I-2. List of Companies Interviewed

I-2-1. Textile Factories — Nov. and Dec. 1988 Survey and Mar. 1989 Supplementary Survey

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Thai Tricot	Dyeing (Bleaching, dyeing and resin processing of *woven fabric*)	Employees 700 Workers 600	Recently introduced Hisaka jet high pressure continuous dyeing machines	Mostly for domestic demand (in particular Sampeng). Some sales to Burma, Laos, and Cambodia (about 30%).	Equity composition: Initially, 51% Thai side and 49% Japanese side, at present, 80% and 20%, respectively Average monthly sales: 23 to 25 million bahts Technology and quality: Production managed and run by Japanese engineers	Dyes: West Germany, Switzerland, U.K., and Japan Auxiliaries: Thai products
Union Thread	Spinning: (cotton and acrylic) Dyeing: (cotton yarn, TC mixed yarn)		Insufficient spare parts		Technical level: About 60 to 70%	Dyes: West Germany, Switzerland, and Japan Softening agents: Japan
Nan Yang Textile Nan Yang Knitting (Visited twice)	Spinning Apparel Knitting Dyeing	Garment sector 800 Knitting sector 250 Dyeing sector 350	• Power cutters for cutting fabric 10 • Various sewing machines 650 • Irons 28	Japan, Canada, Australia	Spinning factory under construction under BOI approval. Problems with shortage of engineers Requests to government: R&D, inspection systems, textile information services	Problems in storage, quality, and purchasing price due to obligation to use Thai cotton Dyes: Imports used
Lucky Tex	Spinning Weaving Dyeing	3,237	Applications for additional taffeta weaving machines and dyeing machines approved by BOI	Domestic : 47% Export : 53% (of which, 32% Europe, 29% Asia, 13% America, and 15% Middle and Near East)	Survival policy of shifting away from OE yarn denim to specialization in ring type denim (Competition between Japanese companies and local companies) Equity composition: Toray 49.0%, Thai Garment 49.4%	Thai cotton used by the company from the start (at one time 30%, now about 10%). Cotton imported from U.S. and Africa.
Toray Nylon	Synthetic fiber spun yarn (nylon filament yarn, polyester filament yarn)	700 9 Japanese staff	Use made of tax exemptions on introduction of latest facilities so as to construct 100T/A nylon and *polyester production facilities.*	Nylon filament = for domestic consumption (exports of fishnets increasing)	Equity composition: Toray 28%, Mitsui & Co. 17%, total 45% Luckytex 32%, MITSiam 11%, local 12% Problems: Lack of industrial water supplies, high tariff rates (50% for yarn)	Procured from Japan and West Germany. Polyester from U.K. Synthetic fiber materials: Lactam procured from Japan and BASF and TPA from ICI (U.K.)

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Thai Toray Textile Mills	Woven fabrics (polyester 65%, polyester and rayon mix spun 35%)		Spinning machines and looms are subject to restrictions on facilities, but replacement is allowed for modernization and capacity is being increased by the change to new facilities	40% of production exported. Emphasis shifting to New Zealand, Australia, Hong Kong, and Middle and Near East. Domestic sales: Retail and direct sales, in particular to Sampeng.	Equity composition: Toray 25.1%, Tomen 17.1%, Gifu Seisen 5.7%, total Japanese side 48.6%, local side Luckytex 3% plus general shareholders. Company has invested primarily in tetron and rayon.	
Thai Kurabo	Spinning Weaving	907 Male 1654 Female 742	Ring spinners 32,032 sp (79M/C) Looms 824 M/C Replacement by air jet looms underway. Almost all spare parts are imported.	Export ratio: 45% Domestic sales 55%, of which about 60% is for indirect export. Export destinations: Japan 30%, Europe 25%, Middle and Near East, U.S., Bangladesh, Sri Lanka	• Handicapped if compared with local companies. Costs, including personnel costs, are higher. Has to be adopt to compete and must plan products and diversify same. • High weaving and knitting ability and low spinning ability.	Reduction in use of cotton produced in Thailand. Cotton mostly imported from U.S. (recently cotton also imported from China, Africa, and Australia). • Domestic price of polyester raw stock made in Thailand may become obstacle to achieving cost competitiveness.
Tokai Dyeing	Dyeing Prints 1.5millionyd/mo Saran 1million yd Fabric dyeing 200-250 Yarn dyeing and treatment 500,000 yd		Infrastructure: 5000 t/month water, ground water used, water quality poor. Land: 41,600 m2 Room for expansion, water treatment, after addition, aeration capacity to be doubled, shift from Kurita type aeration to natural aeration.	All consignment processing, 80% of orders from Marubeni, 20% from Thai Kurabo. Of Marubeni orders, 60% are for Sampeng, 20% for export. Mostly domestic demand.	• In future will not handle polyester and textured yarn fabrics. Filaments are a local market and company is not competitive there. Cost composition: Costs include 40% materials cost. Percent of fluctuating costs is high, so profits are low and company is susceptible to price fluctuations.	97 to 98% of dyes imported. Local dyers include Thai Ambica and Thai Matangi. Net disperse dyes, vat dyes, direct dyes. Quality-wise, suited for batch dyes, not suited for continuous dyes.
Lucky Tex	Spinning	2,257 Male 348 Female 1,909	Lack of mechanical engineers for managing machinery. High import duty on spare parts. No heat resistant bobbins able to handle steam locking available among domestically produced plastic spinning bobbins and these therefore have to be imported.	Exports 60%, of which Europe 35%. Others include ASEAN, Australia, Canada, Middle and Near East, North America. Local sales 40%, used for garments, half of which are exported. Total exports 80%	Emphasis on quality more than quantity. Beginning to handle special products (new merchandising) Problems in training engineers Gradual reduction of tariffs on parts How to tie in select products with domestic apparel?	Main materials: West Africa, China, Pakistan Thai cotton is high in cost and includes much foreign matter, requiring manual grading.

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Thai Torey Textile	Spinning False twisting, weaving, knitting, dyeing		No facilities replaced since establishment of company. Half of looms made in Japan. Knitting machines made in Europe. Spinning machines and dyeing machines made in Japan	Exports to Japan have merit of being half the cost of products (TR) on the Japanese market. However, there are doubts about exports to Japan in the future. Exports to Australia and New Zealand growing.	Orientation toward special products: TR(B), TR(S), TR-K, TR-Super Bright, T100 (polyester 100%), Toraylon yarn, fancy yarn, etc., 20 types of yarn in all • Example of diversification of products through diversification of materials • Management is Japanese style	Almost all dyes are imported. Thai Ambica produces dyes, but they are not stable in quality. Materials: Polyester is obtained from TNT and some yarn is imported from Indonesia and Taiwan. TR is purchased in Thailand, but is in short supply.
Phiphatanakit Textile	Spinning		500 machines - Toyota, Howa, W. Germany's Sinzer, Looms are made by Picanol • No expansion of facilities scheduled.	60% used domestically (Sampeng), 40% exported to Europe and U.S. (direct imports)	• 100% Thai ethnic Chinese textile company • Problems: Blackouts in rainy season, poor roads • Production on order. Exports are direct with customers coming in through Toyo Menka	Materials (cotton): U.S., West Africa, China 10% Thai cotton used, but seed control is poor and foreign matter is included.
Thai Etsusho	Woven fabrics	40	• Sophisticated finishing facilities • Unregistered looms and spinning machines present. Problems in management of restrictions on facilities. • Dec. 1988, development capacity raised from 22 units to 55. After four to five months, separate factory established and 200 looms installed for start of in-house production of special fabrics.	Production sold to Sampeng wholesalers, from primary merchants (wholesalers not engaging in retail sales) to secondary merchants (wholesalers cum retailers) and to tertiary merchants (retailers). Wholesalers are split between those specializing in interior goods and those in shirt fabrics. Sampeng customers come to office for business talks.	• Established by 100% investment by Niigata prefecture fabric wholesaler, Etsusho. Etsusho pulled out in 1972 and company is currently local equity based. • Originality: Product development is excellent	Yarn is all procured domestically. Acrylic yarn = Mitsubishi Rayon's Thaiacryl, design yarn is produced in-house.
Siam Synthetic	Spinning Dyeing Filaments Woven fabrics	750	414 looms (rapier 78) 4 water jet looms (in testing) 15 false twisters, Italian yarn twisters, ring yarn twisters for strong twisting. 3 flat screens (capacity of 500,000 yd/mo), 3 shifts. (Sophisticated technique and high quality making product mistakable for silk)	Mostly domestic sales (through C. Itoh). Exports started at end of 1987 (550,000 to 600,000 yards). In future, export ratio of 20% desired to be raised to 20 to 30%.	Polyester filament woven fabric is special feature Equity composition: Local 55%, Japanese 45% (C. Itoh 25%, Toray 9%, Sakase Orimono 4%, Komatsu Seiren 4%)	Special yarn is imported. Yarn: Filaments are obtained from Taiwan.

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Teijin Polyester	Synthetic fibers		Plans for expansion of spinning machines (2000 tons) Points in decision for investment = In worst case, would give export competitiveness. • Problems: There are no trading companies in Thailand which act as convertors, so even if domestic materials are available, they are not necessarily used.	Products supplied to Japanese affiliated companies are high quality, select types (40%). Local companies are becoming stronger and buying increasing amounts (60%). No sales to Sukri Group.	Territories of Teijin and Thai Melon in polyester filament: Teijin supplies only Japanese companies, while Thai Melon supplies local companies. Two monopolies exist. No tremendous increases in domestic demand can be expected and, with exports, there are quotas in the west, so companies are looking to border business for growth in consumption and thus expanding spinning operations	Polyester raw stock imported includes: • Raw stock for sewing machine yarn (domestic production scheduled for 1989) • Raw stock for stuffing • China is strong in TC 186 f shirts and pillowcase fabrics, so Japanese affiliated companies are oriented toward higher class goods (dress shirts, working wear, etc.) • No intention of importing new materials.
Teijin Textile	Spinning Dyeing	No. 1 factory 1,500 No. 2 factory 375	No. 1 factory: 21,400 spindles No. 2 factory: 20,304 spindles Restrictions of BOI and MID removed in 1987 and massive expansion made. Prospects due to expansion: Expansion of share to one of the large corporation like Sukri Group and lead in prices. Room for entry into new fields too.	Export destinations Spun yarn... Australia, Canada, Japan, France, 300,000 to 350,000 pounds/month (20 to 25%) Woven fabrics... Middle and Near East, Hong Kong, China, South Korea, U.S., 5000 bolts/month (25%) Own consumption: 50% Domestic sales: Direct contacts with four to five leading Sampeng wholesalers.	• Equity composition: Teijin (production), C. Itoh (sales), Thai side (labor management), with Thai side having almost no sales rights. 78% of sales are handled by C. Itoh. • Predyed fabrics come in large variety of qualities and patterns, making this factory one of rare ones in Bangkok • Product development... post dyeing 20 types/mo, yarn dyeing 20 types/mo, actual 5 types/mo. • Dyeing and processing technology is weak point	• Materials being diversified. In addition to TR, use being made of wool, linen, and silk. Cost analysis: Spinning = Materials 60%, factory costs 40% Woven fabrics = Materials70%

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Soon Heng Lee Textile	Dyeing Woven fabrics	280 Two shifts	300 looms (of which, 200 are for yarn dyed fabrics; 100 added in 1987) 1 sizing machine. Sizing agents used are PVA and starch. Entire amount can be procured domestically, but PVA is made in Japan. PVA costs 115 to 120 bahts/kg, starch over 3 bahts/kg.	Exporting through Marubeni and Erawan (Indian affiliated), more to Erawan. Markets are Burma and Middle and Near East.	• Strong desire for technical guidance staff • Production 300,000 yards/mo • Corporate form: Limited company (small company run by family) • Plans for new construction of spinning factory with 20,000 TC spindles (BOI)	Yarn: Domestic TC yarn is high in price, so recently partial use has been made of Chinese yarn. However, there are problems with quality of Chinese products, so company is aiming at inexpensive prices and stable supplies through system of self-supply. Dyes: All dyes are imported. There are no tax refunds and import duties are 30%. Appreciation of Japanese yen and German mark has made cost of dyes higher. Domestic products are unstable in quality.
Siam Development	Woven fabrics	More than 200	• 350 looms (of which 50 are recently purchased used machines) • 60 shuttle looms added at separate location • Applications made at BOI for 240 new looms in June 1987		• Capitalized at 10 million bahts • Family run limited company • Technology was developed through independent study and experience • Produces elastic fabrics	• Yarn is all procured domestically. • TC, TR, and cotton are purchased from Lucky Textile, Union American, etc. • There is always two-week stock on hand, but state of storage is poor.
Saiviwat Industrial	Dyeing Bleaching Finishing	• Male 160 • Female 150	• No approval needed for expansion of dyeing machines, but profit ratio to capital invested is lower than with textiles and so there are no plans for expansion. • Approval from provinces is easier in case of new installation than expansion. Water treatment facilities of company are excellent.	• Receives requests for yarn dyeing from group and other weaving factories and knitting factories. • Unit of orders received: Yarn dyeing = from 300 pounds. • On requests for export items (when exported by the customer), when for Japanese market, there are conditions of color fastness, less than 5% elasticity in finishing, and less than 10 ppm of formalin.	• Established in 1979 • Equity composition: Local 100% • Capitalized at 7 million bahts • At start of operations, 80% of operations was in dyeing of TC yarn and fabric dyeing • Starting around 1984, engaged in 50% dyeing of cotton fabric and 50% of TC • Started dyeing 70 to 80% cotton fabric, mostly circular knits, from 1986.	• Dyes: All imported • Dyes from Japan are from Nihon Kayaku and Nikka (Fukui prefecture) • Domestic dyes are available, but customers demand high grades, so use is made of imports. • Resin: No domestic production. • Mostly procured from Europe, with good quality resin obtained from Germany.

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Jong Pattana	Woven fabrics	Average for year 600 Three shifts Number differs by season	• 452 shuttle looms All used machines. 92 machines were recently purchased. • Has right to expand with another 500 looms. • Almost all parts are domestically made. Winding machines and dobby parts are imported.	• Export ratio: Indirect exports of about 10%	• Established in 1985 • Equity composition: Local 100% • Monthly production: 800,000 to 900,000 yards	• Polyester filament #75, #100, #150, and #300, TC #45 and S34, TR, etc., 30 types in all. • Domestically produced polyester, TC, TR, rayon, cotton, and acrylic used. • Imported metallic yarn and linen used. • Over 95% domestic products.
Bambi Textile	Prints only		• Used machines with automatic flat machines (mainly German made)	Exports 5%, silk 70%, mainly to West German and the U.K.	• Established 1986, currently still constructing facilities • Engineers from Thai German Printing employed • Interested in interior goods as future products	• Cotton from Marubeni. • Silk imported from Japan and other countries. • Dyes all imported.
Rachabure Filament Textile	Woven fabrics	230	• No. of looms Dobby 100 Jacquard 50 • In future, 24 air jets and 36 water jets are scheduled to be introduced.	• Direct sales to Sampeng, but whether or not this is exported is not known. • Desires to export. At present, scheduled to export to Italy etc., but this is to be through trading company.	• Produces high quality, high class woven fabrics such as polyester georgette, jacquard, etc. • Jacquard, which has become scarce in Japan, should remain at current high prices • Quality control: Room for improvement	• Only polyester. • Purchases only from Teijin.
Kangwal Weaving Factory	Woven fabrics	Spinning 850 Woven fabrics and yarn dyeing 450 Three shifts	• Part of 40,000 spindle spinning machines of Kangwal Weaving Factory are machinery promoted by BOI. That portion makes up the facilities of Kangwal Textile Co.	• Yarn = Used in-house or sold domestically or exported. Export destinations include Australia, Japan, and Middle and Near East. Exports go through Nichimen, C. Itoh, and Howa. • Woven fabrics: Sarongs for Burma (10%), remaining fabrics 100% sold through Sampeng.	• This factory is comprised of Kangwal Textile (established 1986) and Kangwal Weaving Factory Ltd. (established in 1980). • Problems: Insufficient engineers	• Use made of Teijin products, but materials could also be purchased from Melon. However, prices are high due perhaps to monopolistic system, so need for introduction of principle of competition felt.
Yong Suwat	Ginning		• All manually harvested and cultivated.	• Sales to domestic spinning companies • Sometimes exports through brokers • Exports to Japan • 1987 export ratio of 30%	• Used to purchase cotton from farmers and sell to ginning factories, but obtained its own factory in 1979. • Problems: Unstable price of cotton	• Cotton: When ginning cotton directly purchased from farmers, intermediaries are sometimes used for purchases.

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Union Textile	Spinning	5,000	• Plans for facilities: 1,800 spindles, 60 looms	• Export destinations: U.S. 40%, Europe 40%, Australia, Middle and Near East, etc. 20% • Tried dozen or so times to export to Japanese market, but still has not succeeded. • Domestic sales: 5 to 10% of total production sold to fabric wholesale market and garment manufacturers.	• Established by Thai Durable around 1970 • Purchased by Union Textile in 1988	• Polyester and rayon are procured domestically. • Polyester is purchased from Teijin. • Cotton is purchased from U.S., Pakistan, China, etc.

I-2-2. Garment Factories Nov. and Dec. 1988 Survey and Mar. 1989 Supplementary Survey

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Premier	Sweaters	Sweater sector 750 Bag sector 300	• Knitting machines 400 to 450 • Sewing machines 120	• 100% exported 95% to Japan 5% to U.S.	• Member of Premier Group. Handles production and export of sweaters and is a BOI export promoted company.	• Part of cotton and acrylic used is of domestic make, but rest is all imported, so company is in inferior position in costs and delivery compared with Taiwan and South Korea
Bangkok Nylon Co.,Ltd.	Socks	520	Sock knitting machines 430 (70 machines at time of start of operations)	• Domestic 60%, Japan 30%, Europe 10% • Exports to Europe cannot be increased in volume due to quotas. • Exports to Japan increasing due in part to yen appreciation. • Sales to Japan are mostly to three manufacturers: Tokyo Socks, Toyo Socks, and Umeda Knitting	• Established in 1964 • Equity composition: Japan 45% (Mitsui & Co. 30%, Toray 7.5%, Nichinan 7.5%) and Thai side 55% (Saha Patana is large shareholder)	• Sources: Domestic supplies of nylon, TC, acrylic 100% are available. • TC procured from Luckytex and Fujibo. • TW, AW, and AC mostly imported from South Korea.
Kai Boutique	High quality apparel			• Only domestic sales at present	• Mr. Kaewthong, known for his "KAI" brand, is typical fashion designer in Thailand • Improvement of added value of garment industry requires both improvement in quality and promotion of original designs and original brands	
Thai Wacoal	Women's lingerie		• Poor maintenance techniques of machinery and equipment. Lack of parts industries. (Welcomes investment by small and medium sized Japanese machinery manufacturers and investment by materials manufacturers)	• Products for Japan are unprofitable. Lots are small, quality demands severe, claims frequent, and customers otherwise fussier than Europe and other regions.	• Joint venture between Wacoal and Saha Patana Group. Started with 49:51 equity ratio.	• Working on system of self-supply of required materials (through tieup with affiliated companies) (e.g., straps and rubber unwoven fabrics). • Thai nylon is limited to 40 denier type. Products are mostly 30 denier, so product variety is not possible.

