

## **TEXTILE SECTOR IN INDONESIA**

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The purpose of this paper is to analyse the structure of the Indonesian textile sector basically starting from 1980. It evaluates the role and importance of the textile sector as a non-oil manufacturing industry in the country's economy. The textile sector as a whole has been an important source of foreign exchange, especially since 1985 when trade reform packages aimed at stimulating non-oil exports were introduced. However, since competition is very high particularly from ASEAN countries and NIEs, Indonesia must develop its competitiveness to protect the crucial role of the textile sector in the economy.

### **1. INTRODUCTION**

The textile sector comprises three distinct sub-industries: spinning/fibres, weaving/fabrics, and garments. A distinctive feature of the textile industry is the high international regulation of its trade. Much of the world trade in textile is governed by the Multi-Fibre Arrangement (MFA), which has been described as the most trade-restraining international agreement for manufactured products in existence (World Bank, 1991).

During the last three decades, there has been a major international relocation of the industry away from the developed industrial world towards the developing countries. There is a strong competition between the developed and the developing countries in penetrating the international textile market. Therefore, developed countries in North America and the European Community (EC) began to impose restricted quotas under the rules of the MFA to prevent access of the developing countries into their textile and garment markets. The restraints in textile trade were firstly imposed on trade in cotton textiles. Then the coverage extended to synthetic fibres and wool. Thereafter all of these restraints were covered under the term of Multi-Fibre Arrangement (MFA). Following the short-term (1961-62) and the long-term (1962-73) arrangements, the MFA came into existence. The original

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MFA (1974-78) was followed by MFA II (1978-81), MFA III (1982-86) and MFA IV (1986-July 1991). MFA IV was extended to December 1994. The MFA sets the conditions to manage the imposition of quantitative restrictions on textile and clothing exports of developing countries. These restrictions had been determined either through negotiations of bilateral agreements or on a unilateral basis (UNCTAD, 1994).

On the other hand, the MFA might also have provided an initial stimulus to countries in the very early stages of export orientation since they could not fill the quotas determined by developed countries, but the MFA becomes very quickly an important obstacle to export growth. Consequently, to sustain rapid export growth, developing countries not only have to achieve international competitiveness in this industry, but also to develop the capacity to manage and respond flexibly to an ever more restrictive and complex international commercial environment.

Textile is among the big non-oil industries in Indonesia. Its sub-industries show different characteristics according to their capital intensity (from high in spinning/fibres to low in garments), export orientation (from low in spinning/fibres to high in garments), and ownership (from significant foreign ownership in spinning/fibres to high domestic ownership in garments) (World Bank, 1991). Weaving is the first sub-industry to be established among the three, followed by spinning mills and fibre plants in Indonesia. Indonesia's dependence on the import of raw materials for its textile industry gradually decreased, and by the 1970s, Indonesia had achieved self-sufficiency in textile production.

In this study, some problems related to data have been encountered. Industrial national statistics could not be obtained extensively and so some of the data used may be out of date. Also, the data are insufficient to make a deeper analysis. On the other hand, there are some complications arising from the usage of the phrase "textile sector" itself, since the textile sector and subsectors are not clearly defined and separated comprehensively in the studies conducted so far about the textile sector in Indonesia. For example, the studies on the Indonesian textile industry by Hal Hill also contain such complications, since he considers garments as a subsector of the textile industry while he refers to it as an independent sector at the same time. These complications are mostly related to the international statistical classification systems. Although garments is generally considered a

subsector of textile, the data for garments are given independently from those of the textile sector according to both the International Standard Industrial Classification (ISIC) and the Standard International Trade Classification (SITC) systems. In fact, the commodities cannot be matched one by one in these different classification systems. Comparisons between industrial data (production, employment, etc.) and trade data cannot be made easily.

To simplify the analysis, for the sum of subsectors spinning/fibre and weaving, ISIC 321 will be used in the industrial statistics. In fact, ISIC 321 also includes other textile products, but the latter's amount is insignificant compared to the two subsectors, and so ISIC 321 can be considered as a total of spinning/fibre and weaving. To determine the item of garments is easier than the other two subsectors, because ISIC 322 refers directly to garments. It is also easy to examine the data on garments in the analysis of trade data since it is equal to SITC 84 (Revision 3). For yarn and fibres, SITC 651 and 266 (Revision 3), for fabrics SITC 65-651 (Revision 3) will be used without considering other textile products. In this study, when "textile" is used as a sector, i.e., the textile sector, it includes all of the three subsectors of the industry. But if "textile" is mentioned on its own as an item, it includes only the two sub-industries of yarn/fibre and weaving/fabric in accordance with the international classification systems.

The aim of this study is to examine the structure of the Indonesian textile industry and to analyse the developments and importance of the textile industry in the Indonesian economy. The next section evaluates the structure of the Indonesian textile industry. In this section, the history of the Indonesian textile industry will be summarised. Then the structural key features of the textile industry will be analysed. The production, growth, investment and employment data of this sector will be provided.

The third section concentrates on the trade structure of the Indonesian textile industry. It will examine the export performance of the textile sector since 1980, looking at each of the spinning, weaving and garments subsectors. Leading export markets of textile products and the share of these products in total non-oil exports and manufactures will be assessed. Furthermore, the international position of Indonesia in the textile trade will be illustrated.

The fourth section considers the recent developments in the textile industry. It attempts to shed light on the future prospects of the Indonesian textile sector. Moreover, an attempt will be made to assess what effects the Uruguay Round may have on the Indonesian textile sector. As a conclusion, the importance of the textile industry as a non-oil manufacturing industry for the Indonesian economy will be evaluated. Furthermore its future prospects in terms of growth of production, employment, and international trade will be discussed.

## **2. STRUCTURE OF THE INDONESIAN TEXTILE SECTOR**

### **2.1. History**

Weaving is the oldest established industry of the three subsectors. The factory weaving sector emerged in the 1920s following the introduction of upright hand looms. The number of these hand looms rose rapidly from about 257 in 1930 to some 44000 in 1940. Over the same period, the number of power looms also increased significantly from 44 to 8000 (World Bank, 1994).

After a decade of stagnation in the 1940s, the weaving industry was promoted by the government as a supplier of a basic commodity over the period 1950-65. As a result, the weaving subsector grew quite rapidly during the period 1950-1955 and output expanded by about 150% (Hal Hill, 1991). However, for the period 1956-66 it is necessary to make estimations since the quality of statistical reporting deteriorated and the large foreign mills were nationalised. According to Hal Hill's estimate, output may have risen by only about 20% over this period.

After 1965, the "New Order"\* regime brought about a virtual technological revolution especially in the weaving sector through introducing power looms instead of most of the hand looms. The hand loom sector began to decline rapidly and hand looms were replaced with large integrated textile mills operating on a highly mechanised technology. The machinery capacity of the textile sector increased significantly. Weaving looms, garment-making

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\* Indonesia's history after independence is usually divided into two parts: the years under the helm of President Soekarno (1948-65), often referred to as the Old Order; and the period under President Soeharto, or the New Order.

machines and spindles increased by 147%, 692% and 357%, respectively, over the period 1972-1986 (*Textile Horizons*, December 1987).

In spite of the collapse of hand looms, the textile subsector has expanded rapidly since the late 1960s under the stimulation of strong demand growth and high import protection together with the technological revolution (World Bank, 1994). However, the industry experienced a slow down in the growth rate of real production during 1980-1985, indicating a 12.3% growth per annum, although it had realised 13.1% annually in 1976-1980. Then the textile industry continued to expand as real production increased by 22.5% during 1985-1989 (calculated from Table A1).

