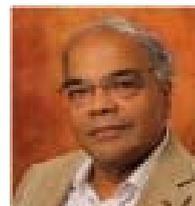# Repositioning in the Global Apparel Value Chain in the Post-MFA Era:

Strategic Issues and Evidence from Sri Lanka

PREMA-CHANDRA ATHUKORALA
RAVEEN EKANAYAKE

INSTITUTE OF POLICY STUDIES OF SRI LANKA

Prema-chandra Athukorala is a Professor of Economics at the Arndt-Corden Department of Economics, Crawford School of Public Policy, Australian National University. He is an Honorary Professorial Research Fellow at the School of Environment and Development, University of Manchester and has been a consultant to the World Bank, Asian Development Bank, International Labour Organization (ILO), United Nations Conference on Trade and Development (UNCTAD), United Nations Industrial Development Organization (UNIDO), Economic and Social Commission for Asia and the Pacific (ESCAP), and the government of Sri Lanka.

Raveen Ekanayake is an Economist by training with research interests in trade, foreign direct investment, and private sector development. He is a Research Officer, currently attached to the Industry, Competiveness and Regulatory Policy Unit of the IPS.

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Abstract

A widely-held view in the lead-up to the abolition of the Multi Fibre Arrangement (MFA) quotas in 2005 was that, in a quota-free global market, large low cost countries (in particular China and India) and countries in proximity to the major markets (such as Mexico, Turkey and countries in the European periphery) would crowd out export performance of the other developing countries. The post-MFA world apparel trade has, however, brought in many surprises: a number of 'predicted losers' have maintained or increased their market shares, while some 'predicted gainers' have performed poorly. This paper aims to broaden our understanding of the determinants of these inter-country differences through a case study of the export-oriented apparel industry in Sri Lanka. The evidence suggests that apparel is a bundle of differentiated products, not a homogenous commodity as commonly assumed by the trade flow modellers, and individual exporting countries have room for carving out a niche in specific products. Sri Lankan apparel industry has managed to maintain growth dynamism through specialization in fashion-basic products, in particular intimate apparel (lingerie) and upmarket casualwear.

සාරාංශය

2005 දී බහු - කෙඳි වැඩ පිළිවෙළ (MFA) යටතේ කෝටා ක්‍රමය අහෝසි කිරීමට පෙර පුළුල්ව පැතිරී තිබුණ අදහසක් වූයේ කෝටා ඉවත් කරන ලද ගෝලීය වෙළඳ පොළ පිරිවැය අඩු විශාල රටවල් (විශේෂයෙන් චීනය සහ ඉන්දියාව) හා ප්‍රධාන වෙළඳ පොළට ආසන්නයේ පිහිටි රටවල් (මෙක්සිකෝව, තුර්කිය හා යුරෝපීය රටවල් ආසන්නයේ පිහිටි රටවල්) අනෙකුත් සංවර්ධනය වන රටවල අපනයන ක්‍රියාකාරිත්වය ඉවත් කර දමනු ඇතැයි යන්නයි. කෙසේ වුවත් පශ්චාත් MFA සමයේ ලෝක ඇඟළුම් වෙළඳාමේ අනපේක්ෂිත ප්‍රවනතා මතු කෙරිණ. 'හානියට පත්වෙනු ඇත'යි කී බොහෝ දෙනකුට වෙළඳ පොළ තම කොටස පවත්වා ගැනීමට හෝ වැඩි කර ගැනීමට හැකි වූ අතර 'වාසියක් ලබනු ඇතැයි' කී සමහර අයගේ අපනයන ක්‍රියාකාරිත්වය බෙහෙවින් දුර්වල මට්ටමට පත් විය. ශ්‍රී ලංකාවේ අපනයන ඇඟළුම් කර්මාන්තයේ සිද්ධි අධ්‍යයනයක් තුළින් රටවල් අතර පවතින මෙම වෙනස්කම්වල නිර්ණායක තේරුම් ගැනීම පුළුල් කිරීමට අදහස් කෙරේ. එම තොරතුරු වලින් පෙනී යන ආකාරයට වෙළඳ කටයුතු ගලනයවීමේ රටා පිළිබඳ ආදර්ශ ගොඩ නගන්නන් සාමාන්‍යයෙන් සිතා ගන්නා ආකාරයට ඇඟළුම් කර්මාන්තය සමජාතීය වෙළඳ හාණ්ඩයක් නොව විවිධ වූ නිෂ්පාදනවල එකතුවකි. එක් එක් අපනයන රටකට නිශ්චිත නිෂ්පාදන සඳහා විශේෂිත තැනක් ගොඩ නගා ගැනීමට අවකාශයක් පවතී. ශ්‍රී ලංකාවේ ඇඟළුම් කර්මාන්තය මෝස්තර පදනම් නිෂ්පාදන, විශේෂයෙන් දුහුල් යට ඇඳුම් සහ වැඩි මිලක් ගෙවන වෙළඳ පොළට ලිහිල් ඇඳුම් සැපයීමට විශේෂ ප්‍රවීනත්වයක් හිමි කර ගැනීමෙන් වර්ධන ගතිකත්වය පවත්වා ගැනීම කළමනාකරණයට සමත්ව ඇත.

சுருக்கம்

கோட்டா அற்ற நிறந்த உலகலாவிய சந்தையில், 2005 ஆம் ஆண்டில் பல்லின - நார்
ஏற்பாடுகளின் (ஆகுயு) கோட்டாக்களின் இல்லாதொழிப்புக்கான முன்னெடுப்பினை பரந்த
அளவில் மேற்கொண்டமைக்கு பங்காளிகளான பாரிய குறைந்த கிரயத்தினைக் கொண்ட நாடுகள்
(குறிப்பாக சீனா மற்றும் இந்தியா) மற்றும் பாரிய சந்தைகளைக் கொண்ட நாடுகளுக்கு
அண்மித்த சந்தைகளைக் கொண்ட நாடுகள் (மெக்சிகோ, துருக்கி மற்றும் ஐரோப்பிய எல்லையில்
உள்ள நாடுகள்) ஏனைய அபிவிருத்தியடைந்து வரும் நாடுகளின் ஏற்றுமதி முன்னேற்றங்களை
பின்னடையச் செய்யக் கூடும் என்பது பரந்த ஒரு கண்ணோட்டமாகக் காணப்பட்டது. கோட்டா
முறைமை ஒழிக்கப்பட்டதன் பின்னரான காலத்தில் உலக ஆடைத்தொழில் வர்த்தகம்
எவ்வாறாயினும் பல வியத்தகு அதிசயங்களை நிகழ்த்தியுள்ளது : "நட்டம் அடையக் கூடும்" என
எதிர்வு கூறப்பட்ட பலர் தங்களுடைய சந்தைப் பங்கினை பேணிக் கொள்வதற்கும் அல்லது
அதிகரித்துக் கொள்வதற்கும் முடிந்துள்ளதுடன் அதே வேளை "இலாபம் அடையக் கூடும்" என
எதிர்வு கூறப்பட்ட சிலர் குறைவான செயலாற்றுகையினையே வெளிப்படுத்தியுள்ளனர்.
இலங்கையில் ஏற்றுமதியை முனைப்பாகக் கொண்ட ஆடை தொழில் ஏற்றுமதிக் கைத்தொழில்
தொடர்பான ஆய்வுக் கற்கையின் ஊடாக நாடுகளுக்கிடையேயான முரண்பாடுகளை ஆய்ந்தறிந்து
கொள்வதற்கான எமது புரிந்துணர்வினை விரிவு படுத்திக் கொள்வதற்கும் இந்த ஆவணம்
குறிக்கோள் வைத்துள்ளது. பல்வேறு மாற்றங்களுக்கு உட்பட்ட ஒரு தொகுதியாக ஆடைகள்
காணப்படுவதுடன் மாறாக, இவை வர்த்தகப் போக்கு மாதிரிகளின் மூலம் பொதுவாக ஊகித்த
பிரகாரம் தனித்துவமான உற்பத்தியன்று அத்தோடு குறிப்பிட்ட பொருட்களில் தனித்துவமான
வடிவமைப்புக்களை மேற்கொள்வதற்கு தனிப்பட்ட ஏற்றுமதி நாடுகளுக்கு வாய்ப்பு உள்ளன என
சான்றுகள் அபிப்பிராயம் தெரிவிக்கின்றன. புதிய வடிவமைப்பினை அடிப்படையாகக் கொண்ட
குறிப்பாக ஆடைகளுடன் நெருங்கிய தன்மையைக் கொண்டதும் சந்தையில் ஓய்வு நேர
ஆடையில் உயர் சந்தையினையும் சிறப்புத் தேர்ச்சியின் ஊடாக இலங்கையில் ஆடைக்
கைத்தொழிலில் துறையில் வளர்ச்சிப் போக்கினை பேணிக்கொள்வதற்கும் முடிந்துள்ளது.

1. Introduction[1]

The geography of global apparel trade has been in a state of flux following the termination, with effect from 1 January 2005, of the export quotas imposed under the Multi Fibre Arrangement (MFA). The widespread expectation in the lead-up to the MFA abolition was that in a quota-free global apparel market the large low-cost countries (such as China and India) and countries in close proximity to the major markets (such as Mexico, Turkey and some Eastern European countries) would gain market shares at the expense of other countries where the apparel sector had grown under quota protection.[2] The actual outcome over the past four years has, however, brought in many surprises. As predicted China, has become by far the biggest gainer and many countries in Africa and Latin America whose 'export competitiveness' relied heavily on the quota system have lost market shares, but a number of countries such as Bangladesh, Cambodia, Sri Lanka, Vietnam, Indonesia, Honduras, Nicaragua, and Peru have maintained or increased market shares. Contrary to the expectations, sourcing of apparel by retailers in the US and EU from regional suppliers has decreased in the face of rapid growth in procurement from low-cost Asian countries. There have also been contrasting patterns in the geographic profile of exports from individual countries, with market share losses in some importing countries compensated by an increase in exports to other destinations (Staritz 2011; Gereffi & Frederick, 2010).

Understanding these inter-country differences in export performance is vital for crafting national policies for facilitating adjustment and industrial upgrading in the clothing industry in the post-MFA era. This paper aims to contribute towards this end through a case study of the phasing out of the MFA quotas on structural adjustment in the clothing industry in Sri Lanka. Much has been written about the complexities of country- and product-specific system of MFA quotas which has shaped global trade patterns and export performance of individual exporting countries. However, there is a dearth of empirical evidence of the experiences of individual countries in the post-MFA era. Sri Lanka provides an interesting subject for a case study of the subject at hand. For over three decades, Sri Lanka's apparel industry has remained deeply embedded within the global clothing supply chain. The industry has managed to maintain its world market share, in spite of the disappearance of assured market access provided by export quotas under the MFA and significant increases in manufacturing wages relative to the other low-wage countries in the region. A number of large Sri Lankan firms have consolidated their position in world apparel trade as credible suppliers to leading brand name owners in the world apparel trade.

> **As predicted China, has become by far the biggest gainer and many countries in Africa and Latin America whose 'export competitiveness' relied heavily on the quota system have lost market shares, but a number of countries such as Bangladesh, Cambodia, Sri Lanka, Vietnam, Indonesia, Honduras, Nicaragua, and Peru have maintained or increased market shares.**

[2] For a comprehensive survey of the relevant literature, see Nordås et al. (2009).

In order to understand how the MFA abolition impacts upon the export performance of a given country, it is necessary to go beyond the standard trade data analysis and probe the country experience in the context of changing governance patterns of the global apparel value chain. For this purpose, we draw on the global value chain (GVC) framework developed by Gereffi and others, which has become the workhorse of multi-disciplinary studies on developing countries' engagement in international division of labour within labour-intensive consumer goods industries (Gereffi, 1994 and 1999; Hamilton & Gereffi, 2009; Bair, 2009).

The study is based on data pieced together from various secondary sources and information gathered from field research carried out in Sri Lanka in November 2012 and July-August 2013. The secondary sources include unpublished investment approval and monitoring records of the Sri Lanka Board of Investment; unpublished exporter-level Customs data disaggregated by commodity, destination and the mode of shipment; UN Comtrade database; the news clipping collection at the Institute of Policy Studies, Colombo; and company websites. As part of the field research, face-to-face interviews were conducted with top executives of eleven apparel exporting firms of varying sizes, and senior officials of the Joint Apparel Association Forum (JAAF), Ceylon Chamber of Commerce, Sri Lanka Export Development Board, and the Ministry of Industry and Commerce.

The paper is structured as follows: Section 2 introduces the GVC framework. Section 3 provides an overview of the way MFA moulded the world apparel trade for over thirty years and the challenges faced by exporting countries during the post-MFA era. Section 4 provides an analytical narrative of the evolution of Sri Lanka's engagement in the apparel value chain, focussing specifically on the role of the international buyers and the role of specific socio-economic factors which shaped the relationship between international buyers and the domestic apparel producers. Section 5 probes Sri Lanka's performance in apparel exports, paying particular attention to the emerging trends and patterns following MFA abolition. The key findings and inferences are summarised in the final section.

