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The Global Apparel Value Chain, Trade and the Crisis

Challenges and Opportunities for Developing Countries

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Abstract

This paper examines the impact of two crises on the global apparel value chain: the World Trade Organization phase-out of the quota system for textiles and apparel in 2005, which provided access for many poor and small export-oriented economies to the markets of industrialized countries, and the current economic recession that has lowered demand for apparel exports and led to massive unemployment across the industry's supply chain. An overarching trend has been the process of global consolidation, whereby leading apparel suppliers (countries and firms alike) have strengthened their positions in the industry. On the country side, China has been the big winner, although Bangladesh, India, and Vietnam have also continued to expand their roles in the industry. On the firm side, the quota phase-out and economic recession have accelerated the ongoing shift to more streamlined global supply chains, in which lead firms desire to work with fewer, larger, and more capable suppliers that are strategically located around the world. The paper concludes with recommendations for how developing countries as well as textile and apparel suppliers can adjust to the crisis.

This paper—a product of the Trade and Integration Team, Development Research Group (Global Trade and Financial Architecture project supported by DFID)—is part of a larger effort to explore the effects of the world economic crisis on global value chains. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at ggere@soc.duke.edu and stacey.frederick@gmail.com.

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Produced by the Research Support Team

The Global Apparel Value Chain, Trade and the Crisis: Challenges and Opportunities for Developing Countries

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1. Introduction

Apparel is one of the oldest and largest export industries in the world. It is also one of the most global industries because most nations produce for the international textile and apparel market. Apparel production is a springboard for national development, and often is the typical starter industry for countries engaged in export-oriented industrialization due to its low fixed costs and emphasis on labor-intensive manufacturing (Adhikari & Weeratunge, 2006; Gereffi, 1999).

Although the global apparel industry has been expanding at a rapid rate since the early 1970s and providing employment to tens of millions of workers in some of the least-developed countries in the world, the industry has experienced two major crises in the past five years. The first crisis is regulatory. The Multi-Fiber Arrangement (MFA), which established quotas and preferential tariffs on apparel and textile items imported by the United States, Canada, and many European nations since the early 1970s, was phased out by the World Trade Organization (WTO) between 1995 and 2005 via its Agreement on Textiles and Clothing. The concern of many poor and small developing economies that relied on apparel exports was that they would be pushed out of the global trading system by much larger, low-cost rivals, such as China, India, and Bangladesh.

The second crisis is economic. The recent global recession, which was sparked by the banking meltdown in the United States in 2008 and quickly spread to most of the major industrialized and developing economies, brought the world to the brink of the most severe economic crisis since the Great Depression of the 1930s. Plant closures and worker layoffs in the industrialized nations led to slumping consumer demand, which resulted in fewer orders and shrinking markets for export-oriented economies in the developing world. The recession hit the apparel industry especially hard, leading to factory shutdowns, sharp increases in unemployment, and growing concerns over social unrest as displaced workers sought new jobs.

This paper will examine the impact of the MFA phase-out and the current economic crisis on the changing patterns of supply and demand in the global apparel value chain from 1995 to 2010, and also look at how these crises have affected global sourcing and production networks among firms. Has there been greatly increased consolidation by the most successful exporting countries and among the leading firms in the apparel value chain? Who are the winners and losers in this industry, and what are the most viable upgrading strategies in today's global economy? Finally, we discuss recommendations and strategic options for how developing countries can deal with these challenges.

2. Two Crises in the Apparel Global Value Chain

A. MFA Phase-Out in 2005

Global expansion of the apparel industry historically has been driven by trade policy. Apparel is one of the most protected of all industries, ranging from agricultural subsidies on input materials (cotton, wool, rayon) to a long history of quotas under the General Agreement on

Tariff and Trade within the MFA and its successor pact under the WTO, the Agreement on Textiles and Clothing (ATC) (Adhikari & Yamamoto, 2007). The MFA/ATC restricted exports to the major consuming markets by imposing country limits (quotas) on the volume of certain imported products. The system was designed to protect the domestic industries of the United States and the European Union (EU) by limiting imports from highly competitive suppliers such as China (Thoburn, 2009).

Trade restrictions have contributed to the international fragmentation of the apparel supply chain, whereby low-wage countries typically sew together imported textile components and re-export the finished product. This reconfiguration began when exports from Hong Kong, South Korea, Taiwan, and later China reached their maximum levels under the quota system. Clothing assembly processes were then sub-contracted to low-wage developing countries throughout the Asian Pacific region and elsewhere that had unused export quotas, such as Bangladesh, Sri Lanka, and Vietnam (Gereffi, 1999; Audet, 2004).

The removal of quotas on January 1, 2005 marked the end of over 30 years of restricted access to the markets of the European Union and North America. Retailers and other buyers became free to source textiles and apparel in any amount from any country, subject only to a system of tariffs and a narrow set of transitional safeguards that expired at the end of 2008. This caused a tremendous flux in the global geography of apparel production and trade, and a restructuring of firm strategies seeking to realign their production and sourcing networks to accommodate new economic and political realities (Gereffi, 2004; Rasmussen, 2008; Tewari, 2006).

Apparel protectionism has declined in the past several years, with more garment-importing countries removing barriers to clothing trade than ever before (Frederick & Gereffi, 2009a, 2009b; just-style.com, 2009a). The economic recession and subsequent import slowdown in the United States, Europe and Japan has sparked a reinvigoration of government policies to support the textile and clothing sector in leading apparel exporting countries (see Table A-1 in the Appendix), but overall, international restrictions on apparel trade are still relatively limited.

B. The Current Economic Crisis and Its Impact on Global Apparel Supply and Demand

Consumption in the global apparel industry is highly concentrated in three main regions: the United States, the European Union, and Japan. In 2008, the European Union (EU-27, including intra-EU-27 trade) accounted for nearly half (47.3%) of total world apparel imports of US$ 376 billion, while the United States accounted for 22%, Japan for 6.9%, and the Russian Federation for 5.7% (see Table 1). Together, the United States, the EU-27, and Japan represented over three-quarters of world apparel imports in 2008, which is down from the 82.4% they accounted for in 1995. Particularly notable is the steady decline in the U.S. share of global apparel imports, which fell from a peak of 32.1% in 2000 to 22% in 2008, and Japan's drop from 11.5% in 1995 to 6.9% in 2008.

At the onset of the current recession, global apparel imports increased by nearly 7% ($22.3 billion) between 2007 and 2008. U.S. imports declined during this period, but those of

the EU-27, Japan, and the Russian Federation grew. Thus, the negative impact of the economic recession was not yet apparent in the annual import statistics for 2008 (see Table 1).

Table 1: Shifts in Top 15 World Apparel Importers: 1995, 2000, 2005, & 2007-2008

[Top 15 by Year; Values in $US Billions, at Current Prices]

Country/ Region	**1995**		**2000**		**2005**		**2007**	**2008**	
	Value	**%**	**Value**	**%**	**Value**	**%**	**Value**	**Value**	**%**
World	162.9		208.9		291.2		358.1	375.6	
EU-27 (h)	74.2	45.5	83.2	39.8	131.5	45.2	165.0	177.7	47.3
United States	41.4	25.4	67.1	32.1	80.1	27.5	84.9	82.5	22.0
Japan	18.8	11.5	19.7	9.4	22.5	7.7	24.0	25.9	6.9
Russian Federation (a)	--		2.7	1.3	7.9	2.7	14.5	21.4	5.7
Canada (b)	2.7	1.7	3.7	1.8	6.0	2.1	7.8	8.5	2.3
Switzerland	3.8	2.3	3.2	1.5	4.5	1.5	5.2	5.8	1.5
United Arab Emirates (c)	1.3	0.8	--		1.8	0.6	5.0	5.5	1.5
Australia (b)	1.3	0.8	1.9	0.9	3.1	1.1	3.7	4.3	1.1
Korea, Republic of	1.1	0.7	1.3	0.6	2.9	1.0	4.3	4.2	1.1
Norway	1.4	0.9	1.3	0.6	1.8	0.6	2.3	2.7	0.7
Mexico (b, d)	1.9	1.2	3.6	1.7	2.5	0.9	2.5	2.5	0.7
China (e)	1.0	0.6	1.2	0.6	1.6	0.6	2.0	2.3	0.6
Singapore	1.6	1.0	1.9	0.9	2.1	0.7	2.4	2.2	0.6
Turkey	--		--		--		--	2.2	0.6
Saudi Arabia	--		--		1.5	0.5	1.9	--	
Honduras (f)	--		1.3	0.6	--		--	--	
Taipei, Chinese	0.9	0.5	1.0	0.5	--		--	--	
Top 15 Share & % of World Total Imports									
	151.3	**92.9**	**193.0**	**92.4**	**269.9**	**92.7**	**325.5**	**347.8**	**92.6**
Hong Kong, China (g)	12.7		16.0		18.4		19.1	18.5	

Source: (WTO, 2010); Apparel represented by SITC Code 84
--Indicates country not in Top 15 that year

(a) Estimated value: coverage: includes intra-trade; (b) Method of valuation: imports are valued f.o.b.; (c) Estimated value; (d) Coverage: Includes processing zones; (e) Trade system: prior to 1992: CT data reported in HS; (f) First year processing zone trade included; break in data continuity with data from earlier years; (g) Value of Hong Kong, China not included in world totals due to large portion re-exported and not retained; (h) EU values include intra-EU trade; values only represent EU-15 in 1995.

A closer look at the shifting apparel imports of the United States, the EU-15, and Japan provides more detailed evidence of the impact of the economic recession on global apparel supply and demand.

United States. In 2008, U.S. consumers spent $200 billion on apparel, down 3.6% from 2007, and apparel spending in the first quarter of 2009 was also down 10% from the same period in the previous year (Driscoll & Wang, 2009). Apparel sold and consumed in the United States has a very high import ratio, which has been increasing for decades. In 2006, the estimated overall apparel import penetration was 94% (Clothesource, 2008). In 2008, the percentage of imports to apparent U.S. consumption of men's, women's, and children's apparel ranged from a

low of 77.2% for finished socks to a high of 100% for men's dress and sports coats (in volume terms) (U.S. Census Bureau, 2009a; 2009b).

Table 2 charts trends over time in the top 15 countries that supply U.S. apparel imports. Most striking is the dramatic increase in China's import share, which climbed from 13.3% of all U.S. apparel imports in 2000 to 26.4% in 2005 and 34.7% in 2008. The big losers during this period were Mexico, whose apparel import share fell from 13.1% in 2000 to just 5.2% in 2008, and the DR-CAFTA (Dominican Republic and the five countries in the Central American Free Trade Agreement), whose import share dropped from 13.9% in 2000 to 9.6% in 2008. A more graphic illustration of the shifts in the regional structure of U.S. apparel imports is found in the Appendix, Figure A-1.

Table 2: U.S. Top 15 Apparel Import Shifts: 1995, 2000, 2005, & 2007-2009

[Value in $US Million; % Represents Country/Region's % of Year's World Value]

Country/ Region	**1995**		**2000**		**2005**		**2007**	**2008**	**2009**	
	Value	%	Value	%	Value	%	Value	Value	Value	%
World	**41,367**		**67,115**		**80,071**		**84,853**	**82,466**		
China	6,170	14.9	8,924	13.3	21,138	26.4	28,530	28,575	28,201	39.1
DR-CAFTA	4,920	11.9	9,341	13.9	9,413	11.8	8,199	7,903	6,405	8.9
Vietnam	--		--		2,911	3.6	4,619	5,527	5,332	7.4
Indonesia	1,376	3.3	2,333	3.5	3,163	4.0	4,306	4,358	4,154	5.8
Mexico	2,904	7.0	8,809	13.1	6,374	8.0	4,743	4,250	3,580	5.0
Bangladesh	1,142	2.8	2,279	3.4	2,537	3.2	3,286	3,657	3,580	5.0
India	1,379	3.3	2,157	3.2	3,376	4.2	3,505	3,412	3,126	4.3
Cambodia	--		--		1,818	2.3	2,559	2,508	1,950	2.7
Thailand	1,209	2.9	2,276	3.4	2,351	2.9	2,311	2,238	1,765	2.4
EU-15	2,003	4.8	2,644	3.9	2,535	3.2	2,602	2,412	1,646	2.3
Pakistan	--		--		1,447	1.8	1,696	1,691	1,467	2.0
Sri Lanka	1,029	2.5	1,609	2.4	1,796	2.2	1,711	1,620	1,319	1.8
Malaysia	1,253	3.0	1,380	2.1	--		1,422	1,505	1,300	1.8
Philippines	1,685	4.1	2,037	3.0	1,949	2.4	1,821	1,443	1,071	1.5
Jordan	--		--		--		--	--	791	1.1
Hong Kong	4,566	11.0	4,808	7.2	3,738	4.7	2,162	1,645	--	
Korea	1,923	4.6	2,591	3.9	1,319	1.6	--	--	--	
Taiwan	2,261	5.5	2,285	3.4	--		--	--	--	
Canada	896	2.2	1,933	2.9	--		--	--	--	
Top 15 Totals and % of World Total										
	34,715	**83.9**	**55,407**	**82.6**	**65,866**	**82.3**	**73,470**	**72,744**	**72,064**	**91.2**

-- Indicates country not in the Top 15 apparel suppliers that year.
Source: UN Comtrade; Apparel represented by SITC 84

European Union-15. In 2008, Europe accounted for 41% of global apparel retail sales of $1,026 billion (Datamonitor, 2009). In the EU-15, the apparel import penetration varies significantly among countries. In 2006, the estimated import shares for the main consuming countries were: the United Kingdom and Germany 95%, France 85%, Italy 65%, and Spain 55% (Clothesource, 2008).