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Yamaken Apparel	Sweaters	400 (female 92%)	• Knitting machines 340 (all made in Taiwan) However, 170 are in operation. Repairs are made in-house (3 persons in charge)	• Recent orders from Japan mostly 7 to 10 guage. Patterns preferred are simple ones. Three types of collars being ordered: round neck, V, and cardinal. • Exports expanding to U.S. and EC.	• Established Oct. 1984 • At first was established as BOI export promoted company. However, subsequently exports concentrated toward U.S. and EC, and BOI approval was cancelled (initial plans were to export entire production to Japan)	• Main materials: Cotton and acrylic used are of domestic make. Loss rate is high average 6%. This is major cost factor. • In addition, lamb stole, wool, and ramie are imported.
Rapee Boutique	Fashion shops			• Mrs. Lamyong herself is concentrating on education and garments with high class finishes and has in the past refused proposals by garment manufacturers to make ready-made garments. However, she is very interested incooperating with the readymade garment industry. Her daughter Pichitra has tied up with manufacturers for the production of pret-a-porter.	• Mrs. Lamyong has been managing sewing school and engaging in design activities for over 20 years. • Can't government run design contests and offer scholarships to winners through cooperation with garment and textile industries?	
Thai Iryo Garments Ltd. Dec. 1988	Garments Outerwear 63% Shirts & blouses 20% Pants, Skirts, Pajamas 15%	2,430 2,800 500	No. of sewing machines Thai Iryo Garments Ltd. 1,600 Thai Iryo Co., Ltd. 1,200 Par Garment Co., Ltd. 350 Sewing machines: Thai Iryo uses all Juki machines Thai Iryo Garment uses all Brother machines. Industrial sewing machines are only available from Juki and Brother.	• Export ratio: 100% • Export destinations: 50% to U.S. and Canada, 40% to 10 EC countries and three Scandinavian countries, 6% to Japan, and 4% to Eastern Block and Soviet Union. • Demand sector: At present, most products are brandname products (for example, Levi's and Adidas). Four years ago, mass merchandisers were main customers (Sears, Denny, Montgomery, etc.[2]	• Equity composition: At time of establishment, Nihon Iryo 30%, Teijin 19%, and Thai investors 51% (major shareholder was Sukri). Listed on market in 10th year. Present shareholder composition is estimated to be 45% Sukri family, 10% Japanese side, and 45% general shareholders • Thai Iryo Co. Ltd. was established based on investment from Japan in 1971. Thai Iryo Garments Ltd. was established in 1984.	• Bolts: Current 30% are domestic make and 70% imports. Four years ago, 65% were domestic makes and 35% imports. Main reason imports have increased is high price of domestic products. • Domestic TC and cotton woven fabrics form sellers market due to long period of restrictions on capital investment. • Interlining cloth almost all imported.

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Supplementary survey Mar. 1989 (Thai Iryo Garments)				• Markup for brandname goods for Europe and U.S. is about 80%, in which cost of defective goods is included. As opposed to this, markup for Japan is about 30%. • There is potential demand in Japan and Soviet Union, so when orders fall from the U.S. and Europe, orders from Japan and the Soviet Union will be increased. Right now, the company is trying to avoid them. • Mass production of limited items will probably shift to China and Indonesia.	• Production efficiency Per capita daily production of dress shirts differs according to degree of automation, but in general is as follows: Degree of automation / No. produced Japan 50% 54 South Krea 20% 37 Thailand 0% 21.8	
Dandy	Garments Children's wear	900 to 1,000	• Sewing machines 600 • High duty on imported sewing machines (about 80%). Thailand purchases used machines.	• Export destinations: 60% Japan, 30% EC, others 10% (Canada, Australia) • Japanese buyers: Department stores (Hankyu, Seibu, Daimaru, Takashimaya, etc.), superstores (Daiei, Ito-Yokado, Uni, JUSCO, etc.), importers (Sankyo, Yokohama, etc.), trading companies (Marubeni, Mitsui, Mitsubishi, Nissho-Iwai, etc.) • House brandnames (domestic sales): Dandy, Charcoal, Red & White	• Continuing to specialize in upgraded products, primarily for Japan. Has six designers and is tackling creation of original designs. 10% of shipment value is from original designs (however, mostly sold under buyers' brands and design fees cannot yet be charged)	• Bolts: Use made of domestic makes and imports depending on specifications. Overall, cotton and denim are locally made. Imports are from Hong Kong. 5 to 10% of all materials used are supplied by customers.
Noriko Boutique	Fashion			• Domestic	• Boutique set up by Japanese woman married to Thai citizen 18 years ago. Began tailoring of women's wear, then nine years ago began production and sales of high quality ready-made garments. • Subsequently, daughter studied in U.S., returned home, and began production and sale of pret-a-porter casual wear etc. for the young under "Compose" brand.	

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Nawavit Dec. 1988	Garments Nylon jackets Skirts Pants Blazers	400 Female 95%	• Sewing machines 300 In the case of purchases, all new machines purchased.	• Export ratio 100% • Export destinations: 70% Europe, 30% Japan, in future, exports to Japan would like to increase.	• Established in 1981. Not BOI promoted company. • Cost composition: Materials (including accessories) 65 to 70%, personnel costs and labor costs 30% • Designs: All supplied by customers • Quality control: 18 to 20 QC personnel. All products inspected after sewing process, random check made after finishing, use SGS inspection of original bolts.	• Bolts: More frequent use made of domestic makes than imports. • In domestic makes, TC and 100% cotton used. • Imports are from Japan, Hong Kong, Taiwan, etc.
Supplementary survey Mar. 1989 (Nawavit)				• Exports to Europe for department stores and to Japan for JUSCO, Itoman, AIC, etc.	• Problems: Thai produced materials cannot be purchased. If Thai materials could be purchased it is estimated that in the case of nylon and polyester materials costs could be cut 30% and delivery times cut two weeks. • Reason why purchase of Thai produced materials is difficult is that one of conditions of BOI approval is obligatory exports	

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Michael Trade Ltd.	Garments Children's shirts Skirts Pants, blouses Women'swear Men's shirts	250	• Sewing machines 108. All new Japanese sewing machines purchased through agent. • Plans for capital investment: Present factory scheduled to be expanded and 200 sewing machines added. Price of machines about 1,800 bahts per machine. • Funding of facilities: No government funds required. Funds to be borrowed from private banks. IFCT has interest of 14%, so will not be used for funds. Funds to be procured from Bangkok Bank (interest rate of 11%).	• Export ratio: 100% • Export destinations: 60% West Germany, 25% Japan, 15% U.K. and France • Demanders at export destinations: 90% department stores and Pinocchio for Japan.	• Equity composition: Thai capital 100% • Established in 1975	• Main materials: 95% domestic materials used. Imports are cheaper than domestic makes, but use is made of domestic makes since purchases on credit are possible. Cotton, flannel, and prints are 15 to 20% cheaper when made in Taiwan. Tax refund for imports is slow. • Auxiliaries: Interlining cloth and buttons used are South Korean and Japanese.
General Knits	Garments Knitted sweaters	1000 Female 90%	• Knitting machines 800 Linking machines 300 Sewing machines 40 • Machines are imported from Japan, Hong Kong, and Taiwan. • Average years of experience of knitting machine operators: About six years	• Export ratio 100% • Export destinations: 80% U.S., 20% Europe and Japan. Company began aiming at U.S. market. Recently has been increasing exports to Japan. • Demanders: Department stores and importers	• Established as BOI promoted company in 1973 • Equity composition: 70% Thailand, 30% Hong Kong • Requests to government: Establishment of training center with training courses in knitting, linking, and mending etc.	• 70% of materials used are imports. Cotton yarn and acrylic 100% are made domestically or imported. Wool, wool blends, and AC are imported. Quality of cotton is same in case of imports and domestic products.
JODC Expert	Garments Knits Towels			• Thai managers do not seem to feel threatened over China , Indonesia, Pakistan etc. , catching up. Thai managers work with their minds on only short-term profits.	• Thai sewn garment manufacturers have insufficient engineers who have mastered all stages of technology. • Therefore, JODC experts currently provide overall guidance from design and product development to the production processes irregardless of the content of their contracts.	

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Thong Thai Textile	Garments • Elastic western apparel, pants • 50% for children • 50% for men and women	500 Female 70-80%	• Sewing machines 250 In purchasing, comparison was made among three types: Yamato, Pegasus, and Brother. • Plans for facilities: Expansion of dyeing factory being considered within next three years.	• Export ratio 100% • Export destinations: 80 to 90% Europe, rest Japan	• Established 29 years ago At start, company was promoted by BOI, but incentives to all companies promoted were suspended seven or eight years ago • Equity composition: Local 100%	• Of fabrics produced by company, 80 to 90% is consumed by company (only knitted products). • In times of shortage, yarn is purchased and knitted. Fabrics are procured domestically.
Thong Thai Textile Dec. 1988 and Mar. 1989	Garments	Over 500	• Sewing machines 200 or more	• Export ratio 100% 70% Europe, 20% Japan, 10% U.S. • Sales by written communication to Nissen, Renown, etc.	• Established 30 years ago • Has ability of vertical production of textiles, dyeing, and sewing	
People's Garment	Garments	1200	• Sewing machines 1500 Presently 200 machines on order for Ramphoon factory.	• Export ratio Currently 30%, three years ago 5% • Export destinations: 80% Japan, 15% EC, U.S., Australia, Singapore, and Hong Kong	• Established in 1980. Non BOI promoted company • Equity composition: Local 100%, Saha Group Listed on stock market from end of August 1988 • Production of casual slacks increasing • Problems: Price of domestic fabrics higher than in Taiwan and South Korea and thus no competitiveness	• Rate of use of domestic materials is 90% for products for domestic market and 80% for products for export. • Materials imported for domestic market oriented products are nylon for swimwear, polyester, wool, and other high quality items. • Tax refunds take about six months.
Amtex	Garments Garments made primarily by sewing knit fabrics		• New factory scheduled, to include knitting machines and sewing machines.		• Company owned by family from India • Stressed need for technical guidance personnel	

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Garden of Eden	Garments (casual wear primarily)	5,000	• Sewing machines 800 • Roller type silkscreen printers 3 • Design computers 3	• Export ratio 95 to 98% (U.S., West Germany, Australia, and Japan) • Three types of brandname products shipped to U.S.: Walt Disney Wear, Blowout, and Michel Adam	• Operating company of U.S. and West Germany (with headquarters in Australia). BOI promoted company established in 1978. Has four to five affiliated companies in Thailand	• Local and from China. • About 15% of fabrics imported. • Japanese dyes purchased in Thailand.
Bambi House	Garments	300	• Sewing machines 200 • New factory scheduled for 1990	• Exports to U.S., Japan, and Singapore • Exports under original brands	• Started exports about 18 years ago	• 100% domestic makes.
Bangkok Knitting Industry	Garments Sweaters	Factory workers 250 Factory management 10 Office 4 to 5	• Knitting machines 3 gauge 100 7 gauge 150 12 gauge 50 • Linking machines about 50 • Irons 20 to 30 • Sewing machines for making lapels 2	• Export ratio 100% Exporting since 1973 • Export destinations: 80 to 85% to Europe (U.K., Denmark, West Germany, Belgium, and Australia) and Canada, 15 to 20% to U.S.	• Established 1971 • Equity composition: Local 100% • Has had inquiries from Japan too, but none have reached contract stage. Three years ago, company tried to export to Japan, but failed. Exports to Japan are small in quantity, require numerous colors, and are low in price	• Main materials are almost all imported. • Angora is imported from Japan, wool from South Korea, acrylic from Taiwan, cotton from China, and acrylic wool from Taiwan. • Buttons are produced domestically.
Udomkan Knitting	Garments Embroidered apparel Emblems Garments80%	20	• NC embroidering machines, jacquard type embroidering machines, band knives, etc. • Plans for facilities: Jacquard type embroidering machines to be replaced with NC machines.	• All production sold domestically • Sales customers: Department stores and agents • Sampeng agents sometimes export products of the company. This is known from fact that "Made in Thailand" tags are attached, but volumes are small.	• Established 10 years ago • Equity composition: Local 100%	• Rayon yarn (for embroidery) is imported from Japan. German makes are expensive and South Korean and Taiwanese makes are lower in quality. • Sewn garment accessories are domestic makes. • Domestic fabrics are also used. • Materials are imported in Sampeng.
Pichitra	Fashion Pret-a-porter				• Pichitra is one of top young Thai designers (daughter of Mrs. Lamyong)	

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Nissin Industry Dec. 1988 and Mar. 1989	Garments Knitted products	938 (1988)	• Knitting machines (manual and automatic) about 500 • Linking machines 120	• Export ratio 100% 20% Japan, 25% West Germany, 25% U.S., 30% Italy, France, U.K., Australia • Japanese customers: Itoman, Seibu, Tomen, Sanshu, Aiwa, Miki, etc.	• Established 1972, BOI promoted company • Equity composition: Local 100% • Problems: Capacity of pattern makers not enough to keep up with production	• 70% of materials are imported. Ramie cotton is imported from Hong Kong, acrylic and acrylic nylon from Taiwan, fancy yarn from Italy, wool from South Korea, and Angora and from Japan.
Acme	Garments	8-9	• Sewing machines 14	• Export destinations: Singapore, Hong Kong, Panama	• Local 100%	
Naowarat	Garments		• Sewing machines 10		• Cottage industry type company begun two to three months ago	
Young Student Designers Competition	Fashion shows			• About 500 works submitted, of which about 80 were selected and introduced in the competition.	• Previously has run contest for young designers at Siam Center	
Thai Fashion Garment	Garments Mostly uniforms	About 40 Of which 20 are seasonal workers	• Sewing machines about 30	• All production sold domestically. • Sales customers: Police, military, Bangkok Municipal Officers Academy, private companies, etc.	• Equity composition: Local 100% • Started operations 10 years ago • Modification of order made production	
Golden Ax	Garments and knitted products	Knitting 150 Garments 750	• Knitting machines 120 Sewing machines about 700	• Export ratio 100% of garments are exported. Knitted fabrics are not exported. (40% for in-house use, 60% for other domestic companies)	• Established in 1975 • Equity composition: Local 100%	• 100% domestic products used. When there is trouble over wrong colors etc., it is easier to deal with matters when using domestic products.

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Asian Garment	Garments Knitted wear	About 800	• Knitting machines 14 Sewing machines 750 • Desire to modernize production process, but what to do not known. Further, how much it would cost not known.	• Export ratio 100% 60% Europe, 38 to 39% U.S., 1 to 2% Japan, exports to Japan having been begun just two years ago. • Customers at export destinations: Otto, etc. in Europe. Renown, Marubeni, Itoman, Toman, etc. in Japan.	• Established in 1980 • Local 100% • Reasons for concentrating on knitwear (1) Has knitting machines, so costs can be kept down by finding materials domestically (2) Able to control quality of products • Product level targeted is upper middle level	• Imported materials: 20% of materials are imported. TC 45 for use as knitting yarn is imported from China, while 100% nylon fabrics are imported from Taiwan. • Domestic materials: TC, cotton, sheeting, etc. Quality-wise, there are no problems since purchases are made through large factories such as Luckytex and Tokai Dyeing.

I-3. Questionnaire

I-3-1. Interview and Questionnaire Items for Textile Industry (Spinning, Weaving, and Dyeing Industries)

1. Corporate outline
   (1) Name of company (individual, corporation)
   (2) Industry (when more than one please list all)
   (3) Location (headquarters, plants)
   (4) Date of establishment
   (5) Capital structure (capital, main investors, investment ratios)
   (6) (In the case of joint ventures) Partner firm nationality, company name, and industry
   (7) Number of employees: Male [ ] Female [ ] Total [ ]
   (Manufacturing division only: Male [ ] Female [ ])
   (8) Sales (for the past three years)

	1985		1986		1987	
Major products	Volume	Value	Volume	Value	Volume	Value
Other						
Total						

   (9) Production sales trends over the last three years and responsible factors

2. Materials and supplmentary materials
   (1) Main materials in 1987

Material	Volume	Source (domestic, imported)

(2) Supplementary materials in 1987

Material	Volume	Source (domestic, imported)

(3) When imports were used, please indicate the reason (price, quality, lack of a suitable domestic product, etc.)

(4) Problems encountered with materials and supplementary materials (weaving machine components) (import procedures, domestic procurement, quality, delivery time, etc.)

3. Production and technology

(1) Main production facilities by process (in particular, weaving and knitting)

Name of machine	Type	Domestic or imported (country of origin)	Year installed	Number of units

(2) Production capacity

Item	Monthly production capacity

(3) Number of personnel for each process

(4) Was the prodution technology developed in-house or introduced from outside?

(5) Number of engineers and technicians: [ ] including [ ] foreigners
Schools attended by engineers:

(6) Operating conditions

Spinning industry: Fiber material, yarn count, spinning machine spindle rotations , number of broken threads per unit, yield

Weaving industry: Fiber material, main items, number of spinning machines per operator, defects and loss, number of maintenance personnel

Knitting industry: Fiber material, main items, defects and loss, number of maintenance personnel

Dyeing industry: Average lot size, presence/absence of special finishing processes (water repellent treatment, preshrinking, etc.) for raw cotton dyeing, yarn dying, cloth dyeing, piece dyeing, and print dyeing

Please indicate other special products such as carpets, unqoven fabric, blankets, etc.

(7) Is there an inspection system to test whether products meet specifications? If so, what kind of system?

(8) When subcontractors are used, please indicate the number of firms and the presence/absence of material supply, inspection on receipt, and technical guidance

4. Marketing

(1) Are the products consumed in-house or are they sold outside? Is processing done on consignment from a parent firm or customer (material supply, in-house procurement)?

(2) Main customers by product and volume (in the case of exports please indicate the destination country)

(3) Distribution routes for main products from shipment to final consumer (domestic, exports) (as clearly as possible)

(4) What kind of product planning and development structures are in place at present?

(5) Have there been any changes over the past three years in orders or inquiries from abroad, including Japan? If so, what type of changes?

(6) Please indicate in as much detail as possible the following items concerning selling price, production cost, and production cost breakdown:

Raw materials (%) Labor (%) Electricity (%)

Facilities (%) Other costs (%)

5. Labor
   (1) Average monthly wages for operators and managers
   (2) Average number of working hours per day, holidays, working days per year
   (3) Main means of transportation
   (4) Presence/absence of dormitories, company housing, welfare facilities

6. Peripheral facilities
   (1) Method of transporting raw materials and products: Rail, truck (indicate whether a private transport firm or company trucks)
   (2) Monthly use of steam, electricity, and water
   (3) Presence/absence of boilers, generators, wells at the company
   (4) In the case of the dyeing industry, does the firm possess liquid waste treatment facilities?
   (5) Land area, floor area of plants, offices, and other buildings
   (6) Is there room for plant expansion?

7. Future plans and problem areas
   (1) Demand forecasts for production items
   (2) Plans for expansion of production scale or plans for construction of new product production facilities
   (3) Plans for development of new sales or export routes
   (4) Need for land for new plant construction, area required
   (5) Need for new employees (quantity and quality)

8. Desired government assistance (financing, investment, exports, introduction of land and labor, taxation, raw material import quotas, etc.)

9. In the case of exports to Japan, the U.S., or neighboring countries, please indicate any problems, hindrances encountered, or requests (delivery time, quality, terms of business, import duties and quotas, etc.)

I-3-2. Interview and Questionnaire Items for Garment Makers

Reference number:

Date: / /1988 Time: : ~ :

Firm name: _____

Address: _____

Interviewees: _____

Interviewers: Research group: _____

C/P: _____

Interpreter: _____

1. Corporate outline

(1) Year of establishment: _____

(2) Capital: _____

(3) Participation of foreign capital: • No • Yes ---> Country name: _____

(4) Production items:

- Outer garments made of cloth: • Men's jackets • Men's trousers
  • Women's blouses • Women's slacks • Women's coats
  • Women's dresses • Men's other _____ • Women's other _____
- Cloth underwear: • Undershirts • Men's pajamas
  • Women's pajamas • Men's other _____ • Women's other _____
- Knitted outer garments: • Shirts • Sweaters/Cardigans
  • Pants/Knee pants • Dresses/Skirts • Other _____
- Knitted underwear: • Men's undershirts • Women's undershirts
  • Men's pajamas • Women's pajamas • Pantyhose
  • Other _____

(5) Annual sales: _____

(6) Ratio of exports: _____ %

(7) Situation of varieties of products and production volume:

• Multi-variety, small-lot production • Little-variety, large-lot production

(8) Number of employees: _____ ---> including skilled workers: _____

(9) Monthly production volume in terms of main products: _____

(10) Use of outside ordering: • No • Yes

---> Details on outside ordering: _____

(11) Recent changes in items and sales

2. Strength of products and production system

(1) Ability to handle various levels of products

(2) Existence of manufacturing manuals: • No • Yes

(3) System to handle product specifications

(4) Quality control:

Checkup of number of defective products: • No • Yes

---> Ratio of defects: _____ %

Processes being checked: • Only after completion • _____

(5) Production system:

• Synchronized production system

• Belt conveyor system

• Hanger conveyor system

• Bundle system

• Other: _____

(6) Minimum lot of production: _____

(7) Equipment you have:

- _____ • Domestic made
  - Import ---> Name of country _____
- _____ • Domestic made • Import ---> _____
- _____ • Domestic made • Import ---> _____
- _____ • Domestic made • Import ---> _____
- _____ • Domestic made • Import ---> _____
- _____ • Domestic made • Import ---> _____
- _____ • Domestic made • Import ---> _____

(8) Are you doing anything to train skilled workers?

- No
- Yes ---> What: _____

(9) Management policy on product planning:

Current situation: • Own plan • Customers' plan

- Own and customers' plan ---> Ratio: _____ %

Future policy: _____

(10) Do you feel inconvenienced by the quality of main materials?

- No
- Yes ---> Points of inconvenience: _____

(11) Do you feel inconvenienced by the quality of subsidiary materials?

