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The transformation of the North American apparel industry: Is NAFTA a curse or a blessing?

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Abstract

The article uses the global commodity chains framework to explain the transformations in production, trade and corporate strategies that altered the global apparel industry over the past decades and changed the conditions for industrial upgrading. The apparel industry is identified as a buyer-driven commodity chain that contains three types of lead firms: retailers, marketers and branded manufacturers. As apparel production has become globally dispersed and competition between these firms has intensified, each type of lead firm has developed extensive global sourcing capabilities. While “de-verticalizing” out of production, they are fortifying their activities in the high value-added design and marketing segments of the apparel chain, leading to a blurring of the boundaries between these firms and a realignment of interests within the chain.

Industrial upgrading in the global apparel industry is primarily associated with the shift from assembly to full-package production. Compared with the mere assembly of imported inputs, full-package production fundamentally changes the relationship between buyer and supplier in a direction that gives far more autonomy and learning potential for industrial upgrading to the supplying firm. Full-package production is needed because the retailers and marketers that order the garments do not know how to make them. Particular places such as the East Asian newly industrializing economies of Hong Kong, Taiwan, South Korea, and the People’s Republic of China have used the full-package role to create an enduring edge in export-oriented development. However, the North American Free Trade Agreement between the United States and Mexico, along with a relative decline in

the importance of East Asian apparel exports to the United States, has now created favourable conditions for the extension of full-package production to the North American setting.

The article proposes the distinction between three new patterns or models of competition in the North American market: the East Asian, Mexican and Caribbean Basin models. Each model presents different perspectives and challenges for industrial upgrading. The United States continues to define the terms of change, and US firms lead the process toward mass customization and agile manufacturing. Mexico needs to develop new and better networks in order to compete with East Asian suppliers for the US full-package market. The Caribbean Basin model, almost exclusively limited to assembly, would have to develop networks with US retailers and marketers if they were to acquire the skills and resources needed to move into the more diversified activities associated with full-package production.

Given the power shifts that are occurring among North American textile, apparel and retail firms, a key question is: Who will be the main "organizing agents" in modernizing the region's apparel commodity chain? The notion of organizing agents refers to those firms, foreign and domestic, that could enhance the competitiveness of the apparel sector in Mexico and the Caribbean Basin through backward or forward linkages with major producers and retailers. Large firms in different segments of the apparel chain, mainly from the United States, are all vying to become co-ordinating agents in new North American networks that have focused on strengthening Mexico's capabilities to carry out full-package supply. However, the extension of NAFTA-parity to the Caribbean Basin will provide new opportunities for those firms to compete with Mexico on a more equal footing.

Introduction

I. Latin America's Development Dilemmas

The economic history of Latin America is a story of paradoxes and diversity. At one level, the twentieth century appears to reflect spectacular progress. Average per capita income in Latin America and the Caribbean quintupled. Life expectancy, a dismal 40 years in 1900, now stands at 70 Years. And literacy is a reality for seven out of eight adults in 2000, compared to just one in four in 1900.

Despite these gains, however, the gap between Latin America and the developed world has not narrowed. The average per capita income of the region's larger countries vis-à-vis the United States remains unchanged; it was 14% of U.S. per capita income in 1990, and it is 13% today. Although industry has grown from 5% to 25% of gross domestic product, Latin America's share of world trade fell from 7% to 3%, and primary commodities still make up more than half of the region's exports. Finally, the countries of Latin America and the Caribbean suffer from the greatest income inequality in the world. Two out of every five Latin American families live in poverty. Striking disparity among incomes is evident in both large and small countries of the region. In Brazil and Guatemala, the top 10% of the population amass almost 50% of national income, while the bottom 50% scrape up little more than 10%. While Latin America's income distribution seemed to improve in the 1970s, it worsened considerably in the 1980s and it has remained stagnant at high levels in the 1990s

(IDB, 1998; Thorp, 1998). Latin America's all-out conversion to free markets in the 1990s has not led to tangible benefits for the majority of the population; the sad fact remains that poverty and inequality persist and even worsen.

The enduring legacy of social and economic inequality in Latin America, despite a decade of market-friendly reforms, has resulted in growing criticism of the prevailing policy framework dubbed the "Washington Consensus." This approach maintained that the key to creating prosperous and equitable societies in Latin America is fiscal discipline, open markets, and private sector-led growth. Top officials in leading financial institutions like the World Bank and the Inter-American Development Bank are now calling for a second generation of reforms that go beyond financial stabilization and address the issues of long-term equitable growth by putting "people first." These institutional reforms emphasise education for all (especially women and girls), social protection for the unemployed and elderly, good governance, improved public services and infrastructure, and environmental sustainability as the pillars of a new development framework (see the address on "The Other Crisis" by James D. Wolfensohn, President of the World Bank Group, to the Board of Governors on Oct. 6, 1998, <http://worldbank.org/html/extdr/extme/1964.htm>; also Birdsall et al., 1998).

Implementing new development strategies for Latin America is complicated by the fact that the region is a heterogeneous mix of subregional economies. Small Central American and Caribbean nations are highly dependent on exports of agricultural products and traditional manufactures like apparel. The Andean countries (Venezuela, Peru, Ecuador, Bolivia, and Colombia) are almost exclusively primary-product exporters, with the exception of Colombia where manufactured exports make up one-third of the total. Southern Cone countries (Argentina, Chile, and Uruguay) also emphasise primary products, although they have more developed manufacturing sectors than the Andean nations. By contrast, in the region's two largest economies – Brazil and Mexico – manufactured exports account for more than one-half and three-quarters, respectively, of total exports (Gereffi and Hempel, 1996). Furthermore, the dominance of Brazil and Mexico in the region's exports increases in proportion to the technological complexity of goods: the two countries accounted for 60% of traditional exports, 77% of basic intermediate inputs, and 85% of Latin America's exports of advanced industrial products (ECLAC, 1994, pp. 61-81). The acute financial crisis in Asia has contributed to the dramatic improvement in Latin America and the Caribbean's position as a destination for foreign direct investment (FDI) in the 1990s, with the increase in FDI to the region doubling from US\$ 33 billion to \$65 billion between 1995 and 1997. However, one-half of total FDI in 1997 went to just two countries, Brazil (30%) and Mexico (19%), reinforcing the existing disparities in the region (ECLAC, 1998, pp. 17-18).

Within Latin America, Mexico has surpassed all other nations in building its manufacturing export capacity. The number of exporting firms has risen from 22 000 in 1994 to 34 000 in 1998, and the workers employed in Mexico's thriving maquila industry (which assembles imported U.S. inputs for re-export to the United States) has passed the one million mark. Foreign investment has poured into Mexico at more than \$10 billion a year to create new export-driven factories. Productivity has risen steadily, and total quality management systems are becoming the norm. However, productivity still has not translated into higher real wages for the workers, who often are less well off than their fathers were. While total trade between the United States and Mexico has doubled to \$159 billion a year from \$77 billion since the enactment of the North American Free Trade Agreement (NAFTA) in 1994, putting Mexico ahead of Japan and trailing only Canada as the United States' leading trade partner, most consumers are worse off today than they were a decade ago in terms of what they can buy for themselves. Since Mexico's big currency devaluation of 1994-1995, when the peso lost over half of its original value in a matter of months, consumers in

Mexico have suffered a staggering 39% drop in their purchasing power. Today almost two-thirds of the citizenry is considered “poor” — i.e., daily incomes of \$3 or less; fewer than half of the population fit that description before the currency crisis. “Assuming the economy can keep growing at 5% a year, it’s still going to take five more years for Mexico to reduce poverty to 1984 levels,” according to Miguel Szekely, an economist with the Inter-American Development Bank (Millman, 1999; Smith, 1999).

No industry better captures the development contradictions that have beset Latin America in the past decade than apparel. It is an industry that is simultaneously very traditional (many of its antiquated sewing factories are a throwback to the sweatshops at the onset of the Industrial Revolution) and ultramodern (the global sourcing networks managed by today’s large apparel companies link dozens of countries, hundreds of factories, and thousands of retail outlets, and they are knit together by the most advanced transportation, communication, and information technologies available). Apparel shipments from Mexico and the Caribbean Basin countries to the United States are pacing the boom in manufactured exports from these economies, generating plenty of jobs and foreign exchange; yet complaints abound about the quality of these jobs, the stability of the export earnings, and the declining standard of living confronted by workers.

There is acrimonious debate about whether NAFTA should be considered a good deal or not, and for whom. The dispute galvanizes strong vested interests in the United States and Mexico, as well as the Caribbean Basin. The U.S. critics of NAFTA claim that it has escalated the destruction of the U.S. manufacturing base, and bolster this view with estimates that more than 250,000 jobs have been lost in the United States because of the passage of NAFTA. A disproportionate number of these job losses have occurred in the apparel and textile sector. In North Carolina, the hub of many of the leading US textile and apparel firms, apparel employment state-wide has fallen by 9.2% since 1995, while textile employment has declined at the appreciably slower annual rate of 4.9% (Jud and Cassill, 1999). Burlington Mills, Cone Mills, VF Corporation, Sara Lee, Guilford Mills, and numerous other North Carolina companies are investing in Mexico at a rapid clip. Although consolidation, automation and enhanced productivity have contributed to U.S. job losses, NAFTA is seen as the primary culprit because Mexican production dramatically increases U S corporate profits: “U.S. corporations in Mexico can pay workers \$30 per week, provide little or no benefits, avoid U.S. laws that protect the health and safety of workers, and then discharge waste into the local river or ditch without having to worry about meeting the stringent government regulation that exists in the United States” (Castelli, 1999).

This critical perspective is sharply challenged by NAFTA boosters, who see the regional trade agreement as a defensive “survival strategy” intended to protect the North American market against a flood of Asian imports. Since NAFTA went into effect on January 1, 1994, Mexico has overtaken China as the top U.S. supplier of apparel. More generally, NAFTA has precipitated a profound regional shift in where apparel is made. Before NAFTA, most U.S. clothing imports came from Asia. Today, most U.S. apparel comes from the Americas, and it is made in places like Mexico, the Caribbean, and Canada – all places that use U.S. yarn and fabric (unlike Asian clothing imports, which have virtually no U.S. yarn or fabric). Using impeccable supply-chain logic, Carlos Moore of the American Textile Manufacturers Institute concludes that NAFTA has indeed benefited the U.S. textile industry and its workers:

"When apparel imports from the Far East increase, textile production in this country decreases. When production drops, that means fewer jobs for American textile workers. Simply put, apparel imports from Mexico help our industry and our workers; apparel imports from the Far East hurt us. I’m not claiming all is rosy in our industry. Like manufacturing industries all across the United States, the textile industry has consolidated and increased its productivity, which has resulted in job losses. The industry also has faced growing imports from Asia, much of which

violates trade rules, and this has added to job losses. But keep in mind, if we didn't have NAFTA, job losses in the textile industry would have been far more drastic because U.S. garment-making would have continued to move to the Far East and we would not have nearby markets for our textiles". (Moore, 1999).

Actually, NAFTA appears to have accelerated a prior, more general trend toward a growth in U.S. exports to Mexico. Between 1992 and 1997, North Carolina's textile exports to Mexico grew fivefold (from \$33 million to \$150 million), while apparel exports increased nearly eightfold (from \$49 million in 1992 to \$383 million in 1997) (Dyer, 1999). Whether net job losses can be attributed to NAFTA is difficult to pin down. While an estimated 20 000 North Carolinians reportedly have lost jobs as their employers relocated factories south of the border since NAFTA went into effect in 1994, unemployment rates in the state remain at a record low 3%, fuelled in part by the creation of new jobs to assist with the record level of exports to Mexico.

Unravelling the North American restructuring paradox in terms of the drivers as well as the beneficiaries of change in the apparel sector will be the focus of this paper. First, the global commodity chains approach will be introduced as a way to understand the world-wide organization of apparel production, and the shifting economic roles of lead companies within this sector. Second, international market factors will be examined by outlining the most significant trade shifts in the apparel industry, with an emphasis on Asia and Latin America. Third, the impact of NAFTA on patterns of competition in the textile and apparel commodity chain in Mexico and the Caribbean Basin countries will be explored. Finally, we will analyze in greater detail the changing corporate strategies of the major transnational firms in the North American apparel industry, who themselves are following different approaches to maintaining their market power and profitability in a post-NAFTA environment.

II. The apparel commodity chain

In global capitalism, economic activity is not only international in scope, it is also global in organization. "Internationalization" refers to the geographic spread of economic activities across national boundaries. As such, it is not a new phenomenon. Indeed, it has been a prominent feature of the world economy since at least the seventeenth century when colonial empires began to carve up the globe in search of raw materials and new markets for their manufactured exports. "Globalization" is much more recent than internationalization because it implies functional integration between internationally dispersed activities.