The spinning/fibre industries are much more recent in origin. Hand spinning of local and imported fibres has long existed as an occasional household activity in Indonesia, but a small factory sector did not develop until the 1930s. The industry progressed little over the next thirty years, and much of it was state-owned by the early 1960s. Thereafter, and following the technological revolution under the New Order regime, the spinning output expanded even more quickly than weaving, even though spinning started from a smaller initial base. Polyester fibre production also emerged on a significant scale in the early 1980s.

Garment production had been the preserve of Indonesia's tailor shops up to the 1970s. It firstly emerged as a factory activity in the late 1970s to take advantage of growing export opportunities and to serve the country's expanding middle classes.

## **2.2. The Present Outlook of the Textile Sector**

The most important feature of Indonesian manufacturing is the dominance of the oil and gas processing industries. Endowed with rich natural resources, resource-based manufactures have constituted a larger proportion of Indonesia's exports. A series of reforms including trade reforms, which began in 1985, reduced the dependence of the Indonesian economy on oil and gas sharply. The share of oil exports in total exports decreased from 73.2% in 1984 to 31.4% in 1992, and its share in GDP from 21.5% to 13.0%. This decrease was partly due to the improvement in the non-oil manufacturing sector and partly to the decline in oil prices starting from 1982. Concurrently, the share of non-oil/gas manufacturing in total exports

increased from 18.2% to 51.7%, and the share in GDP from 8.9% to 17.5% (Table 1.)

Table 1  
Major Economic Indicators, pre- and post- Reforms

Indicator	1984	1992
Oil output/GDP (%)	21.5	13.0
Non-oil manufacturing/GDP (%)	8.9	17.5
Oil exports/total exports (%)	73.2	31.4
Non-oil manufacturing exports/total exports (%)	18.2	51.7

Source: UNCTAD, 1994.

As regards the textile sector, it constituted 14.8% of the non-oil manufacturing sector's production in 1989 (Table 3). Moreover, the textile sector had a significant share in total non-oil manufacturing exports, representing 34.5% in 1992 rising from 12.7% in 1980 (Table 14). This sector is also the largest sector with respect to employment and number of establishments. There are nearly 3000 establishments (with 20 or more persons engaged) (Tables 4 and 6) in the textile sector, which have 23.3% out of the total number of employees in the non-oil manufacturing sector in 1989 (Table 3).

In terms of production, in 1989, the textile sector (5.03% of GDP) occupied the second position in all the manufacturing sector after food products (5.14% of GDP). With this promising position, the textile sector plays an important role in the country's economy: from 1.9% in 1980, its share in (GDP) increased to 2.8% in 1985 and to 5% in 1989 (Table 2).

Table 2  
Production Share of Textile Products in Total GDP  
(Percentages)

Years	Textile*	Garments	Total
1980	1.9	0.1	1.9
1981	1.6	0.1	1.7
1982	1.6	0.1	1.7
1983	1.5	0.1	1.6
1984	1.8	0.2	2.0
1985	2.5	0.4	2.8
1986	2.9	0.4	3.4
1987	3.1	0.5	3.6
1988	3.5	0.6	4.1
1989	4.3	0.8	5.0

Source: Industrial Statistics Yearbook, 1984, 1988, 1991.  
International Financial Statistics Yearbook, 1995.

\*Textile = 321 according to ISIC system including spinning, weaving and other textile products excluding garments.

The share of the textile sector in the total production of the non-oil manufacturing sector decreased from 12.8% in 1980 to 11.9% in 1985. Afterwards, it started to grow again reaching 14.8% in 1989 (Table 3). A similar trend is observed for the value-added, excluding 1982 and 1987-1988. The share of the textile sector's value-added declined during 1980-1985, then it recovered again, reaching 15% after 1985. The total production of the whole textile sector at 1980 prices rose by 14.6% annually during 1980-85, which was an import substitution period, then it increased more rapidly by 23.3% per annum during 1985-89 (calculated from Table A1).

Table 3  
Share of Textile Sector in Total Manufacturing (excluding oil)  
for Structural Variables \*

(Percentages)

Years	No. of establishments <sup>a</sup>	Total no. of employees	Wages & salaries of employees	Production	Value added	Investment
1980	26.0	25.5	18.4	12.8	12.8	24.6
1981	25.8	25.1	18.7	11.9	11.2	19.4
1982	24.8	24.1	16.3	11.4	12.5	12.3
1983	24.2	22.8	15.6	10.8	10.7	16.0
1984	23.4	23.0	15.8	12.5	14.2	14.4
1985	20.7	21.8	15.1	11.9	12.2	12.3
1986	20.8	22.2	15.2	13.3	14.5	6.8
1987	21.0	22.7	15.3	13.4	12.6	11.8
1988	20.0	22.4	15.3	13.4	11.9	12.7
1989	20.4	23.3	16.1	14.8	15.0	24.2

Source: Industrial Statistics Yearbook, 1984, 1988, 1991.

\* Textile includes garments.

<sup>a</sup> Establishments with 20 or more persons engaged.

As the price of oil decreased starting from 1982, Indonesia applied more restrictive and inward-oriented policies accompanied by continued import substitution policies. As a result, the period between 1980 and 1985 is called the import-substitution period. Then, more outward-looking policies were implemented by the trade reform packages. The main headings of these packages include removing non-tariff barriers, decreasing tariff rates, removing import licence restrictions from a majority of items, and abolition of monopolies. Furthermore, in May 1986, a duty drawn-back scheme was introduced to provide internationally-priced inputs to exporters.

Rapid growth in the textile and clothing industry in Indonesia is attributed to a series of deregulation and export promotion measures that mostly began in 1985, and accelerated with the 1986 devaluation and other deregulation packages that were mentioned above.

The textile sector started as an import substitute but later developed mostly due to the stimulation of exports owing to comparative labour-cost advantage, technologically developed equipment, initial government support and export-oriented industrial strategy, especially since 1985. Total employment in the textile sector (in establishments employing 20 or more persons) was approximately 525 thousand employees (Tables 4 and 6), representing 23.3% of the total employees in the whole manufacturing sector excluding oil in 1989 (Table 3).

In 1989, most of the production in the textile sector was owned by the spinning and weaving industries (85%). Moreover, 75% of employment in the textile sector is engaged by the establishments of these subsectors. Therefore, the spinning and weaving subsectors dominate the textile industry according to the employment, production and value-added levels (calculated from Table 4 and Table 6). The spinning and weaving subsectors totally produce 12.6% of the total production of the non-oil manufacturing sector in 1989.

Table 4  
Structure of Textile \*

Years	No. of establishments (Number)	Total no. of employees (Th.)	Wages & salaries of employees (m Rupiahs)	Production (m Rupiahs)	Value added (m Rupiahs)	Investment (m Rupiahs)
1980	1,957	229.9	77,000	841,000	263,000	107,000
1981	1,892	232.6	98,000	939,000	288,000	106,000
1982	1,822	231.0	110,000	1,005,000	339,000	119,000
1983	1,755	224.4	126,000	1,139,000	349,000	182,000
1984	1,669	238.3	145,000	1,660,000	566,000	171,000
1985	2,033	296.1	207,000	2,388,000	763,000	146,000
1986	2,028	307.8	236,000	3,022,000	1,047,000	92,000
1987	2,031	323.9	264,000	3,890,000	1,113,000	185,000
1988	2,137	352.8	335,000	4,969,000	1,241,000	269,000
1989	2,160	395.6	416,000	7,156,000	2,119,000	1,419,000

Source: Industrial Statistics Yearbook, 1984, 1988, 1991.

\* Textile = 321 according to ISIC (International Standard Industrial Classification) code system, including spinning, weaving and other textile products excluding garments.

<sup>a</sup> Establishments with 20 or more persons engaged and named large and medium firms.

