# TRADE PERFORMANCE OF THE INDONESIAN TEXTILE INDUSTRY (1980-1993)

Muhammad Aslam Memon

## INTRODUCTION

The industrial sector plays an important role in the economy of country. The countries that solely relied on agriculture have remained poor and underdeveloped where as those nations which gave importance to industrial development achieved high rate of development. Textile industry in Indonesia is the most important sector of the economy. It comprises of three sub-industries: spinning / fibres, weaving/fabrics, and garments. A distinctive feature 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).

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.

## HISTORICAL BACKGROUND OF THE INDONESIAN TEXTILE INDUSTRY

Weaving is the oldest established industry of the three sub-sectors. The factory-weaving sector emerged in the 1920s following the introduction of upright handlooms. The number of these handlooms rose rapidly from about 257 in 1930 to some 44000 in 1940. Over the same period, the

ASIA – PACIFIC 113

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 sub-sector 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 nationalized. 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 handlooms. The handloom sector began to decline rapidly and handlooms were replaced with large integrated textile mills operating on a highly mechanized technology. The machinery capacity of the textile sector increased significantly, weaving looms, garment-making 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 sub-sector 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 realized 13.1% annually in 1976-80. Then the textile industry continued to expand as real production increased by 22.5% during 1985-1989. (Industrial Statistics Yearbook 1991).

The spinning/fibre industries are much more recent in the 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 ships 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.

#### POSITION OF THE TEXTILE INDUSTRY

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 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 (Introduction Statistics Yearbook 1991). Moreover, the textile sector has a significant share in total non-oil manufacturing exports, representing 34.5% in 1992 is in from 12.7% in 1980 (Table 3). 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) in the textile sectors, which have 23.3% out of the total number of employees in the non-oil manufacturing sector in 1989 (Industrial Statistics Yearbook 1988 and 1991).

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 (Industrial Statistics Yearbook 1991).

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. A similar trend is observed for the value-added declined during 1980-1985, which was an import substitution period, then it increased more rapidly by 23.3% per annum during 1985-89 (Industrial Statistics Yearbook 1991).

## 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 against 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 continues to rise rapidly by 33.3% according to the five-year period of 1988-1993 (calculated from Table 3). 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%. Then it decreased to 16.9% in 1993 (Table 2).

Table – 2 Share of Textile Products in Total Exports

(Percentage)

					(Percentage)
Year	Yarn & Fibres	Fabrics	Garments	All textile sector	Total export (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

Source: Commodity Trade Statistics, 1993, United Nations

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 3). 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 4). 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 the US\$10 billion per year.

Table 3
Trade of Textile Products

(Thousand US\$)

		EXP	ORTS	]	rs		
Year	Yarn & Fibres	Fabrics	Garments	All textile sector	Yarn & Fibres	Fabrics	All textile sector
4	651	65-651	84	651+266		65-651	7
1980		45836	98274	144110	135025	126195	261220
1981		36243	95259	131502	133441	163592	297033
1982		43530	116938	160468	141727	131455	373182
1983		120434	157229	277663	115120	92830	207950
1984	16992	183291	295924	496207	116394	79812	196206
1985	12633	227199	339,122	578954	102479	74698	177177
1986	19946	286856	521926	828728	159838	88193	248031
1987	84100	384602	595806	1064508	176697	113594	290291
1988	109251	571133	796670	1477054	201428	168728	370156
1989	111163	748436	1153244	2930075	299598	294064	593662
1990	109482	1154576	1666017	2930075	415086	457867	872953
1991	203678	1588390	2306192	4098038	388631	618043	1006674
1992	344136	2525489	3219413	6089038	483343	792791	1276134
1993	389953	2266281	3558912	6215146	457496	849010	1306506

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 and Fibres = 651+266: Fabrics = 65-651; Garments = 84

The most labour-intensive sub-sector, garments, experienced the largest exports among the three sub-sectors, and its exports have been the major

source of its growth. For the other sub-sectors-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 3). 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 4). 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.

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 import-substitution period was characterized 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 3). Currently, the fabrics sub-sector 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 5, where the share of textile products in total non-oil manufacturing imports decreased until 1985, and then grew up to 5.9% in 1993

119

Table 4
Share of Textile Products and Garments in Total Non-Oil
Manufactured Exports

Year	Yarn and 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	0.8	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 characterized 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 3). Currently, the fabrics sub-sector 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 5, 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 5 Share of Textile Products in Total Non-Oil Manufactured Imports

Year	Yarn and Fibres	Fabrics	Total Textile Product
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

## SHARE OF INDONESIAN TEXTILE IN WORLD EXPORT

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 6). Although it 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. Newly Industrialized Economics include Hong Kong, Singapore, South Korea, Taiwan. The members of the European Union and the US are the major markets for the over all textile sector in the world. In the garments sub-sectors, the US is the largest market all over the world, but yarn and fibre and fabric markets are much more diverge.

