

**Potential Impact of a Free Trade Agreement
with the EU on Egypt's Textile Industry**

Hanaa Kheir-El-Din Hoda El-Sayed
Cairo University Al Azhar University

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Hanaa Kheir-El-Din is Professor of Economics and Head of the Economics Department at Cairo University. Hoda El-Sayed is Associate Professor of Economics at El-Azhar University. The authors thank Amal Rifaat for her active research assistance in data collection and result calculation, and Françoise Clément for the background paper "Prospects for the Egyptian Trade of Textile Products with the EU in the Frame of the Proposed Partnership." They also thank Sahar Nasr for helping in data collection on public sector companies, and Lorenzo Jachia from UNCTAD for providing trade data.

Abstract

The paper discusses the possible impact of the Egypt-EU Agreement on the textile industry and ready-made garments in Egypt. It shows that Egypt has good export potential to EU markets. It also highlights that although trade liberalization resulting from the implementation of the GATT and the EU partnership agreement will increase Egypt's access to external markets, it will increase competition in the domestic market, especially for textiles and ready-made garments.

The paper's main conclusion is that the Egyptian textile and clothing exports are constrained by internal factors rather than by external ones. Therefore, reform should focus first and foremost on increasing the efficiency of the industry by changing the product mix in favor of products with higher value added, by reducing unit costs through improved quality control and better labor standards, and by allowing firms in the spinning industry to choose the least cost input mix of cotton yarns. With respect to the business environment, the paper emphasizes the importance of adopting measures to reduce the administrative barriers and modernizing infrastructure.

ملخص

تناقش هذه الورقة التأثير المحتمل من إبرام اتفاقية بين مصر والاتحاد الأوروبي بشأن صناعة الغزل والنسيج والملابس الجاهزة في مصر. وتوضح أن مصر لديها إمكانيات جيدة للتصدير إلى أسواق الاتحاد الأوروبي. كما تشير إلى أنه على الرغم من أن تحرير التجارة الناتج عن تنفيذ اتفاقية الجات والشراكة مع الاتحاد الأوروبي سيزيد من قدرة مصر على النفاذ إلى الأسواق الخارجية، فإنه سوف يعزز المنافسة في السوق المحلية، وخصوصاً في قطاع المنسوجات والملابس الجاهزة.

وخلصت الورقة إلى نتيجة رئيسية مفادها أن صادرات مصر من المنسوجات والملابس الجاهزة تقيدتها عوامل داخلية وليست خارجية. ولذا، ينبغي أن يركز الإصلاح في المقام الأول على زيادة كفاءة هذه الصناعة عن طريق تغيير مزيج المنتجات لصالح منتجات ذات قيمة مضافة أعلى، وتخفيض تكاليف الوحدة من خلال تحسين مراقبة الجودة ومعايير العمل، والسماح للشركات في صناعة الغزل باختيار مدخلات أقل تكلفة من مزيج خيوط القطن. وفيما يخص بيئة الأعمال، تؤكد الورقة على أهمية اعتماد تدابير من شأنها تحديث البنية التحتية والحد من الحواجز الإدارية.

1. Introduction

Egypt and the European Union (EU) are engaged in bilateral negotiations concerning a free trade agreement (FTA), which will involve preferential trade liberalization. Although the specific terms of this agreement are still unknown, it is likely to be very similar to the recently completed bilateral agreements between the EU and Tunisia and Morocco. All restrictions on industrial products exported from Egypt to the EU will be eliminated, while Egypt will gradually abolish trade barriers against European exports over a 12-year period.

As Egypt's industrial exports are already allowed free access to the EU—with the exception of exports beyond a quota for yarns and fabrics—the economic argument against this arrangement is clear. By discriminating in favor of EU countries, the possibility of trade diversion arises. The elimination of tariffs on imports from the EU may induce Egyptian consumers and producers to import from less efficient EU suppliers than from other sources in the rest of the world. Although Egyptian consumers could enjoy lower-priced, better-quality and more diverse imports, Egyptian producers will confront increased competition on the domestic market.

This paper examines the implications of preferential liberalization on the Egyptian textile and clothing industry. Part 2 assesses the export performance of the cotton textile industry, with emphasis on its relative position in EU markets. Production efficiency and extent of protection given to various stages of this industry are also considered. Part 3 examines potential impacts of an FTA with the EU on the competitiveness of this industry in EU markets and domestically. Part 4 turns to the changes required to face the post-FTA environment, and asks how the EU can help in the transition period to full liberalization. A final section sums up the findings and policy recommendations.

2. The Present Performance of Egypt's Textile Industry

The textile industry is one of Egypt's oldest industries, and its second largest manufacturing sector after food processing. With some 500,000 workers, the industry accounts for a quarter of total employment in manufacturing. Of this total, 210,000 were engaged in the public sector (of which 186,000 were working in public sector cotton textile companies).¹

¹ This industry is largely dominated by 31 public sector textile manufacturing companies of which 25 process cotton. These companies are mainly composed of large vertically integrated mills engaged in spinning, weaving, dyeing, finishing, garment making and even retailing. They operate under Law 203 of 1991 and are distributed among three public holding companies (HCs) which have exclusive or majority ownership of the share capital of these affiliated companies (ACs). This law provides that HCs and ACs operate as other private sector companies incorporated under Law 159 of 1981. In addition, "mixed" companies, including El-Ameriya (owned by Misr Bank) and Miratex (owned by several public sector companies and the Iranian government), operate under Investment Law 230 of 1989. These public and "mixed" enterprises dominate the textile industry, accounting for all cotton spinning and about 60% of weaving. On average they absorb about 80% of domestic cotton production, the remainder being exported. They are also involved in spinning and weaving wool, jute and other fibers. However, since cotton is a predominant component of Egypt's textile industry, most analysis and disaggregated data reported in this paper refer to cotton textiles. Private sector participation in weaving and ready-made

Except for ready-made garments, production of all Egyptian textile products has been on a declining trend since 1991/92, and the sector's relative importance has been declining also. The industry accounted for 22% of total industrial (non-oil) output, and one third of total export earnings in 1993/94, down from 30% of output and 40% of exports in the 1980s. This reflects the world textile recession, coupled with a domestic recession following the macro-stabilization program launched in 1990/91. Textile exports—not including clothing—stagnated in the early 1990s, with raw cotton exports declining dramatically. In addition to the demand factors noted, low procurement prices, an increase in consumption by local spinning mills, and high export prices (as these were based on a five-year average of Egyptian cotton prices) were underlying the poor export performance. Finally, the loss of Eastern European markets for fine-count yarns induced spinning mills to shift their production to coarser yarns. Egypt is not competitive in this area, as reflected in a persistent decline in cotton yarn exports after 1990 (Table 1). These factors also negatively affected cotton fabric exports, though less so than yarn exports.

In contrast to the gloomy export performance of cotton lint, yarns, fabrics, and manufactured clothing exports performed better, increasing at an average yearly rate of 24% during the first half of the nineties. Imports of textiles are very limited, averaging only 3.7% of total imports during 1989-94.

Table 1. Textile Exports by Component 1989-94

	1989		1990		1991		1992		1993		1994	
	mil.LE	%	mil.LE	%	mil.LE	%	mil.LE	%	mil.LE	%	mil.LE	%
Cotton, raw	594.2	28	562.2	23	193.4	8	175.2	8	146.6	7	791.1	21
Cotton yarn	990.2	46	1045.8	43	986.5	42	819.8	39	720.5	33	1279.5	34
Cotton fabric	176.5	8	219.7	9	309.1	13	236.9	11	272.3	13	409.0	11
Manufactured clothing	169.8	8	465.2	19	554.0	24	542.8	26	665.3	31	780.3	20
Others	225.5	10	152.8	6	303.9	13	327.5	16	354.9	16	552.1	14
Total textile exports	2156.3	100	2445.7	100	2346.9	100	2102.3	100	2159.8	100	3812.1	100

Source: Statistical Yearbook, CAPMAS.

The Private Sector Share in Textile Exports

garment production has grown significantly, to reach 55% of fabric production and, to exceed 85% of total production of garments during the 90s. The private sector is composed of many traditional small workshops and a smaller number of medium to large firms, many of which are joint ventures under Law 230/1989. Data on the production of this sector by volume or value are sketchy and do not give an accurate picture of its relative importance in the textile industry.

Trade in textiles is highly regulated around the world. In Egypt, cotton lint exports were under direct government control until 1994/95. Trade channels for textiles have been less rigorously regulated. The production and trade of yarn was a public sector monopoly until the mid-1980s, when two large investment companies were allowed to establish operations. However, minimum export prices of yarn and fabrics are set by the Cotton Textile Consolidation Fund for both public and private sales. This price setting seriously interfered with export sales—particularly in times of textile recession—and were subject to ad hoc adjustments. Private sector prices for exports of knitted fabrics and ready-made woven products are not regulated. Quantitative export restrictions are not imposed on textile exports.

