

# **POTENTIAL EFFECTS OF A NORTH AMERICAN FREE TRADE AGREEMENT ON APPAREL INVESTMENT IN CBERA COUNTRIES**

Report to the United States  
Trade Representative on  
Investigation No. 332-321

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## PREFACE

This report sets forth the U.S. International Trade Commission's advice to the President, as requested by the United States Trade Representative (USTR), concerning the potential effects of providing duty-free and quota-free treatment for U.S. imports of apparel from Mexico under a North American Free Trade Agreement (NAFTA) on the levels of apparel investment in the Caribbean Basin Economic Recovery Act (CBERA) countries, and on the competitiveness of U.S. apparel operations in these countries. The Commission investigation on which the report is based, investigation No. 332-321, "Potential Effects of a North American Free Trade Agreement on Apparel Investment in CBERA Countries", was conducted under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) following receipt of a request, on November 26, 1991, from the USTR. The USTR requested that the Commission, in its analysis, examine in particular those operations that produce primarily for import into the United States under heading 9802.00.80 of the Harmonized Tariff Schedule of the United States. The USTR asked that the Commission provide its report by June 1, 1992. A copy of the USTR's letter of request is reproduced in appendix A.

By way of background, the USTR noted in her letter that the United States was currently negotiating a NAFTA with the Governments of Mexico and Canada. She stated that among our objectives in these negotiations is the elimination of tariff and non-tariff barriers to apparel trade. She noted that U.S. apparel manufacturers co-producing in the Caribbean and Central America are concerned that a NAFTA could have a detrimental effect on the competitiveness of their operations in the region, and also that the countries that are eligible for benefits under the CBERA have expressed concern over the potential effects of a NAFTA on the levels of investment in the region's apparel industry.

An investigation was instituted by the Commission on January 2, 1992. A notice was published in the Federal Register on January 8, 1992, and a public hearing was held on March 17 in the Commission's main hearing room. In lieu of or in addition to appearances at the public hearing, interested persons were also invited to submit written statements concerning this investigation. A copy of the Commission's Federal Register notice can be found in appendix A.

Because the Commission does not know what the outcome of the negotiations will be, including whether there will be a transition period for some or all articles, the Commission, in making its analysis and preparing its advice, assumed that import duties and quotas on U.S. imports of apparel from Mexico will be eliminated as of the date that a NAFTA becomes effective.



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## **EXECUTIVE SUMMARY**

### **BACKGROUND**

- During the past decade, U.S. and other foreign-owned apparel firms have come to view production in Mexico and the Caribbean and Central American (CBERA) countries as a competitive alternative to other low-cost manufacturing sites--particularly in East and Southeast Asia. As a result, exports of apparel products from Mexico and the CBERA countries have increased dramatically. The United States is the primary market for these exports.
- Recently, concerns have been expressed both by government officials in the Caribbean and Central American countries and by representatives of U.S. companies operating in the region that a North American Free Trade Agreement (NAFTA) would disrupt the current patterns of apparel trade. The United States Trade Representative (USTR) has requested that the United States International Trade Commission (the Commission) provide a report on the potential effects of a NAFTA on apparel industry competitiveness and investment in this region.

### **SCOPE**

- At the request of the USTR, the Commission's report assesses the potential effects of providing duty-free and quota-free treatment to U.S. imports of apparel from Mexico under a NAFTA on (1) the levels of apparel investment in CBERA countries and (2) the competitiveness of U.S. apparel operations in these countries. The USTR requested that the Commission examine in particular those apparel operations that produce primarily for import into the United States under heading 9802.00.80 of the Harmonized Tariff Schedule of the United States (HTS).

