in demand and supply. Extra equipment which is introduced to meet the increase in demand in times when the economy is healthy is liable to be in oversupply when there is a downturn in the economy and changes in demand occur.

Adjustments to production comprised a major part of textile industry policies, and as time passed related legislation was enacted and adjustments made to the industry.

The major measures taken comprised of the following:

a) The application of the Small Enterprises Stabilization Law (1954) (the law preceded the present Law on Organization of Small and Medium Enterprises)

The law consisted of: 1- approval for voluntary production adjustments by manufacturers' associations belonging to industries which were experiencing a slump and which had been designated under government ordinances; 2- the invocation of orders and giving advice to outsiders not belonging to industry associations where necessary; and 3- making it possible to control the introduction of additional equipment by all manufacturers, irrespective of whether they be members of industry associations or outsiders.

b) The enactment of the Law on Extraordinary Measures for the Textile Industry Equipment (1956) (usually referred to as the old Textile Law)

The law was enacted on the basis of the report submitted by the Textile Industry Comprehensive Measures Council which had been established a year earlier in 1955. The findings of the report stated that "Comprehensive measures required by the textile industry consist mainly of adjustments to equipment within the industry and the development of synthetic fibers, and in the case of equipment adjustments in particular, the enactment of legislation is considered necessary".

The objective of the law was to "rationalize the textile industry by placing controls on equipment in order to contribute to the normal development of exports of textile products". This was to be achieved through the following measures:

[1] the registration of spindles and cloth tenters according to the different textiles which are manufactured and processed by those machines, with the use of unregistered equipment to be banned;

[2] setting a quota for spindles and tenters for which additional equipment is required while taking into consideration the demand and supply situation for textiles;

[3] scrapping or storing equipment from areas in which there is a surplus, and which have been registered under the law or the Small Enterprises Stabilization Law, in order to dispose of a certain amount of surplus equipment. This is to be done through joint action and through directions issued to manufacturers by the Minister of International Trade and Industry;

[4] the disposal of the surplus equipment described in [3] above is to be achieved by implementing regulations worked out by the Adjustments Association, and in cases where the involvement of the Minister of International Trade and Industry is necessary, the Minister is to be empowered to order non-members to obey the regulations for the disposal of equipment.

(3) Third Period: The First Period of Structural Adjustments (circa 1965-1973)

Policies which had been adopted in relation to the textile industry up until this time had centered on the development of the chemical fiber industry and on the formation of cartels and also on guidance provided by the government in an attempt to avoid excessive competition. However, the tendency towards controls as seen in the old Textile Law had the adverse effect of hindering the vitality of companies and their ability to respond with flexibility, and had a growing negative effect as far as the operation of enterprises was concerned. Also, the sharp increase in labor wages which accompanied the period of rapid economic growth made maintaining and improving international competitiveness a major task.

Amidst such changes in the environment it became necessary to re-examine the fundamental basis of existing policies. A new policy structure was formulated on the basis of the following three main measures: 1- the Law on Extraordinary Measures for the Textile Industry Equipment (commonly known as the new Textile Law) was enacted and applied to the spinning industry; 2- the Small and Medium Enterprises Modernization Promotion Law was applied to the weaving industry; and 3- the Chemical Fiber Equipment Cooperation Meeting was established to consider the synthetic fiber industry.

[1] Law on Extraordinary Measures for the Textile Industry Equipment (1964)
The law was aimed at modernizing equipment over a four-year period by approving the scrap-and-build method through the implementation a 2:1 ratio for old and new spinning industry equipment accumulated under the old Textile Law. It also aimed at establishing an industry structure which, as a result of the systematic disposal of equipment, could withstand free competition.

[2] The Law on the Promotion of Modernization for Small and Medium Enterprises (1963)
The law was implemented in order to modernize industries, such as the cloth industry, in which a great many small and medium-scale manufacturers existed by making a priority of implementing measures aimed specifically at small and medium enterprises.

[3] The establishment of the Chemical Fiber Equipment Cooperation Meeting
This joint public-private sector meeting was established to replace the old Textile Law in respect of the chemical fiber industry, and adjustments to the introduction of new and additional equipment were made on the basis of these public-private sector discussion meetings. Rigid standards and controls on equipment which were established by the meeting were enforced up until 1968, after which time the introduction of new and additional equipment has been left up to the discretion of individual companies.

A new system for textile policies was finally established in 1964. However, it was exactly at this time that the textile industry was confronted with yet another serious depression.