- No
- Yes ---> Points of inconvenience: _____

3. Cost and condition of transactions

(1) Time for delivery of main products:

Assuming you have materials on hand, how many days do you spend between receipt of orders and shipment? _____ days

(2) Ratio of material and personnel costs to shipment prices:

- Unavailable
- Material cost: _____ % Personnel cost: _____ %

(3) Situation of wages: _____

(4) Do you have accounting standards for estimation? • No • Yes

(5) Conditions for the settlement of accounts: _____

_____

(6) What kinds of claims have been received so far? _____

_____

---> How have you disposed of them? _____

(7) Critical views on condition of transactions: _____

_____

_____

4. Purchase of materials

(1) Main materials: [a] [b] [c] [d]

Materials used: _____ _____ _____ _____

Sources: • Domestic products • Domestic • Domestic • Domestic
• Imports • Imports • Imports • Imports

_____ _____ _____ _____

Purchase price: _____ _____ _____ _____

Time for delivery: _____ _____ _____ _____

(2) Subsidiary materials: [a] [b] [c] [d]

Materials used: _____ _____ _____ _____

Sources: • Domestic products • Domestic • Domestic • Domestic
• Imports • Imports • Imports • Imports

_____ _____ _____ _____

Purchase price: _____ _____ _____ _____

Time for delivery:_____ _____ _____ _____

(3) Reasons for the use of imported materials: _____

_____

(4) What you feel are problems with the purchase of materials: _____

_____

5. Sales

(1) Destination of domestic sales: _____

(2) Destination of exports (name of country and ratio):

_____ : _____% _____ : _____% _____ : _____%

_____ : _____% _____ : _____% _____ : _____%

(3) Export procedures:

Current situation: • Direct exports by ourselves • Through distributors

Future policy: _____

(4) Customers in countries of destination of exports:

Current situation: • Garment makers • Retailers

• Other _____

Future policy: _____

(5) Means of obtaining information on routes of export sales: _____

_____

(6) Methods of approach to new routes for export sales: _____

_____

(7) Existence of corporate outlines, product pamphlets and price lists:

- No • Yes ---> Materials request ed

5. On the expansion of productive capacity

(1) Existence of plant and equipment investment plans:

- No
- Yes ---> For what sector is the equipment planned?

_____

(2) Fund-raising policy for plant and equipment investment (sources, etc.):

_____

_____

6. Problems and difficulties with exports:

_____

_____

_____

7. Matters under request to government agencies and industrial organizations:

_____

_____

_____

I-4. Samples of Plans for Third Country Surveys

(Sample-1)

The US Garment Market

1. Outline of the Textile Market

Outline of the size (sales, export value) and trends of markets for individual goods, focussing on the items being surveyed

2. Demand Trends

(1) Imports

Situation regarding imports classified according to individual items and individual countries (statistics from 1970)

(2) Competition between imports and domestically produced goods

Show the situation regarding quality and price by including interviews with retailers, and provide concrete details in what areas improvements need to be made if Thai-made garments are to expand in the future.

(3) Consumption trends, consumption patterns

Show recent characteristics in design, quality and lifestyle, and show what the position is with regard to these for imported garments (including Thai products), clarifying the situation for each of the main items.

3. Garment Distribution

(1) Characteritstics and trends in distribution

(2) Distribution channels and the roles and the average percentage mark-up for each of the distribution stages

(3) Role of garment importers and the common sales system (agents, stores)

(4) Sales strategies of typical distributors

(5) Trends in production consigned to other countries

a. Show for each individual item what proportion of garment imports is comprised by consigned production

b. By using case studies show what sort of systems are used and what points require attention in cases of production consigned to developing countries. Use case studies for typical items (10 companies).

4. Trends in Domestic Production, Export Trends

(1) Show changes in production value and export value from 1970

(2) Export price for individual items

(3) Report on product development and recent trends in design

(4) Developing typical overseas markets, marketing activities

5. Policies for the Protection of Textile Production

Advanced countries impose restrictions based on the MFA (Multi Fiber Arrangement). In relation to this, show 1- the effect which the MFA is having on countries covered by the survey; and 2- what sort of quotas are being allocated for each country, covering the previous five years and the individual countries (including Thailand) and items involved. (Statistical tables to be attached).

6. Related Restrictions

(1) Related laws and regulations, standards, criteria

(2) Import systems, tariff rates

7. Collection of Related Material and Pamphlets

Attach material such as data, pamphlets and catalogs on the American garment industry, production companies, and exports and imports which are obtained in the course of carrying out the survey.

(Sample-2)

The Hong Kong Garment Industry

1. Outline of the Industry

Provide an outline on the present situation regarding production, exports, company management, technology and product standards for the garment industries in countries covered by the survey on the basis of the survey findings for the items listed from 2. below. A future outlook relating to relative changes in competitiveness between Hong Kong and its Asian neighbors, problems in obtaining raw materials and the development of export markets is also to be included.

2. Production Trends

(1) Production trends

Show, where at all possible, trends in garment production from 1970 for the different kinds of items.

(2) History of the garment industry

Changes in manufacturer numbers, and specific details relating to the size of companies (number of workers per comapny, capital)

(3) Labor

Show changes in labor for the whole of the garment industry (from 1970) as well as what efforts manufacturers are making to improve their sewing technology and design capacity. Provide an outline of training centers and similar organizations where applicable (both public and private organizations).

(4) Mechanization of the whole textile industry

Number of spindles, weaving looms, and sewing machines installed (since 1970).

(5) Raw materials

Trends in the price of domestically supplied and imported raw materials, and an evaluation of the quality of both types.

(6) Outline of government standards

(7) Cost competitiveness

A. Cost competitiveness

Show in which areas garments from the countries surveyed are competitive, and average values for the garment industries. Also show the component ratio for manufacturing costs.

a. Hourly labor costs (converted into US dollars)

b. Raw material costs (for domestically produced and imported materials)

c. Equipment costs

d. Electricity costs (1kwhr)

B. Non-price competitiveness

a. Technical side (sewing technology)

Interview approximately 20 companies on the points listed below:

* Design and pattern making technology
* Marking and cutting technology
* Technology for the pre-sewing process
* Technology for parts sewing and assembly sewing
* Finishing technology
* Production management technology
* Technology for repairing sewing machinery and equipment

b. Design development

Details, including whether design is developed independently or is based on buyer's instructions

c. Delivery

d. Developing export markets, marketing (details including government assistance)

e. Existence of inspection systems, points inspected, and fees (includes government organizations)

(8) Structure of distribution market

Show the distribution structure for garments and special features thereof.

3. Export Trends

(1) Changes in exports

Show changes in exports for individual items, country of destination, and changes in items on the basis of export statistics for individual items for the past 5 years. Show the extent of the effect of the appreciation of the NT dollar.

(2) Types of exports

(Consignment processing exports, licensed exports)

(3) Export channels

Show the extent of consigned production exports (importing countries, individual items, etc). Show what type of route is generally used for exports other than OEM exports.

(4) Export price

Show what changes have occurred in export prices as a result of the depreciation of the US dollar since 1985. Pay particular attention to trends in 1987-1988 using specific items as examples.

(5) Product development and design

Are designs developed independently by each company, or are they based on the instructions of buyers?

(6) Developing overseas markets, marketing activities

Setting of export targets for each major market, diversification of markets, trade fairs, trade missions despatched by the industry, etc.

(7) Competition on overseas markets

What is the competitiveness of export products overseas? What countries are competitors on major markets, and for what reasons?

(8) Product inspection

Outline of organizations (public and private) which inspect garment exports.

4. The Application of the MFA and Measures Taken in Response

5. Industrial Development Policies and Export Promotion Policies

A chronological outline of what sorts of policies have been adopted by the government and what systems have been implemented, including measures applied to general small and medium companies within the garment industry, to show the development of textile and garment production as well as exports. As objective an evaluation as possible of the effects which these policies and systems have had will be made on the basis of information obtained from both the government and private sector companies.

In particular, details on assistance with production and exports and promotion policies will be provided by showing government 1- financial assistance, 2- preferential tax measures, 3- tariff policies, and 4- other policies (scope of adjustments, etc).

6. Case Studies of Major Companies

Case studies focussing on the points listed below will be provided on 5 or so major garment manufacturers (which also play an important role in exports)

(1) Company's history

(2) Changes in main production and export items

(3) Supply situation for raw materials and supplementary materials

(4) How the company uses government assistance and development policies

(5) Development of export strategies

(6) Tie-ups with foreign companies

Where applicable, provide details of capital and technical tie-ups between head office and foreign companies.

(7) Characteristics of company's management staff

(8) In cases where overseas operations (production) have been established, seek information on the background, joint venture partner, size, items (country of destination), and also future plans.

7. Collection of Related Material and Pamphlets

Attach material such as data, pamphlets and catalogs on the Hong Kong garment industry, production companies, and exports and imports which are obtained in the course of carrying out the survey.

APPENDIX-II
WOODEN FURNITURE

APPENDIX II. WOODEN FURNITURE

II-1. Summary of Japanese Questionnaire Survey

II-1-1. Questionnaire

Questionnaire Targeting Firms with an Interest in Foreign Investment (Wooden Furniture Industry)

Please respond to the following questions (figures should be based on fiscal 1987).

Company name	
Company name (English)	
Address	
Year of establishment	
Capital structure	1. Japanese corporation 2. 100% foreign investment 3. > 50% foreign investment
Paid-in capital	
Annual sales	
Overseas production ratio	% (= overseas production/annual sales x 100)
Number of employees	
Major products manufactured or handled	
Department and section in charge of answering this survey	
Name and position of respondent Name Position	

Question 1. Current overseas activities

(1) Does your company maintain an overseas production base?

If the answer is yes, please indicate the countries in which production bases are maintained.

(2) Does your company have a technology provision agreement with a foreign manufacturer?

If the answer is yes, please indicate the nationalities of the manufacturers with which agreements are in effect.

(3) Does your company supply components for OEM to overseas manufacturers?

If the answer is yes, please indicate the nationalities of the manufacturers to which OEM is supplied.

(4) Not involved in such activities at present but are considering them in the long term.

(5) No such activities.

Question 2. Plans for future foreign investment

(1) Currently being considered

(2) May be considered in the future

(3) Not under consideration

2-1. For those firms who answered yes to (1) and (2): What are your thoughts concerning the destination and objective of investment? Please indicate the country of destination, the type of investment, and the reason for investment in Table 1 (multiple response).(*Table 1 is omitted.)

Question 3. Would you like JETRO to provide introductions to prospective partners for joint ventures or technology provision agreements?

Yes No

3-1. JETRO operates an investment registration firm system which, among other services, provides firms interested in overseas activities with information free of charge. (Companies interested in this service will be briefed separately.) Would you like to become a member of this system?

Yes No

Question 4. Imports of furniture products or materials from Thailand

(1) Has your firm ever imported furniture products or materials from Thailand?

Yes No

(2) Please indicate the type of furniture imported.

(3) What was the quality of the imported furniture?

Excellent Good Average Below average Poor

(4) Please indicate any quality-related problems.

(5) How was the imported furniture priced?

Very inexpensive Inexpensive Average Expensive
Very expensive

(6) Was the imported furniture delivered on time?

Yes
Delivered after a slight delay
Delivered after a long delay

(7) What was the main reason behind the decision to import?

Price Quality Delivery time Other

(8) What type of transaction was it?

1) Import of a standard product from a Thai manufacturer.
2) Import of an order-made product.
3) Import of an order-made product as part of a deal that included technology guidance.

(9) Please indicate Thai furniture materials in which you are particularly interested.

(10) Do you have any special images concerning Thai furniture?

Yes No

(11) If yes, please indicate below.

(12) Are you considering importing Thai furniture or furniture materials in the future?

Yes No

(13) If yes, what is the main reason?

Price Quality Delivery time Other

(14) Are you considering a technology provision agreement, joint venture, etc. with a Thai manufacturer?

Yes No

Thank you for your cooperation.

II-1-2. Questionnaire Results

Of the 167 firms which responded to the *List of Japanese Companies With Investment or Plans to Invest in Thailand,* 68, or 41%, indicated that they had already invested or had plans to invest. More specifically, only four firms had already invested, while at the remaining 64 such plans are currently under consideration. This is an indication of the great latent interest in investment in Thailand.

The most commonly noted reason behind investment in Thailand was use of the local labor force, given by 27% of all respondents. Following this item, both at 23%, were exports to Japan and the ease of obtaining raw materials. Response to the strong yen was the fourth most common response. These four were the main factors involved in the plans for investment, and together they accounted for fully 95% of the total.

Next, concerning the type of investment desired by Japanese companies, licensed production was the most common response, at 46%, followed by joint ventures, at 26%, technology provision, at 22%, and 100% investment, at 6%. In addition, the majority of responding firms were quick to indicate desired investment destinations, which included Thailand, Taiwan, and Korea as well as Indonesia, Malaysia, and Singapore. This also provided confirmation of the strong interest in foreign investment.

All of the 167 companies which responded to the current questionnaire were Japanese corporate entities, and most were small and medium-size firms with capital of less than ¥100 million. The headquarters of these firms were spread out across Japan, indicating that corporate functions are often dispersed. It was also learned in a follow-up telephone survey that firms considering foreign investment face many problems when it comes to the actual decision to invest, such as a lack of the corporate functions necessary to carry out surveys or the difficulty of obtaining pertinent information outside the large cities in Japan. As a result, it became clear that these kinds of problems must first be resolved.

II-1-3. List of Japanese Companies Hoping to Invest

Investment type and objective together with the desire (or lack thereof) for introductions to prospective partners for the 64 firms indicating plans for investment in Thailand are shown below.

List of Japanese Companies Hoping to invest (1/4)

	Company	(A) 100% investment (B) Joint venture (C) Technology provision (D) Licensed production	* Main reason for investment in Thailand	Partner introduction desired Yes / No	Possession of foreign production base Yes / No	Existing technology provision agreement Yes / No	Desired investment destinations other than Thailand	Headquarters
1	Kasumi	(C)		No	No	No	-	Ibaraki pref.
2	Uchida Yoko	(B)	(F), (F), (I)	No	No	Yes	Taiwan, Malaysia	Tokyo
3	Fukura Japan	-	-	-	-	-	-	Tokyo
4	Yamamoto Kogyo	-	-	Yes	Yes	No	Taiwan, Indonesia, Pakistan	Saitama pref.
5	Marutsuchi Kokei	(D)	(H), (I), (J)	Yes	No	No	Indonesia	Fukuoka pref.
6	Maruni	(B)	-	Yes	No	No	Korea	Hiroshima pref.
7	Toyo Kogei	-	-	No	No	No	Taiwan	Tokyo
8	Ikeda	-	-	Yes	Yes	Yes	Indonesia, India	Tokyo
9	Yamaka Sangyo	-	-	No	No	No	Taiwan, Singapore	Shizuoka pref.
10	Kibe Bamboo	(C)	(G), (J)	Yes	Yes	Yes	China	Miyazaki pref.
11	Kongo	(B), (C)	(K), (M)	Yes	Yes	Yes	Taiwan, U.S.	Kumamoto city
12	France Bed	(A), (B), (D)	(G), (H), (I), (J)	Yes	No	Yes	Korea, Taiwan, Malaysia, Philippines, Singapore, China	Tokyo
13	Kenshy International	-	-	No	-	Yes	Italy	Tokyo
14	Noguchi Eitaro	-	-	No	Yes	No	-	Tokyo
15	Ryumondo	-	-	No	No	No	-	Nagano pref.

* (E) Expansion of sales channels to local market
(F) Expansion of sales channels to third-country market
(G) Exports to Japan
(H) Countermeasure to strong yen
(I) Useof local labor force
(J) Ease of obtaining raw materials
(K) Request from technology provision agreement partner or export destination
(L) Foreign investment by Japanese parent firm
(M) Other

List of Japanese Companies Hoping to Invest (2/4)

	Company	(A) 100% investment (B) Joint venture (C) Technology provision (D) Licensed production	* Main reason for investment in Thailand	Partner introduction desired Yes / No	Possession of foreign production base Yes / No	Existing technology provision agreement Yes / No	Desired investment destinations other than Thailand	Headquarters
16	Endoh Wood Working	-	-	No	No	No		Kanagawa pref.
17	Hagiwara Kagu	(C), (D)	-	Yes	No	Yes		Shizuoka city
18	Izu Mokki	-	-	-	No	Yes		Shizuoka pref.
19	Fuji Mokko	(D)	(G), (H), (I), (J)	No	No	No		Shizuoka city
20	Hayashi Kogyo	-	(G), (H), (I), (J)	-	No	No		Toyohashi city
21	Ohnoki Daimo	(B), (D)	(G), (H), (J)	Yes	Yes	Yes		Kure city
22	Hikari Kagu Kogyo	(A), (D)	(G), (J)	Yes	No	No		Maebashi city
23	Fuji Furniture	-	-	Yes	No	No		Tokushima pref.
24	Komiyama Kagu Seisakusho	(B), (C)	(G), (I), (J)	Yes	No	No		Gifu pref.
25	Iwataya Department Store	(D)	(G), (I)	-	No	No		Fukuoka city
26	Matsumoto Industrial	(D)	(H), (I), (J)	Yes	No	No		Aizuwakamatsu city
27	Isetan	(B)	(E)	-	Yes	-		Tokyo
28	Kokusai Kogei	(B), (C), (D)	(G), (H), (I)	Yes	No	No		Fukuoka pref.
29	Maruni Furnishing	(D)	(G), (H), (I)	No	Yes	No		Matsudo city
30	Houtoku	-	-	No	No	Yes		Nagoya city
31	Keio Department Store	-	-	No	No	No		Tokyo
32	Kyowa Mokko	(A), (B), (C), (D)	(G), (H), (I), (J)	Yes	No	No		Hiroshima pref.
33	Kintetsu Department Store	-	-	Yes	No	No		Osaka city
34	Aidec	-	-	No	No	No		Tokyo

* (E) Expansion of sales channels to local market
(F) Expansion of sales channels to third-country market
(G) Exports to Japan
(H) Countermeasure to strong yen
(I) Use of local labor force
(J) Ease of obtaining raw materials
(K) Request from technology provision agreement partner or export destination
(L) Foreign investment by Japanese parent firm
(M) Other

List of Japanese Companies Hoping to Invest (3/4)

	Company	(A) 100% investment (B) Joint venture (C) Technology provision (D) Licensed production	* Main reason for investment in Thailand	Partner introduction desired Yes / No	Possession of foreign production base Yes / No	Existing technology provision agreement Yes / No	Desired investment destinations other than Thailand	Headquarters
35	Matsuoka Kagu Seizo	(D)	(H), (J)	Yes	No	No		Hiroshima pref.
36	Naiki	-	-	No	No	Yes		Osaka city
37	Kihoku Furniture	(D)	(I), (J)	No	No	No		Gifu city
38	Oliver(?)	-	-	No	Yes	Yes		Aichi pref.
39	Takashimaya Kosakusho	-	-	No	No	No		Osaka city
40	Tokyu Department Store	-	-	No	No	No		Tokyo
41	Shonan Mokko	-	-	No	No	No		Yokohama city
42	Niida Mokko	-	-	Yes	No	No		Nangoku city
43	Echo Kagu Kogyo	(C), (D)	(G), (H), (I), (J)	Yes	No	No		Yamagata pref.
44	Tada Mokko	-	-	No	No	No		Yamagata pref.
45	Akita Mokko	-	-	Yes	No	No		Akita pref.
46	Hinode Mokko	-	-	Yes	No	No		Hiroshima pref.
47	Asahi Kogyo	-	-	-	No	No		Aichi pref.
48	Shinmise Furniture	-	-	Yes	No	No		Kagawa pref.
49	Maki Kagu Seisakusho	-	(J)	No	No	No		Fukuoka pref.
50	Yajima	-	-	Yes	No	No		Tokyo
51	Marian	(D)	(I)	Yes	No	Yes		Osaka city
52	Kotori Furniture	(D)	(I), (J)	No	No	No		Gumma pref.
53	Tokai Kagu Kogyo	(D)	(G), (H), (I), (J)	Yes	Yes	No		Shizuoka city

* (E) Expansion of sales channels to local market
(F) Expansion of sales channels to third-country market
(G) Exports to Japan
(H) Countermeasure to strong yen
(I) Useof local labor force
(J) Ease of obtaining raw materials
(K) Request from technology provision agreement partner or export destination
(L) Foreign investment by Japanese parent firm
(M) Other

List of Japanese Companies Hoping to Invest (4/4)

	Company	(A) 100% investment (B) Joint venture (C) Technology provision (D) Licensed production	* Main reason for investment in Thailand	Partner introduction desired Yes / No	Possession of foreign production base Yes / No	Existing technology provision agreement Yes / No	Desired investment destinations other than Thailand	Headquarters
54	Ayano Seisakusho	-	-	Yes	No	No		Kagawa pref.
55	Matsuda Kagu Kogyo	-	-	Yes	No	No		Fukuoka pref.
56	Shin-Nippon Mokko	(C)	(G), (H), (I), (J)	Yes	No	Yes		Tokushima city
57	Noda Furniture	(B), (D)	(G), (H), (I), (J)	-	No	Yes		Gifu pref.
58	Karitani Mokuzai Kogyo	(B), (C), (D)	(J)	No	Yes	No		Aichi pref.
59	Nisshin Wood Work	(D)	(G), (H), (I), (J)	Yes	No	No		Gifu pref.
60	Noble Kagu Kogyo	-	(G), (H), (I), (J)	Yes	No	No		Ibaraki pref.
61	Ishisaki Kagu	(D)	(F), (G)	Yes	Yes	No		Toyama pref.
62	Tokuda	-	-	Yes	Yes	No		Shizuoka pref.
63	Kosuga	(D)	(G), (H), (I), (J)	Yes	Yes	Yes		Tokyo
64	Morita Interior	-	(I), (J)	Yes	No	No		Okawa city

* (E) Expansion of sales channels to local market
(F) Expansion of sales channels to third-country market
(G) Exports to Japan
(H) Countermeasure to strong yen
(I) Use of local labor force
(J) Ease of obtaining raw materials
(K) Request from technology provision agreement partner or export destination
(L) Foreign investment by Japanese parent firm
(M) Other

II-1-4. Information on Concerned Companies

Due to the large number (64) of firms expressing interest in investment in Thailand, information concerning individual firms will be omitted.