### **OPERATING ASSUMPTIONS**

- The Commission assumed that a NAFTA would result in the immediate and complete elimination of duties and quotas on U.S. imports of Mexican-made apparel. It is assumed that current U.S. duties and quotas on apparel imports from CBERA countries will remain unchanged.
- Apparel products are defined to include all items classified in Chapters 61 and 62 of the HTS.
- The U.S. companies covered by this study include (1) wholly-owned subsidiaries, (2) joint ventures, and (3) contractors.
- Costa Rica, the Dominican Republic, Guatemala, Honduras, and Jamaica account for the vast majority of CBERA apparel exports to the United States. Therefore, observations regarding competitiveness and investment incentives for these five countries are used to draw conclusions for the CBERA region as a whole.

## CONCLUSIONS

### Competitiveness

- ° U.S. companies in the CBERA countries and Mexico usually cite low labor and transportation costs as the primary determinants of the region's competitive success in recent years. In general, as data presented in this report demonstrate, the one-time reduction in the cost of Mexican-made apparel resulting from the NAFTA duty elimination will improve the competitive position of Mexican operations in relation to their CBERA counterparts.
- ° Above and beyond cost savings, other factors that could affect the relative competitiveness of the countries in this region, such as labor supply, infrastructure, and transportation time, were also considered. These "other" factors, however, are not believed to constitute a major source of competitive advantage or disadvantage for any of the countries.
- ° Overall, the removal of import quotas on Mexican-made apparel is not expected to have a significant impact on the cost competitiveness of CBERA producers compared with their Mexican counterparts. Quota elimination is expected to have effects on the relative competitiveness of only one of the six apparel items analyzed in this report.

### Investment

- ° A NAFTA is expected to introduce incentives that will tend to favor apparel investment shifts from the CBERA countries to Mexico. These incentives include duty and quota elimination, an improved macroeconomic and investment climate in Mexico, and opportunities for vertical integration and scale economies.
- ° Due to the lack of necessary data on apparel-related investment flows to the CBERA countries and Mexico, it was not possible for the Commission in this study to quantify the magnitude of any investment shifts that might occur under a NAFTA.
- ° Elimination of quotas on U.S. imports of Mexican apparel will allow Mexican producers unencumbered access to the U.S. market relative to CBERA producers under a NAFTA, particularly for quota-bound items. In general, however, U.S. quotas on apparel imports from Mexico are not binding.

Highlights of each chapter are presented in italicized paragraphs at the beginning of each chapter.

## CHAPTER I

### INTRODUCTION

#### PURPOSE

Over the last two decades, both Mexico and the countries of the Caribbean and Central American (CBERA) region have attempted to expand and diversify their export product base in order to boost foreign exchange earnings. During the past decade, U.S. and other foreign-owned apparel firms have established assembly operations in Mexico and the CBERA countries as a competitive alternative to other low-cost manufacturing sites--particularly in East and Southeast Asia. As a result, exports of apparel products from Mexico and the CBERA region have increased dramatically. The U.S. market is the primary outlet for these exports.

Recently, however, concerns have been expressed both by government officials in the Caribbean and Central American countries and by representatives of U.S. companies operating in the region that a North American Free-Trade Agreement (NAFTA) negotiated between the United States, Mexico, and Canada would disrupt the current patterns of apparel trade by placing the Caribbean and Central American countries at a competitive disadvantage vis-a-vis Mexico. They also contend that future foreign investment in apparel production facilities would be diverted away from CBERA countries to Mexico. This report is intended to address these concerns by assessing the potential effects of a NAFTA on the competitiveness of U.S. companies operating in this region, as well as the impact of the agreements on apparel investment flows to CBERA countries.

#### Growth of CBERA and Mexican Apparel Exports

During the 1970s and early 1980s, Mexico and the countries of the Caribbean and Central American region found themselves saddled with large and growing foreign debt obligations. At the same time, annual export earnings by these countries remained uncertain--and often lagged--as world prices for traditional export products from the region (agricultural products, fuels and primary minerals) fluctuated greatly. In order to bolster dollar revenues to help service this debt, these countries sought to diversify their export base, moving away from traditional products to "nontraditional" manufactured goods such as apparel. The U.S. Government encouraged this diversification process. For the Caribbean, it unveiled in 1983 a special trade and investment expansion program--the Caribbean Basin Initiative (CBI). The trade-

liberalizing centerpiece of this program is the Caribbean Basin Economic Recovery Act (CBERA).<sup>1</sup>