The private sector has increasingly contributed to exporting high value-added textile products. It currently accounts for around 70% of total knitted exports, 35% of terry cloth and 30% of garments². Furthermore, its export performance was not as severely hit by the world textile recession as that of the public sector. Data on the composition and trends of exports (shown in Table 1) indicates that textile products for which the public sector is the sole or main supplier (cotton lint, yarns) lost ground; segments of the industry with higher value-added products, and in which private sector participation is high, tended to expand (clothing and other textile manufactures). The shares of cotton lint³ and of yarn fell; meanwhile those of manufactured clothing, fabrics and other textiles rose, reflecting the private sector's ability to adapt to change and to penetrate external markets.

The EU Share in Textile Exports

The EU constitutes the major export market for Egyptian textiles and clothing (Table 2), accounting for almost 53% of total exports of these items. During 1988-95, exports of yarn, fabrics and knitted garments to the EU expanded. Export prices in European markets also rose more rapidly than on world markets, reflecting a boom in European demand in 1994-95, a sharp decline in Asian cotton and textile exports in 1994, and an increase in duty-free quotas: 50% for yarn and 90% for fabrics.⁴ Exports of yarns and fabrics are admitted to the EU duty free within negotiated quotas. These have not been a serious constraint to Egyptian exports of yarn and fabrics, as the utilization ratio averaged about 87% and 96% of their respective quotas. The same is true in the US market.⁵ This suggests that the export performance of Egyptian textiles is more constrained by domestic factors than by export market conditions.

² According to the Egyptian Textile Consolidation Fund figures.

³ This share increased again to 21% in 1994 due to cotton crop failures in India and China, but fell in 1994/95.

⁴ See background paper by Françoise Clément, *op.cit.*

⁵ Egypt is also subject to quota restrictions on yarns and fabrics in the US, which imposes quotas for selected finished products (shirts, blouses, towels, and woolen trousers). These quotas also remain under-utilized for most products.

Table 2. EU Share of Egypt's Textile Exports by 2-digit HS Classification 1994 (thou.US\$)

HS No.	Textile products	Exports to the world	Exports to EU	% Share of EU
50	Silk yarn and fabrics	40	0	0.00
51	Wool yarn and fabrics	556	231	41.55
52	Cotton yarn and fabrics	736 504	419 335	56.94
53	Other natural fiber yarns and fabrics	13 630	7 016	25.74
54	Man-made filament	4 698	375	7.98
55	Man-made staple fibers	3 032	786	25.92
56	Wadding, yarn, twine	5 902	4 245	71.92
57	Carpets and other floor coverings	34 069	18 796	55.17
58	Woven fabrics, laces,...	1 807	787	43.55
59	Impregnated, coated,... fabrics	1 122	347	30.93
60	Knitted or crocheted fabrics	1 013	269	26.55
61	Knitted or crocheted clothing	84 055	35 962	42.78
62	Clothing, not knitted or crocheted	145 650	44 708	30.70
63	Made-up textile articles	67 060	48 139	71.78
Total		1 099 138	580 996	52.86

Source: Compiled from COMTRADE

Export Potential

It is generally claimed that Egypt's comparative advantage relies on its natural resources, its location and its labor. Its cotton production yields a variety of extra long (ELS) and long (LS) staples (over 1-1/4 inches long) and medium-long staples (MLS, 1-1/8 to 1-1/4 inches). Long staple production has been falling since the mid-1970s. By 1992, medium-long varieties accounted for over 70% of total cotton output. Egypt's share of world premium ELS has fallen dramatically. In 1980/81 Egypt's output of this variety amounted to 59.2% of global output; by 1989/90 this share had fallen to 27%, while India's share rose from 12.2% to 24%.

Egypt's comparative advantage does not lie in the simplest, most labor-intensive goods where it is unable to compete with East and South Asia. Yet a comparison of labor costs in garment production puts Egypt among the lowest labor-cost producers (Table 3). While it cannot compete with China, Indonesia, Pakistan, Sri Lanka and Vietnam in labor cost, it can easily compete with India, the Philippines, or Thailand, particularly if location and transport costs are accounted for. Egypt is close to Europe, giving it an advantage in those markets.⁶ This suggests that Egypt needs to find a suitable niche where it can differentiate its products and capitalize on its advantages and the quality of its cotton.

⁶ Of course, this advantage is shared by competitors in the Mediterranean region: Israel, Morocco, Tunisia, and Turkey, as well as by Central and Eastern European Countries (CEEC).

Table 3. Labor Costs in Garment Sectors of Selected Countries, summer 1993.

Country	Average cost per operator/hour as % of US cost	Indirect charges as % of gross wages	Country	Average cost per operator/hour as % of US cost	Indirect charges as % of gross wages
Brazil	13.0	70.0	Malaysia	10.0	46.0
China	3.0	33.0	Pakistan	4.0	49.0
Egypt	5.0	43.0	Philippines	7.0	29.0
Hong Kong	33.0	16.0	Singapore	31.0	22.0
India	5.0	38.0	Sri Lanka	3.0	20.0
Indonesia	4.0	26.0	Taiwan	50.0	34.0
Italy	140.0	99.0	Thailand	9.0	11.0
Japan	204.0	68.0	Turkey	30.0	71.0
Rep. of Korea	32.0	44.0	US	100.0	33.0
			Vietnam	3.0	27.0

Source: Werner International Inc.: *Spinning and Weaving Cost Comparisons*, Summer 1993 (New York)

Simple indicators of significant export potential are positive trends in exports and increasing market shares in major export markets; the average annual percentage rate of change over the period 1990-94 of the value, quantity, and EU market shares of product items at the 2-digit level of the Harmonized System classification reveals this. Although trends for particular textile products diverged greatly, they all point to the existence of export potential for items in all product groups, except for one group (53) where Egypt seems to be losing ground against other sources.

Another measure of international competitiveness is a positive trade balance for disaggregated product categories. The 'revealed comparative advantage' (RCA) index, often used in this connection, measures a country's relative specialization in particular products.⁷ By construction, a country has comparative advantage in products with $RCA > 0$. The higher the RCA index, the more successful is the trade performance of the industry in question. Egypt appears to have a comparative advantage in all 14 groups of textile products in Table 4.⁸ Its comparative advantage in the EU is higher than in the rest of the world for all textile and clothing products, except woven and knitted fabrics.

⁷ Revealed comparative advantage is calculated by the formula:

$$RCA = \ln \left(\frac{X_i}{X} \bigg/ \frac{M_i}{M} \right) \times 100$$

where X and M denote value of exports and imports respectively and the subscript i refers to a commodity group at the 2-digit HS classification level.

⁸ The RCA indices have been calculated on the basis of prevailing prices and domestic and external restrictions on imports and exports. Tariffs, quotas, bans, indirect taxes and subsidies could distort the results, and affect the structure of international competitiveness. Any change in trade policy towards liberalization would have direct impact on relative competitiveness of various product groups. Furthermore, efficiency improvements in domestic production would be reflected in costs and price reductions and hence on external competitiveness.

Table 4. Egypt's Revealed Comparative Advantage, 1994

HS No.	Textile products	RCA World	EU
50	Silk yarn and fabrics	25%	
51	Wool yarn and fabrics	-196%	-184%
52	Cotton yarn and fabrics	425%	609%
53	Other natural fiber yarns and fabrics	226%	297%
54	Man-made filament	-149%	-230%
55	Man-made staple fibers	-190%	-285%
56	Wadding, yarn, twine	23%	76%
57	Carpets and other floor coverings	365%	547%
58	Woven fabrics, laces	89%	73%
59	Impregnated, coated fabrics	-109%	-156%
60	Knitted or crocheted fabrics	165%	118%
61	Knitted or crocheted clothing	438%	603%
62	Clothing, not knitted or crocheted	531%	571%
63	Made-up textile articles	397%	592%

The Industry's Efficiency

The issue of efficiency of Egypt's cotton textile and clothing industry is now of particular importance. Strong competition is expected in domestic and international markets, as a result of trade liberalization under the WTO and implementation of an FTA with the EU. Indicators of efficiency include financial returns, labor productivity, input waste, and capacity utilization. A comprehensive indicator is domestic resource cost per unit of foreign exchange (DRC). A recent audit reports the rate of defective output of a sample of items produced by 13 cotton textile companies (accounting for 64.65% of total production and 61.92% of exports of the 25 public sector cotton textile companies) increased in nine firms between 1992/93 and 1993/94, ranging from 6.2% and 57.7% for individual products. Input waste rates exceeded standard rates in 10 of the companies. Efficiency in using cotton lint as measured by the amount of lint per ton of yarn was reported to have increased in 12 companies. The average count of yarn never exceeded 35, a relatively thick medium-count.

