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SCOPE AND OUTLINE FOR ASEAN REGIONAL CO-OPERATION IN THE TEXTILES AND TEXTILE PRODUCTS INDUSTRY

Prepared by the
Regional and Country Studies Branch
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CONTENTS

INTRODUCTION

The purpose of the study is to assess the scope and identify new approaches for regional co-operation in ASEAN in the textiles and textiles products industry.

The report is made of two main parts:

- synthesis of:

  the overall development of the textile industry in ASEAN

  main constraints facing the industry areas of co-operation between ASEAN countries

- five annexes covering each of the ASEAN country.

The study was based on the short-term missions made in each of the ASEAN country by two UNIDO consultants. The findings rely extensively on datas and documents made available to the experts during their visits.

SUMMARY AND CONCLUSIONS

The international scene is, as today, not very favourable for the implementation of an export oriented textile industrialization strategy. Access to the developed countries' markets is limited and is likely to remain so in the years to come.

The development of the ASEAN countries' textile industries, which was rather late in the context of the big move in the 1960's and 1970's towards a new international division of labour, has essentially been taking advantage of the easiest opportunities: import substitution, foreign investments, export oriented garment production.

As such the ASEAN countries' textile industries, which are composed of successive layers, are very diverse, due to different growth patterns and different policies. Their growth performances have been substantial. But beyond the actual situation - world recession, but U.S. recovery - questions are being raised as concerns the future prospects for the ASEAN countries' textile industries. They are indeed showing some structural weaknesses: overall competititveness does not seem to be very high, the quality dimensions seem to be rather neglected, dyeing and printing activities are poorly developed, the import dependency for fabrics is significant. They have still to grow up to'mature' industries: while some segments (or layers) have been successfully developed, with noteworthy export performances, these developments have not yet been worked out into a consistent textile industry sector system.

Future prospects seem to be dependent on the possibility to set up such a consistent system in which all the processes (at the successive production stages) and all the functions (not just the production, but design, quality control, training and research, maintenance, distribution, etc.) are effectively and efficiently performed. The two main aspects of such a strategy would seem to be, on the one hand the definition and implementation of 'product policies' (or marketing strategies'), and on the other hand the

efficient organization of the production process (development of complementary production stages, training, maintenance, provision of technical expertise, etc.).

One may wonder whether the ASEAN countries individually will be able to fulfill these necessary requirements. This is not a question of capacities or resources per se, nor of size. The question is whether each of them will be able to mobilize the necessary resources and to fulfill all of these requirements, in the timespan available (which may be rather short taking account of the changing technological conditions) and in the framework of existing competitive pressures.

There seems to exist a good case for developing, within the ASEAN region, co-operative schemes aiming at enhancing collectively the capacities to fulfill some of the basic requirements for the development of consistent and competitive textile and clothing industries. The objective is not to eliminate competition through the planning of productive capacities, but to increase, through co-operation and collective investments, their overall competitive position vis-à-vis the rest of the world.

Opportunities for co-operation are shown to exist in different fields. First, opportunities as concerns 'product policies' aiming at upgrading textile and clothing production. Second, opportunities in the field of those actions which are necessary to strengthen the textile 'chain' and thus reduce the actual structural imbalances. Third, oppertunities to promote exports, including those on an intra-ASEAN and intra-industry basis.

I. THE INTERNATIONAL SCENE

Before evaluating the actual situation of the textile and clothing industries in the ASEAN countries, as well as their future prospects, due account should be taken of the transformations which have occurred at the international level, as concerns both the supply and the demand conditions within the world textile and clothing industries. These conditions have been changing quite substantially; the tendency towards a new international division of labour in textiles and clothing has come to an halt. While free trade is increasing North-North intra-industry trade the North-South relations and relative positions are strongly regulated.

These conditions might be changing again very substantially in the future. On the basis of the 'new technologies', new textile and clothing production techniques are emerging which are likely to alter the traditionally labour-intensive character of the production process and thus to modify the structure of comparative advantages. The opportunities for an export oriented textile industrialization strategy may accordingly be rather limited. They are in any case more limited than they were 10 to 15 years ago.

This chapter aims at making these points more explicit.

1. The reduced importance of textiles in manufacturing trade

The share of textiles in total merchandise trade (including petroleum) and in total trade in manufacturing has been decreasing continuously since the fifties. At the world level, the share of textile exports in manufacturing trade has been, according to GATT, decreasing from 11.3 per cent in 1955 (8.74 per cent in 1963 and 6.7 per cent in 1973) to 4.9 per cent in 1982. Similarly textiles have been losing ground in developing countries' exports of manufactures; this share has been decreasing from 34.3 per cent in 1955 to 10.6 per cent in 1982. This decrease has however been partially compensated by increased trade in clothing: at the world level, from 1.9 per cent in 1955 to 3.9 per cent in 1982 and within developing countries' manufacturing exports from 4 per cent in 1955 to 14.2 per cent in 1973 and 13.6 per cent in 1982. But in the recent period - 1973 to 1982 - the combined share of textiles and clothing in manufacturing trade has been decreasing: from 10.3 per cent in

1973 to 8.8 per cent in 1982 at the world level and from 33 per cent in 1973 to 24.2 per cent in 1982 in developing countries' exports.

2. The strongly increased deficit of the North in clothing

The biggest change in the recent period has been the rapidly growing trade deficit of the North in clothing: this deficit has been increasing from $4 billion in 1973 to $16.8 billion in 1981. While this deficit has been partially compensated by an increased surplus in textiles (textiles: from $0.7 billion in 1973 to $3.2 billion in 1981; textile fibres from $-0.5 to $2.9 billion). Account must, however, be taken of the surplus in textiles has been reduced since.

3. The surplus of the North in textile machinery is not growing any more

To the above must be added that the OECD industrialized countries have a comfortable trade surplus in textile machinery. But while still growing in value terms - from $2.25 billion in 1973 to $2.9 billion in 1981 - this surplus is, however, not growing any more in real terms. It can be seen that, according to GATT, the volume of exports (to all destinations) of the seven major textile machinery exporters reached a peak in 1974, with $7.2 billion, declined substantially to $4.8 billion in 1977-78 and has stayed below $6 billion since. This seems to be reflecting at the same time not only the existence of overcapacities and reduced investment, but also the actual transition to new production techniques.

4. A general tendency towards overcapacities

Textile and clothing production capacities have been building up in many places. The elasticity of supply is known to be very high in these sectors: the 'textile first' industrialization strategy and the credit facilities offered in order to promote textile machinery exports have been increasing production capacities nearly everywhere. The actual capacities are larger than actual demand, both at the world level and at the level of continents and most regions.

5. A strongly regulated market

The process of delocalization from the North to the South has been going on for a while, but in the framework of a more and more regulated system (transition from LTA to MFA, and evolution of MFA). It has become more and more evident in the course of the seventies that the OECD countries were and are not willing to accept any further delocalization at any substantial degree. The tendency within MFA has been towards more protection and not towards more liberalization.

6. Low performances of textile and clothing

In nearly all countries - industrial and developing countries - the textile industries appear to have reached everywhere a situation of poor (lower than average) performances, i.e. lower than average incomes (lower profitability and lower wages). This is because of a combination of structural factors: overcapacities, protectionism and limited market access, increased competition, etc. While the textile industries in the OECD countries have for several years had to face difficulties and structural problems, due to comparative disadvantages and to the negative effects of capital/labour substitution on capital profitability, the same kind of situation has been extended to larger and larger numbers of developing countries because of strong price competition among them.

7. Increased exports and intra-industry trade in the North

While having stopped, or at least slowed down, the penetration of their markets by the producers from the South, the OECD countries have been developing their textile and clothing exports, a large proporation of these being intra-industry trade. A number of firms - a limited number of big firms, but also larger numbers of medium to large sized firms - have been able on the basis of various combinations of strategies and actions (fashion, distribution, delocalization, product innovation, technical progress ...) to develop their exports substantially.

8. Access to remain limited to the OECD countries' markets

The observed trend towards more restrictions imposed on the access to the market in the OECD countries does not seem likely to be reversed in the medium-term. Within this limited global access, some redistribution of shares is likely to occur, but in favour of newcomers.

9. New textile and clothing production techniques

A new wave of technological progress is underway, which consists in the application of the so called 'new technologies' - essentially electronics - to the textile and clothing production techniques. The opportunities for the application of CAD/CAM techniques and further for computer integrated manufacturing systems are wide-ranging. Several such applications already exist, at least at the pilot stage, for most of the textile and clothing processes.

10. Changing comparative advantages

It is too early to evaluate the specific characteristic and impacts of the new production techniques and to decide definitively whether these new techniques are going to eliminate the labour intensiveness of textile and more so, of clothing production processes, and thus to change the structure of comparative advantage which was based fundamentally on the level of wages (besides some other elements which have to do with efficiency and productivity).

But several indications are available which suggest that this might indeed be the case. While uncertainties do remain as concerns both the product range which is to be affected by the new techniques and the relation the productivity increases and their costs (in terms of investment, human resources, maintenance and repair, etc.) the central question for future comparative advantages and relative competitiveness is the likely rate of diffusion of the new techniques. This will of course be dependent on the evolution of investments.

II. OVERALL DEVELOPMENT IN ASEAN COUNTRIES' TEXTILES SECTOR

1. From import substitution to export orientation

Most of the first textile mills in the ASEAN countries were established in the thirties, to supplement the existing traditional home weaving industries and to reduce textile importations from Europe and Japan. In Thailand mechanized production of textile goods was introduced in 1936, in Indonesia the first effort to promote industrialization was followed by the setting up of the Bandung Textile Institute. Traditional home weaving industries consisting of backstrap looms and improved hand looms still exist in nearly all the ASEAN countries.

At the outbreak of World War II most of the existing textile mills in the ASEAN countries ceased operations; but due to acute needs for textiles most of the mills resumed operations, hampered by the lack of spare parts and the scarcity of raw material supply. The postwar development of the ASEAN textile industry up to the sixties was merely rehabilitation of prewar equipment in existing mills and some minor extensions. The really significant development of the moder ASEAN textile industry started in the late sixties and early seventies.

In most developing countries in the world textile production occupied a prominent role when industrialization began in earnest. This pattern of industrialization has been summed up as a virtual rule of 'textile first'. In general, to the ASEAN countries the development of the textile industries fit into the pattern described by the 'catching up product cycle' model (i) starting from an import substitution phase when imports still surpass production volumes, (ii) then proceeding to an export starting stage when some exports begin while import substitution continues and (iii) going on to an export expansion stage when exports surpass imports, (iv) to finally reach a maturing stage and a reimport stage.

This pattern of development can be illustrated for either yarn or fabrics (cotton and man made) and Thailand is perhaps the country in ASEAN where the model is best illustrated. One should notice that the maturing stage does not always imply a decrease in exports.

Table 1. Stages of development of the textile industsry sector in ASEAN countries

		Pre-production stage (I)	Import-substitution stage (II)	Export starting stage (III)	Export expansion stage (IV)	Maturing stage, reimport stage (V)
Cotton yarns	1968		Indonesia	Philippines, Thailand, Malaysia		
	1977			Philippines Indonesia	Malaysia Thailand	
Cotton fabrics	1968		Philippines, Indonesia	Thailand Malaysia		
	1977			Indonesia Philippines Malaysia	Thailand	
Man-made Yarns	1968		Indonesia Philippines Thailand	Malaysia		
	1977			Indonesia Philippines Malaysia	Thailand	
Man-made fabrics	1968		Philippines Indonesia Malaysia Thailand			
	1977			(Philippines) Malaysia Indonesia	Thailand	
Man-made fibre	1968	Thailand Malaysia Indonesia Philippines				
	1977		Philippines	Thailand Malaysia Indonesia		

The model on the other hand hardly applies to garment manufacturing. Four of the ASEAN countries are characterized by large rural populations; the ratio of urbanization is 20 per cent in Indonesia, 15 per cent in Thailand, 30

per cent in Malaysia and 37 per cent in Philippines. Most of the garments are still either home-made or tailor-made; the market for ready to wear garment is growing rapidly, but remains relatively small. In some of the countries a relatively large garment manufacturing sector has been established, which was export oriented at its initial stage. In some cases the growth of the garment industry was at the expense of cottage industries, a fact that may lead to an over estimation of the growth of the industry and in the domestic market projections.

The nature of the priority status of textile industry sector has changed over time, from an import substituting sector to an export oriented one. This change illustrates the shift in industrial policy in ASEAN countries. Being a labour intensive industry and a potential foreign exchange earner, textile and garment industry had received priority, and the ASEAN industries were trying to follow the examples of East Asian textile exporters. As rapid wage increases would erode some of the competitiveness of exports from these countries, ASEAN textile exports could progressively grow.

ASEAN as a group has now emerged as a substantial exporter. Its export growth has been rapid, especially in clothing; its combined textile capacity of over 5 million spindles, and 180,000 looms puts it into the rank of large textile producers. Total ASEAN exports reached US $2.4 billions in 1983, and US $2.8 billion (est.) in 1984.

However, the ASEAN exports are now growing in an international context quite different from the one which earlier surrounded the exceptional growth of the East Asian textile producers. The ASEAN exporters are facing new threats:

- on the demand side

  global recession which affects foreign markets as well as the domestic market;

  protectionist policies; (As a result of its emergence as a substantial exporter ASEAN has been engaged in trade diplomacies: discussion of quotas and lately of countervailing duties in USA);

- on the supply side

  the emergence of new producers in countries where wages are significantly lower, either inside ASEAN (rapid growth of Indonesia in 1983 and 1984) or outside (e.g. China and Sri Lanka);

  the introduction of more rational processes, particularly micro processor based technologies which are likely to have a significant impact on the international location of production and on employment in the years to come.

2. ASEAN countries' textile and textile products trade

(a) Volume and structure of trade

ASEAN countries textile and textile products exports have increased rapidly during the last decade, US $1.6 billion in 1978, US $2.3 billion in 1981 and probably over US $3 billion in 1984. However, it should be stressed that ASEAN as a whole is not a 'textile power' by Asian standards. In 1982 exports from the ASEAN countries were less than half the textile exports from the Republic of Korea; and the ASEAN countries' combined textile trade is less than 5 per cent of total textile world trade.

This moderate size has been an asset as newcomers in the world textile market. ASEAN countries, such as Thailand and Indonesia, have enjoyed a better treatment in terms of quotas and protectionists measure than more established textile exporters. However, the rapid export increase in the last two years have brought some changes, Indonesia was imposed quotas. Recently ASEAN export firms have been subject to an inquiry from the US Department of Commerce to measure the rate of subsidization of their export sales; this could lead to the introduction of countervailing duties on ASEAN textile imports in the United States.

Tables 3, 4, 5 shows the textile exports and imports figures of each ASEAN countries from 1978 to 1984 in millions of current US dollars as well as cumulative balance of trade for each subsector. Figures related to 1983 are sometimes preliminary (Philippines, Malaysia) and figures related to 1984 are in all cases estimates.

Table 2. Growth of ASEAN textile exports 1978-84

(per cent, on basis of current values)

	Annual growth (%)
1978/79	27.0
1979/80	7.5
1980/81	10.2
1981/82	3.0
1982/83 (pre.)	8.5
1983/84 (est)	17.0

Source: 1978-83: National trade statistics.
1984: Estimates secured from textile manufacturers associations

Imports and exports are aggregated in two digit SITC classification, namely:

26 fibres
65 yarn and fabrics
84 clothing

Singapore's entrepot trade is rather important, Singapore exports of fibres, and a large proportion of its exports of fabrics are reexports. An unknown part of its garment imports are sold to foreign tourists and should be considered as reexports.

The first point one should stress regarding the ASEAN overall textile balance of trade is that, taken together, the ASEAN countries have in the past been characterized by a trade deficit. Up to 1984 the textile sector was not a net foreign exchange earner for the ASEAN countries taken together. However, according to most estimates the upsurge in exports in 1984 has accelerated the trend which was clearly perceptible before, and a textile trade surplus may soon be achieved. If one excludes Singapore, ASEAN textile trade was in surplus from 1982 onwards. However, if one added the deficit related to the textile machinery imports as well as the trade deficit in dyestuff, the overall textile related trade (fibre, textile and textile products and machinery) would remain in deficit.