Table 6
Leading Exporters and Importers of Textile 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	
Exporters							
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	-	1=	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	
Indonesia Importers	2.8	0.1	2.4	3.2	0.2	2.4	
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	4.0	2.9	4.2	4.3	3.0
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 Imports	4.3	3.6	3.5	0.3	0.9	0.2

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 internationally competitive textile products — basically lower priced garments and as quota ceilings had become binding (Hal Hill, 1991).

Table 7 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 7 Indonesia's Textile Products Exports to Quota and Non-Quota Markets, 1988-1992

(Thousand US\$)

				(211000	und Oby)
Exporter destination	1988	1989	1990	1991	1992
I. Quota destination:	907662	1254951	1707958	2056093	2703705
<ol> <li>USA</li> <li>ECU</li> <li>Canada</li> <li>Sweden</li> <li>Norway</li> </ol>	472163 379994 33555 17833 4117	541469 50215 18196	708226 915321 57182 21037 6192	671905 1294637 58468 25162 5921	997857 1624668 75783 5,397
II. Non-Quota destination:	520340	777319	1209525	2019260	3438190
<ol> <li>Sweden</li> <li>ASEAN</li> <li>Other Asian         countries</li> <li>Middle East</li> <li>Other countries</li> </ol>	176671 133346 31519 94917 83887	288517 172768 48920 169442 97672	497819 235363 60155 279905 136283	819865 368604 70541 480249 280001	23640 1435423 541473 88727 717690 631237
Total (I+II)	1428002	2032270	2917483	4075353	6141895
% of quota markets % of non-quota markets	63.6 36.4	61.8 38.3	58.5 41.5	50.5 49.6	44.0 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 destination.

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

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 – specially from Mexico – following the adoption of the NAFTA agreement in January 1, 1994. The European Union imports were 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 textile 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 year (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 earning from US\$4.7 billion in January – September 1993 to US\$4.3 billion in the same period of 1994 (EIU, 1<sup>st</sup> Quarter 1995).

## 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, due 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 realized is lower than that of real value added for the whose 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 liberalization polices and some new regulations, lagging in investment realization 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 textile viewed from an international perspective are small, although they showed a rapid rise during 1980-1992.

During 1993-94, 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 1993-94 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 garments exports, then the EU became the most important market for all three subsectors of textiles, to be able it improve its position in the international markets, where increasing competitiveness and trade liberalization 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.

### REFERENCES

- Bank Indonesia, Indonesian Financial Statistics, November 1991, Jakarta Bank Indonesia.
- 2. Report for the Financial Year 1993/94, 1994/95, Bank Indonesia, Jakarta.
- 3. Berry, Albert, and Levy, Brian, Indonesia's Small and Medium-Size Exporters and Their Support Systems, Policy Research Working Paper 1402, The World Bank, December 1994.
- 4. E.I.U, Indonesia Country Report, London, The Economist Intelligence Unit, 1<sup>st</sup> Quarter 1995.
- 5. Hill, Hal, "The Emperor's Clothes Can Now Be Made In Indonesia, "Bulletin of Indonesian Economic Studies, Vol. 27, No. 3, December 1991.
- 6. JTN, "Indonesian Textile Industry: Establishing Status as Textile Supply Base, "JTN, March 1991.
- 7. JTN, "Indonesian Textile Industry, "JTN, June 1991.
- 8. JTN, "Indonesia Enjoys Favorable Exports of Textile Products in Spite of Recession,, "JTN, October 1993.
- 9. Lohia, S.P, "Prospects for Indonesia's Textile Industry, "Textile Horizons, December 1987.
- 10. Manning, Chris, "Approaching the Turning Point?: Labor Market Change Under Indonesia's New Order, "The Developing Economies, March 1995.
- 11. Pangestu, Mari, "Economic Policy Reforms in Indonesia, "Indonesian Quarterly, No. 3, 1989.

- Raillon, Francois, Indonesia 2000 the Industrial and Technological Challenge, Paris-Jakarta, 1990.
- 13. UN, Commodity Trade Statistics, New York, UN, 1993.
- UN, International Trade Statistics Yearbooks, New York, United Nations 1984, 1988, 1989, 1991, 1992, 1993.
- UNCTAD, Expansion of Trading Opportunities to the Year 2000 for Asia-Pacific Developing Countries, UNCTAD/ITD/13, New York, United Nations, 1995.
- UNCTAD/GATT, Textiles and Clothing, Geneva, International Trade Center UNCTAD/GATT, 1994.
- Wie, Thee Kian, "The Surge of Asian NICs Investment into Indonesia, "Bulletin of Indonesian Economics Studies, Vol. 27, No. 3, December 1991.
- The World Bank, The Uruguay Round and the Developing Economies, Discussion Papers No. 307, Washington, D.C. The World Bank, 1995.
- 19. The World Bank, Managing Restructuring in the Textile and Garment Subsector: Examples from Asia, Edited by Saha Dhevan Meyanathan, EDI Seminar Series, Washington, D.C. The World Bank, July 1994.
- The World Bank, Indonesian Trade Policy Report, Report No. 8317-IND, Country Department V, Asia Region, the World Bank, March 22, 1991.