Table 3 highlights trends in the EU-15's source of apparel imports over time. China is the market leader, with 24% of total EU-15 apparel imports in 2009, up from 9.6% in 2000. The next three top importers in 2009 are Turkey (6.3%), Bangladesh (4.7%), and India (3.9%). The shifting regional structure of EU-15 apparel imports between 1996 and 2008 can also be seen in Figure A-2 in the Appendix.

For the EU-15, it is important to note that all leading apparel suppliers, with the exception of China and Hong Kong, receive either duty-free or preferential tariff treatment. Tunisia and Morocco are part of the Euro-Mediterranean Partnership, and Romania, Bulgaria, Poland, Hungary, and Turkey are part of the EU-27 or EU Customs Union. To varying degrees, Indonesia, Thailand, Pakistan, Vietnam, India, Sri Lanka, and Bangladesh receive benefits from the Generalized System of Preferences (GSP) program. Whereas the United States excludes textiles and apparel items from its GSP agreements, the EU-15 includes textiles and apparel, thereby favoring many of the least-developed exporters in the global economy.

Table 3: EU-15 Top 15 Apparel Import Shifts: 2000, 2005-2009

[Values in Euros; % Represents Country/Region's % of Year's World Value]

	2000		**2005**		**2006**	**2007**	**2008**	**2009**	
	Value	**%**	Value	**%**	Value	Value	Value	Value	**%**
World Totals	64,517		73,909		80,392	84,172	86,935	81,300	
EU15_INTRA	26,180	40.6%	29,544	40.0%	30,993	33,710	34,601	31,507	38.8%
China	6,190	9.6%	13,061	17.7%	14,789	16,865	19,139	19,491	24.0%
Turkey	4,437	6.9%	5,648	7.6%	5,730	6,109	5,739	5,137	6.3%
Bangladesh	1,907	3.0%	2,596	3.5%	3,381	3,208	3,536	3,800	4.7%
India	1,805	2.8%	2,455	3.3%	2,922	2,838	2,998	3,138	3.9%
Tunisia	2,496	3.9%	2,359	3.2%	2,386	2,500	2,526	2,196	2.7%
Morocco	1,822	2.8%	1,858	2.5%	2,007	2,165	2,089	1,809	2.2%
Romania	2,196	3.4%	2,881	3.9%	2,791	2,060	1,982	1,521	1.9%
Poland	1,539	2.4%	854	1.2%	812	890	1,185	1,335	1.6%
Vietnam	650	1.0%	522	0.7%	768	843	947	935	1.1%
Indonesia	1,281	2.0%	891	1.2%	1,052	899	899	865	1.1%
Bulgaria	722	1.1%	977	1.3%	1,088	1,054	1,035	823	1.0%
Pakistan	645	1.0%	697	0.9%	787	802	813	779	1.0%
Thailand	730	1.1%	663	0.9%	761	703	717	690	0.8%
Switzerland	377	--	519	--	528	636	642	548	0.7%
Sri Lanka	338	--	331	--	426	488	529	555	0.7%
Hungary	1,001	1.6%	687	0.9%	706	677	582	445	--
Hong Kong	1,885	2.9%	1,006	1.4%	1,557	1,005	510	258	--

Source: Eurostat: Apparel Imports to Euro Area EU-15; Apparel represented by SITC 84

Japan. Like the United States and the EU-15, Japan relies heavily on apparel imports. In 2006, the estimated apparel import penetration ratio was 93% (Clothesource, 2008). Furthermore, Japan is highly dependent on one country, China, which represented 83% of total apparel imports in 2008 (WTO, 2009). The top 5 countries/regions (EU-27, Vietnam, Thailand, and Korea, plus China) accounted for 93.9% of total imports in 2008 (see Table 4).

Table 4: Japan: Top 5 Apparel Import Shifts: 1995, 2000, 2005, & 2007-2008

[Value in $US Million; % Represents Country/Region's % of Year's World Value]

Country/ Region	1995		2000		2005		2007	2008	
	Value	%	Value	%	Value	%	Value	Value	%
World	**18,758**		**19,709**		**22,541**		**23,999**	**25,866**	
China	10,626	56.6	14,713	74.7	18,243	80.9	19,795	21,350	82.8
EU-15	2,398	12.8	1,476	7.5	1,556	6.9	1,515	1,457	5.6
Vietnam	--		591	3.0	610	2.7	717	865	3.4
Thailand	503	2.7	--		--		271	313	1.2
Korea	1,847	9.8	951	4.8	436	1.9	258	227	0.9
USA	1,096	5.8	468	2.4	296	1.3	--	--	
Top 5 Total & % of World Imports									
	16,469	**87.8**	**18,200**	**92.3**	**21,141**	**93.8**	**22,555**	**24,213**	**93.9**

--Indicates country not in Top 5 for the year
Source: UN Comtrade, SITC 84, Rev. 3., Imports to Japan

C. Characteristics of Top Apparel Exporting Countries

By the end of 2009, the economic recession that hit the apparel retail markets of all the advanced industrial countries had rippled throughout the supply chain in developing economies as well. A striking trend is that the largest low-cost apparel producers in the developing world, such as China, India, Bangladesh, and Vietnam, have actually managed to increase their export shares in major global markets (see Tables 2, 3 and 4 below). This may reflect a substitution effect of the economic recession, in which the lowest cost suppliers gain market share vis-à-vis more expensive rivals.

China is the clear winner by far in the global apparel export race during the past 15 years. Between 1995 and 2008, China more than doubled its share of global apparel exports from 15.2% to 33.2 %, and it had a fivefold increase in the value of its apparel exports, from $24 billion to $120 billion. Other than the EU-27, which includes intra-European Union trade, the next six apparel exporters combined (Turkey, Bangladesh, India, Vietnam, Indonesia, and Mexico) account for less than half (15.4%) of China's export total in 2008 (see Table 5).

Table 5: Shifts in Top 15 World Apparel Exporters: 1995, 2000, 2005, & 2007-2008

[Top 15 by Year; Values in $US Billions; in US Dollars at Current Prices]

Country/ Region	1995		2000		2005		2007	2008	
	Value	%	Value	%	Value	%	Value	Value	%
World	**158.4**		**197.7**		**277.1**		**345.8**	**361.9**	
China	24.0	15.2	36.1	18.2	74.2	26.8	115.2	120.0	33.2
EU-27 (c)	48.5	30.6	56.2	28.4	85.5	30.8	105.1	112.4	31.1
Turkey	6.1	3.9	6.5	3.3	11.8	4.3	13.9	13.6	3.8
Bangladesh (b)	--		5.1	2.6	6.9	2.5	8.9	10.9	3.0
India	4.1	2.6	6.0	3.0	8.6	3.1	9.8	10.9	3.0
Vietnam (b)	--		--		4.7	1.7	7.4	9.0	2.5
Indonesia	3.4	2.1	4.7	2.4	5.0	1.8	5.9	6.3	1.7
Mexico (a)	2.7	1.7	8.6	4.4	7.3	2.6	5.1	4.9	1.4
United States	6.7	4.2	8.6	4.4	5.0	1.8	4.3	4.4	1.2
Thailand	5.0	3.2	3.8	1.9	4.1	1.5	4.1	4.2	1.2
Pakistan	--		--		3.6	1.3	3.8	3.9	1.1
Tunisia	2.3	1.5	--		3.1	1.1	3.6	3.8	1.0
Cambodia (b)	--		--		--		3.5	3.6	1.0
Malaysia	2.3	1.4	--		--		--	3.6	1.0
Sri Lanka (b)	--		2.8	1.4	2.9	1.0	--	3.5	1.0
Hong Kong (d)	9.5	6.0	9.9	5.0	7.2	2.6	5.0	--	--
Morocco	--		--		2.8	1.0	3.5	--	--
Korea, Republic of	5.0	3.1	5.0	2.5	--		--	--	--
Taipei, Chinese	3.2	2.0	3.0	1.5	--		--	--	--
Dominican Republic	--		2.6	1.3	--		--	--	--
Philippines	2.4	1.5	2.5	1.3	--		--	--	--
Poland	2.3	1.5	--		--		--	--	--
Top 15 Total and % Share of World Exports									
	127.5	**80.5**	**161.5**	**81.7**	**232.6**	**83.9**	**299.1**	**315.0**	**87.0**

Source: (WTO, 2010); Apparel exports represented by SITC 84

(a) Includes significant shipments through processing zones; (b) Some years include estimates; (c) EU values include intra-EU trade; values only represent EU-15 in 1995; (d) Domestic exports only.

i. Capabilities of Leading Global Apparel Exporters

Table A-3 in the Appendix lists the production capabilities of several of the main apparel exporting countries. As countries such as China, Turkey, and India develop capabilities that permit vertical integration in apparel, their reliance on apparel exports tends to diminish because their upgrading processes facilitate broader industrial diversification. Table A-4 in the Appendix, which provides export dependence ratios for major apparel suppliers, lends support to this argument. Those countries with the greatest apparel export dependence – such as Cambodia (85%), Bangladesh (71%), and Sri Lanka (41%) – emphasize CMT assembly and have limited

full-package capabilities. Vietnam also emphasizes CMT assembly, but its apparel export dependence ratio is relatively low (14%) because of the importance of its agricultural exports.

The main apparel exporting countries can be placed into the following categories:

- **Steady Growth Suppliers** (overall increasing market share since the early 1990s)**:** China, Bangladesh, India, Vietnam, and Cambodia; Pakistan and Egypt as well, but with smaller market shares.
- **Split Market Suppliers:** Indonesia is increasing its market share in the United States and Japan, and decreasing in the EU-15; conversely, Sri Lanka is increasing market share in the EU-15 and decreasing in the United States.
- **Pre-MFA Suppliers** (sharp declines after MFA quota phase-out that have accelerated during the crisis): Canada, Mexico, CAFTA, EU-12, Tunisia, Morocco, and Thailand.
- **Past-Prime Suppliers:** (decreasing since early 1990s): Hong Kong, South Korea, Taiwan, Malaysia; also countries with smaller market shares: Philippines, Singapore, and Macau.

The last two years have reinforced many of the trends occurring after the phase-out of quotas. China, Bangladesh, Vietnam, and Indonesia are increasing their market shares in North America and the European Union, primarily at the expense of near-sourcing options such as Mexico and the Central American and Caribbean suppliers to the United States, as well as apparel exporters from North Africa and Eastern Europe to the EU-15 (see Figures A-1 and A-2 in the Appendix).

Leading apparel suppliers like China, India and Turkey, concerned about a slowdown in global exports, have also begun to focus more on sales to their domestic markets. This trend not only taps into the added purchasing power of those emerging economies, but it also allows them to accelerate the upgrading process associated with moving beyond assembly and full-package supply to original design manufacturing (ODM) and original brand manufacturing (OBM).

ii. Regional Trends

From a regional perspective, how have different apparel exporters managed to cope with the MFA phase-out and the economic recession? Since our export data for 2008 only captures the initial year of the economic recession, these findings are provisional yet they reveal some interesting trends.

The growth of regional suppliers for finished apparel to the European Union and the United States has decreased markedly since 2005, largely due to the expansion of China's exports to these markets (see Tables 2 and 3). Regional and bilateral trade agreements in Asia are also increasing, such as those in the South Asian region (SAFTA) and those involving the Association for South East Asian Nations (ASEAN), including the new China link that went into full effect starting Jan. 1, 2010 (see Table A-1 in the Appendix).