Table 3. ASEAN countries' imports of textiles 1978-1984
(US $ million)

		1978	1979	1980	1981	1982	1983	1984
SITC 26	Fibres							
	Indonesia	163	203	291	305	299	149	150
	Malaysia	74	67	85	96	82	85	85
	Philippines	101	112	10o	113	106	110	110
	Singapore	52	57	77	0	46	42	53
	Thailand	155	162	148	142	127	183	227
	Cotton							
	Indonesia	118	129	170	182	172		
	Malaysia	47	48	48	51	47		
	Philippines	43	33	42	33	19		
	Singapore	0	34	0	0	0		
	Thailand	99	134	124	157	100	148	183
SITC 26	Minus cotton							
	Indonesia	45	74	121	123	127		
	Malaysia	27	19	37	45	35		
	Philippines	58	79	64	80	87		
	Singapore	56	23	77	0	46		
	Thailand	56	28	24	-15	27	35	44
SITC 65	Yarn and fabrics							
	Indonesia	183	246	216	250	203	255	255
	Malaysia	171	187	294	301	286	305	315
	Philippines	208	241	285	342	309	340	350
	Singapore	648	746	878	934	894	954	956
	Thailand	48	95	139	145	127	155	261
SITC 84	Clothing							
	Indonesia	5	3	3	11	4	9	9
	Malaysia	20	18	34	40	42	40	40
	Philippines	3	2	3	3	3	3	3
	Singapore	118	110	144	203	252	274	276
	Thailand	4	1	1	1	2	2	2
Total imports of textiles and textile products (SITC 26+65+84)								
	Indonesia	351	422	512	566	506	413	414
	Malaysia	265	272	413	437	410	430	440
	Philippines	312	355	394	458	418	453	463
	Singapore	818	913	1,099	1,137	1,192	1,270	1,285
	Thailand	207	258	288	288	256	340	430

Source: As for Table 2.

Table 4. ASEAN countries' exports of textiles 1978-1984
(US $ million)

	1978	1979	1980	1981	1982	1983	1984
SITC 26 Fibres							
Indonesia	0	0	0	1	1	1	1
Malaysia	6	99	36	21	17	15	15
Philippines	18	30	32	26	32	35	40
Singapore (incl. re-exports)	27	28	31	23	19	24	32
Singapore (domestic exports only)	n.a.	n.a.	0	0	0	2	1
Thailand	3	4	20	13	27	12	9
SITC 65 Yarn and fabrics							
Indonesia	6	52	46	36	44	120	150
Malaysia	99	119	135	140	150	165	175
Philippines	43	55	74	68	60	70	70
Singapore (incl. re-exports)	280	364	368	342	350	376	370
Singapore (domestic exports only)	n.a.	n.a.	149	224	101	80	35
Thailand	270	255	223	235	273	220	271
SITC 84 Clothing							
Indonesia	15	66	98	95	116	157	340
Malaysia	106	134	46	163	173	215	240
Philippines	300	372	500	578	549	566	580
Singapore (incl. re-exports)	311	377	424	460	455	466	500
Singapore (domestic exports only)	n.a.	n.a.	362	392	367	355	405
Thailand	183	165	241	303	321	368	507
Total exports of textiles and textile products (SITC 26+65+84)							
Indonesia	21	118	144	132	161	278	501
Malaysia	211	352	217	332	341	395	430
Philippines	361	457	606	672	641	671	690
Singapore (incl. re-exports)	618	769	823	825	824	866	902
Singapore (domestic exports only)	n.a.	n.a.	511	616	468	437	441
Thailand	456	424	489	551	621	600	707

Source: As for Table 2.

Table 5. ASEAN countries' balance of textiles trade 1978-1984
(US $ million)

	1978	1979	1980	1981	1982	1983	1984
SITC 26 Fibres							
Indonesia	-163	-203	-291	-304	-298	-148	-149
Malaysia	-69	32	-49	-75	-65	-70	-70
Philippines	-83	-82	-74	-87	-74	-75	-70
Singapore (excl. re-exports)	-25 a/	-29 a/	-77	0	-46	-40	-52
Thailand	-152	-158	-128	-129	-100	-171	-218
SITC 65 Yarn and fabrics							
Indonesia	-177	-164	-172	-214	-159	-135	-105
Malaysia	-72	-68	-159	-153	-136	-140	-140
Philippines	-165	-186	-211	-274	-249	-270	-280
Singapore (excl. re-exports)	-368 a/	-382 a/	-729	-710	-793	-874	-921
Thailand	222	160	89	90	146	65	70
SITC 84 Clothing							
Indonesia	10	63	95	84	112	148	341
Malaysia	86	116	12	123	132	175	200
Philippines	297	370	498	576	546	563	577
Singapore (excl. re-exports)	193 a/	267 a/	218	189	115	81	129
Thailand	179	164	240	302	319	366	505
Overall balance of textiles trade (SITC 26+65+84)							
Indonesia	-330	-304	-368	-434	-346	-135	87
Malaysia	-55	80	-196	-105	-69	-35	-10
Philippines	49	102	213	215	223	218	227
Singapore (excl. re-exports)	-200 a/	-144 a/	-588	-521	-724	-833	-844
Thailand	249	166	201	263	365	260	357

a/ Including re-exports.

Source: As for Table 2.

Due to its entrepot trade, and the tourist shopping, Singapore's textile trade is negative. Also Malaysia, in spite its important textile exports, and Indonesia where most of the industries serve the home market have negative textile trade balance. According to some estimates, however, the strong Indonesian export increase in 1984 could have change the status of the textile industry to a foreign exchanged earner. In Thailand and in the Philippines the textile trade balance has been traditionally in surplus.

Every one of the ASEAN countries has to face a deficit in fibre trade (SITC 26). Total fibre imports amounted to US $660 millions in 1982. Table 2 offers a breakdown of fibre imports, cotton and other fibres, mainly man made fibres. Each of the ASEAN countries is a net importer of cotton and generally also in man made fibres. However, as shall be seen, the countries are making steady progress towards self sufficiency. Natural constraints limit cotton growing to some countries, and the development of synthetic fibre industry has offered additional opportunities for import-substitution; unfortunately this has led to higher costs and additional constraints to the industry, this is especially the case in the Philippines. (The Malaysian synthetic fibre industry on the contrary was export oriented from the start.)

With the exception of Thailand, each ASEAN country is characterized by a deficit in its trade in yarn and fabrics (SITC 65). Textile spinning and weaving is a disappearing activity in Singapore, and this explains the decline in yarn and fabrics domestic exports from Singapore. The other countries' deficits need, however, additional explanations in view of the local manufacturing activities which exist in both spinning, weaving and knitting, and the export growth in this sector.

In Philippines the growth of garment exports is on the basis of imported fabrics which are made up in export processing zones, or processed in factories with bonded warehouse facilities. This rapid increase of garment exports, from US $300 millions in 1978 to US $566 millions in 1983 and probably close to US $600 millions in 1984 has made the Philippines the largest ASEAN garment exporter but at the same time the second largest yarn and fabric importer.

In Indonesia and Thailand one does not find such a structural inbalances between the different textile subsectors; however the upstream sector encounters some difficulties in meeting the needs of the garment export sector.

In every country but Singapore the garment imports are negligible. As said above, ready to wear goals are about to take off in the domestic market of rural ASEAN economies. At the same time it should be observed that most of the modern garment industries have been set up to cater for the export market. Moreover garment imports are subject to high import duties which

limit their growth to a trickle: total ASEAN clothing imports amounted to US $300 millions (whereof US $250 in Singapore) in 1982, whereas total ASEAN garment exports were over US $1.5 billlion in 1982, and probably US $ 2 billion in 1982.

Table 6, gives a structural view of the ASEAN countries textile exports, showing in percentages the relative share of fibre, yarn/fabrics and clothing in their domestic exports.

Table 6. Textile trade (exports) structure in the ASEAN countries, 1978-84

(in per cent)

	1978	1979	1980	1981	1982	1983	1984
Percentage of SITC 26 (fibres)							
Indonesia	0	0	0	1	0	0	0
Malaysia	3	28	17	6	5	4	3
Philippines	3	7	5	4	5	5	6
Singapore	4	4	0	0	0	0	0
Thailand	1	1	4	2	4	2	1
ASEAN	3	8	4	3	3	3	2
Percentage of SITC 65 (yarn and fabrics)							
Indonesia	29	44	32	27	27	43	30
Malaysia	47	34	62	45	44	42	41
Philippines	12	12	12	10	9	10	10
Singapore	45	47	29	24	22	18	8
Thailand	59	60	47	43	44	37	34
ASEAN	42	40	32	28	28	28	25
Percentage of SITC 84 (clothing)							
Indonesia	71	56	68	72	72	56	70
Philippines	83	81	83	86	86	84	84
Malaysia	50	38	21	49	51	54	56
Singapore	50	49	71	76	78	81	92
Thailand	40	39	49	55	52	61	64
ASEAN	55	53	63	69	68	70	73

Clothing exports represent a growing proportion of total textile exports from the five ASEAN countries. It has risen from 55 per cent in 1978, to 68 per cent in 1982 and an estimated 73 per cent in 1984. There are some differences among the individual countries.

Fibre exports are insignificant in most ASEAN countries. There are some natural fibre exports from the Philippines (abacca) and Thailand (cotton) and man made fibres from Malaysia, Indonesia and Thailand. Malaysia and Thailand are the only two countries were yarn and fabrics export play a significant role.

Textile exports (all categories) from Indone ia have been minimal, although they have increased rapidly in the last two years with both textile and garment exporters making inroads into world market recent years exports.

In Malaysia a large part of the exports are produced in export processing zones; this is not the case in Thailand. More disaggregated trade satistics (see Table 7) do not show any striking differences between imports and exports structure in Malaysia and Thailand. Man-made cotton yarn and fabrics are

Table 7. Yarn and fabrics trade in Malaysia and Thailand

Malaysia, 1982 (millions of M$)	
	Imports / Exports
Yarn	76.9 / 91.9
Fabrics	439 / 235
Woven cotton	115 / 88
Woven Man made	267 / 143
Knitted	57 / 4
Thailand, 1984 (millions of baht)	
	Imports / Exports
Yarn	728 / 923
Cotton	90 / 134
Man made	638 / 789
Fabrics	2,741 / 3,767
Cotton	640 / 1,079
Man made	1,704 / 2,688
Knitted	397 / 1

Source: Malaysia Trade Statistics and Thailand Trade Statistics.

important items in both imports and exports in Malaysia as well as in Thailand. One notice in the two countries a large deficit in knitted fabrics. More meaningful evidences are to be sought at a more disaggregated

level (Thailand is exporting mainly grey fabrics while it is importing finished fabrics).

Garment exports made up close to 80 per cent of textile exports in Singapore, Philippines and Indonesia. It may be noted, however, that ASEAN countries are not necessarily in advantageous position in terms of prices when compared to East Asian countries where wages are substantially higher. Table 8 shows unit prices for some selected product categories imported in Japan in 1981.

(b) Direction of trade

Table 9 and 10 give for 1982 (most recent year for which information is available for all) the direction of the ASEAN countries' textile trade. The tables provide data both in US dollar and in per cent. Table 9, related to the exports of yarn/fabrics and garments, disaggregates exports to other ASEAN countries, MFA countries and non MFA countries. Table 10, related to the imports of yarn and fabrics of ASEAN countries, offers another geographical breakdown, it disaggregates the ASEAN countries imports from their ASEAN partners and from East Asian economies, which play a prominent role in this trade. (Figures concerning Thailand do not fully coincide with data provided in preceding tables, due to discrepancies between statistics published by the Customs Department and Textile Manufacturers Association sources.)

Intra ASEAN trade in textile and textile products is very small. This would seen to be due to various factors, such as differences in tariff structure, lack of information, and the ownership structure in the textile industry of each of the countries.

The share of intra-ASEAN trade in the ASEAN countries' total exports of garments is 3 per cent. Intra-ASEAN trade related to yarn and fabrics is somewhat larger in percentage, around 13 per cent (12.5 per cent from the export figures and 13.3 per cent from the import figures); however its total value is only slightly less than twice of that of the garments intra-ASEAN trade since garments play a much bigger role in the ASEAN countries' exports than yarn and fabrics.

Table 8. Unit prices of imports to Japan for selected textile products by major supplying country in 1981

(in terms of CIF prices)

	Women's girls' and infants dresses	Skirts	Trousers and shorts	Woven shirts	Knited shirts	Coats	Jackets
Korea, Rep. of	466	931	750	629	698	3,533	3,096
China	753	680	683	866	455	1,550	2,775
Chines province of Taiwan	1,378	912	801	734	829	5,705	8,838
Hong Kong	3,887	1,595	1,611	1,733	1,004	5,167	5,724
Philippines	1,925	1,648	1,726	1,058	648	844	3,387
Indonesia	1,985	1,678	1,425	1,004	2,315	2,165	
Malaysia	2,222	1,429	1,773				
Singapore	1,816	819		1,170	747	5,495	
Thailand	1,434	1,102	2,038	644	1,270	2,411	
India	1,429	915	1,420	694	396	1,558	3,623
U.S.A	5,667	4,161	2,542	3,546	1,433	10,787	8,218
Italy	13,256	9,556	5,189	7,169	3,565	20,732	15,221
France	14,178	7,197	4,973	6,991	2,453	18,448	13,962

Source: Japan Exports and Imports, Ministry of Finance.

Concerning clothing exports, the trade between Thailand and Singapore represents two thirds of the total intra ASEAN trade. It may be related to Singaporean investment in Thailand garment industry.

Concerning yarn and fabrics, exports from Malaysia and Thailand represent 80 per cent of total ASEAN exports to ASEAN countries, and in both cases Singapore is the main destination.

As said earlier exports of garments play a prominent role in textile exports from ASEAN countries, they represent 70 per cent of total exports, whereas yarn and fabrics make up 25 per cent. These two categories follow quite different directions or pattern of trade as illustrated by Table 9.

Countries of the Multifibre Agreement (MFA) represent the main outlet for ASEAN garment exports; their combined share is 70 per cent. Between ASEAN countries the ratios vary from 45 per cent in Thailand to 78 per cent in

Table 9. ASEAN countries' exports of textiles, 1982

Exporting countries	Destination: Indonesia	Malaysia	Philippines	Singapore	Thailand	Total ASEAN	EEC	USA	MFA countries	non MFA countries	Total
STCI 65 - Yarn and fabrics											
					(US $ million)						
Indonesia	-	0.2	0.0	7.3	0.0	7.5	14.2	2.5	16.7	27.3	44.0
Malaysia	0.8	0.0	7.3	12.7	2.2	23.0	35.3	5.3	40.6	109.8	150.4
Philippines	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0 0	60.0	60.0
Singapore	2.2	10.4	0.8		0.6	14.0	24.9	19.0	43.9	57.1	101.0
Thailand	4.2	10.6	0.0	29.4	-	44.2	115.8	50.2	166.0	188.1	354.2
Total ASEAN	7.2	21.2	8.2	49.4	2.8	88.8	190.2	77.0	267.3	142.3	709.6
					(percent)						
Indonesia	-	0.5	0.0	16.6	0.0	17.0	32.3	5.7	38.0	62.0	100.0
Malaysia	0.5	-	4.9	8.5	1.4	15.3	23.5	3.5	27.0	73.0	100.0
Philippines	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
Singapore	2.2	10.3	0.8		0.6	13.9	24.6	18.8	43.5	56.5	100.0
Thailand	1.2	3.0	0.0	8.3	-	12.5	32.7	14.2	46.9	53.1	100.0
Total ASEAN	1.0	3.0	1.2	7.0	0.4	12.5	26.8	10.9	37.7	62.3	100.0
SITC 84 - Clothing (garments)											
					US $ million						
Indonesia	-	0.0	0.0	0.0	0.0	0.0	21.9	58.5	80.4	35.6	116.0
Malaysia	4.1	-	0.0	0.5	1.3	6.0	76.1	57.4	133.5	40.9	174.3
Philippines	0.0	0.6	-	2.0	0.0	2.6	280.0	152.0	432.0	117.0	549.0
Singapore	0.0	2.1	4.9		0.0	7.0	92.8	173.7	266.5	103.0	366.8
Thailand	3.0	2.5	0.2	24.6	-	30.3	73.1	72.3	145.3	176.9	321.3
Total ASEAN	7.2	5.2	5.1	27.1	1.3	45.9	415.9	641.8	1,057.7	469.8	1,527.5
					(percent)						
Indonesia		0.0	0.0	0.0	0.0	0.0	18.9	51.0	69.3	30.7	100.0
Malaysia	2.4	-	0.0	0.3	0.8	3.4	43.6	32.9	76.6	23.4	100.0
Philippines	0.0	0.1	-	0.4	0.0	0.5	27.7	50.4	78.7	21.3	100.0
Singapore	0.0	0.6	1.3	-	0.0	1.9	25.3	47.3	72.6	27.4	100.0
Thailand	0.9	0.8	0.1	7.6	-	9.4	22.7	22.5	45.2	54.8	100.0
Total ASEAN	0.5	0.3	0.3	1.8	0.1	3.0	27.2	42.0	69.2	30.8	100.0

Source: As for Table 2.