2. GVC Framework

The global value chain (GVC) framework is built around the role of the lead firms as the key driver in the formation and shaping of global 'value chain' in 'demand responsive industries'. It postulates that global sourcing policies of lead firms shape production and trade patterns. The success of a developing-country's firms entering export markets and achieving industrial upgrading-movement from low-value to increasingly high-value activities in the global value chain -depends crucially on the links they forge with lead firms. The term 'value chain' encompasses the entire range of activities required to bring a particular product to the market. A demand-responsive industry is one that is economically organised 'backward' in direct response to the demand from global buyer of the final product (the

'lead firms'). Using information on final demand collected through point-of-sales information or other means such as focus group surveys, the lead firm locates manufacturers that can produce the good at the quality and quantity levels required by the consumers (Hamilton & Gereffi, 2009). The standard labour intensive consumer goods industries such as clothing, toys, sport goods and footwear are the prime examples of demand-responsive industries.

In its application to the global apparel industry, the GVC framework specifies four sequential phases in the process of industrial upgrading: cut, make, and trim (CMT) (simple assembly); Original equipment manufacturing (OEM) (package contracting); Original design manufacturing (ODM) (full-

packaging); and original brand manufacturing (OBM) (Table 1). Moving from CMT to OBM is considered the major upgrading challenge faced by a firm in the apparel value chain. This upgrading trajectory involves acquiring an expanding set of capabilities in filling orders placed by the lead firms, which includes making samples, procuring or manufacturing the needed inputs, meeting international standards in terms of price, quality and delivery, and finally packing and shipping the finished goods.

The full-package role requires manufacturers to coordinate the entire manufacturing process, including the procurement of fabric and other inputs. In addition to experience gained and the strong links developed with the buyers though

Table 1
Firm/Country Capabilities within Global Clothing Value Chain

Capability	Nature of Operation
Cut, make and trim (CMT) assembly	A system of subcontracting in which the manufacturer is engaged in cutting fabric, sewing and final trimming of apparel. Designing, procurement and supply of fabric and other inputs, and shipment of the final product is handled by the foreign buyer ('lead firms') or his agent.
Original equipment manufacturing (OEM) (Package contrasting) specifications,	The manufacturer engages in sourcing and financing of piece goods (fabric), producing according to customer and packing for delivery to the buyer. The lead firm usually specifies material procurement and handles shipment.
Original design manufacturing (ODM) or full package supplier (full package manufacturing)	The manufacturer carries out all steps in the production of a given brand, including design, fabric and other input purchase, cutting, sewing and trimming, packaging and delivery.
Original brand manufacturing (OBM)	The manufacturer by 'own brand' production, without depending on the lead firm.

Source: Gereffi 1999; Gereffi and Frederick 2010; and Hamilton and Gereffi 2009.

OEM, there are two strategies that would help a firm sustaining its ODM status. The first strategy is to integrate the production process vertically (creation of backward linkages) to gain a competitive edge of improved quality and timely delivery of fabric and other ancillary inputs. In particular, since fabric is the most important input in the clothing chain, virtually all countries that want to develop full package capabilities need to develop a strong textile industry. The second strategy is the creation of cross-border triangular manufacturing arrangements by setting up production bases in other countries, to gain competitive advantage from differences in cost of production (mainly labour cost) in order to reap relative cost advantages and preferential market access.

The OBM status, which entails the firm developing its own brands, is the most advanced stage of industrial upgrading. It requires design and marketing capabilities in addition to the preconditions required for achieving ODM status. Transition from ODM to OBM status is difficult, because of complex barriers to entry into developed country markets. For many firms in developing countries the viable strategy for achieving OBM would be to begin with brand development for the domestic maker or markets in neighbouring developing countries (Neidik and Gereffi, 2006).

The way the relationship between the manufacturing firm (the supplier) and lead firms shape industrial upgrading of apparel producing firms in a given country depends on the nature of activities the latter performs within the global value chain. To understand the nature of this relationship, the GVC framework comes up with a four-way typology of lead firms: mass retailers (e,g. Walmart, K-mart, Sears, Dillards, C&A), speciality retailers (L Brands,[3] Gap, Marks & Spencer, Mango, Abercrombie), brand marketers (Nike, Polo, Hugo Boss, Gucci, Victoria's Secret, Ralph Lauren, Inditex (Zara), Hennes & Mauritz (H&M)), and brand manufacturers (Wrangler, Levi's, van Heusen, VF). Mass retailers normally do not directly deal with the manufacturers (i.e. do not involve in direct sourcing); they predominantly source through value-chain intermediaries (alternatively known as sourcing agents, international buyers, sourcing companies, jobbers and packagers). The other three types use a mixture of direct sourcing and relying on value-chain intermediaries, with brand marketers and brand manufacturers generally placing a greater weight on direct sourcing compared to speciality retailers.

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[3] Formerly known as The Limited and Limited Brands.

Compared to sourcing through intermediaries, direct sourcing generally involves greater transmission of capabilities from the lead firm to the manufacturer, facilitating industrial upgrading.

In the early GVC literature, the main (if not sole) focus was on the buyer-producer interaction- the role of the lead firm in placing the producers on a potentially dynamic learning curve. Recent applications of GVC framework have increasingly emphasized the importance of analysing this key linkage within the broader international, and national, institutional and policy contexts. On the international front, trade policy changes and regional or global trade preference schemes are an integral part of the operational environment within which the buyers operate. On the domestic front, historical legacies such as colonial links, trade and foreign investment policy regimes, labour market reforms, the quality of trade-related infrastructure have direct implications for the entry of foreign buyers and determination of local firms' capabilities in the upgrading process (e.g. Pipkin, 2011; Tewari, 2008a; Feenstra and Hamilton, 2006; Neidik and Gereffi, 2006).

Compared to sourcing through intermediaries, direct sourcing generally involves greater transmission of capabilities from the lead firm to the manufacturer, facilitating industrial upgrading.

3. Global Context: The MFA and After

Apparel industry, given the labour-intensity of production and low entry barriers (low fixed cost and simple/well-diffused technology), is the quintessential 'starter' industry of export-oriented industrialisation in developing countries (Jones, 2006).[4] However, for over three decades from 1974, developing countries' ability to enter this industry purely based on their comparative advantage remained severely constrained by a complex system of country and product specific export quotas imposed by the importing (developed) countries under the Multi Fibre Arrangement (MFA).[5]

The introduction and the subsequent tightening of MFA quotas on exports from the three newly industrializing countries (NIEs) in East Asia - Hong Kong, South Korea and Taiwan -- played an important role in the global spread of clothing industry. In response to binding MFA quotas, entrepreneurs from these countries (especially those from Hong Kong) moved production to low-wage countries in Asia and subsequently to even high-cost locations in Latin America and Africa. This was, however, only a qualified, short-run benefit for the these new exporting countries. Eventually, export restraints were imposed on these countries too at levels well below those enjoyed by established suppliers, effectively short-circuiting the industrialisation process at a very early stage.

The MFA severely distorted the global spread of clothing industry in two ways. First, quota restrictions were specifically targeted at developing countries, other than those imposed on a few apparel products exported to the USA from Japan (Srinivasan, 1998). This resulted in a notable reallocation of world production from quota-constrained developing-country

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[4] In common usage, textile and apparel are often lumped together as a single industry. However, it is important to treat the two industries separately for the purpose of a meaningful discussion of their role in the process of economic development. Textile (yarn and fabric) production, in contrast to apparel production, is more capital and skill intensive, and thus production remains largely confined to high-income (developed) or upper-middle income countries. The focus of this paper is on apparel, although textile receives attention in the discussion on industrial upgrading within the global apparel value chain.

[5] For comprehensive accounts of the post-war trade restrictions in world textile and clothing trade and the MFA see Keesing and Wolf 1981 and Srinivasan 1998.

suppliers to relatively low-cost countries in the developed world such as Italy, Portugal and Spain, which were high-cost countries by the developing country standards. Second, there were significant inter-country differences in restraint levels, with a bias in favour of first-comers and the politically powerful (Keesing and Wolf, 1988). The three East Asian trio were able to maintain their market shares even after their comparative advantage had eroded because the 'quota rent' was an effective buffer against escalating domestic cost pressure. By contrast, quotas were imposed on new exporting countries purely based on initial rapid growth regardless of the low starting base. For instance, countries like Bangladesh and Sri Lanka had to face stringent quota restrictions at the very early stages of export expansion, despite their very low shares in total clothing imports to the US and the European Union (EU).

As part of the Uruguay Round of world trade negotiations concluded in 1994, the MFA was replaced by the Agreement on Textiles and Clothing[6] (ACT), which was designed to incorporate textile and clothing trade into the General Agreement on Tariffs and Trade (GATT) so that protection could only take the form of non-discriminatory tariffs. The ACT put in place a program for the elimination of MFA quotas in four stages in 1995, 1998, 2002 and 2004. In the implementation process, most importing countries, however, did not go beyond the minimum liberalisation required at the first three stages, retaining the bulk of quota restrictions to the very end of the transition period (31 December 2004). Given this 'back-loading' in the liberalisation process, the final removal of quotas

with effect from 1 January 2005 represented a systemic trade policy change that entailed considerable adjustment for all stakeholders. Some quantitative restraints on apparel exports from China ('China safeguards') continued to remain in place in the USA, EU and Turkey after this date, as permitted under the China WTO accession protocol. These safeguard quotas were also eliminated by the end of 2008.

Following the phasing-out of MFA quotas and the ending of 'China safeguard', international buyers are now free to source textiles and apparel from any country, subject only to the system of tariffs. In the absence of quota protection, cost competitiveness is much more important in determining export success in the post-MFA era: 'quota rent' no longer distorts market prices. At the same time, since procurement practices are no longer constrained by country-specific quotas, buyers would demand many more attributes in addition to price, such as product variety, quality and timely delivery. Also, since there are no limits on the amount procured from a given country (or a firm), scale economies (the volume factor) could counterbalance the export competitiveness based purely on cost competitiveness. Thus global apparel production is likely to become more concentrated among the most capable firms.

The MFA quotas prompted lead firms in the US and Europe to rely heavily on value-chain intermediaries (sourcing agents) for coordinating the flow of orders to a large number of apparel factories around the world. Following the abolition of quotas, the lead firms have started to

Since procurement practices are no longer constrained by country-specific quotas, buyers would demand many more attributes in addition to price, such as product variety, quality and timely delivery.

aggressively restructure their sourcing patterns to procure from fewer efficient suppliers worldwide and to develop long-term strategic partnership with core suppliers. This has also resulted in the setting up of local sourcing offices by some major buyers, bypassing their erstwhile sourcing agents. Some lead firms have begun moving their sourcing offices (involving local sourcing staff and quality control inspectors) closer to their main apparel suppliers (mainly Asia), and some have moved the design process and material

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[6] In this paper we use the terms 'clothing' and 'apparel' interchangeably.

The importance of non-price factors in export success in the post-MFA era has been further elevated by the ongoing process of 'lean retailing'

selection offices as well (Fung et al., 2007; USITC, 2012).

The importance of non-price factors in export success in the post-MFA era has been further elevated by the ongoing process of 'lean retailing', a business strategy which has become widespread in apparel trade in developed countries since the mid-1990s (Abernathy et al., 1999 and 2000; Evens and Harrigan, 2005; Harrigan and Barrows, 2009). Lean retailing involves replenishing the range of clothes on offer on the shop floor in very short cycles (rather than seasonally, as was traditionally done), while defraying the inventory risk by holding low stocks.[7]

Lean retailing calls for close cooperation between the supplier and the buyer in order to achieve the desired levels of quality and reliability, and timeliness of delivery. For products subject to rapid replenishment, direct costs related to labour, textile inputs, shipping and tariffs are balanced against the cost associated with lead times, inventory maintenance, and their attended risks. The retailers exchange point-of-sales information with their suppliers, requiring them to replenish orders, in order to minimise inventory cost while ensuring continuous supply on the shopfloor. In the process of lean retailing, "suppliers' warehouses and distribution centres act in many ways as virtual warehouses and distribution centres for the retailer" (Abernathy et al., 1999, p. 16). The buyers also increasingly require suppliers to undertake tasks such as labelling, packaging, and bar-cording which were traditionally done in the buyer's warehouses or distribution centres (Abernathy et al., 2000; Fung et al., 2007). Suppliers therefore need to adhere to *flexible manufacturing*[8] in order to enable a swift response to changing demand, by cutting batch size and reducing inventories, while ensuring timely delivery.

A key determinant of a firm's success in flexible manufacturing is backward integration of the production process: domestic availability of high quality fabric at competitive prices, which reduces transport costs of inputs, time delays, and the management time needed to coordinate the fragmented supply chain (Audet, 2007). Countries located in proximity to major markets will also be at a considerable competitive advantage in terms of timely delivery, provided of course if the other preconditions such as political stability and the quality of trade-related infrastructure are met. A possible substitute for proximity in meeting timeliness is airfreight, but shipping by air is commercially viable only for high-value, light products (Evans and Harrigan, 2003).[9]

Another recent development, which has significant implications for lead firms' sourcing decisions in a quota-free apparel trade, is the NGO-led campaign in developed countries for imposing corporate social responsibility (CSR) norms (maintaining internationally accepted labour standards and meeting environmental standards) on developing-country exporters. Apparel industry has been at the forefront of the implementation of these norms because of the labour intensity of production with an overwhelming reliance on female labour, and the environmental sensitivity of the production process (energy usage and waste water generation). 'Social audits' at the factory level have become an important prerequisite for apparel buyers (in particular speciality stores) in placing orders (Amaeshi et al., 2008).