East Asia – Rise of China with Functional Upgrading: Winners

In East Asia, China has not only increased its share of overall exports, but it has also significantly diversified its export partners. In 1996, Japan and Hong Kong represented nearly 60% of China's apparel exports of $25 billion, with the United States and the EU-15 accounting for another 22.6%. By 2008, China's apparel exports nearly quintupled to $120 billion, and the EU-15 and the United States were the top two export partners, but they accounted for only 39.3% of China's apparel exports, while Japan and Hong Kong held 21.1% (see Table 6). Thus, China's top four export markets in 2008 had about the same share of China's total exports as did Japan and Hong Kong alone in 1996. In this respect, China is lessening its dependence on its traditional export partners while adding important new markets, such as Russia and countries from the former Soviet bloc. This pattern can help China to withstand the demand slump in advanced industrial markets.

It is also important to recognize the size of China's apparel production for its domestic market. In 2007, the estimated value of sales to the Chinese apparel market totaled $93 billion for the year, indicating that 56% of the overall apparel production activities in China were for local consumers (Clothesource, 2008).

Table 6: China's Top 10 Apparel Export Markets: 1996, 2002, & 2008

[Values in $US Millions; %: Partner's Share of China's Annual Apparel Exports to World]

	1996			**2002**			**2008**		
	Partner	**Value**	**%**	**Partner**	**Value**	**%**	**Partner**	**Value**	**%**
1	Japan	8,170	32.6%	Japan	11,197	27.1%	EU-15	28,760	23.9%
2	Hong Kong	6,600	26.4%	Hong Kong	7,084	17.2%	USA	18,566	15.4%
3	USA	3,187	12.7%	USA	5,325	12.9%	Japan	17,686	14.7%
4	EU-15	2,467	9.9%	EU-15	4,672	11.3%	Hong Kong	7,757	6.4%
5	Rep. Korea	649	2.6%	Rep. Korea	2,250	5.4%	Russia	5,640	4.7%
6	Russia	635	2.5%	Russia	1,300	3.1%	Kyrgyzstan	5,091	4.2%
7	Australia	453	1.8%	Australia	1,027	2.5%	Rep. Korea	3,340	2.8%
8	Poland	275	1.1%	Canada	731	1.8%	Kazakhstan	3,022	2.5%
9	Canada	267	1.1%	Mexico	618	1.5%	Canada	2,956	2.5%
10	Saudi Arabia	192	0.8%	Singapore	617	1.5%	Australia	2,473	2.1%
	World	25,034		World	41,302		World	120,405	
Value of Year's Top 10 and % Share of China's Annual Apparel Exports									
		22,896	91.5%		34,821	84.3%		95,290	79.1%
World Apparel Exports & China's Share									
	166,077		15.1%	203,664		20.3%	361,888		33.3%

Source: UN Comtrade: SITC code 84 rev. 3: Exports from China
World Textile Export Values from WTO Statistics Database

South Asia: Steady Winners

In the long-term, the South Asian countries have all increased market share to both the EU-15 and the United States. Post-MFA and during the crisis, Bangladesh has performed well in both markets, but India, Sri Lanka, and Pakistan have performed differently to the two markets. The U.S. market share and export value of India, Sri Lanka, and Pakistan has been decreasing,

whereas it has increased since 2007 to the EU-15. South Asian countries receive preferential access to the EU under the GSP scheme, yet they do not receive U.S. benefits.

Southeast Asia: Split Effects

Both Vietnam and Cambodia have been gaining EU-15 and U.S. market share since the early 1990s. During the crisis, however, Vietnam has managed to maintain its value, volume and market share far better than Cambodia. Indonesia and Malaysia are more important suppliers to the U.S. market than the EU market, and their post-2007 export values and market shares have affected exports to the two markets differently, with increases in their share of the U.S. market and decreases in the EU-15. Furthermore, Indonesia and Malaysia have both started to focus on growth in textile exports as well. Thailand has been negatively impacted by the MFA phase-out, and the Philippines' market share in the United States and EU-15 has fallen since the early 1990s.

Regional Suppliers: Declines in Market Share

The EU's outward processing trade (OPT) arrangement is analogous to the U.S. production sharing system (807) (Gereffi, 1997). The United States and its periphery include: NAFTA members (United States, Mexico, Canada), the DR-CAFTA signatories (Central America and the Dominican Republic), and other economies in the Caribbean Basin Initiative. The EU and its periphery include: EU-27, Turkey, Central and Eastern Europe, and North Africa.

Nearly all of the U.S. regional suppliers have been negatively impacted by the MFA phase-out. EU-15 regional suppliers are also experiencing declines in market share to the EU-15, but the EU as a whole is increasing its share of global apparel exports. Apparel exports from the EU-27 are increasing to emerging markets such as Russia.

3. The Global Apparel Value Chain: Shifting Roles, Capabilities and Networks

The global industry has undergone several production migrations and has undergone a transformation in production network configurations over the last 30 years. As production and sourcing networks evolved and expanded to different global regions, they embodied different kinds of governance structures and upgrading opportunities in the apparel value chain.

A. Upgrading in the Buyer-Driven Apparel Value Chain

The apparel industry is the quintessential example of a buyer-driven production chain marked by power asymmetries between the producers and global buyers of final apparel products. The most valuable activities in the apparel value chain are not related to manufacturing per se, but are found in the design, branding, and marketing of the products. These activities are performed by lead firms, which are large global retailers and brand owners in the apparel industry. In most cases, these lead firms outsource the manufacturing process to a global network of suppliers. Apparel manufacturing is highly competitive and becoming more consolidated, with increasing barriers to upgrading. Developing countries are in constant competition for foreign investments and contracts with global brand owners, leaving many suppliers with little leverage

in the chain. The result is an unequal partition of the total value-added along the apparel commodity chain in favor of lead firms.

Beginning in the 1970s, East Asian suppliers extended their upgrading opportunities in the apparel value chain from simple assembly to a series of new roles that included OEM (full-package) production, ODM (design), and OBM (brand development) stages (Gereffi, 1999). As intangible aspects of the value chain (such as marketing, brand development, and design) have become more important for the profitability and power of lead firms, "tangibles" (production and manufacturing) have increasingly become "commodities." This has led to new divisions of labor and hurdles if suppliers wish to enter these chains (Bair, 2005; Gereffi, Humphrey, Kaplinsky, & Sturgeon, 2001).

The main stages of functional upgrading in the apparel value chain are described below (Gereffi & Memedovic, 2003). Table A-5 in the appendix highlights the shift in roles, and associated governance structures and required skills for contemporary upgrading in the global apparel value chain.

- **Assembly/CMT:** A form of subcontracting in which garment sewing plants are provided with imported inputs for assembly, most commonly in export processing zones (EPZs). CMT stands for "cut, make and trim" or CM **(**cut and make) and is a system whereby a manufacturer produces garments for a customer by cutting fabric provided by the customer and sewing the cut fabric into garments in accordance with the customer's specifications. In general, companies operating on a CMT basis do not become involved in the design of the garment, but are merely concerned with its manufacture. Under CMT, a factory is simply paid a processing fee, not a price for the garment, and uses fabric sourced by, and owned by, the buyer.

- **Original Equipment Manufacturing (OEM)/FOB/Package Contractor:** A business model that focuses on the manufacturing process. The contractor is capable of sourcing and financing piece goods (fabric) and trim, and providing all production services, finishing, and packaging for delivery to the retail outlet. In the clothing industry, OEMs typically manufacture according to customer specifications and design, and in many cases use raw materials specified by the customer. Free on Board (FOB) is a common term used in industry to describe this type of contract manufacturer. However, it is technically an international trade term in which, for the quoted price, goods are delivered on-board a ship or to another carrier at no cost to the buyer.

- **Original Design Manufacturing (ODM)/Full Package:** A business model that focuses on design rather than on branding or manufacturing. A full package garment supplier carries out all steps involved in the production of a finished garment—including design, fabric purchasing, cutting, sewing, trimming, packaging, and distribution. Typically, a full package supplier will organize and coordinate: the design of the product; the approval of samples; the selection, purchasing and production of materials; the completion of production; and, in some cases, the delivery of the finished product to the final customer.

- **Original Brand Manufacturing (OBM):** A business model that focuses on branding rather than on design or manufacturing; this is a form of upgrading to move into the sale of own brand products. For many firms in developing countries, this marks the beginning of brand development for products sold in the home or neighboring countries.

The desire of buyers to reduce the complexity of their own operations, keep costs down and increase flexibility to enable responsiveness to consumer demand has spurred the shift from CMT to OEM package contractors. Establishing and maintaining captive, buyer-supplier dependent relationships is costly for the lead firm and leads to inflexibility because of transaction-specific investments. Modular production networks provide the lowest costs to lead firms. Therefore, logistics coordination and sourcing are frequently the first functional activities lead firms are willing to give up, and shift the responsibility to their first tier suppliers. The CMT model is unnecessarily complex and has finally become obsolete. The recession has accelerated awareness of the existing flaws in this model. Countries without sourcing capabilities are at a disadvantage moving forward. Table 7 summarizes the current capabilities of the main apparel export countries.

Table 7: Summary of Country Capabilities with Examples

Functional Capabilities	**Supplier Tier**	**Recommendations; Key Facilitators**	**Country Examples**
Cut, Make, Trim CMT (Assembly)	Marginal Supplier	Promote upstream FDI. Government and regional organizations. Lead firm to commit to long-term supply.	Cambodia, SSA, Caribbean, Vietnam
Package Contractor (OEM): Sourcing	Preferred Supplier	Invest in machinery and logistics technology. Private investment.	Bangladesh, Indonesia
	Niche Supplier		Sri Lanka, Mexico
Full Package Provider (ODM)	Strategic Supplier	Next step: enter new emerging markets as a lead firm	Turkey, EU, India, China
Service Providers	Coordinators and Foreign Investors		Hong Kong, South Korea, Taiwan, Singapore, Malaysia

B. Upgrading of Regional Capabilities within the Apparel Supply Chain

In the past, the global apparel industry has been characterized by a large number of exporting countries due to the MFA quota system, but the level of export concentration is sharply increasing. The apparel supply chain is also marked by substantial country specialization. Higher income nations generally predominate in more capital-intensive segments, while lower income countries dominate labor-intensive segments (Kilduff & Ting, 2006). The most labor-intensive

activity is apparel production, followed by textile (yarn and fabric) production. The most capital-intensive segments, such as man-made fiber production and machinery manufacturing, are located upstream where barriers become progressively higher (Gereffi & Memedovic, 2003). As countries grow richer and wages rise, the comparative advantage in manufacturing is eroded, and the focus shifts to high value-added products or to other manufactured products with lower labor intensity (Adhikari & Weeratunge, 2006).

Figure A-3 (see Appendix) illustrates how this division of labor between countries at different levels of development shapes the pattern of industrial upgrading in the Asian apparel value chain. The main segments of the apparel chain – garments, textiles, fibers, and machinery – are arranged along the horizontal axis, and they reflect low to high levels of relative value-added as capital intensity increases. Countries are grouped on the vertical axis by their relative level of development, with Japan at the top, China and India in the middle tier, and the least-developed exporters like Bangladesh, Cambodia, and Vietnam at the bottom.

Figure A-3 reveals several important dynamics about the apparel value chain in Asia, and the GVC approach more generally (see (Gereffi, 2005): 172). First, individual countries tend to progress from low to high value-added segments of the chain in a sequential fashion over time. This shows the importance of looking at the entire constellation of value-added steps in the production process (raw materials, components, finished goods, related services, and machinery), rather than just the end product. Second, there is a regional division of labor in the apparel value chain, whereby countries at very different levels of development form a multi-tiered production hierarchy with a variety of export roles (e.g., the United States generates the product designs and large orders, Japan provides the sewing machines, the East Asian newly industrializing economies (NIEs) supply fabric, and low-wage Asian economies like China, Indonesia or Vietnam sew the apparel). Industrial upgrading occurs when countries change their roles in these export hierarchies. Finally, advanced economies like Japan and the East Asian NIEs do not exit the industry when the finished products in the chain become mature, as the "product cycle" model (Vernon, 1966) implies, but rather they capitalize on their knowledge of production and distribution networks and thus move to higher-value-added stages in the apparel chain.

C. Lead Firms in the Contemporary Apparel Value Chain

In the apparel value chain, there are three main types of lead firms (retailers, brand marketers, and brand manufacturers), which are highlighted in Figure 1. These lead firms not only have significant market power because of their size (reflected in sales), but they also have moved beyond production to different combinations of high-value activities, including design, marketing, consumer services, and logistics.