Table 10. ASEAN countries' imports of yarns and fabrics, 1982

Importing countries	Origin: Indonesia	Malaysia	Philippines	Singapore	Thailand	Total ASEAN	Japan	Hong Kong	Chinese province of Taiwan	Republic of Korea	Others	Total
STCI 65 - Yarn and fabrics												
					US $ million							
Indonesia	-	0.4	0.2	2.2	10.5	13.3	75.0	8.5	11.0	23.0	72.2	203.0
Malaysia	1.2	0.0	0.7	14.7	8.6	25.2	76.5	34.3	44.6	43.0	62.5	286.1
Philippines	0.0	4.2	-	1.5	0.6	6.3	30.0	75.0	40.0	17.5	140.2	309.0
Singapore	0.0	51.7	2.0	-	34.6	88.3	237.6	90.2	113.7	140.0	268.3	938.0
Thailand	2.2	2.0	0.0	0.6	-	4.8	57.1	17.6	29.6	27.9	22.9	159.9
Total ASEAN	3.4	58.3	2.9	19.0	54.3	137.9	476.2	225.7	238.8	251.4	566.1	1,896.0
					(percent)							
Indonesia	-	0.2	0.1	1.1	5.2	6.6	36.9	4.2	5.4	11.3	35.6	100.0
Malaysia	0.4	0.0	0.3	5.1	3.0	8.8	26.7	12.0	15.6	15.0	21 8	100.0
Philippines	0.0	1.4	-	0.5	0.2	2.0	9.7	24.3	12.9	5.7	45.4	100.0
Singapore	0.0	5.5	0.2	-	3.7	9.4	25.3	9.6	12.1	14.9	28.6	100.0
Thailand	1.4	1.2	0.0	0.4	-	3.0	35.7	11.0	18.5	17.5	14.3	100.0
Total ASEAN	0.2	3.1	0.2	1.0	2.9	7.3	25.1	11.9	12.6	13.3	29.9	100.0

Source: As for Table 2.

Indonesia. MFA countries represent the largest market; up to now most ASEAN countries have failed to effectively enter large non-MFA markets, such as Japan.

The direction of trade of yarn and fabrics are opposite to the garments: Non-MFA countries represent 63 per cent of total ASEAN exports while the MFA countries share is 37 per cent. Among the non-MFA countries East Asian countries (Japan, Hong Kong, Chinese province of Taiwan and the Republic of Korea) play a substantial role.

In the case of Malaysia and, to a lesser extent, Indonesia exports of yarn and fabrics are largely made by multinational companies to countries where they have other operations. The products in question may subsequently be exported to other markets in the world, either as yarn and fabrics or incorporated in clothing.

In Thailand border trade with Burma, Democratic Kampuchea, Laos and Viet Nam has traditionally played an important role for fabrics producers, however, currently this trade has been much reduced.

Imports origins of yarn and fabrics highligh the relationship between ASEAN countries and East Asian economies (Japan, Hong Kong, Chinese province of Taiwan, Republic of Korea). Firms from the later area have played quite an important role in the setting up of ASEAN textile industries, either through foreign investments (subsidiaries, joint ventures), technical expertise, and handling of trade; in some cases they have come to make use of quotas allocations.

Together yarn and fabrics imports from the East Asian economies represent more than 60 per cent of total ASEAN imports; imports from other ASEAN countries 7 per cent and imports from other countries 33 per cent. The East Asian share is close to 50 per cent in Indonesia and Philippines, and over 80 per cent in Thailand; in Singapore and Malaysia the ratio is close to per cent.

Due to this large share of yarn and fabrics exports from East Asian economies there is a wide textile trade deficit between ASEAN and the East Asian area.

The MFA is of great importance for the ASEAN countries' textile trade with industrialized countries' markets, and the availability of quotas is an important factor enabling ASEAN to take full advantage of opportunities for export in these markets. However, one should not overestimate the impact of quotas, as a large share of export items are in fact not sensitive products.

It has not been possible to have a dissaggregate view of the proportion of most sensitive MFA imports categories in the ASEAN countries' exports to MFA countries. In the case of Malaysia a study has pointed out that exports of yarn and fabrics in the most sensitive MFA categories represent only 12 per cent of yarn and fabrics exports, while the highly sensitive categories of textile products such as T-shirts, pullovers and blouses represent a further 28 per cent of Malaysia exports. This means that 60 per cent of Malaysian exports to MFA countries are not in fact in sensitive MFA categories.

The performance of different countries against available quotas may show wheather the ASEAN countries have been able to take advantage of the available quotas which offer access to developed country markets.

Table 11 gives the ASEAN countries' performances against quotas in EEC. It shows the different levels of concentration in the ASEAN countries. Exports from Malaysia are far more concentrated in the most sensitive MFA groups than are exports from other ASEAN countries, notably the Philippines and Singapore which have a wider range of export products to EEC market.

An analysis made by the EEC Commission of MFA textiles from ASEAN countries makes possible some comparison between ASEAN countries regarding the EEC markets. Table 12 shows the EEC imports of MFA textiles from ASEAN countries between 1978 and 1982 in both values (millions of European Currency Units) and volume (tons). Imports to EEC from Philippines and Indonesia have outperformed that of the other ASEAN countries' in terms of average annual growth rate 1978-82 on basis of either value and volume: respectively 32 per cent and 26 per cent for Indonesia, and 28 per cent and 12 per cent for Philippines. Imports to EEC from Singapore and Malaysia have declined in volume during the period. As will be pointed out later these performances are somewhat related to the strength of the individual ASEAN country's currency vis-à-vis the European currencies.

Table 11. ASEAN countries' performance against quotas exports to EEC: 15 months licences 1982: Percentage utilization

		Indonesia	Malaysia	Philippines	Singapore	Thailand
Group IA						
Category	1. Cotton yarn	-	-	-	-	-
	2. Cotton fabrics	-	64	-	47	91
	3. Man-made fabrics	-	76	-	48	71
Group IB						
Category	4. T-shirt; knitted shirts	-	66	61	50	74
	5. Jerseys; pullovers	-	57	36	31	84
	6. Trousers and shorts	28	61	69	70	83
	7. Woven and knitted blouses	64	56	82	69	76
	8. Man's woven shirts	80	81	55	73	41
Group IIA						
Category	9. Towels and towelling	-	-	-	-	-
	20. Bed linen	-	-	-	-	-
	22. Synthetic fibre yarn	-	36	-	17	46
	23. Artificial fibre yarn	-	-	-	-	-
	32. Velvet and corduroy	-	-	-	-	-
	39. Table and kitchen linen	-	-	-	-	-
Group IIB						
Category	12. Socks	-	-	23	-	44
	13. Knitted underpants	-	-	72	27	-
	14. Woven coats: ment	-	-	-	0	-
	15. Woven cotas: women	-	-	69	-	-
	16. Woven suits: men	100	-	-	-	-
	17. Woven jackets: men	12	-	-	-	-
	18. Men's woven pyjamas	-	-	-	-1	-
	19+89. Handkerchiefs	-	16	-16	-	-
	21. Anoraks	-	-	61	58	97
	24+25. Knitted pyjamas	-	30	39	4	14
	26. Women's dresses	-	74	73	99.6	74
	27. Women's shirts	-	-	-	44	-83
	28. Knitted trousers	-	-	-	42	-
	29. Woven suits: women	-	-	136	42	-
	30. Woven nightwear: woment	-	-	-	0	-
	31. Brassieres	-	-	85	-	-
	73. Knitted track suits	-	-	-	-	29
Group IIIA.						
Category	Rayon fibre fabric	-	-	-	-	69
Group IIIB						
Category	Knited gloves	-	-	-	-	13
	Babies knitted outerwear	-	-	111-	-	-
	Knitted suits: women	-	-	-	0	-77
	Babies woven garments	-	-	94	-	-

Source: EEC Commission.

Table 12. EEC imports of MFA textiles from ASEAN countries, 1978-82

		1978	1979	1980	1981[a/]	1982[a/]	Annual growth rate 1978-82
(a)	Value (million European currency units)						
	Indonesia	14.4	21.5	29.9	35.8	44.2	32
	Malaysia	61.8	77.3	79.2	94.4	93.6	11
	Philippines	53.5	98.4	109.7	138.6	144.3	28
	Singapore	86.2	115.0	124.7	136.5	127.2	10
	Thailand	82.3	111.8	130.3	167.6	201.7	25
	Total ASEAN	298.2	424.0	473.8	572.9	611.0	20
(b)	Quantity ('000 tons)						
	Indonesia	1.9	3.2	4.3	3.8	4.8	26
	Malaysia	14.0	13.8	12.5	11.9	10.6	-7
	Philippines	5.3	9.8	9.5	9.1	8.3	12
	Singapore	11.0	13.8	12.8	10.5	8.9	-5
	Thailand	22.2	24.0	23.2	20.6	23.9	2

a/ Since 1981 - 10 European countries.

Source: EEC Commission.

Table 13 shows the EEC imports from ASEAN countries in Group 1, most sensitive products, and other groups. On average, the ASEAN countries have had better performances in the case of Group 1 products.

Table 13. EEC imports from ASEAN countries - 15 months licences for the year 1982

	Group I			All other groups		
	Quota	Utilized		Quota	Utilized	
	(tons)	(tons)	(%)	(tons)	(tons)	(%)
Indonesia	3,480	1,685	48	-	-	-
Malaysia	12,057	8,282	69	4,740	1,586	33
Philippines	5,401	3,177	59	4,521	2,269	50
Singapore	11,979	6,789	57	4,047	1,008	25
Thailand	18,690	13,581	73	6,929	4,226	61
Total ASEAN	51,607	33,514		20,237	9,089	
Weighted average			65			45

Source: EEC Commission.

III. THE TEXTILE INDUSTRY IN ASEAN COUNTRIES

(a) The role of the textile industry in the ASEAN countries' manufacturing and exports

The importance textile of the industry in each of the ASEAN countries may be measured by its relative share in employment, value added and manufacturing exports.

Table 14 shows the textile and clothing industry's share of manufacturing employment and value added in each ASEAN country. From the table it can be seen that textile and garment production account for quite an important proportion of manufacturing employment and value added in Thailand, Indonesia and Philippines; Singapore and Malaysia record significantly smaller shares.

Table 14. Contribution to MVA and employment of the textile and garment industry in the ASEAN countries

	Contribution to manufacturing valued added (MVA)	Contribution to manufacturing employment
	(per cent)	
Indonesia (1982)	11.6	26.1
Malaysia (1979)	5.4	12.6
Philippines (1982)	9.6	28.7
Singapore (1983)	6.2	4.9
Thailand (1980)	19.7	n.a. (20)

Sources: Indonesia: Biro Pusat Statistik 1983.
Malaysia: Manufacturing Census 1981.
Philippines: Statistical Yearbook 1983.
Singapore: Manufacturing Census 1983
Thailand NESDB.

Table 15 and 16 show the average annual growth rate of textile and garments industry value added and employment, with reference to overall manufacturing growth, from 1970 to 1980 and 1980 to 1982. The textile industry has been a highly dynamic one in the 70s in most of ASEAN countries; its growth has been larger than average manufacturing growth. Figures from

1980/82, when available, show the impact of world recession and domestic recession on the industry. In the case of Singapore the rapid increase in wages starting 1979 has strongly affected the employment in the textile industry (Table 16) whereas, thanks to productivity gains the value added has kept increasing (Table 15).

Table 15. Average annual growth rate of value added in the ASEAN countries, 1970-80, 1980-82

(constant prices)

		Indonesia	Malaysia	Philippines	Singapore	Thailand
Textiles	1970/80	11.8		4.2	13	14.5
	1980/82	n.a. (1970/80)	12	1.9	n.a.	n.a.
Garments	1970/80	n.a. (1980/82)	-2.6	8.5	20	17.2
	1980/82	n.a.		9.5	6.9	n.a.
Total manufacturing						
	1970/80	11.8	11.4	6.9	10.4	11.2
	1980/82	n.a.	4.4	2.8	2.8	n.a.

Source: As for Table 14.

Table 16. Annual growth rate of employment in the ASEAN countries, 1970-80

		Indonesia	Malaysia	Philippines	Singapore	Thailand
Textiles	1970/80	n.a.		10.4	3.6	10
		)	10.4			
Garments	1970/80)	n.a.		19.8	10.5	8.3
Total manufacturing						
	1970/80	n.a.	9.7	9.9	8.6	8.3

Source: As for Table 14.

The total number of persons engaged in textile and garment industries in the ASEAN countries is around 950,000 (Table 17) with 60 per cent in garments and 40 per cent in textiles production. This total employment figure is roughly equal to that of the Republic of Korea where one million persons, 30 per cent of the country's total manufacturing workforce, are engaged in textile industry.

The statistics fail, however, to give an acurate picture of the true importance of textile employment in the ASEAN countries. In many of the countries there exists a sizable unorganized sector, and production of textiles is one of this sector's most important activities. This is especially the case in Indonesia where employment in cottage textile industries was recorded to be 293,000 in 1979 (see Table 18) or in Thailand were a very large number of small weaving units are not registered. The

Table 17. Employment in textile and garment industries the ASEAN countries (in thousands)

	Indonesia (1982)	Malaysia (1979)	Philippines (1982)	Thailand (1980)	Singapore (1983)	ASEAN
Textile	196	40	140	6.5	144	426.5
(spinning)	(86.5)				(45)	
(weaving)	(108.5)				(46)	
(others)					(53)	
Garment	65.5	25	207	28.5	199	525.0
Total	261.5	65.0	247	35.0	343	951.5

Source: As for Table 4.

Table 18. Employment and value added in the textile industry in Indoneisa, 1979

	Employment (1000)	Value added (billions Rp)
Large and medium-firms	227	72
Small firms	91	6
Cottage industries	293	7

Source: Biro Pusat Statistik 1980.

unorganized textile sector consists of home weaving, tailoring and garment making. In some countries the informal sector is undertaking subcontracting activities for the 'modern' sector. It is especially the case in the Philippines where export oriented garment industries are "farming out" part of

their production to household units where parts of garments are sewn together and then sent back to the garment export firm for quality control and final expedition. According to some estimates between 100,000 and 400,000 persons are engaged on a part time basis in these "farming out" activities in the Philippines (while the garment industry itself employs about 200,000 persons). Total employment related to textile industry is probably around 1.5 millions in all ASEAN countries if the informal sector is included.

Textiles and textile products represent 4 per cent of total ASEAN exports, and 15.2 per cent of ASEAN manufactured exports (see Table 19). Textile and garments share of manufactured exports is relatively small in Malaysia, where over 50 per cent of manufactured exports are consist of integrated circuits, and Singapore; the higest shares are found in Philippines and Thailand.

Table 19. Share of textiles and textile products exports in total in total exports of the ASEAN countries, 1983

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN
Total exports (US $ million)	18,000	13,600	5,000	14,700	6,400	57,700
Total manufacturing exports (US $ million)	1,300	4,100	2,400	5,000	1,900	15,200
Exports of textiles (US $ million)	120	165	70	80	220	655
Exports of garments (US $ million)	157	215	566	355	368	1,661
Share of textiles in tota exports (%)	0.6	1.2	1.4	0.5	3.4	1.1
Share of garments in total exports (%)	0.8	1.5	11.3	2.4	5.7	2.8
Share of textiles in total manufacturing exports (%)	9.2	4.0	2.9	1.6	11.5	4.3
Share of garments in total manufacturing exports (%)	12.1	5.2	23.5	7.1	19.3	10.9

Source: National Trade Statistics.

In promoting garment exports the ASEAN countries generally can rely to various degrees on the comparative advantage they have in labour intensive activities. Table 20 gives the current daily wage for unskilled workers in

textiles and garments industry. In general it can be said that the textile industry offers the lowest wages among other manufacturing activities. Except in Singapore and Malaysia direct wages are almost equal to labour costs.

Table 20. Daily and hourly wages for unskilled labour in the ASEAN countries

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Local currency	1,100 Rp.	11 S$	62 peso	13 S$	70 Baht
US $ per day	1.0	4.8	3.0	6.4	2.7
US $ per hour	0.12	0.6	0.37	0.8	0.34

Source: Various Textile Manufacturing Associations.

A survey conducted by Werner International gives average costs per operator in the textile industry in 1984 (Table 21).

Table 21. Labour costs per hour in textile industry in Asia, 1984

	Indonesia	China	Hong Kong	Republic of Korea	Thailand
Direct (local currencies)	202	0.48	11.03	980	11.8
Total costs (local currencies)	224	0.53	12.8	1,506	12.8
Total costs (US $/hour)	0.22	0.26	1.65	1.89	0.56

According to the Singaporean statistics average labour costs per hour in Singapore are US $1.6, and thus very close to those in Hong Kong.