Consequently, additional measures, like the ones listed below, were implemented in order to transform the industry into one which was able to keep up with the changing times.

[1] Law on Extraordinary Measures for Structural Improvement of Specific Textile Industries (1969)
The enactment of the law saw the launching of the structural improvements project (old project). Under the project companies were brought together, equipment was modernized and surplus equipment was disposed of using low-interest funds provided by the Small and Medium Enterprises Project Association. The four industries covered by the law were the spinning industry, cloth industry, dye industry, and the knit manufacturing industry.

[2] The modernization of the other industries was carried out with the revision of the Small and Medium Enterprises Modernization Promotion Law which established a system for carrying out structural improvements.

[3] The buying up of equipment under the Interim Textile Special Case Law (1971)
Equipment from 13 industries, including the cloth and spinning industries, which were found to have a surplus of equipment as a result of controls imposed on exports to the U.S. on the basis of a textile agreement worked out by the Japanese and U.S. governments, was bought up by the government with the help of industry associations. Although this proved successful to a certain extent in that it facilitated the modernization of equipment and did away with surplus equipment, it was not successful in encouraging company operators to adopt a strongly independent stance in regard to bringing companies together, as it should have been.

(4) Fourth Period: The Second Period of Structural Adjustments (1973-79)

In the early 1970s the textile industry was confronted by new problems, namely, a slump in exports caused by gains made by Japan's neighbors and by the appreciation of the yen, and the change in consumer demand towards greater emphasis on fashion.

It was in response to these developments that in 1973 the Textile Industry Council and the Textile Sectional Meeting of the Industrial Structure Council jointly put out a report which recommended what sort of policies should be adopted for the textile industry during the 1970s. The report stated that "Based on the premise that an international division of labor is to occur in the textile industry it will be necessary to foster know-how-intensive groups and to pay particular attention to the "soft" sector in order to meet the diversifying needs of the people".

The Law on Extraordinary Measures for Structural Improvement of the Textile Industry Textile was enacted in 1974 on the basis of this report. The law resulted in the formation of companies groups which linked different industries such as the spinning and cloth industries, and aimed at turning the textile industry into a know-how-intensive industry.

Structural improvements were made to the textile industry by making improvements to the structure of industries experiencing hard times due to structural factors, and by improving the business activities of small and medium companies.

[1] The application of the Law on Extraordinary Measures for the Stabilization of Depressed Industries (1978)
The law was aimed at making structural improvements to structurally depressed industries and disposing of surplus equipment which existed within those

industries in order to stabilize operations and to overcome the slump which they were experiencing. As for the textile industry, four synthetic fiber industries and two spinning industries were designated as depressed industries, and the disposal of equipment was carried out in accordance with each of the basic plans for the stabilization of the respective industries.

[2] The implementation of the Joint Equipment Scrapping Project
(Note- An outline of the main project undertaken for carrying out structural improvements is provided in the appended material.)

(5) Fifth Period: A Period of Transition (1980s)

As the textile industry entered a new decade the yen continued to appreciate sharply and the efforts by Japan's neighbors to catch up also continued. Despite some degree of variation from industry to industry, in general the textile industry found itself facing a harsh environment.

As a result, the various measures which have been implemented by the government have focussed on making further improvements in order to strengthen the industry. Along with the expansive implementation of adjustments to production and equipment and the structural improvements project which have been implemented since the later 1970s (refer to the appended material), guidelines were worked out for the future direction of the textile industry on the basis of a textile vision. These guidelines call for raising technology and design standards as a means of turning the industry into a know-how-intensive industry in line with the changes in the times.

In 1983 a "New Textile Vision" was announced in order to transform the textile industry from a labor-intensive industry into a technology- and capital-intensive industry which fulfills lifestyle needs. The revision of the Law on Extraordinary Measures for Structural Improvement of the Textile Industry was carried out to accommodate this new vision.

However, owing to the considerable changes which have subsequently taken place in the internal and external economic environment affecting the textile industry, a further report was completed on "The Future of the Textile Industry and Future Industry Policies" (a new "New Textile Vision"). (An outline of this new "New Textile Vision" is provided in the appended material.)

7. Trends in Key Markets

7-1. Japanese Garment Market

The overall structure of the imports of Japan has been changing tremendously. A comparison of imports in 1977 and 1987 shows the share of manufactured products doubled from 20% to 40%, approaching the 50% line in 1988. The ratio of imports of manufactured goods is expected to break through the 50% line in the next one or two years.