Much has been written on the efficiency of using domestic LS cotton in the domestic textile industry. Egypt's ELS and LS varieties are best suited for producing yarn counts of 51 and higher.⁹ The consensus has long been that unless the very high quality—and hence opportunity cost—ELS and LS cottons are used to produce a high-quality output which yields

⁹ See, for example, the report prepared by the Secretariat of the 47th Plenary Meeting of the International Cotton Advisory Committee, Lima, Peru, October 1988.

a high international price, Egypt's spinning industry will not be competitive. Egypt is mainly spinning and exporting coarse and medium-count yarns, thus underspinning the fine quality lint it is using and raising raw material costs of yarn production (Table 5).

Table 5. Cotton Cost of Yarn in Various Countries, 1995

Country	Cotton costs (US\$ per kg of cotton)	Cotton cost as % of total yarn cost	Country	Cotton costs (US\$ per kg of cotton)	Cotton cost as % of total yarn cost
Brazil	2.01	42%	Japan	2.32	41%
India	2.04	47%	Korea	2.30	51%
Italy	2.27	43%	Thailand	2.31	51%
Egypt	2.21	62.5%	USA	2.15	43%

Source: Various countries, 1995 *International Production Cost Comparison*, International Textile Manufacturers Federation. Figures for Egypt have been derived from accounts of public sector companies for 1994/95, Fob price of the qualities used by the companies, according to CAPMAS, 1995.

Labor productivity, measured in terms of real output per worker and of production at constant 1992/93 prices per LE of wages, shows diverging results. The first measure shows an increase in labor productivity in 1993/94 in 15 companies, while it declined in 10 others (with three of the latter achieving negative value added in constant 1992/93 prices). The second measure of labor productivity points to a decline in wage productivity in 1993/94—compared to the previous year—in 20 companies, while it increased in only five. These observations suggest that wage cost per worker increased faster than both real production and real value-added per worker, pointing to an increase in wage costs of cotton textiles due to declining labor productivity.

The rate of capacity utilization varies considerably among companies and production processes. For yarn, it has ranged from as little as 40% to about 85%, with a number of spinning mills being concentrated within the range of 65% to 70% rate of capacity utilization. In weaving, the reported range was 50% to 90% with a large number of cases exceeding 70%. The main reasons for the low rate of capacity utilization are either related to internal problems such as unavailability of major inputs, poor maintenance of machinery and equipment, inadequate supervision, lack of incentives, negligence or insufficient demand.

All of these factors result in costs of production relative to domestic and export sales prices. Domestic sale prices and export prices barely cover total costs of the majority of products considered, sometimes do not cover production costs, and in a few instances even fail to cover direct raw materials and labor costs. No information is available on the relative importance of the selected manufactured products in total production of the companies concerned. However, the audit report refers to them as “major products.”

Domestic Resource Cost (DRC) Estimates

The DRC measures the amount of domestic resources required to earn (or save) one unit of foreign exchange through export (or import substitution).¹⁰ Domestic resources that enter this measure are essentially the costs of labor, capital and land required—directly or indirectly—in the production process. As domestic prices and incentives may be distorted due to government intervention and market imperfections, costs must be measured in appropriate prices reflecting their opportunity costs. Foreign exchange earned (or saved) is measured by the value added at world prices, i.e., the difference between the foreign exchange earned (or saved) from exporting (import substituting) a commodity and the foreign exchange spent on all intermediate inputs used to produce the commodity.

DRCs for yarn, fabrics and ready-made garment production in eight public sector companies were calculated.¹¹ These companies include one that exclusively produces cotton yarn, one producing only knitted garments, and six that are integrated units producing yarn, fabrics, ready-made garments and miscellaneous products such as bed linen and terry products. The share of yarn production varies between 96% and 23% of total output of these six companies. The eight companies together accounted for 47% of total public sector production in 1993/94, and 59% of total exports.

Efficiency of Cotton Yarn Production

Yarn production is mainly coarse and medium-count. For the first (specialized) company, medium yarn accounts for 77% of its total production, while coarse and fine-count yarn account for 14% and 9%, respectively. Although detailed data on the product mix in the other companies were not available, the average prices of their products suggest that most of their production also consists of coarse and medium yarns.

Despite reform measures undertaken since the late 80s to liberalize this sector, yarn input prices remain highly regulated. The production of yarn has traditionally benefited from high cotton subsidies: prices to the spinners have always been set at levels far below their respective export prices, and often below their farm-gate prices. Subsidy rates differ from year to year and from one variety to another. Thus, in 1993/94, medium-long staple varieties were the most subsidized, while in 1994/95 extra-long staples (ELS) were the most highly subsidized. The traditional high subsidy for ELS has resulted in the wasteful use of this fine variety of cotton to produce coarse and medium yarns. Though domestic yarn prices were

¹⁰ Krueger, A., "Evaluating Restrictionist Trade Regimes Theory and Measurement", *Journal of Political Economy*, Jan./Feb. 1972, pp. 51-53; Bruno, M., "Domestic Resource Costs and Effective Protection, Clarification and Synthesis", *Journal of Political Economy*, Jan./Feb. 1972, pp. 26-27.

¹¹ The methodology is detailed in the Appendix. Data were collected from the Follow-up and Performance Evaluation Reports on the individual companies for the year 1994/95.

raised to near their export prices, in several cases, domestic and even export prices of yarn were set at levels below the costs of production.

Table 6 shows the DRC ratios calculated for yarn production. Of the seven companies, only two are considered efficient in producing cotton yarn, i.e., have DRCs that are less than one. This implies that if these two companies produce for the domestic market the same yarn varieties they export and sell them at the same price, and they use unsubsidized inputs, they would be efficient. Thus, it would be beneficial to the whole economy to proceed in this activity, as it is a net foreign exchange earner.

Table 6. DRC in Cotton Spinning Industry

Company No.	DRC ratios
1	0.710
2	0.863
3	1.028
4	1.061
5	1.082
6	1.315
7	NIVA
Coarse yarn	1.331
Medium yarn	0.824
Fine yarn	0.950

Note: NIVA = negative international value added.

Source: Authors' calculations

The first company is the largest producer in this sector, while the next is specialized in yarn production. Of the others, four companies appear inefficient at the existing level and structure of production and input mix, while the last is extremely inefficient; its spinning activity involves an absolute loss of foreign exchange, as its value added at world prices is negative.¹²

These differences among companies might be attributed to several factors, including: the technical efficiency of using a given input mix—which depends on the degree of capacity utilization and control of waste;¹³ the input mix used (extensive use of highly subsidized cotton such as ELS results in less value added at world prices than use of cheaper less subsidized cotton); and differences in labor, wages, capital productivity; and product mix.

The latter plays an important role in determining efficiency of production. This can be shown by estimating DRCs for different qualities of yarn: as shown in Table 6, coarse yarn production is highly inefficient, while the production of medium and fine count yarn is clearly efficient. Furthermore, it appears that the use of ELS in producing coarse yarn

¹² Note that these five companies incurred net financial losses in 1993/94 and in 1994/95.

¹³ It has been reported that the waste rates in some companies have exceeded (30%), while capacity utilization rates were sometimes as little as 40%, and did not exceed 85% in 1993/94.

involves a relative loss of foreign exchange. If we assume that ELS cotton is replaced by cheaper Egyptian cotton (MLS) for the production of coarse yarn, the DRC will fall from 1.3 to 1.106. This indicates that Egyptian cotton should not be used to produce coarse yarn, and should be replaced by cheaper imported qualities. Accordingly, we may conclude that improving yarn production efficiency requires changing the product mix to produce qualities with higher world prices, and to use appropriate cotton input mix. In addition, improving technical efficiency is a precondition for economic profitability. The necessity of ensuring regular availability of intermediate inputs and spare parts, improving maintenance, and imposing strict discipline on labor standards cannot be overemphasized. Increasing private sector participation in this activity may stimulate efficiency increases in spinning.

Economic Efficiency of Cotton Weaving

Table 7 reports estimated DRCs for cotton weaving in four public sector companies, in which cotton fabric production accounts for 12–32 percent of total production. The estimates indicate that cotton fabric production is efficient in all the companies, as DRCs vary between 0.36 and 0.78. Differences in estimates mainly reflect wide variation in the product mix in each company, as well as in prices. Greater efficiency is related to improved production quality and hence higher prices and value added. Inputs have a smaller impact on the DRCs of fabric production than in yarn production. All companies in the sample use mainly coarse yarn, the cheapest quality produced domestically, which represents a relatively small portion of total costs of production.