II-2. List of Companies Interviewed

Wooden Furniture Factories Nov. and Dec. 1988 Survey and Mar. 1989 Supplementary Survey

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Siam Wood	Wooden furniture Tables Chairs Beds	500 Of which, 120 are skilled workers		Export ratio 100% 100% to Japan (Furniture manufacturers 95%, *retailers 5%*)	middle level • Established in 1970 • Capitalized at 10 million bahts	• Parawood used.
KT Thailocal Products	Manufacture of wooden furniture Salad bowls Trays Salad spoons Hotplates etc.	500	• Some machines are of Italian, Italian, and Taiwanese make, but there are no lines able to manufacture furniture.	Export ratio 100% (U.S. and Canada)		
Komnok Co., Ltd.	Manufacture of furniture Color boxes	50	Cord press (1), small boring machines, edge banders, running saws, crosscut saws			
World Wood Design		150	• Since only particleboard is processed, relatively simple machinery is used.	• Export ratio 100% (U.S. 100%) (Japan 10%) • Customer designs 100%	• Established in 1986 • Equity composition: Japan 100%	• Particleboard: No dimensional error and high in strength. • Plywood: Imported from Indonesia. • Rubberwood
Sun Furniture				• Export ratio 98% • Export destinations: U.S. 80%, Japan 10%, U.K. 10%		
Pongsin Furniture	Livingroom sets Diningroom sets Bedroom sets Clock bases	100	• No drying machines	• Materials imported		
Acme Industries				• Exports 100% (U.S. 50%, Japan 30%, Europe 20%) • 70% of designs are designated by customers.		• Parawood (rubberwood)

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Fancy Wood Industries Co., Ltd.	Manufacture of furniture Wedding furniture Kotatsu	1,050 (25 managers and experts)	• Japanese type production line • Need for establishment of container yard	• Exports 100%, 70% for Japan • 80% of exports are furniture, 20% building materials • Export destinations: Japan (70%), U.S. (25%), Europe, Hong Kong, Singapore (5%)	• Established in 1970 • Joint venture between Thailand (55%) and Taiwan (45%)	• Oak (30%), rubberwood (50%), rosewood (20%)
Dorospan Company Limited	Manufacture of particle-board furniture Plywood knock-down furniture	1,000	• Taiwanese type superlarge large-sized factory	• 100% exported to U.S. • Customer supplied designs	• 100% local capital	• Rubberwood
Thai Teak Wood Veneer Co., Ltd.	Lumber, veneer	180	• Weak basic knowledge about production control methods for mass production of limited items	• Manufactures veneer for Denmark • Plywood for domestic consumption • Began exporting teak lumber to U.S. in 1985	• Established in 1976 • 100% Thai capital	• Teakwood... imported from Burma • Rubberwood (starting two years ago)
Ruangutai Wood Industry Co., Ltd.	Wooden construction materials			Exports furniture parts (parawood) to Japan	• Capitalized at 25 million bahts, 100% local capital	• Rubberwood
Thai Plywood Co., Ltd.	Everything from aforestation to manufacture of products		• Adhesives for indoor products are made domestically and those for outdoor use are imported from West Germany and Norway.		• Semigovernmental	• Ratio of domestic procurement/import of wood is 50:50. Supplies from Burma and Laos and some African wood continuing to enter
Thai Bamboo and Products Co., Ltd.	Wooden furniture (parawood) Housewares	540		• Japan 10%, U.S. 75% • 100% exports	• 1975, joint stock corporation • 100% Thai capital	• Rubberwood (90%) and teakwood (10%)

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
B.S. Parawood Products Co., Ltd.	Manufacture of wooden furniture	300	• 80% of machinery brought in is new	• 90% of furniture production is exported to Japan (breakdown: 50% table legs and 50% chair legs), remaining 10% goes to U.S. • 100% exports	• 100% Thai capital • Established in 1987 with capital of 5 million bahts	• Rubber wood is purchased in tree form and processed by company itself.
CH. Rungruang Industry Co., Ltd.	Manufacture of steel furniture (chairs, beds, ironing boards, etc.)	40-50	• Small sized company of hand crafting type	• 30% exports, 70% domestic sales • Export destinations are Singapore and Middle and Near East	• 100% Thai capital • Established around 1982 with capital of 500,000 bahts	• PVC sheets, iron pipes, etc. are procured domestically. • Iron sheets are not produced in Thailand.
Task Company Limited	Manufacture of furniture (desks 80%, chairs and tables 20%)	300 (50 skilled workers)	• Japanese style manufacturing methods, QC	• All production exported to Japan (Otsuka Chemical Furniture[9] • Designated designs	• Established in 1980 with 100% Thai capital	• Rosewood 90%, jampii, acacea 10%
Sang Thana Furniture Ltd. Part.	Manufacture of furniture (dining chairs, dining tables, beds)	200 (30 skilled workers)		• Began exporting 100% of production two years ago. U.S. 50%, Japan 40%, Europe 10%	• Established in 1966 and moved to present location in 1977 • 100% Thai capital, capitalized at 5 million bahts • Non BOI	• Rubberwood
Siam Maison Co., Ltd.	Manufacture of furniture (panel furniture, furniture floor materials, houseware, salad bowls)	830		• 60% exports, 40% domestic sales • Export destinations: U.S. 70%, Japan 20%, Hong Kong and Europe 10% • Customer designs	• Established in 1985 • 100% Thai capital, capitalized at 40 million bahts • Non BOI	• Rubberwood (from lumber mill of company in Suratani) • Particleboard (purchased outside)
Surina Industries Co., Ltd.	Houseware (salad bowls, trays, etc.) Small furniture	200 (20 skilled workers)		• Export destinations... U.S. 60%, Europe 20%, Australia 10%, Japan 10% • 100% exports		

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
D.K. Industry and Hove & D.K. Industry	Furniture Houseware Floor material	300 (D.K.) 40 (H.D.K.)	• Company receiving OJT type technical guidance • Receiving guidance from Norwegian engineers • Seat cushions made in Thailand	• 70% to Norway and 30% to Japan • 100% exports • Designs, brands, sales, etc. left to foreign companies	• Established in 1979, 100% Thai capital • H.D.K. joint venture with Norway's Hove Co. (49%) (established June 1987) capitalized at 6 million bahts • Non BOI	• Wood purchased from Burma, Laos, etc. • Rubberwood purchased in log form.
Chiangmai Sudalink Co., Ltd.	Carved furniture Manufacture of native crafts	800 (200 skilled workers)	• Artificial drying facilities	• Export ratio 95%, however, 60% of same through direct transactions with tourists • Export destinations... Europe 50%, U.S. 20%, Japan 5% • Agents (trading companies) 30%	• Established in 1983 capitalized at 10 million bahts • 100% Thai capital	• 100% teakwood used. • 100% imported from Burma.
B.K. Home Furnishing Ltd. Part.	Manufacture of wooden furniture	80 (40 skilled workers)	• Drying facilities • Four Hong Kong designers present	• Exports 60%, domestic sales 40% • Export destinations... U.S. 20%, Hong Kong 20%, Taiwan 20%	• Established in 1983 capitalized at 2 million bahts • 100% Thai capital	• 70% rosewood and 30% teak • Soaring prices of wood poses problems.
Chiangmai Treasure Co., Ltd.	Furniture Manufacture of native crafts		• No furniture production lines	• Small run production of diverse items mostly for sale to tourists	• Purchases semifinished goods and carves and paints them to make finished products	• Purchasing difficulties due to insufficient supplies. • Trouble with soaring prices.
S.V. Furniture	Manufacture of wooden furniture (desks, livingroom sets, diningroom sets, sideboards, etc.)	25 (15 skilled workers)	• British made Dankin (used) and seven other units • No artificial drying facilities	• Exports 20%, domestic sales 80% • Customers mostly exporters • Export destinations... U.S. (main), West Germany, Australia	• Established about 30 years ago. Limited company in organization	• Teakwood • Materials are purchased from public corporations. Poor quality materials distributed in Chiengmai.
Sarin Furniture	Wooden furniture (all interior decor items)	60 (half skilled workers)	• Mostly manual work used for manufacture • Mostly domestic machinery • No drying facilities • Own designs	• Exports 20% • Export destinations... Japan (main), U.S., U.K. • Customers mostly individuals	• Established in 1982 • 100% Thai capital, capitalized at 5 million bahts • Non BOI	• Teakwood, teak plywood, rubber plywood • Adhesives are imported and paints used are domestic products.

Company name	Industry	Employees	Main facilities	Sales	Features	Materials
Tanchookiat Group, T.C.K. Furniture Co., Ltd.	Wooden furniture (hotel furnishings, KD products)		• Designs provided by customers	• Almost 100% exports • KD products exported to U.S. and U.K.	• Established in 1979	• 80% of teakwood is imported from Burma and 20% is produced domestically.
Thai Asia Industry, T.C.K. Furniture, T.C.K. Kymin, T.C.K. Sawmill				• T.C.K.F. - see above	• Large corporate group including T.C.K.S. (established 50 years ago), T.A.I. (1979), T.C.K.F. (1979), and T.C.K.K. (established in 1983 as joint venture with Finland)	• 80% teakwood, 80 percent imported from Burma and remaining produced domestically.

II-3. Samples of Plans for Third Country Surveys

(Sample-1)

Plans for Survey of "Korean Wooden Furniture Industry"

Industry to be Studied : Wooden Furniture Industry
Region to be Studied : South Korea

<Survey Items and Contents>

1. Summary of Industry

Based on the results of the individual items mentioned in 2. and on, a summary will be made of the state of the Korean wooden furniture industry from the viewpoints of production, export sales, corporate management, level of technology and product development, etc. and projections will be given for the industry.

2. Trends in Industry

Based on statistics of production of individual items (shipments) in the past 10 years, clarification will be made on the trends in production activities of the wooden furniture industry as a whole and trends by individual items.

Further, through interviews with related persons in government and industry and key manufacturers, in particular, through questions on the following points, it will be learned what kind of problems have been faced and the efforts which have been made to overcome them.

[1] Production system (Mainly presence of drying furnaces)

[2] Labor problems (programs to train skilled workers, the existence of an official furniture industry training center, if it exists, outline)

[3] Procurement of raw materials, parts, (the present situation of natural forest resources, the trend of domestic woods and imported ones.)

[4] Competitiveness (production costs)

1) Labor cost per hour (US$)

2) Manufacturer's purchasing price of Lumber, Plywood, Particle board

Lumber,	Teak thickness	15mm x width 100mm x length 2,000mm
	Rubberwood	15mm x width 100mm x length 2,000mm
	Rosewood	15mm x width 100mm x length 2,000mm

Plywood	4feet x 8feet	thickness 9mm
	4feet x 8feet	thickness 4mm
Particle board	4feet x 8feet	thickness 12mm
	4feet x 8feet	thickness 6mm

3) Paints, per 1 liter (Manufacturer's purchasing price)

Polyurethane, amino alkyd

[5] Standards, regulations and product inspections

[6] Technical capabilities and product development

[7] Overseas Production (Overseas Investment in Asian Countries, investment destination, the reason, production items, export destination)

3. Trends in Exports

Based on statistics for exports of individual products during the past 10 years, clarification will be made of the trends in exports by item and destination, of the changes in the items, etc.

Further, through interviews with related persons in government and industry, key manufacturers, export trading companies, etc., information will be obtained on problems, especially on the following, and means for overcoming them.

[1] Type of Export Products (finished products, semi-finished products (OEM), parts)

[2] Export channels

[3] Export prices (changes in latest 5 years)

[4] Product development and design

[5] Development of overseas markets and marketing activities

[6] Competitive relations in overseas markets

[7] Standards, regulations, and product inspections

4. Industrial Promotion Policies and Export Promotion Policies

It will be learned from related government officials and related persons in the industry and companies what kind of policies the government has taken and what systems it has established to overcome the problems clarified in the above-mentioned sections 2 and 3 and what kind of effects these have had. Further, what kind of promotional measures and preferential measures have been taken in the areas of financing, taxation, and customs duties will be summarized.

5. Case Studies of Key Companies

Case studies will be made, based on the following points, covering 5 to 6 key wooden furniture manufacturers (ones important in exports too):

[1] Histories of companies
[2] Trends in key production and export items
[3] State of procurement of raw materials, and parts
[4] Use of government assistance and promotional measures
[5] Development of export strategies
[6] Tie-ups with overseas companies and moves toward overseas investment
[7] Managers

6. Collection of Related Materials, Pamphlets, Etc.

Materials, pamphlets, export-oriented catalogs, and other materials of the Korean wooden furniture industry and wooden furniture manufacturers obtained during the process of this survey will be appended.

(Sample-2)

Plans for Survey of
"French Wooden Furniture Market"

Product to be Studied : Wooden Furniture
Region to be studied : France

<Survey Items and Contents>

1. Summary of Industry

The recent state of the industry will be summarized based on wooden furniture items. In particular, emphasis will be placed on trends in production and sale by main items, business conditions and development of strategies of main companies, trends in best-selling products on the market, etc.

2. Trends in Imports

The state of imports, by exporting country, will be clarified for the corresponding industries and products using trade statistics from the past five years (as detailed classifications as possible), then characteristics and changes will be analyzed with interviews with related persons on the importing side.

At that time, details will be revealed on characteristics and changes by product and country of origin in import trends from East Asia and the countries of Southeast Asia.

3. Demand and State of Competition

Trends in demand by item in the wooden furniture market will be clarified based on production and trade statistics and, at the same time, the state of competition with corresponding domestic products and imported products (including OEM products) and changes in the past five years will be clarified with interviews with related persons in the field.

As detailed an analysis as possible will be made on the state of competition and changes in market shares of imported products (including OEM products) from East Asia and Southeast Asia.

4. Distribution, Consumption, and Evaluation of Thai Products

Imported Thai products now in circulation will be focused upon and, through interviews with related businessmen, the distribution channels, terms of transaction, markups, etc. will be clarified for both OEM and other products (including those in mass sales stores etc.). At the same time, evaluations and criticisms on the quality, design, delivery, prices, and sales methods of Thai products and future projections on the same will be obtained.

5. State of Procurement of Thai Products by French Manufacturers

Interviews will be held with persons in charge in French manufacturers which are now importing wooden furniture from Thailand (including OEM and subcontracting) so as to obtain evaluations, criticisms, points requiring improvement, and future projections on the state of transactions involving Thai products, their quality, delivery, price, etc. Further, similar interviews will be conducted for non-French wooden furniture manufacturers which are similarly importing wooden furniture from Thailand.

Further, the names of French manufacturers which are considering investment or establishment of joint ventures in Thailand and the ASEAN region in the future or imports of wooden furniture from Thailand will be picked up from articles in trade journals and interviews with related persons in the industry etc. and the trends and projections of such activities will be clarified.

6. Future Outlook

Based on the results of the above survey, means for improving the quality, design, sales methods, etc. of Thai wooden furniture in the French furniture market and problems in tie-ups with French manufacturers will be summarized and advice given on how to expand sales channels in the future.

7. Collection of Related Materials, Pamphlets, Etc.

Magazine articles (including advertisements), pamphlets, etc. showing the form in which Thai wooden furniture is distributed and sold on the market will be collected and appended.

APPENDIX-III
POLICY/REGULATION

[Appendix III-1]

Report On a New Textile Vision - "The Future of the Textile Industry and Future Policies", November 1988

Contained in this report are most of the contents of the summarized version of the main report on a new textile vision, as well as excerpts from the main report which are of particular relevance to this report.

[Summarized Version]

I. Situation

The Textile Industry Council and the Industrial Structure Council have in the course of a year examined the question of "The Future of the Textile Industry and Future Policies" on some 60 occasions in response to a request made by the Minister of International Trade and Industry on November 30, 1987. The subsequent findings have been included in a report submitted by the council on 30 November 1988.

II. Outline of the Report on "The Future of the Textile Industry"

1. Rapid changes in the internal and external environments affecting the textile industry

Since the autumn of 1985 when the Japanese yen began to sharply appreciate the textile industry has confronted unprecedented, rapid changes in its environment.

(1) A higher yen and catching up by the NIEs

The appreciation of the Japanese yen which has continued since the autumn of 1985 and the gains which have been made by the NIEs have led to a sharp increase in imports and a stagnation in exports of textile products.

(Reference) Permeation ratio for imports of textile products (1984-1987: %)

Textile products	Yarn	Textiles	
25.1 to 34.5	11.6 to 13.7	17.6 to 22.8	
Cloth under-garments	Cloth outer-garments	Knit under-garments	Knit outer-garments
29.7 to 36.4	23.2 to 34.1	21.0 to 36.2	26.7 to 46.3

(2) A change in demand towards higher quality, greater variety, smaller lots, and a shorter product cycle

As consumer demand has become increasingly diversified, textile products, which tend to be greatly influenced by consumer tastes, are required to meet tastes for higher quality, greater variety, smaller lots, and a shorter product cycle.

(Reference) Greater variety, smaller lots, and shorter product cycles (using cloth for outer garments as an example)

	1981 ——————> 1986		Ratio
	(A)	(B)	(B/A)
Types produced annually	2,212	4,324	1.95
Average lot	837 rolls	462 rolls	0.55
Delivery time	40 days	35 days	0.875

2. Future Outlook

Based on the assumptions that the currency exchange rate will stay at its present level and that there will be no major changes in the international economic environment, the outlook for domestic demand, exports, imports, and production for the textile industry up until 1995 is as follows:

<Decrease in output>

(a) Steady increase in domestic demand ---- expansion of the Japanese economy led by domestic demand
-- development of new uses for textile products (home-interior use, industrial use)
-- increase in ratio of younger population

(b) Decrease in exports and increase in imports as a result of catching up by NIEs, etc.

(c) Output will decrease as a result of (a) and (b)

3. A Future Path for the Japanese Textile Industry and Future Textile Industry Policies to be Adopted

<Fundamental position>

A decline in domestic production as a result of decreasing exports and increasing imports is a problem also confronting the textile industries in Europe and America. Countries in these regions have responded to this situation by protecting their domestic markets through import restrictions.

From the standpoint of Japan's international position (improved market access, promotion of imports of finished products, assistance with the development of export industries in developing countries) import restrictions of a highly permanent nature should, where possible, be avoided. Friendly measures responding to changes in both the internal and external environments of the textile industry should comprise the basis for policy.