One of the leading manufactured item imported is textile products, primarily garments. Such imports are also expected to rapidly expand in the future.

The first reason is that the per capita GNP of Japan stands at the top in the world and the current account balance is reaching US$80 billion and thus demands upon Japan to increase its imports of manufactured goods are expected to become stronger. By way of note, the per capita GNP in Japan in 1988 was US$23,000, higher than the US$19,000 of the U.S. With the current account surplus standing at around US$80 billion in 1988, the way the world looks at Japan has changed completely. The world is looking hungrily at the Japanese market.

Another reason, one unique to the garment industry, is that the share of imports in the domestic market is still low overall and there is considered to be much room for expansion. This is shown in Table II-7-1. Imports of garments as of 1987 totaled 677.3 billion yen (customs clearance statistics of Ministry of Finance). Converted into retail prices, this is estimated to correspond to about 1700 billion yen. Further, the market share of imported garments is considered to be about 13.5%. If the overall share of imports is about this extent at the present time, then judging from the large scale and high level of the Japanese market, there is still room for further expansion.

Next, even judging by the international level, Japan's imports of garments are still low in level. The situation is clear from Table II-7-2. A comparison of the per capita value of imports of garments in Japan and the U.S. as of 1987 shows the U.S. at US$90 and Japan at just US$38, i.e., the American level is 2.4 times as high as Japan's.

Further, it should be noted here that in the U.S. case, if the U.S. were not imposing the tough, current restrictions on imports, the imports by the U.S. would be even greater. It is not easy to compare the U.S. and Japan since their demand structures differ so much, but even considered from the international level, there is still considered to be much room for expansion of Japan's imports of garments.

Further, Japan represents the only open market among the markets of the advanced nations, establishing no restrictions on imports in principle. This point is also important.

Textile products are subject to tough import restrictions by the U.S., EC, etc. as "sensitive items" under the bilateral agreements based on the MFA (Multilateral Fiber Agreement). However, Japan is a de facto free market, free from all restrictions except for some silk yarn and silk products. For textile exporting nations, Japan represents a free market unequalled among the advanced nations.

In the final report on a new vision for the textile industry, put together by the Ministry of International Trade and Industry in November 1988, was incorporated the following regarding implementation of the MFA: "This should be considered the final means when, in the face of serious damage to domestic industry due to sharply rising imports of specific goods, various measures taken, such as exchanges of opinion with the exporting countries, use of the antidumping system, etc., fail to have any effect." Needless to say, any import restrictions would be to deal with mass production type garments imported from Asia.

In the shares of different countries in Japan's apparel imports, the share of the Asian countries have of course been rising. Among these, the rise in the share of South Korea has been remarkable. The share of the four largest exporters to Japan in all of Japan's garment imports was 81.3% in 1987 (South Korea 40%, China 20.5%, Taiwan 16.4%, and Hong Kong 4.5%), breaking through the 80% line for the first time ever. The share of South Korea grew from the 37.8% of the previous year to 40%, while that of China fell from 21% to 20.5%, with South Korea's vigorous entry and China's sluggishness being in sharp contrast.

Noteworthy after the four largest exporters was Thailand, imports from which rose three-fold all at once, placing that country at ninth place among countries of origin (the four largest Asian exporters and the advanced western nations holding the top eight places).

Table II-7-3 shows a cost comparison of garments imported from five Asian countries and regions. The conclusion of the table is that the biggest difference in cost factors lies in the wage costs. Together with the effects of the yen appreciation, this is the most important reason why imports are advantageous. For example, in the case of men's long sleeved dress shifts (polyester/cotton 208), the processing cost is 600 yen per piece for a Japanese make, 293 yen for a South Korean one, 303 yen for a Taiwanese one, 325 yen for a Hong Kong one, 217 yen for a Thai one, and 173 yen for a Chinese one. The difference in processing costs remains large today.

However, this difference in wages is changing with each year along with the economic growth of the various countries. From this viewpoint, South Korea and Taiwan, which have recently had to raise wages by a very high percentage, face uncertain futures as this may be expected to place China and the ASEAN countries in a more advantageous position. Note that high quality apparel from Italy, France, the U.S., etc. should continue to main a stable 15% share of the market, all together, for the time being.