Exchange rate fluctuations have had a substantial impact on cost in the Philippines and also in Thailand and Indonesia. Werner International's report in 1981 gave labour costs in Indonesia at US $0.63, three times more than in 1984, while in Thailand on the contrary the 1984 figures given by Werner International were (before the November 1984 devaluation these) 70 per cent higher than labour costs measured in 1981 (US $0.34). Malaysia, Thailand and the Philippines appear to be in an intermediate position in regard to wages, between the Asian NICs on the one hand and China and Indonesia on the other.

While considering the relative importance of the textile exports in the manufacturing exports from the ASEAN countries, one should not forget that, with the exception of garments, foreign markets play a relatively minor role in total textile demand in most ASEAN countries. Economic figures measuring production, exports and domestic consumption are not readily available for each country. One has to rely on different sets of data to gauge the relative importance of exports and domestic demand for each of the countries. An effort in this respect has been made and is shown in Table 22.

Table 22. Domestic demand as a share of total textile and textile products production in the ASEAN countries

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Textile	97		94	57	
(Yarn)					95
(Fabrics)					77
Clothing	(10)		n.a.	30	(60)
Textile and clothing	90	65	n.a.	35	78

() tentative estimates.

Sources: Indonesia: Computed from datas in values from the trade statistics and Industrial Census statistics.

Malaysia: Malaysian Textile Manufacturers Association estimates.

Philippines: Textiles: computed by volume from production and export statistics. Garments: computed from data in values from the trade statistics and from value added data of industrial statistics.

Singapore: In values from industrial statistics.

Thailand: Yarn and fabrics Textile Manufacturing Association, computed by volume. Garments: This estimate include the production also of the small and medium industries which are not registered as promoted firms by the Investment. The export ratio of promoted firms is around 90 per cent.

As said earlier textile has started as an import substitution industry and is slowly shifting to an export oriented industry. This is clearly the case in Thailand where domestic demand used to absorb more than 90 per cent of yarn and fabrics in the early 70s. Currently production for domestic demand represents 95 per cent of man made yarn, and 77 per cent of fabrics (84 per

cent of cotton fabrics and 72 per cent man made fabrics). For textile and garments the share of exports was 22 per cent of total output in 1982.

In the Philippines textile production remains domestic oriented; measured in terms of volume the exports market either direct, or indirect (sales to the garment exporters) account for less than 10 per cent of total production.

Indonesian production is mainly aimed at the domestic market; exports accounted for less than 3 per cent of total textile production in 1982. However, the export orientation is increasing rapidly, while domestic demand is stagnant. It is estimate that in 1984 domestic demand will represent about 10 per cent of total output.

In Malaysia the Malaysian Textile Manufacturing Association has estimated that exports represent 35 per cent of total production. In Singapore domestic demand represents respectively 57 per cent and 30 per cent of textile and garment sales.

The figures probably reflect an underestimation of the importance of external demand, since they treat the demand of fabrics by garment exporters as domestic demand, and not as 'indirect export'. However, this correction would not alter fundamentally the assessment that can be made regarding the overall domestic market orientation of the textile industry in the ASEAN countries.

With the exception of Singapore's, the ASEAN countries' textile industry is not as export oriented as Hong Hong's, the Republic of Korea's or the Chinese province of Taiwan's where exports represent respectively 77 per cent (1978), 50 per cent (1979), and 50 per cent (1981) of total textile output.

In the ASEAN countries the garments industry on the other hand started with an export orientation. In most countries domestic consumption is still concentrated in rural areas where people buy fabrics which are either tailor made or sewn into garments in households. However, there is a growing demand for ready to wear products.

As general comment may be added that estimates of domestic demand's share of total production should be considered highly tentative in most countries since there is no indication on cottage industries performances.

Growth of textile consumption is closely correlated with income growth, and the elasticity of textile consumption has been around 1.2 in most of the ASEAN countries. Generally, the ASEAN textile industries were confronted to a highly dynamic domestic market in the 70s. The slowdown of domestic growth, and, in some countries, the economic recession has resulted in a reduction in textile consumption. In the Philippines total textile domestic consumption has been reduced by close to 30 per cent in 4 years (1980-1984); the Indonesian consumption is also decreasing.

Domestic consumption is relatively low by international standards (Table 23).

Table 23. Per capita textile consumption in the ASEAN countries, 1980

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Natural fibre	0.5	0.5	0.7	22.8	2.1
Man made	1.5	4.0	0.7	7.4	1.5
Total	2.0	4.5	1.4	30.2	3.6

Source: FAO World apparel fibre consumption survey 1980.
NB. The Singapore figures probably include the domestic sales to tourists.

(b) Production facilities in the ASEAN countries

Table 24 shows the development of spinning and weaving facilities in the ASEAN countries, and Table 25 shows production facilities and actual production.

The Philippines had been the pioneer among the ASEAN countries from the end of the 50s to the mid-60s. After 1965, however, the Philippines stagnated in spindleage, in contrast to other ASEAN countries that attained rapid increases, owing to the government support through investment promotion and incentives. In terms of growth of installed capacity, Thailand recorded the largest increase in the 60s, and Indonesia in the 70s. In terms of absolute

Table 24. Spinning and weaving equipment in the ASEAN countries, 1961-84

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN
Spindles ('000)						
1961	120		501		93	714
1971	482		860		539	1,881
1980	2,160	429	1,013	142	1,320	5,064
1981	2,425	446	1,140	142	1,566	5,719
1984	2,650	450	1,100	70	1,600	5,870
Growth:						
1961/71	4.0		1.7		5.8	2.6
1971/81	5.0		1.3		2.9	3.0
Share of each country (%)	45.1	7.7	18.7	1.2	27.3	100.0
Looms						
1961			9,400		6,900	
1971	53,000		15,000		27,000	
1984	95,285	8,980	21,000	1,400	64,352	191,017
Share of each country (%)	49.9	4.7	11.0	0.7	33.7	100.0

Source: Textile Manufacturers Associations.

Table 25. Textile production facilities in the ASEAN countries, 1984

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Spindles ('000)	2,650	450	1,100	70	1,600
O.e. rotors	10,000	11,900	12,700	n.a.	n.a.
Looms	95,285	8,980	21,000	1,400	64,352
Knitting	12,000	8,700	1,700	330	33,000
Texturizing	346	70	363	20	317
Garments sewing	12,000	10,000	10,000	15,000	40,500

Source: As for Table 24.

numbers, Indonesia is in first position, followed by Thailand, and the Philippines have dropped to the third position among the ASEAN countries followed by Malaysia and Singapore. In terms of number of spindles per 10,000 persons the ASEAN countries have spindleage between 180 (Indonesia) and 330 (Thailand).

There are in total 191,000 looms installed in the ASEAN countries. However, this number aggregates a wide range of machines, from old automatic looms used in small and medium industry (especially in Indonesia and Thailand) to modern shuttleless looms.

Table 25 and 26 show existing production facilities and production of yarn and fabrics in ASEAN countries.

Table 26. Textile production in the ASEAN countries, 1984

	Indonesia (1982)	Malaysia	Philippines	Singapore	Thailand (1982)
Yarn ('000 tons)	247	56	95	18	238
Cotton	96.5	n.a.	n.a.	n.a.	101
Man made	130.5	n.a.	n.a.	n.a.	132
Fabrics (million sq.m)	1,708	250	592	40	1,390
Cotton	n.a.	n.a.	n.a.	n.a.	620
Man made	n.a.	n.a.	n.a.	n.a.	770
Garments (million pieces)	252	n.a.	n.a	n.a.	500

Source: As for Table 24.

Due to its largest capacity the Indonesian industry is the biggest producer, with, respectively, 247,000 tons of yarn in 1982 (293,000 in 1983) and close to 2 billion square metres of fabrics. It is followed by Thailand with, respectively, 233,000 tons of yarn and 1.39 billion square metres of fabrics. The Philippines which suffers from outdated equipment and an acute recession has a production less than half of Thailand's. Malaysia, before Singapore (where textile is declining) are the smallest ASEAN producers.

As noted earlier, the Philippines is the largest garment exporter, and probably producer, followed by Thailand and Singapore.

The structural characteristics of the textile industry can be considered from different angles:

- the ratio of integration looking at the proportion of either spinning and weaving facilities owned by integrated textile firms;

- the ratio of concentration between textile groups;
- the role of foreign firms vis-à-vis domestic firms in textile production.

Table 27 offers some estimates of the integration ratio in ASEAN countries. Comparable figures were not available from Indonesia, however it seems that integrated textile mills are far from being as important in Indonesia as they are elsewhere in the ASEAN countries. The integration rate cannot be considered to be either favourable or unfavourable to productivity; one has to consider also the product mix. When integration is coupled with a very large diversity of yarn counts (count measures the thinness of the yarn) it can be counterproductive.

Table 27. Production share of integrated textile firms in total textile production in the ASEAN countries

	Indonesia	Malaysia	Philippines	Thailand
Percentage of spinning	n.a.	56	70	69
Percentage of weaving	n.a.	65	78	68 (35)a/

a/ In Thailand 35 per cent when small and medium weavers are considered.

Source: Computed from list of firms given by Textile Manufacturers Associations.

Besides spinning and weaving other activities such as dyeing printing and finishing can be either integrated or specialized. No data are available on this, however it is widely known that in most countries the commissioning of dyeing and finishing is hardly developed. Many firms hesitate to subcontract these activities for fear of loosing trade secrets and competitiveness.

The degree of concentration can be assessed by looking to the share of either spinning or weaving capacity owned by the largest firms. Concentration is highest in Malaysia, where foreign investment is playing a large role, while production capacity is most evenly distributed in the Philippines. The minimum economic size ranges between 20,000 and 30,000 spindles. Firms with spindleage lower than this minimum are more frequently found in Malaysia (Table 28).

Table 28. Concentration in the textile industry in the ASEAN countries

		Indonesia	Malaysia	Philippines	Thailand
Spinning capacity owned by:					
first firm	('000 spindles)	86	92	65	132
	(per cent)	(3.2)	(22.3)	(5.4)	(7.9)
first three	('000 spindles)	n.a.	127	186	364
	(per cent)		(30.8)	(15.5)	(22.6)
first five	('000 spindles)		171	286	535
	(per cent)		(41.5)	(23.9)	(33.2)
Total	('000 spindles)	2,600	412	1,198	1,608
	(per cent)	(100.0)	(100.0)	(100.0)	(100.0)
Weaving capacity					
first	('000 spindles)		1,600	1,870	2,900
	(per cent)		(21.3)	(9.5)	(10.9)
first three	('000 spindles)		3,600	5,200	8,200
	(per cent)		(48.2)	(26.5)	(30.8)
first five	('000 spindles)		4,600	8,400	10,100
	(per cent)		(61.5)	(43.1)	(37.9)

Source: Textile Manufacturers Associations.

Data on foreign investment in the textile sector are not available. Foreign investment plays the largest role in Malaysia where 51 per cent of the textile industry equity are owned by foreign investors; in terms of production capacity foreign firms, either subsidiaries or joint ventures posses, respectively, 75 per cent and 40 per cent of spinning and weaving capacities (see Table 29).

In Indonesia joint venture are rather important, their share of spindleage is around 31 per cent (Table 30), whereas in Thailand it is 25 per cent. No data have been found on the Philippines where foreign investment does not play such a large role.

Foreign investment has played an important role in the development of the modern Thai textile industry. Since the active promotion of private investment in 1960, many foreign textile companies have come to invest in Thailand, mostly as joint ventures with Thai businessmen. Japan has been the most important foreign investing country. Most of the large integrated firms in the Thai textile industries at present are joint ventures with Japanes investment.

Table 29. Paird up capital of textile companies in production in Malaysia, as at 31.12.1982

Subsectors	Foreign capital ($'000)	Malaysian capital ($'000)	Total paid up capital ($'000)
Spinning, weaving & finishing	293,908	217,396	511,304
Made up textile goods	11,120	16,314	27,434
Knitting mills	31,449	52,787	84,236
Carpet and rugs	1,947	2,977	4,924
Cordage rope and twine	3,969	8,247	12,216
Manufacture of textile n.e.c	-	227	227
Wearing apparel	33,716	50,560	84,276
Total	376,107	348,508	724,615

Source: MIDA.

Table 30. Status of spinning companies in Indonesia

	Number of companies		Capacity	
	Integrated	Non-integrated	Spindles	Percentage
Government	2	12	493,292	20.51
Semi-government	3	-	90,728	3.77
Private national	12	20	1,036,264	43.10
Co-operatives	1	1	85,824	3.57
Joint ventures:				
Japan-Indonesia	9	5	282,480	11.75
Hong Kong-Indonesia	5	2	141,582	5.85
India-Indonesia	4	8	274,352	11.41
Total	36	48	2,404,522	100.00

IV. PRINCIPAL CONSTRAINTS

(a) Restructuring the ASEAN textile industry

In each of the ASEAN countries, industrial restructuring is a living issue in the textile industry sector. National programme aim to overcome different sets of constraints which characterize each of the countries' textile industry.

Singapore introduced a wide-ranging industrial strategy in 1979, advocating for higher wages (New Wage Policy) would act as deterrent to labour intensive industries. Textile entrepreneurs were forced or encouraged to upgrade their mills. Lately the Trade Development Board has declared its intention to make staff training a requisite for companies who would wish to get a higher share in the allocations of annual exports quotas. This upgrading process is of primary concern for the garment industry which represents a very large proportion of the textile sector in Singapore.

In Phili, ines, the Board of Investments has embarked on the implementation of a textile industry modernization programme for the period 1981-85. This programme gets a financial support from the World Bank. It concerns the textile industry (spinning, weaving), and the highlights of the progrmme are: (i) rehabilitation of existing facilities, (ii) acquisition of new equipment, and (iii) methods to improve efficiency and promote direct and indirect (sales to garment exporters) textile exports.

In Indonesia a World Bank study on the textile industry is about to be launched. The study will identify the areas where restructuring actions are needed and help to stremline the industry.

In Thailand and Malaysia, UNIDO is providing assistance to the Government in either restructuring the industry (Thailand), or setting development objectives (Industrial Master Plan in Malaysia).

These programmes highlight the constraints facing the textile industry in each of these countries. These constraints can be divided into two main categories: those which are linked to the evolution of demand, either external

and domestic; and those which point to problems on the supply side. However, it is clear that the two sets of constraints are highly related.

(b) Demand issues

The problems facing the ASEAN textile industry in the world markets, and the issues brought up through protectionist policies are well known; the present study cannot contribute much in this field. However domestic demand represent in most ASEAN countries the largest outlet for the domestic production, and the evolution of that demand is thus of primary concern for the ASEAN textile industry.

(i) Domestic demand

As has been noted earlier, the textile industry first developed as an import substitution industry in ASEAN countries. This was clearly the case in Indonesia where exports of either textile and garments used to be minimal, and also of the Philippines (spinning, weaving). However, even in a country such as Thailand where textile exports (yarn, fabrics and garments) play an important role, the growth of domestic demand (through import substitution and domestic demand increase) played a crucial role in sustaining textile growth during the late 70s (Table 31.

Table 31. Thailand: Sources of growth of manufacturing output, 1975-80

(% contribution to increase)

	1975-1978			1978-1980		
	Domestic demand	Import substitute	Export expansion	Domestic demand	Import substitute	Export Expansion
Textile and clothing	66	3	31	74.5	10.5	15
(Total manufacturing)	79.5	-8	28	144	-14	70

Source: Thailand Industrial Sector, background paper prepared by IFCT for the World Bank (1982).

As was pointed out earlier, domestic consumption of textile products in the ASEAN countries remains limited by international standards. The textile producers which used to supply fast growing markets, have now to face a

slowdown of their domestic markets. Most ASEAN economies are still growing at a fast pace by world standards, however the GNP growth rate has been reduced; austerity measures (reduction of budget deficit, limitation on wages) have been implemented in most of the countries. The rate of income growth has declined, and the demand for textiles and garments products has followed. According to industry sources the domestic markets are saturated, notwithstanding the fact that domestic consumption is low by international standards.

The decline of domestic demand has been one of the major problems in Indonesia, Philippines and (compunded with difficulties in the border trade) in Thailand; in Malaysia the more limited size of the domestic market is a clearly felt constraint for national producers. It has greatly affected those firms that are unable to shift easily from domestic to export markets.