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[7] This business strategy is generally more prevalent in 'fashion-basic products'– basic apparel products with some fashion content (such as lingerie, sportswear and casualwear).

[8] Flexible manufacturing refers to the ability to customize a product, to produce to order, or shift quickly from production of one model to another on the same line in order to serve relatively small, specialized niche segments.

[9] L Brand , the big up-market women's clothing retailer in the US, adhere to a limit of 30 days for any order, frequently requiring to use airfreight as the mode of delivery (Fung et al., 2007, p. 2).

4. Expansion of the Sri Lankan Apparel Industry during the MFA Era

In Sri Lanka, commercial production of clothing began in the early 1960s. However, expansion of the industry remained severely constrained during the ensuing decade by a highly interventionist trade and industrial policy regime (Cuthbertson and Athukorala, 1990). Unlike the textile industry, which was dominated by state-owned enterprises, apparel production continued to remain entirely a private sector activity. But importation of yarn and fabric needed for apparel production remained under stringent licencing; and the SOE-dominated domestic textile industry had limited capability to meet the input requirements of the apparel industry. Moreover, during the period from 1970 to 1977, widespread nationalisation measures and threats, coupled with various economic controls, effectively marginalised the private sector in the economy. The 'quota-hopping' apparel firms from the East Asian trio, therefore, bypassed Sri Lanka, notwithstanding the country's intrinsic advantages such as the strategic location, availability of cheap and trainable labour, and trade links forged during the colonial era.[10]

Rapid growth of the export-oriented apparel industry in Sri Lanka began only after the economic liberalisation reforms initiated in 1977-79 and bolstered by a 'second wave' reforms in the first half of the 1990s. The initial reforms included phasing out of quantitative import controls, compression and reduction of the import duty structure, opening up to foreign investment, establishment of an efficient free trade zone (FTZ) scheme, and institution of a market-responsive, unified exchange rate. A guarantee against nationalisation of foreign assets without compensation was provided under the new Constitution of Sri Lanka adopted in 1978 The reforms of the early 1990s carried forward reform of trade policies (including abolition of import duties on textiles and yarn), freed up exchange control on current transactions, gave a major impetus to privatization and strengthened the policy framework for foreign direct investment, extended free-trade-zone privileges to export-oriented ventures in all parts of the country (Athukorala and Rajapatirana, 2000; and World Bank, 2004).

During the immediate post-reform years, the international news media dubbed Sri Lanka 'the new investment centre of Asia' (Far Eastern Economic Review, 23 October 1978, p. 13). This image was tarnished by the escalation of the separatist war from 1983. The Northern Province and large parts of the Eastern Province (which together account for one-third of Sri Lanka's total land area and almost 12% of the population) remained mostly cut off from the national economy. Even in the rest of the country, prospects for attracting foreign investment was seriously hampered by the lingering fear of sporadic attacks by the rebels. However, Sri Lanka continued to remain an attractive location for clothing and other labour intensive industries, which are typically characterised by short pay-back periods, because of the availability of cheap and trainable labour, and the liberal trade and investment policy regimes. There has been some backsliding from liberalisation reforms from about 2005, in particular after the end of the separatist war in May 2009 (Athukorala, 2012). However, the export-oriented firms continue to remain insulated from the distortion in the overall trade regime because of the EPZ scheme and a Temporary Import for Export Processing (TIEP) scheme, which provide exporters with access to imported inputs at international prices.

Quota-hopping apparel firms' response to the liberalization reforms initiated in 1977 was swift and remarkable. By 1982 there were 16 foreign invested enterprises (FIEs) operating in the country, of which 13 were from Hong Kong, the major developing-country exporter of garments at the time (Table 2). While MFA quota restriction was the major push factor, colonial trade and business ties seems to have given firms from Hong Kong an inside track on investing in Sri Lanka (Gereffi, 1999).

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[10] Sri Lanka's missed opportunities are vividly illustrated in a comparison with Mauritius, the remote India-ocean island state which had much less favourable initial conditions. A thriving export-oriented clothing industry had developed in Mauritius by the mid-1970s, with the involvement of investors from Hong Kong who came following the colonial trade roots to circumvent MFA quotas (Subramanian and Roy 2003; Gereffi, 1999). This was propelled by a free trade zone set up in 1969, which effectively insulated the export sector from trade restrictions and labour-market rigidities in the rest of the economy.

Table 2
Source Country Composition of Clothing Manufacturing Firms in Sri Lanka, 1982, 1994, 2002 and 2009

	1982	1994			2002			2009		
	Number of Firms	Number of Firms	Approved Investment	Planned Employment	Number of Firms	Approved Investment	Planned Employment	Number of Firms	Approved Investment	Planned Employment
Foreign invested enterprise	16	66	90.1	88.6	122	70.8	63.0	121	55.6	54.7
Developing countries	14	36	42.3	57.5	72	38.6	39.3	73	43.5	38.9
Hong Kong	13	16	23.5	31.1	34	26.1	26.2	24	26.5	15.8
Korea	0	8	7.2	9.8	14	5.6	5.5	9	3.1	3.6
Taiwan	0	1	0.3	1.8	8	2.1	2.2	2	0.6	1.2
India	1	2	0.1	1.3	3	0.3	0.8	13	3.8	8.7
Other¹	0	9	11.2	13.5	13	4.6	4.5	25	9.5	9.6
Developed countries	2	30	47.8	31.2	50	32.2	23.7	48	12.1	15.8
Germany	0	6	8.1	10.2	10	7.4	4.7	8	0.3	1.3
Italy	0				4	3.2	2.7	6	1.1	1.5
Japan	0	5	26.5	5.0	5	0.8	2.3	2	0.3	0.1
UK	1	5	3.7	2.7	15	16.1	5.3	20	8.1	9.1
USA	1	4	3.7	8.3	8	2.1	6.6	8	0.8	1.3
Other	0	10	5.9	4.9	8	3.5	2.0	4	1.5	2.5
Sri Lankan firms	7	14	9.9	11.4	133	29.2	37.0	109	44.4	45.3
Total	22	80	100	100	255	100	100	230	100	100

Note: 1.Included unclassified firms and firms with multi-country ownership.

Source: Compiled from Sri Lanka Board of Investment records.

There has been a clear pattern of 'localization' of the export-oriented apparel industry over the years, particularly from the mid-1990s.

Apparel exports from Sri Lanka begun to come under MFA quotas as early as 1983, and the product coverage and the quota limit on each category expanding during the subsequent years. Consequently, from about the early 1990s, a number of East Asian firms whose entry was driven primarily by the quota-jumping motive left the country. Moreover, there were no new arrivals from these countries in non-quota categories, primarily because of China's growing attraction as an alternative production location. However, there was no decline in the number of foreign-invested enterprises (FIEs) because there was a notable increase in the arrival of new investors from developed countries, in particular from the UK, Italy and Germany (Table 2).

There has been a clear pattern of 'localization' of the export-oriented apparel industry over the years, particularly from the mid-1990s. In 2009 there were 109 fully-locally owned firms approved by the Board of Investment (BOI) in operation (47% of all BOI firms), up from 14 (18%) in

1994. In addition to these, a large number of local firms had been set up under the normal business law of the country ('non-BOI' firms). Moreover, there has been a notable shift in the ownership structure of FIEs from full foreign ownership to joint ventures with local investors. in 2002 only 8% of all BOI-approved firms in operation (10 out of 121) were fully-foreign owned, compared to 80% (12 out of 16) in 1982. According to the information gathered from interviews, in these joint ventures overall management is undertaken by local managers with inputs from their foreign counterparts for global value chain operations.

At the formative stage, the Sri Lanka apparel industry was very much an integral part of the East Asia centred 'triangular apparel network'(a la Gereffi, 1994): the East Asian firms acted as the intermediaries between foreign buyers and the apparel producing firms in Sri Lanka. However, from about the mid-1980s, the importance of triangular trade began to diminish owing to three important developments. First, as the volume of exports expanded, many international buyers began to set up buying offices in Sri Lanka. These buying offices soon began to play a crucial role in linking local firms with international markets. Second, the developed-country (mostly European) firms that had set up operations in Sri Lanka had already established direct market links with retailers in their countries of origin. Third, more recently a number of large local firms have begun to deal directly with lead firms based on market links established with the help of initial joint-venture operations with foreign firms. Some of these firms have set up their own sales offices in major

importing countries and in Hong Kong.

The apparel industry in Sri Lanka, as in the other second-tier exporting countries, started with 'cut, make and trim' (CMT) operations: simple 'contract manufacturing' using designs and all inputs (fabrics and accessories) provided by the buyer. The industry was also heavily dependent on textile technicians imported from Hong Kong. It was a common practice for international buying offices in Colombo to send textile technicians to factories for closely monitoring the production process. At the time, the industry was often referred to as a 'glorified tailor shop' (Wijesiri and Ekanayake, 2008).

From about the late-1990s, an increasing number of firms embarked on package contracting (original equipment manufacturing, OEM), which involves sourcing of fabrics and other inputs, producing according to customer specifications. A number of these firms have now become full package manufacturers (or original design manufacturers (ODM)). They offer a full range of services to customers, product development, pattern making, finishing, sourcing, manufacturing and delivery. According to tentative estimates provided by JAAF, ODM firms now account for about 60% of total exports (by value),[11] with the rest coming from package contractors. CTM activity has virtually become a relic of the past. So far there has been only one successful case of a Sri Lankan firm (MAS holding, the largest Sri Lankan apparel firm) launching its own brand, a sign of graduating to OBM status (See Appendix 2).

By the late 1990s, Sri Lankan apparel industry had a well-developed

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[11] This figure is comparable to the share in total exports of the top ten apparel firms (see below).

At the formative stage, the Sri Lanka apparel industry was very much an integral part of the East Asia centred 'triangular apparel network'

customer base including well-known brand names such as Victoria's Secret, Marks and Spencer, Sanisbury's, Tesco, Humkemoller, Abercrombie and Fitch, GAP, Liz Claiborne, Nike, Pierre Cardin, Ralph Lauren, Tommy Hilfiger. Large apparel firms (at least the top ten companies) had established their own design centres which work closely with design teams of brand owners. Most large companies (in particular the top ten), have invested in Computer Aided Designing (CAD) and Computer Aided Manufacturing (CAM), and electronic fitting ('e-fitting'), which enable design decisions by visualizing the garment digitally, skipping the standard fit-on session with a model. They have also invested in supply chain enabling technologies such as enterprise resource planning (ERP), a computer system that integrates all data and processes of an organization into a unified system (a unified database to store data for various functions throughout the organization).

The type of international buyers who came to the country had a significant

implication for the evolution and upgrading of the industry. Mass retailers (Wal-Mart, K-mart, Target etc.) never came to Sri Lanka because the MFA quota allocation systems (which was largely based on the country size) did not allow enough quotas for a given producer to achievescale economies needed to be a competitive supplier.[12] So from the beginning Sri Lankan exports were predominantly to speciality retailers and brand marketers such as Marks & Spencer, JC Penny, and The Limited. These buyers sought greater variety and placed smaller orders that suit the small scale operation of Sri Lankan firms. And they, unlike the buyers for mass retailers, often worked closely with local manufactures, imparting technical and managerial and marketing knowhow required for product improvement.

The close links forged with brand marketers set the stage for a compositional change in the product mix from mass-market products to niche products, particularly women's underwear and bras, knitted intimate apparel and active wear. Some buyers of brand marketers made even a greater impact on upgrading local firms by becoming joint-venture partners in manufacturing. Among them, the role of Mast Industries, the overseas buying arm of The Limited deserves particular attention. In the mid-1980s Mast set up joint ventures with two small local companies in Sri Lanka to produce intimate apparel (panties and brassiere) and casualwear. With marketing and technical knowhow obtained from this vital initial link, these two apparel firms (later renamed MAS Holdings and Brandix) have grown to become

According to tentative estimates provided by JAAF, ODM firms now account for about 60% of total exports (by value), with the rest coming from package contractors.

not only the two largest apparel exporters in the country; they have also become multinationals on their own right with production operations in a number of other countries (See Appendix 2 for details).

Backward Linkages

In many countries, the expansion of the export-oriented apparel industry was based on a domestic textile industry developed during period of import-substitution industrialisation (Feenstra and Hamilton, 2006; Tokatli and Kizilgun, 2008; Tewari, 2008a). However, as discussed, the expansion of apparel exports from Sri Lanka began without a domestic textile base. The government-owned textile factories were closed down following the liberalisation reforms as they failed to face the new competitive market conditions. Up to about the mid-1990s, the domestic content of apparel exports from Sri Lanka was basically equivalent to the

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[12] For instance, Epic, a Hong Kong based supplier of trousers to mass retailers came to Sri Lanka in early 1990s, but soon left for Bangladesh because under the 'the complex web of quotas that dominated international trade in garments [it] could not get enough quota allocation to make one product [trousers] in the tiny country' (Jacob, 2013).