Polyester fibre production emerged on a significant scale in the early 1980s, promoted by the government. Table 5 shows that polyester fibre production has the largest share in total production of textile fibre in the late 1980s and the early 1990s. The production of textile fibres in 1992 amounted to about 578,000 tons, a 31.4% increase over the previous year. Although cotton fibre production stayed nearly constant during 1988-1992, polyester fibre generated almost 85% of textile fibre production growth. In particular, the production of synthetic fibres increased sharply as a result of new companies. According to some analysts, Indonesia has become one of the main supplier of polyester filament fabrics in the world (*JTN*, October 1993).

Table 5  
Production of Textile Fibre, 1988-92

Items	1988	1989	1990	1991	1992
Polyester staple	100	100	116	120	165
Polyester filament	104	120	135	180	250
Nylon	12	14	14	17	20
Rayon staple	57	58	70	90	110
Cotton	30	33	33	33	33
Total	303	325	368	440	578

Source: JTN, March 1993.

As regards the garment industry, it is more important among small firms. However, no information is available on cottage industry activity. Growth has been rapid in the garment industry since the mid-1970s. Real value-added grew at an average annual rate of 41.3% and employment at 26.5% between 1980-1989 (Table 6 and Table A2). The garment industry produces 2.2% of total non-oil manufacturing sector's production in 1989. Exports generated about 90% of output growth in this subsector during the 1980s (World Bank, December 1994).

The growth of the Indonesian garment industry was promoted by the very rapid entry of new firms mostly small and medium in size. As table 6 indicates, the number of establishments rose from 134 in 1980 to 837 in 1989. The production share of garments in GDP accounts for 0.8% in 1989 rising from 0.1% in 1980 (Table 2). The share of garments in total textile production and employment in 1989 represents 15% and 24.5%,

respectively. However, the garment industry is the most important subsector in terms of export revenue representing more than 50% of the total textile sector during the 1980s and early 1990s (calculated from Table 14).

Table 6  
Structure of Garments \*

Years	No. of establishments (Number)	Total no. of employees (Th.)	Wages & salaries of employees (m Rupiahs)	Production (m Rupiahs)	Value added (m Rupiahs)	Investment (m Rupiahs)
1980	134	15.5	5,000	29,000	9,000	4,000
1981	157	20.0	8,000	49,000	16,000	5,000
1982	169	23.9	12,000	79,000	32,000	7,000
1983	190	29.2	17,000	115,000	44,000	10,000
1984	207	35.7	25,000	169,000	71,000	11,000
1985	645	68.9	51,000	347,000	117,000	110,000
1986	633	65.3	51,000	431,000	162,000	15,000
1987	656	79.0	70,000	599,000	177,000	25,000
1988	798	106.5	99,000	874,000	270,000	103,000
1989	837	128.7	138,000	1,260,000	427,000	163,000

Source: Industrial Statistics Yearbook, 1984, 1988, 1991.

\* Garments = 322 according to the ISIC code system.

<sup>a</sup> Establishments with 20 or more persons engaged.

As regards the quantity of textile production, fabric reached 4,493.6 million metres in 1989, indicating a 9.2% annual growth during 1980-89, while weaving yarn showed 3,405.0 thousand bales in the same year and grew by 12.5% over the same period. Then these subsectors also continued to grow by 9.8% and 12.1% for fabric and weaving yarn, respectively, over the period of 1989-93 (Table A7).

Table 7  
Production of Textile Products

Textile products	Value			Growth rates		
	1992/93	1993/94	1994/95*	1992/93	1993/94	1994/95*
Fabric (million metres)	5564.0	6532.1	6800.0	4.2	17.4	4.1
Weaving yarn (Th. bales)	4474.0	5382.2	5662.1	8.1	20.3	5.2
Garment (million dozen)	72.0	86.6	90.5	9.1	20.3	4.5
Staple fibre (Th. tons)	210.0	254.3	283.5	-2.9	21.1	11.5

Source: Report for the Financial Year 1992/93, 1993/94, 1994/95, Bank Indonesia.

\* Provisional.

The production of the textile sector progressed well in 1993/94. This satisfactory performance was realised by increased production of fabrics (17.4%), yarns (20.3%) and garments (20.3%), mainly due to the enlarged production capacity during the previous two years. However, the textile sector did not perform so well in 1994/95. Growth rates for the key commodities of fabrics, yarns and garments became only 4.1%, 5.2% and 4.5% respectively, due to the higher costs of raw materials (Table 7).

### 2.2.1. *Employment and Wages*

The textile sector in general includes mostly labour-intensive and low-skill activities. Value-added per employee is actually a measure of productivity but it may be used as an index that reflects labour intensity. However, it is an appropriate index only under the restrictive assumptions of free competitive factor markets and neo-classical production functions. Although this index as a measure of labour intensity is quite problematic, it is so used in this study because no data are available for other methods of measurement. Moreover, this index gives a general view about labour intensity for the whole period but it cannot explain the reasons of the annual changes. A high ratio of value-added to labour implies a low degree of labour intensity and vice versa. While the ratio of value-added to labour was Rp2297.1 thousand for the textile sector, it was Rp3560.7 thousand for the non-oil manufacturing average in 1989. As to the garment sector, it fluctuated during the period 1980-1989 as did all the textile sector, but generally indicated less than half of the non-oil manufacturing average (Table 8).

Table 8  
Real Value Added per Employee

Year	(Th. Rupiahs)			
	Textile (321)	Garments (322)	All textile sector (321+322)	Non-oil manufacturing sector
1980	1144.0	580.6	1108.4	2209.8
1981	1102.6	712.4	1071.7	2404.1
1982	1195.0	1090.3	1185.3	2285.2
1983	1132.0	1096.7	1127.9	2403.8
1984	1565.7	1311.0	1532.5	2477.5
1985	1620.6	1068.0	1516.4	2709.5
1986	2022.4	1475.0	1926.5	2954.0
1987	1869.5	1219.0	1742.0	3134.6
1988	1771.2	1276.5	1656.5	3103.7
1989	2533.8	1569.4	2297.1	3560.7

Growth rate per annum (1980-89)	9.2	11.7	8.4	5.4
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Source: Industrial Statistics Yearbooks, UN, various issues.

Eventually, these figures indicate that the textile sector is more labour-intensive than the non-oil manufacturing average. Furthermore, compared with garments, the spinning and weaving subsectors are, over all, less labour-intensive. Although the three major sectors of spinning, weaving and garments indicate an above-average labour intensity, none of them has been technologically stagnant. In all three, value-added per employee rose faster than that of non-oil manufacturing, and significantly so in the case of garments (See also Table A3).

Table 8 also presents annual average growth rates of real productivity in the textiles and garments industries and all the textile sector. During 1980-89, the textile sector as a whole experienced a real productivity growth rate of 8.4%, which was higher than that of the non-oil manufacturing sector (5.4%). The significant increase in the garment subsector's productivity (11.7%) was mostly due to improved efficiency from the factory production. Furthermore, employment expansion, which accounts for 26.5% over the same period, has become the driving force for the rise in garment production (Table 9).

Table 9  
Annual growth rate of employment

	(Percentages)		
	1980-85	1985-89	1980-89
Textile (321)	5.2	7.5	6.2
Garments (322)	34.8	16.9	26.5
All textile sector (321+322)	8.3	9.5	8.8
Non-oil manufacturing	11.7	7.7	9.9

Source: Calculated from Industrial Statistics Yearbooks, various issues.

During 1980-89, while real productivity growth was 9.2%, annual employment growth in the spinning and weaving subsectors taken together was 6.2% (Tables 8 and 9). The increase in spinning is probably due to the emergence of the highly capital-intensive synthetic fibre sector at the beginning of 1980 and the rapid growth of synthetic fibre especially at the end of the 1980s and the early 1990s (Table 5). For weaving, the growth reflects the technological development which removed most of the hand looms.