Table 7. DRC in the Cotton Weaving Industry

Company No.	DRC ratios
1	0.36
2	0.61
3	0.75
4	0.78

Source: Authors' calculations

Efficiency of Other Textile and Clothing Production

Other textile and clothing industries include garments, knitted garments, bed linen and terry products. Table 8 shows the results. Calculations for ready-made garments were made for only two companies, and revealed that both are inefficient in producing cotton ready-made garments. The use of expensive Egyptian cotton fabrics to produce cheap cotton clothes may provide the explanation for this. Knitwear and other products, in contrast, all seem highly

efficient; their export unit values are high, as is value added at world prices relative to the resources used in production.

Table 8. DRC in Other Cotton Textile and Clothing Manufacture

	Company No.	DRC Ratios
Ready-made garments	1	1.420
	2	1.142
Knitwear		0.350
Bed linen		0.753
Terry fabrics	1	0.180
	2	0.284

Source: Authors' calculations.

Protection of Textile and Clothing Industries

Restrictions in Egypt are much greater on textile imports than exports. With few exceptions, imports of cotton fabrics and ready-made textile products are prohibited. Even when exceptions to import bans are granted, tariffs are generally around 70%.¹⁴ For cotton yarns, however, there are no quantitative restrictions on imports, and the tariff is a flat 30%, to which is added an additional 10% of sales tax and a surcharge of 3%. Yarn imports have provided private sector weaving companies with cheaper and more appropriate types of yarns and enabled private sector weavers to adjust to global price competition for fabrics—particularly during the textile recession. When yarns are imported to be woven for export, they are exempt from tariffs under the temporary admissions or duty drawback systems.

This selective partial liberalization with the continued ban on cotton lint imports—except for spinning mills outside the Delta region—denies public sector companies an important alternative for meeting international and domestic competition effectively: the freedom to use appropriate raw cotton in spinning.

Tariff rates on textiles are typical of tariff structures found in other countries. Raw materials—cotton lint—receives nominal protection of 5%, yarn is taxed at 30%, fabrics are subject to a 60% tariff, and ready-made garments and other made-up textiles are taxed at 70%. The weighted average nominal tariff on textile imports from the EU is 27.21%, compared with 39.11% for the whole world. Imports from the EU account for 24.5% of all textile imports; the share of imports from the EU of various HS items varies from 2.4% (item 53) to a maximum of 68.8% (item 60). The difference observed between nominal protection

¹⁴ They were as high as 80 to 110%, but were reduced in 1994 to a maximum of 70%.

against imports from Europe and those from the world are due to the differences in import mix, not to differences in the actual tariff rates applied.

As mentioned, the textile and clothing industry suffered from intensive government interference in pricing inputs and output. This resulted in a distorted incentive structure that led to misallocation of resources. The concept of effective rate of protection (ERP) can be used as a measure of the structure of incentives given to a certain activity. Although not a measure of efficiency, high ERPs are usually associated with inefficiency, while low ERPs indicate that activities are quite efficient.

ERPs were calculated for the same activities as the DRCs. Two sets of estimates have been made: the first (ERP_1) takes into account all elements of protection, including the effect of interference in prices and of quantitative restrictions on imports. In this case, calculation of value added at world prices was made according to the same methodology applied in measuring DRCs. The second set (ERP_2) is based on the assumption that tariffs are the only means of protection and intervention in the domestic price system. This is a hypothetical case where domestic price for any product is equal to its world price augmented by the respective tariff rate. Results are shown in Table 9, which also reports implicit and nominal protection coefficients for outputs and inputs in each activity.

Estimated ERP_1 s for spinning reveals that two companies are slightly taxed, one is enjoying huge protection (value added at world prices is negative), and others enjoy relatively limited protection ranging between 4% and 19%. Companies with negative ERP_1 are generating domestic value added that is less than what could be realized in the absence of protection. This implies that, in spite of the escalating tariff structure, other elements of protection have had an adverse effect on the incentives to this industry. However, the absolute value of the negative ERP_1 is low, suggesting that the company is producing close to free market conditions.

Calculations for different yarn qualities indicate that coarse yarn is enjoying significant protection, fine yarn is slightly protected and medium yarns are slightly taxed. These differences in ERPs can be attributed to the fact that the world price of coarse yarn is very close to its domestic price, while the world prices for fine and medium yarns are higher than their domestic prices.

The ERP_1 in other activities, including weaving, ready-made garments and miscellaneous products, are all negative. This is due to wide quality differentials between lower-priced yarns produced for the domestic market and those exported at higher prices and thus yielding higher value added. If these companies were to produce the same qualities designated for exports and sell them at the same price, they would substantially increase domestic value added and ERP_1 would not be negative.

Table 9. Effective Protection in Textile and Clothing Industry (%)

Company No.	ERP ₁	INP _j	INP _i	ERP ₂	NP _j	NP _i
Spinning						
1	(2.9)	(9.5)	(15.2)	76.9	30	6.7
2	(16.6)	(11.2)	(11.5)	81.4	“	6.2
3	4.0	(8.8)	(12.9)	104.8	“	6.1
4	11.0	(2.8)	(4.5)	86.8	“	7.1
5	17.9	(3.2)	(10.8)	97.1	“	5.8
6	19.1	(7.3)	(15.0)	110.9	“	5.7
7	NIVA	2.4	(12.5)	NIVA	“	6.2
Coarse yarn	55.0	2.4	(15.2)	---	“	
Medium yarn	(4.8)	(11.0)	(15.2)	---	“	
Fine yarn	11.0	(6.5) ¹	(15.2)	---	“	
Weaving						
1	(39.0)	(11.6)	2.5	123.1	60	28.9
2	(61.0)	(25.9)	3.4	97.5	“	28.6
3	(62.0)	(15.9)	2.9	105.9	“	28.5
4	(71.0)	(23.3)	3.2	82.8	“	24.9
Ready -made garments						
1	(3.1)	(1.5)	2.4	115.2	70	55.8
2	(22.0)	(12.9)	(10.6)	132.0	“	56.7
Knitwear						
1	(31.0)	(13.7)	(5.9)	124.7	70	28.3
Bed linens						
1	(32.0)	(8.3)	2.1	146.4	70	55.1
Terry fabrics						
1	(10.0)	(4.7)	3.4	82.5	70	58.2
2	(57.0)	(34.0)	(1.0)	85.9	70	56.7

Notes: ERP₁ = Due to all elements of protection.

ERP₂ = Due to tariff only.

- INP_j = Implicit Nominal Protection of product j $\left(\frac{pd - pw}{pw} \right) \times 100$,

NP_j = Nominal Protection of product j.

- INP_i = Implicit Nominal Protection of the input i, NP_i = Nominal Protection of input i.

Positive INP_j means that domestic price of output is higher than the respective world price, which increases the ERP.

Positive INP_i decreases effective protection through taxation of input, whereas negative INP_i increases protection through input subsidization.

Note: According to the companies reports, the differences between the export price for fine yarn and its domestic price was much less than the corresponding one for the medium yarn. This was not the case in previous years; in 1991/92, the INP_j for medium yarn was 14.5%, and the INP_j for fine yarn was 28.6%.

Finally, a wide gap—and sometimes inconsistency—exists between ERP₁ measured on the basis of actual domestic and world prices, and ERP₂ calculated on the basis of tariff data alone. Estimated ERP₂ suggests that tariffs provide huge protection to all production activities in the public cotton textile and clothing sector, and that some of these activities would continue producing in the absence of tariffs, as value added would be negative.

In theory, tariffs increase domestic prices of tradable products over their international equivalent by an amount equal to these tariffs. However, this is not the case in practice. For example, with a tariff rate of 30% the domestic price of yarn should equal the world price plus 30%. The actual domestic price of yarn was always less than the f.o.b. price, and the average implicit nominal protection was about 7.1%. This can be explained by differences in quality and costs, and in nontariff measures of protection, which isolate the domestic market from external influences and may make tariffs redundant.

3. Potential Impact of the Partnership Agreement

According to the 1977 Cooperation Agreement between Egypt and the EU, Egyptian textile and clothing products have duty-free access to EU markets. Although in practice duty-free access for cotton yarn and cotton fabrics is subject to quota limits, as mentioned earlier between 1989 and 1995 tariff quotas in EU markets were not fully utilized (Table 10). In Egypt, in addition to the escalating system of tariffs, clothing imports are subject to tight quantitative restrictions. These restrictions were not fully effective; tariffs were not applied in free zones like Port Said and continuous smuggling from the free zones made these products domestically available.