Figure 1: Types of Lead Firms in the Apparel Value Chain

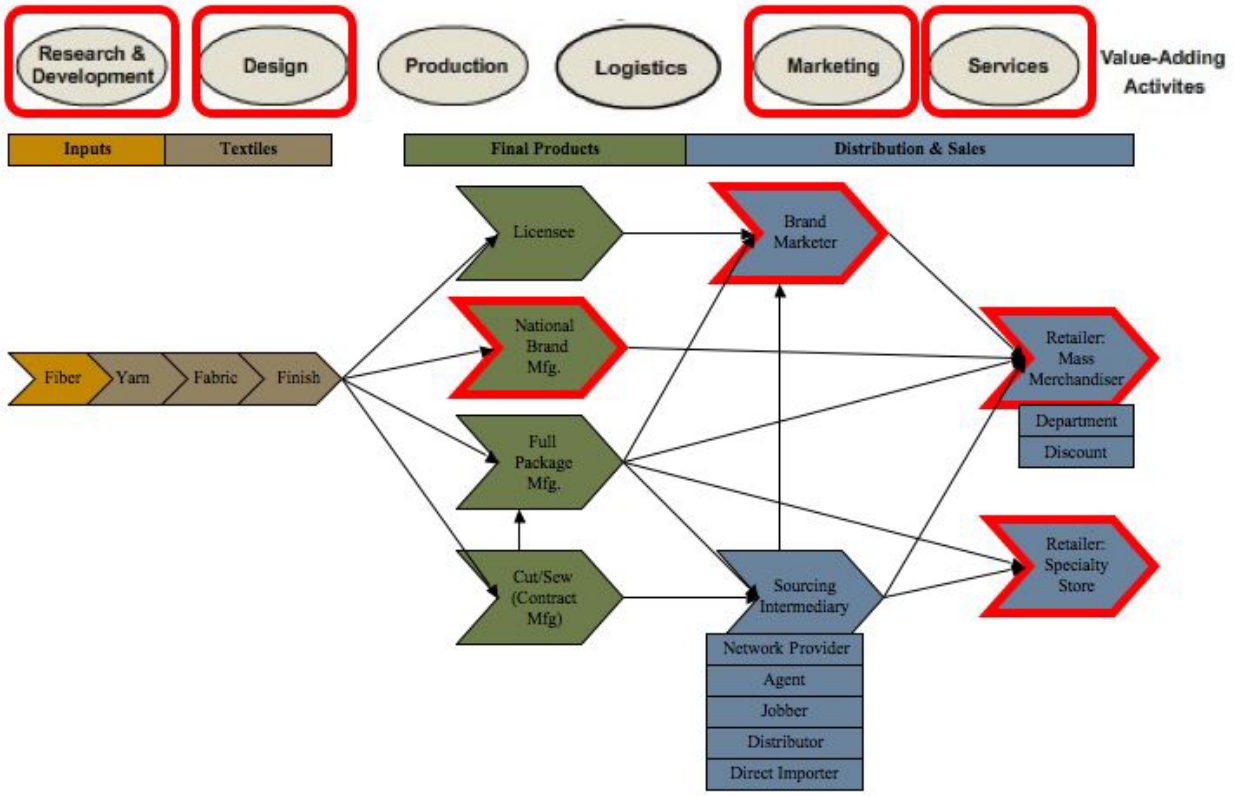


Table 8 provides regional examples of each type of lead firm. Within the retailer category, we can distinguish between mass merchants (who sell a diverse array of products) and specialty retailers that only sell apparel items. Brand manufacturers traditionally formed production networks in which the brand owner was involved in the production process, either through ownership or supplying inputs to production. In contrast to brand manufacturers, brand marketers and retailers opt for sourcing strategies that involve constructing networks with OEM or full-package producers. In this model, the buyer provides detailed garment specifications and the supplier is responsible for acquiring the inputs and coordinating all parts of the production process: purchase of textiles, cutting, garment assembly, laundry and finishing, packaging and distribution (Bair & Gereffi, 2001; Bair, 2006). As capabilities in the global apparel supply base improved, brand manufacturers, marketers, and retailers expanded their sourcing networks.

Table 8: Lead Firm & Brand Types with Regional Examples

Lead Firm Type	Type of Brand	Description	Examples	
			U.S.	EU-27
Retailers: Mass Merchants	**Private Label:** the retailer owns or licenses the final product brand, but in almost all cases, the retailer does not own manufacturing.	Department/discount stores that carry private label, exclusive, or licensed brands that are only available in the retailers' stores in addition to other brands.	Walmart, Target, Sears, Macy's, JC Penney, Kohl's & Dillard's	Asda (Walmart), Tesco, C&A, Marks & Spencer
Retailers: Specialty Apparel		Retailer develops proprietary label brands that commonly include the stores' name.	Gap, Limited Brands, American Eagle Abercrombie & Fitch,	H&M, Benetton, Mango, New Look, NEXT
Brand Marketer	**National Brand:** the manufacturer is also the brand owner and goods are distributed through multiple retail outlets.	Firm owns the brand name, but not manufacturing, "manufacturers without factories." Products are sold at a variety of retail outlets.	Nike, Levi's, Polo, Liz Claiborne	Ben Sherman, Hugo Boss, Diesal, Gucci
Brand Manufacturer		Firm owns brand name and manufacturing; typically coordinate supply of intermediate inputs (CMT) to their production networks often in countries with reciprocal trade agreements	VF, Hanesbrands, Fruit of the Loom, Gildan	Inditex (Zara)

In the following section, we look more closely at how global production and sourcing networks in the apparel value chain have been affected by the crisis.

D. Shifts in Apparel Sourcing Strategies

Two major changes occurred during the MFA phase-out that caused a shift in the sourcing strategies of lead firms in the apparel value chain. On the demand side, brand manufacturers were replaced by the suppliers of private label merchandise (store brands) sourced by retailers. Retailers' strengths are in marketing and branding and they tend to have limited knowledge of how to make the products they are procuring. Thus, retailers needed suppliers (or agents) capable of bundling and selling the entire range of manufacturing and logistics activities (OEM or ODM). On the supply side, network relationships in the apparel supply chain became increasingly complex due to the breadth and specialization of apparel products and the growth of countries with advanced production capabilities. The MFA had facilitated the entry of developing countries with limited technical or business skills into global apparel networks.

These two shifts led to the need for new forms of coordination and management in the apparel supply chain. Two groups emerged to provide the key links between producers and retailers: East Asian transnational manufacturers with established buyer relationships who set up and managed global production networks, and traders (import-export companies) and agents who emerged as intermediaries between established buyers and sellers in the apparel value chain.

The traditional agent-sourcing model is most popular with buyers that require smaller volumes or larger buyers that need small quantities of certain items. Benefits of using a third-party sourcing agent include scale of operations, buying power, flexibility, and ability to spread risk among suppliers. Li & Fung has been the pioneer in the agent-sourcing model and is continuing to expand its roles into areas such as product development, marketing, and branding. Recently, Li & Fung has adopted a more prominent role as the primary purchasing agent for giant retailers such as Walmart, and well known apparel brands like Liz Claiborne.

Alternatively, as buyers developed expertise in assessing local capabilities, they started to establish direct sourcing relationships. To reduce cost and mitigate risk, many buyers established overseas sourcing offices in their main producing countries. Over the years retailers shifted more responsibilities to these overseas sourcing offices, driven by cost and the skills of the staff based there. Many are also moving product development and design offices closer to the manufacturing process. Direct sourcing requires manufacturers to provide faster reaction times and better factory understanding of a retailer's particular needs. Sourcing agents charge clients 4-8% of the wholesale price as commission, representing an area to realize savings if this step is eliminated.

Tables A-6, A-7, and A-8 describe the sourcing channels and destinations used by several categories of lead firms in the global apparel value chain. Most retailers use a range of different channels depending on their levels of expertise and volumes (just-style.com, 2009c).

E. New Roles and Relationships in the Apparel Value Chain

The roles and relationships among national and global lead firms, apparel manufacturers, and intermediaries have become increasingly blurry in recent years. The following trends are closely tied to buyers' strategies and long-term objectives. These shifts began before the economic crisis and will likely persist after the crisis is over.

- **Brand Owners Becoming Specialty Retailers:** Brand manufacturers and marketers are increasingly opening their own stores. In addition, brands with existing retail operations are likely to focus more on their own stores rather than meeting the needs of their external customers (Euromonitor, 2009).
- **Full-Package 'Manufacturers' Becoming Intermediaries:** Rather than manufacture, they establish a network of global suppliers. Essentially, these suppliers are doing what brand marketers and manufacturers did 10 to 20 years ago. There are a host of firms in countries around the world that make products for multiple brands, based on the buyers' requirements. They provide full-package services along with production capabilities.

- **Intermediaries/agents** are expanding their roles to include an array of services to buyers, including design, product development, and quality control in addition to providing a network of suppliers and logistics.
- **Increase in Private-label Brands:** There is a sharp increase in the volume and diversity of retailer private labels. Retailers that develop proprietary brands use in-house design teams and outsourced manufacturing capacity, often by direct foreign product sourcing. By eliminating the middleman associated with national brands, retailers can shave costs and widen profit margins. Today, retailers are expanding the range of private-label products offered and developing higher-margin private-label goods (Euromonitor, 2009).
- **Brand Marketers Creating Exclusive Product Lines with Mass Merchant Retailers:** Exclusive product lines are a new way for mass merchants to offer unique merchandise. Retailers are striking agreements with brand marketers to develop and distribute brands that are sold exclusively through the one retailer's stores instead of the traditional brand marketer model in which goods are sold via multiple retail outlets. (Asaeda, 2008; Euromonitor International, 2009).
- **Importance of Social and Environmental Standards:** This began with corporate social responsibility (CSR) campaigns and social advocacy groups. Now environmental compliance requirements and green initiatives are moving to the forefront (Asaeda, 2008; Barrie & Ayling, 2009; Driscoll & Wang, 2009; International News Services, 2009; Tucker, 2009). Consumers are demanding that lead firms become more responsible and transparent about their practices. Success of ethical clothing brands (e.g., Patagonia) is a testament to the power of consumer demand and green credentials.
- **Dual Sourcing Strategies: Quick Response and Fast Fashion:** Buyers tend to source fashion-sensitive products from suppliers that can deliver in a flexible and speedy manner, while basic products are sourced from the lowest-cost countries (Technopak, 2007). This leads to the distinction between fast fashion and quick response. Fast fashion emerged from quick response, but the two are different. Quick response is associated with replenishment purchases for basic products (Jassin-O'Rourke, 2008). Fast fashion is quick response in new merchandise (with little or no replenishment), involving shipping fewer pieces, in a great variety of styles, and more often. Predictions thought fast fashion would lead to local sourcing, but this has not been the case. Asian suppliers have quickly adapted the capabilities to serve fast-fashion buyers, including reducing minimum-run requirements. These suppliers have also lowered the cost of goods, thus putting intense pressure on regional manufacturers (*The clothing industry*, 2009).

F. Trends in Lead Firm Sourcing Strategies Accelerated by the Crises

The activities and strategies of lead firms have a profound effect on supply chain relationships and the capabilities expected from suppliers. Key trends affecting lead firms in the apparel value chain that have been accentuated by the MFA phase-out and economic recession include:

- **Buyers' Risk Avoidance & Diversity:** Maintaining a diversified portfolio of vendors and regions is a necessity for successful sourcing organizations (Sauls, 2008). The recession has increased buyers' interest in having back-up suppliers in place in case factories go under and to cope with general uncertainty about the future (Barrie & Ayling, 2009). Some predicted the recession would lead to more local sourcing, but this has not yet happened (*The clothing industry*, 2009).
- **Reduce Reliance on China:** Lead firms continue to source the majority of products from China, but they also seek to diversify into other countries to avoid putting all their eggs in one basket. The Japanese government has openly declared its interest in reducing reliance on China. This could have major impacts since Japan is the world's second largest clothing importer, and Southeast Asia and Bangladesh currently only account for 7% of imports. Japan's plan could double or triple the total current exports from these countries, putting price pressure on European and U.S. Asian importers ("Talking strategy", 2008; "Japan mulls", 2009; just-style.com, 2009b).
- **Decrease in Supplier Captivity:** Lead firms no longer desire to be the main buyer for any suppliers, due to the risks associated with controlling the majority of a factory's output. Buyers tend to follow the "30/70" rule in which 30% of a factory's business is desirable, but not more than 70% (Fung, Fung, & Wind, 2008).
- **Decrease in Short-Term Relationships:** During the era of quotas, trade was dominated by short-term, market relationships. Now that quotas are gone, buyers are streamlining the number of suppliers they work with and focusing on developing long-term strategic partnerships with their most important suppliers. These strategic suppliers are increasingly multinational manufacturers or network coordinators that do the logistics legwork for the lead firms.
- **Supply Chain Rationalization:** Most lead firms in the apparel industry are committed to significant reductions in the size and scope of their supply chains. They want to deal with fewer, larger, and more capable suppliers, who are strategically located near major markets around the globe. Retailers are seeking to consolidate the number of wholesalers they purchase from and they want to buy a more comprehensive line of clothing, accessories, and footwear from these wholesalers (Barrie & Ayling, 2009; Euromonitor, 2009). The recession has caused lead firms to 'cut the fat,' and they are confining their relationships to their most capable and reliable suppliers.