The Philippines economy is in its fifth year of economic recession. This has led to a significant decline in disposable income per capita, and domestic consumption of textile products has fallen markedly since 1979 from 3 kg per capita equivalent fibre to 1.9 kg (see Table 32). Textile production has traditionally been oriented towards the domestic market and comprised mainly fabrics for making up, with ready to wear garments forming a small but growing

Table 32. Demand for textiles in the Philippines, 1972-83

Year	Consumption fibre equivalent (million kg)	Personal disposable income (million pesos)[a/]	Population (million)
1972	92.2	96.6	38.8
1973	97.0	102.7	39.8
1974	90.7	106.8	40.8
1975	99.0	112.9	41.9
1976	96.8	120.7	42.9
1977	114.4	127.6	44.0
1978	136.7	131.7	45.2
1979	139.9	138.5	46.3
1980	108.4	141.4	48.1
1981	105.6	144.3	49.5
1982	103.1	146.7	50.7
1983	100.3	150.3	52.0

a/ At constant 1978 prices.

segment of the market. There is also significant clandestine imports in some parts of the archipelago. Informal estimates put the level of such imports at 25 per cent of the market.

In the case of Indonesia, according to a study made at the Institute for Research and Development of Textile Industries, Bandung the per capita consumption increased from 1 kg to close to 1.4 kg of equivalent fibres between 1965 and 1974. From 1975 to 1982 textile production studily kept increased at 13.5 per cent a year on average while domestic demand only grew at 4.3 per cent yearly. It is estimated that production is about 35 per cent greater than total domestic demand. In the past four years 660 million metres of cloth have remained unsold, close to 30 per cent of one year output. The slowdown which has affected the Indonesian economy since 1982 has had a deep impact on the domestic textiles demand.

The effects of this imbalance between supply and demand are not yet measured by the statistics; the number of establishment in the textile industry decreased between 1981 and 1982 from 2,051 to 1,991, and this decline was mainly due to the closure of weaving establishments (from 1,938 to 995). This trend has continued in 1983 and 1984. The industry is thus currently undergoing restructuring process which is, however, not closely monitored. The closure of industrial establishments in particular in the Bandung area is hastening the processes of industrial concentration. Some old units with outdated equipment have closed down, others have shifted a major part of their activities to subcontracting. The industries which are affected by the crisis are the ones that cannot shift their sales from the domestic market to the export market. The industries which produce better quality fabrics and have some knowledge of international markets are not significantly hit by the crisis, and, on the contrary, many of them are investing to upgrade their equipment in order to succeed on the foreign markets, either directly or indirectly by selling to garment exporters.

In Thailand domestic consumption has increased rapidly in the 1960s and 1970s and now represents 3 kg of fibre equivalent per capita. This increase has been related to the dynamic economic growth of Thailand with an average per capita GNP growth rate of 8.4 per cent in the 1960s and 7.2 per cent in the 1970s. Domestic market expansion, however, slowed down from 1979. This

has been compounded by sharply reduced border trade. Thailand's textile industry has traditionally been supported by the demand structure of some 100 million consumers who live on either in Thailand or in surrounding nations such as Laos, Democratic Kampuchea, Burma and also the Yunnan province of China. In the late 1970s the textile industry output was divided between 30 per cent overseas exports, 20 per cent border trade and 50 per cent Thai domestic consumption. The decline of domestic consumption and the border trade is not the only demand problem affecting the industry. There is also a qualitative imbalance between supply and demand. As in most ASEAN countries, domestic demand was earlier mainly for fabrics, which were either home sewn or tailor made into garments; ready-to-wear consumption was limited to the urban areas, whereas the largest share of total population is living in rural areas. According to industry sources there is an increasing demand for ready-to-wear garments, specially in the younger generations. This trends affect the Thai as well as other ASEAN countries' textile industry in several ways:

- Many of the textile mills had earlier no marketing concerns. The mills had been set up by wholesalers, who went on selling the production through their old channels. They did not make much efforts regarding the quality of the fabrics they produceed for the domestic market and then enjoyed for many years the benefits of a "seller's market". They now have some problems to meet the new consumers requirements, and in some cases clandestine imports of better quality fabrics or of extremely low priced fabrics are competing with domestic production.

- Most textile mills used to produce and sell large quantities of the same fabrics. The ready-to-wear development will lead them to more diversification in their product mix: in quality, design and raw material. In Indonesia, for example, the growing demand for 'fancy' fabrics is offering larger opportunities to continuous filament producers, whereas the firms specializing in cotton and polyester-cotton blended yarns face a downturn in their sales.

Projections of domestic demand are available in only two countries while most of them have ambitious objectives for their exports. In Thailand the NESDB has projected a textile (fabrics) domestic demand growth of 7.3 per cent/per annum up to 1987 (which means a per capita annual increase of 5 per cent), whereas fabrics exports were supposed to grow at 14 per cent/per annum.

In Indonesia projections made for Repelita IV call for an annual growth rate of 7 per cent for textile production, sustained by a 4 per cent annual growth rate of domestic demand and 33 per cent annual growth rate of exports.

Exports of fabrics are supposed to play a significant role in 1987, representing 22 per cent total production, instead of 6 per cent in 1983. In the medium-term, business circles envisage limited domestic demand growth, and new investments are geared towards exports (either fabrics or garments).

Also in the Philippines the medium-term objectives for exports are ambitious, which representing a multiplication of current exports by nearly two and a half times within the next five years in a difficult international environment.

(ii) Export markets

Like others textile producers in the developing world the ASEAN countries are confronted with the consequences of world recession and growing protectionism. Unlike some other Asian economies, most ASEAN countries are relatively new producers in the world market.

The problems of external markets, and access to these markets have already been much studied. Suffice here to say that the ASEAN countries' export growth have been hampered by the evolution of external demand. The export growth was significant in the late 1970s, it decreased in the early 1980s. The US recovery offered new opportunites of growth in 1983 and 1984. However, this growth will probably be reduced in the coming years.

In some cases the importance of quotas should not be overemphasized, some of them have not been met, and markets outside the quotas, such as Japan, have hardly been tapped. However, relative latecomers, like the ASEAN countries, cannot easily switch between quota and non-quota items, and have difficulties to anticipate which items will be affected in the future. The threat of quotas can be a most serious deterrent for would be exporters.

Among the ASEAN countries with ambitious export objectives, are the Philippines and Indonesia which both have targetted in the medium-term export sales of US $1.2 billion of textile products. The Philippines have also emphasized indirect exports objectives, namely fabrics sales to the country's garments exporters.

Heavy reliance an external export channels is a problem which affects most of the ASEAN countries. This is specially important now that export diversification is an objective. In most cases ASEAN textile firms are producing and exporting in a responsive manner to the requirements of the importers. There are only a few exceptions to this pattern. This also partly explains the import dependence on fabrics that characterizes the garments industry in most ASEAN countries.

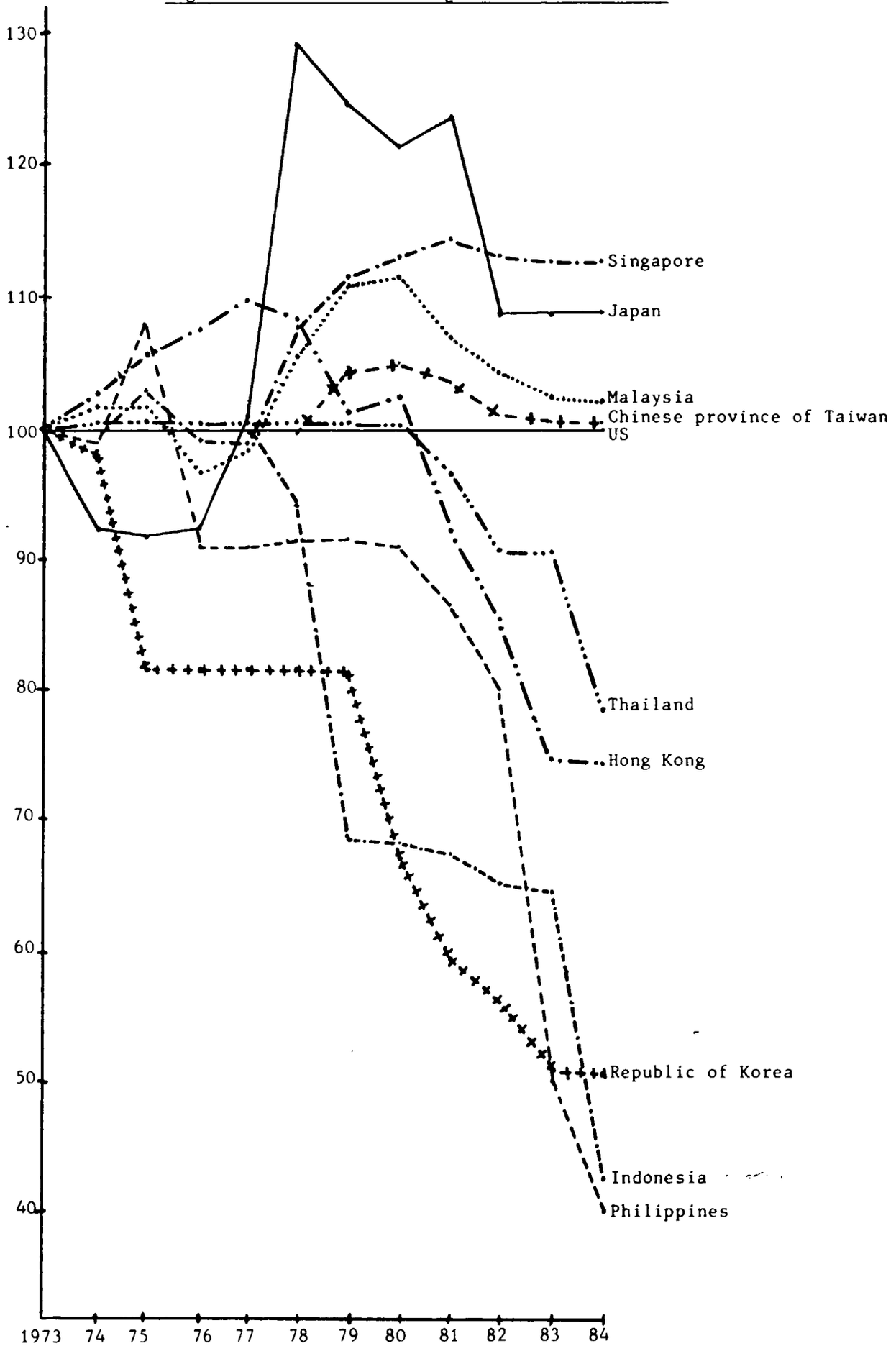
In Indonesia, according to the Jakarta Jetro office, Japanese joint ventures accounted for 28 per cent of Indonesia's textile exports in 1983, and industry sources say that as much as 80 per cent of all textile exports are using the channels of Japanese trading houses. Textile fabrics and garments are also exported under counter-trade agreement schemes.

In Thailand, the largest textile exporter is the Saha Union group (60 million square yards in 1983) which is also a large trading house. Other exporters, such as Japanese joint ventures, are relying on Japanese sogo-soshas. Most garments exports are made under a subcontracting arrangement with the foreign buyer which is also the ultimate seller.

In Malaysia's, spinning and weaving sector most foreign-owned firms have external marketing resources, usually controlled by their parent companies who decide on marketing policies. Only a few larger locally-owned firms with an export orientation have some marketing capability, whereas the smaller companies tend to act in a wholly responsive manner. In the garments sector the buyer specifies the features of the product, that is, the design, and the brand name the materials and the packaging. Most of the Malaysian companies act solely as production units.

The relative strenth of individual ASEAN currencies may either help or hinder export growth (see Figure 1). The Singapore dollar and the Malaysian ringgit have been very strong currencies, these two currencies even appreciated against the US dollar in the 1970s. Other ASEAN currencies depreciated against the US dollar in the 1970s, and this trend has been accelerating during the last two years, after the devaluation (in 1983) of the Indonesian rupiah and (in 1984) of the Thai Baht (this currency is no longer pegged on the US dollar), and three successive devaluations of the Philippines

Figure 1. Index of exchange rates to US dollar



peso which has recently (November 1984) been allowed to 'float'. It is noteworthy that the currencies of the major East Asian competitors have also declined vis-à-vis the US dollar.

The performance of the ASEAN countries' exports in the European market should be seen in relation to their currency behaviour vis-à-vis the European currencies. Malaysian and Singaporean exports have encountered less problems in the Federal Republic of Germany than in France. In the future the probable strength of the Singapore dollar and of the Malaysian ringgit will be added factors affecting negatively the exports from these two countries, whereas Philippines and Indonesian exports may benefit from the relative weakness of their currencies.

There is no question that such exchange rate changes have a profound impact on the relative competitiveness of the industriesin the different ASEAN countries. However, one has to remember that some of the countries import the fabrics they then process into garments, and this has a counter effect on individual competitiveness. Indeed, in some cases the real impact of exchange rates on export competitiveness remains to be seen. Som conclusions may be drawn from Table 33 which records the growth of textile and textile products imported in the USA in 1982 and 1983.

Table 33. USA's imports of textiles and textile products from east and southeast Asia, 1982-1983

(US $ '000)

Country of origin	1982	1983	Changes (%)
Indonesia	42,042	84,151	+95.9
Malaysia	37,348	49,064	+31.3
Philippines	170,872	190,905	+11.7
Singapore	104,445	103,086	-1.3
Thailand	116,636	121,773	+4.4
China	670,580	785,516	+17.1
Republic of Korea	763,950	975,389	+27.7
Hong Kong	842,657	954,879	+13.3
Chinese province of Taiwan	938,295	1,185,864	+26.4
Total	3,649,077	4,450,627	+21.9

Source: International Trade Administration Office of Textiles and Apparel, USA.

(c) Supply issues

Import dependence is one of the main problem affecting the industry on the supply side, it is related to questions of productivity. New development in textile technology are a possible threat for ASEAN countries which are also on the other hand facing growing competition from lower wage countries.

(i) Import dependence

Overall ASEAN textile trade was in deficit in the 1970s and up to the early 1980s. Maintaining a trade surplus in that sector in the years to come will necessitate further import substitution.

As seen earlier (Table 5) the fibre deficit (SITC 26) has not grown significantly in the past years. Cotton is a traditional crop in Thailand, Indonesia and the Philippines. Cotton growing has been encouraged and promoted by the respective Governments. Other natural fibres are also produced, ramie in the Philippines and Indonesia, and silk in Thailand and the Philippines.

Table 34. Cotton ratio of self sufficency

Thailand	58
Indonesia	14
Philippines	15

Although use of man-made fibre development has shown a significant upward trend in the past years, the ASEAN countries' man made fibre capacities do not as yet fully meet the requirements for the area's textile industry (see Table 35 and 36). In the near future the basic material for polyester staple (PTA) will be produced in Indonesia; the planned capacity has been reduced from 225,000 to 150,000 tons.

Due to the limited size of the market, the man-made fibre industry in the ASEAN countries is not always fully competitive, and higher than international prices for man made fibres is an additional problem in some ASEAN countries, notably the Philippines (see Table 37).

Table 35. Man-made fibre production facilities in the ASEAN countries

Tons/year	Indonesia	Malaysia	Philippines	Thailand
Polyester filament	60,600		9,000	24,000
Polyester staple	75,550	30,000	19,500	65,000
Neylon filament	11,800			18,000
Acrylic rayon staple	34,500			18,000

Source: Textile Manufacturing Association.

Table 36. Production, imports and exports of man-made fibres in the ASEAN countries

('000 tons)

	Production	Imports	Exports
Indonesia			
Polyester staple	109	17	
Nylon filament	11)	28	
Rayon staple	34)		
Total	154	45	
Malaysia			
Polyester staple filament			
Polyester staple	34	1.6	15
Nylon filament		n.a	
Acrylic			
Rayon staple		20	
Total	34	12	15
Philippines			
Poiyester staple	19	2	
Filament	5	13	
Nylon filament			
Acrylic			
Rayon staple		20	
Total	24	35	
Thailand			
Polyester staple	67		8
Nylon filament	17		
Rayon staple	11		6
Total	95	23	14

Sources: As for Table 35.

Table 37. Price of polyester short staple

Indonesia	0.80 US $/lb
Malaysia	0.60-0.70 US $/lb
Philippines	2.60 US $/lb
Thailand	1.02 US $/lb
Chinese province of Taiwan	0.65 US $/lb

As seen earlier the ASEAN countries' textile trade show a deficit in yarn and fabrics. Table 38 gives the ratio of:

$$\frac{\text{Imports of yarn and fabrics}}{\text{Exports of garments}}$$

which is one measure of the import dependency on yarn and fabrics: it allows to see if the growth of garments exports leads to a parallel growth of fabrics imports. Such a trend severely limits the growth of local textile value added and suggests an imbalance problem between local supply and demand.

Table 38. ASEAN countries' import dependence on fabrics

	1978	1980	1982	1983
Indonesia	12.2	2.18	1.78	1.62
Malaysia	1.61	2.0	1.61	
Philippines	0.66	0.57	0.57	
Singapore	2.08	2.07	2.06	
Thailand	0.26	0.57	0.49	0.42
ASEAN	0.75	0.92	0.82	

Source: As for Table 3-5.