Table 10. Egypt's Utilization of Yarn and Fabric Quotas in EU Markets 1989-95

Percentage of actual Egyptian exports to quotas in EU markets							
	1989	1990	1991	1992	1993	1994	1995
Yarn	104.5	90.2	77.9	80.3	73.2	124.0	76.0
Fabrics	112.6	99.2	94.3	73.4	107.8	129.0	74.0

Source: Calculated from Cotton Textile Consolidation Fund Data.

As Egypt and the EU are members of the Agreement on Textile and Clothing (ATC), they are committed to the liberalization of trade in textile and clothing products negotiated in the Uruguay Round (UR). The main provisions of the relevant UR agreement are gradual phasing out of quotas or any equivalent quantitative restrictions over a period of 10 years starting January 1995. Egypt has maintained the right to keep bans on imported fabrics until January 1998, and on clothing until January 2002.¹⁵ In addition, tariffs are to be gradually reduced. Pre-Uruguay average weighted MFN tariffs in the EU averaged 7% on yarn, 10.5% on fabrics and 13.5% on clothing.¹⁶ While the average reduction of tariffs is expected to be

¹⁵ As mentioned in the report of the Egyptian delegation in UR negotiations.

¹⁶ Kirmani, N.: 'The UR and International Trade in Textiles and Clothing', in the Annual Joint Seminar on the UR and the Arab Countries, Arab Fund For Economic and Social Development and others, Kuwait, 1995.

about 22% in the industrialized countries, Egypt is committed to reduce bound tariffs in 1995 by almost 45%. By January 2005, tariffs will be reduced to 15, 30, and 40% for yarns, fabrics and clothing, respectively.¹⁷

The EU Partnership Agreement

The main elements of the proposed partnership agreement, concerning textiles and clothing, are complete elimination of tariffs, charges having equivalent effect and quotas over a 12-year period.¹⁸ Thus, the proposed EU agreement goes beyond the requirements of the UR, which does not eliminate tariffs. Upon entry into force, the agreement (draft January 1996) provides for immediate free access of all industrial goods, including textiles. Similar agreements, such as the one concluded with the East European countries, excluded ATC products from the immediate complete removal of quantitative restrictions. Instead, restrictions on ATC are to be removed by January 1998,¹⁹ i.e., half the period agreed upon in the UR. The Tunisian agreement includes a joint declaration that textile products will be the subject of a special protocol to be concluded “on the basis of the provisions of the arrangements in force in 1995”. This implies that the immediate abolition of QR on industrial goods does not apply to textile products.²⁰

Egypt is allowed to apply exceptional measures of limited duration—e.g. increasing or reintroducing tariffs—under specific constraints, to protect industries or sectors in serious difficulties. In addition, any party may take appropriate measures against dumping practices in accordance with Article VI of the GATT. Practical experience has shown that safeguards and anti-dumping provisions have been used to restrict trade and exports to the EU. East European countries suffered from unfair application of these provisions to constrain increases in exports of iron and steel products. Some believe that quotas were a better alternative.²¹ Similar Turkish experience with textile and clothing exports to the EU supports the view that antidumping measures were over-applied to constrain exports to the EU.²²

¹⁷ As stated in the report of the Egyptian delegation in UR negotiations.

¹⁸ According to the proposed version as of January 1996. Egypt is proposing a 15-year transition period.

¹⁹ Kaminski, B.: “*The Significance of the Europe Agreement*” for Central European Industrial Exports”, World Bank Policy Research Working Paper 1314, June 1994.

²⁰ In Hoekman’s study, Tunisia and the EU will liberalize QR on ATC products according to the WTO agreements. See Hoekman, B. and S. Djankov, *An Egypt-EU Trade Agreement: Issues and Policy Options*, ECA/MNA Technical Department, World Bank, March 1996, p.8.

²¹ Kaminski, B., *op. cit.*, p.4, writes:

“Some provisions of the FTA made it easier to erect extra barriers against CEE-5 exports. For instance, trade in steel has been governed by QR and pricing arrangements. With the removal of these restrictions under the FTA, CEE-5 exporters have become more vulnerable to anti-dumping actions.”

²² See: “The Implications of the WTO Uruguay Round on Turkish Economy”, A speech by Cavit Ozdem and Ozgur Demirkol, Undersecretariat of Treasury, in Arab Experts’ Meeting on WTO Impacts’, Analysis on Arab Economies, League of Arab States, Cairo, July 1994, p. 5.

The rules of origin concerning the ATC products apply only to clothing; in other words, Egyptian yarns and fabrics will benefit from duty-free access to the EU market whether cotton or yarn originating in Egypt or elsewhere. Clothing exports from Egypt will benefit from duty-free access to the EU market only if the fabrics used are either produced in Egypt, or imported from the EU or a third country that has an FTA with either Egypt or the EU.²³

Potential Direct Effects of the Agreement on Egyptian Exports

Removal of yarn quotas under the UR agreement will expose Egyptian exports to increased competition from countries such as India, Pakistan and Indonesia. Other potential competitors such as Argentina, Brazil, and Korea are not likely to challenge Egyptian yarn exports, as they were far from filling their quotas during 1994-96.²⁴ Keen competition in fabrics can be expected from Thailand and Malaysia, which have exceeded their quotas to the EU. Other competitors from Asia, South America, Russia and Central and Eastern Europe have not filled their respective quotas and are not likely to threaten Egyptian export performance, *ceteris paribus*.²⁵

The EU agreement will not provide Egypt with any additional preferential treatment beyond the extent to which exports from other countries will remain subject to EU tariffs. The scheduled reduction of these tariffs will lead to erosion of preferences enjoyed by Egypt. This may explain Yeats' (1994)²⁶ conclusion that Egypt will suffer a net loss from its textile and clothing liberalization under the UR agreement. The expected shift away from Egypt towards other suppliers will be larger than any potential export increase Egypt could achieve in the EU market, unless Egypt's textile industry achieves greater efficiency in production.

Abolition of quantitative restrictions upon entry into force of the EU agreement will allow Egypt to increase its competitiveness in EU markets—particularly for yarns and fabrics—against other countries, except Turkey. However, this again requires exerting intensive efforts to increase efficiency by reducing costs and improving quality of production to benefit from enhanced export opportunities.

An important positive effect of the partnership agreement on exports is the potential increase in so-called outward processing activities. Egyptian clothing produced with EU

²³ The provision that rules of origin apply to third parties having FTA with a member of the partnership is referred to as "cumulation of the rules of origin."

²⁴ India filled 107% of its yarn quota to the EU in 1994/96, Pakistan 150% and Indonesia 130% of their respective quotas during that period. Argentina covered 33% of its quota in 1994/95, Brazil 6%, Peru 51%, Thailand 56%, Turkey 22%, South Korea 77%. See Françoise Clément, *op.cit.*

²⁵ Quota utilization rates for major fabric exporters to the EU for 1994/96 were as follows: Argentina 34%, Brazil 28%, Bulgaria 94%, Czech Republic 90%, Egypt 74%, Hong Kong 16%, Hungary 37%, India 93%, Indonesia 80%, Malaysia 101%, Pakistan 98%, Peru 24%, Poland 28%, Romania 34%, Thailand 108%, Turkey 71%, Singapore 5%, Slovakia 44%, South Korea 46%. See Françoise Clément, *op.cit.*

²⁶ Yeats, A. (1994), *Export Prospects of Middle Eastern Countries, A Post-Uruguay Round Analysis*, World Bank.

fabrics will enjoy free access to the EU according to the rules of origin.²⁷ Thus European investors may increasingly engage in subcontracting activities in Egypt, creating new productive units and providing existing ones with fabrics, accessories, designs and the know-how to produce high value-added products for export to European markets. This kind of subcontracting is already pursued by both the private and public sectors, but the scope for enlarging the scale of these operations is substantial.²⁸ Egypt's free zones and incentives to investors to operate in new industrial areas provide opportunities for both foreign and local private investment.

Comparison with other countries reveals that after the conclusion of a partnership agreement with the East European countries, total outward processing activities significantly increased to account for about 18% of total CEEC exports to the EU in 1993, up from 10% in 1989. For garments alone, such activities account for around 74.5% of CEEC exports to the EU, compared to 12.2% in Morocco, 16.5% in Tunisia and only 0.3% in Egypt in the same year.²⁹ Although these activities may improve the efficiency of domestic textile industries and promote exports, they are subject to various criticisms. The Moroccan experience suggests they may result in a dualism of the economy, as they install various production units alien to the rest of the economy and their externalities benefit the world rather than the domestic economy. On the other hand, new export opportunities may emerge for Egyptian fabrics to other countries which have concluded FTAs with the EU that allow for cumulation of the rules of origin.

Potential Impact on Egyptian Imports

The complete liberalization of trade in textile and clothing products will result in a surge of imports. If quantitative restrictions are removed according to WTO rules, no preferential treatment will be given to the EU products beyond that provided by the gradual elimination of tariffs on EU products. However, immediate removal of quantitative restrictions on EU imports will certainly give these products (fabrics and clothing) additional preferential access to the Egyptian market.