Table 10  
Wages Per Employee in the Textile Sector

(Th. Rupiahs)

Years	Textile (321)	Garments (322)	All textile (321+322)	Non-oil manufacturing
1980	334.9	322.6	334.1	463.1
1981	421.3	400.0	419.6	565.2
1982	476.2	502.1	478.6	705.8
1983	561.5	582.2	563.9	822.5
1984	608.5	700.3	620.4	902.2
1985	699.1	740.2	706.8	1022.6
1986	766.7	781.0	769.2	1124.4
1987	815.1	886.1	829.0	1226.8
1988	949.5	929.6	944.9	1382.3
1989	1051.6	1072.3	1056.6	1531.3

Source: Calculated from Industrial Statistics Yearbooks.

Indonesia's wages in the textile sector are very low by international standards and also as compared with the other non-oil manufacturing industries (see Tables 10 and 12). From table 10, it can be seen that the average wage per employee in the textile sector is significantly less than that in the non-oil manufacturing sector. However, it should be noted that textile sector wages grew faster than wages in the other activities especially agriculture (Chris Manning, 1995). During 1980-89, the growth rate in real wages in the textile sector as a whole was less than that in the non-oil manufacturing sector; however, it grew rapidly to 4.6% per annum over the same period (Table 11).

Table 11  
Rate of Annual Growth In Real Wage Per Employee

(Percentages)

Years	Textiles	Garments	All textile sector	Non-oil manufac.
1980-85	5.6	7.6	5.9	6.8
1985-89	3.1	2.2	3.0	3.0
1980-89	4.5	5.2	4.6	5.1

Source: Calculated from Table A4, Table 4 and Table 6.

In spite of the rise in real wages, Indonesia is the most advantageous country with respect to direct wage cost per operator hour and also total cost if we exclude China, which stands at par with it in textiles, compared with other countries. Total cost in the garments subsector is also at the minimum

level for Indonesia (0.18) (Table 12). China, India and Pakistan are strong competitors with respect to cost per operator hour in textiles and garments.

Table 12  
Costs per Operator Hour in the Textile Sector, 1991

Country	Textiles		Garments
	Total cost *	Direct wage cost	Total cost
US	10.3	8.05	6.77
W. Germany	17.0	11.00	14.81
Italy	17.3	8.51	13.50
UK	10.2	8.14	7.99
Mexico			1.17
Brazil	1.5	0.96	0.76
China	0.3	0.25	0.24
Hong Kong	3.4	2.92	3.39
India	0.6	0.38	0.25
<b>Indonesia</b>	<b>0.3</b>	<b>0.21</b>	<b>0.18</b>
S. Korea	2.6	2.61	2.75
Malaysia	1.0	0.59	0.62
Pakistan	0.4	0.24	0.24
Philippines	0.7	0.52	0.46
Singapore	3.2	2.58	2.72
Sri Lanka	0.4	0.34	0.39
Taiwan	5.0	3.78	3.74
Thailand	0.9	0.77	0.59
Japan	16.4	9.40	7.44

Source: Lynden Moore, 1995.

\* Total cost includes social security and health insurance payments.

### 2.2.2. Investment

The series of reforms adopted since 1985 also introduced new regulations on foreign investment allowing foreign ownership of up to 90% of export-oriented sectors' investment. Furthermore, they allowed the usage of export credits with low interest rates, and foreign investors were given the right to manage domestic distribution if they were in a joint-venture with 75% or more Indonesian equity (*Indonesian Quarterly*, 1989).

These reforms generally led a to rise in the share of export-oriented foreign investment as a percentage of total foreign investment from 40% in

1986 to 64% in 1988. Also, the share of domestic export-oriented investment in total domestic investment increased from 54% in 1986 to 74% in 1988 (*BIES*, April 1989).

Approved foreign investment was \$11.6m in 1983, but it increased rapidly and reached \$1,094.2m in 1990, representing 13.7% of total approved investments and rising from 9.2% in 1983. On the other hand, approved domestic investment amounted to \$6,843.9m in 1990, representing 86.2% (Table 13). Although this is an improvement in the investment area in the textile sector, it should be pointed out that at the end of 1990 only 42.4% of domestic and 59.5% of foreign approved investment projects--in terms of value--were implemented (*JTN*, June 1991).

Table 13  
Approved Foreign and Domestic Investment in Textile industries

Years	Foreign	Domestic	Total
1983	11.6	114.5	126.1
1984	1.2	122.8	123.0
1985	6.8	87.3	94.1
1986	9.0	204.7	213.7
1987	117.9	784.0	901.9
1988	213.2	1369.7	1582.9
1989	581.1	2012.8	2593.9
1990	1094.2	6843.9	7938.1

Source: Indonesian Trade Policy Report, World Bank, 1991.

Indonesian Financial Statistics, Bank Indonesia, November 1991.

From January 1967 to April 1991, the textile sector had the largest amount of total authorised export-oriented foreign investment, accounting for US\$3.52 billion. However, the total realised foreign investment in the textile sector was only US\$618.9 m over the same period, which actually reflects the significant gap between approved and realised investment (*BIES*, December 1991). According to some reports by the World Bank, realisation of investment is lagging behind approvals in almost all sectors of the economy. This situation is generally attributed to a number of factors including bureaucratic inefficiency, weak corporate legal system, poor infrastructure, costly transportation, as well as the attitude towards and calculations on foreign investments.

### **3. THE TRADE STRUCTURE OF THE INDONESIAN TEXTILE SECTOR**

#### **3.1. Trade Performance of the Textile Sector (1980-1993)**

Until the early 1980s, the Indonesian textile sector was almost wholly inward-looking. Thereafter, a significant transformation occurred. Exports first began to increase after the November 1978 devaluation, but the beneficial effects of devaluation were quickly eroded by the appreciation of the Rupiah resulting from the second oil price increase (1980). More sustained growth occurred after 1982, in response to the April 1983 devaluation and to various trade policy reforms. The growth of exports accelerated again after 1986 following a further devaluation and implementation of trade reform measures designed to increase producers' access to imported inputs at world prices.

The sudden increase in oil revenues due to the second oil boom in 1980 decreased the momentum to boost non-oil exports. Following the trade reform in April 1985, reform packages were implemented through changing custom procedures and removing most of the restrictions on trade. These policies were intended to stimulate non-oil exports and to improve the international competitiveness of trade.

These factors resulted in a rapid increase in Indonesia's textile exports to the international markets. The annual growth (at current US\$) of the textile sector's exports reached 32.0% in 1980-85 and a higher level of 38.3% in 1985-90. It continued to rise rapidly by 33.3% according to the latest available data for the five-year period of 1988-1993 (calculated from Table 14). During the period 1980-92, the share of the textile sector in total Indonesian exports experienced a very big expansion from 0.7% in 1980 to 17.9% in 1992. Then it decreased to 16.9% in 1993 (Table A5).

Indonesia's textile product exports jumped to US\$6,089m in 1992, increasing from US\$144m in 1980, and up almost 50% over the previous year. They further increased by a little margin in 1993 reaching US\$6,215m (Table 14). In addition, the share of the textile sector in total non-oil manufacturing exports rose significantly from 12.7% in 1980 to 31.5% in 1993 (Table 15). With this increasing trend in the export growth, Indonesia

is expected to reach the level of Korea and Taiwan where the value of exports is more than US\$10 billion per year.