Apparel products, however, were excluded from the list of eligible duty-free articles designated under CBERA. Imports of apparel into the United States, moreover, were subject to control under the Multifiber Arrangement (MFA), the network of bilateral agreements designed to regulate international trade in textiles and apparel.<sup>2</sup> In an effort to encourage growth in the apparel industries of Mexico and CBERA countries, the U.S. Government in the mid-1980s began to negotiate bilateral agreements with these countries that improved access for apparel exports to the U.S. market, especially for those items assembled from U.S.-formed and cut fabric.

Under the so-called "Special Access Program" for CBERA countries and the "Special Regime" for Mexico, apparel items assembled in the Caribbean Basin or Mexico from fabric parts knit or woven (i.e. formed) and cut in the United States receive liberalized import quota treatment when entering the U.S. market. The Special Access Program for CBERA countries went into effect on June 11, 1986. The Special Regime for Mexico went into effect on January 1, 1989. These provisions of the U.S. textile and apparel input program are commonly referred to as "807A."

As a result, apparel exports from CBERA countries and Mexico increased sharply, with the United States being the principal apparel export market for

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<sup>1</sup> The Caribbean Basin Economic Recovery Act (CBERA) was enacted on Aug. 5, 1983 (19 U.S.C. 2701 et seq.), and was made permanent and expanded by the Caribbean Basin Economic Recovery Expansion Act of 1990 (Public Law 101-382, Title II, Aug. 20, 1990). CBERA granted the President authority to provide unilateral duty-free treatment for U.S. imports of eligible articles from designated Caribbean Basin countries and territories. Duty-free treatment became effective as of Jan. 1, 1984, and currently applies to 24 designated beneficiary countries or territories (For further information see U.S. International Trade Commission, Annual Report on the Impact of the Caribbean Basin Economic Recovery Act on U.S. Industries and Consumers, USITC publication 2432, Sept. 1991). CBERA countries include: Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, Panama, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, and the British Virgin Islands. However, throughout this study, the adjective "CBERA" specifically refers to Costa Rica, Dominican Republic, Guatemala, Honduras, and Jamaica, five of the region's leading apparel producers.

<sup>2</sup> The MFA is an agreement among most of the major textile-exporting and importing countries. It allows signatories to place quantitative restraints, or quotas, on textile imports to prevent market disruption. Established under the aegis of the General Agreement on Tariffs and Trade (GATT) in 1974, the MFA was extended on July 31, 1991, for a fourth time, through Dec. 31, 1992. The MFA initially covered trade in cotton, wool, and manmade-fiber goods. Its product coverage was expanded in 1986 to products of other vegetable fibers and silk blends. The MFA's future is being considered in the Uruguay Round of multilateral trade negotiations, with a stated goal of eventually integrating the textile and apparel sectors into the GATT.

these countries. Apparel exports from CBERA countries are estimated to have increased by 160 percent between 1987 and 1991, with shipments to the United States accounting for virtually all of this increase.<sup>3</sup> In 1991 shipments to the United States accounted for approximately 85 percent of apparel exports from CBERA countries. Although similar export data are not available for Mexico, it is estimated that at least 80 percent of that country's apparel exports go to the United States.<sup>4</sup> Using U.S. apparel import data as a measure of Mexican export activity, it is clear that Mexican exports have also increased over the past 5 years, as seen in table 1.

Table 1  
U.S. imports of apparel

	(Millions of dollars)				
	1987	1988	1989	1990	1991
Imports:					
Total . . . . .	20,268	21,286	22,109	23,222	24,078
Mexico . . . . .	432	513	552	663	857
CBERA . . . . .	1,108	1,438	1,678	1,888	2,440

Source: Compiled from official data of the U.S. Department of Commerce.