Table II-7-1. Import Ratio of Apparel (Trial Calculation)

Year	Retail sales of apparel throughout country (A) (trillion yen)	Apparel imports (B)		Retail sales of imported apparel (C) b x 2.5 (trillion yen)	Import ratio (C/A) (%)
		CIF (US$ million)	Yen dominated (billion yen)		
1980	10.13	1,530	3,476	0.87	8.6
1985	11.56	1,995	4,780	1.20	10.4
1986	11.90	2,853	4,741	1.19	10.0
1987	12.50*	4,649	6,773	1.69	13.5

Source: Susumu Tanaka, "Future of Textile Business", 1989.

Table II-7-2. Comparison of Per Capita Apparel Imports of Japan and U.S.

Year	USA		Japan	
	Apparel imports (US$ billion)	Per capita imports (US$)	Apparel imports (US$ billion)	Per capita imports (US$)
1980	68.5	30.0	15.3	13.1
1981	80.0	34.8	18.0	15.3
1982	87.0	37.5	18.3	15.4
1983	102.9	44.0	15.0	12.6
1984	145.1	61.0	19.5	16.3
1985	160.6	67.2	20.0	16.5
1986	185.5	76.7	28.5	23.5
1987	219.6	90.0	46.5	38.1

Source: Susumu Tanaka, "Future of Textile Business", 1989.

Table II-7-3. Imports of Apparel by Origin

(Unit: US$ million, %)

	1986		1987		1988 (Jan.-Sep.)	
South Korea	907	(37.8)	1,570	(40.0)	1,605	(38.4)
China	505	(21.0)	804	(20.5)	1,016	(24.3)
Taiwan	397	(16.5)	642	(16.4)	482	(11.5)
Hiong Kong	105	(4.4)	176	(4.5)	198	(4.7)
Thailand	14	(0.6)	43	(1.1)	78	(1.9)
Italy	210	(8.7)	309	(7.9)	366	(8.7)
U.S.	36	(1.5)	76	(1.9)	91	(2.2)
France	55	(2.3)	77	(2.0)	82	(2.0)
England	58	(2.4)	86	(2.2)	92	(2.2)
West Germany	18	(0.8)	23	(0.6)	21	(0.5)
Total	2,400	(100.0)	3,926	(100.0)	4,181	(100.0)

Source: Susumu Tanaka, "Future of Textile Business", 1989.

Table II-7-4. Cost Comparison of Apparel Imported from Five Asian Regions (as of July 1988)

	Cost Comparison of Imports				
	S. Korea	Taiwan	Hong Kong	Thailand	China
Fabric cost US$1.70 x 19.2m	$32.64	$32.64	$32.64	$32.64	$32.64
Secondary materials (local)	$ 6.00	$ 6.00	$ 6.00	$ 5.00	$ 2.00
Secondary materials (Japan)	$ 2.42	$ 2.42	$ 2.42	$ 2.42	*$ 8.00
Processing costs	$27.00	$28.00	$30.00	$20.00	$16.00
FOB price (per dozen)	$68.06	$69.06	$71.06	$60.06	$58.64
Overseas shipping insurance	$ 2.12	$ 2.28	$ 2.38	$ 2.48	$ 2.37
Import duties (CIF x 9%)	$ 6.32	$ 6.42	$ 6.61	$ 5.63	$ 5.49
Price on arrival at port (per dozen)	$76.50	$77.76	$80.05	$68.17	$66.50
Converted at US$1=130 yen (per piece)	¥829	¥842	¥867	¥739	¥720
Customs clearance charge	¥35	¥35	¥35	¥35	¥35
Domestic shipping and storage	¥25	¥25	¥25	¥25	¥25
Interest (six months) at 6% per annum	¥27	¥27	¥28	¥24	¥23
Total import cost (B)	¥916	¥929	¥955	¥823	¥803
Import merit (A)	¥170	¥157	¥131	¥263	¥283

Source: Susumu Tanaka, "Future of Textile Business", 1989.

7-2. U.S. Garment Market

7-2-1. Market Scale

According to UN statistics (SITC 84), the U.S. accounts for 28% (1987) of the world's imports of garments. U.S. imports of garments exceeded the US$10 billion mark in 1983 and reached US$22 billion in 1987. The rate of growth of imports in the 1980's has been an average annual 18%.

(1) Imports

Looking at the recent trends in imports on a volume basis (SYE), the following points may be mentioned:

[1] The share of the "big four", i.e., Hong Kong, Taiwan, South Korea, and China, which for long years accounted for most of the U.S. apparel imports, peaked at 70% in 1982 but fell to 53% in 1987.