With marketing and technical knowhow obtained from this vital initial link, these two apparel firms (later renamed MAS Holdings and Brandix) have grown to become not only the two largest apparel exporters in the country; they have also become multinationals on their own right with production operations in a number of other countries.

labour content (about 20%) and the low level of backward integration was a major concern of the policy makers (Kelegama and Foley, 1999).

Since then the three largest firms (MAS Holding, Brandix and Hidramani) have set up plants to produce textile (mostly knitted fabric) and ancillary inputs (hangers, bra

moulding, packaging material, labels, buttons) to be used mostly in their own apparel plants, but also to meet the requirements of other apparel producers in the country. By this time, the country's export volume had reached levels that provide scale economies for such downstream production. Most of these downstream factories are joint ventures with foreign firms, which had been established suppliers to these Sri Lankan firms.[13] Currently about 60% of fabric used in apparel production (about 80% of fabrics used in knitted apparel and about 20% of woven apparel), and the bulk of the ancillary inputs (embroidery, hangers, labels, buttons etc) are produced domestically.[14]

Corporate Social Responsibility

The organised labour market in Sri Lanka has long been characterised by significant rigidities, in particular, minimum wage legislation, restrictions on labour retrenchment and severance payments, and trade union activism (World Bank, 2004). Sri Lanka was an early signatory to (and remains the only country in Asia to do so) the 39 ILO Core Convention covering workplace practices, prohibition of forced labour, child labour and ensuring better working conditions. Employment of Child Labour has been curbed in Sri Lanka, and the minimum statutory age for employment is 18, with some conditional exemptions for those over 16. The compliance of these regulations is rigorously enforced and monitored by the Labour Department and other bodies (Perry, 2012). These initial labour market conditions were instrumental in preparing the apparel industry to effectively face the 'ethical trade' norms which the international buyers have recently begun to emphasize as an important part of their procurement policy.

Up to the mid 1990s, the domestic content of apparel exports from Sri Lanka was basically equivalent to the labour content 20%

Today, about 60%

of fabric used in apparel production and also the bulk of the ancillary inputs (embroidery, hangers, labels, buttons etc) are produced domestically

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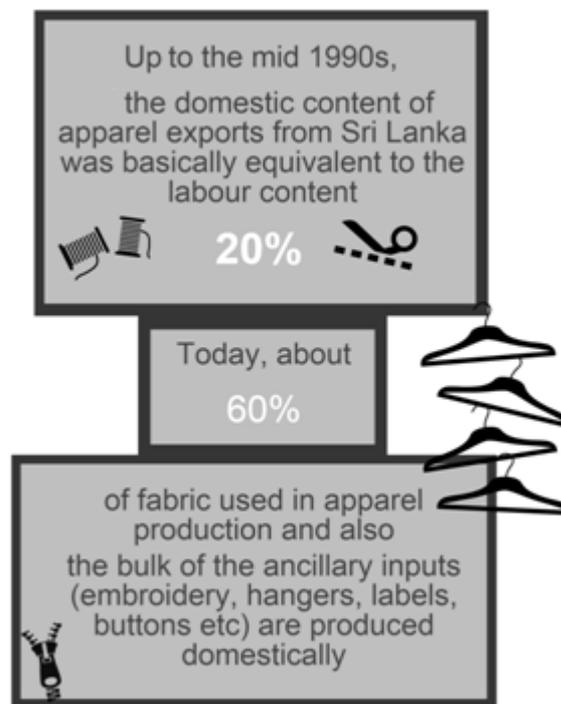
[13] Among these firms, Stretchline Lanka, a joint venture of MAS holdings and Stretchline UK engaged in the production of elastics and a range of high-quality yarn for the production of lingerie and intimate wear, has become a multinational on its own right with production plants in four countries (China, Indonesia, Mexico, Honduras); sales offices in UK, USA, Hong Kong; and a research lab in UK jointly run with its parent company.

[14] Tentative estimates provided by JAAF.

Against this background, the upward movement in the value ladder of Sri Lankan apparel producers has been accompanied by a greater emphasis on ethical employment practices than in many of its Asian competitors (Fernando and Almeida, 2012; Ruwanpura and Wrigley, 2011; Watson, 2010; Friedman, 2000). In this respect, MAS Holdings took the lead in the mid-1980s as part of its emerging role as a major supplier to Victoria's Secret (Appendix 2). Following MAS's lead, the other apparel manufacturing firms also have established their own corporate social responsibility programs for employees. Most firms provide workers with transport facilities, free breakfast, subsidised meals and medical care. They also actively engage in community services in rural area where the factories are located. The 'Garment Without Guilt 'campaign launched by the Joint Apparel Association Forum (JAAF) has played a pivotal role in strengthening CSR commitments among apparel exporting firms and promoting Sri Lanka's name as an ethical clothing manufacturer (Appendix 1).

Some apparel factories in Sri Lanka have started to produce 'fair trade' clothing, clothing made out of organic and fair-trade cotton imported from India and some African countries. The three largest firms already supply organic cotton clothing for brand names such as Marks & Spencer and Tesco.[15] Some local fabric producing companies have obtained fair-trade and organic accreditation from international certification bodies such as FLO-Cert GmbH in Germany and

Institute of Market-ecology (IMO) in Switzerland. With increasing global concerns regarding climate change, a number of apparel firms have started investing in building 'green factories', which meet the international environmental standards.

Labour Supply and Skill Upgrading

The expansion of apparel industry was aided by an ample supply of cheap, trainable labour. At the time of reforms initiated in 1977 nearly a fifth of the labour force of about 5 million was out of work, with the bulk of unemployed concentrated in the age bracket of 18-25. The average monthly wage of a factory worker in Sri Lanka in the late 1970s was about US$33, which amounted to about 12% of that in Hong Kong and was also significantly lower compared to the other favoured locations of clothing production in the region such as Malaysia, Indonesia, and Philippines and Mauritius (Athukorala and Rajapatirana, 2000, Chapter 4). The labour force[16] also had a much higher level of formal education (on average 10.3 years of schooling) compared to that in most other apparel exporting countries (Savachenko and Acevedo, 2010). Another unique feature of Sri Lankan female apparel workers is that most of them came with years of experience in using the standard household sewing machine, the basic technology of which was not very different from that of the industrial sewing machine.[17] Consequently, a worker who joined the labour force as a 'helper' in an apparel factory in Sri Lanka took only two to three months

to become a machine operator, compared to three to six months taken by her Bangladeshi counterpart.[18]

Sri Lanka's track record of technical and tertiary education is not as impressive as the country's long-standing success with primary and secondary education. But the country did have a human capital base capable of acquiring technical and managerial skills within a short period once the liberalisation reforms set the stage for the expansion of the apparel industry. There has been a notable improvement in managerial and technical capability of the apparel industry over the past four decades, with public-private partnership playing a pivotal role. University of Moratuwa (the main technical university in the country) has been offering (since 1984) diploma-level design courses in textile technology in collaboration with the London School of Fashion Design. In 2004 the university started offering a four-year degree course in fashion development jointly with the North Carolina State University College of Textiles. The JAAF played an important role in initiating this program. JAAF has also taken an initiative to offer a postgraduate diploma in Marketing in collaboration with the Chartered Institute of Marketing in UK. Brandix, the second largest apparel producer is running its own training institution, Brandix Clothing Training Institution (BCTI), since 1998. Recently BCTI started offering a Master's program in textile technology in collaboration with the RMIT University in Melbourne.

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[15] Tesco sells clothing designed by Katherine Hammett, a designer known for her political t-shirts and her ethical business philosophy.

[16] Women accounted for over 85% of total employment in the apparel industry (Nordås, 2003).

[17] In the late 19th century the Sri Lankan subsidiary of the Singer Sewing Machine company launched a hire-purchase scheme with affordable monthly instalment payments through an island-wide network. This scheme soon became so popular that the sewing machine became an ubiquitous household asset and part of bridal dowry. The combination of a higher level of formal education and basic training in using a household sewing machine has made Sri Lankan factory workers easily trainable compared to their counterparts in other countries in the region.

[18] Based on an interview with a Sri Lankan firm, which has a large branch plant in Bangladesh. See also Savachenko and Acevedo (2010).

There has been a notable improvement in managerial and technical capability of the apparel industry over the past four decades, with public-private partnership playing a pivotal role.

Thanks to these initiatives, the dependence of Sri Lankan apparel industry on foreign textile technicians (mostly from Hong Kong) has virtually disappeared by the dawn of the new millennium. Sri Lanka has also become a supplier of textile technicians and managers to the other apparel producing countries in the region and beyond (Jacob, 2013; Staritz, 2011).

The industry has begun to experience labour shortage and increase in wages in recent years. Various news reports appearing during the first half of 2013 placed the number of unfilled vacancies between 30,000 and 50,000. The average hourly wage is now much higher than in Bangladesh, Vietnam, Cambodia (and also possibly India and Indonesia) and approaching the levels in China and the other East Asian clothing producing countries (Table 3). Wages in almost all apparel firms are now well above the minimum wage set by the government (Sri Lankan rupees 9500 (about US$70).

Going Global

In the mid-1990s a number of Sri Lankan apparel companies set up production plants in countries like Maldives, Madagascar, Bangladesh, Mauritius, and Kenya in order to circumvent MFA quota restrictions on

Following the MFA abolition, the three largest firms have set up plants in Vietnam, Bangladesh, China, India, Honduras and Vietnam.

their operations in Sri Lanka. These ventures employed Sri Lankan technicians, managers and, in some cases, Sri Lankan machinists. Some of these production bases (including all those set up in Maldives) were shifted back to Sri Lanka after MFA abolition; only those located in countries which continue to assure profitability due to tariff preferences and/or relatively low wages compared to Sri Lanka have continued to remain in operation. Following the MFA abolition, the three largest firms have set up plants in Vietnam, Bangladesh, China, India, Honduras and Vietnam (Appendix 2). Recently, a medium-size Sri Lankan firm set up a manufacturing plant in Jordan as a direct response to its US buyers, whose sourcing calculations have been changed because of a free trade agreement between Jordan and the USA. These firms are co-ordinating production in these countries to meet orders from their strategic buyers, reminiscent of the triangular manufacturing practices of the East Asian firms during the MFA era.

Table 3
Apparel Manufacturing Labour Cost in Selected Asian Countries, 2008 (US$/Hour)

Country	Cost
Thailand	1.29 - 1.36
Malaysia	1.18
Philippines	1.07
China	0.51-1.08
Prime coastal provinces	1.08
Other coastal provinces	0.86 -0.94
Remote provinces	0.55-0.94
India	0.51
Indonesia	0.44
Sri Lanka[1]	0.43
Vietnam	0.38
Pakistan	0.37
Cambodia	0.33
Bangladesh	0.22

Note: 1. At the time of field work undertaken for this this study (the third quarter of 2012), the average hourly wage was about 0.57, with the large firms paying an average wage of over 0.65.

Source: Jassin-O'Rourke Group (2008).

5. Post-MFA Export Performance

By the time of policy reforms in 1977, the export structure of Sri Lanka remained concentrated in a limited range of primary commodities, with manufactures accounting for only 4 per cent of total merchandise exports. Since then, manufacturing exports have expanded rapidly, with apparel playing the dominant role. Between 1977 and 2004 apparel exports increased from a mere US$15 million (2.1% of total exports) to over 2.8 billion (50.6%) (Table 4). From 1992, apparel has become the single largest foreign exchange earner of the country. Over the years the composition of manufactured exports has diversified into other labour intensive and resource based products, but apparel still accounts for over 40% of total merchandise exports and over 60 of manufacturing exports.

According to various predictions made in the lead up to the MFA-quota abolition, Sri Lanka was among the countries expected to experience significant contraction in exports in the quota-free era (Nordas, 2009). This gloomy prediction has not materialised: the average annual Sri Lankan exports of apparel during 2005-13 amounted to US$ 3440 million, up from 2820 million during the preceding five years (2000-04), a 20% increase. Sri Lanka's share in world apparel exports did decline from about 1.10% during 2000-04 to 1.01 during 2005-07, but has increased since then, reaching 1.13% in 2013 (Table 4).

During the first six years of the post-MFA era, a widely held view was that Chinese safeguards (the invoking of safeguard provision by the EU and the USA against imports from China) and preferential access to the EU markets under the Generalized System of Preferences (GSP)[19] helped Sri Lanka to withstand the competitive pressure.[20] But the data are not consistent with this view. First, there was no significant overlap between the categories of clothing subjected to the safeguards and the items that figured prominently in Sri Lanka's exports to the US and EU markets (Kelegama, 2009). Apparel exports from Sri Lanka have, therefore, continued to increase after the termination of these safeguards. Second, contrary to a highly publicized prediction that 'losing GSP

Table 4
Apparel[1] Exports from Sri Lanka, 1970-2012

	US$ Million	Share of Apparel in Merchandise Exports (%)	Share of Apparel in Manufacturing Exports[2] (%)	Share in World Apparel Exports
1970	1.4	0.4	0.9	—--
1975	3.4	0.6	13.9	—--
1977	15.1	2.1	13.8	—--
1985	278.6	20.9	39.5	0.12
1990	637.0	33.3	53.2	0.91
1995	1465.7	38.5	75.4	1.02
2000	2775.8	52.0	76.6	1.10
2005	2870.6	46.6	73.1	1.11
2006	3048.8	45.1	72.1	1.03
2007	3271.2	42.7	68.7	0.98
2008	3434.3	42.1	67.5	1.01
2009	3120.3	45.9	65.4	1.01
2010	3178.3	42.0	56.9	1.07
2011	3986.4	39.9	56.2	1.09
2012	3783.8	43.1	57.1	1.11
2013	4261.8	43.4	60.2	1.13

Note: (1) Products belonging to the commodity code 84 of the Standard International Trade Classification (SITC).
             (2) Manufacturing is defined as SITC 5 to 8 - 68.
             --- Negligible.