#### Role of U.S. Companies

In the period between 1972 and 1986, imports of apparel from low-wage countries in Asia captured a growing share of the U.S. market. It is estimated that by 1986 the Asian share of total U.S. apparel consumption was nearly 20 percent. In response to this trend, some U.S. apparel companies came to view production-sharing operations in Mexico and the CBERA countries as a viable means of competing with Asian-made products in the U.S. market. By contracting out or setting up manufacturing facilities to assemble U.S. components, companies could take advantage of the low wage rates in Mexico and the CBERA countries and their close proximity to the United States. Companies also qualified for a duty reduction under the Harmonized Tariff Schedule of the United States (HTS) heading 9802.00.80 (807 trade). This duty break applied to apparel assembled abroad from U.S. components and imported into the United States. The dramatic growth in 807 trade in recent years and the

<sup>3</sup> Additional detail for individual CBERA countries is provided in chapter II.

<sup>4</sup> ITC estimates based on United Nations trade data for 1988-1990. During this period, the share of Mexican apparel exports going to the United States exceeded 90 percent in each year.

predominance of CBERA countries and Mexico in that trade can be seen in table 2.<sup>5</sup>

Table 2

U.S. 807 imports<sup>1</sup> of apparel

(Millions of dollars)

	1987	1988	1989	1990	1991
807-Imports:					
Total . . . . .	1,427	1,794	2,134	2,394	3,128
Mexico . . . . .	359	431	501	601	784
CBERA . . . . .	868	1,111	1,353	1,467	1,948

<sup>1</sup> Includes apparel products assembled from U.S.-formed and cut fabrics (807A).

Source: Compiled from official data of the U.S. Department of Commerce.

U.S. firms have played an important part in the development of the apparel export industries in Mexico and the CBERA countries. In Jamaica, for example, U.S. companies are responsible for approximately 28 percent of total direct investment in the apparel sector.<sup>6</sup> In Honduras, the corresponding figure is 25 percent.<sup>7</sup> Production-sharing facilities set up under the 807 program account for the overwhelming majority of U.S. apparel imports from CBERA countries. In 1991, 807 (including 807A) assembly operations supplied 80 percent (\$1.9 billion) of all U.S. apparel imports from the Caribbean and Central America. Similarly, 807 assembly plants operating in Mexico accounted for 92 percent of U.S. apparel imports from that country in 1991.

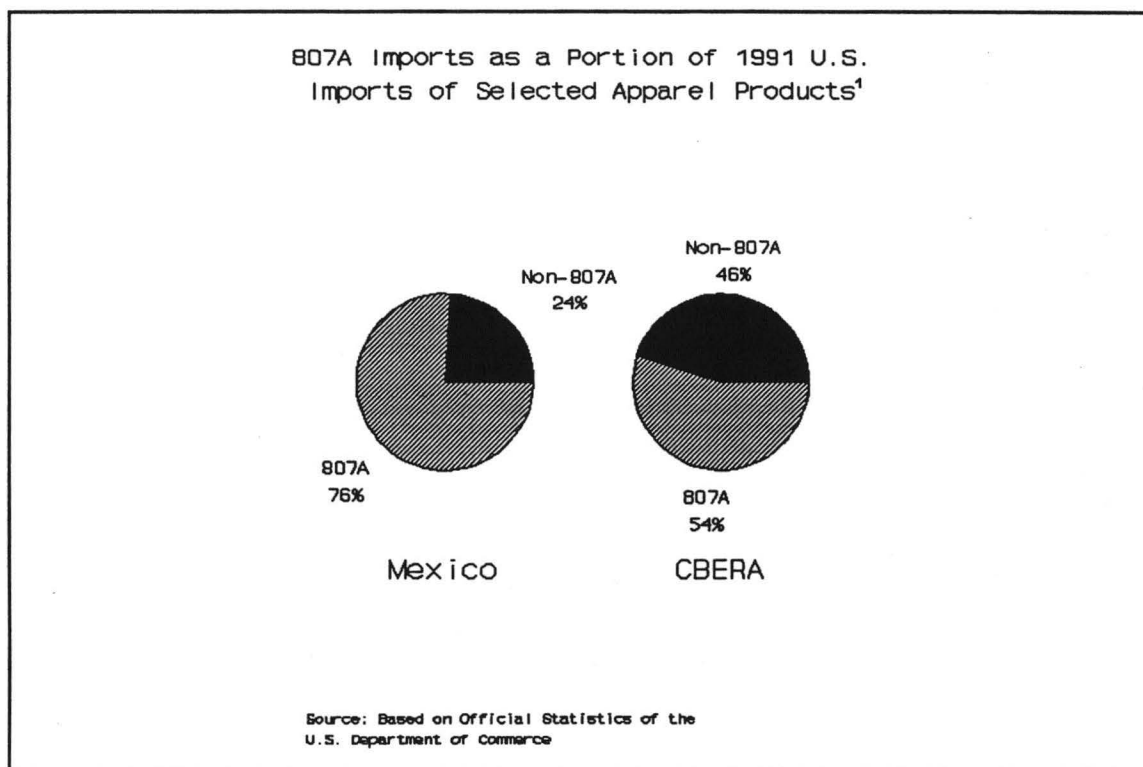
U.S. textile companies supply much of the fabric used by these export industries as seen in figure 1. While some of the components used in the region are fabrics finished and cut but not formed in the United States (referred to in this report as non-807A for the sake of brevity), the largest portion is U.S.-formed fabric (807A).