<Three tasks for the further development of the textile industry>

- the promotion of structural improvements for establishing a new supply system which meets structural changes in domestic demand, and smooth industry adjustments for business operators experiencing difficulty in responding to changes in the internal and external environments
- implementation of adjustments to the fundamentals of the environment to respond to the trend of demand for fashionable products
- response to the trend of information and technology renovation

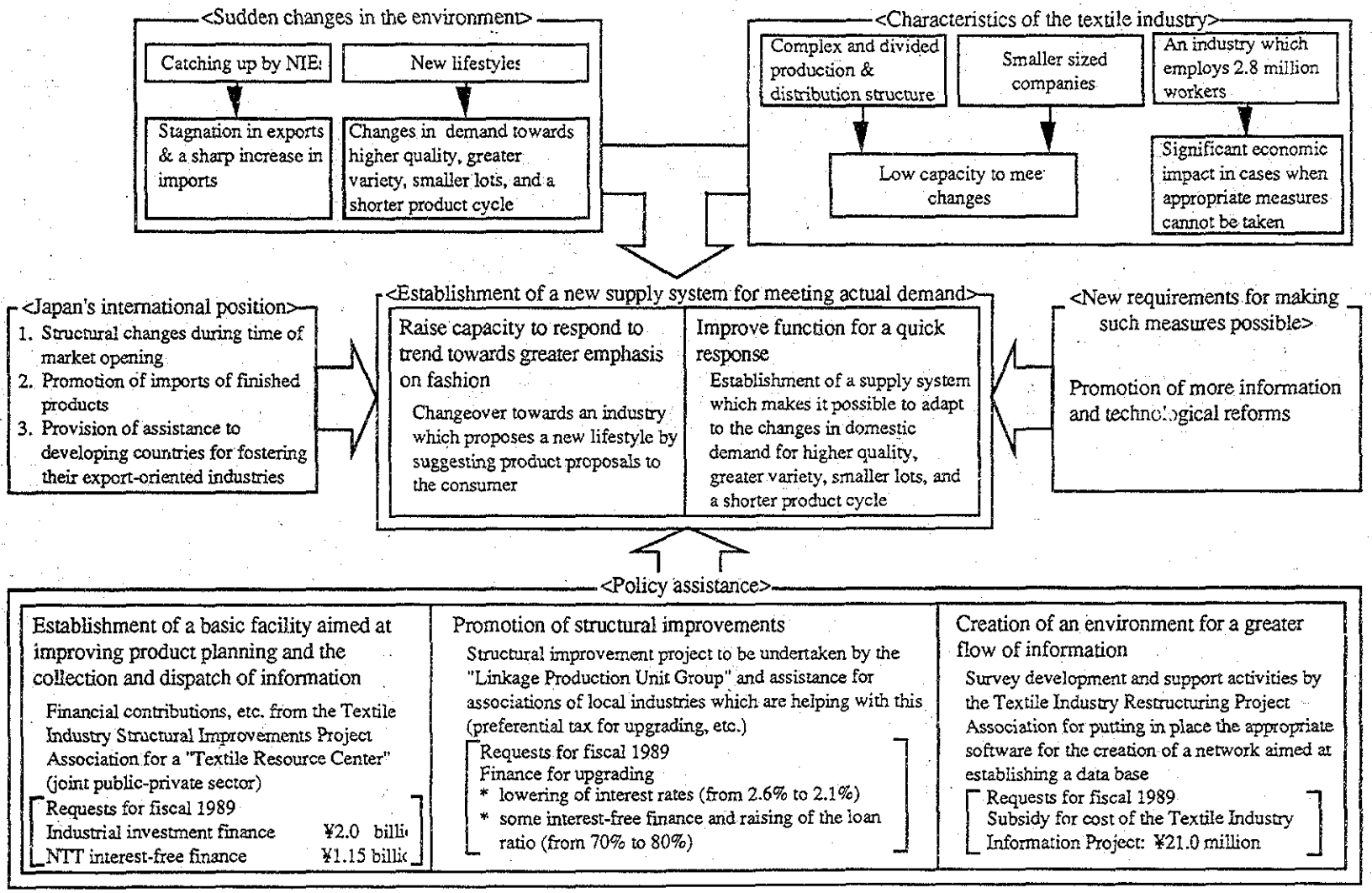
Although textile businesses must make constructive efforts to carry out these tasks, it must be said that given today's harsh environment and the textile industry's tendency towards the division of production processes, regionalization, and smaller-scale ventures, they will not be able to adopt such measures without outside assistance. Assistance through policy measures is therefore required in order to enable businesses to tackle these three tasks.

Succeeding in the three tasks

<The significance for the national economy of developing the textile industry into a "lifestyle-oriented" industry>

- stable employment of 2.8 million workers
- stable development of regional economies
- realization of an affluent national lifestyle by proposing a new lifestyle in relation to the apparel sector
- expansion of domestic demand due to the tapping of potential demand, and a changeover to economic growth led by domestic demand

New Textile Policies



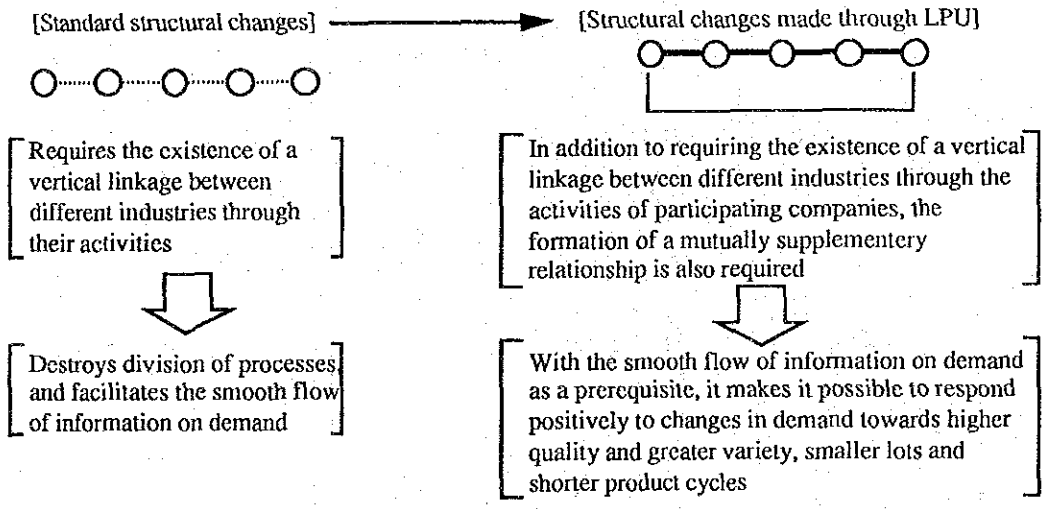
4. New Structural Improvements In Response to Changes in the Environment - Creation of Linkage Production Units Responding to Actual Demand

4-1. New Structural Improvements

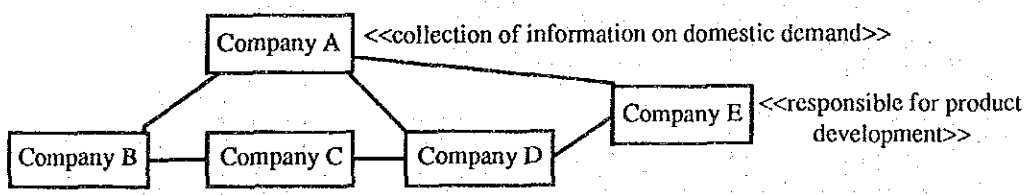
Improvements to various functions such as data collection, product development, and the capacity to respond quickly are required in order to establish a new supply system which meets actual demand. To this end, it is vital that a number of enterprises join forces and form new company groups (Linkage Production Units) for the mutual supplementation of these functions which will in turn raise the level of these functions.

<Linkage Production Unit>

* LPU aims not only at vertical linkage between different industries to ensure a smooth flow of information on demand, but also at the mutual supplementation of functions between members within the group which inproves the various functions required for the creation of a supply system for meeting actual demand for the group as a whole.



<<Example of supplementation of functions>>



<<share production in order to respond to trend towards greater variety and smaller lots>>

* In concrete terms, Linkage Production Units consist of business tie-up between companies, associations, and joint companies.

* The establishment of Linkage Production Units makes it possible to respond quickly to changes in demand, and also makes it possible to break away from the supply system based on assumed demand which has for many years been the guiding principle of the textile industry

4-2. Promotion of Structural Improvements By Local Industry Associations

Associations of local industries should utilize the advantages of their respective areas (the smooth flow of information etc, made possible by the accumulation of related industries) and make an effort to establish Linkage Production Units in each of their areas.

The training of personnel, guidance, and experimental research, etc., are all required in order to form the units. Furthermore, the units should be developed with assistance for the modernization of plant and equipment.

<Project for making structural improvements through local industry associations>

Establishing a suitable environment —> training of personnel, guidance, experimental research <formation of LPUs>

Modernization of plant and equipment ——————> <development of LPUs>

4.3 Measures to be Adopted by the Government

Substantial measures of support are required from the government in order to promote the structural improvement project and the projects undertaken by local industry associations for the smooth implementation of the structural improvements. It is to this end that the government should undertake various necessary measures, including the amendment of the Law on Extraordinary Measures for Structural Improvement of the Textile Industry.

5. Establishment of a Base For Responding to the Trend For Fashionable Products

- Establishment of a Textile Resource Center

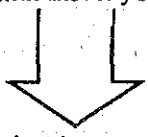
The textile industry as a whole needs to improve its capacity for product development and for the collection and dispatch of information so that it is able to meet the growing trend towards fashionable products. To meet this need, a basic facility (Textile Resource Center) should be established.

<Textile Resource Center>

An important aspect of the product planning of textile products is the mutual exchange of proposals for superior quality materials between the materials sector and apparel companies and designers responsible for product development.

(Example) Visits by a prominent designer to over 6,000 factories in order to find materials which reflect his own style.

Due to the complex supply structure of the textile industry which involves the separation of the various production stages, the present situation is one in which there is an uneven and inadequate flow of information on matters such as which types of materials companies and local industries are able to supply. As a result, the superior technology which exists within the materials sector is being prevented from raising the textile industry's capacity for planning and making proposals.



As well as collecting a comprehensive range of "data" on a wide variety of materials and secondary products and making these available to textile businesses and designers around the country, it is necessary to establish a basic facility which encourages mutual interaction between sectors through the provision of information required for product planning and other services.

The main functions of the Textile Resource Center are:

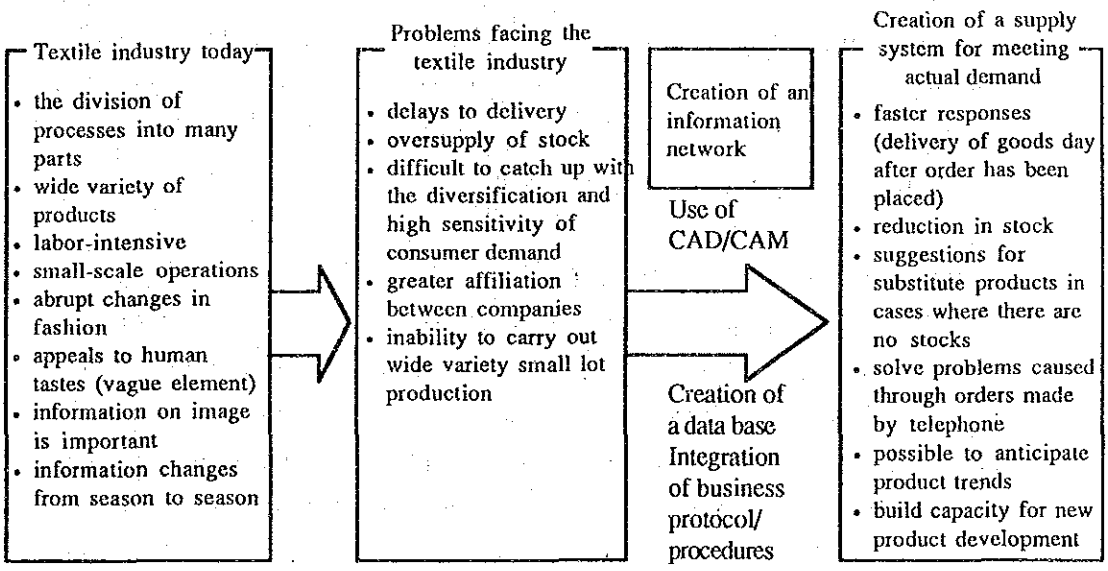
(1) the collection, analysis, processing and supply of data and information on textile materials;
(2) the training of personnel such as textile designers and merchandisors;
(3) the carrying out of survey research on textile materials.

6. Improving Information Availability and Technological Development

Within the textile industry, which handles a vast range of items, there is a huge amount of information relating to production and transactions. The incorporation of the fruits of the increasing amount of information which has become available in recent years is extremely useful for creating a new supply system which meets actual demand. The Textile Industry Structural Improvements Project Association should, among other measures, conduct a research study and standardize business protocol in order to establish a textile information network and a data base.

Furthermore, technology-related tasks to establish a new supply system to meet actual demand include the automation of technology for the design and evaluation of apparel, and basic technology for a fixed amount of information on sensibilities. Appropriate assistance is required for these.

(Making the textile industry into an infomation-oriented industry)



7. Trade Problems

<The International Textile Goods Agreement (MFA)>

The invocation of the International Textile Goods Agreement should be regarded as a last resort. It should be used in cases where extensive damage has been caused to domestic industries due to the rapid increase in imports of specific items, and where talks with exporting countries and anti-dumping duties and other measures adopted as a result of the rapid increase in imports brought about by unfair trade have proven ineffective.

Also, even if the International Textile Goods Agreement were to be invoked, this should be done not as a measure for the implementation of import restrictions which tend to last more or less permanently, as is being done by the United States and European countries. It should be done with the sole objective of regulating imports, and moreover, should be restricted to specific items. The invocation of the agreement should be seen as purely a temporary emergency measure. When examining whether or not to invoke the International Textile Goods Agreement, it is necessary to consider Japan's position in the world economy, the position of the consumer, and the national economy as well as other matters concerned.

<Measures for regulating imports>

While continuing to keep in close contact with one another it is necessary that the industry, Textile Industry Council, and the government take the following measures in order to maintain orderly imports.

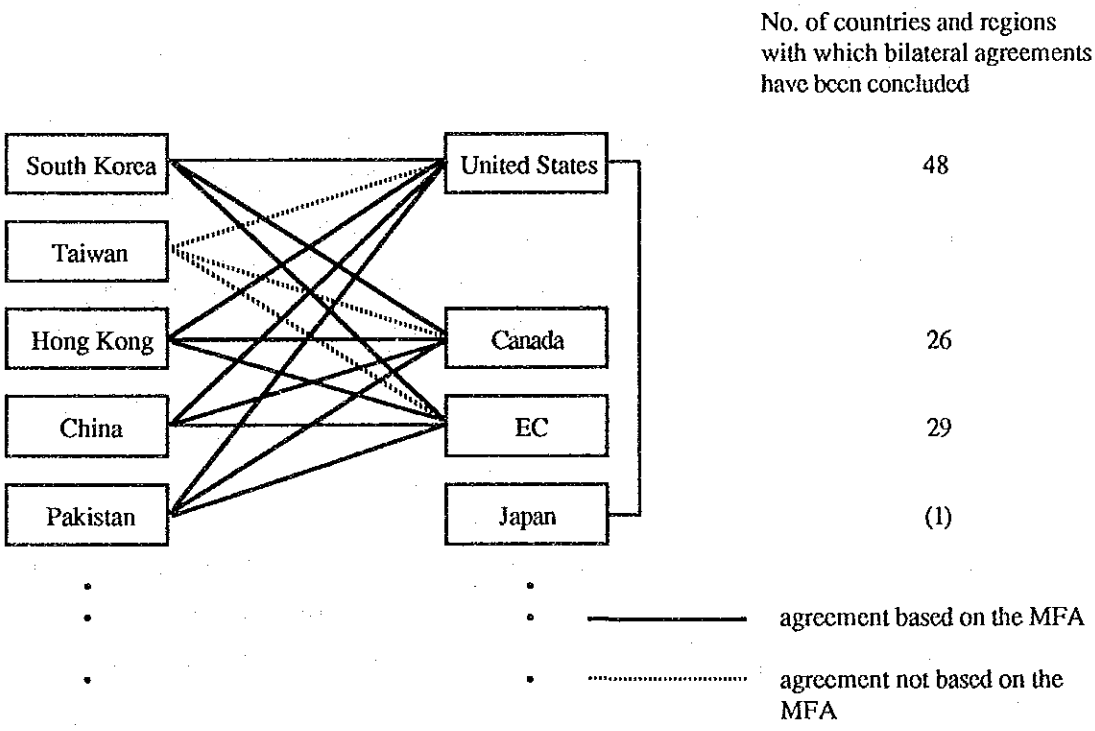
(a) The relevant industries should prevent irregular increases in imports by studying demand and supply trends, and deepen mutual understanding by carrying out an exchange of opinions with industries in exporting countries;

(b) The government should collect information on import trends and on the domestic conditions of exporting countries and provide them to the Survey Subcommittee (made up of persons of learning and experience) of the Demand and Supply Sector in the Textile Industry Council which is undertaking surveys of the Japanese market;

(c) When the subcommittee has ascertained in the course of its regular surveys that a problem has arisen due to a rapid increase in a specific area, they should undertake a detailed survey without delay and present proposals to the government on measures to be taken;

(d) In addition to this, the government should take appropriate actions such as holding talks with exporting countries, introducing anti-dumping duties to deal with unfair trade practices running counter to GATT regulations, implementing countervailing measures, and concluding agreements for the exchange of information in line with the gist of Clause 7 of the MFA. If these measures prove ineffective it should take appropriate steps for applying the MFA in accordance with the accepted policy for dealing with the MFA, while making reference to the proposals put forward by the Textile Industry Council's Subcommittee.

(Referance) Situation in Which The MFA is Invoked (Conclusion of Bilateral Agreements on Import Restrictions for Textiles)



8. Equipment Registration System

<Gradual relaxation>

Efforts to improve the equipment registration system have already been made and consideration is to be given to continuing with such gradual improvements. In efforts to improve the system hereafter, it is necessary to consider methods to deal with such a sharp increase in imports and make structural improvements in the textile industry as well as revitalize local industry associations since the industry is strongly affected by sharp increases in imports.

(Reference) Equipment Registration system

1954 Small and Medium Enterprises Stabilization Law
The law placed restrictions on plant and equipment by banning new weaving looms and restricting the use of unregistered weaving looms.

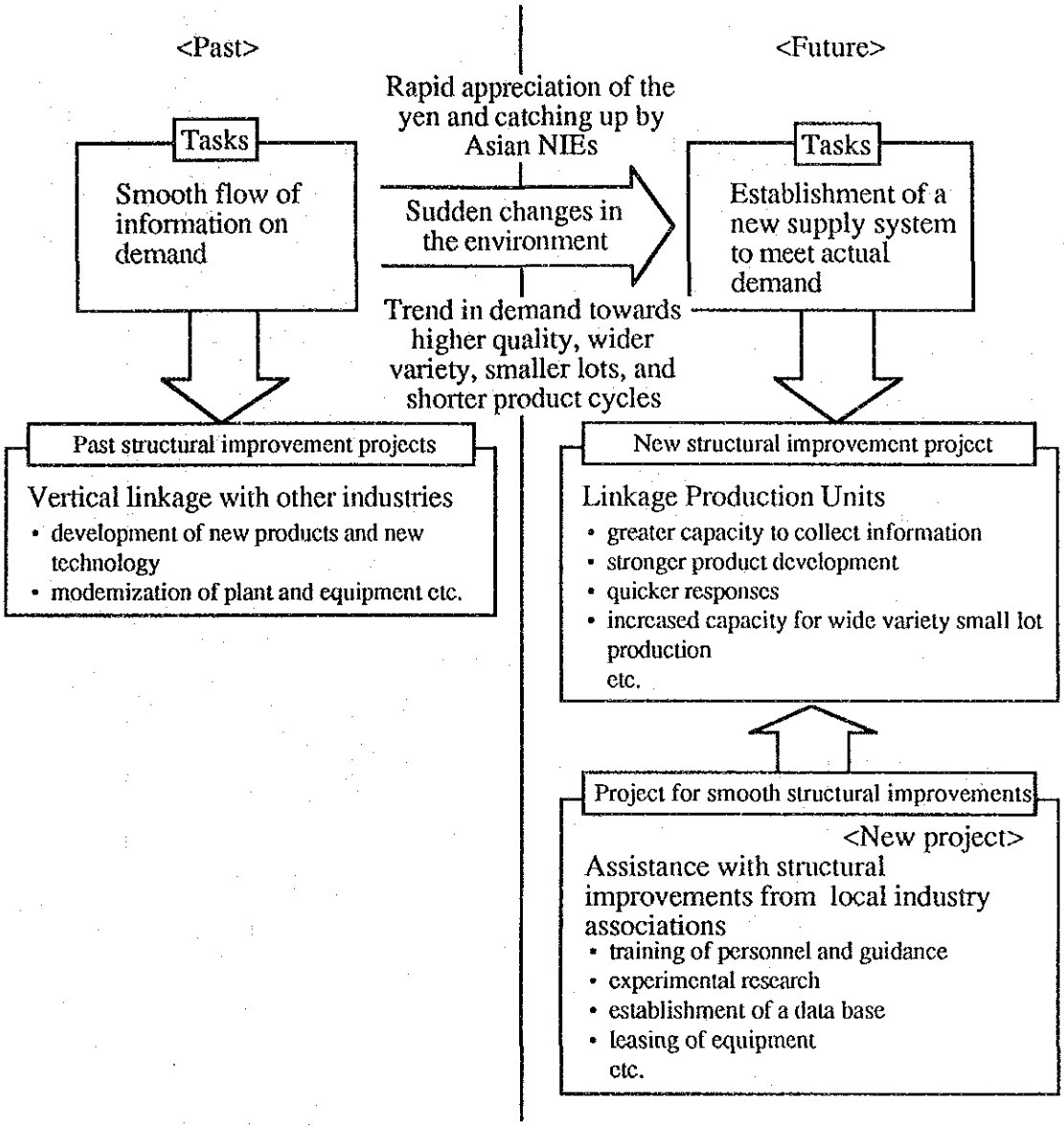
1957 Law on the Organization of Small Business Associations (Law on Cooperatives of Small and Medium Enterprises and Other Parties)
The law enacted regulations restricting the setting up of equipment as well as ordinances restricting outsiders in individual industries.