Source: Compiled from UN Comtrade database and Central Bank of Sri Lanka Annual Report (various years).

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[19] Under the EU-GSP scheme, Sri Lanka is eligible for an average non-reciprocal preference margin of about 2.2% on clothing exports (the average GSP rate of 9.0% compared to an average MFA tariff rate of 11.2%). On July 2005 Sri Lanka became eligible to additional tariff concessions under the newly introduced GSP-Plus scheme, which offered duty free access to 7200 products (including almost all clothing items). On 15 February 2010, the EU suspended GSP+ concessions to Sri Lanka (with effect from 15 August 2010) due to concerns about the violation of human rights (Abayasekara, 2013).

[20] See Adhikari and Weeratunga (2007) and the works cited therein.

US$ 15 million (2.1% of total exports) 1977

US$ 2.8 billion (50.6% of total exports) 2004

products are the ones that remain in a retailer's or a manufacturer's collection for many seasons, such as men's white shirts or underwear. Fashion-basic products are variants on basic products which contain some fashion element (such as stone-washed jeans, pants with pleats or trim, fashion lingerie and intimate wear). On average, basic products account for the bulk (over a half) of internationally traded apparel products, with the other two categories each accounting for a quarter. However, over the past two decades, the third category has been the most dynamic mainly because of the rapid increase in lean retailing. In these products, unlike in basic products, exporting is more than a simple price-cost game; speed and flexibility are crucial capabilities for firms wrestling with product

Plus would lead to a 4% cut' (Economist, 2008), Sri Lanka apparel exports to EU exports recorded a 20% increase during 2011-2013 compared to the previous three years (Central Bank of Sri Lanka, Annual Report 2013, Table 71).

As discussed in the previous section, Sri Lanka apparel industry had experienced significant industrial upgrading and carved out niches in a number of dynamic product lines (fashion-basic product) during the MFA era. The industry also had built a strong image of corporate social responsibility, in particular relating to compliance with internationally agreed employment practices, and improved social and environmental standards. The human capital base and design capabilities of the industry had improved significantly, enabling it to swiftly respond to buyers' quest for variety. These non-price factors seems to have played a pivotal role in securing export orders, even though Sri Lanka is no longer a low-cost production base compared

to many other apparel producing countries. It is not possible to quantify the relative importance of price- and non-price factors from a single country study of this nature, but the following discussion on the commodity composition, size distribution of firms and direction of trade is illustrative of the relevance of these factors in understanding Sri Lanka's repositioning in the global apparel markets in the post-MFA era.

Commodity Composition
In order to examine the changing patterns of commodity composition of apparel exports, we use the three-way classification proposed by Abernathy et al. (1999): fashion products, basic products, and fashion-basic products. Fashion products are high-end products, such as dresses from Paris and Italian made suits, the demand for which is largely driven by social status and deep-rooted cultural values. These products are not typically imported from developing countries. Basic

Sri Lanka apparel industry had experienced significant industrial upgrading and carved out niches in a number of dynamic product lines (fashion-basic product) during the MFA era.

proliferation. In basic apparels, low wage nations, especially those with access to inexpensive textiles, have the potential for major market gains in the post-MFA era.

The available trade data do not permit precise disaggregation of total apparel exports into three categories. But the data summarised in Table 5 shows a clear pattern of concentration of Sri Lankan apparel exports in the fashion-basic category following the post-MFA era. The table summarises data on the changing commodity composition of apparel exports from Sri Lanka at the five-digit level of the Standard International Trade Classification (SITC), focussing on the share accounted for by the top 20 products. The degree of concentration of exports in these 20 products has increased over time from 79.8% in 2000-03 to 88.7 in 2011-12.[21] Among these products, women apparel, which generally contain a higher fashion content, account for a much larger share: the share increased from 44% to nearly 60%. The two most rapidly expanding categories within this product group have been intimate wear (brassieres (SITC 84551 and panties (84482)). Their share in total exports increased from 7.5% to nearly 20% between these two points in time. Product such as men's business shirt and normal trousers (for both men and women), which generally have no fashion content, have virtually disappeared from the export product mix.

The growing importance of Sri Lanka as a global supplier of intimate apparel is clearly shown in Figure 1. In 2011-2012 Sri Lanka accounted for 8.2% of total world exports of women/ girls panties, up from an average annual figure of 2.2% in 2003-04. Sri Lanka's world market shares of

Table 5
Sri Lankan Clothing Exports: Top 20 SITC-5 Digit Products, 2003-04 and 2011-12

SITC Code	Product	Export Share (%)	SITC Code	Product	Export Share (%)
84260	Women/girls trousers woven	9.6	84551	Brassieres	9.9
84140	Men/boy trousers woven	8.9	84140	Men/boy trousers woven	9.5
84270	Women/girls blouse woven	7.3	84260	Women/girls trousers woven	9.3
84540	T-shirts/singlets knit	5.6	84540	T-shirts/singlets knit	9.3
84530	Jerseys/pullovers	5.4	84482	Women/girls panties knit	9.2
84130	Men/boys jackets woven	5.2	84691	Gloves knitted	4.7
84551	Brassieres	4.8	84426	Women/girls trousers knit	4.6
84151	Men/boys trousers cotton woven	4.7	84822	Women nightwear woven	4.4
84230	Women/girls jackets woven	3.4	84151	Men/boys trousers cotton	3.4
84371	Men/boys trousers cotton knit	3.2	84530	jerseys/pullovers	3.2
84250	Women/girls skirrs woven	3.2	84270	Women/girls blouse woven	3.0
84240	Women/girls dresses woven	3.0	84240	Women/girls dresses woven	3.0
84482	Women/girls panties knit	2.7	84381	Men/boys underwear knit	2.8
84282	Women nightwear woven	2.6	84512	Baby clothes knit	2.3
84512	Baby clothes knit	2.4	84564	Women/girls swimwear knit	2.2
84470	Women/girls blouses knit	2.0	84424	Women/girls dress knit	2.1
84691	Glove impreg/coat knitted	1.9	84250	Women/girls skirts woven	1.7
84511	Baby clothes woven	1.7	84483	Women/girls skirts woven	1.5
84423	Women/girls jackets knit	1.1	84371	Men/boys trousers cotton	1.5
84159	Men/boys trousers fibre woven	1.1	84423	Women/girls jackets knit	1.1
	Total	79.8		Total	88.7

Source: Compiled from UN Comtrade database.

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[21] Inter-temporal comparison is done using two-year averages relating to the end points of the period so as to reduce the impact of year-to-year fluctuations of trade flows.

Figure 1
Sri Lanka's World Market Share in Total Apparel Exports and in the Top 5 Apparel Products[1] (%)
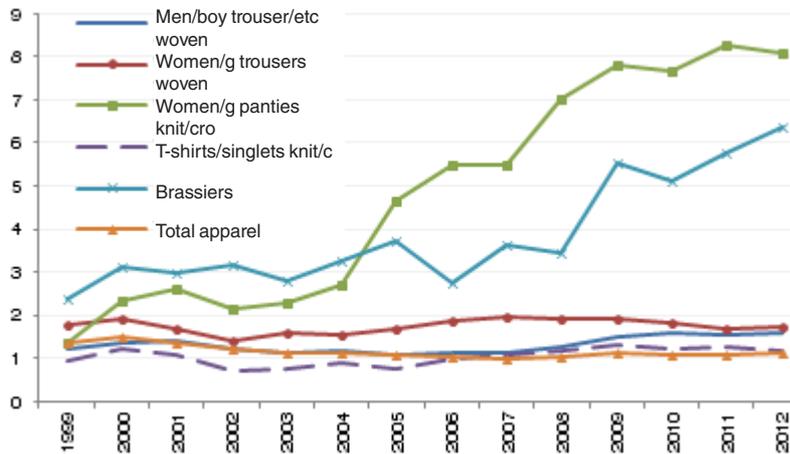
Note: 1 The top five apparel products were identified based on export value for 2011-2012.

Source: Based on data compiled from UN Comtrade database.

brassiere increased from 3.2% to 6.1% between these time points. In both products, the increase in world market share was faster during the post-MFA years. Even in the other three products, the market shares have remained above that of total apparel exports during the post MFA era. The patterns of exports to the USA and EU of these products (data not reported here for the space constraint) are remarkably similar to this aggregate picture.

In order to provide a more encompassing picture of the emerging commodity profile of Sri Lanka's apparel exports, we computed reveal comparative advantage (RCA) indices at the SITC 5-digit level of commodity disaggregation. The RCA index[22] measures a country's relative export performance in individual categories of a given product (in this case apparel, defined to encompass all five-digit categories belonging to SITC 84) compared to that category's overall performance in world trade (Balassa, 1965). If the value of the RCA exceeds unity for a given product, the country is said to have 'revealed' comparative advantage in the production of that product. In contrast, an RCA index of below one implies that country is at a comparative disadvantage in the production of the related product.

The RCA indices are reported in Table 6 for all products with RCA>1 in 2003-04 or 2011-12 (which we dub 'RCA products'). In order to help understand the change in revealed comparative advantage between pre- and post-MFA periods, these products are classified into three categories: 'RCA-lost': products that had RCA>1 in 2003-04 but RCA<1 in 2011-12; 'RCA-sustained' products: products with RCA>1 both in 2003-04 and 2011-12; and 'RCA-gained' products: products that had RCA<1 in 2003-04 but RCA>1 in 2011-12.

Most of the products which have lost revealed comparative advantage between the two time points (in particular, jackets of various types, rubber clothing, headgear, gloves, men/boy underwear) are generally classified as basic products. Both RCA-sustained and RCA gained groups are dominated by women wear, which, as already mentioned, normally have a higher fashion content. In these groups, RCA indices are much larger for intimate apparels (women/girls slips, women/girls panties, brassieres, and swimwear) compared to the other products. Interestingly, all RCA-gained products are produced using knitted fabrics; generally the fashion content is higher in knitted apparel compared to woven apparel. These products accounted for 24% of total apparel exports in 2011-12, up from 10.5% in 2003-04.

The time pattern of value, price (unit value) and volume indices of apparel export from Sri Lanka are also consistent with the structural shift in the commodity composition towards high-value produces (Figure 2). The

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[22] The revealed comparative advantage (RCA) index:

$$RCA_{j,i,t} = \frac{X_{j,i,t}/\sum_i X_{j,i,t}}{\sum_j X_{j,i,t}/\sum_j \sum_i X_{j,i,t}}$$

where $X_{j,i,t}$ is the value of exports by country j of product i in year t. The numerator is the share of product i in total exports of country j in year t and the denominator is the share of product i in world (sum of all countries) exports in year t.