4. Impact of the Crisis on Apparel Suppliers in Developing Economies

One can detect several structural impacts of the economic crisis on apparel suppliers in developing countries:

Decrease in Number of Employees and Factories: Survival of the Fittest

During the recession, buyers are transferring business away from marginal suppliers to their core operations. This is creating a major problem in countries that are highly dependent on the apparel industry (Birnbaum, 2009) (see Table A-4). Lower demand from international customers and the recession have caused a large number of vulnerable, developing-country

garment manufacturers to go out of business (Barrie & Ayling, 2009; Driscoll & Wang, 2009; International News Services, 2009).

Table A-4 in the Appendix includes employment figures and estimated job losses in the textile and apparel industries Upper estimates for job losses attributable to the economic crisis in different developing countries include: China – 10 million jobs; India – 1 million jobs; Pakistan – 200,000 jobs; Indonesia – 100,000 jobs; Mexico – 80,000 jobs; Cambodia – 75,000 jobs; and Vietnam – 30,000 jobs (Forstater, 2010). Job losses are causing rising levels of poverty and geographical shifts from urban areas focused on export markets to rural areas focused on agriculture and traditional employment, thus reducing the number of skilled textile and apparel laborers.

Decline in Export Volume and Value

For those companies that are surviving, many are experiencing a decline in exports in some product categories. By May 2009, apparel imports to the United States market dropped by 15.7% with every major garment supplier reporting declines (WTO, 2009). Right now, most view the decline in U.S., EU, and Japanese consumption as temporary. However, the longer the recession lasts, the longer consumers will become accustomed to living with less. If the decrease in consumption becomes permanent, the current slow shift towards domestic markets in developing economies will accelerate and production networks will become more national or regional in nature.

New Sources of Credit & Trade Finance

Perhaps the most lasting effect of the recession on existing and new suppliers is access to credit and finance. The recession brought the importance of suppliers' financial stability to the attention of all buyers. The crisis has made access to credit much more difficult, leading to new types of financial arrangements (and thus dependence) created by retailers. In the future, firms will have to prove their financial stability in order to become suppliers.

To make matters worse, some customers are delaying payments and banks are becoming stricter with credit access (just-style.com, 2009a). The general decline in credit availability is affecting all suppliers, but particularly hard hit are small and medium-sized firms and locally owned firms (Barrie & Ayling, 2009; Driscoll & Wang, 2009).

The credit crunch is spurring new financial arrangements. Some buyers fear that when demand returns, it may be difficult to find qualified suppliers (Driscoll & Wang, 2009). Retailers such as Kohl's and Walmart are offering financial support to their suppliers. Kohl's offered 41% of its suppliers a "Supply Chain Finance" program that lets suppliers get paid early once their invoices are approved for payment, and 11% had signed on to the deal by mid-2009 (O'Connell, 2009). Walmart also offered about 1,000 suppliers, primarily apparel manufacturers, an alternative to their traditional means of financing. Walmart informed its suppliers of its new "Supplier Alliance Program," in which eligible suppliers can get payment for their orders within 10 to 15 days of Walmart's receipt of goods, compared with the more typical 60 to 90 days (O'Connell, 2009). Li & Fung is also moving into financing by becoming a lender of last resort to factories and small importers, whose credit was cut off during the global financial meltdown (Kapner, 2009; O'Connell, 2009).

Increase of Government Support

In the aftermath of the MFA quota phase-out and more recently the recession, the governments of nearly all major apparel exporting countries have provided various forms of support to local industry. During the recession, the actions of individual governments have become critical steps to recovery. Government interventions in developing economies have taken various forms—tax relief, suspending tariffs or export duties, and assuring financing and liquidity for enterprise (see Table A-1 in the Appendix).[1]

Necessity to Form Strategic, Long-Term Relationships with Lead Firms

Strategic, long-term relationships are beneficial for buyers and suppliers. Buyers benefit from these relationships by virtue of their ability to exert influence over a supplier in order to achieve efficiencies in the supply chain, including reduced lead times, standardizing production processes to suit the nature of the buyer's product (asset specificity and tacit knowledge—lead firm setting standards), establishing preferential logistics and transportation arrangements, and increasing the transparency of the supplier's inventory (Technopak, 2007). Suppliers benefit because these relationships provide security in the form of guaranteed demand for the supplier's output.

The strategic-supplier relationship is likely to become increasingly prominent in the apparel value chain in the post-MFA and post-crisis era. As global supply chains become more rationalized and consolidated, lead firms realize that future efficiency gains will require closer, more integrated linkages among all parts of the chain. The question today cannot be limited to "how successful is my firm?" Today firms must ask themselves, "how successful is my network, and what role does my firm play in the bigger picture?"

More Stringent Supplier Capabilities

The following factors have long been important in apparel sourcing strategies, but the crisis has heightened the need for suppliers to meet all or most requirements as opposed to just one or two:

- **Cost/Price:** During the recession, consumers are placing more emphasis on price, thus causing retailers and brand marketers to focus on reducing costs (MSN, 2009; Tucker, 2009).
- **Product Quality:** Firms must provide quality in addition to low prices, flexible production, and services (Driscoll & Wang, 2009).
- **Supplier Flexibility:** Firms are under pressure to make multiple products in small runs in order to deal with decreased demand and niche markets (MSN, 2009).
- **Visibility/Transparency:** Growing consumer demand for higher social and environmental standards has increased the need for supply chain transparency in both the

[1] For a more detailed review of protectionist actions in the textile and apparel industries, see (Frederick & Gereffi, 2009a, 2009b).

United States and the European Union. Lead firms want to know more about their suppliers to ensure they uphold the principles of the brands (Sauls, 2008**).**

- **Full Package Capabilities:** Suppliers need to be able to offer full package options that expand their capabilities to other parts of the value chain—including design, inventory management, and transportation of goods, and adopt the appropriate technologies to facilitate this transition (Technopak, 2007).

Since the removal of quotas, the global apparel industry is faced with overcapacity that is creating intense competition in low-cost countries. Quotas created too many factories in too many countries, and now these factories are competing for fewer orders. In the short term, this has significantly raised the bar to be a global competitor; manufacturers must be more creative and comprehensive in the development of their products and services (Technopak, 2007). Buyers place stricter demands on manufacturers and are asking for better products (quality), more services, and faster turnaround times, all for lower costs. Suppliers must meet buyer demands to keep orders, increase volume, and reduce costs ("Talking strategy", 2008). When this is coupled with the ongoing consolidation in the retail sector, the result is more power in the hands of the global buyers (i.e., retailers, global brands, and large manufacturers that have outsourced their production).

5. Recommendations for Economic Development

This final section provides recommendations for economic developers, governments and the private sector that can provide assistance to developing countries in order to better face the challenges and harness opportunities created by the crisis. How can developing countries best use current times to make critical reforms that will enable them to be amongst the benefactors of global growth once the economy recovers?

Short-Term Suggestions to Get Through the Crisis

- Implement the equivalent of "furlough" days rather than lay off workers. By reducing the number of hours or wages, firms and countries can maintain the labor force and industry expertise that will be needed when production returns.
- Improve access to credit.
- Encourage production for the local market to keep companies in business. For example, MOL Magazalari (Turkey) is a consortium of 38 local clothing manufacturers that have recently set-up manufacturer-owned shops selling goods "Made in Turkey" (including design and marketing). The group would like to expand retail operations to other countries, but success will depend on the group developing a real competitive edge (like Inditex in Spain). These Turkish firms have used the crisis as an opportunity to upgrade their skill sets in marketing and retailing that is helping them survive the recession and become more competitive in the future (*The clothing industry, 2009*).

Long-Term Suggestions to Enable Growth After the Crisis

- **Education and Training:** Invest in both education and training opportunities to overcome the skills deficits that could hinder economic upgrading. Whereas quotas

helped to initiate a textiles and clothing industry in developing countries, maintaining or improving a country's position in the global apparel value chain requires a continuous process of workforce development. In the long run, innovative capacities depend on suitable human capital. Education should include technical skills as well as soft skills in areas such as management, product development, design, and market research.

- **Marketing & Networking:** Create organizations to market and network the country/region and align firms with international organizations dedicated to standards development, industry advocacy, research and development, and best practices. Provide assistance to attend and participate in international trade shows to increase visibility to potential buyers.
- **Promote Foreign Direct Investment or Joint Ventures to Develop Vertical Capabilities:** Countries without domestic textile production should promote FDI in countries that do not have vertical capabilities. This is a good strategy for countries that are still dominated by assembly or CMT production models, such as Africa, Southeast Asia, and the Caribbean. This will help to establish backward linkages and to develop skills not in the country. Economic authorities need to provide a one-stop shop for any investor or supplier wishing to set up a new firm (Knappe, 2008).
- **Technology Investment and Flexible Production Systems:** Stakeholders with a long-sighted vision of recovery are prepared to invest in technology that enables more efficient and flexible business and production models. Investments are needed to upgrade production machinery as well as logistics and information technologies that enable suppliers to become more integrated into their buyers' networks. Enterprises willing to invest in creative solutions are likely to be the winners in the aftermath of the recession.
- **Develop Full Package Capabilities:** Buyers not only want to purchase a final product, they want to purchase services. Firms must be able to (or have alliances with firms that can) provide additional services related to product development, design, logistics, and quality control. Global brands and retailers are starting to move product development and design divisions closer to regional manufacturing. Suppliers able to offer these services can be indispensable to the buyer (strategic suppliers) and are likely to maintain market share through tough economic times.
- **International and Regional Standard Certifications:** Encourage and provide assistance to firms with product and process standards required by international buyers, such as ISO 9000 & 14000, the Global Organic Textile Standard (GOTS), and the European Union's REACH directive.
- **Promote Sustainable Practices and Production:** Surviving suppliers will be companies that chose to compete on their environmental credentials in addition to cost, quality, and other traditional factors. Whether legally enforceable or "voluntary," making adjustments to have a more green and transparent firm and supply chain will be mandatory to compete in the future. Countries that develop policies that facilitate the transition to more sustainable practices will be the winners.
- **Diversify Buyers, Products, and End Markets:** Encourage firms to diversify into multiple product lines and end-use markets as well as different geographic markets. Equally important, suppliers should expand their export focus to emerging countries with

growing disposable incomes. These markets are often less demanding than traditional export markets in the United States and the European Union, but they offer more opportunities to upgrade skills to higher value-adding functions such as product design, marketing, and branding. Bilateral and regional trade agreements can help facilitate this process and build future long-term relationships.

6. Conclusions

Developing countries in the global apparel value chain have been beset by two major crises in recent years: the WTO phase-out of the quota system in 2005, which provided access for many poor and small export-oriented economies to the apparel markets of industrialized countries, and the current economic recession that has lowered demand for apparel exports and led to massive unemployment across the industry's supply chain. Beyond the need to adjust to these two crises, our analysis has also highlighted a longer term process of global consolidation, whereby a handful of leading apparel suppliers (countries and firms) has strengthened their positions in the apparel value chain, which complicates the adjustment strategy of smaller or more vulnerable players who have lost ground in the crisis.

On the country side, China has been the big winner. It has increased its dominant position in all of the major industrial economies (the United States, the European Union, and Japan). It has also diversified its export reach by gaining ground in many of the world's top emerging economies as well, such as Russia for finished goods, and India, Brazil and Turkey for intermediate goods, such as textiles. Other developing economies have also gained in the post-MFA era, such as Bangladesh, India, Vietnam, and Indonesia. But regional suppliers have been hard hit, especially Mexico and CAFTA-DR in North America, and East European and North African suppliers to the European Union.

On the firm side, the quota phase-out and economic recession have accelerated the ongoing shift to a rationalization of global supply chains. Major retailers, brand marketers, and brand manufacturers have been stressing their desire to work with fewer, larger, and more capable suppliers, strategically located around the world. In addition, there has been a consolidation among the lead firms, as the largest retailers (Walmart), traders (Li & Fung), brand marketers (Nike), and brand manufacturers (VF Corporation) are increasing their market shares through mergers, acquisitions and bankruptcies within the textile and apparel chain.