Industrial and commercial capital have promoted globalization by establishing two distinct types of international economic networks, which can be called "producer-driven" and "buyer-driven" global commodity chains, respectively (Gereffi, 1994; 1999). A commodity chain refers to the whole range of activities involved in the design, production, and marketing of a product (see Gereffi and Korzeniewicz, 1994 for an overview of this framework). Producer-driven commodity chains are those in which large, usually transnational, manufacturers play the central roles in co-ordinating production networks (including their backward and forward linkages). This is characteristic of capital- and technology-intensive industries such as automobiles, aircraft, computers, semiconductors, and heavy machinery. The automobile industry offers a classic illustration of a producer-driven chain, with multilayered production systems that involve thousands of firms (including parents, subsidiaries, and subcontractors). In the 1980s, the average Japanese automaker's production system, for example, contained 170 first-tier, 4 70 second-tier, and 31 600 third-tier

subcontractors (Hill 1989: 466). Florida and Kenney (1991) found that Japanese automobile manufacturers actually reconstituted many aspects of their home-country supplier networks in North America. Doner (1991) extended this framework to highlight the complex forces that drive Japanese automakers to create regional production schemes for the supply of auto parts in a half-dozen nations in East and Southeast Asia. Henderson (1989) and Borrus (1997) also support the notion that producer-driven commodity chains have established an East Asian division of labour in their studies of the internationalization of the U.S. and Japanese semiconductor industries.

Buyer-driven commodity chains refer to those industries in which large retailers, marketers, and branded manufacturers play the pivotal roles in setting up decentralized production networks in a variety of exporting countries, typically located in the third world. This pattern of trade-led industrialization has become common in labour-intensive, consumer goods industries such as garments, footwear, toys, housewares, consumer electronics, and a variety of handicrafts. Production is generally carried out by tiered networks of third world contractors that make finished goods for foreign buyers. The specifications are supplied by the large retailers or marketers that order the goods.

One of the main characteristics of the firms that fit the buyer-driven model, including retailers like Wal-Mart, Sears Roebuck, and J.C. Penney, athletic footwear companies like Nike and Reebok, and fashion-oriented apparel companies like Liz Claiborne and The Limited, is that these companies design and/or market—but do not make—the branded products they order. They are part of a new breed of “manufacturers without factories” that separate the physical production of goods from the design and marketing stages of the production process. Profits in buyer-driven chains derive not from scale, volume, and technological advances as in producer-driven chains, but rather from unique combinations of high-value research, design, sales, marketing, and financial services that allow the retailers, designers, and marketers to act as strategic brokers in linking overseas factories and traders with evolving product niches in their main consumer markets (Gereffi, 1994).

Profitability is greatest in the relatively concentrated segments of global commodity chains characterized by high barriers to the entry of new firms. In producer-driven chains, manufacturers making advanced products like aircraft, automobiles, and computers are the key economic agents not only in terms of their earnings, but also in their ability to exert control over backward linkages with raw material and component suppliers, and forward linkages into distribution and retailing. The lead firms in producer-driven chains usually belong to global oligopolies. Buyer-driven commodity chains, by contrast, are characterized by highly competitive and globally decentralized factory systems. The companies that develop and sell brand-named products exert substantial control over how, when, and where manufacturing will take place, and how much profit accrues at each stage of the chain. Thus, whereas producer-driven commodity chains are controlled by large manufacturers at the point of production, the main leverage in buyer-driven industries is exercised by retailers and marketers at the distribution and retail end of the chain.

Both buyer-driven and producer-driven commodity chains are useful in analyzing and evaluating global industries. As with traditional supply-chain perspectives, the commodity chains framework is based on the flow of goods involved in the production and distribution of apparel products. However, the global commodity chains approach differs in at least four respects from related concepts, such as the apparel “pipeline” (AAMA, 1984) or “value chain” (Porter 1990) approaches. The global commodity chain:

- incorporates an explicit international dimension into the analysis;
- focuses on the power exercised by the lead firms in different segments of the commodity chain, and it illustrates how power shifts over time;

- views the co-ordination of the entire chain as a key source of competitive advantage that requires using networks as a strategic asset; and
- looks at flows of information as one of the critical mechanisms by which firms try to improve or consolidate their positions within the chain.

1. Diverse lead firms

Because of the intensive use of low-skilled labour in apparel production, transnational companies have limited potential for deriving firm-specific advantages from direct foreign investment in overseas locations. Instead, they have turned to other forms of transnational activity, such as the importing of finished garments, brand name and trademark licensing, and the international subcontracting of assembly operations. These various activities have led to multiple lead firms in buyer-driven commodity chains.

There are three types of “lead firms” in the apparel commodity chain: retailers, marketers, and branded manufacturers (Gereffi, 1997). As apparel production has become globally dispersed and the competition between these types of firms intensified, each has developed extensive global sourcing capabilities. While “de-verticalizing” out of production, they are fortifying their activities in the high value-added design and marketing segments of the apparel chain, leading to a blurring of the boundaries between these firms and a realignment of interests within the chain.

Here’s a quick look at where each “lead firm” stands in apparel sourcing:

a) Retailers

In the past, retailers were the apparel manufacturers’ main customers, but now they are increasingly becoming their competitors. As consumers demand better value, retailers have increasingly turned to imports. In 1975, only 12% of the apparel sold by U.S. retailers was imported; by 1984, retail stores had doubled their use of imported garments (AAMA, 1984). In 1993, retailers accounted for 48% of the total value of imports of the top 100 U.S. apparel importers (who collectively represented about one-quarter of all apparel imports). U.S. apparel marketers, which perform the design and marketing functions but contract out the actual production of apparel to foreign or domestic sources, represented 22% of the value of these imports in 1993, and domestic producers made up an additional 20% of the total¹ (Jones, 1995: 25-26). The picture in Europe is strikingly similar. European retailers account for fully one-half of all apparel imports, and marketers or designers add roughly another 20% (Scheffer, 1994: 11-12). Private label lines (or store brands), which refer to merchandise made for specific retailers and sold exclusively in their stores, constituted about 25% of the total U.S. apparel market in 1993 (Dickerson, 1995: 460).

b) Marketers

These manufacturers without factories include companies like Liz Claiborne, Donna Karan, Ralph Lauren, Tommy Hilfiger, Nautica, and Nike, that literally were born global because most of their sourcing has always been done overseas. In order to deal with the influx of new competition, marketers have adopted several strategic responses that are altering the content and scope of their global sourcing networks. These measures include:

- shrinking their supply chains, using fewer but more capable contractors;
- instructing contractors where to obtain needed components, thus reducing their own purchase and redistribution activities;

¹ These figures do not include the production-sharing activities of U.S. apparel firms in Mexico and in the Caribbean Basin, which also have been expanding very rapidly (USITC, 1997).

- discontinuing certain support functions (such as pattern grading, marker making and sample making) and reassigning them to contractors;
- adopting more stringent vendor certification systems to improve performance; and
- shifting the geography of their sourcing networks from Asia to the western hemisphere.

c) Branded apparel m

The decision of many larger manufacturers in developed countries is no longer *whether* to engage in foreign production, but *how* to organize and manage it. These firms supply intermediate inputs (cut fabric, thread, buttons, and other trim) to extensive networks of offshore suppliers, typically located in neighbouring countries with reciprocal trade agreements that allow goods assembled offshore to be re-imported with a tariff charged only on the value added by foreign labour. This kind of international subcontracting system exists in every region of the world. It is called the 807/9802 program or “production sharing” in the United States (USITC, 1997), where the sourcing networks of U.S. manufacturers are predominantly located in Mexico, Central America, and the Caribbean; in Europe, this is known as outward processing trade (OPT), and the principal suppliers are found in North Africa and Eastern Europe (OETH, 1995); and in Asia, manufacturers from relatively high-wage economies like Hong Kong have outward processing arrangements (OPA) with China and other low-wage nations (Birnbaum, 1993).

2. Industrial upgrading as export role shifts

The concept of industrial upgrading encompasses several related levels of analysis: product characteristics, types of economic activity, intrasectoral shifts, and intersectoral shifts (Gereffi and Tam, 1998). At a product level, one can talk about the movement from simple to more complex goods of the same type (e.g., cotton shirts to men’s suits). At the level of economic activities, there are various roles that involve increasingly sophisticated production, marketing, and design tasks. One typology includes: assembly, original equipment manufacturing (OEM), original brandname manufacturing (OBM), and original design manufacturing (ODM). A third type of industrial upgrading involves an intrasectoral progression, typically from the manufacture of finished items to the production of higher value goods and services involving forward and backward linkages along the supply chain. Finally, industrial upgrading may also be viewed as the intersectoral shift from low-value, labor-intensive industries to capital- and technology intensive ones (e.g., clothes to cars to computers). While firms generally implement industrial upgrading, the spatial context in which this activity occurs and is observed includes local, national, and regional economies.

In the specific historical context of the global apparel industry, one of the clearest qualitative indicators of industrial upgrading are the role shifts involved in moving from assembly (using imported inputs) to more integrated forms of manufacturing and marketing associated with the OEM and OBM export roles (Gereffi, 1999). Participation in assembly networks (often associated with export-processing zones) is considered the first step in the upgrading process because it teaches apparel exporters about the price, quality and delivery standards used in global markets. Thus, entry into the apparel commodity chain via the assembly role requires learning how to work with organizational buyers (e.g., manufacturers, trading companies, and brokers) that supply the exporting firm with fabric and other inputs needed to assemble garments.

The most typical upgrading move following assembly is OEM or full-package production. Why is full-package production so useful for the success of a country in a global commodity chain? Compared with the mere assembly of imported inputs, full-package production fundamentally changes the relationship between buyer and supplier in a direction that gives far more autonomy and learning potential for industrial upgrading to the supplier. Full-package production is needed

because the retailers and marketers that order the garments do not know how to make them. Thus, the suppliers must learn how to do everything and they frequently do so in a relatively long-term relationship with the buyers. Moreover, if the buyer is a marketer, the supplier can closely observe its client's behaviour in response to changing market conditions. The more stable and open the relationship between the buyer and the supplier, the more favourable is the environment for observing and learning from the buyer.

Particular places such as the East Asian newly industrializing economies (NIEs) of Hong Kong, Taiwan, South Korea, and Singapore have used the OEM role to create an enduring edge in export-oriented development. However, East Asian producers confront intense competition from lower-cost exporters in various parts of the third world, and the price of their exports to western nations has been further elevated by sharp currency appreciations during the past decade. Under these circumstances, it is advantageous to establish forward linkages to developed-country markets, where the biggest profits are made in buyer-driven commodity chains. Therefore, a number of firms in the East Asian NIEs that pioneered OEM are now pushing beyond it to the OBM role by integrating their manufacturing expertise with the design and sale of their own branded merchandise (Gereffi, 1995).

From a theoretical point of view, there are four defining elements in this historically and organizationally grounded, global commodity chains approach to industrial upgrading. First, sequences of export roles are contingent, not invariant, features of industrial upgrading. While the progression from assembly to OEM to OBM export roles is quite typical, success in one role does not guarantee success in subsequent ones. Backsliding is possible and the sequences may vary, especially for more advanced forms of upgrading. These export roles are not mutually exclusive, either. In fact, most nations are tied to the world economy in multiple ways (Gereffi, 1995). In the case of apparel, for example, the East Asian NIEs have engaged in assembly, OEM, and OBM from the 1960s through the 1990s, and they have extended their OEM and to a lesser degree OBM capabilities to a diverse array of other export industries. Prominent apparel exporters like China, Mexico, and Turkey are currently making a successful transition from assembly to OEM production, while most nations have not progressed beyond the assembly export role.

Second, industrial upgrading is embedded in a social structure of producers, which is made up of "organizational chains" of buying and supplying firms. From this perspective, industrial upgrading involves organization learning to improve the position of firms or nations in international trade and production networks (Gereffi and Tam, 1998). Participation in global commodity chains is a necessary step for industrial upgrading because it puts firms and economies on potentially dynamic learning curves. There are many obstacles, however, to moving up these chains. The barriers to entry for each export role are more demanding as one moves along the industrial upgrading trajectory. Subsequent stages generally require the mastery of skills associated with the previous stage, although new resources and capabilities are also involved in upgrading shifts. Entry into the apparel commodity chain in the assembly export role, for instance, requires that an economy have low labour costs, political stability, and favourable quotas or other forms of trade access to major export markets. The shift from assembly to the OEM role requires, in addition to the foregoing conditions, a local infrastructure of firms capable of supplying a variety of apparel inputs (e.g., textiles, thread, buttons, zippers, labels) at the quality and quantity levels required for export production, as well as a good working relationship with a new set of foreign buyers (e.g., retailers and marketers) willing to place full-package orders.

Third, industrial upgrading requires not only physical and human capital, but also social capital – i.e., relevant and effective networks. Economic theories of industrial upgrading indicate that as capital (both physical and human) becomes more abundant relative to labour and the endowments of other countries, nations develop comparative advantages in capital- and skill-

intensive industries (Porter, 1990). However, industrial upgrading does not occur to a random set of capital- or skill-intensive industries or activities, but rather to products that are organizationally related through the lead firms in global commodity chains (Gereffi and Tam, 1998). Industrial upgrading within the apparel commodity chain involves building and co-ordinating networks with different kinds of lead firms that have access to distinct pools of design, production, and marketing resources needed to create new forms of national and regional competitive advantage (Gereffi, 1999).