Table 6
Sri Lanka's Revealed Comparative Advantage (RCA) in Apparel Exports and Export Composition, 2003-04 and 2011-121

SITC	Product	RCA3		Composition (%)	
		2003-2004	**2011-12**	**2003-04**	**2011-12**
	(a) RCA-lost products3			11.75	3.71
84130	Men/boys jackets woven	2.95	0.43	4.80	0.59
84230	Women/girls jackets woven	1.56	0.48	3.66	0.82
84323	Men/boys jackets knit	1.29	0.57	0.69	0.62
84614	Gloves not knit	1.72	0.74	0.30	0.17
84423	Women/girls jackets knit	1.22	0.44	1.35	1.07
84829	Rubber clothing	2.98	0.06	0.22	0.00
84842	Headgear	2.51	0.35	0.12	0.03
84389	Men/boys underwear knit	1.13	0.31	0.06	0.02
84379	Men/boys trousers fibre	1.07	0.62	0.54	0.38
	(b) RCA-sustained products4			58.20	56.89
84140	Men/boys trousers woven	1.01	1.44	8.41	9.46
84151	Men/boys trousers cotton woven	1.49	1.35	4.37	3.40
84161	Men/boys underwear woven	1.06	1.34	0.40	0.21
84162	Men/boys pyjamas woven	1.00	2.22	0.17	0.19
84240	Women/girls dresses woven	2.15	1.02	2.80	2.95
84250	Women/girls skirts woven	2.09	1.75	4.20	1.72
84260	Women/girls trousers woven	1.39	1.56	11.51	9.33
84270	Women/girls blouses woven	2.22	1.11	6.96	2.96
84281	Women/girls petticoats woven	5.63	6.30	0.30	0.17
84282	Women/girls nightwear woven	3.78	2.93	1.60	0.63
84289	Women/girls underwear woven	1.86	1.09	0.84	0.32
84371	Men/boys trousers cotton knit	2.20	1.18	2.78	1.47
84481	Women/girls slips knit	2.05	5.84	0.11	0.27
84482	Women/girls panties knit	2.20	7.47	3.53	9.21
84483	Women/first nightwear knit	1.59	2.04	1.37	1.52
84511	Baby cloths woven	2.14	1.39	1.38	0.72
84512	Baby cloths knit	1.08	1.72	1.36	2.33
84551	Brassieres	2.70	5.53	5.43	9.95
84561	Men/boys swimwear not knit	6.65	1.28	0.68	0.08
	(c) RCA-gained products5			10.56	24.09
84381	Men/boys underwear knit	0.97	3.00	0.84	2.84
84382	Men/boys nightwear knit	0.51	1.44	0.14	0.36
84540	T-shirts/singlets knit	0.73	1.10	6.34	9.30
84426	Women/girls trousers knit	0.62	1.53	1.00	4.57
84562	Men/boys swim wear knit	0.31	1.35	0.02	0.10
84564	Women/girls swim wear knit	0.23	3.62	0.14	2.18
84691	Gloves knit	9.14	10.01	2.07	4.74
	Total (a + b + c)			80.52	84.69
	Other6			19.48	15.31

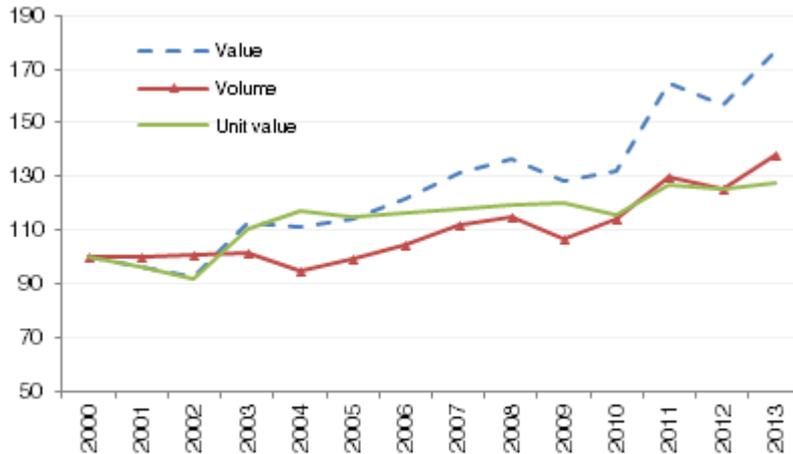Notes: 1 Two-year average   2   Standard International Trade Classification
3 RCA> 1 only in 2003-04
4 RCA > 1 in both 2003-04 and 2011-12   5   RCA> 1 only in 2011-12
6 RCA < 1 in both 2003-04 and 2011-12

Source: Compiled from UN Comtrade database.

Figure 2
Volume, Unit Value and Value Indices of Apparel Exports from Sri Lanka, 1985-2013 (1990 = 100)

Note: Value and unit value series are in US$ (original series (in rupees) adjusted for changes in the average annual US$/Rupee exchange rate).

Source: Based on data compiled from Central Bank of Sri Lanka, Annual Report (various issues).

theory of trade protection predicts a general decline in export prices following abolition of quantitative export restrictions on a given product (Harrigan and Barros, 2009).[23] Consistent with this postulate, a number of recent studies have found significant decline in prices of apparel in world trade (Harrigan and Barrow, 2009; Startitz 2010, USITC, 2011).

But, interestingly, in the Sri Lankan case both volume and price changes seem to have contributed to increase in export value suggesting that the postulated price-lowering effect of quota removal could have been counterbalanced by the shift in the commodity composition towards high-value products.[24]

Table 7
The Share of Air-cargo in Total Clothing Exports from Sri Lanka (%)

	2000	2004	2008	2011
EU	23.2	18.4	26.4	26.4
Japan	30.1	23.4	23.1	25.2
USA	26.8	21.6	39.3	42.3
World	21.0	20.4	32.1	33.7

Source: Compiled from Customs records by mode of transport (accessed through Sri Lanka Export Development Board).

Another indicator of the upward shift in the product mix towards fast-replenishing apparel products is the share of air cargo in total exports (Table 7). Air shipment, which is far more costly compared to shipment by sea, is normally used in fashion-basic products which have a short replenishment cycle in order to mitigate competitive disadvantage arising from the distance to the market (Evens and Harrigan, 2005). These are also generally 'high-value-to-weight product' which permit absorbing the high transport cost while maintaining a handsome profit margin. The share of air cargo in total apparel export from Sri Lanka, which remained virtually unchanged at about 20% during 2000-2004, increased to 33.6% in 2011. The increase in the share of air cargo was much sharper in exports to the US market, from 21.6% in 2004 to 42.3% in 2011. This pattern is consistent with the relatively higher share of fashion basic products (brassiere, in particular) in apparel exports to the USA (see below).

Size Distribution

Data compiled from unpublished exporter/firm-level Customs returns on the size distribution of exporting firms are summarized in Table 8. The data clearly show that following the MFA abolition, Sri Lankan apparel industry has been in the process of settling into a smaller core of firms, which are presumably well prepared to take advantage of changing future demand. During the MFA era, export quotas for a given country were set well below the supply potential of the country in a given product. At the same time, the quota allocation

[23] There are two possible reasons for this. First, binding quotas push up prices above the 'natural' market prices. Secondly, when the number of items that can be exported is limited, there can be a tendency on the part of the exporters to improve the quality of the product to maximize export value within the quota limit).

[24] Tewari (2008b) also shows that, during 2005-2009, the unit value of apparel export from Sri Lanka to the EU continued to remain much higher compared to that of exports from Bangladesh, Cambodia, China, Pakistan and Vietnam .

mechanism at the country level was based partly on the past export performance of firms. At times, bureaucratic discretion also played a role. These constraints on the output expansion of individual firms disappeared with the MFA abolition. In a quota free world, buyers also have started forging long-term procurement relations with large firms.

According to the Customs records, there were 817 exporting firms in 2004 (identified using US$10,000 of exports as the minimum cut-off point). This number declined to 671 in 2008 and to 450 in 2011. The size distribution of the surviving firms has become increasingly skewed to the right, with larger farms accounting for the bulk of exports. At the upper end, the three largest firms accounted for over 35% of total exports in 2011 up from 13.4% in 2004. In 2011, over two-thirds of exports originated from the top 20 firms, compared to 39% in 2004. At the lower end of the size distribution, 250 firms accounted for a mere 3.4% of total exports in 2011. According to information collected from the interview with farm managers, most of the small firms now undertake subcontracting for the large firms. This pattern of concentration would have helped the apparel industry to face highly competitive market conditions in the post-MFA era.

Direction of Trade

The geographic profile of apparel exports from Sri Lanka has undergone significant changes in the post-MFA period. From the beginning until about 2006, the US was the largest export destination, accounting for more than half of total annual exports. Since then, the EU has become the largest export market. Sri Lanka's share in total apparel imports to the US also declined continuously from an average annual level of 2.4% during 2000-04 to 1.8% during 2008-2012, whereas the share in the EU increased from 1.5% to 1.7% between these two periods (Table 9).

What explains these changes in market shares? The popular explanation is the differences in import tariffs (Adhikari and Weeratunga, 2007; IPS, 2012). As already noted, Sri Lanka is eligible for EU GSP and was also enjoying zero-duty market access under GSP-plus during 2005-2010. The GSP scheme of the US does not cover textile and apparel, but exports from Africa, Latin America and the Caribbean (which accounts for over 80% of total apparel exports to the US) benefits from tariff concessions under various preferential trading arrangements.

Tariff differences may have played a role, but this explanation is not fully consistent with the available data. First, the decline in the share of apparel export to the US started well before the introduction of GSP+ which was the biggest source of tariff differential between the two destinations during 2005-2010 (Table 9). Second, as already discussed, there is no evidence to suggest that trade preferences have had a significant impact on the expansion of

Table 8
Size Distribution of Clothing Exporting Firms in Sri Lanka

Cumulative Number of Firms in Ascending Order	Cumulative Export Share (%)			
	2000	2004	2008	2011
Top 3	13.0	13.4	21.8	35.2
Top 5	18.0	18.3	31.2	44.2
Top 10	26.0	27.0	45.2	55.5
Top 20	37.2	39.3	59.1	67.7
Top 30	44.6	48.4	67.4	74.6
Top 40	50.7	55.3	73.4	79.8
Top 50	55.9	60.6	78.1	84.0
Top 60	59.8	64.7	81.5	87.0
Top 70	63.4	68.5	84.6	89.6
Top 80	66.6	71.7	87.0	91.8
Top90	69.6	74.5	89.1	93.5
Top 100	72.3	77.2	90.9	94.9
Top 150	82.4	87.2	96.2	98.5
Top 200	88.9	93.1	98.5	99.6
All	100	100	100	100
Memo items				
Number of firms	888	817	671	450
Total export (US$ million)	2685	2762	3433	4212
Average export turnover (US$ million) of,				
Top 3 firm	116	124	249	494
Top 10 firms	70	75	155	234
Top 20 firms	50	54	101	143

Note: Data compilation covered all customs entries with export values of US$10,000 and above.
Source: Compiled from firm-level export records maintained by the Sri Lanka Customs.

Table 9
Geographic Profile of Clothing Exports from Sri Lanka, 1990-2012 (%)

	1995-9	2000-4	2005	2006	2007	2008	2009	2010	2011	2012	2013
USA	60.1	60.9	58.1	54.8	49.2	44.4	40.6	40.2	38.7	39.3	42.9
EU15	32.8	33.1	36.5	39.6	44.8	47.9	50.8	49.5	49.0	48.5	46.1
Belgium	1.0	1.9	2.0	1.9	1.9	2.3	2.3	2.9	3.3	3.2	3.7
France	2.9	1.7	1.8	2.0	2.0	1.7	1.8	1.9	2.0	2.4	2.7
Germany	7.0	3.7	3.5	4.1	4.6	5.4	6.1	5.9	5.9	5.6	4.4
Italy	1.2	2.3	5.2	5.9	8.7	9.6	10.9	10.6	11.6	10.5	9.6
UK	16.2	20.5	21.4	22.8	24.3	25.5	26.2	24.3	22.2	22.4	21.1
Canada	1.9	1.8	1.5	1.5	1.4	1.5	1.4	1.7	1.8	2.1	1.9
Switzerland	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Japan	0.7	0.7	0.5	0.6	0.5	0.4	0.5	0.7	0.7	0.8	0.9
World, US$ Mns.	1881	2569	2874	3048	3272	3437	3120	3178	3986	3784	4265
Memo times: Sri Lanka's share in total apparel imports to the US and EU-15											
US	2.4	2.3	2.2	2.2	2.0	2.0	1.8	1.6	1.8	1.9	1.8
EU	1.5	1.5	1.5	1.5	1.6	1.7	1.8	1.7	1.7	1.8	2.0

Source: Compiled from US import records, UN Comtrade database.

exports to the EU market. Third, the data on the source country composition of imports to the US show that in both markets a number of Asian exporting countries, which face similar import tariffs as Sri Lanka, have maintained and even gained market shares in the US market, whereas Mexico and a number of other countries which enjoy tariff preferences lost market shares (Gereffi and Frederick, 2010).

We believe that the major explanation of the shifts in market share lies in a combination of the emerging patterns of commodity composition of Sri Lankan exports and differences in demand patterns in the two markets. There is evidence that the EU apparel market is much more heterogeneous: demand is more variable among various segments of the markets, and hence order sizes are generally smaller compared to exports to the US market. These differences are also reflected in the importance of the type of retailers and international buyers involved in the value chain relating to the two markets. Speciality stores and brand marketers seem to play a relatively much more important role in the EU market compared to the US market which is dominated by large retail stores (Tewari, 2008a; Palpaceuer et al., 2005). The European demand patterns and the nature of marketing channels are much more compatible with the production and specialisation patterns of the Sri Lankan apparel industry's evolution over the past two decades (Section 4).

An analysis of disaggregated US import data (not shown here for brevity) show that the decline is Sri Lanka's market share in the US is predominantly accounted for by basic apparel products in which it no longer has competitive advantage compared to the other low-cost Asian exporters such as Vietnam, Bangladesh and Cambodia. Sri Lanka has, in fact, gained market

There is evidence that the EU apparel market is much more heterogeneous: demand is more variable among various segments of the markets, and hence order sizes are generally smaller compared to exports to the US market.

shares in its top five apparel products (listed in Figure 2). This is particularly the case with intimate wears, in which Sri Lanka accounts for over 15% of total imports to the US, compared to 8% in the EU. Sri Lanka's market share gains in these products run counter to the predictions in previous studies that, given the buyers' increased preferences for 'fast fashion', geographic proximity (which underpins 'timeliness' of delivery) would be a key determinant of export success in these products (Evens and Harrigan, 2005; Abernethy et al., 1999 & 2000). Presumably, factors such as local availability of fabric, supply chain management capabilities and close links forged with buyers for over two decades would have helped the Sri Lanka exporters. Also, as already noted, the Sri Lankan exporters of these high-value apparel products make use of air transport to mitigate the 'tyranny of distance'.