Within the developing world, the dual crises outlined in this paper pose the biggest threat to two kinds of vulnerable actors. The "trade impact" will be most significant for the smaller countries that were privileged by the MFA quota system, who no longer have guaranteed access to developed country markets. Regional trade agreements can ameliorate, but not eliminate, this pressure from dominant global exporters. A more specific "recession impact" is likely to hurt the weaker manufacturers in large developing economies, like India, China and Bangladesh. This could lead to major unemployment in these economies as supply-chain consolidation occurs inside these economies. We have offered suggestions to apparel suppliers in developing economies for coping with these competitive pressures, but there is no quick fix or certain solution.

The ultimate impact of the economic crisis is likely to extend well beyond specific industries, such as apparel. It challenges the broader viability of export-oriented industrialization as a growth model for developing economies. The economic recession will probably push even the successful apparel-exporting countries, such as China and India, toward more emphasis on domestic markets, and less reliance on export-oriented development per se. This is not only because export demand has slackened, but also because the upgrading opportunities of domestic and regional markets are likely to be greater for suppliers in developing countries. While these issues are beyond the scope of any specific industry analysis, they highlight the importance of rethinking national models of development in light of what we have learned about global value chains and the crisis.

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8. Appendix

Table A- 1: Leading Apparel Exporters: Government Support & Trade Agreements

Country	Government Support	Key Trade Agreements
China	**2009 (April 24): China's State Council: Three-Year T&C Stimulus Plan.** The aim of the plan is to ensure stable development and to upgrade the T&C infrastructure. The plan will eliminate obsolete capacity, reduce energy consumption, improve efficiency, and encourage a shift to higher value-added products plus improvements in product quality and variety. The government is targeting average textile production growth of 10% each year and export growth of 8% annually to reach US $240 billion by 2011. They want the industry to invest in more advanced technology to increase productivity, nurture 100 domestic brands to make them account for 20% of all export volumes in three years, and to boost domestic consumption and improve access to credit and extend loan repayment deadlines to textile companies facing difficult times. Reports of massive lending sprees by Chinese banks to exporting companies to keep factories going despite customers delaying or defaulting on payments, or demanding price reductions. **2008-2009: Increase in VAT Export Rebates:** China charges a VAT of 17% at every level of the production process and the final product, but firms exporting a product can receive VAT export rebates on finished and input products. Due to decreases in export demand and increasing domestic production costs (currency and labor), China progressively increased VAT export tax rebates a total of five times for T&C (three times in 2008 and twice in 2009). Chinese clothing manufacturers can now claim a rebate up to the 17% ceiling. Prior to increases in 2008, China had been taking measures to slow export growth by decreasing export rebates.	ASEAN-China (Jan. 1, 2010), FTA: Pakistan, New Zealand, Hong Kong
Turkey	**2009: Strategic Action Plan for Textile, Ready-to-Wear, and Leather Sectors:** 2009-2014: scheme recently unveiled from the government to alleviate problems with T&C production in the country. The plan provides support in the form of government finance, advice, and training for export-oriented clothing producers who wish to relocate factories from Istanbul and its surrounding areas to eastern provinces of Turkey where wages are lower. Incentives include exemptions from customs tax and reductions in VAT, corporation tax, and energy bills. **2003: Government Incentive program, Turquality** (WTO compliant): an accreditation and support program to strengthen the international image of the country and of the garments manufactured by a select group of approximately 30 T&C brand owners.	EU Customs Union; Active in China Safeguards
Bangladesh	**2006: Government of Bangladesh:** support measures taken to bolster the T&C industry include the provision of bonded warehouse facilities, technological upgrading (concessionary duty rates and tax exemptions for the import of capital machinery), cash subsidies for the use of local fabrics as inputs for exporting RMG enterprise and	SAFTA, GSP: EU (EBA), Canada, Australia, & Norway

	an Export Credit Guarantee Scheme covering risk on export credits at home, and commercial and political risks occurring abroad. The government also supports market promotion efforts of the RMG exporters and subsidizes utility charges.	
India	**2006-2011: Government Strategic T&C Development Plan:** initiatives in the budget include: reducing VAT on all goods, established the Scheme for Integrated Textile Parks in 2004 to encourage vertically integrated textile clusters with modern infrastructure; 40 parks are approved and four are in operation. Also investing in handloom and handicraft clusters. **2009/2010: India's National Budget** included several support mechanisms to help T&C manufacturers recover from the economic recession including a $US 26 million financial aid package to help companies looking to develop new export markets. Also increasing availability of low interest loans and tax incentives (extension of tax holiday arrangements) for export-oriented firms. **1999-2009: India's Textile Upgradation Fund Scheme (TUFS):** Government offers financial incentives (low cost loans and special credits) for domestic manufacturers to upgrade their technology. This has been a very effective tool to foster new investment.	SAFTA, EU-GSP (textile articles included, but textiles omitted)
Vietnam	**2010 Industry Plans:** restructure production by moving textiles into industrial parks and apparel to rural areas, encourage big firms to establish long-term relationships with overseas importers and retailers, add value to products using fashion techniques, pay attention to local markets and improve workers quality of life. **2009: Cotton Development Program:** goal of tripling raw cotton production by 2020. Includes free cottonseed to several provinces and Vinatex also investing in cotton production. **2008 (March): Vietnamese Government Development Strategy** seeking to encourage manufacturing value-added products by: emphasizing the use of domestically-grown raw cotton, promoting the production of high quality woven fabrics by improving dye and finish operations, and focusing on training workers in management and design positions. Asked Vinatex, one of the largest domestic firms, to increase the amount of local material from 36-50%. Efforts underway to make the industry more fashion-oriented and to develop qualified fashion designers and Vietnamese fashion brands.	ASEAN, ASEAN-Japan, ASEAN-Australia-New Zealand, ASEAN-China, EU: GSP (footwear and headgear omitted)
Indonesia	**2009 Indonesian Government** approved a US$26.5M state budget fund to support the country's T&C (82%) and footwear (18%) industries. In 2007, this fund supported 78 T&C manufacturers with approx. US$18.9M and US$23.1M in 2008. In 2008, government set aside $US 25.2M to update textile machinery to meet Japan's high import standards. The subsidy for textile machinery upgrading was pulled back in 2010 due to a lack of interest and applicants.	ASEAN, ASEAN-Japan, ASEAN-Australia-New Zealand, ASEAN-China
Pakistan	**2009 (August): Government** released details of a new a five-year program to revitalize the textile industry. The policy allocates funds to companies to make investments necessary to compete in international apparel markets by increasing the local availability of Pakistan-made textiles, especially yarns and fabrics. The initiative	SAFTA, GSP: EU, U.S. Reconstruction Opportunity

	focuses on gas and electricity supply, full refund of past R&D claims, availability of 5% export refinancing, relief on long-term loans, tax free import of machinery and subsidized credit. Mills that increase market share and earn more money for the country have been promised a higher rate of duty drawback. **2008/2009 Trade Strategy** has several textile-related initiatives including: establishing new export clusters for weaving and textile processing and embroidery, funds for productivity audits, hiring international consultants to develop handicraft sector, tax incentives to facilitate imports of machinery and raw material inputs, and encourage manufacture and export of recycled polyester. **2006: Government Support** focused on technology upgrading and modernization as well as training institutes for skill development.	Zone (similar to EPZ), FTA: China, Malaysia, Sri Lanka
Cambodia	**2001: Better Factories Cambodia: ILO Project:** the project grew out of a trade agreement between the United States and Cambodia. Under the agreement the United States promised Cambodia better access to U.S. markets in exchange for improved working conditions in the garment sector and the ILO project was established to help the sector make and maintain these improvements with lead firms. **2000s: Government support** centered on encouraging foreign investment with generous incentives.	ASEAN, ASEAN-Japan, ASEAN-Australia-New Zealand, ASEAN-China
Sri Lanka	**2006: Sri Lankan Government:** wrote off the non-paid debt of the local textile manufacturers that had registered for restructuring the textile industry. Incentives for apparel productivity improvement through a grant of US$1 million to promote backward linkages. Began setting up an Industrial Park with a waste and effluent treatment plant to facilitate fabric manufacturing. Also outlined a program aimed at developing a regional apparel hub in Katunayake where both an EPZ as well as an international airport are located. Government attracts FDI with incentives including special industrial zones, tax holidays, and import duty exemptions. **2002: Garments without Guilt:** co-funded by the government and private sector to promote the country's image as an ethical T&C manufacturer committed to labor rights and ethical sourcing. The campaign is a way for Sri Lankan producers to differentiate themselves from other Asian suppliers.	SAFTA, GSP+: EU

Source: Information compiled by authors from various trade journals and online sources.

Table A- 2: Leading Apparel Exporters: Strengths & Weaknesses/Threats

Country	Strengths	Weaknesses/Threats	Labor Rate*
China	**Labor: High Productivity, Competency, & Experience:** China excels at improving productivity in light of rising inflation. **Cost: Labor & Quota Elimination** **Quality: fabric and garments** **Reliability** **Technology Investment** (logistics) **Product Diversity:** fabric and finished goods **Mentality & Management:** "can do" business approach **Government Support**	**Inflation** (increases producer prices), and **labor competition** from higher paying, non-apparel sector industries **Labor Costs & Labor Laws:** rising domestic wages, expected to increase further as a result of new labor laws **Currency Appreciation** **Energy Costs:** increasing **Shipping cost:** major increases **Product Safety**	$1.88-$1.44/ hour
Turkey	**Flexibility and speed** Domestic manufacturers **Investing in** New Production in **Egypt**	**Labor Costs** **IP Enforcement** **Inflation in Raw Material Costs** compared to competitors	$2.44/ hour
Bangladesh	**Cost** & **firms' willingness to keep margins low:** while investing in new technology to improve productivity and to reinforce relationships with buyers **Improvements in terminal handling and customs:** have gone from 12-13 days as recently as last year to clear goods within 3 days **Labor Costs and Availability** **Energy Costs** **Currency Depreciation:** coincided with post-ATC period. More of an advantage to knit exports. **Growing Textile Industries:** Taiwanese & Korean investors are setting up fabric/fiber operations	**Design, soft skills, & technology** **Currency fluctuation** (mainly Euro) causing losses in previously arranged letters of credit **Shortage of skilled workers and middle management** **Human capital (poor)** and worker unrest and strikes over poor pay and conditions **Energy Reliability:** power interruptions in the national power grid are common, and stand-alone generators are often needed (more expensive) **Inefficient Infrastructure:** port and transportation **Support, expertise, social standards, and proximity**	$0.31/ hour
India	**Product diversity**: most diversified exporter of T&C products in South Asia. **Cost, flexibility, and speed:** strengths when compared to China; Flexibility: can cater to buyers' requirements for small customized orders as well as large orders. Intricate, high quality garments with flexibility & speed **Government support**	**Procedural hurdles** to international trade **Lack of scale economies:** 80% of T&C units are small, cottage-like typically employing less than 11 workers with only 6% with over 49 employees **Currency Appreciation** (rupee): 2007/08, but in 2009 fallen over 25% against the U.S. dollar;	$0.51/ hour

	Domestic Market: growing number of firms switching to supply domestic market	assisting export growth **Inflation in Raw Material Costs** compared to competitors **Manufacturing Costs:** power, operating, and transactions costs are higher in comparison to competitors	
Vietnam	**Alternative to China:** FDI & sourcing **Growing Textile Industries:** Taiwanese & Korean investors are setting up operations Growing exports to Japan and domestic market; ASEAN trade pacts Relatively **stable** business environment and **Government support** to grow the industry	Lack of **skilled workers** with experience in technology, fashion, and management Dependent on **imported textiles** Ability to allow **private capital** to **operate freely**	$0.38/ hour
Indonesia	Large **domestic market** **Large installed production capacity** **Low labor costs** and relatively **low turnover** rates **Long, refined textile tradition** (batik techniques, embroidery)	**High energy costs** **Outdated** machinery **Inconsistency** **General business climate:** unfavorable bureaucracy, taxes, corruption, security, cooperation	$0.44/ hour
Mexico	NAFTA Proximity to the United States	**Labor Cost**	$2.17/ hour
Pakistan	**Low labor costs** **Government support** and liberal **FDI policies** with incentives have been essential to development **Currency Depreciation**: against the U.S. dollar and other Western currencies. This has helped exports, but has also raised the cost of imported inputs.	**Energy Access & Reliability** **National instability and Security** **Mediocre quality and color consistency** of textiles and clothing **Labor: productivity** & **unskilled** **Lack design** skills and global **market knowledge** as well as supporting **resources** (research & training centers)	$0.56/ hour
Cambodia	**Labor:** Cost, Availability, & Standards **Government Support** **Economies of Scale** (2005): 7% of the garment manufacturing entities employ over 5,000 people	Labor: Unskilled, low productivity All FDI; **lack local firms** Apparel Export **Dependence** Production flexibility & efficiency **Lack upstream** textile industry **Infrastructure** & Corruption	$0.33/ hour
Sri Lanka	**Diversification** of product exports **Focus on niche apparel:** and enterprising nature of the private sector to position country in niche markets **Quality, on-time deliveries, & service** Compliance & emphasis on **international labor and environmental standards**	Higher labor costs **Uncertainty** of EU-GSP benefits **Dependence** on apparel exports	$0.46/ hour (2004)