Fourth and finally, sustaining the upgrading process within a particular commodity chain involves both forward and backward linkages from production, and the kind of learning that occurs across these segments. There are various ways that industrial upgrading can proceed once the capabilities for integrated manufacturing required by the OEM role have been mastered, whether by individual companies or by networks of firms. The East Asian NIEs, faced with domestic supply-side constraints (labour shortages, high wages, and high land prices) and external pressures (U.S.-mandated currency reevaluations, high tariffs, and quota restrictions), created international “triangle manufacturing” networks in which they became the middlemen between U.S. buyers and a wide range of low-cost factories in Asia and other developing regions. Thus, they internationalized the networks built around their OEM role (Gereffi, 1995; 1999). Another upgrading option is to move forward along the supply chain from production to marketing. Hong Kong apparel companies have gone from OEM to OBM by establishing new retail chains featuring their brands (Granitsas, 1998). U.S. apparel giants like Levi Strauss and Sara Lee have chosen to lessen their commitment to manufacturing in order to put more resources into building global brands, which are the most profitable part of the softgoods value chain (Black, 1998), while textile manufacturers are integrating forward into apparel supply precisely to enhance their manufacturing capabilities and enlarge their potential customer base (Bonner, 1997). Similarly, vertical integration can occur in a backward direction, and this also can be considered an upgrading move if it adds knowledge that improves the productivity and competitiveness of a firm or an economy. A good illustration of value-adding backward integration is “vertical retailing,” whereby major private-label retailers such as The Gap, J.C. Penney, and Sears Roebuck have moved aggressively into designing and sourcing their own products, frequently from overseas locations, thereby performing the same operations as many companies that are generally considered apparel manufacturers (Apparel Industry Magazine, 1997). Thus, industrial upgrading is a key force that motivates the economic restructuring being undertaken by U.S. textile, apparel, and retail companies today, as well as firms in developing nations.

III. International trade shifts and industrial upgrading in Asia

The world textile and apparel industry has undergone several migrations of production since the 1950s and they all involve Asia. The first migration of the industry took place from North America and Western Europe to Japan in the 1950s and early 1960s, when Western textile and clothing production was displaced by a sharp rise in imports from Japan. The second supply shift was from Japan to the “Big Three” Asian apparel producers (Hong Kong, Taiwan, and South Korea), which permitted the latter group to dominate global textile and clothing exports in the 1970s and 1980s. During the past 10 to 15 years, there has been a third migration of production -- this time from the Asian Big Three to a number of other developing economies. In the 1980s, the principal shift was to mainland China, but it also encompassed several Southeast Asian nations and Sri Lanka. In the 1990s, the proliferation of new suppliers included South Asian and Latin American apparel exporters (Khanna, 1993; Gereffi, 1996a).

This most recent shift is seen in sharp relief in Table 1, which looks at apparel imports to the United States, the world’s largest market, during the past 15 years. In 1983, the Asian “Big Three” (Hong Kong, Taiwan, and South Korea), plus China, were responsible for two-thirds of U.S. apparel imports; by 1998, this share had dropped to less than one-third. Table 1 highlights two main trends in U.S. apparel imports: (1) a shift within Asia from the “Big Three” to the growing importance of successive waves of exporters: first China followed by Southeast Asia and then South Asia; and (2) a growth in non-Asian sources of apparel supply especially the importance of

Central America and the Caribbean as a region (which nearly doubled its share of U.S. apparel imports from 8% in 1990 to 15% in 1998) and most notably Mexico (which more than quadrupled its share of U.S. apparel imports from 3% to 13% in the same period).

How can we explain these international trade shifts? A simple market explanation is that the most labour-intensive segments of the apparel supply chain will be located in countries with the lowest wages. This account is supported by the sequential relocation of textile and apparel production from the United States and Western Europe to Japan the Asian Big Three and China given that each new tier of entrants to the production hierarchy had significantly lower wage rates than its predecessors. The cheap-labour argument does not hold up as well however when we get to the proliferation of new Asian and Caribbean suppliers whose U.S. market share expanded even though their wage rates are often considerably higher than China's. Furthermore although the share of U.S. apparel exports represented by Hong Kong South Korea and Taiwan has declined substantially during the past decade these economies still rank among the top six apparel exporters to the United States in 1998 despite having the highest apparel labour costs among all major suppliers (see ILO 1995: 35-36).

Exchange rates and trade policies help to explain some of these discrepancies. A critical factor in the sharp decline of Taiwan's and South Korea's apparel exports in the late 1980s was not only their rising wages but also the sharp appreciation of their local currencies vis-à-vis the U.S. dollar after the Plaza Agreement was signed in 1985. Between 1985 and 1987 the Japanese yen was revalued by close to 40% the New Taiwan dollar by 28% and from 1986 to 1988 the Korean won appreciated by 17% (Bernard and Ravenhill 1995: 180). The most important policies shaping U.S. apparel imports however have been quotas and preferential tariffs. Since the early 1970s quotas on apparel and textile items were regulated by the Multifiber Arrangement (MFA). The MFA has been used by the United States Canada and various European nations to impose quantitative import limits in a wide variety of product categories.

Although the clear intent of the MFA was to protect developed country firms from a flood of low-cost imports that threatened to disrupt major domestic industries the result was exactly the opposite. Protectionism heightened the competitive capabilities of developing country manufacturers who learned to make sophisticated products that were more profitable than simple ones. Protectionism by the industrialized nations also diversified the scope of foreign competition as an ever widening circle of exporters was needed to meet booming North American and European demand. In recent years the creation of the European Union and NAFTA has heightened preferential tariffs in these trade blocs and promoted a growing consolidation of supply chains within regions.

The ability of the East Asian NIEs to sustain their export success over several decades and to develop a multilayered sourcing hierarchy within Asia is only partially related to wage rates and state policies. From a commodity chain perspective East Asia must be viewed as part of an interrelated regional economy (Gereffi 1996a). The apparel export boom in the less developed southern tier of Asia has been driven to a significant extent by the industrial restructuring of the northern tier East Asian NIEs. As Northeast Asian firms began moving their production offshore they devised ways to co-ordinate and control their sourcing networks. Ultimately they focused on the more profitable design and marketing segments within the apparel commodity chain to sustain their competitive edge. This transformation can be conceptualized as a process of industrial upgrading based in large measure on building various kinds of economic and social networks between buyers and sellers.

Thus East Asia's transition from assembly to full-package supply derives in large measure from its ability to establish close linkages with a diverse array of lead firms in buyer-driven commodity chains. Lead firms are the primary sources of material inputs technology transfer and knowledge in these organizational networks. In the apparel commodity chain different types of lead

firms use different networks and source in different parts of the world. Retailers and marketers tend to rely on full-package sourcing networks in which they buy ready-made apparel primarily from Asia where manufacturers in places like Hong Kong Taiwan and South Korea now play primarily a coordinating role in the OEM or full-package production process. Branded manufacturers by contrast tend to create production networks that focus on apparel assembly using imported inputs. Whereas full-package sourcing networks are frequently global production networks established by branded manufacturers are predominantly regional: U.S. manufacturers go to Mexico and the Caribbean Basin European Union firms look to North Africa and eastern Europe and Japan and the East Asian NIEs look to lower-wage regions within Asia.

Table 1

TRENDS IN U.S. APPAREL IMPORTS BY REGION AND COUNTRY, 1983-1998

Country Source		1983		1986		1990		1994		1996		1998		% change 1994-98	% change 1996-98
		Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%	Value US\$ mn	%		
Northeast Asia	China	759		1 661		3 439		6 338		6 340		7 180		13 3	13 3
	Hong Kong	2 249		3 392		3 977		4 393		3 998		4 494		2 3	12 4
	Taiwan	1 800		2 621		2 489		2 269		2 066		2 224		-2 0	7 7
	South Korea	1 685		2 581		3 342		2 245		1 531		2 047		-8 8	33 6
	Macao	132		229		417		605		761		1 019		68 6	33 9
	Total	6 625	68	1 0483	60	13 663	54	15 850	43	14 696	35	16 963	31	7 0	15 4
Southeast Asia	Indonesia	75		269		645		1 182		1 505		1 857		57 2	23 4
	Philippines	319		473		1 083		1 457		1 569		1 797		23 3	14 5
	Thailand	125		213		483		1 006		1 243		1 733		72 3	39 4
	Malaysia	93		257		604		1 051		1 242		1 360		29 4	9 5
	Singapore	193		386		621		472		327		307		-34 9	-6 1
	Total	806	8	1 598	9	3 436	13	5 168	14	5 887	14	7 054	13	36 5	19 8
South Asia	India	220		344		636		1 309		1 350		1 636		25 0	21 2
	Bangladesh	7		154		422		885		1 125		1 628		84 1	44 8
	Sri Lanka	126		257		426		871		1 059		1 342		54 1	26 7
	Pakistan	32		92		232		508		642		771		51 7	20 1
	Total	385	4	847	5	1 716	7	3 573	10	4 175	10	5 377	10	50 5	28 8
Central America and the Caribbean	Dominican Republic	139		287		723		1 600		1 773		2 358		47 4	33 0
	Honduras	20		32		113		650		1241		1 905		193 3	53 5
	El Salvador	7		11		54		398		721		1 170		194 3	62 3
	Guatemala	4		20		192		600		809		1 150		91 6	42 2
	Costa Rica	64		142		384		686		706		827		20 6	17 1
	Jamaica	13		99		235		454		505		422		-7 0	-16 5
	Other CBI	142		207		284		151		321		516		241 5	60 7
	Total	389	4	797	5	1 985	8	4 538	12	6 076	15	8 349	15	84 0	37 4
Mexico		199	2	331	2	709	3	1 889	5	3 850	9	6 812	13	260 6	77 0
All other countries		1 328	14	3 283	19	4 009	16	5 859	16	6 996	17	9 318	17	59 0	33 2
	TOTAL APPAREL	9 731	100	17 341	100	25 518	100	36 878	100	41 679	100	53 874	100	46 1	29 3

Source: Compiled from official statistics of the U.S. imports for consumption, customs value Data before 1989 are estimated.

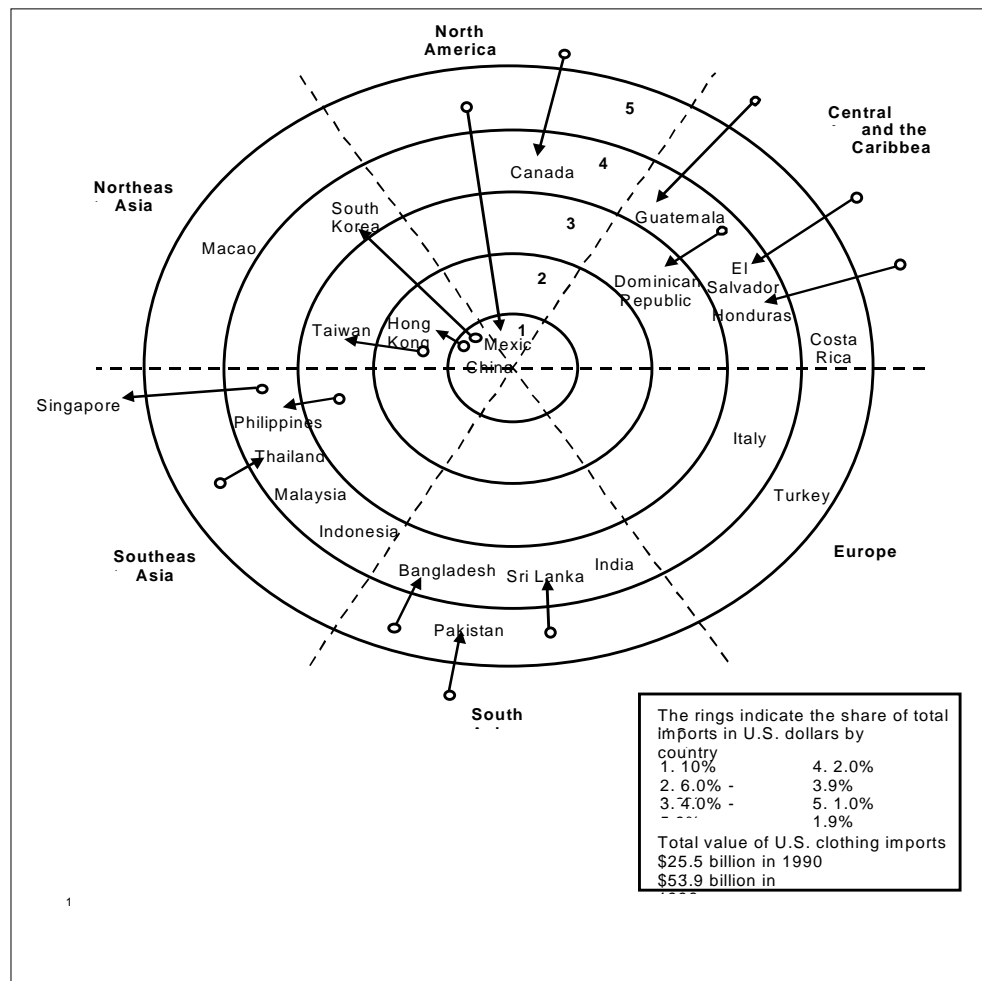
IV. New patterns of competition in the apparel commodity chain in North America

Our analysis of the apparel commodity chain in Asia suggests three main trends relevant to the future of the textile and apparel sector in North America. First there are parallel processes of regionalization of the apparel commodity chain within Asia, North America and Europe (Gereffi 1996b). The emerging supply relationships that are being fashioned with nearby low-cost producers in each area (South and Southeast Asia as well as China in Asia, Mexico and the Caribbean Basin vis-à-vis North America and North Africa and Eastern Europe for the European Union) are likely to strengthen intra-regional trade and production networks in the apparel chain. Second the relative decline of finished apparel exports from the East Asian NIEs is producing a “supply gap” in the North American apparel commodity chain. This is partly due to the greater geographical distances and logistical complexity involved in managing Asia’s OEM production networks as well as the tendency for more direct marketing in Asia as local manufacturers shift from OEM to OBM. Third apparel manufacturers in Mexico and the Caribbean Basin will need to develop the capability to carry out full-package production if they hope to compete for the large and dynamic branded and private-label segment of the U.S. market especially more fashion-oriented products such as women’s wear. Previously the offshore supply of ready-to-wear garments had only been done by the East Asia NIEs for the U.S. mass market or in the fashion centers of Europe for high couture.