> **Sri Lanka's market share gains in these products run counter to the predictions in previous studies that, given the buyers' increased preferences for 'fast fashion', geographic proximity (which underpins 'timeliness' of delivery) would be a key determinant of export success in these products.**

6. Conclusion

Following the policy reforms initiated in the late 1970s, Sri Lanka has emerged as a successful participant in the global apparel value chain. The bulk of apparel exports from Sri Lanka are now by full package suppliers. While foreign buyers played a pivotal role in linking Sri Lankan firms to the global value chain and helped them in industrial upgrading as predicted by the GVC approach, the process was immensely helped by a domestic enabling environment, which included a domestic workforce with an adequate skill development, an entrepreneurial class, proactive industry associations and, above all, policy reforms initiated in 1977 that eliminated many of the crippling barriers on trade and foreign investment. Collaborative actions by the industry and the government greatly eased the burden of adjustment to the abolition of MFA quotas, and helped take advantage of the opportunities that opened up in the past-MFA environment.

Growth and structural adjustment over three decades through engagement in apparel value chain, in particular a niche carved out in high-end markets for intimate apparel (lingerie) and casual wear, seem to have helped the Sri Lankan apparel industry to face competitive market conditions following the termination of MFA. The industry has also built a strong image of corporate social responsibility, in particular relating to compliance with internationally agreed employment practices, and improved social and environmental standards. Improvement in the human capital base and design capabilities of the industry has enabled the industry to swiftly respond to buyers' quest for variety. These non-price factors seem to have played a pivotal role in securing export orders, even

> **The bulk of apparel exports from Sri Lanka are now by full package suppliers.**

though Sri Lanka is no longer a low-cost production base compared to many other apparel producing countries in the region. Overall, the Sri Lankan experience demonstrates that apparel is a bundle of differentiated products, not a homogenous commodity as commonly assumed by the trade flow modellers, and individual exporting countries have room for specialisation in specific products.

An important issue in the contemporary trade and industrial policy debate is whether an import-substitution (IS) phase is a precondition for successful transition of the economy to export orientation. In Sri Lanka the new local exporting firms (both those with FDI participation and purely local ones) developed initially following the reforms as exporting ventures independently of the industrial base developed during the import-substitution era. A few firms in the garment industry established during the IS era have successfully ventured into export business. However, their new operations were largely based on knowhow and management inputs obtained through foreign collaboration and/or marketing links established with foreign buyers. Most of the firms which were exporting to non-competitive Eastern European markets under bilateral trading agreements disappeared under competitive market conditions after 1977. Moreover, unlike in some other countries, the import-substitution phase did not help the nascent apparel industry by providing the apparel with a competitive domestic fabric base. The domestic fabric base and other ancillary industries grew following the rapid expansion of the apparel industry. The recommendation by some 'economists' to develop domestic input linkages of clothing industry through direct government intervention is not supported by the Sri Lankan experience. Domestic input linkages of clothing industry should come naturally as part of the expansion of the latter through successful export expansion.

Domestic input linkages of clothing industry should come naturally as part of the expansion of the latter through successful export expansion.

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Appendices

Appendix 1: Joint Apparel Association Forum (JAAF)

Following the decision made in 1995 under the Uruguay Round Agreement to phase out MFA, there was a fear that the garment industry in Sri Lanka would be hard hit by competition from China and other low-cost sources. In 2002 leading apparel manufacturing firms joined hands to form the Joint Apparel Association Forum (JAAF) for preparing the industry to face the post-MFA challenges. It brought together the National Apparel Exporters Association, The Sri Lanka Garment Buying Office Association, the Sri Lanka Chamber of Garment Exporters and the Free Trade Zone Manufacturers Association, which had until then been pursuing their own agendas in an uncoordinated manner, to form a common front.

JAAF joined hands with the government to formulate a five-year strategic plan with the aim of consolidating and strengthening the industry. The plan, prepared by a group of leading players in the Apparel industry headed by Mahesh Amalean (CEO of MAS), came up with a road map for transforming the industry from being pure 'contract manufacturers' to providers of 'fully package suppliers'. It emphasised the need for focussing on exporting 'high-value 'garments to premium markets as opposed to manufacturing of low cost garments for mass consumer markets. Based on an analysis of the past performance of the industry and on-going changes at the global stage, four product categories were earmarked as potential growth area for the Sri Lankan firms in world apparel trade: active and sportswear, casual wear, children's clothing and intimate clothing (lingerie). The plan also emphasised the need for shifting manufacturers' focus from production to marketing.

Nine committees were formed to implement the strategic initiatives. These committees, led by industry pioneers, focused on key areas such as backward integration, human resource development and technology advancement, trade, labour and SME initiatives, finance, logistics and infrastructure and marketing and image building both locally and internationally. A secretariat (initially fully funded by a leading apparel exporting firm, Brandix) was established to coordinate and support the nine committees and oversee the implementation of the strategy. The strategic plan and policy reports prepared by the committees played a pivotal role in guiding individual firms to restructure their operation to face the post-MFA challenge. A second five-year plan was issued in 2010. Based on an assessment of the emerging patterns of Sri Lankan apparel exports during the post-MFA years, it focussed on strategies for consolidating Sri Lanka's position as a high-value apparel hub in the region.

JAAF achievements are particularly noteworthy in two main areas: skill development and promoting Sri Lanka's image as an ethical apparel producer. In the area of skill development its achievements include launching a number of middle-level training programs jointly with the Katubedda Technical University, establishing four training centres with financial and technical support from USAID to train sewing machine operators, and inaugurating a certificate (diploma) course in marketing in collaboration with the Chartered Institute of Marketing, UK.

As part of its attempt to build Sri Lanka's image as an ethical apparel exporter, in 2006 JAAF launched a 'Garment without Guilt' campaign to promote Sri Lanka as an ethical clothing manufacturer. The campaign was launched based on market research, jointly funded by the government and JAAF member companies, in the US and Europe. It placed particular attention on paying fair wages to workers, elimination of the 'sweat shops' image through workplace improvements, avoiding employment of child labour businesses (stick to the motto, 'children have no business in our businesses'), and creating opportunities for worker education and personal growth. Firms were advised to communicate the new 'Garment without Guilt' image through packing material and corporate communication media such as company letterheads and websites.

In order to provide third-party assurance to the buyers of compliance of workplace norms by firms, JAAF engaged the Swiss based SGS Group ?the world's largest organization in the field of inspection, verification, testing and certification? to undertake 'Code of Conduct' audits. The top ten apparel exporting firms and many other medium-sized firms in the Sri Lankan apparel industry are now 'SGS certified'. JAAF has also been involved in encouraging/helping member firms to obtain Leadership in Energy and Environmental Design (LEED) certification, a third-party verification of energy and water efficient manufacturing environment, from the U.S. Green Building Council.

JAAF is actively involved as an advisory body to the Sri Lankan government on international trade policy issues relating to apparel trade. It played a key role in obtaining GSP+ concessions from the European Union in 2005.

Appendix 2: Profiles of Three Clothing Companies

MAS Holdings

The Amalean family-the owners of MAS Holdings, the largest apparel firm in Sri Lanka-has a long history in the textile trading business in Colombo. The three Amalean brothers, Mahesh, Ajay and Sharad cut their teeth on apparel trade by working at a textile trading company founded in 1920 by their grandfather. In 1984 they pooled US$10,000 to set up Sigma Industries with 26 Juki sewing machines to produce casual wear (Tafferta jackets) for Sears. Sigma Industries attracted the attention of Martin Trust, the president of Mats Industries, the sourcing arm of The Limited (the largest retailer of upmarket women's apparel in the USA) who visited Colombo in November 1985. In 1986, a joint venture with Mast Industries, Unichela (coined from the Pali words of women and apparel), was established to manufacture women's dresses for The Limited (Trust 2007). In the same year MAS Holdings (named after the three brothers) was formed by amalgamating Sigma and Unichela.

When women dresses exports to the US market came under MFA quota restrictions in 1987, MAS moved on to production of brassieres (bras), which at the time was a quota-free product without competition from any other local producer. Mahesh got the idea from a sales catalogue of Victoria's Secret (a newly established lingeries retailer which was taken over by The Limited a few years ago). He visited China and Hong Kong to see how lingerie were made and then with the help of Martin Trust became a supplier to Victoria's Secret. The link forged with Victoria's Secret was the key to MAS's transition from a small venture to a global entity in the ensuing two decades. Following the initial success of lingerie operation, Martin Trust helped MAS to form a large

new firm in 1989, Shadowline, with MAS, Triumph International (a 100-year-old German lingerie company) and Mast as equal shareholders. This was followed by setting up Bodyline in 1992, MAS's first fully-owned brassiere plant.

Until the early 1990s, MAS's exports were entirely to the US market, with Victoria's Secret accounting for over 80% of the total turnover. Diversification of exports to the UK and other EU countries began with the establishing of the Slimline plant in 1993, a joint venture with Courtaulds, a UK-based private label manufacturer (owned by Sara Lee, a US company) to produce briefs for Marks and Spencer. Diversification of the product mix from bras and panties to swimwear began in 2001, with the setting up of Linea Aqua, a joint venture with Speedo (UK) and Brandoit International (a new company formed by Martin Trust), to produce swimwear for Marks & Spencer and Victoria's Secret.

During the next two decades the customer list expanded to encompass a number of other prominent brand-owners including GAP, Triumph, Nike, Adidas, H&M, Ralph Lauren, Columbia, Soma, La Senza, Athleta, Land's End, Warnaco, DBA and Lululemmon. The highlights of its operation as a 'design-to-delivery solution provider' in the global apparel value chain include, the "Nike Revolutionary Sports Bra" (an ultra-lightweight sports bra adjustable three ways to ensure a personalized fit produced using no-sew (or bonded) technology), Fastskin11, a hydrodynamic swimsuit, produced jointly with Speedo for the 2004 Athens Olympics, and the FS Pro swimsuit for the 2008 Beijing Olympics. In 2007 Victoria's Secret named MAS Holdings its top vender in the world.[25]

In the late 1990s, when lean retailing began to spread in developed country markets resulting in shortening the traditional fashion cycle from nine months to six weeks, MAS swiftly responded by restructuring its production plans. In 1997 it started two in-house IT consulting firms, one to manage their manufacturing and production information systems and the other to implement the business software solutions processes, "Systems, Applications & Products" (SAP). MAS was the first Asian apparel company to embrace this new system, which ensured that the goods are ready for shipping within two weeks after receiving an order. SAP enables the foreign buyers to monitor the entire production process and change the order midstream (relating to the colour, size or the mode of delivery), depending on the sales patterns on the shop floor. In 2014 MAS acquired (at US$20 million) Attune Consultancy, a well-established Sri Lankan IT firm (established in 2006) which offers SAP-based specialized consultancy in apparel and footwear industries. Attune has a branch network encompassing US, UK, Germany, India, Sri Lanka, Italy, China, Hong Kong and Australia.

After building a large customer base encompassing the US and European markets, in the late 1990s MAS embarked on backward integration within the apparel value chain by establishing input-supplying companies. Most of these new ventures were joint ventures set up with a number of foreign firms, which initially supplied fabric and clothing accessories to MAS. In 1995, Stretchline was set up jointly with Chamwood Elastics, UK to manufacture elastic, a key input for intimate apparel. The other backward-liked ventures

formed during the next decade included Linea Intimo, Sri Lanka's first seamless knit operation specialising in performing clothing; Textured Jersey, a joint-venture with Textured Jersey, UK and Pacific Textiles Hong Kong, to produce weft-knit fabrics; a joint venture with Noyon Dentelles de Calais of France to produce lace; Prym Industries Lanka, a joint venture with Prum Intimate Group in UK to produce bra accessories; Silueta a wholly owned by MAS, opens to manufacture laminated foam moulded bra cups; joint venture with DOGI International (Spain) to produce warp-knit fabrics; and Text Print Lanka, joint venture with Textprint S.A (Spain) for fabric printing.

In 1996 MAS set up the first offshore apparel plant in Maldives. The Maldivian operation ended in 2005 following the abolition of MFA. However, the process of going global gained momentum following the post-MFA years. Intimate Clothing, a subsidiary of MAS Holdings has large production plants in Vietnam and India. The two factories, in Chennai and Bangalore, started operation in 2006, and currently employ over 1500 and 1300 workers respectively. The MAS integrated fabric park in India, which located in a 714 acre site in Chintavaram in Nellor District, Andhra Pradesh, started operation in 2007 with an initial investment of $200 million. It expects to generate US$500 million export revenue and employ 30,000 workers in full capacity. The park is an integral part of MAS's global supply chain integration strategy, and is expected to attract investment in different stages of the manufacturing and finishing process of warp knit fabrics used in the production of corsetry, swimwear and sportswear. MAS has already set up two joint-venture companies in the park, one with Dogi Spain and Elastic Fabric of the

USA and the other with Miami Exports (a Sri Lankan firm).[26]

Stretchline Lanka, MAS's elastics producing subsidiary, has become a multinational on its own right with production plants in China, Indonesia, Mexico, Honduras; sales offices in UK, USA and Hong Kong; and a research lab in UK jointly run with its parent company. Its UK affiliate, a joint venture with its initial UK partner, engages in R&D activities in addition to coordinating marketing in the UK and Europe. Stretchline is now a well-known provider of 'narrow fabric solutions' to some of the world's leading brands of intimate apparel.