Table A- 3: Apparel Country Exporter Capabilities

Country	Country Capabilities	Firm Ownership & Size
China	Full Package (ODM), vertical capabilities within country with full supply chain geographic clusters MMF and cotton; world's largest cotton producer, importer, & consumer. Upgrading to higher-end clothing. Primary supplier to global buyers: major buyers have local sourcing offices. Strong domestic market as well (OBM).	Foreign direct investment (FDI) approx. 45%; state-owned enterprises (SOE) 2%
Turkey	Full Package (ODM), vertical capabilities within country Intricate, high-quality garments; Cotton and MMF fiber production. More knitted apparel~70% (t-shirts, pullovers, socks) than woven 20% (outerwear, shirts, blouses).	Many small and medium enterprise (SME) firms
Bangladesh	OEM Package Contractors (OEM) (knit apparel only) CMT Assembly: woven apparel: woven fabrics: industry is not developed; import 85% of needed materials from China, India, Pakistan, Hong Kong and Taiwan Major buyers tend to have sourcing offices Products: cotton apparel; ~50/50 knitted (t-shirts) and woven	FDI dominates SOE: < 5%
India	Full Package (ODM): vertical: cotton to cut/sew final products Strong design skills Mostly cotton apparel: medium quality and relatively high fashion ready-made garments for export and domestic markets	Local dominates; foreign firms must be a joint venture. Small firm size
Vietnam	CMT Assembly; limited OEM; lack domestic textile industry Major buyers tend to have sourcing offices Products: low cost, volume production Cotton and cotton blends; primarily woven garments	FDI: 45% SOE: 10%
Indonesia	OEM Package Contractors: garment manufacturers source the bulk of fabrics from the U.S. and Europe. Do not take full advantage of domestic upstream production for apparel exports. Vertical capabilities; strong, well-integrated materials and accessories base with strong textile and apparel export markets. Products: low cost, volume, synthetics: fabric and apparel; second strongest in MMF behind China	Foreign and local firms
Mexico	OEM and CMT capabilities Products: commodity cotton denim trousers, imagewear	Foreign and local firms
Pakistan	Vertical production for cotton: (cotton, spinning, weaving, knitting, finishing, & cut/sew; focus more on home textiles than apparel products Cotton apparel; nearly 50/50 knitted and woven	Foreign firms important Woven apparel: small-scale firms
Cambodia	CMT Assembly; lack domestic textile industry Less important supply country; mostly basics (t-shirts)	FDI: 90% Local: 7%
Sri Lanka	OEM Package Contractors and ODM for knitted apparel Niche products: particularly women's underwear and bras; specialize in knitted intimate apparel, and activewear Several lead firms have long term strategic relationships with firms (Victoria Secret, Nike, Gap)	

Source: Compiled by authors from various trade journals and online sources.

Table A- 4: Leading Apparel Exporters: Export Value, Markets, and Dependence, 2008

[Export Values U.S. Billions; Export Dependence is % Share of Total Merchandise Exports]

Country	Export Value	Export Markets	Employment	Estimated Employment Loss and % Total	Apparel Export Dependence
China	$120.0	**EU-15: 24%** U.S.: 15% JPN: 15% HK: 6% RUS: 5%	T&A: 30 million	10 million (33%)	8.4%
Extra EU-27	$27.7	**RUS: 19%** SWISS: 17% U.S.: 10%	--	--	--
Turkey	$13.6	**EU-15: 76%** US: 2.3%			10.3%
Bangladesh	$10.9	**EU-15: 59%** U.S.: 32% CAN: 4%	T&A: 3 million	0 (0%)	71.1%
India	$10.9	**EU-15: 48%** U.S.: 26% UAE: 8%	T&A: 35 million	300,000-1 million (0.9-3%)	6.1%
Vietnam	$9.0	**U.S.: 61%** EU-15: 19% JPN: 9%	T&A: 2 million	20,000-30,000 (1.0-1.5%)	14.3%
Indonesia	$6.3	**U.S.: 58%** EU-15: 24% UAE: 2%	T&A: 1 million	41,000-100,000 (4-10%)	4.5%
Mexico	$4.9	**U.S.: 97%** CAN: 1% EU-15: 1%	T&A: 750,000	36,000-80,000 (4-10%)	1.7%
Pakistan	$3.9	**EU: ~30%** U.S.: ~30% HK: ~4%	T&A: 2.5 million	200,000 (8%)	19.2%
Cambodia	$3.6	**U.S.: 70%** EU: 22%	A: 352,000	74,500-75,500 (20-22%)	84.8%
Sri Lanka	$3.3 (2007)	**EU-15: 48%** U.S.: 44% CAN: 2%	A: 270,000		40.9%

Note: Geographic export markets: figures for Vietnam, Cambodia and Bangladesh are for 2007. Employment information and loss for India, China, Bangladesh, Pakistan, Indonesia, and Mexico from (Forstater, 2010).

Source: Information compiled by authors from various trade journals and online sources.

Table A- 5: Functional Upgrading Trajectories, Governance, & Local Skills

Functional Capabilities	Governance Structure	Weaknesses & Upgrading	Skills Acquired
Assembly (CMT): the focus of the supplier is on production alone; suppliers assemble imported inputs, following buyers' specifications.	Captive or Market	Lack capital, expertise, direct access to buyers, local inputs. Process or product upgrading.	Local firms learn foreign buyers' preferences, including international standards for price, quality and delivery.
OEM: the supplier takes on a broader range of tangible, manufacturing-related functions, such as sourcing inputs and inbound logistics in addition to production.	Captive or Market	Lack design capabilities and strong managerial and technical skills. Functional upgrading to logistics and coordination.	Production expertise increases over time and spreads across different activities. Suppliers learn the up and downstream segments of the chain from buyers. Can lead to substantial backward linkages in the domestic economy.
If the ability to codify transactions increases and supplier competencies remain high, degree of explicit coordination decreases	Modular		
ODM: supplier carries out part of the pre-production processes including design or R&D		Lack direct access to foreign consumers and marketing skills. Functional & product upgrading.	Innovative skills related to new product development
If in collaboration with buyer	Relational		
If buyer attaches its brand to a product designed by the supplier	Captive or Modular		
OBM: supplier acquires post-production capabilities and is able to fully develop products under its own brand names.		Knowledge changing.	Innovative skills related to marketing and consumer research.
If maintains relationship with & develops brands with buyer	Relational	Functional upgrading.	
If no longer relies on buyer for any functions and establishes own distribution channels.	Lead firm	Channel & functional upgrading.	

Adapted and modified from (Gereffi, 1999; Gereffi & Memedovic, 2003; Humphrey, 2004). Table assumes vertical integration is not present.

Table A- 6: Mass Merchants: Private-Label Sourcing Strategies

[Sales Revenues in $US Billions for 2008]

Retailer	Sales	Sourcing	Description & Known Countries
Walmart	302.6	Direct Sourcing; Intermediary: Li & Fung	80% from 3rd parties; <20% sourced directly from manufacturers (2009); Countries: China: ~90%; others Mexico, Bangladesh, & Jordan
Target	64.9	Own Intermediary	Target owns (subsidiary) a domestic agent, AMC
Sears	25.3	Direct Sourcing	60-70% direct sourcing via 8 sourcing and 4 quality assurance offices worldwide (2005)
Macy's	24.9	Own Intermediary; Intermediary: AMC	Macy's owns (subsidiary) a domestic agent, MDSI, that has offices in 10 countries
J.C. Penney	18.5	Direct Sourcing	16 overseas buying offices: concentrate on 15 countries including Bangladesh, Hong Kong, Pakistan
Kohl's	16.4	Intermediary: Li & Fung	Kohl's is currently Li & Fung's largest supplier
Marks & Spencer (UK)	15.3	Direct Sourcing	Domestic Importers: 70% provided from <15 UK-based full service importers/vendors. 30% direct sourcing with 120 suppliers via 7 owned sourcing offices; Turkey/Morocco office responsible for 12% (2006). Others: Bangladesh**,** Sri Lanka.

Sales from: (Asaeda, 2009); sales represent all divisions-not just apparel

Table A- 7: Specialty Retailers: Sourcing Strategies

[Sales Revenue for 2008 in $U.S. Billions]

Retailer	Sales	Private-Label Sourcing	Description & Known Countries
Gap	14.5	Direct Sourcing	900 vendors in 60 countries. China 27%; U.S.: 3%. Others: Bangladesh, Sri Lanka Pakistan, Philippines, Jordan, Vietnam, Cambodia (Gap largest buyer), Morocco, Turkey, and India.
H&M (Sweden)	13.1	Direct Sourcing	20 offices (10 each in Europe & Asia); relationships with 750 factories: 60% Asia (incl. Bangladesh, Pakistan, Cambodia) and 40% Europe (2007).
Limited Brands Inc	9.0	Own Intermediary	Own MAST Industries (agent, contract mfg., design): mfg. facilities in 35 countries in Asia (Sri Lanka), Europe, S. America, Africa
Abercrombie & Fitch	3.5	Direct Sourcing	Domestic Importer: use MAST Industries; relationships with 38 countries: primarily Asia and Central and South America
Talbots	2.4	Intermediary: Li & Fung	
Aeropostale	1.9	Direct Sourcing	>67% of business with five vendors
Gymboree	1.0	Intermediary: Li & Fung	

Sales are for 2008 from (Apparel's top 50, 2009); Talbot's (Euromonitor, 2009).

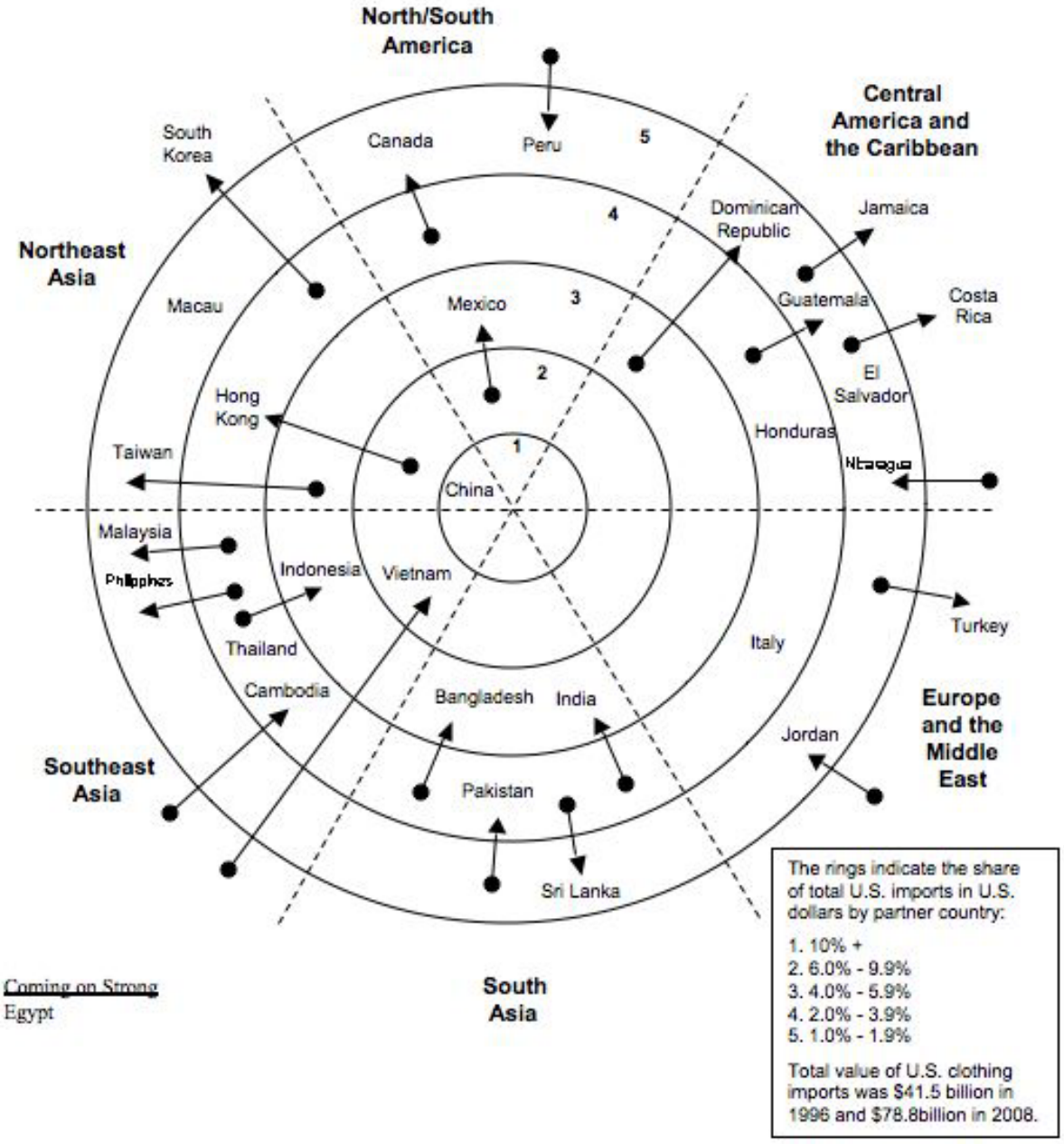
Table A- 8: Brand Marketers & Manufacturers: Sourcing Strategies