We do not expect cotton yarn imports from the EU to significantly increase. The main current suppliers are Switzerland and Pakistan, and no quotas are imposed (the EU accounted for only 10% of Egypt's total yarn imports in 1994). Intermediate imports of fabrics may be diverted towards the EU as a result of the rules of origin. Imports of fabrics for final consumption and ready-made garments from the EU may also increase,³⁰ depending on the

²⁷ Note that clothing is not subject to any QR in the EU.

²⁸ For example, in the private sector, products are manufactured bearing the Italian knitwear brand Stefanel and the US brand Joval, and jeans under the Wrangler label as well as Van Heusen shirts are manufactured. A substantial portion of these products is exported to the US and the EU.

²⁹ World Bank, *ARE: Egypt into the Next Century*, Discussion Papers, May 1995, p. 115.

³⁰ Egypt's imports of ready-made garments from the EU account for about 12% in 1994, while fabrics were only 7%.

elasticity of these imports with respect to MFN tariff reductions within the WTO framework. Trade diversion from other suppliers towards EU products will not occur in the first years of the agreement; the reduction of these tariffs will be postponed to later stages of this partnership, by request of the Egyptian government.

Egyptian imports of machinery and other intermediate inputs for the textile industry are not subject to quotas and face low tariff rates (5% for machinery, 10% for chemicals). Machinery and chemicals are essentially imported from Western Europe, Japan and the US. Trade diversion will occur to the extent that Egypt delays trade liberalization with other countries. However, this effect is likely to be very limited, as prevailing tariff rates are very low. Overall, this effect will be beneficial to the extent it contributes to cost reduction in the textile industry.

The development of textile imports from the EU over time depends in large part on the pattern of tariff reduction that Egypt follows. If the Tunisian approach is followed, tariffs on raw materials and capital goods would be abolished first (over a period of five years), then tariffs on intermediate goods (yarn) over a period of twelve years from entry into force of the agreement, while tariffs on final goods are eliminated over nine years starting in year 4 of the agreement. An alternative approach is to reduce all tariffs on all goods by a fixed—or varying—amount yearly over 12 years. A third approach is that implied by the UR: gradual reduction of tariffs on textile and clothing products until they reach 15% for yarn, 30% for fabrics and 40% for garments within 10 years from entry into force of the UR agreements until 1/2005.

Egypt's negotiators seem to prefer the first back-loaded approach, **which** would provide Egyptian industry with increased effective protection during the first years of implementation of the agreement. In fact, while this pattern of tariff reduction may assist Egyptian industry to restructure and to adapt to the new environment, the resulting increased protection might create additional inefficiencies. Moreover, some argue that it might be more difficult for the government to start liberalization of the final products after providing them with increased protection: public and private producers may resist such measures.

Calculations have been made for the possible effect of the three alternative approaches on the ERP for textiles and clothing, as shown in Table 11. It appears that the first two approaches (a and b) give similar results for cotton yarn, namely a gradual phasing out of all effective protection due to tariffs. However, the results differ for all other textile products. Gradual reduction of all tariffs implies a gradual phasing out of ERP to all activities, as shown in option b; while, according to the Tunisian model (option a), ERP will increase to reach a maximum by the end of year 3 for fabrics, ready-made garments and knitwear, before starting to decline until complete erosion. The latter option (a) might be less disrupting to

Egyptian textile industry, as it allows three to four years for the industry to adapt to the new environment. On the other hand, this period is not long enough to have a damaging effect on the pattern of resource allocation. The results also imply that if the Tunisian approach is applied, imports of fabrics and clothing will not increase significantly in the first three–four years, but after that will certainly increase at a higher rate, in view of declining protection.

Table 11. ERP Under Various Patterns of Tariff Reduction

	Year 0	Year 3			Year 6			Year 9			Year 12		
		a	b	c	a	b	c	a	b	c	a	b	c
Cotton yarn	90.9	66.3	62.9	70.5	47.1	41.9	55.2	21.4	20.9	39.9	0	0	39.9
Cotton fabrics	100.3	112.6	69.4	80.2	76.4	46.3	65.2	39.6	23.2	50.5	0	0	50.5
Knitwear	124.7	137.8	86.3	115.4	93.1	57.6	96.2	48.0	28.8	84.1	0	0	84.1
RM garments	132.0	134.9	91.4	117.0	90.4	61.1	105.8	45.2	30.7	94.6	0	0	94.6

Year 0 = according to the tariff structure in 1995.

Year 3 and thereafter = the end of year (or the beginning of the following year)

a = tariff elimination according to the Tunisian model.

b = uniform tariff reduction till complete elimination by year 12 .

c = uniform tariff reduction over 10 years according to WTO.

Finally, the WTO approach to tariff reduction (option c) is more conservative than the first two approaches, as it does not lead to complete elimination of tariffs. Furthermore, it has the advantage of being non-preferential and hence does not discriminate between various groups of trade partners. Yet, the Tunisian model (option a) appears to provide cotton fabrics and clothing with higher protection than the WTO approach to tariff reduction until the end of year 3 of its implementation.³¹

4. Necessary Changes to Face the New Environment

In relation to Egypt's exports, the main direct beneficial impact of the EU/FTA will stem from the elimination of existing tax exempt quotas, although these quotas have never actually been constraining Egyptian exports of cotton yarns and fabrics to the EU. Egypt's export performance will thus depend crucially on improving its competitiveness vis-à-vis EU producers and other competitors in the Middle East and Eastern Europe. Improving the rate of capacity utilization and fostering productivity growth are necessary. Enlarging supply capacity and attracting new investments to textile and clothing activities are also necessary.

³¹ The elimination of tariffs on imports from the EU will certainly affect total tariff revenue. The EU share in Egypt's total imports of clothing and textile products, including woolen and silk products, reached, in 1994, around 31%, while tariffs revenue generated by the EU accounted for only 17% of total tariff revenue obtained from imports of spinning and weaving products. Under the Tunisian approach, imports with higher tariffs—fabrics and clothing—will be gradually liberalized after year 4, which means that during the first four years of the agreement, the decline in tariffs revenue will be very limited.

However, this depends on what Egypt does to increase technical efficiency, improve the investment climate and reduce transaction costs.

On the import side, removal of tariffs on intermediate inputs and machinery from the EU will likely reduce costs of production, but gradual removal of tariffs on textile and clothing imports from the EU will subject highly protected domestic production activities to increased competition. Two questions arise. First, will Egypt be able to compete with EU companies with respect to quality and price? Second, will Egypt be able to upgrade its infrastructure and reduce transaction costs during the transition period?

Spinning activity. In cotton spinning, value added at international prices is positive in all but one public sector company (see above). The activity, however, is still economically disadvantageous due to the high prices of cotton. Large public investments in upgrading, modernizing and enlarging spinning mill capacity were implemented in the 1980s, and there is currently evidence of overcapacity in spinning. Two alternatives can be envisaged:

- 1) Substitution of inexpensive short-staple cottons for Egyptian varieties in spinning appropriate counts of yarn (of count 40 and less). Imports of short-staple cotton were recently permitted and currently account for 15–20% of total consumption of spinning mills. However, their use was restricted to spinning mills outside the delta region.³² Furthermore, exports of yarns made of imported cotton are prohibited, in an effort to protect the yarn market. The argument is that foreign buyers are mainly attracted by use of the “famous” Egyptian cotton for the production of yarn, rather than by the yarn itself. This is a myth, however, as the quality and specifications of the yarn produced are more important in attracting potential buyers than the raw material input for producing the yarn.
- 2) Specializing in spinning fine yarns out of Egyptian LS varieties. While this is the niche that Egypt has traditionally chosen, it requires a level of perfection and accuracy that Egypt is not likely to attain within the medium term. Moreover, competition from European spinners would impede rapid expansion of market share of Egyptian yarns in EU markets.

Much progress has been achieved in producing blends of cotton and synthetic fibers, particularly in the private sector. This illustrates the potential competitive edge which Egypt could enjoy, given its domestic production of medium long staple cotton (Giza 80) and of hydrocarbon feedstock necessary to produce polyesters and other synthetics. The regional

³² Restrictions on using imported cotton have recently been lifted.

market—particularly in the Gulf countries and Saudi Arabia—could benefit from Egyptian production of blends designed specially for use in hot climates.³³

Technical assistance from the EU within the context of the agreement, e.g., from Italian spinners, could enhance quality and efficiency and reduce cotton waste. The immediate liberalization of cotton imports to allow spinners to purchase lint cotton from least-cost sources is not only essential for efficient capacity utilization but also a precondition for liberalization of trade in yarns.