1. Three models of competition

Between 1990 and 1998 U.S. apparel imports rose from \$25.5 to \$53.9 billion. Figure 1 is an import map that helps to identify trade shifts among the main suppliers to the U.S. apparel market. Those nations in the innermost circle each account for 10% or more of the total value of U.S. clothing imports in 1998 while each of those in the outer ring makes up only 1.0-1.9% of total imports. In other words as we move from the inner rings to the outer ones in this import map the relative importance of national apparel exporters decreases.

Figure 1
SHIFT IN THE REGIONAL STRUCTURE OF U.S. APPAREL IMPORTS
FROM 1990 TO 1998



The 1998 position corresponds to the ring where the country's name is located; the 1990 position, if different, is indicated by a small circle. The arrows represent the magnitude and direction of change over time.

Source: Compiled from official statistics of the U.S. Department of Commerce, U.S. imports for consumption, customs value.

Several key aspects of the direction and magnitude of change in U.S. apparel trade are revealed in Figure 1. First there are striking regional differences in the pattern of U.S. apparel imports. The NIEs in Northeast Asia are becoming much less important in U.S. apparel sourcing. South and Southeast Asia are growing slowly or not at all and imports from China, the Caribbean Basin, and Mexico are booming. Second, despite considerable mobility during the 1990s, there is a strong core-periphery pattern that dominates the geography of export activity in the U.S. apparel sourcing matrix. Only four economies (Hong Kong, South Korea, China, and Mexico) were core U.S.

suppliers during the past decade and only China and Mexico currently hold that distinction. There is a wide dispersion of 17 apparel suppliers in the outer two rings (indicating 1% to 4% shares of the U.S. apparel market) with just five nations in the inner three rings. Third while for most countries the degree of change from 1990 to 1998 has been relatively modest (they changed their position by one ring or not at all) other nations have shown more substantial degrees of advancement (Mexico Guatemala El Salvador Honduras and Canada) or decline (South Korea and Singapore). Nonetheless inward shifts of even one ring may be quite significant for smaller economies given the substantial overall growth of U.S. apparel imports in the past decade.

These patterns of U.S. sourcing highlight three distinct models of competition in the North American apparel industry. First there is an East Asian model in which national exporters in the East Asian NIEs offer full-package apparel to the U.S. buyers which allows them to dominate the higher value mainly women's fashion-apparel market. Second there is an emerging Mexican model in which NAFTA's rules of origin create an incentive for more integrated apparel production in Mexico although diverse U.S. firms are vying for the lead role in co-ordinating this full-package option. Third there is a Caribbean Basin model in which the traditional 807/9802 form of production sharing prevails based on a mixture of low wages an export-processing zone format preferential access and quotas which offer none of the benefits of the NAFTA rules of origin. While Mexico has graduated beyond simple assembly it has not yet achieve the full-package status of East Asian export firms. The remainder of this report will examine the dynamics and regional development implications of these three models in greater detail.

2. North America's regional division of labour in apparel

If one envisions the complete apparel commodity chain as encompassing raw materials, yarn and synthetic fibers, textiles, apparel, and the distribution of apparel to retailers (Appelbaum and Gereffi, 1994), then the Mexican and U.S. commodity chains are quite distinct. Mexico has several large, reasonably successful synthetic fiber companies, a multitude of export-oriented assembly firms that send apparel products to the United States using U.S. inputs, and an emergent retail sector that is fashioning a number of strategic alliances with their U.S. counterparts. The weakest link in the Mexican production chain, by far, is the textile segment. The vast majority of Mexico's textile companies are undercapitalized, technologically backward and inefficient, and they produce goods of poor quality. By contrast, the United States is very strong in synthetic fibers, textiles and retailing, but limited in its garment production capability, especially for women's and children's apparel. The Mexican apparel chain thus appears to be strongest where the U.S. chain is relatively weak: garment production.

This picture becomes more complex if we expand the borders of North America to include Central America and the Caribbean². The most common form of export activity in Latin America is the labour-intensive assembly of manufactured goods from imported components in export-processing zones (EPZs). These zones are disproportionately concentrated in Mexico (where they are known as the maquiladora industry) and the Caribbean Basin (where they are also called Free Trade Zones) because of this area's low wages and proximity to the U.S. market, where over 90% of their exports are sold. Virtually all of the EPZ production in the region is of a very low value-added nature, which is a direct result of U.S. policy. Under U.S. tariff schedule provision HTS 9802 00 80 (formerly clause 807), enterprises operating in EPZs have an incentive to minimize locally purchased inputs because only U.S. -made components are exempt from import duties when the finished product is shipped back to the United States. This constitutes a major impediment to

² Canada is a niche player in the North American apparel sector. Canada's considerable textile strengths are oriented to the home furnishings market (upholstery, rugs, and curtains). Within apparel, Canada's main export niche to the United States is wool suits.

increasing the integration between the activities in the zones and the local economy, and it limits the usefulness of EPZs as stepping stones to higher stages of industrialization.

While the onset of NAFTA removes the legislative rationale for the maquiladora industry in Mexico, broader structural changes during the past 10-15 years have rendered obsolete many of the popular stereotypes concerning the maquiladora sector. A recent study of Mexico's export manufacturing industry (MacLachlan and Aguilar 1998) challenges at least five of these outmoded generalizations:

- **Myth #1:** Maquiladoras are found almost exclusively along Mexico's northern border. *Fact:* Once true, this is no longer the case. Since the mid-1980s, the interior maquiladoras have been growing rapidly, and in 1996 they accounted for one-third of national maquiladora employment.
- **Myth #2:** The maquiladora labour force is dominated by young women. *Fact:* The proportion of female workers in maquiladoras has plunged and the gender structure of maquiladora employment is approaching parity.
- **Myth #3:** Labour compensation in maquiladoras is extremely low and exploitative. *Fact:* While maquiladora wages are abysmal in relation to U.S. standards, they compare quite favourably to industrial wages in Mexico. Furthermore there appears to be little difference between working conditions in maquiladoras and domestic manufacturing plants in Mexico.
- **Myth #4:** Maquiladoras are primarily foreign-owned plants. *Fact:* The origin of capital invested in maquiladoras is almost evenly divided between the United States and Mexico.
- **Myth #5:** Maquiladoras are export enclaves, totally dependent on imported components. *Fact:* While maquiladoras still import an average of 98% of their material inputs, interior maquiladoras show a greater propensity to use domestic inputs than those along the border and there has been a sharp growth of inter-maquila trade in certain sectors (such as electronics and autos). These trends, along with the loosening of trade restrictions implied by NAFTA, suggest a greater integration of maquiladoras into the Mexican economy.

Given these transformations in the maquiladora sector, we need to look more closely at how the export-oriented apparel plants in Mexico and the Caribbean Basin are shaping the competitive performance of these economies vis-à-vis the U.S. market. Of particular significance for the region are two questions:

- Has Mexico developed the capability to challenge East Asia as a full-package supplier for the U.S. market?
- Is Mexico using the advantages afforded by NAFTA to displace the Central American and Caribbean economies from their niche as low-cost assemblers in the U.S. production-sharing system?

3. The United States Mexico and the Caribbean Basin: Who benefits from regional integration?

Mexico's maquiladora industry, which was established in 1965, is made up of assembly plants (known as "maquilas") that mainly use U.S. components to make goods for export to the U.S. market. In 1993 Mexico's maquiladora industry generated \$22 billion in exports and employed 540 000 Mexicans; by 1996, it had grown by 50% to 811 000 jobs, while exports rose by 54% to \$34 billion. Until the past decade, Mexico's maquiladora plants typified low value-added assembly, with virtually no backward linkages (local materials typically accounted for only 2-4% of total inputs). In the 1980s, a new wave of maquiladora plants began to push beyond this enclave model to a more advanced type of production, making components for complex products like

automobiles and computers (Gereffi, 1996c; Carrillo, 1998). Despite the predominance of more technologically sophisticated and higher value-added assembly operations in the new maquiladoras, the passage of NAFTA is likely to further increase the attractiveness of old-style apparel and textile assembly operations in Mexico over those in the Caribbean Basin, whose countries don't enjoy the tariff benefits NAFTA accords to Mexico.

The maquiladora sector has benefited most dramatically from Mexico's opening to trade in 1988. Between 1994 and 1998, total U.S. imports of apparel assembled from U.S. parts (under the 807/9802 production-sharing program) rose from \$5.7 billion to \$12.8 billion. Mexico has been the star performer in the 1990s. Its apparel exports to the United States from Mexican maquiladora plants more than tripled from just under \$1.5 billion in 1994 to \$5.1 billion in 1998. Assembly trade predominates in the North American garment sector, accounting in 1998 for 79% of U.S. apparel imports from Mexico and 84% of those from the Caribbean and Central America.

From a regional perspective, Mexico competes for the U.S. market most directly with the Caribbean Basin Initiative (CBI) countries. Caribbean Basin venues are now the favoured locales for export-oriented assembly in Latin America. By the early 1990s, EPZs had become a leading source of exports and manufacturing employment in various Caribbean nations. The Dominican Republic is a prime example. There are 430 companies employing 164 000 workers in the country's 30 free-trade zones; three-quarters of the firms are involved in textiles and apparel (Burns 1995: 39). In terms of employment, the Dominican Republic is the fourth largest EPZ economy in the world (the fifth if China's Special Economic Zones are included). The Dominican Republic has an especially large dependence on EPZs, whose share of official manufacturing employment on the island increased from 23% in 1981 to 56% in 1989. By this latter year, EPZs also generated over 20% of the Dominican Republic's total foreign exchange earnings (Kaplinsky 1993). U.S. investors account for more than half (54%) of the companies operating in the zones, followed by firms from the Dominican Republic itself (22%), South Korea (11%), and Taiwan (3%) (UNCTAD, 1994: 90).

The diversity of the apparel export industry in Mexico and the CBI economies in 1998 is apparent in Table 3. Mexico has the largest apparel sector, by far, with nearly 12 000 plants and 460 000 garment workers. However, these statistics encompass both the domestic as well as the export-oriented apparel firms. Many of the companies that supply Mexico's domestic market are undercapitalized, traditional family-owned workshops or microenterprises; 95% of Mexico's garment plants are considered small, which brings the national average for the sector down to 39 employees per plant. The apparel sector in the Central American and Caribbean countries, by contrast, is dominated by much larger, export-oriented firms that supply the U.S. market under the 807/9802 production-sharing program. The Dominican Republic has 180 000 apparel employees, followed by Honduras (90 000 garment workers), Guatemala (70 000 workers), and El Salvador (42 000 workers). Apparel is the main manufacturing industry in each of these economies. Especially striking is the large average size of the apparel plants in these four CBI economies, which ranges from 250 to over 500 employees. This suggests that CBI apparel exports are channelled through giant assembly plants that are capable of filling the big orders that come from U.S. apparel manufacturers, rather than through traditional family firms or more flexible forms of networked production.