[Sales Revenue for 2008 in $U.S. Billions]

Brand Firm	Sales	Sourcing Strategy	Description & Known Countries
Nike	19.2	Direct Sourcing	Apparel from 38 countries. China (largest); others: Thailand, Indonesia, Malaysia, Vietnam, Turkey, Sri Lanka, Cambodia, Taiwan, El Salvador, Mexico, India, Israel
Inditex (Zara) (Spain)	15.1	Direct Sourcing; Manufacturer	50% owned manufacturing (Spain, "fashion items"); 50% sourced with 40% from Asia (China, Bangladesh, "basics") and 10% Europe and Northern Africa (Morocco). 1990: Asia represented almost 0%.
VF Corporation	7.6	Direct Sourcing Manufacturer	77% sourced: China (largest), Bangladesh, Vietnam, Indonesia, Thailand, Cambodia, the Philippines, Pakistan, India, Sri Lanka, Egypt, Chile, Argentina, Tunisia & Morocco. 23% owned mfg. incl.: Mexico, Nicaragua, Honduras, Poland, and Turkey.
Liz Claiborne	4.2	Intermediary: Li & Fung	
Hanesbrands	4.0	Direct Sourcing; Manufacturer	34% sourced from 3rd party mfg. (FOB); 66%: owned facilities or 3rd party cut/sew contractors (CMT). Own 52 manufacturing plants incl.: U.S., Vietnam, Thailand, Puerto Rico, Dominican Republic, El Salvador, & Honduras.
Phillips-Van Heusen PVH	2.5	Direct Sourcing	175 mfg. in 26 countries (incl. Bangladesh, Cambodia, U.S.) to firm specifications (FOB)
Timberland	1.5	Intermediary: Li & Fung License to PVH for some apparel	

Sales from: (Driscoll & Wang, 2009). Detailed information about each company comes from annual reports, trade journals, newspapers, and various online sources.

Figure A-1: Shifts in Regional Structure of U.S. Apparel Imports: 1996-2008



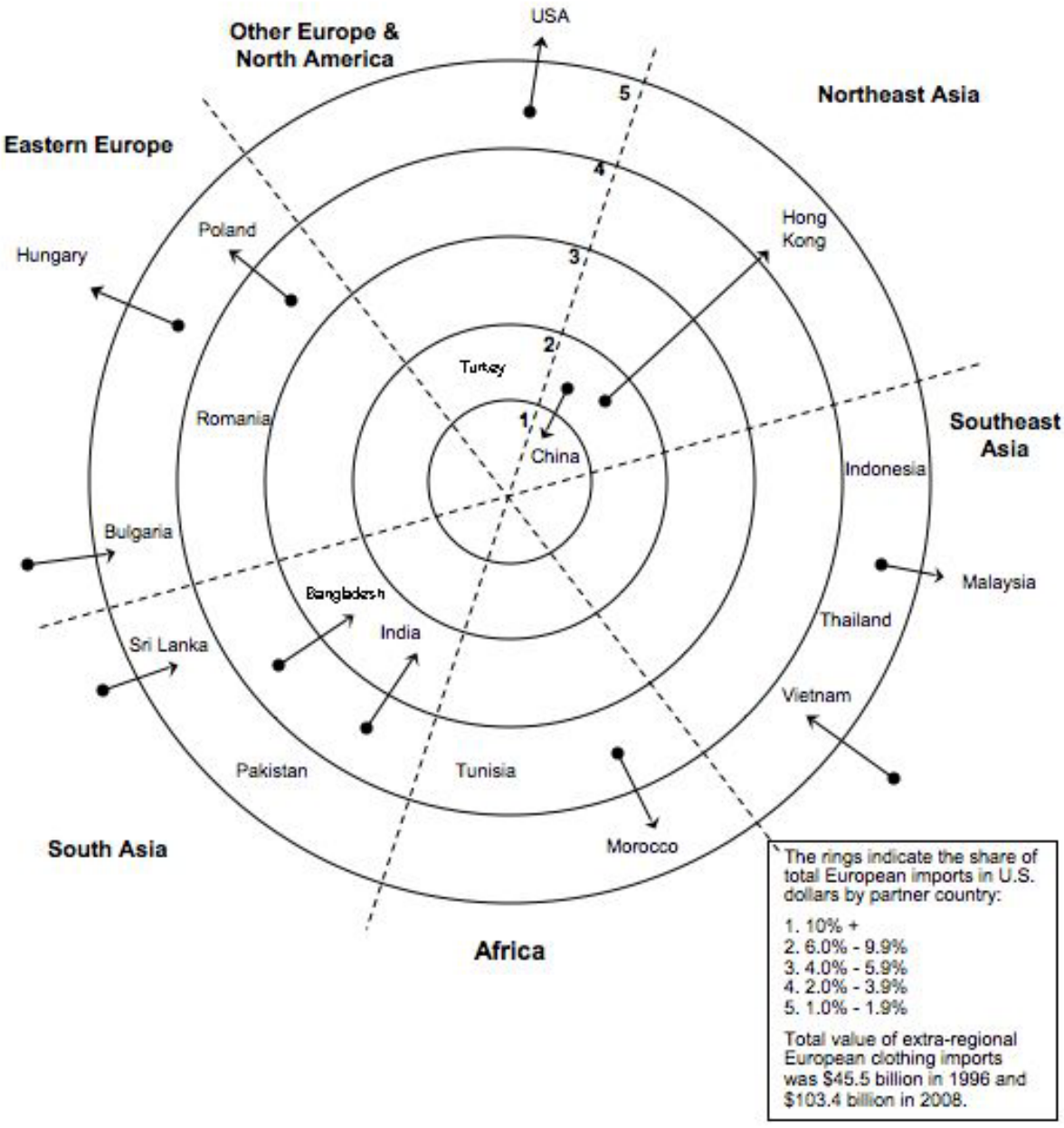
'The 2008 position corresponds to the ring where the country's name is located; the 1996 position, if different, is indicated by a small circle. The arrows represent the magnitude and direction of change over time.

N.B.: **From 1996 to 2008, China's import share of the United States apparel market grew from 15.2% to 34.5%.**

Source: Compiled from official statistics of the U.S. Department of Commerce, U.S. imports for consumption, customs value. SITC code: 84 http://dataweb.usitc.gov

Source: USITC; U.S. Imports: SITC 84, rev. 3

Figure A-2: Shifts in Regional Structure: EU-15 Apparel Imports: 1996-2008

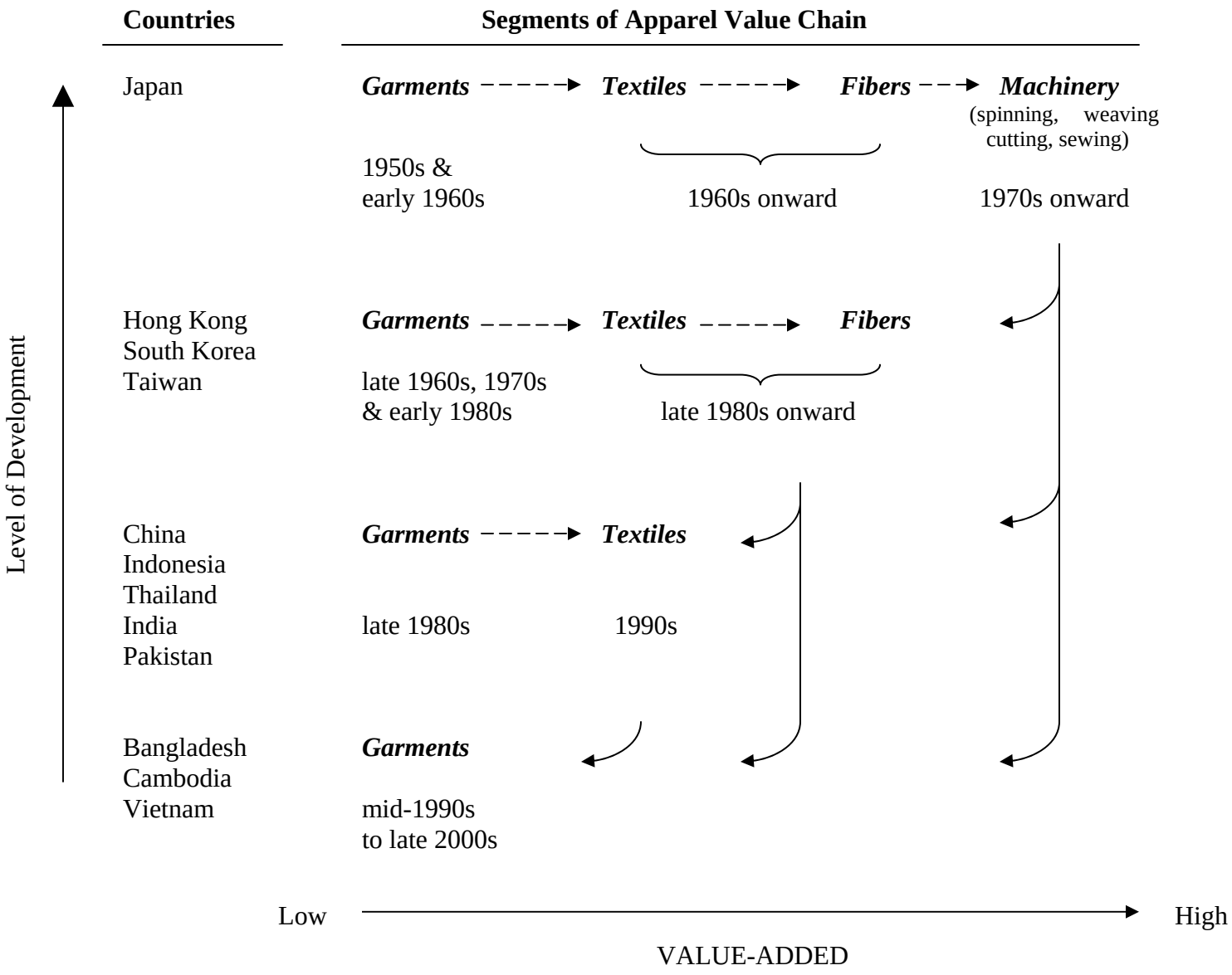


[1] Apparel imports are for the EU-15 countries only. The calculations *include* the value of intra-EU15 trade, but the chart *excludes* the names of the individual EU-15 countries. EU-15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

[2] The 2008 position corresponds to the ring where the country's name is located; the 1996 position, if different, is indicated by a small circle. The arrows represent the magnitude and direction of change over time.

Source: UNComtrade,SITC 84, Rev 3, imports to EU15

Figure A-3: Industrial Upgrading by Asian Economies in the Apparel Value Chain



Notes: *Dotted arrows* refer to the sequence of production and export capabilities within economies.
Solid arrows refer to the direction of trade flows or foreign direct investments between economies.
Dates refer to a country's peak years for exports of specific products.

Source: Adapted from Gereffi, G. (2005): 172.