Removal of quantitative restrictions on yarn imports led to only a partial liberalization of these imports, which are still subject to a 30% tariff plus an additional surcharge. Immediate elimination—or at the minimum over a two to three year period—of these tariffs is feasible. This would put pressure on the domestic spinning industry, particularly in the public sector, to increase its efficiency. The negative impact of tariff elimination—or reduction—on producers would be matched by the benefits of lifting restrictions on cotton import and use.

Weaving activity. Production of fabrics in Egypt appear to be profitable at international prices (see above), although Egyptian exports of fabrics to Europe are mostly raw fabrics (gray). Egypt seems well placed to serve the European market, given its proximity and low labor costs, but the ability to export fabric has been hampered by the low quality of the weaving and finishing processes. The agreement may enhance the quality of these processes if it induces EU firms to provide up-to-date patterns, dyes and finishing requirements. A potential benefit from the agreement is the possibility of establishing regular marketing channels with European clothing manufacturers. Much will depend in this connection on the efforts exerted by Egyptian producers to deliver on time the quantities and quality demanded.

Domestically, Egyptian fabrics are too expensive. This is an essential reason for the inefficiency of clothing manufacturing in the public sector and helps to explain the reluctance of private sector manufacturers to use domestically produced fabrics in garment production. The rules of origin of the agreement will induce export-oriented garment producers to use fabrics that are domestically produced or originate in the EU. This again raises the question of efficiency improvement in weaving. This requires either using low-cost yarns to produce the prevailing quality of fabrics or using expensive yarns to weave special quality fabrics. A successful example of the first approach is that of fabric production for upholstery. Some private sector producers have succeeded in producing and exporting good quality textiles for upholstery. The second approach has not been tested and would require additional effort, particularly in the area of finishing.

These remarks suggest that the weaving process is not yet ready for complete liberalization. The weaving industry could take advantage of increased protection implied by

³³ UNIDO: Industrial Branch Profiles.

the Tunisian pattern of phasing out tariffs on inputs first, and then on final production to improve its finishing capabilities. Lack of adequate supervision and negligence on the part of workers can also be partly blamed for inadequate finishing. Phasing out tariff protection of fabrics could be extended over a longer period than that of yarn, as domestic weaving capacity is lower than that of spinning.

Rules of origin constraints, and the great potential for increased garment production, require enlarging weaving capacity. This can only be achieved gradually. Prices of fabrics woven in the EU are relatively higher than in South and East Asia or the Middle East. Liberalizing trade with the EU faster than with other countries (as required by the UR agreement) will not necessarily divert trade to EU sources. A necessary condition is that the import price from the EU—including preferential or duty-free treatment—is lower than import price from other sources including MFN tariff for the same products. It will not also necessarily create trade with Egypt: higher prices and quality of EU products may not fit the requirements of Egyptian garment industry. However, EU fabrics will find their way to cater for the needs of more affluent Egyptians and may provide scope for manufacturing of brand name items under international labels.

Ready-made Garments. Although garment making in the public sector is at a great competitive disadvantage, it appears to be quite profitable in the private sector, given the large increase in output and exports seen in the 1990s. This diverging performance is in part a reflection of the fact that public sector companies rely primarily on expensive domestic cotton fabrics; the more flexible private sector has achieved cost reductions by using imported fabrics. In addition, private sector producers have increasingly succeeded in modernizing garment making through improving designs, production techniques and accessories used (such as buttons or zippers). Although the local market is nominally sheltered from foreign competition by bans on clothing imports, smuggling through free zones has partially exposed domestic production to foreign competition. Tariffs on clothing items are as high as 70% and immediate removal of these tariffs would threaten this industry, particularly that it will have to use relatively expensive fabrics woven domestically according to EU/FTA requirements. Thus their liberalization should lag behind that of fabrics to allow this industry to adapt to the changing external conditions.

The prospects for growth in this area are quite promising in terms of production and exports. Opportunities for EU and local private investment exist in Egypt's free zones and new industrial areas (such as the Tenth of Ramadan and Sixth of October), where modern industrial infrastructure, tax holidays, preferential customs duties, and access to technical vocational training for workers provide attractive incentives to producers. European

producers are already taking advantage of free zones in El-Ameriya to export clothing and fashion sportswear to France, Germany, the UK and even the US

Private sector activity in this domain is expanding, and encompasses a diverse mix of products including suits, trousers, T-shirts, knitwear, underwear, men's, women's and children's clothing, carpets and curtains. The partnership agreement would enhance such activities by providing improved access to the best international fashion design, production techniques, accessories, patterns, dyes and finishes as well as marketing and advertising services. This could significantly improve competitiveness of Egyptian products internally and externally. It may further create niches among more affluent Egyptians and abroad for designer and brand-name items produced under license in Egypt and marketed under international labels. To succeed within this agreement, distinct and differentiated Egyptian products must be created for their own market niches.

Liberalization of trade in garments in the WTO context—as opposed to the EU agreement—is likely to threaten this domestic public sector monopoly by opening the market to cheaper products from Central and Eastern Europe, Turkey, and East and South Asia. Increased competition will compel public sector firms to enhance productivity by improving supervision, reducing waste, and improving quality control. Further reducing the cost of raw materials by upgrading the weaving process would improve their competitiveness vis-à-vis cheaper sources of garment supplies. EU garments, even if admitted duty-free, are not likely to be a serious threat to Egyptian garment-making given their high costs. However, insofar as prices for garments are lower than in Egypt, the threat of trade creation will be an additional spur to Egyptian producers to strive for greater efficiency and reduction of production costs, and to pursue joint ventures with EU producers.

Other Necessary Changes. Changes of a more general nature must also be implemented to face the preferential opening towards EU markets. Some relate specifically to the structure of the textile industry and more particularly to that of the public textile sector; others involve reforms and restructuring of a more general nature. Over the 1986-92 period, in an effort to regain international competitiveness in textiles, the government launched a number of reforms. These included measures to increase cotton yields and production, freeing of cotton trade and textile export regulations, investment in new plants, and measures to increase profitability of state-owned factories. The use of synthetic fibers, particularly polyesters, to make modern blends is also being encouraged.

Public investments directed to modernizing and upgrading the industry were heavily concentrated in spinning. This led to overcapacity and to imbalances between various stages

of production.³⁴ The global recession in textile markets, together with inflexibility in production and pricing decisions led to an accumulation of inventories (mostly of 30 count yarns) and a loss in competitiveness on the international market. Stocks are gradually being reduced through use in the weaving industry, but this is not sufficient to eliminate them. Moreover, the fabrics that are produced do not meet the needs of the local private garment industry as they are too expensive given their quality. As noted earlier, public sector garment manufacturing is compelled to use these fabrics, thus incurring losses in the process.

The excessive integration of the spinning and weaving processes and in many cases of the garment manufacturing in public sector companies reduces the flexibility in responding to rapidly changing market conditions and warrants decentralization of various production units and processes within each public sector company. This requires dismantling these huge entities into smaller independent production units to avoid cumulation of problems and their transfer to various units within the same company.³⁵ Disintegration of these large textile mills is also important for their effective privatization.

Another acute problem within this sector relates to the overstaffing of public textile companies which hinders their modernization without creating social and economic disruption. The EU/FTA may provide an opportunity to employ this excess labor productively in the highly labor intensive garment manufacturing stage, provided the necessary measures for improving patterns, designs and finishing are implemented.

Finally, there is a need to reduce costs and improve the quality of support services. A recent survey indicates that in knitwear Egyptian manufacturers generally require a lead time of two to five months compared with only 15 to 25 days for firms from Brazil. These delays, which are in part the result of administrative “red tape” barriers, impact negatively on export performance. Developing an up-to-date infrastructure for information on international markets and export channels is an essential prerequisite for improving world market access. Lack of appropriate and reliable information leads to weak marketing capabilities and inability to respond quickly to changes in demand in the international market. Removal of such obstacles would significantly improve the investment climate not only in textile activities but more generally in all production activities.

5. Concluding Remarks

³⁴ ‘Assessment of Potential for Liberalization and Privatization of the Egypt Cotton Textile Subsector’, Study by Chemonics International, July 1993, submitted to the Textile Industries Holding Company, Egypt and to USAID/Cairo.

³⁵ See for example some Far Eastern countries experience as in: Meyanathan, S.D. and J. Ahmed: “Managing Restructuring in the Textile and Garment Subsector, An Overview”, in *Managing Restructuring in the Textile and Garment Subsector, Examples From Asia*, EDI, World Bank, 1994, pp. 14-15.