Mexico has relied heavily on a handful of apparel exports to gain a strong foothold in the U.S. market during the 1990s. Table 4 shows that nearly two-thirds (64%) of Mexico's total apparel exports of \$7.5 billion to the U.S. market in 1998 are accounted for by just six products: cotton trousers (31% of the total), cotton knit shirts (13%), man-made fiber (MMF) knit shirts (8%), MMF trousers (6%), cotton underwear (3%), and MMF brassieres (3%). The relative importance of these top six products has increased substantially since 1990, when they represented less than one-half (48%) of Mexico's apparel export total of \$680 million. Thus, while Mexico's

total apparel exports increased elevenfold from 1990 to 1998, the top six products augmented their value by a factor of 15 in this same period.

Table 2

U.S. APPAREL IMPORTS: TOTAL AND 807 (9802), BY MEXICO AND CARIBBEAN BASIN INITIATIVE (CBI) COUNTRIES, 1994-1998

Year	Total Apparel Imports (US\$ millions)	807/9802 Trade (US\$ millions)	807/9802 Trade as a Share of Total Imports (percent)
World			
1994	31 387	5 707	18
1995	34 649	7 631	22
1996	36 389	8 719	24
1997	42 827	11 322	26
1998	48 175	12 791	27
Mexico			
1994	1 594	1 470	92
1995	2 566	2 282	89
1996	3 560	2 967	83
1997	5 050	4 096	81
1998	6 494	5 102	79
CBI Countries			
1994	4 489	3 617	81
1995	5 433	4 497	83
1996	6 009	4 999	83
1997	7 585	6 411	85
1998	8 270	6 929	84

Source: from official statistics of the U.S. Department of Commerce, International Trade Administration, office of textiles and Apparel: U.S. Imports for consumption, customs value.

A closer look at the patterns of competition among the leading suppliers of these top six apparel exports in Table 5 reveals that Mexico has become the number one U.S. supplier for five of these six products in 1998, and it occupies the number two slot behind Honduras for the sixth item (cotton underwear). However, a surprisingly heterogeneous mix of CBI and Asian suppliers holds the second and third positions for each of these products. For cotton trousers and cotton knit shirts, the Dominican Republic and Honduras, respectively, are the number two exporters, while Hong Kong is the number three suppliers for both items. For MMF trousers and MMF knit shirts, however, the second and third suppliers behind Mexico are East Asian nations, while the main U.S. suppliers of intimate apparel (cotton underwear and MMF bras) are all located in the Caribbean Basin.

There are several explanations for the cross-regional patterns of competition identified in Table 5. First, U.S. quotas still available to the East Asian nations probably account for their continuing prominence in several of these product areas. Second, despite higher wages than Mexico and the CBI countries, the East Asian NIEs may be making higher quality, more expensive items and thus they are able to compete effectively against lower cost suppliers. Third, for each of the apparel items listed in Table 5, the East Asian NIEs predominate in the women's categories, while the CBI countries concentrate on men's apparel. Mexico and China tend to be more balanced

across men and women's MFA categories for each item in their export profiles. This pattern for men's and women's products fits the widely held generalization that men's apparel is relatively standardized, and thus can be made more easily under production-sharing arrangements such as those found in the EPZs of the CBI economies; conversely, women's apparel is more fashion-oriented, and thus tends to be sourced from countries that can offer OEM or full-package production arrangements.

Table 3
APPAREL PLANTS IN MEXICO AND THE CARIBBEAN BASIN, 1998

Country	Population (millions)	No. of apparel plants	Plant breakdown (small, medium, large)	Average employees/plant
Mexico	94	11 760	(S) 95 (M) 3 (L) 2	39
Guatemala	10 6	236	(S) 31 (M) 37 (L) 32	299
Dominican Republic	7 9	350	(S) 35 (M) 45 (L) 20	514
Honduras	5 8	270	(S) 50 (M) 20 (L) 30	500
El Salvador	5 5	700	(S) 56 (M) 29 (L) 15	250
Nicaragua	4 3	300	(S) 85 (M) 10 (L) 5	(S) 5 (M) 40 (L) 500
Costa Rica	3 5	594	(S) 75 (M) 11 (L) 14	n/a
Panama	2 7	117	(S) 15 (M) 35 (L) 50	68

Source: Apparel Industry Magazine, October 1998, p SS-46
n/a = not available

Table 4
MEXICO'S TOP APPAREL EXPORTS TO THE U.S. MARKET, 1990-1998

Product	1990 value	% of total imports	1993 Value	% of total imports	1996 value	% of total imports	1997 Value	% of total imports	1998 value	% of total imports
(MFA categories)										
1 Cotton trousers	194	29	458	33	1 259	30	1 710	29	2 285	31
men's (347)	111	16	297	22	758	18	942	16	1 222	16
women's (348)	83	12	162	12	501	12	768	13	1 063	14
2 Cotton knit shirts	16	2	81	6	456	11	672	11	952	13
men's (338)	3	0	53	4	261	6	423	7	601	8
women's (339)	13	2	27	2	195	5	249	4	350	5
3 MMF knit shirts	9	1	65	5	384	9	563	9	598	8
men's (638)	1	0	4	0	190	4	257	4	263	4
women's (639)	7	1	61	4	194	5	306	5	334	4
4 MMF trousers	55	8	64	5	257	6	399	7	466	6
men's (647)	42	6	36	3	113	3	177	3	215	3
women's (648)	13	2	27	2	144	3	222	4	250	3
5 Cotton dresswear (352)	6	1	38	3	120	3	176	3	248	3
6 MMF brassieres (649)	49	7	97	7	167	4	201	3	239	3
Top 6 products	329	48	803	59	2 644	59	3 721	63	4 787	64
Total MFA Imports from Mexico	678	100	1 372	100	4 229	100	5 928	100	7 453	100

Source: USITC, Annual Statistical Report on U.S. Import of Textiles and Apparel, various years

MMF: man-made fiber

MFA: Multifiber Arrangement

This hypothesis of export specialization is explored more fully in Tables 6a-6e, which identify the 10 leading suppliers of men's and women's MFA categories for each of Mexico's top six apparel exports to the U.S. market. Once the top 10 suppliers are included, the cross-regional contrast is attenuated. Every product has some mix of Asian and North American exporters. With the exception of Mexico, East Asian suppliers tend to occupy most of the top five spots for MMF trousers and knit shirts, although Honduras and the Dominican Republic are also present on the men's side of the ledger. Intimate apparel remains a North American speciality. Over 60 % of U.S. imports of MMF brassieres comes from Mexico and three CBI suppliers (the Dominican Republic, Honduras, and Costa Rica), and more than 50% of cotton underwear comes from Honduras, Mexico, the Dominican Republic, and El Salvador. Mexico and these CBI economies, which supply the majority of all U.S. underwear imports are viewed by U S corporate giants like Fruit of the Loom and Sara Lee Corporation (the world's leading hosiery supplier, with brands like Hanes and L'Eggs) as part of "a trans-American alliance to take on Asian underwear manufacturers in world markets" (Coleman, 1995). This new logic of regional integration is premised on stricter national rules-of-origin clauses in NAFTA and the Caribbean Basin.

While EPZs in Mexico and the Caribbean have been associated with undeniable gains in employment and foreign exchange earnings, these benefits are offset by a picture of immiserizing employment growth that reflects falling real wages and a decline in local purchasing power. In Mexico, the real minimum wage in 1989 was less than one-half (47%) of its 1980 level, and in El Salvador, workers in 1989 earned just 36% of what they did at the beginning of the decade (IADB, 1990: 28). These trends exacerbate the polarization between the rich and the poor in Latin America, where close to 50% of the population lives in poverty, with 25% considered destitute.³

The rivalry among neighbouring EPZs to offer transnationals the lowest wages fosters a perverse strategy of "competitive devaluation," whereby currency depreciations are viewed as a means to increase international competitiveness (Kaplinsky, 1993). Export growth in the Dominican Republic's EPZs skyrocketed after a very sharp depreciation of its currency against the dollar in 1985; similarly, Mexico's export expansion was facilitated by recurrent devaluations of the Mexican peso, most notably in 1994-1995.⁴ Devaluations heighten already substantial wage differences in the region. Hourly compensation rates for apparel workers in the early 1990s were \$1.08 in Mexico, \$0.88 in Costa Rica, \$0.64 in the Dominican Republic, and \$0.48 in Honduras, compared to \$8.13 in the United States (ILO, 1995: 35-36). Although it may make sense for a single country to devalue its currency in order to attract users of unskilled labour to their production sites, the advantages of this strategy evaporate quickly when other nations simultaneously engage in wage-depressing devaluations, which lower local standards of living while doing nothing to improve productivity.

³ Address by Mr. Enrique V. Iglesias, President of the Inter-American Development Bank at the World Summit for Social Development, Copenhagen, Denmark, March 10, 1995.

⁴ Of course, export growth is not the only, nor even the major, reason for Mexico's peso devaluation. Nonetheless, it can have the effect of stimulating "competitive devaluations" in CBI countries.

Table 5
MEXICO'S MAIN COMPETITORS IN THE U.S. APPAREL MARKET, 1996-1998

(Value in US\$ Million)

Product (MFA categories)	# 1 Supplier	1996 Value	% men's & women's	# 2 Supplier	1996 Value	% men's & women's	#3 Supplier	1996 Value	% men's & women's
1. Cotton trousers	Mexico	1 259	100	Hong Kong	636	100	Dominican Rep.	468	100
men's (347)		758	60		238	37		338	72
women's (348)		501	40		398	63		130	28
2. Cotton knit shirts	Mexico	456	100	Pakistan	346	100	Honduras	342	100
men's (338)		261	57		298	86		198	58
women's (339)		195	43		47	14		144	42
3. MMF knit shirts	Mexico	384	100	Taiwan	339	100	Hong Kong	274	100
men's (638)		190	49		50	15		31	11
women's (639)		194	51		289	85		242	89
4. MMF trousers	Taiwan	260	100	Mexico	257	100	China	194	100
men's (647)		66	25		113	44		110	57
women's (648)		195	75		144	56		84	43
5. Cotton underwear (352)	Honduras	213		Jamaica	174		Dominican Rep.	168	
6. MMF brassieres (649)	Mexico	167		Dominican Rep.	135		Honduras	73	

Table 5
MEXICO'S MAIN COMPETITORS IN THE U.S. APPAREL MARKET, 1996-1998
(Value in US\$ Million)

Product (MFA categories)	#1 Supplier	1996 Value	% men's & women's	#2 Supplier	1996 Value	% men's & women's	# 3 Supplier	1996 Value	%men's & women's
1. Cotton trousers	Mexico	1 710	100	Hong Kong	684	100	Dominican Rep.	643	100
men's (347)		942	55		257	38		468	73
women's (348)		768	45		427	62		175	27
2. Cotton knit shirts	Mexico	672	100	Honduras	471	100	Hong Kong	424	100
men's (338)		423	63		298	63		146	34
women's (339)		249	37		173	37		278	66
3. MMF knit shirts	Mexico	563	100	Taiwan	334	100	Hong Kong	319	100
men's (638)		257	46		70	21		34	11
women's (639)		306	54		264	79		284	89
4. MMF trousers	Mexico	399	100	Taiwan	310	100	China	247	100
men's (647)		177	44		91	29		137	55
women's (648)		222	56		219	71		110	45
5. Cotton underwear (352)	Honduras	297		Dominican Rep.	220		Jamaica	189	
6. MMF brassieres (649)	Mexico	201		Dominican Rep.	151		Honduras	92	

(Table 5 cont'd)

Product (MFA categories)	#1 Supplier	1998 Value	% men's & women's	#2 Supplier	1998 Value	% men's & women's	#3 Supplier	1998 Value	%men's & women's
1. Cotton trousers	Mexico	2 285	100	Dominican Rep.	708	100	Hong Kong	90	100
men's (347)		1 222	53		467	66		280	41
women's (348)		1 063	47		242	34		411	59
2. Cotton knit shirts	Mexico	952	100	Honduras	611	100	Hong Kong	430	100
men's (338)		601	63		441	72		130	30
women's (339)		350	37		170	28		300	70
3. MMF knit shirts	Mexico	598	100	Hong Kong	403	100	South Korea	323	100
men's (638)		263	44		36	9		107	33
women's (639)		334	56		367	91		216	67
4. MMF trousers	Mexico	466	100	Taiwan	299	100	China	226	100
men's (647)		215	46		97	32		125	55
women's (648)		250	54		202	68		101	45
5. Cotton underwear(352)	Honduras	322		Mexico	248		El Salvador	234	
6. MMF brassieres (649)	Mexico	239		Dominican Rep.	167		Honduras	112	

Source: Compiled from official statistics of the U.S. Department of Commerce, Office of Textiles and Apparel.