[2] In 1987, among the "big four", there was a drop in the volume of imports from Taiwan, Hong Kong, and South Korea.

[3] While the share of the "big four" fell, there were marked increases in the volume of imports from the Dominican Republic, Mexico, Haiti, and other Caribbean countries.

[4] The average unit price of imports in US$/SYE was by far the highest for Italian apparel, followed by apparel from Macao, Japan, Hong Kong, and the NIE's and ASEAN countries.

[5] A look at the items in which the "big four" hold high shares shows Taiwan holding an overwhelmingly high share of the market for sweaters. On the other hand, the "big four" hold relatively small shares of the market for shirts, women's lingerie, dresses, and blouses.

[6] Provisional statistics for 1988 show that imports from the "big four", with the exception of China, have fallen in volume and, even in value, have risen by only a few percent.

Looking at the trends in imports from the advanced nations and countries other than the "big four" , on the other hand, the following may be pointed out:

[1] Imports from the ASEAN countries, India, Sri Lanka, Bangladesh, Macao, and Mexico have been growing at the expense of the shares of the "big four".

[2] The value of imports from the lower group of Guatemala, Greece, Portugal, Turkey, Israel, and the UAE has been rising rapidly in recent

years, going up 40% in 1987, but the overall share of these imports is still no more than 4%.

Table II-7-5. Trends in Import-Export Balance of Apparel of U.S.

(Unit: US$ million)

Year	Imports	Exports	Balance
1967	595	119	-476
1970	1,053	155	-998
1971	1,402	164	-1,238
1972	1,718	198	-1,520
1973	1,956	229	-1,727
1974	2,095	333	-1,762
1975	2,318	341	-1,977
1976	3,257	434	-2,823
1977	3,650	524	-3,126
1978	4,833	548	-4,285
1979	5,015	772	-4,243
1980	5,703	1,0901	-4,702
1981	6,756	1,032	-5,724
1982	7,386	775	-6,611
1983	8,649	664	-7,985
1984	12,029	638	-11,391
1985	13,493	593	-12,900
1986	15,712	721	-14,991
1987	18,454	943	-17,511

Source: Office of Textiles and Apparel, Department of Commerce

Table II-7-6.Apparel Imports by Key Countries/Regions of Origin

(Unit: million yd^2)

	1964	1968	1974	1978	1982	1984	1986	1987
Taiwan	36	148	422	608	748	931	1,011	942
Hong Kong	168	321	369	695	690	814	881	871
People's Republic of China	0	0	8	63	357	445	709	739
Korea	11	144	294	458	576	685	701	690
Subtotal	215	613	1,093	1,824	2,371	2,875	3,302	3,242
% of Total	38%	53%	56%	63%	70%	61%	56%	53%
Japan	197	313	164	170	76	138	121	87
% of Total	35%	27%	8%	6%	2%	3%	2%	1%
Philippines	44	43	102	158	161	234	274	304
Indonesia	—	—	—	—	38	129	168	192
Bangladesh	—	—	0	0	2	24	109	179
Dominican Republic	—	—	6	35	76	95	143	173
Singapore	—	23	90	85	82	128	182	172
Mexico	—	13	91	91	56	86	116	160
Sri Lanka	—	—	1	10	59	108	138	157
India	—	—	27	77	73	131	124	151
Haiti	—	—	41	53	54	68	96	109
Malaysia	—	—	—	—	26	64	113	108
Subtotal	—	—	358	509	627	1,067	1,463	1,705
% of Total	—	—	19%	17%	19%	23%	25%	28%
All Other Countries	—	—	322	398	308	635	973	1,082
% of Total	—	—	17%	14%	9%	13%	17%	18%
Total All Countries	561	1,153	1,937	2,901	3,382	4,715	5,859	6,116
	100%	100%	100%	100%	100%	100%	100%	100%

Source: Office of Textiles and Apparel, Department of Commerce

Button, wool and man-made fiber apparel imports totalled 6,116 million SYE in 1987. Imports of new MFA fibers-silk blends and other vegetable fibers-amounted to additional 578 million SYE bringing total apparel imports for 1967 to 6,694 million SYE.