In 2002 MAS became the first OMB apparel producer in Sri Lanka. It that year, MAS launched in India a range of lingerie under its own brand name, Amante' (meaning 'the lover' in Italian). This brand was developed and designed in Sri Lanka for the the premium segment of the lingerie market, to suit the South Asian climate and local taste in colour and print. Before designing it, MAS took measurements from 1500 women across India because European or East Asian fits would not work in South Asia. After the initial launch in Chennai and Bangalore, *Amante* range of lingerie are now sold in departmental stores and regional multi-brand outlets all over India. The range of Amante brand sold in India was initially manufactured in Sri Lanka, but the production was shifted to the Chennai factory after three years. MAS has invested US$ 10 million in the Amante line with the aim of making the product a premier brand in the Asian region. By 2012 Amante had already become 'a close third'(with a market share of 20%) in the premium lingerie market in India, after Enamor and Triumph, which had entered the market

a decade ago (Kulamannage, 2012, 53). Amante was successfully launched in Sri Lanka in October 2012, and MAS has plans to expand its distribution network to Pakistan and the Middle East in the near future.

The remarkable success of MAS has been built on unique management practices. The three brothers worked on the shop floor, supervising production lines. Rather than treating the business as a source of family cash, the three bothers take salaries based on their title and responsibilities, like any other employee. Any other family members who worked for the company had to start on the shop floor and learn the business. MAS developed its leadership program with the help of MDA Associates International with which it forged links through Victoria's Secret. Corporate hierarchy was abolished and all employed encouraged to address one another by their first name. MAS managers eat in the same canteen, use the same restrooms with their workers.

MAS has played a pivotal role in building Sri Lanka's reputation as an ethical apparel producer through progressive human resources policies. From the mid-1980s when it started to become a major supplier to Victoria's Secret, the Amalean brothers have worked hard to reject the every element of the sweatshop model; it embraced 'productivity is improved when the workplace is welcoming' as its management motto (Dinankar, 2007).[27] MAS conducts English language classes, reproductive health workshops and leadership training programs, organise athletic and other social events, and provide maternity clinics, vaccinations, personal hygiene programs. In November 2003, MAS launched a 'worker empowerment'

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[26] http://www.fibre2fashion.com/news/printStory.aspx?new_id=43172.

[27] Thomas Friedman, who visited a garment factory of the MAS Holding in 1999 wrote, 'In terms of working conditions, this factory was world-class. Wages aside, I would allow my own daughters work there' (Friedman, 2000, p. 177).

program called 'Women Go Beyond' in collaboration with Victoria's Secret and GAP. This program has attracted world-wide attention as an example of ethical employment practice in apparel industry (Watson, 2010). According to MAS's estimates the total cost of its worker-welfare programs adds up to about 3-4% of operational cost, but resulted improvement of worker productivity could be as high as 5% of the average productivity level in the industry (Dinankar, 2007).[28]

In 2007, MAS inaugurated its own training school, MAS Institute of Management and Technology (MIMT), to serve as a "One Destination Solution" to training requirements in the apparel industry. Located in MAS Fabric Park, it offers a range of training facilities for its own employees and those from other apparel firms. Recently, Nike joined hands with MAS to set up a global training facility, Nike Apparel Innovation and Training Centre (Nike-AITC), at MIMT. Nike-AITC trains annually over 100 personnel from Nike vendors in 15 different countries.

After a quarter century of rapid expansion starting with a 26-machine CTM operation, MAS is now the largest intimate wear (lingerie, leisurewear and sportswear) producer in South Asia. In 2011 MAS total sales touched US$1 billion, accounting for nearly 10% of the country's total merchandise exports. It employs over 55,000 in its world-wide operations, with a total employment of over 45,000 in Sri Lankan operations (one of the largest employers in the country).

Brandix Lanka

Brandix Lanka's history dates back to 1969, when the father of Ashrof Omer (the present owner-CEO of Brandix) set up a textile trading house (Firoze Ltd) in Colombo. In 1972 the Ashrof family ventured into apparel manufacturing by

setting up Lux Shirts for commercial production of shirts for the domestic market. Following the liberalisation reforms in 1977, Ashrof Omer expanded the family business by acquiring a number of sick companies which were not able to face the new competitive environment and restructuring them to undertake subcontracting for foreign buyers. In 1999 Phonix Ventures was formed by amalgamating the various clothing firms.

The year 1986 was a watershed in the transformation of the family business to a complete service provider in the global apparel value chain. In that year, LM Apparel was formed as a joint venture of Phonix and Mast Industries to produce casual wear for The Limited. While casual wear continued to remain the core of the Brandix group of companies, the product mix has expanded during the past ten years to encompass lingerie and sportswear. The list of customers expanded to cover well-known brand names including Victoria's Secret, Marks & Spencer, Nike, Speedo, Triumph, La Senza, GAP, DRA, H&M, Lululemon, Oysho and Athleta.

The process of supply chain integration by setting up firms to produce fabric and other accessories began in the mid-1990s. Key investments in the allied fields of dyeing, finishing and printing of textiles, manufacture of thread and apparel accessories, as well as a complete washing plant, enabled the group to provide total apparel solutions. As with the case of MAS, these firms were joint ventures with international firms with long-standing vendor relationships. These joint ventures include Quenby Lanka, a joint venture with Brandoit International (USA) which provides rotary screen and digital printing facilities for both woven and knitted fabrics with a production capacity of 1.5m metres a month.; T & S

Buttons Ltd, a joint venture with T & S Buttons (UK) the world's largest manufacturer of buttons, which produces a wide variety of button styles from a range of materials including imitation horn, wood, shell and pearl; Textured Jersey, producing knitted fabrics for the intimate apparel and sportswear industries; Ocean Lanka Ltd (joint venture with Hidramani Group and Fountain Set - the world largest knit manufacturer headquartered in Hong Kong), is Sri Lanka's largest weft knitted fabric manufacturer producing core products such as jersey, lycra, and fleece and terry towels; Stevenson Lanka, an exclusive garment dyeing facility (joint venture with Stevenson, UK); and A&E Brandix Hangers.

In March 2003 Brandix Lanka, a 'total apparel-solutions provider', was formed by merging Phonxi Venture and Jewelknit Group (an apparel firm established in 1979 with capital contribution of Mast and a Hong Kong-based investor) and acquiring the total equity interest of Mast industries. Brandix Lanka is structured into three sectors: Brandix Apparel, Brandix Textiles and Brandix Investments. Brandix Apparel - the core of the group's business focuses on product development, manufacturing and marketing of casual wear and intimate apparel. It has a marketing office in Hong Kong to coordinate its dealings with global buyers. Brandix Textiles produces fabric, thread, buttons and hangers for Brandix's own apparel production and also for a number of other apparel producers in the country.

In 1996 the Phoenix College of Clothing Technology (later renamed The Brandix College of Clothing Technology, BCCT), the nation's first academic institution for apparel technology, was established to train Brandix employees. BCCT offers tailor-made training programs for Brandix employees from the grass roots

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[28] For a detailed account of MAS employment practices and worker-welfare programs, see Watson, 2007 and 2008.

level through to junior and middle level management.

The Brandix group took its first steps to establishing overseas production facilities with the setting up of Eden Fashions (Maldives) in 1996 to circumvent quota restrictions on exports from Sri Lanka. In subsequent years it has set up production plants in India and Bangladesh. In 2006, Brandix started developing a 1000 acre vertically integrated textile and garment park ('Brandix India Apparel City', BIAC) in the port city of Vishakapatnam in India's Andhra Pradesh state. It was formally inaugurated in 2010. With an initial investment of US$750 million, BIAC is so far the biggest foreign investment in clothing industry in India. At full capacity, it expects to generate a turnover of US$1.2 billion and employ over 60,000. Brandix Apparel Ltd was the first enterprise to start operation in BIAC. It currently employs 1600 workers and has begun to supply fabric from the Indian base to Brandix apparel firms in Sri Lanka and Bangladesh. A number of other world-class companies involved in various layers of the global apparel supply chain (ranging from spinning, knitting and weaving, clothing accessories, apparel making and embellishment, store services and logistic) have either already set up operations in BIAC or made commitments to do.

Brandix Casualwear Bangladesh Ltd, a state-of-the-art factory situated in Comilla, free trade zone in Bangladesh, started operation in October 2010. The factory was designed as a lean manufacturing unit to produce woven bottoms for Marks and Spencer and GAP. With total force at full capacity of 2800 workers, it is the first apparel firm in Bangladesh to receive 'Plan A' certification for environmentally friendly production from Marks and Spencer.

Brandix together with MAS, Hidramani and other main apparel producers in the country has played a pivotal role in promoting Sri Lanka's image as an ethical apparel producer. Over the past decade or so, meeting environmental standards has been a key priority in its factor expansion program (environmentally friendly practices). In August 2008, Brandix Casualwear's Green Factory at Seeduwa was awarded the Platinum Certificate in the Leadership in Energy and Environmental Design rating system of the US Green Building Council. The Brandix Eco Centre, a converted 30-year old factory, is a lead manufacturing plant for Marks & Spencer. It was formally inaugurated in April 2008 by its CEO, Sir Stuart Rose. Brandix Finishing has invested considerably in waste management and good environmental practices. It is the first company in Sri Lanka to achieve 'Deep Green Light' status, the highest rating from the Gap 2005 Global Water Program for meeting global water quality guidelines for vendor laundries.

The total turnover of Brandix group is rapidly approaching the $1 billion mark. It has a workforce of over 40,000, including 35,000 in 38 production plants in Sri Lanka.

Hidramani Group

The Hidramani Group has a history dating back to 1890 when Parmanand Hirdaramani set up a retail clothing store in Fort, Colombo. The store made a name by introducing the concept of same-day tailoring to passengers of cruise liners that docked at the Colombo Harbour. In 1954 Hidramani Industries was set up for commercial manufacturing of shirts and towels. A subsidiary of Hidramani Industries, Ceylon Knit Trend, was set up in 1974 to produce knitted garments for the export market. This was among the few apparel firms set up during the import-substitution era to thrive following the liberalisation reforms in 1977.

During the post-reform years, Hidramani group has set up over 25 production facilities in the country, with a capacity of 13 million pieces per month and a workforce of over 30,000. It has a comprehensive Product Development Centre (located in Maharagama, a suburb of Colombo) which provides design and consultation services for production plants within the group. The customers of the group include over 30 leading international brand owners such as Marks & Spencer, Tesco, True Religion, Levi's, Ralph Lauren, Tommy Hilfiger, Patagonia, Abercrombie and Fitch, Levi's and Nike. The group provides a complete product range of knit and woven garments from casual wear to jeans, sleepwear, lounge sportswear and underwear for women, men and children. It is the largest Children-wear producer in the country.

Hidramani Group was the first Sri Lankan apparel producer to set up a production plant overseas. In 1984 it established Comtextile Bangladesh, a joint venture with LT Apparel, a world leader in the children's wear industry. Its operations were expanded in the mid-1990s by setting up for more state-of-the-art factories (including a sophisticated washing plant, a reverse osmosis water treatment plant and an effluent treatment plant), which meet worker safety and environmental standards required by the buyers and washing facilities. The total workforce it currently it employs is over 5000 people. With a total workforce of over 5000, Comtextile Bangladesh has also grown to become a large global sourcing company with offices in the USA, Hong Kong, China, Indonesia, Vietnam, Sri Lanka, India and Bangladesh. It sources textiles, garments and accessories for various US and European clients from over 50 factories in the region. Hidramani's Vietnamese venture, Fashion Garments Ltd., was set up in 2002. It is

an integrated embroidery plant, with over 38 manufacturing lines and a production capacity of 1.25 million pieces a month.

Hidramani's supply chain integration strategy began with the establishment in 1996 of Ocean Lanka (Pvt) Ltd for producing knitted fabric, jointly with Fountain Set - the world largest knit manufacturer headquartered in Hong Kong and Brandix Lanka. Paxan Lanka, a joint venture with Paxan Corporation, USA, was set up in 1999, to produce apparel accessories. Hi Fashion (Pvt) Ltd (a fully owned subsidiary of

Hirdaramani Group) was set up in 2005 to undertake graphic designing, colour development and embellishments for its apparel firms.

A unique feature of Hidramani group is its role as an apparel trading house, in addition to its core role as an apparel producer. Hirdaramani International Export (Pvt) Ltd. located in the Katunayake Export Processing Zone purchases products from local manufacturers for exporting to the US and EU markets.

Hidramani group is an active participant of the JAAF's 'Garment without Guilt'

program. Commitment to ethical employment practices, community development, sustainable manufacturing have been integral parts of its business expansion strategy. It has developed a reputation among major global buyers as an environmental-friendly apparel producer. One of its newly-built factories ('Mihila' in Agalawatte) is the first carbon neutral apparel factory in Asia. Hidramani also produces apparel using fair-traded cotton for a number of leading brand owners.