Table 6a
**LEADING EXPORTS TO THE U.S. APPAREL MARKET:
 COTTON TROUSERS (MFA CATEGORIES 347 & 348)**
 (Value in US\$ Million)

Men's Cotton trousers (347)				Women's Cotton Trousers (348)			
#	Country	1998 value	% of Imports	#	Country	1998 value	% of Imports
1	Mexico	1 222	30	1	Mexico	1 063	29
2	Dominican Republic	467	12	2	Hong Kong	411	11
3	Hong Kong	280	7	3	Dominican Republic	242	7
4	Costa Rica	161	4	4	Canada	125	3
5	China	153		5	Turkey	120	3
	Subtotal (top 5)	2 283	5		Subtotal (top 5)	1 961	54
6	Honduras	146	4	6	Honduras	119	3
7	Bangladesh	129	3	7	Guatemala	112	3
8	Guatemala	124	3	8	China	111	3
9	Indonesia	122	3	9	Taiwan	106	3
10	Philippines	106	3	10	Philippines	96	3
	Subtotal (top 10)	2 910	72		Subtotal (top 10)	2 505	69
	TOTAL	4 042	100		TOTAL	3 616	100

Source: Compiled from official statistics of the U.S. Department of Commerce, Office of Textiles and Apparel.

Table 6b
**LEADING EXPORTERS TO THE U.S. APPAREL MARKET:
 COTTON KNIT SHIRTS (MFA CATEGORIES 338 & 339)**
 (Value in US\$ Millions)

Men's Cotton Trousers (347)				Women's Cotton Trousers (348)			
#	Country	1998 value	% of imports	#	Country	1998 value	% of imports
1	Mexico	601	14	1	Mexico	350	12
2	Honduras	441	11	2	Hong Kong	300	10
3	Pakistan	335	8	3	Honduras	170	6
4	India	240	6	4	Turkey	168	6
5	El Salvador	192	5	5	Macau	165	6
	Subtotal (top 5)	1 810	44		Subtotal (top 5)	1 153	40
6	Thailand	157	4	6	Canada	110	4
7	Guatemala	148	4	7	Guatemala	107	4
8	Philippines	146	4	8	South Korea	97	3
9	Turkey	141	3	9	Israel	90	3
10	Hong Kong	130	3	10	Dominican Republic	89	3
	Subtotal (top 10)	2 531	61		Subtotal (top 10)	1 645	57
	TOTAL	4 153	100		TOTAL	2 876	100

Table 6c

**LEADING EXPORTERS TO THE U.S. APPAREL MARKET:
MMF KNT SHIRTS (MFA CATEGORIES 638 & 639)**
(Value in US\$ Millions)

Men's MMF Knit Shirts (638)				Women's MMF Knit Shirts (639)			
#	Country	1998 value	% of Imports	#	Country	1998 value	% of Imports
1	Mexico	263	23	1	Hong Kong	367	19
2	South Korea	107	9	2	Mexico	334	18
3	Honduras	106	9	3	Taiwan	246	13
4	Taiwan	70	6	4	South Korea	216	11
5	China	66	6	5	China	159	8
	Subtotal (top 5)	612	53		Subtotal (top 5)	1 322	70
6	El Salvador	58	5	6	Macau	102	5
7	Philippines	57	5	7	Singapore	60	3
8	Indonesia	50	4	8	Canada	53	3
9	Dominican Republic	46	4	9	Thailand	53	3
10	Bangladesh	45	4	10	Philippines	43	2
	Subtotal (top 10)	869	75		Subtotal (top 10)	1 633	86
	TOTAL	1 156	100		Total	1 02	100

Table 6d

**LEADING EXPORTERS TO THE U.S. APPAREL MARKET:
MMF TROUSERS (MFA CATEGORIES 647 & 648)**
(Value in US\$ Millions)

Men's MMF Trousers (647)				Women's MMF Trousers (648)			
#	Country	1998 value	% of Imports	#	Country	1998 value	% of Imports
1	Mexico	215	18	1	Mexico	250	19
2	Dominican Republic	164	14	2	Taiwan	202	15
3	China	125	10	3	China	101	8
4	Indonesia	111	9	4	Indonesia	97	7
5	Taiwan	97	8	5	South Korea	79	6
	Subtotal (top 5)	713	59		Subtotal (top 5)	729	55
6	Bangladesh	63	5	6	Hong Kong	76	6
7	Malaysia	46	4	7	Canada	74	6
8	Thailand	41	3	8	Dominican Republic	54	4
9	Honduras	40	3	9	Guatemala	41	3
10	Sri Lanka	39	3	10	Philippines	35	3
	Subtotal (top 10)	942	78		Subtotal (top 10)	1 009	76
	TOTAL	1 213	100		Total	1 328	100

Table 6e
**LEADING EXPORTERS TO THE U.S. APPAREL MARKET:
 UNDERGARMENTS (MFA CATEGORIES 352 AND 649)**
 (Value in US\$ Underwear (352))

Cotton Underwear (352)				MMF Brassieres (649)			
#	Country	1998 value	% of imports	#	Country	1998 value	% of Imports
1	Honduras	322	16	1	Mexico	239	26
2	Mexico	248	12	2	Dominican Republic	167	18
3	El Salvador	234	12		Honduras	112	12
4	Dominican Republic	232		4	Costa Rica	59	6
5	Jamaica	155	8	5	Sri Lanka	42	5
	Subtotal (top 5)	1190	59		Subtotal (top 5)	619	67
6	Costa Rica	120	6	6	Indonesia	38	4
7	Hong Kong	110	5	7	China	36	4
8	Bangladesh	85	4	8	Philippines	36	4
9	Israel	77	4	9	Thailand	30	3
10	Thailand	69	3	10	El Salvador	27	3
	Subtotal (top 10)	1 651	81		Subtotal (top 10)	786	85
	TOTAL	2 027	100		TOTAL	924	100

Labour is beginning to develop revitalized strategies for dealing with U.S. apparel manufacturers in the Caribbean. Take the case of The Gap, a prominent U.S. apparel firm that acquires a substantial portion of its clothing from Central America. Mandarin, a contractor in El Salvador that makes clothes for Gap, fired 350 workers en masse when a union was formed to protest abysmal working conditions, such as 14-hour workdays, sub-poverty wages, and sexual abuse. The Gap, like a number of other U.S. apparel firms, has established much-touted Corporate Codes of Conduct that require contract shops with whom it does business to abide by their countries' labour laws. When abuses are exposed, the typical response by a U.S. company is to rescind its contract with the offending factory, thereby throwing garment workers out of their jobs. In a meeting with Gap management, ousted employees from Mandarin in El Salvador demanded the reinstatement of the 350 workers who were fired for union organizing, an end to mandatory overtime so the younger girls could go to school, and pay for overtime work (*Sweatshop Watch*, 1995: 2). The Gap eventually complied with these demands. This kind of confrontation, which is being repeated elsewhere in the Americas and Asia, is forcing U.S. apparel firms to expand their notion of corporate responsibility and use their leverage as major buyers to play a more active role in improving working conditions in the third world.

In 1998, the total apparel exports (maquila and non-maquila trade combined) from CBI countries were nearly 25% higher than Mexico's total (\$8.3 billion versus \$6.8 billion, respectively). The leading CBI apparel exporter was the Dominican Republic (\$2.4 billion), which actually had a higher level of garment exports than Mexico in the early 1990s before Mexico pulled ahead in 1994. The other leading CBI garment exporters in 1998 were: Honduras (\$1.9 billion), El Salvador (\$1.2 billion), Guatemala (\$1.15 billion), Costa Rica (\$830 million), and Jamaica (\$420 million) However, the gap between Mexico and the CBI countries as sources of apparel supply to the U.S. market has been closing. Mexico's apparel exports from 1994 to 1998 have grown by

72%, compared to only 46% for the CBI countries (see Table 1). The lack of NAFTA parity for the Caribbean Basin has severely truncated the growth of export-oriented apparel assembly in these smaller economies. In 1995 and 1996, more than 150 apparel plants closed in the Caribbean and 123 000 jobs have been lost “as a direct result of trade and investment diversion to Mexico,” according to the Caribbean and Apparel Institute in Kingston, Jamaica (Rohter, 1997).

Momentum is currently building within the U.S. Congress for some kind of a CBI trade enhancement bill. Proposed “NAFTA parity” legislation for the CBI economies was defeated in 1997, but lingering concerns over the aftermath of two hurricanes (Mitch and Georges) that devastated huge parts of Central America and Caribbean in the fall of 1998 led Congress to debate legislation during March 1999 to provide short-term funding for hurricane relief projects. Amidst reports that Central American immigration through Mexico increased by more than 30% in the first few months of 1999 alone, attention is now turning to longer-term reconstruction tools that will generate and sustain employment for the Central Americans who can no longer work in the industries that were wiped out by the storms (AAMA, 1999b). If President Clinton makes good on his promise to support passage of new CBI trade legislation in 1999, the apparel industry will undoubtedly be one of the major beneficiaries as the treatment of CBI countries is likely to move closer to that enjoyed by Mexico under NAFTA.

V. Corporate restructuring among U.S. apparel and textile firms: a struggle for power profits and jobs

Given the power shifts that are occurring among North American textile, apparel and retail firms, a key question is: Who will be the main "organizing agents" in modernizing Mexico's apparel commodity chain? The notion of organizing agents is used here to refer to those firms, foreign and domestic, that could enhance the competitiveness of the apparel sector in Mexico through backward or forward linkages with major producers and retailers.

Large firms in different segments of the apparel chain, mainly from the United States, all are vying to become co-ordinating agents in new North American networks that would strengthen Mexico's capabilities to carry out full-package supply (Gereffi, 1997; Gereffi and Bair, 1998):

- Synthetic fiber companies in the United States and Mexico have been lobbying downmarket with U.S. apparel manufacturers and retailers, trying to get the apparel firms to develop products using their fibers and trying to get retailers to bring these orders to Mexico.
- Textile mills have been forging alliances with apparel suppliers that could allow for more integrated textile and apparel production in different regions of Mexico; in addition, textile firms are exploring the possibility of

creating their own product development teams for select apparel categories.

- U.S. branded apparel manufacturers are rationalizing their supply chains in Mexico, looking for smaller numbers of more capable suppliers, or “de-verticalizing” their domestic and offshore production operations by divesting themselves of manufacturing assets in favour of building up the marketing side of their business, with an emphasis on global brands.
- A handful of Mexican integrated apparel manufacturers, who own modern plants that go from spinning and weaving through apparel production and finishing, are beginning to develop strong reputations with U.S. retailers and marketers who are looking to place full-package orders in Mexico.
- U.S. and Latin American retailers are beginning to set up sourcing networks in Mexico, aided by government-supported vendor certification programs.
- Mexican sourcing agents are emerging to serve as intermediaries for U.S. buyers and Mexican factories, a pattern already widespread in East Asia.

Spurred by intense competition, the major U.S. apparel and textile firms are currently undergoing extensive restructuring. This restructuring involves several related aspects: (1) shifting from domestic manufacturing to foreign sourcing; (2) divesting manufacturing facilities in order to become consumer driven and develop marketing expertise; (3) consolidation by retailers and manufacturers alike; and (4) the blurring of boundaries between firms in adjacent segments of the apparel commodity chain. A major consequence of these corporate restructuring initiatives is that they tend to increase the salience of the Mexican and Caribbean Basin operations of U.S. firms, and simultaneously decrease employment in the United States.

Table 7 summarizes a number of these changes for leading companies in the U.S. apparel industry. The table includes five of the top U.S. apparel manufacturers, and two of the biggest U.S. textile firms, all of whom currently have extensive linkages to Mexico and the Caribbean Basin region. All of these companies except Warnaco (which has grown through acquisitions) have experienced substantial decreases in employment since the passage of NAFTA in 1994; and in most cases, sales have increased while employment has fallen during the 1994-1998 period.

These same trends characterize the U.S. apparel sector as a whole. During 1993-1997, restructuring by U.S. apparel companies caused an estimated loss of 176 000 jobs in the domestic industry (Jones, 1998: 37). In 1998, the U.S. apparel industry shed an additional 74 000 jobs and the textile labour force dropped by 30 000. Apparel employment at year's end in 1998 stood at 32 000 workers and U.S. textile employment was also at an all-time low of 581 000⁵ (AAMA, 1999a, Table 2). However, these job declines in the United States have been accompanied by two related and less well recognized phenomena: improved productivity and higher U.S. wages. Since 1995, the productivity of the average U.S. apparel worker has increased by about 11% because of advances in technology, production practices, and inventory management, and average weekly wages have increased by about 12% during the same period (AAMA, 1999a). The hourly earnings of the average U.S. apparel worker increased from \$7.34 in 1994 to \$8.70 in February 1999, while the hourly wages of U.S. textile workers rose from \$9.13 to \$10.61 in the same period. Thus, contrary to popular opinion, the competitiveness and wage levels in the U.S. textile and apparel industries have actually improved since NAFTA went into effect.

In order to get a closer look at how corporate strategies have evolved for several of the major apparel and textile firms in the North American apparel commodity chain, brief company profiles

⁵ By February 1999, U.S. apparel employment had continued its free fall to 709,000 jobs and U.S. textile employment was 570,000.

are provided below for Levi Strauss & Co., VF Corporation, Sara Lee Corporation, and Burlington Industries. (Source materials are the same as those used in Table 7).