Table II-7-7. Top 20 Countries/Regions of Origin of U.S. Apparel Imports

(Unit: US$ million/million yd^2)

Rank	Country	Import value	Import quantity	Unit price per yd
1.	Hong Kong	$3,659	1,027	3.56
2.	Taiwan	$2,656	974	2.73
3.	South Korea	$2,365	840	2.82
4.	PRC	$1,889	924	2.04
5.	Italy	$ 792	75	10.56
6.	Philippines	$ 579	308	1.88
7.	Singapore	$ 472	173	2.72
8.	India	$ 436	154	2.83
9.	Indonesia	$ 372	194	1.92
10.	Dominican Republic	$ 372	174	2.14
11.	Mexico	$ 362	160	2.26
12.	Sri Lanka	$ 335	157	2.13
13.	Japan	$ 328	89	3.68
14.	Macao	$ 311	80	3.88
15.	Malaysia	$ 297	110	2.70
16.	Thailand	$ 279	87	3.21
17.	Bangladesh	$ 275	180	1.53
18.	Turkey	$ 186	76	2.45
19.	Haiti	$ 142	109	1.30
20.	Pakistan	$ 133	80	1.66

Source: U.S. Department of Commerce

(2) Trends in Domestic Market

According to the AAMA (American Apparel Manufacturers Association), the U.S. retail market for domestically produced apparel is worth US$69 billion. If one adds on the US$68 billion of imported apparel, one gets a total market of US$137 billion (retail basis).

On the other hand, consumer tastes are becoming more diversified and more individualized. In particular, the postwar generation, which has now grown to a central position in society, is no longer satisfied with conventional, mass produced items.

7-2-2. Evaluation of Thai Products and Problems Therein

Thai garments are positioned at 16th place in the import market and account for only 1.5% of the total volume of U.S. imports (SYE). Further, Thailand exports mostly standard products and therefore competes with Taiwan, South Korea, and other ASEAN nations.

In this survey, Thai products were not found to be inferior in quality or price competitiveness with products of the other NIE's, except for Hong Kong apparel, which dominates the medium class product market.

In the future, in promoting Thai's apparel exports to the U.S. market, the key factors will be [1] a bilateral agreement on textiles with the U.S., [2] Article 807 of the Tariff Schedule, which defines the system of consignment processing trade, and Super Article 807, which gives priority to the Caribbean nations, and [3] consumer trends in the U.S. and competition with the Asian NIE's and China.

Regarding the bilateral agreement on imports of textiles (including apparel), the U.S. has been deliberating with Thailand over an agreement since January 1989. The current agreement introduces a group quota system for three Far Eastern countries and Japan and sets severe average growth rates for imports from major countries - 3.3% for China, the highest rate, 1.46% for Hong Kong, and less than 1% for Taiwan and South Korea. Further, the scope of the agreement has been expanded to cover 43 countries and to even cover silk and mixed hemp products. The situation for exports of Thai apparel to the U.S. is expected to become increasingly severe in the future.

Article 807 of the Tariff Schedule defines consignment processing trade as "the shipment overseas of parts produced in the U.S. for overseas assembly and the reimport of the same with payment of duties only on the added value resulting from the overseas assembly". For fabrics, this system can be applied even to fabrics not produced in the U.S. so long as "they are cut in the U.S.". At the present time, this system is being used in the 21 Caribbean countries, Mexico, and Columbia.

However, in 1986, the U.S. set its own preferential quotas for the Caribbean countries for their exports of apparel using fabric made in the U.S. and cut in the U.S. and concluded bilateral agreements with Jamaica, the Dominican Republic, Haiti, Trinidad and Tobago, and Costa Rica. Next, it concluded an agreement with Mexico under the above terms.

The extension of these privileges to the Caribbean nations and Mexico was meant to enable these countries to serve as production bases capable of competing with imports from the Far East and to give them the ability of "quick response" (QR). The result of it has been the successive establishment of apparel producing factories in the Caribbean nations. The decisive advantages of apparel production in these regions are [1] low labor cost and cost of fabrics and other materials and [2] quick response (QR) to U.S. demand trends. U.S. apparel importers are able to quickly obtain standard products from these regions at low cost.

South Korean, Taiwanese, and Hong Kong apparel companies have already invested in factories in those regions and are setting up for export of mass production

items and standard items to the U.S. from there. Demand for standard products in the U.S. market has leveled off at the present time and exports of apparel from the Caribbean nationns would work to decrease the growth of exports of Thai and other countries which are present exporting mass production type goods.

As to U.S. consumer trends, there has been a remarkable slowdown in growth of standard products. Instead, more individuality, diversity, and fashionability are demanded than ever before. Further, the lifecycle of products has become shorter. In other words, the area in which future growth may be expected has shifted from the mass production type items in which the Asian nations are competitive to short run production type items. In the future, exports of apparel should desirably be of a type meeting actual demand, in which consumer needs are accurately grasped.