Egyptian textile and clothing manufacturing and exports are mostly constrained by domestic factors rather than by external conditions (market access). Egypt appears to have good export prospects in a wide array of products, ranging from cotton yarns and fabrics to ready made garments and other made-up textiles. These prospects seem to be higher in EU markets than in other markets. However, this industry has traditionally been sheltered by escalating and high tariff and nontariff barriers. This has allowed inefficient production to develop at all levels of the industry. The assessment of efficiency in this industry has been based on public sector data. Although there are indicators that the private sector' performance has been better than that of the public sector, particularly in exports, high protection has perpetuated these inefficiencies all over the economy.

With increased trade liberalization resulting from implementation of the UR agreements and a free trade area with the EU, textile and clothing producers in Egypt will enjoy increased access to external markets. They will also face the challenge of domestic liberalization. This will require reform and restructuring within the industry as well as in the overall economic system. The main focus should be on increasing the value added of these activities by changing the product mix towards products with higher unit value. This has always been the case in South and East Asian countries which shifted increasingly to manufacture higher unit value products to compensate the quota restrictions on their exports to EU and US markets.³⁶ A complementary line of action is to seek to reduce unit costs by improving supervision, labor standards, control over waste, and quality control.

In the area of spinning, both input and output mixes must be adjusted and firms allowed freedom to choose the least-cost input mix, using imported cottons for spinning yarns of 40 count or less and Egyptian varieties of higher-count yarns. To reduce cost further by reducing cotton waste and defective output, technical assistance from EU spinners should be sought. Developing blends of cotton and synthetic fibers is another avenue to be pursued. In principle, tariff protection for this activity could be phased out within two years.

In weaving, increasing value added through developing dyeing, printing and finishing processes is essential. Improving quality and reducing cost are also crucial, as the agreement's rules of origin will not allow preferential access of exports of clothing and other made-up textiles to the EU unless made of domestically produced fabrics. The EU partnership agreement can facilitate access to patterns, improved dyes, and know-how through technical assistance, joint ventures or subcontracting. Increasing capacity in weaving is necessary but only feasible in the medium term. Thus there may be a case for extending the

³⁶ See for example: Hal Hill: "The Indonesian Textiles and Garments Industries Structure, Developments, and Strategies" in Meyanathan, S.D., *op. cit.*, pp. 150-2.

period of tariff protection to this activity beyond that given to spinning. But it should be clear to weavers that this protection is only temporary and will be phased out within three to four years.

Garment-making appeared to be highly disadvantageous in the public sector, but quite profitable in the private sector, as witnessed by the large increase in output and exports. The more flexible private sector has reduced its costs by using low-priced imported fabrics, and has modernized garment making through improving design, production techniques and accessories. Prospects in this domain are very promising, but are constrained by availability of low-priced domestically produced fabrics. This further strengthens the argument for upgrading and enlarging the weaving process.

Restructuring the public sector companies is also a necessity. Dismantling these large public entities into smaller decision units is important for increasing their efficiency and reducing the problems associated with diseconomies of scale. This will further increase their flexibility and capacity to respond to changing internal and external environment.

These lines of action, together with more general reforms aimed at modernizing the economy, updating economic infrastructure, promoting private investment, reducing administrative barriers and enhancing competition will reduce transactions costs and boost industrial activities. Transparency of economic policies to be followed to liberalize the economy is essential. Producers in both the public and private sectors should be given clear signals as to the direction of economic policy.

The question should not be whether or not to liberalize or to integrate in the world economy or, transitionally, with the Mediterranean region, and at which pace. It should be rather what to do to help update and restructure Egyptian industries to increase their competitiveness and allow them to face the challenge of increased globalization and regionalization of the world economy.

Annex

1. Methodology for the calculation of DRC

DRC is calculated as follows:

$$\text{DRC} = \frac{\text{Economic Cost of Primary Factor Inputs}}{(\text{Value of Output} - \text{Value of Traded Inputs}) \text{ at World prices.}}$$

The denominator may be expressed either in foreign currency (\$) or in national currency (L.E.). In the first case, computed DRCs are to be compared to the exchange rate: if DRC is higher than the exchange rate, we conclude that the activity is not efficient as it would be cheaper to import the commodity than to produce it domestically; the domestic activity is paying more LE per \$ worth of production than it would for imports. If the denominator is expressed in the national currency, then the DRC for any efficient activity should not exceed one. In brief, DRC value may fall into one of 3 ranges:

DRC > 1, then the activity is not advantageous to the economy, as it is inefficient.

1 > DRC > 0, the activity is advantageous.

0 > DRC, then the activity is disadvantageous, as it involves foreign exchange loss since the value added at world prices would be negative. These cases are referred to as NIVA.

The calculation of DRC requires the measurement of both value added at world prices, and economic opportunity costs of primary factor inputs:

1.1 Value added at world prices is defined as the difference between production and tradable inputs each at world prices.

1.1.1 Valuation of Production. Production of any product is defined as the output designated for sale-whether in the local or export market-in addition to the amount produced and used internally by the companies to produce another product. For example, total production of yarn in a company is equal to the amount available for sale and the amount used in the weaving process. Most of the company reports provide information on these two magnitudes . However, where they were not provided, we used an average input-output ratio computed from other companies to determine total production.

As for the valuation of products at world prices, all the reports of individual enterprises indicate the export prices (fob) of products actually exported. These prices were used to

evaluate the company's total production of each product, although in some cases, these export prices were for different (better) qualities, which imply that the world value of the products is to some extent overestimated.

1.1.2 Valuation of Inputs. As for inputs, a major problem is to allocate common inputs to individual products within each company, as all the companies are integrated units, and their accounts do not differentiate between various industrial processes. Direct inputs were easily allocated: cotton is allocated to cotton yarn, yarn to fabrics, fabrics to ready - made clothing and other made-up products. As for other inputs, such as electricity, fuel, packaging material, spare parts, chemicals, they were allocated to each product in proportion to the product share in the company's total production at domestic price. This procedure was also applied to allocate the costs of factors of production (labour, capital and land).

The valuation of inputs at world prices was as follows:

For tradable inputs, most of the company reports included the c.i.f. prices of most imported inputs. In cases such information was not available, a conversion factor (the ratio of average c.i.f. price to average domestic price) was applied to similar inputs falling within the same tariff category. On the other hand, export prices were applied on the exportable inputs, mainly cotton and fuel.

For cotton, companies use different varieties of cotton each at a fixed price. Some of the companies' reports provide figures about the quantity used and domestic price of each variety. A weighted average export price has been derived (from CAPMAS foreign trade statistics) and applied to cotton inputs in different companies.

As for fuel, whereas some reports included detailed data on the fuel component, others provide an aggregate figure for fuel without specifying its components. Therefore, the detailed information was used to derive a weighted average price for fuel, using CAPMAS statistics, to be applied to all companies.

As for electricity, the report of Egypt Electricity Authority for 1995 indicates that about 50% of the costs of producing electricity was fuel, while the other 50% could be approximately equally divided between labour and capital costs. Accordingly, half the domestic value of electricity used in the production activity was evaluated at its world price using again the CAPMAS fob price for fuel (mazout).The other half was treated as costs of primary factors and added to the numerator in its appropriate value.

1.2. Opportunity costs of primary factors of production

Labour costs. In the company reports, labour is divided into five groups: production workers industrial services, marketing, management and others. Only wages of production workers were used, assuming that they reflect their productivity and hence their opportunity costs. Wages include in-kind payments, bonuses and social security paid by the companies.

The opportunity cost of capital input consists of both the rate of return on capital expressed by the shadow rate of interest and the annual rate of depreciation of the capital assets. The financial liberalization implemented since the early nineties has resulted in interest rates that reflect to a large extent the economic rates. We assumed that shadow interest rate is about 15%, which is slightly higher than the average prevailing rate in 1995 for investment certificates or the long term treasury bills about 12%. As to depreciation, figures provided by the companies were used, they represent a very small fraction of total cost.

Finally, shadow rent on land was arbitrarily calculated as 15% of the book value of land included in the company reports, which is highly underestimated as it ignores the sharp increase in land value in the areas where these companies are located.

2. Calculation of the ERP due to tariffs

$$ERP = \frac{DVA - WVA}{WVA} \times 100 = \left(\frac{DVA}{WVA} - 1 \right) \times 100$$

where WVA, world value added, is the value added estimated using the f.o.b. and c.i.f. prices provided by the companies themselves, calculated as already described.

DVA, value added at domestic prices, is calculated as the difference between output and tradable inputs at domestic prices. Domestic prices are assumed to be equal the world price + the amount of tariff per unit.

$$P_d = P_w + t.$$

ERP has 3 ranges of value.

$ERP > 0$, the activity is protected and attracts resources.

$0 > ERP > - 00$, the activity is discouraged.

$- 100 > ERP$, the activity is highly protected because value added at world prices is negative.

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