Textile production is declining in Singapore. However, the garments manufacturers have an easy access to fabrics produced elsewhere.

In the Philippines the clothing exports have increased from US $36 million in 1970 to a peak of US $681 in 1982. (Due to the world recession the figure was lower in 1983 US $566). This dynamic development reflects the countries wage costs advantage in this highly labour extensive industry; another important factor has been the Government policy of allowing the unrestricted and duty free import of fabric under bond for making up into

clothing for exports the surge of garments exports went thus along with a corresponding growth of yarn and fabrics imports. To maintain or increase their share in the highly competitive clothing world market, the garment manufacturers need raw materials on internationally competitive terms. The vital elements are price, consistency of quality, delivery performance, and ability to quote a fixed price per contract. So far the domestic textile mills have not be able to comply with these constraints. The dependence of the export-oriented garments industry almost entirely on imported fabrics means that domestic value added is low and that oportunities for indirect exports of domestic fabric are missed. Imported woven fabrics are preferred to the domestically produced fabrics because the price is lower, the quality is higher and there are fewer problems in obtaining orders in small quantities. The main obstacle to the use of domestic woven fabrics is the price, with domestic fabrics up to 70 per cent more expensive than equivalent imported fabrics. This difference in price can be illustrated (see Table 39) in the cases of the main fabrics used by the export garment makers, namely (i) polyester/cotton woven fabrics (65/35) dyed used for infant wear, blouses, dresses, nightwear lingerie; (ii) denim (100 per cent cotton) used in jeans; (iii) nylon taffeta used in jackets, anoraks; and (iv) polyester/cotton yarn for knitting. Among the principal reasons explaining those differences one can mention:

Table 39. Philippines: Typical selling price comparisons

(in pesos)

Fabric	Local prices	International prices C.i.f.	Price difference	
P/C woven	19/m	9.81/m	9.19/m	94%
Denim	64/m	42.88/m	21.28/m	58%
Nylon taffeta lining	22/m	9.95/m	12.00/m	110%
P/C yarn for knitting	37/kg	45.60/kg	41.40/kg	90%

- The lack of specialization of the textile industry which is predominantly vertically integrated;

- The price of local polyester which is currently US $2.6 per pound instead of US $0.65 per pound on the international market;

- The price of electricity and oil which is currently higher than in other countries;

- The high financial cost incurred by local textile mills.

Looking at Malaysia, the trade statistics reveal Malaysia has a trade deficit in the case of fabires as well as yarn and fabrics. There are several reasons for this:

- The most efficient companies are located in the free trade zones and have a limited access to the domestic market. They export their fabrics. In the case of the garments manufacturers, their fabrics purchases are managed by overseas agent, parent company, or the garments buyer himself.

- Sales in the domestic market are characterized by long delays in payments. Interest free trade credit can be expected from periods from nine to twelve months. Since duties are payable on delivery and wage bills and financial charges must be met, the incentive to sell locally is reduced and firms are more likely to seek foreign buyers which pay promptly.

- Reasons given by garments manufacturers for using imported cloth are lower prices, more reliable quality, greater range of fabrics (larger width).

It may be concluded that there exists significant areas for import substitution linked to the export orientation.

In Thailand the garments industry is the most successful textile exporter. However, its dependence upon imported fabrics is growing. Between 1982 and 1983 the 15 per cent growth in garment exports coincided with a 40 per ent growth in textile fabrics imports. Between the first nine months of 1983 and 1984 the garment industry experienced a 30 per cent increase of its exports in volume (number of pieces). However, in the same period the fabrics imports increased over 55 per cent while at the same time the country's weaving capacity utilization was only 70 per cent. The reasons for the import increase are many:

- The garments industry is producing according to the design and specifications of foreign buyers and consequently needs a wide range of fabrics styles which the textile mills find difficult to produce on short notice. Sometimes the importers even specify in the L/C the origin of the fabrics. (There are cases where the technical capacity of the textile industry is up to the requirements; e.g. a well as known American shirt maker relies exclusively on Thai fabrics);

- the reliance upon imported fabrics can also be explained by the delay which are experienced in order to obtain the duty rebate. Garment exporters can either buy duty free imported fabrics, or buy local fabrics and apply for a tax rebate equivalent to the import duty.

In Indonesia, the textile export growth is a rather recent phenomenon; before 1984 Indonesia was not a significant exporter. Things are, however, changing rapidly, and Indonesia is now affected by quotas. By and large garment exports are concentrated in the low quality spectrum by international standards. One should notice that the Indonesian export growth has not lead to a similar growth in imported fabrics. One of the largest private domestic companies engaged in exporting blue jeans has reported that while in the beginning all the raw material and accessories had to be imported, now blue denim of reasonable quality is obtainable domestically and so are most of the accessories (sewing thread, sewing needles, zippers, buttons, etc.). It is, however, difficult to assess whether the country's textile industry would be able to produce in significant quality and quantity for a much larger garments export sector. Nevertheless, according to industry sources most of the ongoing investment in either spinning and weaving are linked to the coming export drive. The export processing zones do not play a significant role in that process.

(ii) Structural imbalance

The textile industry in the ASEAN countries is experiencing a situation of structural imbalance between supply and demand (see preceding pages), and in some cases this is worsened by other imbalances.

Imbalance between spinning and weaving.

In Indonesia, according to the Association of Textile Industries, there is a current imbalance between large spinning capcity on one hand, and less weaving and knitting capacity on the other. In the late 1960s, the imbalance was between a small spinning sector and a large weaving sector. The surge in investment in spinning during the 1970s has led to this new imbalance. According to the Bandung Institute the spinning sector can produce 2.5 billion meters of weaving and knitting yarn, whereas the weaving sector can process 1.8 billion. There are, however, contradictory opinions on that matter within

the industry, and in the absence of an in-depth study in its quite difficult to conclude on the matter.

In Thailand, the textile industry can be divided into two main categories of firms: modern integrated mills, and small and medium weaving mills located in the area of Bangkok. The importance of this later activity is expressed by the number of plants and the equipment installed: 250 plants and 28,000 looms. These plants are among the worst hit by the current depression both in the domestic and border market. One expects that many of them will disappear, while some of them will find the means to upgrade their weaving capacity.

Imbalance between weaving and finishing.

According to industry sources one of the features of Thailand's textile industry is that dyeing, printing and finishing are main bottlenecks. Dyeing of staple fibre is a sector which should be upgraded, nothwithstanding that the dyestuffs are imported. The weakness in this field partly explains why a large part of fabrics exports are made of grey fabrics. Moreover these fabrics are not affected by fashion changes and it is then possible to make long-term planning at plant level.

One of the weak points generally of the ASEAN countries' textile industry seems to be the dyeing and finishing subsectors. It is partly due to the industrial organization in these countries, too much integration is a deterrent factor to subcontracting arrangements. Commissioning dyeing and finishing is a rare activity in the ASEAN countries.

Imbalance between product diversification and specialization.

Lack of specialization, absence of competition pressure and obsolete machinery have contributed to the poor performances of the industry in the Philippines. Most of the firms show very low profitability and are unable to meet repayments of their debt. The lack of specialization has meant that the Philippines' industry has been inefficient producers. Average per spindle productivity of the specialized firms are 35 per cent higher than that of the integrated.

Mills tend to produce fabrics within a limited weight range with width governed by the types of looms installed, and the number of styles in each mill is not large considering the number of looms in use. If all other production factors were satisfactory, this degree of variety would not prevent an efficient weaving performance. However, because the mills are vertically integrated, the range of yarns consumed in the weaving departments is invariably produced by the spinning departments of the same mill. The range of yarn counts is often wide, leading to poor spinning performance and poor quality yarn which, in turn, causes poor weaving performance. It is not uncommon to find one mill using counts 4s to 36s, or another with counts 10s to 45s.

(iii) Production costs

Textile industry is typically considered as a labour intensive industry. However in ASEAN countries many firms are complaining that it has become an energy intensive industry (see Table 40).

Table 40. Production costs of fabrics

	Philippines	Thailand
Raw material	36	60
Labour direct	2.4	9.3
Labour indirect	n.a.	4.1
Electricity	14.5	15.3
Miscellaneous	47.1	11.3

Source: National Textile Associations. Items not comparable except energy's share.

(a) Energy.

Each ASEAN country's Association of Textile Industries states that their electricity charges are the highest. Structure of production costs shows that energy is now more important than labour. At the same time it seems that ASEAN countries are more or less on equal footing regarding electricity prices. Moreover, electricity unit prices are increasing with consumption in Malaysia, the Philippines and Thailand. Higher prices of electricity is a

constraint for the ASEAN textile industries which have to face competition of East Asian countries where electricity rates are lower (see Table 41). Subsidizing electricity costs may lead to additional countervailing duties in USA.

Table 41. Electricity charges

(US cents per kWh)

Indonesia	7.5
Philippines	7.25
Singapore	7.8
Thailand	7.0
Chinese province of Taiwan	5.0

(b) Wages.

There exists wide range of wages among the ASEAN countries; the comparative advantage in this respect of some of the countries is being eroded.

As seen earlier daily wages vary from US $1 in Indonesia to US $6 in Singapore. In Malaysia where the labour market is very tight and turnover extremly high (up to 100 per cent per year) wages projections assume a 7 per cent growth during the coming years. One can assume that the wages increases in textile will be move to about the same level as in Singapore. In Indonesia, the Philippines, and Thailand it is probable that wages in textiles, are not going to grow that substantially. This development is likely to widen the wages range between ASEAN countries, foster competition between countries or promote new co-operation.

In the meantime the ASEAN countries are competing with new textile producers relying on lower wages to promote their exports.

(iv) Labour productivity

Productivity is said to be rather low in the ASEAN countries. Average figures can be worked out from available statistics in spinning they give an average of 1 kg of yar per man hour in Indonesia, 4 kg in the Philippines, 5 kg in Thailand. One has to stress that average figures are rather meaningless in an industry where one can find such a large panel of technologies: from

hand looms still used in rural areas to air jet looms. If one looks only at those firms which are affiliated to the different textile associations the average productivity in spinning is 4 kg, this is regardless of the count diversity. As has been noted above a problem facing the spinning industry (especially in Malaysia and the Philippines) is too little specialization in yarn count. In each of the ASEAN countries one can also find firms with labour productivity close to European average.

In Thailand productivity has been growing steadily during the last ten years. In weaving the achievement of integrated mills was about 71 per cent of the productivity level in France or Italy, of 68,000 thousands pick per man hour. However, in the small and medium mills the level of productivity was only 16 per cent of that achieved in the modern plants. The average number of looms per operative is 40 in large scale industries and in small industries it is thought to be 24. In garment the average output per man/year is 2,458 pieces; considering that operatives work 2,300 hours per year, the average time for one piece is 50 minutes (see Table 42).

In the Philippines outdated equipment partly explains the low productivity in the spinning sector. According to industry sources the average man-hour production by spindles is between 4 to 6 kg. These figures give only a crude idea of productivity since one should take into account the count number of the yarn. In one of the most efficient plant visited, productivity was close to 8 kg per month. However, the age of machinery is not the only cause of this low performance. One has to take into account the problems linked with the sector organization (integrations) and work organization. Better organization and manpower development can lead to substantial increase in productivity.

(v) Machine productivity and economies of scale

From Table 25 the average machine productivity in spinning vary from 90 kg per spindle (Philippines) to 215 kg (Thailand); lowest figures in the Philippines, are due to the age structure of the spinning industry. In all ASEAN countries but the Philippines the equipment is rather up to date in the modern mills.

Table 42. Thailand: Labour productivity of spinners and of garments workers, 1972-83

	Spinners				Garment workers			
	Yarn production (tons)	No. of production spinners	Output per man/year (kg)	Annual growth of output per man/year (%)	Production (1000 pieces)	No. of garment workers	Output per man/year (pieces)	Annual growth of output per man/year (%)
1972	79,815	18,770	4,252		340,450	186,350	1,827	
1973	95,248	22,483	4,236	-0.38	436,204	232,331	1,878	2.8
1974	92,607	22,054	4,199	-0.87	448,976	235,075	1,910	1.7
1975	107,048	25,366	4,220	0.50	492,074	248,310	1,982	3.8
1976	119,246	27,460	4,342	2.89	514,841	252,422	2,040	2.9
1977	152,797	31,365	4,871	12.18	548,024	260,530	2,103	3.1
1978	163,904	31,584	5,189	6.55	616,386	285,650	2,158	2.6
1979	181,101	33,355	5,430	4.64	659,353	300,376	2,195	1.7
1980	181,452	33,021	5,495	1.20	729,950	322,729	2,262	3.1
1981	182,578	33,228	5,495	0	795,927	336,645	2,364	4.5
1982	181,656	33,246	5,464	-0.56	831,979	347,395	2,395	1.3
1983	-	-	-	-	894,848	363,984	2,458	2.6

Source: Thai Textile Manufacturers Association.

In the Philippines problems arise from the large proportion of aging and badly maintained equipment. As shown in the following table which indicates that 36.4 per cent of the spindles and 48 per cent of the looms are more than 25 years old.

Table 43. Philippines: Breakdown of spindles and looms, by year

	Pre-1950	1951-1960	1960-1975	Post 1976	Total
Spindles	53,600	370,200	523,100	249,800	
(per cent)	(5.4)	(31.0)	(43.7)	(20.9)	(100.0)
	Pre-1960	1960-1970	1970-1981	Total	
Looms	9,454	5,500	4,600	19,564	
(per cent)	(48.3)	(28.1)	(23.6)	(100.0)	

In Malaysia according to a recent survey, the machinery in general tends to be between 7 and 10 years old. Some industries possess very modern up-to-date equipment. One of the key technical problems seems to be the absence of shuttleless looms. For Malaysia to be at par with world average would require 700 shuttleless looms. Another problem is the width of the fabrics weaved and finished by the industry; using obsolete equipment these industries are weaving too narrow fabrics. These narrow fabrics (1.2 to 1.5 metre) are exported at a discounted price. Most of the industries are making efforts to overcome this problem by either widening their looms or buying second hand larger ones.

More than half the Malaysian establishments posses less than 20,000 spindles, a scale often regarded as the minimum economic size. This problem is worsened by the lack of specialization. There is a lack of standardization in the yarn market and most firms go on offering a much too wide range of yarn counts often from 8's to 60's. (In many countries firms specialize in a much narrower range - 10's to 20's.

The principal technological breakthroughs in textiles concern open end spinning and shuttleless looms. These developments have not failed to reach the ASEAN countries as can be seen from the Table 25 which gives the number of

rotors installed as far as data are available. (There is not a complete coverage of the number of shuttleless looms installed in the ASEAN countries. There seems to be a complete absence of them in Malaysia whereas in the other countries many firms are equipped with shuttleless looms using the conventional rapier system. In Indonesia, according to industry sources, the number of shuttleless looms using either air-jet and water-jet is growing. One estimates gives their number at around 200. However, to be effective these investments require a certain standard of industrial environment (problem of water control, humidity control), and a high quality of yarn. In Thailand some air-jet looms are to be introduced this year.)

In the field of garments, the ASEAN exporters rely on the comparative advantage in wages. However, new technologies could erode this competitive edge. Technology is now available that combines computerized pattern grading with optional pattern lay out, marker duplication facilities and electronics controlled cutting. This allows to keep the cloth wastage to a minimum, and to wastly enhance labour productivity in an area of highly skilled manual work.

Further progress in electronics would lower the price of automation and make it affordable for medium sized companies in industrialized countries, as well as for textile firms in developing countries (where capital costs are usually higher). What might be expected is a gradual process of automation, which in fact does take place in some of the ASEAN countries where domestic garment makers are now investing in computer-aided machines.

(vi) Training

Whatever is the real average productivity in the ASEAN textile industry, labour training, at the operatives and the technician levels is seen as a major objective in each of the countries. Many foreign companies rely on expatriate technicians. Training capacity are underdeveloped in every country but Indonesia, and the ASEAN countries have projects to build up training facilities for its technicians.

In Malaysia the very high rate of turnover makes it difficult for the industry to train qualified operatives. Firms face an accute shortage of technical personnel, a situation which is exacerbated by the inadequacy of

present training facilities. In the spinning and weaving sector the demand for Malaysians personnel far outstrips supply, and the sector is dependent on expartriate expertise. In 15 firms recently surveyed 71 non-Malaysians were employed. The same survey has estimated at 125 the number of trained technicans needed each year, without taking into account the backlog of insufficient training which presently exists.