7-3. West German Garment Market

7-3-1. Market Scale

(1) Import and Export Trends

West Germany imported 13.56 billion DM worth of apparel in 1987, up 11% from the previous year and 7.5 times the amount of 1980. At the same time, it exported 6.05 billion DM worth of apparel, giving it a deficit in the apparel trade of 7.5 billion DM.

A look at the origins of the imports shows the EC, led by Italy, accounting for 32.9% of West Germany's imports, the largest share, followed by Eastern Europe with 7.5%, the Mediterranean countries with 20.5%, the EFTA with 5.3%, and the LDC's with 26.9%.

As a geographic characteristic of the imports, mention may be made of the stress on Europe in the import structure. The reliance on the EC countries is a conspicuous feature of exports as well.

By country, the main suppliers are Italy, Hong Kong, and Yugoslavia, in that order, but imports from China and Turkey, Morocco, Greece, and other Mediterranean countries have been sharply rising. Imports from Thailand tripled in the three years from 1985 to 1987, but account for just 1.2% of overall imports.

A look at imports by commodity classification shows large imports being made of slacks, men's shirts, and blouses. Among the items imported from Thailand, women's outerwear accounts for 51.4%.

The West German apparel trade features as a general trend a rise in imports, a downturn in the share of the three major Far Eastern suppliers, and a gradual expansion of imports from Eastern Europe and the Mediterranean countries. As the reasons for the increase in imports of apparel by West Germany, mention may be made of the large rise in the exchange rate of the DM with respect to the U.S. dollar, the basic factor of rising wages, and the increasing weight of consignment processing trade where Germany exports bolts of cloth to Eastern Europe and the Mediterranean countries for processing into apparel etc. and then reexports it to Germany.

Further, regarding the growth in imports from the Mediterranean countries, in recent years, import restrictions have been toughened in member countries of the MFA and preference has been given to imports from the Mediterranean countries under special trade agreements.

(2) Trends in Domestic Market

According to 1986 UN statistics, West Germany was number two in the world after the U.S. in imports of apparel (SITC 84) and was number five after Taiwan in exports, making a leading apparel producing and consuming nation.

As of 1988, apparel companies generated sales of about 24.0 billion DM. Of this, about 18% was overseas sales, it is estimated. The domestic market was worth about 19.6 billion DM.

The volume of apparel production has declined almost straight since the end of the 1970's. If the production for 1980 is taken as 100, production fell to 77.1 in 1987. Compared with the 95.0 for textiles per se, the recent fall in apparel production has been striking.

The per capita clothing costs of West Germany and the weight of clothing costs in household consumption in the same are the highest in the EC. This may be said to reflect the feature of the medium and high class product market, where older consumers etc. look for stable quality and a corresponding price and quality of material.

The following may be mentioned with regard to recent consumer trends:

- The West German market differs from the market of the U.S. in that the demands on quality-oriented goods are severe.
- However, in recent years, Germany, like other advanced countries, has been undergoing a strong diversification of demand and individualization of design and fashion. Further, product lifecycles have become shorter.
- Sales in the new growth fields of sports and leasure goods have been growing, with particularly fast growth being shown by items with good product development concepts.

Therefore, the market is becoming increasingly clearly split between high quality, fashionable goods produced domestically or imported from the EC and mass produced, standard goods produced through consignment processing in the Mediterranean and Eastern Europe.

7-3-2. Evaluation of Thai Products and Problems Therein

Thai garments account for an extremely small 1.2% of West Germany's garment imports. As reasons for this, mention may be made of the limited materials of Thai products, the lack of variety, and the disadvantageous shipping costs and delivery times compared with the Mediterranean countries and countries near West Germany.

In promoting exports of Thai garments to West Germany, the marketing strategy would have to give consideration to the consignment processing trade and dealing with diverse, small orders, not thinking about the quotas under the MFA.

In the consignment processing trade of the EC, only the added value given to exported semifinished products is taxed. In Germany, however, this system can only be used by manufacturers. The consignment processing work is going mostly to the Mediterranean countries and Eastern Europe, due to their geographic proximity and low wage costs. In particular, over 80% of the garments imported from Yugoslavia are produced by consignment. The percent of consignment processing imports in all imports was 14 to 15% for fabric products, over 30% if knitted products are included.