1986 Introduction of the supplementary registration system
The system approved the setting up and registration of plant and equipment introduced in line with the Structural Improvements Project based on the Law on Extraordinary Measures for Structural Improvement of the Textile Industry.

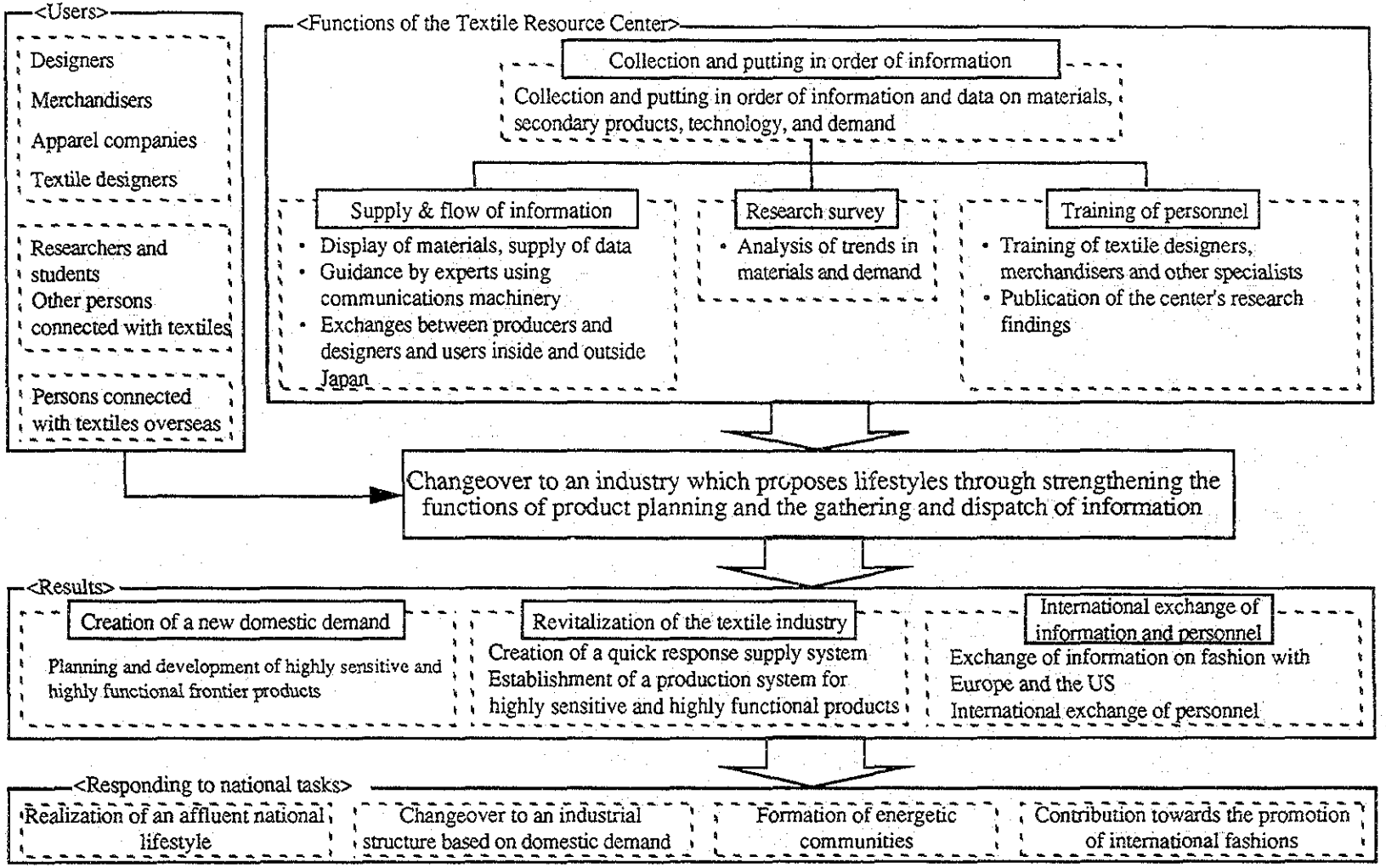
1987 Introduction of a special registration system
The system relaxed existing restrictions by approving extensive use of equipment for cotton fiber, wool, and linen textiles in a portion of less than 10% each.

1988 Introduction of the multiple registration system
The system relaxed existing restrictions on cotton fiber, wool, and linen textiles by approving the manufacture of a number of different textiles by a single weaving loom.

New Structural Improvements Project



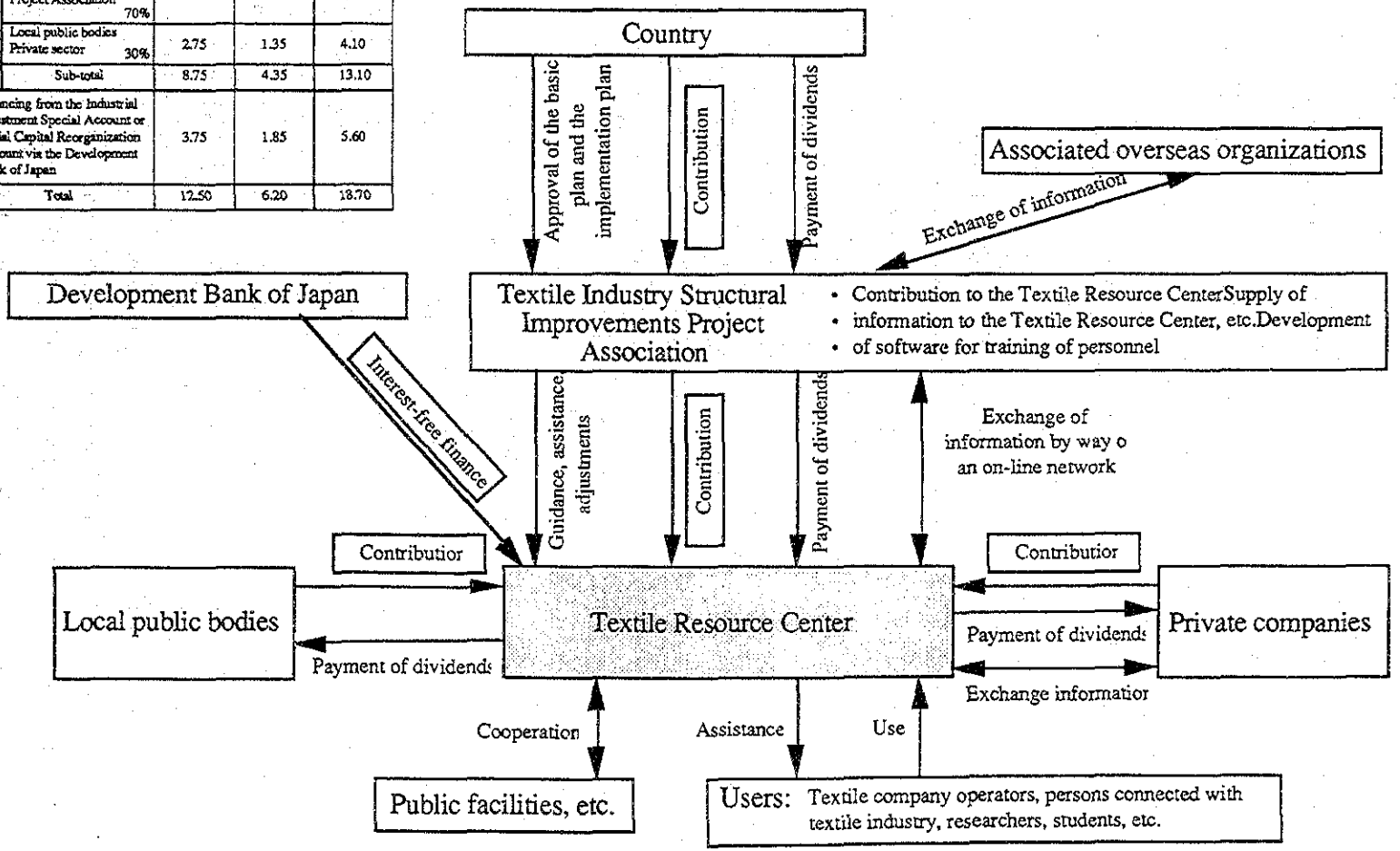
The Objectives of the Establishment of a Textile Resource Center



(Funding) Unit: ¥100 million

		First year	Second Year	Total
70%	Contribution (70%) Textile Industry Structural Improvements Project Association 70%	6.00	3.00	9.00
	Local public bodies Private sector 30%	2.75	1.35	4.10
	Sub-total	8.75	4.35	13.10
30%	Financing from the Industrial Investment Special Account or Social Capital Reorganization Account via the Development Bank of Japan	3.75	1.85	5.60
	Total	12.50	6.20	18.70

Conceptual Plan of The Textile Resource Center



<Main Report>

Chapter 1. The Textile Industry Today, Changes in the External and Internal Environments and The Future Outlook.....(Omitted)

Chapter 2. The Future Path for the Japanese Textile Industry

1. New Tasks for Developing the Industry into a "Lifestyle Suggestion" Industry

1-1. Developing a "Lifestyle Suggestion" Industry by Succeeding in New Tasks

As has already been stated in Chapter 1, the textile industry is currently facing extreme changes in its environment. These include (a) a change in demand towards higher sensitivity, higher quality, wider variety, a smaller product cycle; and (b) a stagnation in exports and a sharp rise in imports as a result of the gains being made by the Asian NIEs and other countries, and also because of the appreciation of the yen.

A decline in domestic production as a result of a stagnation in exports and a sharp increase in imports is a problem also confronting the textile industries in Europe and America. The responses of the United States and European countries to this problem have been to impose import restrictions as a means of protecting their domestic markets. Japan's response has differed from those of Europe and the US in that it has undertaken structural improvement as a means of responding to the gains being made by developing countries. In considering Japan's present international position - its clear intention to promote imports of finished products and its policy for economic cooperation which has the top priority of assisting in the development of export industries in developing countries, all in an attempt to reduce its huge trade surplus - import restrictions which are apt to be placed more or less permanently should be avoided if at all possible. Rather, it is important that the textile industry concentrate on carrying out measures for establishing a supply system which can meet the changes in domestic demand towards higher quality, greater diversification in products, smaller plots, and a shorter product cycle.

The three tasks which must be tackled in order to achieve this are set out in detail below. They involve establishing a supply system which meets actual demand, and turning the industry into one which puts forward proposals for lifestyles.

The first task involves the textile industry as a whole carrying out structural improvements for establishing a supply system (a new supply system to meet actual demand) in response to structural changes in domestic demand, and at the same time

making adjustments to the industry by helping businesses which are having difficulty coping with the changes occurring to the environment both internally and externally. Thus, it involves undertaking constructive structural improvements and smooth industry adjustments (referred to hereafter as "structural adjustments").

The second task requires improving the textile industry's capacity for product planning and for the gathering and transmission of information. These improvements are necessary in order to respond to the trend in demand towards a greater emphasis on fashion, as has been evident recently with the notable trend in demand towards high sensitivity and high quality. This requires the establishment of a firm base, such as setting up a basic facility, and improving the training of personnel.

The third task consists of the constructive utilization by the textile industry of the rapid advances made recently in technological reforms and the benefits of greater sources of information for establishing a supply system which is able to meet changes in demand.

When tackling these tasks it is important that sufficient attention is given to the protection of employment and also to preventing labor problems such as a deterioration in labor conditions.

Furthermore, the development of the textile industry will make a considerable contribution to regional development. Because the textile industry strongly influences the prosperity of regional economies, the impact which the industry has on regions is not simply restricted to the economic sector when proceeding with the three tasks mentioned above. In other words, by giving regions a new image which reflects today's modern times through the production of highly fashionable goods, as well as holding fashion events and establishing the various kinds of basic facilities, a contribution will be made to the revitalization of these regions.

1-2. Structural Adjustments by the Textile Industry in Response to Changes in its Environment

1-2-1. Structural Improvements to the Textile Industry

At the present time, as sudden changes are occurring in the environment, the textile industry is experiencing a decline in volume as it increases its dependence on domestic demand and a considerable reduction in company numbers and in plant and equipment is taking place, mainly in the midstream cloth manufacturing sector. Meanwhile, while there has been an increase in sales and in the number of companies downstream, there has been a marked increase in imports of secondary products. Because of such developments, some parts of the synthetic fiber manufacturing industry, apparel

and distribution sectors have taken steps to propose products which reflect consumer demand and to turn towards higher quality, diversification, smaller lots and shorter cycles. However, the reality of the situation is such that as a whole the textile industry is unable to respond adequately to the significant changes taking place in domestic demand.

As the situation facing the textile industry becomes increasingly difficult due to the gains being made by Asian NIEs and other factors, the international economic position in which Japan finds itself today necessitates that the Japanese textile industry adopt measures in response to the growing trend towards higher quality, diversification, smaller lots, and shorter cycles which exists within the huge domestic market. In addition, active participation in creating market demand is a way of promoting further development. It is therefore necessary for the industry to establish a new supply system which meets actual demand.

This new supply system entails a new system for the cheap, prompt supply in proper quantities of products which meet actual demand through (a) proposals made on the supply side based on an accurate grasp of consumer demand and the actualization of actual demand in accordance with the choices made on the demand side; and (b) the establishment of a quick response system which reduces lead time. To give further details, this involves various special functions such as (a) linking up with information which can be obtained in the downstream sales sector and gaining an accurate grasp of consumer demand; (b) carrying out product development which actualizes potential consumer demand by making full use of the sensitivities of the personnel involved in product development; and (c) having the capacity to produce and sell a wide variety of products at appropriate prices and to maintain the quality of and logistics concerning these products.

1-2-2. Importance of Industry Adjustments

As has been mentioned earlier, the textile industry is currently facing sudden changes in both the internal and external environments and a number of tasks have to be carried out by the industry in order to overcome the problems brought by these changes. However, the features of the textile industry are such that they present obstacles which make it difficult to succeed in these tasks. Also, the changes in the environment are happening at such a fast rate that the industry is given little time to respond. One problem arising out of this situation is that while there are some companies which can respond to these changes in the environment, there are others which cannot. Consequently, it is necessary to carry out "industry adjustments" aimed at business operators having

difficulty coping with these changes, such as converting them to other business, while giving consideration to employment-related problems.

In concrete terms, it is first necessary to make a review of the plant and equipment registration system while working out what sort of measures should be taken in regard to imports and structural improvements.

Furthermore, when examining how to make industry adjustments involving plant and equipment in the course of carrying out drastic structural adjustment to the textile industry, serious examination needs to be made to new industry adjustments, taking into account the situations and problems faced in the past, which are based on a new ideology and new ideas and for which a broad consensus can be obtained.

Secondly, although the changes in the environment affecting the textile industry necessitate finding alternatives such as changing over to other business activities and moving into new business fields, it is important that this be done smoothly by providing assistance in the form of information and various types of guidance.

"Structural adjustments" should be made to the textile industry as a whole by carrying out simultaneously constructive "structural improvements" and smooth "industry adjustments" as mentioned above in response to the changes in the environment.

1-3. Establishing a Base to Meet the Trend Towards Fashionable Products

Strengthening the product development function and information dispatch function of the textile industry is indispensable as a means for responding to the trend towards greater sensitivity and higher quality seen in demand or in other words a trend in demand towards greater emphasis on fashion. However, the efforts of individual businesses aimed at strengthening these functions will not suffice on their own: the establishment of a base is also necessary.

The mutual exchange of proposals for materials containing new designs and quality specifications put forward by the materials sector and of the superior planning capacity and product development based on the sensitivity in apparel companies and designers - that is, among the different parts of the industry (upstream, midstream and downstream) - forms the basis of product planning and information dispatch on sensitive and high quality products in the textile industry.

Today, however, the complexity of the traditional supply structure and the tendency for the division of production processes result in transmission of information in a fragmentary manner through daily transactions, etc., on what kind of materials producing regions (areas where many manufacturers are concentrated) and companies are able to supply and on what kind of materials are required. The result is that such

information is conveyed neither smoothly nor adequately to a wide range of interested parties, and that it causes difficulty in trying to revitalize or facilitate a wide range of mutual exchanges between the upstream, midstream and downstream parts of the industry. This has, moreover, hindered improving the Japanese textile industry's capacity for planning and making proposals. If this situation is left as it is, the materials sector will weaken and will not be able to make full use of the advantages which it has created in today's harsh international environment, such as its capacity for detailed production management and its high level of processing technology. Furthermore, it will not be possible for the textile industry as a whole to raise its planning capacity and creativity above a certain point. Attention should be paid to this situation also from the standpoint of creating markets, and improving the way of life involving the national lifestyle, culture and the economy as a whole.

As well as promoting structural improvements by textile business operators themselves as a means of avoiding the possible problems outlined above, it is also necessary that a base be established in order to strengthen creativity and promote mutual exchanges, tasks which cannot be achieved solely through the efforts of individual businesses. This entails promoting greater interaction between sectors through the comprehensive collection of "data" on the numerous kinds of materials and secondary products which come out of the materials and apparel sectors, and making the data available to businesses and designers located all around the country. In addition to this, a "textile resource center" should be established which would supply information on demand, technology, and trends overseas which are necessary for product planning. This would fulfill the role of a basic facility for taking measures in response to the greater emphasis now being placed on fashion. The establishment of this sort of basic facility is significant in that it provides a nucleus for transforming local regions into supply bases for highly fashionable products and also into two-way information bases. Not only will such facilities foster a sensitivity for fashion on a regional level and contribute to raising the image of regions, but there are great expectations that they will also raise the standard of the textile industry through active associations between consuming areas and producing areas and along with that bring about a comfortable national lifestyle, change the industry structure into one led by domestic demand, and promote international fashions.

In addition to carrying out these measures, the textile industry should develop the fashion business at an international level and must carry out activities such as holding world fashion fairs, promoting the exchange of designers, and taking in trainees in order to further promote and develop mutual exchanges with Europe, the United States, Asia and other countries and regions.

1-4. The Promotion of Technological Development and Improving Information Availability

1-4-1. Active Promotion of Technological Development

The textile industry has, in the past, relied on manual labor to a considerable extent due to the flexibility of its products and also the production of a wide variety of items in small lots. However, in order to establish a new supply system which meets actual demand it is important that the industry as a whole strengthen its technological base and keep pace with the recent rapid advancements in technological reforms. To this end, it has to strengthen its capacity for both product planning and design, and improve its production function so that it is able to respond to the trend towards a wider variety of products and smaller lots in shorter cycles. This involves (a) the development of automated technology for the planning, design, and evaluation of textile products; and (b) improving production efficiency by reducing the time which is lost in the cloth and apparel sectors in changing over to different items and the stabilization of product quality in response to product diversification, shorter lots and shorter cycles. In particular, the reduction of time taken in the preparatory process in the production processes is quite important to improve efficiency.

In addition to this, appropriate measures need to be taken for the development of materials which are distinctive, such as compound materials found mainly in the multi-fiber, spinning, and dyeing processes. Also, despite the fact that evaluation of products in the apparel sector largely centers on the human senses such as fitness and comfort, basic research work in this area has not been done sufficiently. More research and development needs to be done to augment the insufficient amount of basic research and development.

The active promotion of revolutionary technological development, such as the development of highly functional textile materials, must be continued so that textile materials may be applied to a wide range of areas, including the industrial materials sector.

The development of evaluation technology for these distinctive materials, processed products, and industrial materials, as well as the standardization of such products, needs to be carried out actively in order to provide a base for the supply of adequate information to the consumer and for facilitating smooth transactions between businesses.