Table 14  
Trade of Textile Products

(Thousand US\$)

	Exports				Imports		
	Yarn & fibres	Fabrics	Garments	All textile sector	Yarn & Fibres	Fabrics	All textile sector
	651	65-651	84		651+266	65-651	
1980		45,836	98,274	144,110	135,025	126,195	261,220
1981		36,243	95,259	131,502	133,441	163,592	297,033
1982		43,530	116,938	160,468	141,727	131,455	273,182
1983		120,434	157,229	277,663	115,120	92,830	207,950
1984	16,992	183,291	295,924	496,207	116,394	79,812	196,206
1985	12,633	227,199	339,122	578,954	102,479	74,698	177,177
1986	19,946	286,856	521,926	828,728	159,838	88,193	248,031
1987	84,100	384,602	595,806	1,064,508	176,697	113,594	290,291
1988	109,251	571,133	796,670	1,477,054	201,428	168,728	370,156
1989	111,163	748,436	1,153,244	2,012,843	299,598	294,064	593,662
1990	109,482	1,154,576	1,666,017	2,930,075	415,086	457,867	872,953
1991	203,678	1,588,390	2,306,192	4,098,260	388,631	618,043	1,006,674
1992	344,136	2,525,489	3,219,413	6,089,038	483,343	792,791	1,276,134
1993	389,953	2,266,281	3,558,912	6,215,146	457,496	849,010	1,306,506

Source : International Trade Statistics Yearbooks, 1984, 1988, 1989, 1992, 1993, UN.

According to the SITC code system: 65 = Textile yarn, fabrics, etc.; 651 = Textile yarn; 266 = Synthetic fibres; Yarn & fibres = 651+266; Fabrics = 65-651; Garments = 84.

The most labour-intensive subsector, garments, experienced the largest exports among the three subsectors, and its exports have been the major source of its growth. For the other subsectors--spinning/yarn and fibre and weaving/fabric--as a whole, domestic demand became a more significant source of their growth during the 1980s. Garment exports amounted to US\$3,559m in 1993 rising from US\$98m in 1980 (Table 14). The share of garments in total textile exports represents more than 50% during 1980-1993. Table 15 also shows that garments have a significant share in total non-oil manufacturing exports (18% in 1993).

The export of yarn and fibres, the most capital-intensive activity, represents a 6.3% share in total textile exports in 1993, which is not very significant compared with fabrics and garments. Fabrics are growing as an important export item representing over 11% in total non-oil manufacturing exports since 1990 (Table 15). The value of fabrics exports also increased

impressively from US\$45.8m in 1980 to US\$2266.3m in 1993. Fabric exports take a considerable place in total textile exports, after garments, representing 36.5% in 1993.

Table 15  
Share of Textile Products & Garments in Total Non-Oil  
Manufactured Exports

(Percentages)

Years	Yarn & fibres	Fabrics	Garments	Textile sector including garments
1980		4.0	8.6	12.7
1981		2.7	7.2	10.0
1982		3.0	8.2	11.2
1983		5.9	7.7	13.5
1984	0.7	7.2	11.6	19.4
1985	0.5	8.2	12.2	20.8
1986	0.6	8.7	15.7	25.0
1987	1.8	8.1	12.6	22.5
1988	1.7	8.7	12.1	22.5
1989	1.3	8.9	13.8	24.0
1990	1.0	11.0	15.9	28.0
1991	1.5	11.9	17.2	30.6
1992	2.0	14.3	18.3	34.5
1993	2.0	11.5	18.0	31.5

Source: Calculated from International Trade Statistics, UN, 1984, 1988-89, 1992-93.

As regards textile imports over the same period, Indonesia did not import garments or the figures were negligible. Starting from 1982 and until 1989, imports of yarn and fibres exceeded those of fabrics. The total of yarn and fibres and fabrics imports showed a decreasing trend over the period 1981-1985, as the import-substitution period was characterised by more restrictive trade rules and the imposition of non-tariff barriers. Then, they increased progressively up to US\$1,306.5m in 1993 (Table 14). Currently, the fabrics subsector represents the largest imports with a share of 65% in total textile imports in 1993. The same trend can more or less be seen from table 16, where the share of textile products in total non-oil manufacturing imports decreased until 1985, and then grew up to 5.9% in 1993.

Table 16  
Share of Textile Products in Total Non-Oil  
Manufactured Imports

(Percentages)

	Yarn & fibres	Fabrics	Total Textile products
1980	1.9	1.7	3.6
1981	1.4	1.8	3.2
1982	1.3	1.2	2.4
1983	1.1	0.9	2.0
1984	1.2	0.8	2.1
1985	1.4	1.0	2.3
1986	2.0	1.1	3.1
1987	1.9	1.2	3.1
1988	2.0	1.7	3.6
1989	2.4	2.4	4.8
1990	2.4	2.7	5.1
1991	1.9	3.1	5.0
1992	2.3	3.8	6.0
1993	2.1	3.8	5.9

Source: Calculated from International Trade Statistics, UN, 1984, 1988-89, 1992-93.

### 3.2. Indonesian Textiles and Garments Exports in International Context

An important feature of Indonesian textiles and garments that can partly explain why Indonesia's exports are small from an international perspective is their late arrival to the international context. Because of its rich natural resources, Indonesia's textile and garments exports represented a smaller share in its total exports (0.7% in 1980 and 17.9% in 1992) compared with its East Asian neighbours (World Bank, 1994).

Table 17 indicates the three major subsectors of textile and some of the main exporters of these subsectors with respect to three big markets--the United States, Japan and the EC--for only 1988 due to data limitation for other years. Indonesia remained far behind China and Taiwan in 1988. In these three markets, Thailand's exports were generally larger than those of Indonesia excluding the fabric and garment subsectors in the Japanese and US markets, respectively. In the yarn and fibres subsector, Indonesia ranked as 14th supplier in the Japanese market, while it ranked lower in the US and

the EC markets. With respect to the fabric subsector, Indonesia was one of the top ten suppliers in only the Japanese market, and it had a 1% share of the United States market in 1988. With respect to the garment subsector, the most important market was the US for Indonesia, which had a 1.9% share of this market in 1988 (Table 17).

Table 17  
Top Three Export Markets of Indonesia, 1988  
(Million US dollars)

	Market		
	USA	JAPAN	EC
<b>Export and economy</b>			
<b>Yarn and Fibres</b>			
Total	902	1310	8454
China	25	194	15
Taiwan	18	143	93
Thailand	33	5	9
Indonesia	1	9	6
<i>Rank of Indonesia*</i>	<i>43</i>	<i>14</i>	<i>40</i>
<b>Fabrics</b>			
Total	5640	2810	16992
China	580	833	327
Taiwan	434	210	241
Thailand	84	36	55
Indonesia	59	86	48
<i>Rank of Indonesia*</i>	<i>20</i>	<i>7</i>	<i>33</i>
<b>Garments</b>			
Total	23080	6749	26557
China	2216	1461	892
Taiwan	3060	717	620
Thailand	337	113	302
Indonesia	433	12	150
<i>Rank of Indonesia*</i>	<i>12</i>	<i>16</i>	<i>32</i>

Source: World Bank, 1994.

\* The figures refer to Indonesia's ranking among all suppliers.

Indonesia has a 2.4% share in total world exports of both textiles and clothing in 1992, rising from 0.1 and 0.2%, respectively, in 1980 (Table. 18). Although she showed a rapid increase in total textile exports during 1980-1992, its share is still less than that of some of the other textile exporting NIEs\*. The members of the European Union and the US are the major

\* Newly Industrialised Economies include Hong Kong, Singapore, South Korea, Taiwan (Province of China).

markets for the overall textile sector in the world. In the garment subsector, the US is the largest market all over the world, but yarn and fibre and fabric markets are much more diverse.