As to bilateral agreements based on Article 4 of the MFA, as of the end of 1987, the EC had concluded agreements with 27 countries. If one adds the two exporters which have not joined the MFA, this rises to 29% countries and regions.

Among the countries subject to quotas, South Korea, Hong Kong, and Taiwan have had their growth rates depressed, but Southwest Asia and the ASEAN countries are in a relatively better position compared with the above three Far Eastern countries/regions.

7-4. U.K. Garment Market

7-4-1. Market Scale

(1) Import and export trends

Garment imports have been rising as a general trend, reaching 2,778 million pounds in 1987. Exports, on the other hand, came to 1,428 million pounds, resulting in a deficit in the garment trade of 1,349 million pounds.

A look at imports by countries and regions of origin shows Italy, West Germany, and Portugal accounting for 40.2% of the total and over half of the EC share. Hong Kong accounts for 20%, South Korea for 7.5%, and India for 4.1%. In recent years, imports from Turkey have been increasing by leaps and bounds. Imports of Thai garments have been rising rapidly in recent years, but accounts for just 1.8% of total imports - a low share just as in other advanced country markets.

On the otherhand, 60% of the exports go to the EC and 10% to the U.S., with the shares of the advanced nations thus being overwhelmingly high.

There was no clear trend observed in consignment processing trade such as was seen with the U.S. and West Germany. Privileges are extended to the Mediterranean countries for consignment processing, but the U.K.'s fabric sector is inherently weak in international competitiveness, so effective use cannot be made of consignment processing and thus the U.K. merely imports finished goods.

(2) Domestic market trends

In 1987, British garment manufacturers produced 4,490 million pounds worth of goods. Since the U.K. imported 2,778 million pounds worth of garments, the two combined total over 6,000 million pounds. Subtracting the 1,428 million pounds of exported garments, one ends up with a domestic market worth 5,800 million pounds.

In recent years, there has been a striking slowdown in production of serge. A look at the volume of production shows that if 1980 is taken as 100, production rose to only111 in 1987. However, garment consumption expenditures, including imports, have been rising.

A look at the increase in imports using the rate of pure import penetration of men's apparel (percent of import surplus over apparent consumption) shows the rate at over 50% for all items except for socks and underwear and at 90% for knits and 77.3% for suits. In 1980, the rate was only 28.4%, so imports have increased at a faster pace then both production and exports in the period from then.

In the U.K., traditionally the medium and lower class item markets have been overwhelmingly important. The following features may be observed in consumer trends in recent years, however:

[1] Shift from casual cotton wear to higher quality items.

[2] Shift from heavyweight wool apparel to lightweight worsted apparel.

[3] Mix-spun products of natural fiber and manmade fiber.

[4] Mix-spinning of viscose and cellulose based fibers with cotton and synthetic fibers.

[5] Shift by consumers to natural fibers.

[6] Greater fashionability in knit underwears

[7] Consumer preference for more personalized garments

[8] Specialization of manufacturers into specific garment fields

7-4-2. Evaluation of Thai Products\

British garment retailers commented as follows regarding Thai garment products as compared with the products of competing countries.

First, Hong Kong products are judged as suitable in price, quality, delivery, and other terms of transaction. Further, as to materials, frequent use is made of viscose, polycotton, denim, and other materials in great demand.

Indian products are inferior in quality compared with the products of the three largest Far Eastern suppliers, but are cheap in price. Representatives of Indian companies often visit British retailers to obtain information and thus have a firm grasp of trends in the market.

Taiwan and South Korea come close to Hong Kong in quality and price, but do not as close exchanges of information with British importers or retailers as Hong Kong.

Further, the Philippines is entering the U.K. market with children's wear and Malaysia with raincoats etc. They are ranked lower than the above countries, however.

As to Thai products, first of all mention was made of problems of late delivery. Usually, the importers and retailers of the purchasing country delay in placing their orders as much as possible so as to better discern the fashions popular that year and consumer trends. Thailand still cannot sufficiently cope with this.

Second, there was reportedly a problem with quality. Of course, quality is evaluated in relationship with price, but Thai products reportedly suffered from numerous problems in color fastness rather than design.

Third, Thai companies do not engage in sufficient market promotion. British importers do not have many direct contacts with Thai companies and often have

procurement centers in Hong Kong. Therefore, Thai garments are often evaluated as being oriented to the low income earning consumers more than they really are. In the future, it is considered necessary for Thailand to positively participate in exhibitions and apparel fairs throughout Europe.