1-4-2. Improving Information Availability

In order to build a new supply system which meets actual demand in the textile industry, the midstream and upstream must be able to respond easily to information obtained from downstream. However, there is a large amount of information related to production and transactions due to the wide variety of materials and products handled by the textile industry in comparison to other industries. A look at the industrial structure of the textile industry shows that it is multi-layered and divided into different processes of production, and that processes of transactions etc, are very complex. Consequently, the various kinds of information related to consumer demand do not easily filter upstream, with the result that accurate and efficient planning and design, production, and distribution by using this information is more difficult in the textile industry than it is in other industries. To overcome these situations, it is important to utilize information systems which have recently been developed.

An information network needs to be established within the textile industry, and made into a shared data base comprising various sources of information and the VAN services shared by the industry, company groups, and producing areas. It is becoming increasingly important that information on products and on customers collected downstream be obtained accurately and promptly, and that the range of products available meet consumer demand. Such requirements necessitate the development and introduction of new information systems, such as the POS (Point of Sales) system and the EOS (Electronic Ordering System: a system using circuits which transmits orders to producers through an on-line computer system).

2. Basic Approach for the New Tasks

2-1. Importance of Active Participation by Businesses and Industry Groups

The most important element for succeeding in the three tasks in order to overcome the severe environment facing the textile industry is the efforts of textile businesses themselves. Although the Japanese textile industry has experienced several depressions, two oil crises and various trials since the end of the Second World War, the situation facing the industry today is completely different from anything it has faced in the past. Namely, when it faced hard times in the past it was nevertheless possible to expect that textile production would expand in the long term. However, this time, with the steady strong yen and the gains being made by Asian NIEs etc, it is predicted that production will decrease in volume for the textile industry as a whole. Given this situation, the question of whether the textile industry will develop further or not depends on what measures businesses themselves take in the face of the present situation.

As for industry groups, they should assist these efforts by individual business operators indirectly by providing guidance, education, information, and survey research. In doing so, they should work harder than they have in the past for establishing a base on which the industry as a whole can develop. What is more, the complexity of the textile industry and the way in which processes are separated makes it difficult for industries to understand each other, and this causes conflicts of interest and a lack of understanding, which have all tended to hinder the development of the textile industry as a whole. Concerned industry circles are therefore required to make new efforts to strengthen their relationships and to bring about mutual cooperation.

2-2. Importance of Supplementary Measures by the Government

The carrying out of the three tasks and efforts by textile businesses and industry groups themselves are primarily the basis for opening up new avenues for development in response to the changes in the internal and external environments. Nevertheless, due to the peculiar characteristics of the textile industry and given the severity of present conditions, it will be difficult to succeed in the tasks at hand through the efforts of individual businesses alone. Measures for coping with the changes in the textile industry both internally and externally are also important when viewed from the perspective of the national economy. Thus, it is necessary for the government to provide support for

tackling the above-mentioned tasks by coming up with supplementary measures of assistance aimed at textile businesses and industry groups.

In doing so, attention should be paid to the fact that an economy which makes sustained expansion of domestic demand possible is a prerequisite for enabling the textile industry to make smooth adjustments in response to the harsh changes in the environment.

Chapter 3. Future Textile Industry Policies

1. The Active Promotion of Structural Adjustments

1-1. New Structural Improvements in Response to Changes in the Environment

1-1-1. Past Structural Improvements

Structural improvements which have been made to the textile industry from 1974 through to the present day have been made on the basis of the Law on Extraordinary Measures for Structural Improvement in the Textile Industry and have placed particular emphasis on vertical links, that is, on strengthening product development and adding a high added value to products through links with companies in other industries.

These structural improvements were launched in the late 1960s, a time when sudden changes were occurring in the environment as developing countries were quickly catching up and demand shifted towards higher quality and a wider variety of products. The textile industry was no longer able to meet these changes by simply pursuing an economy of scale at that time. It was difficult to respond to these changes by pursuing an economy of scale under mass production; it was no longer possible to use mass production as a means of meeting the sudden change in consumer demand towards higher quality, diversification, and individuality, brought about by a rise in incomes. It therefore became necessary for the Japanese textile industry to shift the emphasis of production activities away from areas in which developing countries held an advantage in regard to price competitiveness and over to areas which were more know-how-intensive. As a result, information, that is, obtaining adequate information on consumer demand and strengthening the "soft" side such as new product development based on that information, became an urgent task for the industry.

In the course of its history, the supply structure of the textile industry had become multi-layered, complex, and the processes had become separated. This sort of structure not only causes delays in responding to consumer demand. It also creates a situation in which production is heavily dependent on assumed demand generated from the production and distribution stages and this easily encourages oversupply.

Thus, due to the realization that the hindrance to the flow of information between different industries caused by the division of processes was posing a problem for the strengthening of the "soft" side, attempts were made to facilitate a smoother flow of information by forming vertical links with different industries. Political support was also given for the implementation of structural improvements. This constitutes the current way of thinking for structural improvements.

While one can fundamentally agree with the ideology behind using these structural improvements as a means of establishing a new supply system which meets actual demand, the sudden changes in the environment not only necessitate a smoother flow of information through links between different industries, but also make it necessary to build a system which can carry out a variety of functions, such as a quick response and meeting the need for a wide variety of products and smaller lots. Viewed from this perspective, existing structural improvements are not necessarily adequate, and it is thus necessary to make improvements to these inadequacies.

1-1-2. Structural Improvements for Building a Supply System which Meets Actual Demand

The development of technological reforms and information availability contributes to the technology related to a wide variety of products, small lots and shorter cycles, and this in turn makes it possible to establish a new supply system within the textile industry which meets actual demand.

The introduction of the latest machinery and equipment alone is not sufficient for the strengthening of the various functions (i.e. gathering of information, product planning and development, wide variety in small lot production, and quicker responses) needed to establish this new type of supply system. Such machinery and equipment must be used properly, and there must be "software" with which to connect this "hardware" to the gathering of information, product development, production, distribution and quality control. The main objective in implementing new structural improvements is to raise the level of these various functions from both the "soft" and "hard" sides.

1-1-3. New Structural Improvements

1. Establishing a new supply system to meet actual demand through Linkage Production Units

Given the present situation of the textile industry, the linking of a number of companies through the formation of Linkage Production Units for the supplementation of the various functions required for establishing a new supply system is necessary in order to respond with flexibility, and moreover, constructively to the market with its particular features of higher quality, a wider variety of items, small lots, and short product cycles.

This entails the formation of groups for supplementing the functions required for meeting market trends by forming business tie-ups, or forming associations and establishing joint capital companies, within producing areas and also between different areas as well as on a national level.

These Linkage Production Units differ considerably from links made in the past. That is, past tie-ups were aimed at removing obstacles caused by the division of processes which obstructed the flow of information on demand, and they centered on a vertical relationship between group members and different industries. In contrast to this, the aim of Linkage Production Units is to develop the special character of companies which have vertical links with different industries through the mutual supplementation of functions, and in turn to improve the functions of information gathering, product development, and adaptation to wide variety in small lot production of the group as a whole.

The establishment of these Linkage Production Units with a strengthened quick response function also makes it possible to solve many problems which have arisen in the past due to the peculiar characteristics of the textile industry in regard to demand and technology.

By setting up these units and creating a system which (a) makes cheaper and more accurate demand forecasts possible by reducing the period covered by the forecasts; (b) makes it possible to reduce surplus stock and thereby reduce costs; and (c) "makes products which sell", it is possible to control assumed demand and reduce the risks accompanying an imbalance in demand and supply. It will thus be possible to solve the problems which exist within the textile industry's supply system.

2. Tie-ups between Linkage Production Units and external circles

Due to the many processing stages found within the textile industry, it is not enough to have close links within individual companies and also within Linkage Production Units if one hopes to establish a new supply system. It is also necessary to have closer links in the "soft" areas - the mutual exchange of information, merchandising

and marketing, etc. - and distribution areas at the different production and sales stages within the textile industry.

3. Role of the textile distribution industry

The textile distribution industry has a major role to play in the establishment of Linkage Production Units and a network which covers the whole textile industry. Even today the textile distribution industry shares the risks at every stage with producers and fills the gap between production and consumption by storing the wide range of products. In addition to this, there are more than a few within the industry who perform a wide variety of functions such as information gathering, product planning, production management and quality control. Also, viewed from the perspective of an industry network, some distributors are moving towards acting as substitutes for textile wholesalers, and becoming vital linkage points for the formation of a textile industry network.

Textile distributors are expected to play a role in the functions required for establishing a supply system which meets actual demand by taking measures for making more information available (for example, obtaining customer information by creating a network linking it to sales outlets, reducing distribution costs through the creation of a network with producers based on the sales outlet network, and the creation of an exhaustive single product stock control system and an efficient piece picking system).

1-1-4. Structural Improvements which Utilize the Incubator Function of Local Industries

It is thought that given the existence of the many small-scale companies operating within the textile industry, it will not be easy to establish the Linkage Production Units through the independent efforts of individual operators alone. Thus, local industry associations or producing areas consisting of most textile business operators, should provide active support to members wishing to establish Production Linkage Units by making full use of the associations' advantages in regard to the gathering and supply of information, technological development, and the supply of funds.

The local industry associations should utilize their function as incubators for Linkage Production Units formed by their member textile businesses. As well as training personnel, providing guidance, undertaking experimental research, and supplying information as part of the joint project for promoting the formation of the units, it is important that they foster the units by providing assistance with the modernization of plant and equipment as part of the structural improvements carried out by the units.

1-1-5. Measures which Should Be Adopted by the Government

The urgent and steady creation of a new supply system is a task for the textile industry. It is also urgent to implement the structural improvements project to establish the new system. Also required is the adoption of more effective means than those used in the current system and detailed support measures in line with the difficulty of the project.

It will be difficult to make structural improvements to local industries unless the associations make effective use of the advantages they hold. It is because of this that the local industry associations should carry out activities for putting in place a base for making structural improvements to member companies by providing adequate assistance.

The Textile Industry Rationalization Agency is, at the present time, the central organization involved in carrying out structural improvements to the textile industry, and the past experiences of the association in making structural improvements should be fully utilized. Also, as far as the new tasks facing the textile industry are concerned, the association should investigate the implementation of the new projects for providing support for the base required to respond to the greater emphasis being placed on fashion, offering suggestions on opening up new demand, training personnel and providing guidance.

Various necessary measures, including the amendment of the Law on Extraordinary Measures for Textile Industry Structural Improvement in the Textile Industry, should be adopted in order to carry out the kinds of measures mentioned above.

1-2. Industry Adjustments and an Evaluation of their Effectiveness

1-2-1. Review of Equipment Adjustment Policies

1. Equipment Registration System

(a) An examination of the current system for the registration of equipment....(omitted)

(b) The equipment registration system and an evaluation of its effectiveness

The object of the equipment registration system is to prevent excessive competition caused by a surplus of equipment and to facilitate the stable operation of small- and medium-scale companies. However, the subjective condition of the surplus of equipment which occurred in the late 1950s and early 1960s no longer applies to the textile industry. The doing away with equipment in 25 textile-related industries, which lasted until 1987 in response to the sharp drop in demand which

occurred after the oil crises, has created a relative decrease in surplus equipment compared to the late fifties and early sixties.

In the late fifties and early sixties, when the strong international competitiveness of the Japanese textile industry attracted investment in plant and equipment and contributed towards a surplus those areas, banning the introduction of new and additional equipment by implementing an equipment registration system did not hinder technological reforms. Rather, the introduction of such regulations proved beneficial.

However, in today's environment, whereby Japan has lost its international competitiveness in some areas and imports have been increasing rapidly due to the gains made by developing countries, the situation is no longer conducive to investment in plant and equipment which in turn encourages a surplus in equipment. Thus, there is a need to re-examine the meaning of the enforcement of the equipment registration system.

With significant changes in the environment affecting the textile industry such as a sharp increase in imports and a change in demand towards higher quality and diversification etc., whether the Japanese textile industry manages to survive or not depends on what measures it takes in response to such changes. The registration system by itself has little bearing on this survival. What is required now is to examine measures which will enable the industry to successfully cope with the changes in the environment. The future of the registration system needs to be looked at in conjunction with what sort of measures should be taken in response to imports and how to carry out structural improvements.

The following criticisms have been made of the registration system as it stands at present:

- as imports increase, the registration system is not very effective in controlling a surplus in equipment as it restricts only equipment within the country;
- even though equipment belonging to small- and medium-sized manufacturers which comprise the vast majority of companies within the textile industry is technically and economically out of date and is no longer competitive, it is common for these companies to hold on to their equipment as assets for a very long time. This sort of equipment which is no longer competitive is included among "surplus equipment", and as there isn't really a surplus, there is no need for a registration system as a means of controlling equipment;

- as it is considered unlikely that large companies would enter the industry if the registration system were abolished, it is also not very likely that there will be an increase in equipment leading to a surplus;
- the registration system imposes restrictions on the introduction of new equipment and, because the "scrap and build" rule applies, equipment which is no longer competitive is subject to registration. The system thus offers premiums and increases investment costs and prevents companies from modernizing and rationalizing their equipment;
- an excessive reliance on the administration is generated and this makes business operators vague about the extent to which they are responsible for managing their operations;
- although it has been pointed out that the registration system has the advantages of having a grasp on the situation concerning equipment within the industry and of supporting organizations such as local industry associations, these are no more than secondary and reflexive effects. Even if these advantages do exist and it was important to preserve them, whether or not it is necessary to maintain the equipment registration system as a means of preserving them is a completely different matter.

There are also those who have expressed the following opinions in support of the registration system:

- by controlling the introduction of additional and new equipment and newcomers to the industry, situations which incite excessive competition are eliminated and small- and medium-sized companies are protected from large companies entering the industry;
- it raises the status of small and medium-scale companies in regard to transactions and this has the effect of contributing to the stabilization of business;
- The system makes it easy to know what the situation regarding equipment is like in the individual industries and is useful in promoting policies for the respective industries;
- The administrative work involved forms the base of business activities carried out by industry groups such as local industry associations. This has the effect of supporting and strengthening the organization of industry groups, and this in turn contributes to the development of the areas;
- The current registration system does not disadvantage the upstream and downstream sectors and other industries.

2. The system for scrapping equipment

(a) An examination and evaluation of the system for scrapping equipment

In a report on the equipment scrapping system put out in 1983 both councils expressed some doubt as to the effectiveness of the joint scrapping project for equipment as it has been carried out in the past. The report also took into account the urgency of measures for those quitting or transferring to other industries and as its basic direction suggested that the possibility of restricting the project to operators quitting or transferring to other industries should be examined.

Since 1985, in response to the report, the joint scrapping project for equipment has been implemented only for operators quitting or transferring to other industries. At the cabinet meeting on economic measures held on May 30, 1986, it was decided that "A drastic review is to be made of the system, and as well as abolishing the current joint scrapping project for equipment, a new joint scrapping system for equipment with new strict requirements and stricter surveillance is to be implemented for the purpose of promoting structural adjustments in specific local industries". This led to the following four improvements being made to the joint scrapping project for equipment: a) basing the project along local industry lines; b) clarifying separate visions for different industries and producing areas; c) making the system for implementation and the surveillance system more rigid; and d) putting in place a check and balance mechanism for use in considering the rights and wrongs of implementing the project (placing the burden on those left in business). The system was later abolished at the end of fiscal 1987.

Textile business operators have had the following to say about using the system for scrapping equipment: due to the small scale of their operations and the way in which producing areas have been formed, the task of transferring or quitting operations, which would normally have been difficult, has been carried out smoothly and has made it possible to make structural improvements in local industries; and the scrapping of surplus equipment has improved demand and supply and has contributed to stabilizing the business base of the industry.

But the project has also come in for the following criticism: despite the fact that the project has been implemented repeatedly in the past, the surplus ratio has improved little; it has generated the expectation that it will be implemented in the future, and combined with the equipment registration system, has encouraged the attitude that equipment is a right; it has a harmful effect as equipment that would normally be scrapped has been kept; and the responsibility which companies have

in regard to this has been made somewhat vague and an over-reliance on the government has been created.

(b) Measures to be taken should a new situation arise

Should, in the course of carrying out drastic structural adjustments to the textile industry, the situation arise where it is necessary to examine measures for industry adjustments aimed at equipment, serious consideration needs to be given to new industry adjustment measures for which there is a broad consensus and which take into account past circumstances and problems, and which are based on a new ideology and contain new elements.

1-1-2. The Smooth Transition to New Businesses and New Sectors.....(Omitted)

2. Support for a Base for Establishing a Supply System which Meets Actual Demand

2-1. Establishing a Base for Responding to the Greater Emphasis on Fashion

1. Establishing a basic facility for responding to greater emphasis on fashion

Active support for the establishment of "Textile Resource Centers" to enable the textile industry to adopt prompt measures aimed at meeting the trend in demand towards fashion will strengthen the industry's product planning function. In addition, the strengthening of the information dispatch function of local textile industries is a task to be undertaken urgently.

2. Measures for training personnel

The quality of personnel is extremely important in taking appropriate measures in response to the emphasis within the textile industry on fashion. Efforts must therefore be made to train personnel.

(a) School education

Even though the apparel industry has relied on professional schools for its supply of personnel, the majority of these schools restrict their teaching to dressmaking. It is therefore necessary that as organizations training people to work in the fashion business these schools make some changes. A fashion college also needs to be established for providing tertiary education related to the fashion

business, and consideration should be given to incorporating studies on the fashion business in courses taught at the general school level.

A system is also required which can re-train people who are already employed.

(b) Establishment of a qualifications system

There are occupational categories within the apparel industry which require specialized knowledge and technical expertise. However, various problems occur due to the absence of clear guidelines for the degree of special knowledge and expertise required. It is therefore important that some clear guidelines be established and that a standardized system be put in place. A qualifications system must be established, in areas where possible, for improving the image of the industry and for raising the status of those engaged in the industry.

In order to meet the demand for fashion, the midstream sector is required to develop educational materials for textile designers, etc., to improve the training provided at professional schools and other schools, and to carry out activities for the training of personnel in local industries.

3. Fostering fashion sense among the people

(a) Assistance for fashion events

Today, in all sectors of the industry, from apparel through to textiles, fashion-related events are held all around the country. These have increased business opportunities and contributed significantly to developing a fashion sense among individuals and companies. However, those sponsoring the events have encountered some problems, including a lack of suitable venues. Consideration should therefore be given to establishing venues for holding such fashion events.

It is also necessary to promote exchanges with designers from various countries by sponsoring world fashion shows and other events in order to make firm Japan's status as a country from where fashions originate.

(b) An award system for the fashion industry

The image of the textile industry needs to be improved as individual companies face difficulties in holding on to their talented personnel due to the overall image which the industry has.

One effective means for improving the image of fashion and the textile industry is to draw the attention of a large number of people to the superior nature of fashions and of designs for products. To achieve this, it is necessary to investigate the possibility of establishing a new award system away from

precedent awards in the fashion sector by letting neutral organizations like government agencies make the selections for the awards.

2-2. Support for Technological Development and Information

2-2-1. Support for Technological Development

1. Policy support for technological development

Research into human life engineering such as technology for measuring and evaluating the morphological and dynamic characteristics of humans and the development of automated technology for the planning, design and evaluation of textile products, which are needed in order to obtain a fixed quantity of data on the aesthetic side of textile products, such as "Fuuai" and comfort, cover a wide basic area. It is because this sort of research covers a wide area outside the textile industry as well that research and development should be undertaken through liaison with industry, government, and universities.

It is desirable that appropriate measures of support, including the application of related measures, are implemented in order to determine what sort of technology is needed for making variety, small lot, short cycle production more efficient.

2. Evaluation of testing & experiments and comprehensive measures for solving problems related to quality

Due to the diversification in textile products and materials, meetings held by the quality and performance committee covering apparel products should be used to make a greater effort towards promoting the development of product characteristics and quality evaluation technology and similar technology.

There is a growing number of disputes related to transactions and complaints from customers which stem from quality and performance evaluation, and this is due to a large extent to the inadequacy of information on quality which is transmitted between businesses. To remedy this situation it is necessary that steps be taken to set up "Meetings for Discussing Problems Associated with the Quality of Textile Products" (tentative name) to be held at the Ministry of International Trade and Industry's Inspection Institute and at which an exchange of information can take place between business operators, testing organizations, consumers, and other concerned persons.

2-2-2. Support for Making More Information Available

1. Establishment of a "Textile Industry Information System Council" (tentative name)

A "Textile Industry Information System Council" (tentative name) comprised of persons associated with the industry should be set up by the Textile Industry Rationalization Agency to ensure that the task of increasing the availability of information within the textile industry is carried out efficiently. The job of the council is to examine and reach agreement on basic matters relating to information. These include what sort of network the textile industry should have, standardizing business protocol, what sort of textile data base there should be, and the use of POS in the apparel sector.