Table 18  
Leading Exporters and Importers of Textiles and Clothing

(Value c.i.f. in billions of US dollars; share in percent)

	Textiles			Clothing		
	Value	Share in world imports/exports		Value	Share in world imports/exports	
	1992	1980	1992	1992	1980	1992
<b>Exporters</b>						
Germany	13.9	11.4	11.9	8.4	7.1	6.4
Italy	10.2	7.6	8.7	12.2	11.3	9.4
France	6.3	6.2	5.4	5.3	5.7	4.0
US	5.9	6.8	5.0	4.2	3.1	3.2
UK	4.3	5.7	3.7	3.7	4.6	2.8
Netherlands	3.0	4.1	2.5	2.7	2.2	2.1
Hong Kong	11.0	-	-	20.1	-	-
Domestic	2.2	1.7	1.9	10.0	11.5	7.6
Re-exports	8.8	-	-	10.1	-	-
China	8.6	4.6	7.3	16.7	4.0	12.8
Korea	8.2	4.0	7.0	6.8	7.3	5.2
Taiwan	7.6	3.2	6.5	4.1	6.0	3.1
<b>Indonesia</b>	<b>2.8</b>	<b>0.1</b>	<b>2.4</b>	<b>3.2</b>	<b>0.2</b>	<b>2.4</b>
<b>Importers</b>						
Germany	12.4	11.9	10.1	24.8	19.5	18.1
US	8.2	4.4	6.7	33.0	16.3	24.0
France	7.5	7.1	6.1	9.8	6.2	7.1
UK	6.9	6.2	5.7	7.9	6.7	5.7
Italy	5.6	4.5	4.6	4.3	1.9	3.1
Japan	4.2	2.9	3.4	11.2	3.6	8.1
Netherlands	3.6	3.9	3.0	5.8	6.7	4.2
Belg.-Lux.	3.6	4.0	2.9	4.2	4.3	3.0
Spain	2.5	0.6	2.0	3.2	0.4	2.3
Canada	2.5	2.2	2.0	2.4	1.7	1.8
Hong Kong	13.1	-	-	10.3	-	-
Retained	4.3	3.6	3.5	0.3	0.9	0.2
Imports						

Source: UNCTAD/ GATT, 1994.

Indonesia first experienced export quotas on textiles and garments in 1976 when Australia imposed global quotas on its garment imports. Indonesia became a signatory to the Multi-Fibre Arrangement (MFA) in

1979, but quotas became a serious issue only in the mid-1980s. Prior to this date, the quotas were rarely fully exploited. By the end of the 1980s, the MFA had become an important constraint on export growth, as Indonesia had become internationally competitive in textile products--basically lower priced garments--and as quota ceilings had become binding (Hal Hill, 1991).

Table 19 shows the difference in value of Indonesia's exports between the quota and non-quota areas. The EC is Indonesia's largest market, occupying 60.1% (US\$1625m out of US\$2704m) of the quota area total in 1992. Exports to the US market amounted to US\$998m. Before 1990, the United States was the largest market for Indonesian total textile exports; however, it became second after the EC market since this year.

Table 19  
Indonesia's Textile Products Exports to Quota and Non-Quota Markets,  
1988-1992

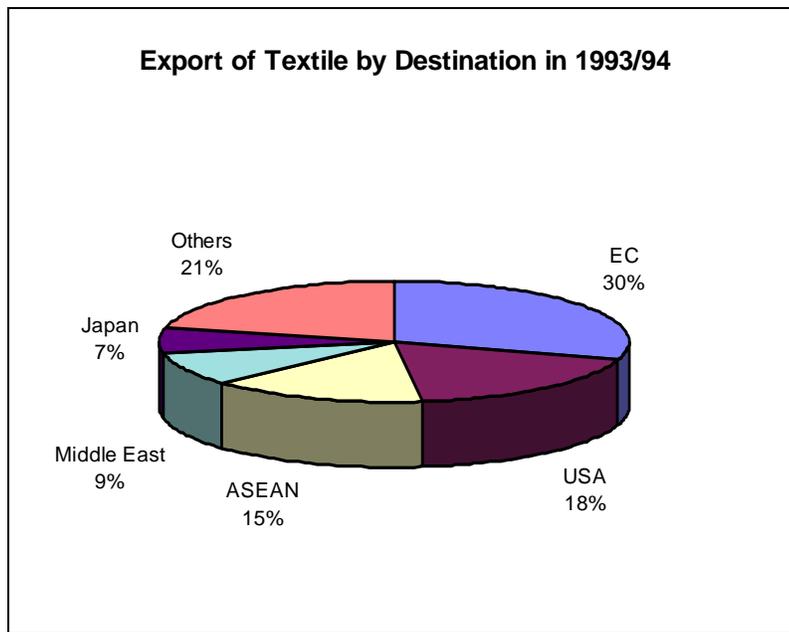
(Thousand US\$)

Export destination	1988	1989	1990	1991	1992
I. Quota destination:	907,662	1,254,951	1,707,958	2,056,093	2,703,705
1. USA	472,163	640,893	708,226	671,905	997,857
2. ECU.	379,994	541,469	915,321	1,294,637	1,624,668
3. Canada	33,555	50,215	57,182	58,468	75,783
4. Sweden	17,833	18,196	21,037	25,162	
5. Norway	4,117	4,178	6,192	5,921	5,397
II. Non-quota destination	520,340	777,319	1,209,525	2,019,260	3,438,190
1. Sweden					23,640
2. ASEAN	176,671	288,517	497,819	819,865	1,435,423
3. Other Asian countries	133,346	172,768	235,363	368,604	541,473
4. Australia	31,519	48,920	60,155	70,541	88,727
5. Middle East	94,917	169,442	279,905	480,249	717,690
6. Other countries	83,887	97,672	136,283	280,001	631,237
Total (I + II)	1,428,002	2,032,270	2,917,483	4,075,353	6,141,895
% of quota markets	63.6	61.8	58.5	50.5	44.0
% of non-quota markets	36.4	38.3	41.5	49.6	56.0

Source: JTN October, 1993.

Note: The data in this table is actually different from the data taken from International Trade Statistics Yearbooks, UN. However, the purpose is to give a detailed information about export destinations.

On the other hand, exports to non-quota areas amounted to US\$3,438m in 1992. The ASEAN\* countries stand as the biggest non-quota market amounting to US\$1435m and representing 41.7% in 1992 (Table 19). Such a large expansion of exports in 1992 is attributed to the increase in the number of garment factories through foreign investments (*JTN* October, 1993). Following the ASEAN countries, the Middle East market is one of the leading markets for Indonesia. Furthermore, Indonesia can be considered somewhat successful in penetrating the non-quota areas in recent years due to its successful trade policy whose aim was to diversify the markets and penetrate especially the non-quota areas.

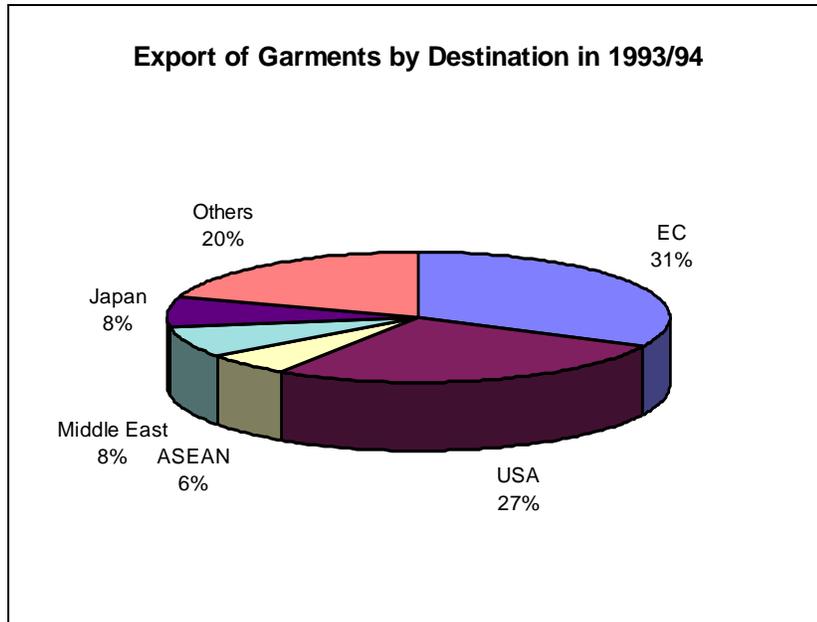


The United States and European Community countries remained as the major markets for Indonesian exports of textiles and garments. However, during 1993-1994, exports of these products continued to encounter protective measures. This situation was worsened by increasing competition--especially from Mexico--following the adoption of the NAFTA agreement

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\* The Association of South-East Asian Nations (ASEAN) is comprised of six members: Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand.

in January 1, 1994. The European Union imports 30% of Indonesian textile exports. The USA is the second largest market both for textiles and garments in 1993/94. The ASEAN countries, the Middle East and Japan are also important markets for Indonesian textiles and garments exports.