1. Levi Strauss & Co

Levi Strauss & Co. is one of the world's largest producers of brandname clothing and the second-largest maker of jeans behind VF Corporation. Levi Strauss manufactures and markets jeans, dress pants, and casual sportswear under the Levi's, Dockers, and Slates labels. Based in San Francisco, Levi's posted 1998 sales of \$6.0 billion, down from a peak of \$7.1 billion in 1996. Its U.S. market share for jeans has plummeted from a high of 31% in the early 1990s to 14% in 1998. This drop is attributable to two factors: Levi's failure to pick up on consumer trends and the high prices of Levi's jeans. These high prices have resulted from Levi's long insistence on keeping production in the United States, while its competitors were moving offshore to take advantage of lower labour costs. Recognizing that U.S. production is no longer sustainable, Levi's announced in February 1999 that it would be closing 11 US plants and laying off 5 900 workers (Emert, 1999). This culminates a series of layoffs throughout the 1980s and 1990s, and leaves only 11 plants remaining in the United States. Earlier layoffs reflected weak sales, but this most recent announcement shows an acknowledgement that large-scale apparel production in the U.S. is no longer feasible.

CEO Robert Haas says that most production will be moved to contract operations in Mexico and the Caribbean: "We can't swim against the tide.... We have invested tens of millions of dollars to try [to] find a way to make our owned-and-operated factories enough of an asset [to offset wage differences]....[February's] announcement is just facing the realities" (Emert, 1999). Levi's is now focusing on regaining market share and encouraging its brandname appeal through a new strategy of consumer-focused brand management. It is devoting resources to innovative marketing and product design aimed at the youth market, and it has opened an online store on its web page to promote Levi's as hip and up-to-date (Hill, 1999c).

2. VF Corporation

VF Corporation, based in Greensboro, NC, is a conglomerate representing \$5 billion in sales. The top selling jeans maker in the United States, VF holds 27% of the market with brands such as Lee and Wrangler. VF's group of brandnames also includes Vanity Fair and Vassarrette (intimate apparel), Jan Sport (the top brand in backpacks), Jantzen (swimwear), and Healthtex (children's apparel). For VF, the 1980s and 1990s have been a process of strategic acquisition. These acquisitions serve VF's goal of growth in four areas: jeanswear, intimate apparel, workwear, and daypacks.

Imports VF acquisitions:

<i>Year</i>	<i>Company</i>
1969	Lee Jeanswear
1986	Blue Bell Holding Co producers of: Wrangler Girbaud Jantzen JanSport Red Kap
1990	Vassarette
1991	Healthtex Barbazon (intimate apparel) WorkWear
1994	Nutmeg Industries H H Cutler (both sports apparel)
1998	Bestform Group Penn State Textile Manufacturing licensing agreements with Nike and Tommy Hilfiger

VF’s production strategy has been to maintain a balance between U.S. production and contracting in the Far East, Mexico, and the Caribbean. In 1990, VF bought Rey-Mex, an assembly facility in Reynosa. One of the oldest maquilas at 20 years old, it has remained strictly an assembly factory. However, it has changed from the traditional image of the maquiladora to a very modern facility. New style shops use employee input, skill centers have been established, and men now represent 29% of Rey-Mex’s employees. VF is aiming to update technology and skills in all of its plants as part of the global strategy of streamlining operations to better handle the rapid speed at which apparel producers must run. In 1995 VF underwent a restructuring that resulted in corporate savings of \$80 million. It closed 14 U.S. plants, moving more of its production to Mexico and the Caribbean, and it laid off 7 800 workers. In 1996, it formed a Global Sourcing Organization to study a variety of global sourcing options.

In 1997, VF launched its new “consumerization” plan. As part of this new intense consumer focus, VF’s 17 decentralized divisions were consolidated into five product-based coalitions, and a \$1 25 billion brand-investment program was announced. According to their 1997 annual report, VF is also “investing \$150 million in systems, coalition activities, and more offshore production.” This consumerization initiative marked a major point in VF’s plan to move into marketing and away from domestic production (Hill, 1999a; 1999b). It has been acquiring companies to boost its brand names, but increasingly these acquisitions either source out production to other countries or own facilities offshore. For example, from 1990 to 1996 Wrangler added three plants in Costa Rica, two in Honduras, and one in Mexico. Whereas offshore production accounted for 30% of VF’s domestic product sales in 1995, this number rose to 57% in 1998, and VF plans to increase it further to 80% in the near future. VF is now augmenting their brandname appeal through licensing agreements with such big names as Tommy Hilfiger and Nike. In this way, they gain already established brands, the production is sourced offshore, and VF expects to reap the profits.

Table 7
RECENT RESTRUCTURING IN THE U.S. APPAREL INDUSTRY (THROUGH MAY 1999)

Firm	Sales in \$ millions	Employees	Market Niche		Main Brands	Foreign Activity	Recent Restructuring Activity
			Product Type	Economic Role			
Levi Strauss San Francisco, CA	1994: 6 074 1998: 6 000 <i>change: -1%</i>	1994: 36 500 1998: 30 000 <i>change: -18%</i>	Jeans and trousers	Branded manufacturer and retailer	Products include jeans, dress pants and casual sportswear under Levi's, Dockers, and Slates brands.	One-third of Levi's global sales is in Europe and the Asia-Pacific region. Most production will be moved to contract operations in Mexico and the Caribbean.	Levi's announced in February 1999 that it would be closing 11 US plants and laying off 5,900 workers or 30% of total workforce, leaving only 11 plants remaining in the US. Focusing on consumer-focused brand management, as well as moving to Internet sales.
VF Corp Greensboro, NC	1994: 4 972 1998: 5 279 <i>change: +6%</i>	1994: 68 000 1998: 62 800 <i>change: -8%</i>	Jeans and intimates	Branded manufacturer	Holds 27% of jeans market under the Wrangler, Lee, Riders, Britannia and Rustler labels; produces intimate apparel under Vanity Fair, Bestform and Vassarette; workwear, and Jansport daypacks.	Formed VF Global Sourcing Organization in 1996. Offshore production accounted for 57% of production in 1998; plans to increase to 80% in the near future. Eight plants in Mexico; six in Costa Rica; one in Honduras.	In 1997 launched "consumerization" plan: 17 decentralized divisions consolidated into five product-based coalitions in order to become more flexible, efficient and competitive. Announced a \$1.25 billion brand-investment program. Acquired Britannia jeans from Levi Strauss in 1997.
Sara Lee Corp Chicago, IL	1994: 6 449 1998: 7 317 <i>change: +13%</i>	N/A	Intimate and athletic apparel	Branded manufacturer and marketer	Products include underwear, intimate apparel, hosiery, and athletic and casual apparel under the Hanes, Playtex, Bali, and L'eggs brands and Champion label.	In 1997, foreign operations accounted for 42% of apparel sales and 47% of profits. Announced plans in February 1999 to spend \$45 million to expand Puerto Rico apparel plants, where it already owns 12 plants and is Puerto Rico's largest employer.	"De-verticalization" plan announced in 1997 resulted in divestiture of nine US textile plants to allow for a greater focus on product development and brand marketing. Goal is to own fewer fixed assets, and use knowledge-based skills to develop and market its goods.

Table 7 Cont'd

Fruit of the Loom Chicago, IL	1994: 2 298 1997: 2 140 change: -7%	1994: 37 400 1997: 28 500 change: -24%	Intimate apparel	Branded manufacturer and marketer	Leading producer of underwear and basic casual family apparel under Fruit of the Loom, BVD, Gitano, Munsingwear, and Wilson brands.	95% of its sewing performed in Mexico and Caribbean Basin countries. Firm's 14 company-owned offshore plants accounted for 50% of offshore sewing in 1998.	Since 1995, has closed 9 US sewing plants, employing more than 7,000 workers, and moved most operations to Mexico and the Caribbean basin in an effort to reduce costs.
Warnaco New York, NY	1994: 789 1997: 1 436 change: +82%	1994: 14 800 1997: 20 000 change: +35%	Intimate apparel	Manufacturer of licensed goods	The leading marketer of bras to US department and specialty stores, with more than 30% of the market. The company boasts a diverse portfolio of its own and licensed women's and menswear brands, including Calvin Klein, Warner's, and Chaps by Ralph Lauren.	Has subsidiaries and manufacturing facilities in North and South America, the Caribbean Basin, and Asia. Operations in Mexico are primarily production-sharing arrangements. Owns 20 Calvin Klein stores in Asia.	Continues to acquire licenses for major brand names to consolidate branded share of intimate wear and sleepwear market. In 1997 acquired Designer Holdings, Ltd., holder of a 40-year extendable license for Calvin Klein jeans and jeans-related sportswear.
Burlington Industries Greensboro, NC	1994: 2 127 1998: 2 010 change: -6%	1994: 23 800 1998: 18 900 change: -21%	Textiles	Textile production and full-package apparel services	Producer of textiles including synthetic fabrics, denim, polyesters and blends and worsted wool blends. In recent years it has added apparel service operations to each of its textile divisions in order to meet booming demand in private-label apparel market.	Mexico is a key growth area. Involved in NuStart, a planned "textile city" south of Mexico City. In 1998 announced plans to invest \$80 million in five garment-making facilities coordinated by its garment service center in Chihuahua, to employ 2,000 workers and expected to add \$225 million to Burlington's annual sales. In 1999 three new plants will open in Morelos. In May 1999, announced new joint venture with Los Angeles-based Tarrant Apparel Group to manufacture casual apparel in Mexico.	Currently undergoing reorganization. US plant production capacity to decrease 25%, and seven plants to be closed. Sportswear division is to become absorbed as a unit within the Global Denim division. Sportswear, recently moved to Mexico, produces men's shirts and slacks with some fabrics coming from Mexican weaving plants, and with sewing contracted to apparel manufacturers around Mexico City. Adopting full-package assembly in various stages in all divisions.
Cone Mills Greensboro, NC	1994: 806 1998: 729 change: -10%	1998: 5 500	Textiles	Textile production	Produces denim for jeansmakers such as Levi Strauss.	Joint venture since 1995 with Compañía Industrial de Parras in Coahuila, Mexico; largest producer of denim in Mexico. Announced in 1998 that it would build a manufacturing plant as part of new textile city in Altamira.	February 1999 restructuring plan announced to deal with losses stemming from Levi's troubles (Cone's largest customer); plans to save \$20-30 million annually through reduction of 20% of workforce. Real estate subsidiary sold to concentrate on core denim production.

Sources: Compiled from Hoover's company profiles; corporate web sites and nannual reports; Jones (1998: 36-37) and other sources.
Last changed: May 7, 1999.

Table 8
LAYOFFS AT LEVI STRAUSS & CO

Date	No of plants closed	No. of workers laid off	Location of plants and/or workers	Type of plant and/or line of work
Nov 1982	9	2 000	Texas New Mexico North Carolina	
June 1984	13	3 200	San Jose Tennessee Arkansas Canada France	
August 1984		400	San Francisco	Corporate Employees
July 1985	2	675	Texas	Distribution Centers
June 1986	3	1 200	Texas Virginia	
April 1988		617	Texas North Carolina	
Sept 1988		835	Tennessee	Jeans Manufacturing
Feb 1989		140	Tennessee	Jacket Manufacturing
May 1989		240	Texas	Finishing Center
1990	1	1 100	Texas	Sewing Factory
Feb 1997		1 000	United States	White Collar Jobs
Nov 1997	11	6 395	Texas Arkansas New Mexico Tennessee	Manufacturing Plants
Sept 1998	2	991	Texas	Finishing Plants
Feb 1999	11	5 900	Texas Tennessee Arkansas Georgia North Carolina Virginia Ontario	Factory Workers

Source: Emert 1999

3. Sara Lee Corporation

Sara Lee Corporation is a global food, apparel, and consumer products conglomerate that has operations in more than 40 countries, markets its branded products in over 140 nations, and employs 139 000 people. Based in Chicago, the Branded Apparel division of Sara Lee had \$7.3 billion in sales in 1998. Sara Lee manufactures women's intimates, men's underwear, hosiery, and athletic apparel under the Hanes, Hanes Her Way, Playtex, Bali, L'eggs, and Champion brands. In 1998 Sara Lee held a 32% share of the U.S. bra market, 36% of the U.S. women's and girl's panties market, and 38% of the men's and boys underwear market.

Throughout the early to mid-1990s, Sara Lee's global strategy lay in acquisitions. In 1992, it announced plans to invest \$700 million in acquisitions of hosiery, underwear, and other apparel concerns. Much of this occurred in Mexico. By December 1992, Sara Lee had purchased the 6 000-employee Rinbros company (annual sales of \$25 million), Mexico's leading maker of men's and boys underwear, as well as Mallorca SA de CV, the second largest hosiery maker in Mexico. These acquisitions led analysts to conclude that Sara Lee's primary emphasis would be on growth outside of the United States. A 1994 restructuring of worldwide operations reinforced this notion.