In Thailand there is no textile engineering school and textile technician training centre. The lack of trained professionals for technical and managerial activities in textiles is thought to be a major obstacle for the upgrading of the product mix; more specifically, technicians in dyeing and finishing are lacking. The Textile Industry Division of the Ministry of Industry lacks much of the dynamism that is required from a modern training institute. Its reorganization and strenthening is being advocated in a recent UNIDO study.

In the Philippines the findings of a recent survey on training needs were as follows:

(a) In 18 mills visited, there were very few qualified textile engineers (technologists) - only 6 or 7 - and there was an almost total lack of trained training staff, i.e., training officers required to assist management with the planning, implementation and co-ordination of all programmes in the company's training plan and of trainers for the training of mechanics and operatives.

(b) The country has 157 textile plants of significant size (35 spinning, 42 weaving, 19 finishing and 61 sizeable knitting plants). There should be at least one fully qualified technologist in each of the plants other than the knitting only plants. For these latter, well qualified technicians (machine technicians) may suffice in those plants which specialize in circular, or warp, or flat-bed knitting operations. A fully qualified knitting technologist as plant manager may be desirable in those of the large knitting only plants which carry out different types of knitting operations. The needs of the industry for technologists and technicians therefore may be around 100 or so fully qualified technologists for spinning, weaving and finishing sectors and 50-60 qualified technicians for the knitting sector.

In Indonesia there are six private academic schools training textile technicians (Jakarta, Bandung, Tengerang, Yogyakarta, Surabaya and Medan) and, according to industry sources, recruiting qualified technicians is not a problem in most cases. However, firms complain about the high turnover of

some of the technicians. At the engineer level 80 persons graduate each year from the Bandung Institute.

(vii) Fashion

The need to upgrade the quality and design of garments exports is strongly felt in the two largest ASEAN garment export countries, the Philippines and Thailand, as well as in Singapore where higher wages make it impossible to compete in low range products.

In every ASEAN country the main bulk of exports has been consisting of classical steady products not affected by fashion, although fashion products will provide higher profits to those plants that respond quickly to the demand. Fashion articles have a very short life.

In Thailand the Thai Garment Manufacturers Association is organizing this year a "garment for export" design contest in order to discover new talents.

In the Philippines the Centre for International Trade Expositions and Missions (CITEM) was established in 1983. CITEM has tried to promote a dozen local ready to wear designers through study tours overseas.

Singapore has begun to generate enough original design talent to mount an exhibition of its own. In 1983 a Singapore mission to the Paris Salon resulted in orders worth US $3.4 million. In 1984 the level of orders was not that high, although still quite substantial.

The use of natural local fibres for fashion articles is still at the onset. In Philippines the use of ramie for fashion articles are about to begin; however, the ramie production has some problems to limit the coarseness of the fabrics. In Thailand the unevenness of the silk fabrics is a characteristic influencing the development of silk in fashion articles.

V. OVERALL OBSERVATIONS ON THE ASEAN TEXTILE INDUSTRY

A review of the development of the ASEAN countries' textile industry has shown that it has responded to different successive objectives. Cottage or small-scale industries catering for the domestic market have been supplemented by modern industries promoted for import substitution reasons and, later priority has been given to exports and the setting up of export-oriented firms.

From an outsider's point of view it seems that the ASEAN countries' textile indutry is made of different layers, each of them being characterized by its technical level and its economic rationale. As it was stated earlier average figures are quite meaningless in such a context: hand looms still in use in distant rural areas co-exist with water-jet looms in foreign joint ventures. The more striking evidence of this type of industrial duality is found in Indonesia but also to a lesser extent in Thailand and Malaysia.

These different industrial layers make it difficult to speak of national competitiveness in the textile industry. Some East Asian joint ventures in ASEAN, and some doemstic firms are able to export their fabrics to East Asia, or other countries, while in the meantime domestic garment manufacturers are reluctant to use domestically produced fabrics. Intra-firm trade does explain some of these exports of fabrics; however, they would not have taken place if the industry was not competitive by international standards. In some plants the productivity was very close to the one measured in industrialized countries in either spinning or weaving, whereas on average the performances of the industry has been found to be rather low.

In some cases these different industrial layers have some real relations between each other. Garment exporters in the Philippines are extensively using the 'putting out' system in order to subcontract sewing operations to households. This is hardly the case for every subsector of the industry, and for every country. One of the main problem facing the indutry is its trade dependence on fabrics. In many cases the increase in garment exports leads to an increase in fabrics imports. This is specially the case in the Philippine where most of the garment exporters are either located in export processing zones or working in bonded ware-houses. It is also the case in Malaysia,

where foreign firms are exporting fabrics from export processing zones, when at the same time garment exporters (in the EPZs) are importing fabrics. This is also the case, in a smaller extent in both Indonesia and Thailand. There are many reasons to this import dependency, some are linked to questions of productivity (prices, quality), others to the industrial organization (intra-firms trade), or the marketing organization (the importer will choose the fabrics to be utilized), and finally to administrative reasons (e.g. the time required to get a tax refund on domestically produced input).

Domestic oriented industries whether cottage or small-scale industries or modern medium-sized have been used to respond to growing markets made of consumers who are not 'quality wise'. In some cases the growth of domestic modern production has been at the expense of cottage industries whose output was not recorded. Textile producers were used to supply fast growing markets and have now to face a slowdown in their traditional markets. Most ASEAN economies are still very dynamic by world standards, however, they do feel the impact of world recession. Small scale weavers in Indonesia, or in Thailand are among the worst hit by economic slow down in their country or in neighbouring countries (border trade has been very important for Thailand). In the Philippines the decrease of internal consumption has had a dramatic effect on the domestic industry. The impact of recession is felt more acutely by those firms which are not able to shift easily from the domestic to the foreign markets.

Within this rather deceptive domestic environment some segments of the industry are fareing better than the others. This is particularly the case of the garments manufacturers. Urbanization, changes in living standards are modifying the mode of consumption and, increasingly, people are buying ready-to-wear garments instead of buying fabrics which were either home sewn or tailor made. This trend goes along with a growing demand for fancy fabrics made of man made yarn, which is not always produced in the countries. In some cases garment producers have to face the competition of cheap clandestine imports.

By and large the ASEAN textile industry remains domestic oriented; domestic demand represents between 60 and 90 per cent of total demand. During the latest period, export growth explains probably an increasing part of total

growth. This export orientation has developed rapidly since the late 1970s. This shift from an import substitution to an export oriented industry might be assessed at the national macro-level, it does not always reflect the evolution of individual firms, nor the growing competitiveness of larger segments of the industry, specially the medium-scale, non-integrated firms. This market evolution is often in the result of new promoted firms responding to various incentives (utilization of quotas, export processing zones), or the flexibility of foreign joint ventures which having invested heavily to cater for the domestic market were able to export part of their output when the growth of the domestic market slowed down.

As a result of its emergence as a substantial exporter the ASEAN group of countries has found itself engaged in trade diplomacy. As seen earlier being late-comers on the international scene has both its advantages (in terms of quotas) and its shortcomings (the threat of quotas can be a deterrent to would be exporters). The slowdown in domestic demand has led some of the ASEAN countries to set ambitious objectives regarding the export markets. As has been stated earlier, the prospects for international trade are somewhat gloomy. The new MFA will not offer larger quotas, and the emergence of new exporters with more negotiation power is a possible threat for ASEAN. It is difficult to assess the effects of new technology on international competitiveness, it is likely to reduce the developing countries' market share in developed countries. Japan, a market still largely untapped by ASEAN exporters, is making efforts to upgrade its technological capacity for each subsector of textiles so that its industry will be able to win back its domestic market in the 1990s.

One can say that ASEAN countries have conquered successively the easy stages of import substitution and export orientation. To pursue in a more difficult environment will require additional efforts, and not only additional incentives. They will have to restructure their industry to be able to overcome new constraints and try to build the linkages between the different layers of their textile industry.

VI. CONSOLIDATION THROUGH CO-OPERATION

Taking account both of the prevailing situation and tendencies at the international level (limited market access, strong competitive pressures, new emerging technologies) and of the actual situation of the ASEAN countries' textile and clothing industries (growth of exports, but import dependency and relatively low performances in value added or income terms), it does seem important that efforts be made to consolidate these textile and clothing industries on much stronger bases.

The study shows that the textile and clothing production in the area has been developing quite fast, that these activities are now quite important in terms of employment and value added, and that the export performance have been substantial in the garments industry. These performances have been achieved by exploiting what can be considered to be the easiest opportunities:

- The growth of the domestic market (partly due to substitution of readymade garments to self-made or crafts);
- Import substitution;
- Foreign investment (part of which for quota reasons) with technical, production and distribution capacities;
- Export oriented garments industry, i.e. of the production stage with the lowest technical and skill requirements.

The ASEAN countries' textile and clothing industries consist of various parts which have been developed independently along the above various lines but without many relations between them. As a result, the textile and clothing industries of the ASEAN countries tend to show to various degrees (varying among and within the different countries) several structural weaknesses:

- With some exceptions (particularly for some foreign affiliates), overall competitiveness does not seem to be very high, due to a combination of factors (related to equipment, skills and organization, to lack of specialization, non-availability of some inputs, or lack of technical know-how for some activities, etc.);
- In general the level of value added per unit is rather low, due to the fact that many quality aspects are neglected (product range, non-autonomous product definition, etc.);

- Some activities are insufficiently developed. The import dependency for fabrics is very significant while the dying and printing activities are poorly developed.

What these observations indicate is that the textile and clothing idustries have not really grown up yet to 'mature' self-sustained industries, or to consistent production systems. This means that some processes are insufficiently developed or mastered and that some functions are not or only poorly performed. The textile 'chain' is lacking some segments and is showing structural disequilibria between production stages. On the other hand the industries are very dependent as concerns the definition and design of the products they export. Pursuing further export objectives would thus seem to require a systematic approach in order to care for these structural deficiencies and imbalances.

The consolidation of the ASEAN countries' textile and clothing industries on stronger bases, would seem to require the following actions:

- The definition and implementation of 'product policies';
- The strengthening of the textile production 'chain';
- On those bases, the promotion of trade and linking the various segments through intra-ASEAN trade flows, partly on an intra-industry basis.

Taking account of the time and resource constraints and of the existing competitive pressures, there would seem to exist considerable room for co-operation. The probability of success in these consolidation actions would seem to be highest if they can be organized on a systematic or co-ordinated basis. ASEAN co-operation hitherto has not been very important in this field, but in the new perspectives set out above, new opportunities for co-operation are suggested.

The feasible areas for co-operation are briefly decribed below.

(a) Product policies

It would seem necessary first to 'upgrade' textile and clothing production and, by doing so, to increase unit values (unit value added). This requires the definition and implementation of 'product policies'. While

marketing, in the ordinary sense, which is rather short-term, should certainly be left, to the individual firms as one of the central factors of their competititve performance, it would seem important, at a collective level, to try, in a longer term and more structural perspective, to develop those capacities which would allow both for higher unit values and for a larger share of these higher unit values. Several approaches could be used and combined:

(i) Development of specialities. Taking account of traditions, culture, consumption patterns, etc., it should be possible to 'develop' and promote regional specialities, around which other elements of the product strategies can be built;

(ii) The second aspect would, indeed, be to try, in relation with these specialities, to build specific product images and collections;

(iii) This does seem to be possible only if design capacities are well developed. But the development of design capacities is a complex problem, which requires a set of complementary functions and capabilities. Training is one aspect, but only one aspect;

(iv) Parallel to this, extensive and systematic market research in export markets is obviously required in relation with the above definition of specialities and product ranges;

(v) Finally, attempts will have to be made in order to reduce the actual dependency on existing distribution channels, through the organization of export promotion and exports;

(b) Strenghten the textile 'chain'

One of the problems facing the ASEAN countries' textile industry is its structural weaknesses in some segments of the industrial organization:

(i) Training facilities are very little developed in Thailand, the largest exporter, and in Malaysia;

(ii) The textile research institutions (where they exist) are not as closely linked with the textile industry as would be desirable;

(iii) Concerning the textile industry itself, there is certain structural imbalance between the spinning sector and the weaving sector. The former being generally made up of modern firms, often integrated, whereas in the latter one can find a large number of small and medium scale firms catering for the local markets;

There is also a common bottleneck in most countries in respect of the dyeing and printing processes; commission dyeing is hardly developed. This segment of the industry requires more know-how and specialists experience than most others;

These common problems of the industry itself are less susceptible to lead to immediate co-operation since they call primarily for national restructuring efforts. In the somewhat longer term it might lead to some kind of division of labour between ASEAN countries. However, this would imply that quite substantial progress will have been made in the development of intra-trade between the ASEAN countries.

Some inputs of quite significant total values to the textile industry are currently imported in all countries (dyestuff and machinery).

einforcement of the textile 'chain' may be an area of co-operation EAN countries. Some of these problems affect every ASEAN country, ects only some of them.

Co-operation in the field of technical training

ical training is an expensive activity in the textile industry. It lete laboratories and pilot plants which require not only a le investment but also involves high running costs.

is a serious lack of local technicians and engineers in Thailand ilippines. Engineers are hired abroad, mainly from Hong Kong and e province of Taiwan. In the Philippines the Textile Research is providing practical classes to engineers of the state university ms that most of these students are going to other areas. In here are no regular courses for textile engineers and the Textile ivision of the Ministry of Industry is short staffed, needs to s labouratories and pilot plants as well as a full reorganization of ire. The Institute for Research and Development of Textile in Bandung is the only centre that has an effective training An intensified co-operation among the ASEAN countires, in this l benefit all the countries. It is suggested that:

Bandung Institute should be used as a model to organize the textile cation at the Philippines Institute so that a complete career in the tile field would be offered within the institute and its oratories and pilot plants. The students would also be involved in research programmes;

iland will have to strengthen its institutional setup. Nevertheless will take some time until decisions are made, plans are set up and ion starts. In the meantime, the Bandung Institute could train

students from Thailand and also contribute to the en... technologists to reinforce the staff of the Textile ... and fill the needs in the future;

- More co-operation between the respective institutes ... field of interchanging experiences in specific fields ... conferences and fellowships.

(ii) Co-operation in research in raw material utilizati...

Two important areas in raw material utilization would b... closer co-operation among the ASEAN countries, namely, silk ... both cases it would help to build a more specific 'product i...

Silk. It is usually thought that world production (aro... will not increase as fast as consumption in the medium term. ... world biggest consumer. It is also the biggest producer (25 ... production in 1983), followed by China, the Chinese province ... Republic of Korea. In the future Japanese consumption is l... somewhat, whereas other OECD markets would be growing.

There is a growing awareness among the ASEAN countries ... silk goods. A common feature is their traditional familiarit... silk products. Thailand is a well known producer, in Indone... and use of silk for batik has been known for centuries, in M... used for head dress and sarong and in the Philippines the tradition... barong tagalog is traditionally made of silk. While the pote... all these countries, the performances in tropical seri cultu... country to the other.

In Thailand there are 4,500 hand looms involved in silk ... total production amounted to 10 million square yards. The w... the Thai silk is mostly imported and efforts made to introduc... capable of producing warp yarn have failed to succeed.

Indonesia is a net importer of silk, importing three tim... production to feed its highly developed handwoven textile ind... government attaches importance to intensify development of s... employment as well as foreign exchange objectives.

The Philippines is producing cocoons but no raw silk. The Philippines Textile Research Institute runs a pilot plant for reeling silk and carries on weaving and finishing tests.

In Malaysia a silk project began in 1980 in Trengannu. It was expected to produce 10 tons of cocoons in 1984.

All the countries suffer from shortcomings arising from lack of technical knowledge and experience, lack of adoption of appropriate technology. To overcome these problems the ASEAN countries may wish to consider a programme of co-operation. Such a programme of regional co-operation in silk might cover matters relating to international trade and trends in the industrial markets as well as problems of production. There is a need for research co-ordination between research institutions in the ASEAN countries. Above all, the ASEAN countries can learn from the breakthroughs in the field of sericulture in other tropical countries, such as India or Brazil, and a co-operative programme for that purpose might be initiated.

Ramie. Ramie is a vegetable fibre quite similar to wax, it is suitable for household table cloth goods as well as garments. Contrary to silk it can be produced in bulk quantities. It can be used both alone and in blend with polyester staple fibre.

Among the ASEAN countries Indonesia and Philippines are interested in the production of ramie. The processing of ramie meet with problems to reduce the coarsness of the fibre so that it can be used properly in the clothing industry. In the Philippines ramie production has reached an industrial stage for some years, and more than 2,000 tons of ramie is currently spun by Ramitex. In Indonesia, the Bandung Institute is heavily involved in the research of spinning technology for ramie, but is facing lack of basic information especially in deguming practices and pre-treatment for spinning.

Both countries would probably gain in co-operating either with each other or with a third country, like Brazil, which has a regular production of ramie for garments and is exporting yarn for knitting.