Although textile sector products remained as one of the leading sources of foreign exchange, accounting for 25.4% of total manufactured exports in 1994-95, they fell on hard times in these years (Bank Indonesia, 1994/95). Exports of textiles and garments stagnated in 1993. This is attributed to difficult conditions in some of Indonesia's major export markets, particularly in Europe and the US, and to increased competition from such lower-cost suppliers as India and China. Trade data for the first nine months of 1994 indicate a decline of almost 9% in export earnings from US\$4.7 billion in January-September 1993 to US\$4.3 billion in the same period of 1994 (EIU, 1st quarter 1995).

#### **4. FUTURE PROSPECTS OF THE INDONESIAN TEXTILE SECTOR AND IMPACT OF URUGUAY ROUND**

The textile sector plays an important role in the Indonesian economy both in terms of the huge place it occupies in the manufacturing sector and in terms of export earnings, although its share in world textile exports is not very significant compared with that of other Asian textile exporting countries. The EU and the US continued to impose their protective quota and non-quota measures in the 1990s with a view to protecting their textile industries. The importance of the adverse effects caused by those measures on the Indonesian textile and clothing exports during the 1990s can better be gauged when it is recalled that export has been a significant stimulus to the sector's growth since 1985.

Domestic costs rise as the price of raw materials increases and economic growth leads to increased demands for improved pay and working conditions. Factory closures have occurred in the textile sector. On the other hand, competition increases from the other Asian producers through low-cost and high-quality products in foreign markets.

Faced with these prospects, a widespread restructuring of the industry is required urgently in the coming years, in the direction of a shift away from low-quality mass production to an increased concentration on high-quality production. This restructuring of the sector requires a stable macroeconomic environment and continuation of the trade reform process, which basically aims to increase competitiveness. Also, there is a need for a more vigorous promotion of the sector to produce better quality and competitive products.

Efforts to promote textile exports to other regions have been pursued by arranging promotional campaigns in the regions with good prospects, such as the Middle East. Following the signing of the GATT world trade accord under the Uruguay Round in December 1993, the MFA which governs quotas for textile exports will be phased out. This development may be seen as an opportunity as well as a challenge for Indonesian textile exporters/producers to expand their exports. In this context, efforts to improve efficiency as well as the quality of textile products should be strengthened to make the products more competitive.

An important factor in the outlook for textiles is the newly established WTO, which entered into force in January 1995 and will phase out the previous MFA. Future world trade in textiles will come under the regulation of the Agreement on Textiles and Clothing (ATC) produced in the Final Act of the Uruguay Round. This stipulates that all bilateral arrangements will be replaced by multilateral trade arrangements. MFA regulations such as the basic quotas and categories effective until December 31, 1994 were adopted for base year figures of January 1, 1995. These quotas will then be phased out over a ten-year period ending 2005. This agreement is both an opportunity for and a challenge to textile and clothing exporters bent on increasing their exports in the future.

The results of the Uruguay Round, after the seven rounds of multilateral trade negotiations, were set out in the Final Act signed by Trade Ministers in Morocco in April 1994. It will govern trading relations well into the 21st century. Textiles and clothing had to be treated separately from the industrial goods in general, since the MFA covered a predominant portion of the trade in these commodities outside GATT through the application of quotas. The MFA, which existed for two decades, will be removed by July 1, 2005.

According to the rules of MFA, importing and exporting countries were to negotiate their bilateral quotas. However, these rules and other restrictions will be completely phased out over a ten-year period from the implementation of the ATC. The phasing out of these quotas will take place in four steps. Over the transition period, the growth of the remaining quotas will be fixed at a higher level than that applied earlier. From the start, MFA-type restraints must be removed on 16% of the total volume of imports. After three years, an additional 17% must be lifted and after another four years 18% more will be brought under normal WTO rules. As a result, after the first seven years, 51% of the volume of imports will be integrated into the WTO rules. The remaining 49 per cent will be abolished at the end of the 10-year period (Table 20).

Table 20  
Four Steps to Phase out MFA

	Step 1 From start	Step 2 After 3 years	Step 3 4 years later	Step 4 End of 10 years
% of trade to be brought under normal WTO rules	16	17	18	49
% increase in growth				

rates of remaining quotas	16	25	27	-
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Source: World Bank, 1995

According to a research carried out by UNCTAD for Indonesia, quota enlargement by the application of growth factors will be 131710 tons in 2004, increasing from 65976 in 1994 in European Union. In the United States, it will be 1,038 square metres in 2004 up from 444 in 1994. In Canada, it will be 57 square metres in 2004 rising from 24. These increases in textile products' quotas will eventually result in a rise in the exports of Indonesia.

The removal of the MFA by integrating the textiles and clothing trade into the GATT will eventually result in new export opportunities for many developing and industrial country producers. According to a research by GATT, the revenues of developing economies as a group from exports of textiles and clothing are likely to rise when the MFA is phased out. Developing countries are expected to gain about one third of world income, or nearly US\$80 billion annually as of 2005, with most of the gain attributable to the abolition of MFA.

The Minister of Trade of Indonesia signed the Uruguay Round Final Act in Marrakesh in April 1994. According to the Ministry of Trade of Indonesia, the economy will benefit from the trade liberalisation of other GATT members resulting from the Round. Large export opportunities for Indonesian firms will result from Uruguay Round liberalisation, especially in the two markets of North America and Western Europe, where Indonesian exports of manufactured products are estimated to increase by as much as 65% and 69%, respectively. The increase in the textile sector's exports is projected to be 34% for Indonesia by the year 2005. The ATC rules will expand access for Indonesian exporters to all major markets. The continuing trade liberalisation policies of Indonesia will also be in harmony with the Agreement.

The extent to which a country will benefit will depend not only upon the reduction of barriers in the markets of its trading partners but upon its own liberalisation measures as well. Overall, trade expansion will involve an increase in imports as well as exports. Liberalisation of imports will make it possible to have cheaper inputs for textile producers/exporters.

If Indonesia is able to increase its share of the world export market between now and the year 2005 through deregulation and export promotion policies, then the quantitative benefits in additional trade and income that will be gained from the Uruguay Round package of trade liberalisation will be correspondingly larger.

## 5. CONCLUSION

The textile sector is one of the leading non-oil manufacturing sectors employing 23.3% of the total employees in non-oil manufacturing and constituting 5% of GDP. It has been also one of the most important sources of foreign exchange since 1980, thanks to the trade reform packages. The textile sector grew significantly during 1980-85 and more rapidly in 1985-89.

Weaving is the oldest among the three subsectors; the spinning and garment industries have developed subsequently. The spinning and weaving industries are dominant in terms of production and employment levels. These two subsectors have 85% of total textile sector production and 75% of total employees in the textile sector. However, the garment industry provides the largest export revenue (more than 50%).

Although the textile sector is more labour-intensive than the non-oil manufacturing average, real productivity in this sector increased more than in non-oil manufacturing due to technological development, the emergence of the synthetic fibre sector and improved efficiency in the textile sector. Furthermore, since the annual growth rate of employment realised is lower than that of real value added for the whole textile sector, real productivity could rise over the period 1980-89.