Sara Lee shifted gears in 1997. During the previous five years, Sara Lee had built brand equity and improved returns. With the continuing goal of improving shareholder's equity, Sara Lee announced its plan to "de-verticalize" operations through the divestiture of fixed assets, moving away from involvement in every step of the manufacturing process and concentrating on sales and marketing. Said John H. Bryan, the company's Chairman and CEO: "The business of Sara Lee Corp. has been and will continue to be the building of branded leadership positions. This program will significantly reduce the capital demands on our company, enhance our competitiveness and let us focus even more sharply on our mission of building brands" (Bobbitt, 1997). As part of this strategy, in 1998 Sara Lee sold 10 of its yarn and textile plants to National Textile, Inc., a company

formed that January by former Sara Lee employees, signing a buying agreement with them. They hope to raise \$3 billion in capital through divestitures by the end of fiscal year 2000 and to buy back common stock with these proceeds in order to increase their stock value. Sara Lee also announced plans to increase outsourcing, which in 1997 accounted for 42% of apparel sales. In February 1999, Sara Lee announced the projected investment of \$45 million in Puerto Rico, where it already owns 12 plants and is Puerto Rico's largest employer.

4. Burlington Industries

Burlington Industries recently celebrated its 75th anniversary as one of the world's largest textile manufacturers with \$2 billion in 1998 sales. It has 29 plants in 6 states in the United States as well as mills in Mexico and India. Production of textiles for apparel accounts for 60% of Burlington Industries' revenue. Burlington serves four major product categories: denim, synthetics, worsted wool, and cotton sportswear. Based in Greensboro, North Carolina, the Burlington story is twofold. First, it is a prime example of the textile industry trend towards movement offshore. Second, Burlington is diversifying into apparel. From being a manufacturer of textiles only, it is integrating forward by venturing into sewing and garment assembly.

Mexico is a key growth area for Burlington, which hopes to use Mexican production to capture middle-tier market share from Asian companies. Though Burlington has been involved in Mexico for over 40 years, these interests had previously been limited to supplying home textiles for the domestic market. As of 1994, Burlington had only three plants in Mexico, two of which were for the production of cotton and synthetic fabrics. Yet layoffs at U.S. plants were an early indicator that the U.S. textile industry was looking south. Burlington claimed as late as 1996 that they would "keep core production based in the United States" (Krouse, 1996). However, this strategy soon began to change rapidly. In 1997, Burlington entered into a joint venture with Guilford Mills, DuPont, and Mexican company Grupo Alfa to build "Textile City," a \$3 million dollar industrial park south of Mexico City, to serve as a base for U.S. clothing producers. The goal of this project, entitled "NuStart," was to promote the vertical integration of fiber, fabric and manufacturing, using the most advanced technology. Plans included a training center for middle managers and workers built with Mexican state and federal support. NuStart is developing much more slowly than expected, and it is not clear if it will ever fulfil the initial ambitions for it. In 1998 Burlington announced it would invest \$80 million over the next three years in five garment-making facilities co-ordinated by its garment service center in Mexico, which would employ 2000 workers and is expected to add \$225 million to Burlington's annual sales. In 1999 three new plants were scheduled to open in Yecapixtla, Morelos to produce denim, wool worsted fabrics, and cotton yarns.

Currently, Burlington is undergoing a comprehensive reorganization of its apparel fabrics business. Their U.S. plants' production capacity will decrease by 25%, with seven plants to be closed, while their Sportswear division has been absorbed as a unit within the Global Denim division. Sportswear has moved to Mexico and makes men's shirts and slacks, with some fabrics coming from Mexican weaving plants, and with sewing contracted to apparel manufacturers around Mexico City. This full-package supply role is being adopted in various stages by Burlington's other divisions as well. In 1994 Burlington began to assist its customers in the production of finished garments through an agreement with International Garment Processors of El Paso, Texas, to build a garment finishing plant in Chihuahua (Gereffi and Bair, 1998: 32). The newer plants in Mexico, unlike their predecessors, are being equipped with state of the art technology, and investments are often funnelled into training programs.

In May 1999, Burlington announced plans to form a joint venture with Los Angeles-based Tarrant Apparel to be called Tabu Apparel Services, which will manufacture casual clothes in

Mexico through both companies' apparel production centers as well as independent contractors (Nieder, 1999). Burlington will be the marketing and product development partner, as well as the supplier for denim fabrics; Tarrant will be the production management partner and the supply source for khaki twill fabrics. Garments will be assembled and finished at various locations in Mexico, utilizing a combination of independent contractors and apparel-making assets contributed by both partners. This joint venture provides further evidence for the claim that the boundaries in the apparel commodity chain are becoming blurred: textile makers are moving into apparel manufacturing, while traditional manufacturers are shifting towards marketing.

VI. Conclusions

The global apparel industry has gone through a series of transformations in production, trade, and corporate strategies during the past three to four decades that fundamentally altered the distribution of basic economic benefits for countries (exports), companies (profits), and workers (jobs). We have used the global commodity chains framework to help explain these changes because it is both dynamic and global, and it seeks to identify the driving forces behind industrial upgrading at multiple levels. Industrial upgrading is conceptualized as shifts in the export roles of apparel suppliers in the world market, and the corporate strategies of the leading firms in the apparel commodity chain are the main drivers of change. Important regulatory events such as the Multi-Fiber Arrangement, NAFTA, and the Caribbean Basin Initiative are viewed as alterations in the political and institutional environment that condition corporate strategies, while new technological developments in communications, transportation, and inventory management are enabling factors that facilitate industrial upgrading without determining it.

Three models of competition stand out in examining the current situation of the North American apparel sector and its prospects for change: the East Asian model, the Mexican model, and the Caribbean Basin model. It would be misleading, however, to think of these as inherently “national” or regional patterns. Rather, the success and limitations of East Asian, Mexican, and Caribbean Basin apparel producers are determined by two factors: their location (not nationality *per se*) and the transnational networks in which they are

enmeshed. Ultimately, success in the contemporary global economy requires understanding how to use organizational networks to penetrate international markets. The three models of competition we have identified indeed use networks and markets quite differently.

The *East Asian model* is based on highly successful textile and apparel exporters from Hong Kong, Taiwan, and South Korea (preceded by Japan, and now followed by China) that have progressed through a sequence of export roles from assembly to OEM to OBM. The East Asian NIEs developed and refined their OEM capabilities in the 1960s and 1970s through establishing close ties with U.S. retailers and marketers, and then “learning by watching” in order to use these foreign partners as role models to build East Asia’s export competence (Gereffi, 1997). The performance trust built up through many successful business transactions with these U.S. buyers enabled suppliers in the East Asian NIEs to internationalize their OEM expertise via “triangle manufacturing” — i.e., the East Asian manufacturers became intermediaries between the U.S. buyers and hundreds of apparel factories in Asia and other developing regions in order to take advantage of lower labour costs and favourable quotas all around the world. The creation of these global sourcing networks helped the East Asian NIEs to sustain their international competitiveness when domestic economic conditions and quota constraints threatened the original, bilateral OEM relationships. Currently, the East Asian NIEs are moving beyond OEM in multiple ways: shifting to higher value “upstream” products in the apparel commodity chain (e.g., exports of textiles and fibers, rather than apparel); moving “downstream” from OEM to OBM in apparel; and switching to new commodity chains where the export success in apparel can be replicated.

The emerging **Mexican model** involves an ongoing transition from assembly to OEM (or full-package) production. The key factor in Mexico’s shift has been NAFTA. The passage of NAFTA in 1994 began to remove the trade restrictions that virtually locked Mexico into an assembly role. The maquiladora system effectively conditioned Mexico’s access to the U.S. market on the use of U.S. inputs. The progressive 10-year phase-in period for NAFTA allows one to see, step by step, how more and more of the apparel supply chain (such as cutting, washing, and textile production) is relocating to Mexico as specific tariff restrictions on each of these stages is eliminated. The East Asian NIEs did not employ the production-sharing provisions established by the 807/9802 U.S. trade regime in apparel because their great distance from the United States made U.S. textile inputs impractical. In addition, U.S. textile mills did not have the production capability or mentality to supply the diverse array of fabrics favoured by the designers of women’s wear and fashion-oriented apparel, which became the speciality of the East Asian exporters. Thus, both of these factors created an OEM niche for East Asian apparel companies that they adroitly exploited.

However, NAFTA does not guarantee Mexico’s success. While the massive peso devaluations of 1994-1995 made Mexico very attractive as a production site for U.S. apparel manufacturers with international subcontracting operations, Mexico has traditionally lacked the infrastructure of related and supporting industries needed to do full-package production of garments. U.S. textile and apparel companies have been expanding their investments in Mexico at a rapid and accelerating pace (see Table 7). Thus Mexico is now better positioned to provide the quantity and quality of inputs needed for OEM production of standardized apparel items like jeans, knit shirts, and trousers, and underwear. But Mexico is still lagging in the fashion-oriented, women’s wear categories (see Tables 4-6). From a commodity chains perspective, the solution to the problem of how to complete the transition to full-package supply, and how to develop new production and marketing niches, is to forge linkages to the kinds of lead firms that can supply the needed resources and tutelage. In other words, Mexico needs to develop new and better networks in order to compete with East Asian suppliers for the U.S. full-package market.

U.S. firms have already shown a strong interest in transferring missing pieces of the North American apparel supply chain to Mexico. A real problem to be confronted, though, is who controls critical nodes of the chain and how to manage the dependency relationships this implies. Thus far, U.S. firms are in clear control of the design and marketing segments of the apparel chain, while Mexican companies are in a good position to maintain and co-ordinate the production networks in apparel. However, textile manufacturers in the United States, and to a lesser degree Mexico, are making strong bids to integrate a broad package of apparel services that would increase their leverage vis-à-vis smaller garment contractors. For the foreseeable future, Mexico is likely to retain a mix of assembly plants linked to U.S. branded manufacturers and a new set of full-package producers linked to private-label retailers and marketers. As more of the critical apparel inputs become available in Mexico U.S. inputs will decline and traditional Mexican assembly plants will be replaced by vertically integrated manufacturers or by clusters of related firms that compete through localized networks, such as the jeans producers in Torreón (Gereffi and Bair, 1998).

The *Caribbean Basin model* is almost exclusively limited to EPZ assembly using the 807/9802 trade regime. Because the CBI economies do not have “NAFTA parity,” they encounter quota restrictions, higher tariffs, and more limited possibilities for vertical integration compared to Mexico. Nonetheless, the CBI economies have enjoyed considerable success within the export assembly role. They continue to expand their position in the U.S. apparel market (see Table 1 and Figure 1), primarily through large assembly plants linked to the production-sharing operations of U.S. apparel transnationals (see Table 3). However, CBI exporters are losing ground to Mexican firms that can export similar goods to the United States more cheaply and quickly than their Central American and Caribbean counterparts. If the CBI economies do get a trade enhancement package in the near future, this would put them on more level footing with Mexico in terms of the regulatory and economic environment. However, our organizational theory of industrial upgrading would still require the CBI economies to develop new networks with U.S. retailers and marketers if they are to acquire the skills and resources needed to move into the more diversified activities associated with full-package production⁶.

The United States continues to define the terms of change in the North American apparel commodity chain. U.S. global brands dominate the industry, and these must be created in the U.S. market because demand is consumer driven and fluctuates rapidly. Mass customization and agile manufacturing represent the next generation in manufacturing, and U.S. firms are taking a leadership role in trying to deliver highly personalized products at mass production prices (see Table 7). This requires the appropriate integration of information technology, automation, and short-cycle, team-based management systems. Giant U.S. retailers have raised the bar for domestic as well as overseas suppliers with state-of-the-art “quick response” systems that place stricter inventory management demands and bigger financial risks on producers, which must be able to supply consumer goods more quickly, more cheaply, and in greater variety than in the past. In this context, it is not surprising that U.S. job losses in textiles and apparel have been accompanied by record gains in productivity and higher compensation levels for those U.S. employees that remain in the sector.

Sustained competitiveness in the international apparel industry involves continual changes in economic roles and capabilities. New exporters are constantly entering the global supply chain, which is pushing the existing firms to cut costs, upgrade, or exit the market. There is a need to run faster to stay in place. To facilitate adjustment and indeed survival in a volatile, export-oriented

⁶ There are a few companies in the CBI region that do full-package production, such as Davon Corporation in Jamaica which has entered the hospital uniform market in the United States. However, these tend to be isolated cases in which the company involved has compensated for the lack of local infrastructure by becoming vertically integrated and by developing its own ties to foreign buyers.

sector such as apparel, industrial upgrading typically requires organizational linkages to the buyers and suppliers in developed country markets. Mexico is using networks with U.S. firms to try to occupy niches that previously have been the stronghold of East Asian suppliers, and the CBI economies are trying to keep pace with Mexico. Sewing up the North American apparel market requires Mexico to learn from U.S. lead firms in the chain, and also to seize control of those opportunities that allow Mexico to expand its domestic and regional capabilities and options.

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