(iii) Co-operation in reducing the imbalances between production stages and the import dependence for fabrics

The import dependence for fabrics can only be reduced if competitive domestic production can be increased, which implies the reduction of imbalances between spinning and weaving as well as the strengthening of weaving and the development of dyeing and printing capacities. The last is also required from the standpoint of the necessary 'product policies'. The main issue here is not necessarily to plan new capacities but to create better conditions (training, research, transfer of technology and know-how, etc.,) for the efficient development and organization of this production stage and, eventually, to introduce incentives and regional preference systems. This is in itself nothing but the usual approach for import substitution, but in this case it is not only in order to substitute domestic production for imports, but also in order to enhance the competitiveness of the user sectors.

(iv) Co-operation in textile machinery production

The ASEAN textile industry is presently a manufacturing sector with a total of 5.8 million spindles and 190 thousand looms. This industry depends on the import of high technology equipment, entirely, as well as spare parts and also to large extent some ancillary equipment of simple technology suitable for many of the local market segments[1/].

Table 44 gives a breakdown of the ASEAN countries' imports of textile machinery for 1982. Total ASEAN imports amounted to US $273 million. The relative share of each ASEAN country is of course related to their relative weight in the ASEAN textile industry, but it might partiuclarly be noted that

- Indonesia accounted for over one half of the total imports;
- Thailand's share was 19 per cent;
- The Philippines imported in spite of a relatively large textile sector - not as much as Malaysia and only slightly more than Singapore.

In terms of overall imports structure the main item is parts and accessories, followed by spinning and weaving machines and machines for

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1/ Indonesia has the only recorded manufacture of mechanic looms.

Table 44. The ASEAN countries' imports of textile machinery, 1982

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN
			('000 US $)						(%)			
Domestic sewing machines	2,737	1,686	4	3,477	825	8,729	2	6	9	13	2	3
Industrial sewing	4,695	5,247	499	8,920	1,325	20,685	3	18	2	35	2	8
Parts for sewing machines	1,827	3,120	7,359	3,804	8,835	24,945	1	11	34	15	17	9
Machines for extruding fibre	9,325	1,110	146	10	91	10,683	6	4	1	0	0	4
Machines for processing fibre	14,967	1,168	270	32	2,354	18,792	10	4	1	0	4	7
Machines for textile spinning	24,778	2,434	3,098	644	9,190	40,144	17	8	14	2	17	15
Weaving machines	30,808	1,167	1,509	1,183	6,432	41,098	21	4	7	5	12	15
Knitting machines	11,398	4,318	1,971	3,024	6,774	27,484	8	15	9	12	13	10
Machines for lace	314	1,701	1,365	0	3,654	7,034	0	6	6	0	7	3
Machine for felt	595	49	3	35	1	683	0	0	0	0	0	0
Auxillary machines	11,797	481	429	234	5,608	18,550	8	2	2	1	11	7
Parts and accessories	30,679	6,684	4,851	4,427	7,947	54,587	21	23	23	17	15	20
Total	143,920	29,165	21,504	25,790	53,035	273,414	100	100	100	100	100	100
(%)	53	11	8	9	19	100						

Source: National trade statistics.

extruding fibres. As shown in table, in each country's import structure the share of spare parts and accessories is quite similar to the overall share.

The 1982 imports figures offer a preliminary assessment of the textile machinery market as a market large enough to justify some initiatives for promotion of production.

There are certain spare parts which are worn out rather quickly and which have been mentioned in the context of - ASEAN wide production: spindle tape, bearings and traveller[1/]. The manufacture of bearing and traveller involves very high technology and, besides, famous brand are well establihsed in the world market. It would be difficult for ASEAN countries to establish a common production for these parts. Serious consideration may however be given to a spindle tape producing venture because its manufacture would not require such a high technology. In weaving, the spare and accessory parts which may be considered for common production include shuttle, reed and picking stick.

Another way to assess the market is to look at the trend in machinery demand in the coming years. Considering the market for replacement of old equipment and assuming 15 years as the economic life of the machines, the annual demand for spindles would be 386,000 units per year. Translated into mill capacity this represents an output of 60 spinning machines per month, a demand large enough to sustain two large manufacturers.

In the weaving operations the picture is even clearer. At least 28,000 looms in Thailand, and a good part of the 15,000 looms in the Philippines, are more than 20 years old. In Indonesia, the equivalent of 60,000 hand looms together with a large number of old mechanic looms, will have to be replaced in the next 5 years. All these looms will probably shift to automatic looms or will disappear.

This second approach might, however, lead to an overestimation of future demand since one has to consider the variety of models, and the future trend between rotors and spindles. The first step in this field would be to make,

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1/ See e.g., "ASEAN Industrial Joint Ventures (AIJV) in the private sector", UNIDO/IS.310, 1982.

on co-operative basis, a systematic study of both the demand prospects and the technical requirements and capabilities.

(v) Co-operation in dyestuffs production

The ASEAN countries are importing most of their needs of dyestuffs; total imports was US $150 million in 1982. The only country having a project in that field is Indonesia, which is also the largest importer. Some co-operative scheme could be devised in promoting production and use of natural dyestuffs, in which fields ASEAN countries have certain complementary resource endowments.

(c) Information

A prerequisite to any scheme of co-operation is a better knowledge of each others capacities and constraints which seems to be lacking. As one specific example, it might be most useful if a systematic assessment of the impact of energy costs in the textile industry would be made as energy represents in many cases a very high percentage of total costs, higher than labour.

Bearing in mind the importance of textile industry in most of the ASEAN countries as a manufacturing activity and an export industry, and the uncertainties concerning its medium-term future (e.g. due to emergence of new exporters and diffusion of new technology), some priority should be given to an instrument able to gather information required for policy makers.

There are presently, in each of the ASEAN countries, many Government agencies concerned with the textile industry, each one with specific tasks. Although the regulations issued by each agency tend to be coherent, the informations on which the decisions have to be based are not always readily available and reliable. Moreover, the information that comes from the industry itself, might not be as complete as may be desirable.

To cope with this problem, the closest possible co-operation between the Government agency (or agencies) directly concerned and the industry is required within call country. Specifically, in each country the industry

representative or spokesman may be the respective constituent member of the ASEAN Federation of Textile Industries (AFTEX), namely

- Asasiasi Perekstilan Indonesia
- Malaysian Textile Association
- Philippine Federation of Textile and Garment Industry
- Joint Standing Committee of Singapore Textile Industries
- Thai Textile Manufacturers Association.

The main tasks of such a unit at national level and, as appropriate, at ASEAN level would be to:

- monitor technological trends in the textile field and assess their impact and their appropriateness to the respective country's industry. This will help the industry and the policy-makers to keep abreast with changes happening in the world;

- monitor the trade evolution in different markets, with particular emphasis (i) on non-quotas countries, about whom knowledge is often lacking among domestic firms in ASEAN countries, and (ii) special items produced in individual ASEAN countries, and appropriate to build an ASEAN product image on;

- compile information of non-confidential nature on individual ASEAN textile production and trade, as well as external inputs required.

(d) Co-operation in trade

(i) External trade with MFA countries

Regarding the trade with the MFA countries, the swapping of quotas among the five ASEAN countries is still a matter of discussions, whether in the form of direct swap, the use of third country quota and exports directly from the country of manufacture, or the use of third country quota for goods to be exported through that third country.

One of the problems facing the different ASEAN countries is that there might not be much room for any swap in respect of 'hot items', and that very few companies in either of the countries are interested in 'left over' items.

(ii) External trade with non-MFA countries

As seen earlier, the ASEAN countries have a large textile trade deficit with the developing East Asian economies and, specially, with Japan. The ASEAN countries have not been able really to penetrate the Japanese market. Together they represent less than 7 per cent of Japanese imports of yarn and fabrics and less than 2 per cent of clothing imports whereas imports from the other East Asian countries represent respectively 55 per cent (yarn and fabrics) and 78 per cent (clothing) of Japanese imports). On the other hand the share of Japanese yarn and fabrics imports of total ASEAN imports of yarn and fabrics is 25 per cent. There is clearly an imbalance that ASEAN co-operation could help to allievate.

For examples, the Japanese market for cotton textile for outer garments is thought to be a promising one for ASEAN exporters according to a study published by the ASEAN Centre in Tokyo[1/]. The annual growth rate at the Japanese market is estimated at 10 per cent compared to only 1 per cent for the total consumption of textiles for garment; cotton items accounts for 23 per cent of the total outer garment market. Imports from ASEAN accounted for 3.3 per cent of total Japanese imports; the largest suppliers are China, USA and the Republic of Korea.

Among the positive factors for the outlook of ASEAN exports to Japan the above-mentioned study cited certain kinds of traditional works on products, such as batik cotton, European style embroideries, Chinese style cut work, calico prints. The negative factors are primarly quality aspects, and specially in finishing textiles (failure of multi-colour printing, problems with quality dyeing) and in sewing.

ASEAN textile products have also had difficulties in entering the Australian market. These East Asian imports account for the biggest share (58 per cent), whereas the ASEAN share of total textile imports is around 10 per cent. There is also a need to locate new markets for the ASEAN textile products outside industrialized countries, so far little efforts have been done to sell to Africa, Arab countries and Latin America.

1/ ASEAN Centre: Marketing in Japan, outergarments of cotton, Tokyo 1983.

(iii) Intra-ASEAN trade

One market that has been generally neglected by ASEAN textile manufacturers is the markets in other ASEAN countries. As seen earlier intra-ASEAN trade accounts for some 13 per ent of total ASEAN exports. This is probably an area where much fruitful co-operation is possible, however, this co-operation will meet with some difficulties.

Some ASEAN countries have set very ambitious objectives for their textile exports. This may encounter some difficulties in view of growing competition of lower wages countries (e.g. China), and increased competition from East Asian countries which are still able to underprice ASEAN exports. One of the problems of the ASEAN countries garments exports is the reliance on imported fabrics. The value of fabrics is a major proportion of final costs, and these costs are comparable for manufacture worldwide, whether for manufacturers relying on lower wages countries or manufacturers implementing micro computer-based technology for garment making.

The supply of fabrics would be a significant area of intra-regional trade, although one that is quite demanding. In view e.g. of the short time lapse between receipt of order and stipulated date of shipment for garments, or from the point of view of certain quality specifications, it may not be possible to purchase fabrics domestically to meet the requirements of garment exports orders. Textile mills in other ASEAN countries could be the source of supply instead of East Asian, and mechanisms could be developed in order to encourage sourcing of fabric requirements for ASEAN exports and from them.

Some countries, in particular the Philippines and Malaysia, are giving high priority to the development of indirect exports, meaning import substitution of fabrics to meet the needs of domestic or foreign mostly EPZ-based garments exporters. This indirect export policy could be a regional objective. However, doemstic production would have to meet with the price and quality of imported fabrics, and domestic purchases should not penalize garments exports. Domestic investors are sometimes reluctant to invest referring to the saturation of their domestic market. The widening of the market could improve both quality and price of sold fabrics.

(ii) External trade with non-MFA countries

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1/ ASEAN Centre: Marketing in Japan, outergarments of cotton, Tokyo 1983.

Table 45. Comparison of simple average of tariff rates in ASEAN countries, by selected commodity grouping

Commodity grouping	Average rate of duty					Regional average		Standard deviation	
	Indonesia	Malaysia	Philippines	Singapore	Thailand	including Singapore	excluding Singapore	including Singapore	excluding Singapore
Total	31.78	11.25	43.86	1.07	29.27	23.45	29.04	16.68	11.66
Animal products, plants and vegetable products	35.52	9.73	63.73	0.20	41.51	30.30	37.63	28.79	19.24
Prepared food stuff, beverages, tobacco	50.66	13.03	78.92	2.60	45.27	38.07	46.97	29.79	23.39
Mineral products and fuels	15.45	1.99	17.66	2.37	21.77	11.85	14.22	14.37	7.25
Chemicals and chemical products	20.68	7.18	20.82	0.73	25.06	15.78	18.44	16.65	6.73
Artificial resins, plastic materials, rubber products	25.49	21.50	36.39	3.81	41.26	26.44	31.21	18.54	8.01
Pulp, paper, paper board	44.06	10.91	55.51	0	22.52	26.60	33.25	24.86	77.50
Textiles and textile materials	40.85	17.44	59.38	2.10	36.29	31.37	38.49	27.51	14.92
Ceramic products and glass	38.19	16.68	47.75	0	34.25	31.79	34.22	23.26	11.23
Base metals and artifical	26.97	8.12	33.72	0.70	32.85	18.80	22.92	19.73	9.39
Machinery, electrical and non-electrical	24.37	9.12	24.62	1.17	20.57	15.67	19.67	15.42	6.30
Transport equipment	15.12	8.50	20.00	3.41	11.80	11.77	13.86	16.02	4.25
Instruments and apparatus	29.93	17.74	25.19	0	29.12	20.40	25.50	18.37	4.82

Source: NEDA.

Table 46.

BTN		Range					Mode					Weighted average rate				
		Indonesia	Malaysia	Philippines	Singapore	Thailand	Indonesia	Malaysia	Philippines	Singapore	Thailand	Indonesia	Malaysia	Philippines	Singapore	Thailand
	Textile and textile materials	0-140	0-70	10-100	0-25	5-60	10	0	100	0	40	21.2	30.0	26.2	2.1	46.6
50	Silk and waste silk	10-80	0-25	20-70	0	10-60	10;15	0	20	0	10	7.9	14.5	26.2	0	9.4
51	Man-made fibres (continuous)	0-80	0-50	30-70	0	20-60	60	15	30	0	20	12.9	25.4	35.0	0	33.1
52	Metalized textiles	20-60	0-25	100	0	30-60	20;60	0;25	100	0	30;60	23.8	2.7	100.0	0	31.6
53	Wool and other animal hair	10-60	0-35	20-70	0	30-60	10	0	20;30	0	30	46.8	0.6	30.8	0	36.7
54	Flax and ramie	10-60	0-25	20-70	0	30-60	10	0	50	0	30	36.5	15.4	33.9	0	37.3
55	Cotton	0-140	0-60	10-70	0	0-60	10;40	0	70	0	40	5.8	11.0	30.3	0	4.9
56	Man-made fibre (discontinuous)	0-80	0-76	10-70	0	20-60	10	0	30	0	20	11.3	29.0	12.4	0	22.6
57	Other vegetable textile materials	10-60	0-25	10-70	0	30-60	40	0	10;30;70	0	30	12.4	17.3	10.6	0	45.3
58	Carpet, lace, embroidery	20-60	25-50	30-100	0	30-60	60	25	100	0	40	55.9	31.4	76.1	0	50.7
59	Wadding rope, coated fabrics	15-56	9-60	10-100	0	5-23	25	60	50	0	30	27.8	29.5	40.4	0	28.6
60	Knitted and crocheted goods	30-80	25-48	30-100	0-25	30-60	70	25	100	15	60	69.9	39.5	30.9	4.2	55.8
61	Articles of apparel and clothing accessories of textile fabrics other than knitted or crocheted good	70-120	25-30	100	0-25	10-60	60	25	100	15	60	76.6	32.5	100.0	14.8	59.9
62	Other made-up textile articles	20-80	0-50	100	0	14-60	70	30	100	0	30;60	25.4	32.2	100.0	0	39.8
63	Old clothing, rags	70	0	100	0	20	70	0	100	0	20	70.0	0	100.0	0	20.0

Source: NEDA.

- Indonesian imports over one half of total imports
- Thailand's share is 19 per cent and Malaysia's 11 per cent
- Philippines imports almost the same amount as Singapore (9 adn 8 per cent).

In terms of overall imports structure the main item is parts and accessories, followed by spinning and weaving machines and machines for extruding fibres. As shown in Table 43 in each country's import structure the share of spare parts and accessories is quite similar to the overall share.

The 1982 imports figures offers a preliminary assessment of textile machinery market, a market large enough to justify some incentive for local production. Another way to assess this market is to look at the trend in machinery demand for the coming years. Considering only the market for replacement of old equipment and taking 15 years as the economic life of the machines, the annual demand for spindles is 386,000 unit per years. Translated into mill capacity this represents an output of 60 spinning machines per month, a demand large enough to sustain two large manufacturers. This is an overestimation of actual demand since one has to consider the variety of models, the future trend between rotors and spindles.

In the weaving operations the picture is even clearer. At least 28,000 looms in Thailand, a good part of the 15,000 looms in the Philippines, more than 20 years old, and the equivalent of 60,000 hand looms in Indoneisa, together with a large number of old mechanic looms, will have to be replaced in the next 5 years. All these looms will probably shift to automatic looms or will disapear.

1/ Indonesia has the only recorded manufacture of mechanic looms (see country study, annex 2)

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