In spite of the fact that approved investment in the textile sector increased significantly through liberalisation policies and some new regulations, lagging in investment realisation is a serious problem in the Indonesian economy.

Until the early 1980s, the Indonesian textile sector was almost wholly inward-looking. Then a series of trade reform packages resulted in acceleration in exports especially since 1985. The basic aim of these reforms was to stimulate non-oil exports and to improve international competitiveness. The share of the textile sector in total non-oil

manufacturing exports rose significantly from 12.7% in 1980 to 31.5% in 1993. Garment is the biggest foreign exchange earner in all three textile subsectors. Following the garment industry, fabrics are the second important foreign exchange source in the textile sector. Spinning exports are very negligible, however.

Compared with its East Asian competitors, Indonesia's textile and garment exports represented a smaller share in total own exports. This is due to the relative weight of its natural resources. Moreover, Indonesia's exports of textiles viewed from an international perspective are small, although they showed a rapid rise during 1980-1992.

During 1993-1994, exports of textiles and garments encountered some restrictions within the framework of MFA and other schemes imposed by the developed countries, especially the EC. These protective measures put constraints on the rapid expansion of Indonesian textile exports. Furthermore, Indonesia's cost advantage resulting from low wage levels in the textile sector deteriorated in 1993-1994 compared with that of China and India, although she had the best position in this area in 1991.

Until 1990, the US was the largest market for Indonesian garment exports. Then the EU became the most important market for all three subsectors of textiles. To be able to improve its position in the international markets, where increasing competitiveness and trade liberalisation have occurred, Indonesia should improve the quality and diversification of her products, and also expand into non-quota markets.

The ATC under the Uruguay Round will phase out the MFA which governs quotas for textile exports by 2005. This development may be considered as an opportunity as well as a challenge for Indonesian textile exporters. In such a new environment with cut-throat competition especially from low cost countries, Indonesia has to develop its competitiveness so that her export-oriented textile sector can survive.

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## APPENDIX

Table A1  
Real Production Values in Textile Sector \*

(Million Rupiahs at 1980 prices)

Year	Textile (321)	Garments (322)	All textile sector (321+322)
1976	514,802.6	5,427.6	520,230.2
1980	841,000.0	29,000.0	870,000.0
1981	836,153.2	43,633.1	879,786.3
1982	818,403.9	64,332.0	882,735.9
1983	828,966.5	83,697.0	912,663.5
1984	1,094,265.0	111,404.1	1,205,669.1
1985	1,501,886.8	218,239.0	1,720,125.8
1986	1,796,670.6	256,242.6	2,052,913.2
1987	2,116,430.9	325,897.7	2,442,328.6
1988	2,502,014.1	440,080.0	2,942,094.1
1989	3,385,052.0	596,026.5	3,981,078.5

Source: Industrial Statistics Yearbooks, UN, various issues.

\* Production has been deflated by the Consumer Price Index series.

Table A2  
Real Value Added in Textile Sector \*

(Million Rupiahs at 1980 prices)

Year	Textile (321)	Garments (322)	All textile sector (321+322)
1976	160,855.3	1,644.7	162,500.0
1980	263,000.0	9,000.0	272,000.0
1981	256,455.9	14,247.6	270,703.5
1982	276,058.6	26,058.6	302,117.2
1983	254,002.9	32,023.3	286,026.2
1984	373,104.8	46,802.9	419,907.7
1985	479,874.2	73,584.9	553,459.1
1986	622,473.2	96,313.9	718,787.1
1987	605,549.5	96,300.3	701,849.8
1988	624,874.1	135,951.7	760,825.8
1989	1,002,365.2	201,986.8	1,204,352.0

Source: Industrial Statistics Yearbooks, UN, various issues.

\* Value added has been deflated by the Consumer Price Index series.

Table A3  
Output and Employment in Textile Sector V/N as % of all Non-oil  
Manufacturing

Years	Textile * (321)	Garments (322)	All textile sector (321+322)	Non-oil manufacturing sector
1980	51.8	26.3	50.2	100.0
1981	45.9	29.6	44.6	100.0
1982	52.3	47.7	51.9	100.0
1983	47.1	45.6	46.9	100.0
1984	63.2	52.9	61.9	100.0
1985	59.8	39.4	56.0	100.0
1986	68.5	49.9	65.2	100.0
1987	59.6	38.9	55.6	100.0
1988	57.1	41.1	53.4	100.0
1989	71.2	44.1	64.5	100.0
Real growth rate per annum (%) (1980-89)	9.2	11.7	8.4	5.4

Source: Calculated from Table 7.

\*Textile = 321 including spinning, weaving and other textile products excluding garments.

V= value added N= employment

Table A4  
Real Wages In Textile Sector

(Million Rupiahs)

Year	Textile (321)	Garments (322)	All textile sector (321+322)	Non-oil manufacturing sector
1980	77,000	5,000	82,000	446,000
1981	87,266	7,124	94,390	505,788
1982	89,577	9,772	99,349	609,121
1983	91,703	12,373	104,076	665,939
1984	95,583	16,480	112,063	707,976
1985	130,189	32,075	162,264	1,075,472
1986	140,309	30,321	170,630	1,122,473
1987	143,634	38,085	181,719	1,186,072
1988	168,681	49,849	218,530	1,427,996
1989	196,783	65,279	262,062	1,628,193

Source: Industrial Statistics Yearbooks, UN, various issues.

\* Wages have been deflated by the Consumer Price Index series.

Table A5  
Share of Textile Products in Total Exports

(Percentages)

Year	Yarn & fibres	Fabrics	Garments	All textile sector	Total exports (Th. US\$)
1980		0.2	0.4	0.7	21,908,890
1981		0.2	0.4	0.6	22,260,345
1982		0.2	0.5	0.7	22,293,339
1983		0.6	0.7	1.3	21,145,854
1984	0.1	0.8	1.4	2.3	21,887,765
1985	0.1	1.2	1.8	3.1	18,586,712
1986	0.1	1.9	3.5	5.6	14,805,041
1987	0.5	2.2	3.5	6.2	17,135,589
1988	0.6	3.0	4.1	7.7	19,218,502
1989	0.5	3.4	5.2	9.1	22,028,874
1990	0.4	4.5	6.5	11.4	25,675,331
1991	0.7	5.5	7.9	14.1	29,142,370
1992	1.0	7.4	9.5	17.9	33,966,997
1993	1.1	6.2	9.7	16.9	36,822,772

Table A6  
Textile Exports of Indonesia by Destinations, 1993

(Million US\$)

Destination	Yarn & fibres 651	Fabrics 65-651	Garments 84	Total textile products
World	389.7	2246.3	3390.7	6026.7
Asia	148.9	993.1	328.6	1470.6
Canada	4.9	22.8	56.7	84.4
USA	15.2	108.3	916.8	1040.3
Japan	33.9	54.1	295.7	383.7
France	3.1	23.6	161.1	187.8
Germany	15.4	66.1	333.5	415.0
Italy	21.4	44.0	54.8	120.2
UK	15.9	146.8	259.3	422.0

Source: Commodity Trade Statistics, UN, 1993.

Table A7  
Production of Textile Products

Year	Fabric (million metres)	Weaving yarn (thousand bales)
1980/81	2027.3	1184.0
1981/82	2094.0	1233.0
1982/83	1708.9	1370.0
1983/84	2347.2	1662.0
1984/85	2401.6	1781.6
1985/86	2498.7	1877.2
1986/87	2761.5	2147.8
1987/88	2925.6	2275.7
1988/89	3503.0	2712.3
1989/90	4493.6	3405.0
1990/91	5028.2	3572.7
1991/92	5339.9	4140.8
1992/93	5564.0	4474.0
1993/94	6532.1	5382.2
1994/95*	6800.0	5662.1

Source: Bank Indonesia.

\* Provisional.