2. Establishing an information network and a data base

In attempting to form an information network for the textile industry, measures are required to assist with the undertaking of a basic survey and other tasks which precede the establishment of a network. As for establishing the information network, use should be made of existing measures for the introduction of hardware and software, and consideration should be given to expanding the various kinds of measures needed for support.

3. Measures for the standardization of business protocol

Basic guidelines and a basic plan should be formulated so that the "Textile Industry Information System Council" can work on standardizing business protocol.

It is also desirable that third party organizations such as the Textile Industry Rationalization Agency assess the present situation in regard to forms and categories for product codes, and on the basis of this compile a model protocol.

In addition to this, consideration should also be given to setting out for the industries involved a preferred direction through the formulation of guidelines by the government based on legislation related to data processing. In doing so, due attention needs to be paid to the state of progress achieved thus far in making more information available within the textile industry.

2-3. Improvements to Transactions and Distribution

1. Improving practices for business transactions

The practices for business transactions found within the textile industry reflect the complexity of the industry's production and distribution structure and have come into being through the accumulation of agreements reached between interested parties over

many years. However, among these are practices which are in need of improvement if the textile industry is to undergo rationalization.

For the present time, the activities of the Council for the Modernization of Business Transactions within the Textile Industry, the efforts of related industry groups and business operators, and changes to the production and distribution structures which have been made in response to the changes in the environment have all brought about a wide range of improvements. Such improvements include an increase in the ratio of written contracts and a decrease in the ratio of returned goods, and delayed and rejected transactions. Nevertheless, there would seem to be a need for further improvements to be made to individual practices belonging to each industry.

Making improvements to transactions is no easy matter as they are firmly rooted in the traditional structure of the Japanese textile industry. But basically, what is most important is an improved capacity for conducting transactions and negotiations arising from an overall improvement in product planning and marketing capacity as a result of structural improvements made by individual business operators. It has also been pointed out that while at a glance some business practices might appear illogical, third parties should not interfere in cases of practices where the parties concerned have no trouble in reaching agreement. In this sense as well, solutions made independently by textile business operators themselves should play an integral role.

Based on the premise that solutions should be made independently, as a central organization which has been established through the consensus of the textile industry as a forum for cooperation within the textile industry, the Council for the Modernization of Business Transactions within the Textile Industry is required to promote the following sorts of measures:

- improvements to individual business practices should continue to be based on the initiatives and activities of related industries, and a full exchange of opinions between related industries should be carried out at discussions held under the auspices of the Council. During such talks, efforts should be made to set guidelines for improving transactions;
- due to the fact that it appears that in many cases a lack of specifics in regard to contracts lead to returned goods and delayed transactions etc., work undertaken in improving transactions should be based on measures for promoting the wide use of written contracts and making contract conditions clearer;
- developing an on-line system makes contracts clearer and helps improve transactions by having a beneficial effect on the problems of business practices such as returned goods, late price settlement, and transaction delays. An even greater effort is required to be made on the improvements which have been made

to business transactions so far by encouraging business contracts and use of payment slips as these establish an information base and accelerate the improvement in business transactions. Given that an increasing number of business problems such as returned goods and annulled contracts are occurring due to the insufficient transmission of information on quality, efforts need to be made so that more information is made available in this area.

While the government regards independent solutions to these problems as the guiding principle, the application, where appropriate, of existing laws, such as the Anti-Monopoly Law and the Subcontractors Deferred Payment Prevention Law, for preventing unfair business practices will, needless to say, assist the industry in its own efforts. Appropriate assistance is also required for setting up discussion meetings for looking into making improvements to individual business practices which will in turn make the activities of the Council for the Modernization of Business Transactions within the Textile Industry easier. Steps are also required in regard to quality and information on quality.

[Appendix III-2]

An Outline of Japan's Textile Industry Structural Improvements Project

Amidst changes to the environment inside and outside Japan such as the development of textile industries in newly industrializing countries regions and other Asian countries, the decrease in international price competitiveness brought about by the strong yen, and a change in the demand structure towards higher quality and diversification, it is the structural improvement project that has been carried out to raise the level of the textile industry in the medium to long-term range.

The first project was launched in 1967 with the enactment of the Law on Extraordinary Measures for Structural Improvement in the Textile Industry. Based on this law, the project concentrated on modernizing plant and equipment, integrating companies and transforming the industry into a capital-intensive industry through seeking merits of scale of economy, and strengthening international price competitiveness for the four specified industries (specified spinning industry, cloth-weaving industry, knit manufacturing industry, and dyeing industry).

In 1974 the Law on Extraordinary Measures for Structural Improvements in the Textile Industry was enacted. With it started a new structural improvements project which aimed to make the industry more know-how-intensive by strengthening the "soft" functions of the industry, mainly the development of new products and new technology.

Enacted for a limited period, the law has been amended twice since its enactment, once in 1979 and again in 1984. In the process, greater efforts have been made to develop the project.

The current structural improvements project (up until June 1989) is being carried out with the dual objectives of making the industry know-how-intensive and training personnel.

(1) Project for making the industry know-how-intensive

The purpose of this project is to deepen links between companies and between different textile-related industries, and integrate the functions of information gathering, product development, production and sales as a means of making the textile industry more know-how-intensive.

Measures on finance and taxation are being provided for companies and cooperatives which have formed groups.

1) Project activities to be assisted

1- the development of new products and new technologies through the establishment of a product development center;
2- the lease of equipment needed for new products and new technological products developed as part of 1 above;
3- the modernization of equipment
4- rationalization of the scale of companies;
5- improvements to business transactions

2) Support measures

1- making finance available from public organizations such as the Small Business Corporation;
2- preferential tax treatment - proportional depreciation of machinery, advanced depreciation of fixed assets used for experimental research;
3- credit supplement from the Textile Industry Rationalization Agency for the supply of funds on hand

(2) Project for training personnel

This project is aimed at training personnel in the apparel industry with specialized skills, and also business skills, who are able to respond to the changes in consumer demand as a means of developing the apparel industry, a key element for the sound development of the textile industry.

The project is being funded through government funds and through donations from industry groups and is being carried out under the administration of the Textile Industry Rationalization Agency.

(3) Textile Industry Rationalization Agency

The association was established in 1967 as a parent body for carrying out the structural improvement project. The activities covered by the association have been expanded along with the amendments to and extension of the Law on Extraordinary Measures for Structural Improvement in the Textile Industry. The association is currently engaged in carrying out the measures described below. Although the association is a private corporation, most of its activities are carried out through funds provided by the government and donations provided by private business circles. Its current activities are:

1- providing credit guarantees for loans of funds required for carrying out structural improvements;
2- granting of subsidies for promoting the development of the textile industry (development of new products and new technologies, survey of trends in

demand for textile products inside and outside Japan, creating new demand, adopting measures for the rationalization and modernization of distribution);

3- granting of subsidies for providing guidance in textile manufacturing technology;

4- training of personnel for providing guidance in textile manufacturing technology;

5- training of personnel employed by apparel companies (holding lectures and providing assistance for training courses held by private associations);

6- gathering, processing and provision of information on textiles (on-the-spot survey of apparel production, survey of sales outlets, carrying out an overseas survey, and supplying information obtained from these surveys);

7- various consigned projects (consignment of investigative research into a fashion community center and holding world fashion fairs etc, compilation of textile design data cards, and investigative research related to technological development).

[Appendix III-3]

Outline of Japan's Fund System for the Modernization of Equipment for Small and Medium Enterprises

This system has been established for the purpose of modernizing the equipment held by small- and medium-scale enterprises, which are in a weak position in regard to credit and raising funds, through financial assistance provided by the central government and also by regional governments. The system consists of the following four systems:

(1) Equipment modernization loan system for small and medium companies

The system provides loans for up to 50% of the cost of equipment introduced by small- and medium-scale company operators for the purpose of raising productivity;

(2) Leasing system for general equipment

The system leases equipment on an installment plan basis to small and medium companies which tend to lack the specialized knowledge and technology required for selecting equipment and which have particular difficulty in raising funds;

(3) High-tech information processing machinery loan system

The system leases high-tech machinery and equipment on an installment plan basis as a means of providing assistance to small and medium-scale companies which lag behind in introducing new technologies for the introduction of high-tech machinery;

(4) High-tech information processing machinery leasing system

Although the system is similar to (3) above in that it provides assistance for the introduction of high-tech machinery, the equipment is not purchased by small and medium companies but is leased over a long term so as to lighten the financial burden placed on such companies. Use of this system has the following advantages for those who choose to use it: (1) less demands are made on the transfer of funds; (2) it is possible to use expensive up-to-date machinery and equipment at a low cost; and (3) the monthly lease payments can be written off as necessary expenses for taxation purposes.

Equipment Modernization Loans and Equipment Leasing Systems

	Equipment modernization loans	Equipment leasing systems		
		Equipment leasing (installment plan)		Equipment leasing
		General equipment	Hi-tech, information processing equipment	Hi-tech, information processing equipment
Main recipients	Small and medium Enterprises with 100 or less employees	Small and medium enterprises with up to 20 employees	Small and medium enterprises with up to 80 employees	Small and medium enterprises with up to 80 employees
Maximum amount of loan or value of leased equipment	Half of funds required Up to ¥30 million	Equipment worth up to ¥25 million	Equipment worth up to ¥50 million	Equipment worth to ¥50 million
Interest or charge	Free	4.5 of the cost of equipment as per annum charge (an additional 10% guarantee money is required)	4.5% of the cost of equipment as per annum charge (an additional 10% guarantee money is required)	about 7% as per annum charge (including tax and insurance premium)
Period	Five years with one year grace period	Four years and six months (eleven years and six months for anti-pollution equipment)	Six years and six months (eleven years and six months for anti-pollution equipment)	Up to seven years (84 months)

Note: Loans and equipment leasing for small and medium enterprises

[Appendix III-4]

Outline of the Korean Project For Raising the Level of the Textile Industry — Textile Industry Modernization Project (1984) —

The following is an outline of South Korea's Modernization Project (fiscal 1984) which was based on the Textile Industry Modernization Promotion Law which was officially announced in December 1979. (The project called for the establishment of a system of vertical and horizontal cooperation between industries for the first time.)

The project consists of: (1) the expansion and improvement of the production base mainly through the replacement of out-of-date equipment and the introduction of the latest equipment; (2) the development of materials, development of fashion designs, and raising quality levels and diversifying products through the fostering of the dyeing process industry; (3) the promotion of technological development; (4) strengthening the information function; and (5) the expansion of export markets.

The project is aimed at turning the industry into one similar to those found in advanced countries which aim at raising quality levels by stressing the importance of technology, information, and fashion. This is the same as the course which the Japanese textile industry is seeking to follow.

Textile Industry Modernization Project (1984)

1. Expansion of the production base
   a) Expanding equipment
   b) Rationalization and adjustment of equipment

2. Modernization of equipment
   a) Replacement of out-of-date equipment
      - assistance with funds needed for replacement equipment
        - amount of assistance: 3.0 billion Won
        - Source of funds: Textile Industry Modernization Fund
      - preferential issuing of approval for replacement of outdated equipment
   b) Introduction of the latest equipment
      - assistance with funds needed for the introduction of equipment (provided by the Fund)
      - assistance with installing equipment to be used jointly
      - provision of information on the latest in development equipment

- holding of the Republic of South Korea International Textile Machinery Exhibition
- support for a mission to attend the ATME (Asia Textile Manufacturers Exhibition)

3. Trend towards higher quality and diversification

a) Promotion of the development of materials

- major items to be developed
  - multi fibers: fine yarns, mixed yarns, moisture absorbent raw yarns, dyeable yarn, PBT fiber, fiber with low fusion point
  - spinning: special mixture spinning yarns (cotton/acetate, cotton/wool, cotton/linen, wool/silk), fancy yarns, fine thread count yarns, knitting yarns
  - fabric: high density fabric, cotton/wool fabrics
- assistance with the development of new materials
  - funds available for development: a 500 million Won fund
  - preferential approval given for the installation of small-scale equipment used for developing materials
- experimental acrylic fiber spinning plants
  - plants with 800 spindles
  - experimental spinning of new materials developed overseas
- each company to develop one material (multi fiber, spinning)
- holding of a new materials development exhibition

b) Development of fashion design

- development of organizations specializing in fashion design
  - strengthening of the functions of the International Fashion Design Research Institute: fostering of designers, forming links between designers and the industry
  - inviting well-known foreign fashion schools to establish branch schools- Esmond (France)
- holding a competition for choosing new fashion designers (providing financial assistance for studying overseas)
- holding the first Korean Fashion Fair (New York)
- assistance for participating in famous overseas fashion exhibitions: Salon Due Preta Porte (France), Easternstoff (Japan), Interstoff (West Germany), Index (Switzerland)

- holding of dress fashion shows (separate shows for different industries, and for each season)
- establishment of a Fashion Design Subcommittee
  - increased cooperation between designers and the industry
- encouragement to companies to set up fashion design divisions

c) Fostering the dye processing industry

(1) assistance for the establishment of dyeing estates

- Banweol estate
  - installation of water pipes for exclusive use (formation of a basic plan)
  - setting up of a computer color matching terminal
  - assistance for joint project for a model cooperative estate for dyeing
  - Diagnosis of technology level and guidance in accordance with the technology level of factory
- Bisan estate
  - assistance with setting up heat absorption development equipment
  - setting up of a computer color matching terminal
- Busan estate
  - formulation of a basic plan for the establishment of an estate

(2) Improving technical guidance

- inviting foreign technical experts for providing on-site guidance (10 persons, 30 companies)
- on-site guidance by Korean technical experts (90 companies)
- *Korea-Italy Private Sector Dyeing Joint Committee*

(3) Technical training

- training overseas

	Period	No. of persons
Technicians and skilled workers	1-2 months	42
Factory manager class	"	45
TOTAL		87

- training in Korea
  - training organizations: Industrial Testing Institute, Small and Medium-scale Enterprises Promotion Corporation, Korean Textile Technology Promotion Center (KOTITI), Daegu Textile Technology Promotion Institute

- number of trainees: 600 persons

(4) Introduction of special dye processing technology

- stain resistant, dye resistant, shrink resistant technology and hygienic processing technology
- special coatings

(5) Production of a Korean standard color chart

d) Development of manufacturers which are exclusively engaged in the production of small quantities of high value items

- assistance with funds for equipment
- assistance with allocation of quota
- technical guidance

e) Creation of a system for vertical and horizontal cooperation between industries

(1) assistance with a vertical cooperation project

- testing —> analysis of results —> expansion of operations

(2) encouragement for forming cooperatives between identical industries (horizontal)

- creation of cooperative estates

weaving (3), sewing (2) knit (2) unwoven cloth (1)

4. Promotion of technological development

a) Encouraging large companies to establish a technological development research institute

- in-company research centers

b) Solutions for technical bottlenecks faced by small and medium companies

- Korean Textile Industry Federation: collection and provision of information; technical consultation
- Korean Textile Technology Promotion Center (KOTITI): technology research and development for the solution of bottlenecks, technical guidance, training of mid-level technicians (150 persons)
- Daegu Textile Technical Promotion Institute: solutions for technical bottlenecks within the Daegu region (experimental analysis, training and re-training of skilled workers), reinforcement of equipment for experiments (200 million Won)
- use of other associated organizations: Small and Medium Enterprises Promotion Corporation, etc

c) Fostering of technicians and skilled workers

(1) fostering of high level textile specialists

- study overseas (doctorate course)
  - KOTITI- 3 persons, companies- 7

(2) re-training of medium-level technicians
- study in Korea
  - study organizations: Small and Medium Enterprises Promotion Corporation, KOTITI, Daegu Textile Technology Promotion Institute, Apparel Experiment and Testing Center
  - areas of study: weaving, knitting, sewing, dyeing, quality control
  - number of students: 2,000 persons
- study overseas: weaving, knitting, sewing, dyeing- 100 persons

(3) commendation of model technicians and skilled workers
- observation tour of domestic industries and inspection of large overseas plants

(4) strengthening of a system for the vertical and horizontal use of introduced technology
  - reciprocal visits between companies and the exchange of information
  - holding of seminars for factory managers (seasonal)

(5) invitation of outstanding foreign technicians, study and guidance

(6) joint assistance from industry-university cooperation
- holding of various types of seminars, support for the activities of academic societies

5. Strengthening of the information function

a) Expanding the operation of information centers related to the textile industry
- formation of links with well-known overseas information organizations
- overseas training for information staff
- formation of an information staff committee (industry, academic circles 10-15 persons)
  - greater exchange of information
  - greater use of information
- various types of materials (fashion, technical, market information,etc), publications, distribution

b) Strengthening the information function of textile groups
- setting up their own information centers
- forming links with associated overseas groups

c) Use of foreign students studying overseas as information monitors

d) Encouragement for establishing "antenna shops" in overseas markets

6. Expansion and diversification of export markets
   a) Development and export of non-quota items: silk products, mixed linen fabric products, leather products, etc.
   b) Direct participation in the distribution systems of major overseas markets
      - establishment of wholesalers and retailers
   c) Expansion of the African market
      - setting up of a joint office
        regions: Abidjan (Ivory Coast)
      - holding of discussion meetings between Korea and Africa on textiles
        • invitations to large-scale buying missions
   d) Invitations to buyers from non-quota regions
   e) Assistance for activities aimed at opening up export markets
      - dispatch of sales missions: one mission to each of Central and South America, Africa, Southeast Asia
      - assistance with quota negotiations
      - hosting of exhibitions held in various overseas countries

7. Establishment of the Textile Industry Modernization Fund
   - amount for 1984: 4.0 billion Won
   - funding: equal 50% share from the government and the industry
   - major projects: modernization of equipment, raising level of products and raising technology levels, export promotion and other projects for the modernization of the textile industry

8. Increased support from the government
   a) Stable supply of raw materials
      - raw cotton
        • assistance with funds for bringing in stock
        • continued application of quota tariffs
      - raw wool
        • decrease in tariffs: from 30% to 20%
      - raw yarn: imports for supplying shortfall
      - multi fiber raw materials: supply of fiber raw materials for domestic production at international prices
      - stabilization of prices of intermediate raw materials

- linking to international prices
- flexible linked import ratios
- increase in stockpiling and joint purchasing

b) Assistance with taxation

- decrease in tariffs for raw materials and facilities
- adjustments to the special consumption tax: wool products and types of carpets

c) Assistance for items subject to improved quality

- corduroy, unwoven cloth...

d) Strengthening the functions of the Textile Industry Federation

APPENDIX-IV
OTHERS

[Appendix IV-1]

List of Steering Committee Members

1.	Director-General Department of Industrial Promotion (DIP)	Chairman
2.	Deputy Director-General (Mr. Manu Leopairote) Department of Industrial Promotion (DIP)	Vice-Chairman
3.	Director of Planning Division Department of Export Promotion (DEP)	
4.	Director of Industrial Economics & Planning Division Office of the Permanent Secretary, Ministry of Industyr	
5.	Director of Planning Division Board of Investment (BOI)	
6.	Mr. Thamnu Vasinonda (Director of Thailand Management Development and Productivity Center)	
7.	Dr. Damri Sukhotanang (Director of the Metal-Working and Machinery Industries Development Institute)	
8.	Chief of Industrial Planning Coordination Section Office of the National Economic and Social Development Board (NESDB)	
9.	Representative of the Association of Thai Industries	
10.	Director of Planning Division Department of Industrial Promotion	Secretary
11.	Director of Industrial Development Center Department of Industrial Promotion	Asst. Secretary

Advisors

1. 1st Secretary, Embassy of Japan (Mr. Shoichi Ikuta)
2. JICA Expert (Mr. Kenichi Kohata)

[Appendix IV-2]

List of Thai Counterpart Members (Second Year)

(Textile & Garment)

1.	Mr. Suchart Intarachote	TID
2.	Mr. Boonying Phumpiem	TID
3.	Miss Sireerat Charuchinda	TID
4.	Mrs. Suda Thongsri	Planning Division

(Furniture)

1.	Mr. Nuntapit Nakasarn	ISI
2.	Mr. Thawee Kaewmane	ISI
3.	Mr. Somchai Chumsuwan	ISI
4.	Miss Suwicha Bhadrasiri	Planning Division
5.	Miss Supawan Satawatorn	Planning Division

(Policy)

1.	Mr. Suwat Siwasaranond	Planning Division
2.	Miss Yawanit Thongpahusatcha	ISI
3.	Mr. Virat Amornlertwit	Planning Division