<sup>5</sup> "807" is a tariff provision and "807A" an import quota provision. Apparel assembled in Mexico and the CBERA countries from fabric cut but not formed in the United States qualified for the 807 duty break, but did not qualify for access under the liberalized 807A quota (Special Regime or Special Access Program). Companies that used U.S.-formed fabric in Mexican and CBERA assembly operations qualified for liberal U.S. import quota treatment (807A) for some products beginning in 1986, as well as the 807 duty benefits.

<sup>6</sup> U.S. Department of State Telegram, Mar. 24, 1992, Kingston, Jamaica, message ref. No. 02827.

<sup>7</sup> U.S. Department of State Telegram, Mar. 26, 1992, Tegucigalpa, Honduras, message ref. No. 04791.

Figure 1



<sup>1</sup> Not all products are subject to "Special Regime" or "Special Access" quotas. Therefore, the allocation between products made from U.S.-formed fabric (807A) and apparel not required to be made from U.S.-formed fabric (non-807A) is based on data for apparel products for which there are separate quotas.

#### SCOPE

##### NAFTA Outcome

The USTR letter specifies two goals of the NAFTA negotiations: (1) the removal of U.S. import duties (tariff barriers) on Mexican-made apparel and (2) the lifting of U.S. import quotas (non-tariff barriers) on the same items. For purposes of analysis in this report, the Commission assumed these goals are the actual outcome of the talks, with immediate and complete implementation of the changes. It should be pointed out that this is only an assumption, and that it does not reflect either the negotiating objectives of USTR or the most likely outcome of the NAFTA negotiations. As such, the effects identified in this report may be the most extreme effects likely to result from a NAFTA. An agreement which provides for staged implementation of duty-free and quota-free access would be expected to result in more gradual effects.

The Commission also assumed that there are no changes to U.S. duties and quotas on U.S. apparel imports from CBERA countries concurrent with the implementation of a NAFTA.

## Definitions

The USTR request letter limits the focus of the study to apparel products. These items are classified almost exclusively in chapters 61 and 62 of the Harmonized Tariff Schedule of the United States (HTS). Although some apparel products are classified in other chapters, they account for only a small portion of all U.S. apparel imports from the CBERA countries and Mexico. Therefore, for the purposes of this investigation, apparel products will be defined as all items classified in these two HTS chapters. Six discreet apparel products were isolated for detailed discussion in this report. Product descriptions and the respective HTS subheadings for these six products are provided in appendix B. The rationale for this and the methodology used in selecting these products are discussed in the "Approach" section.

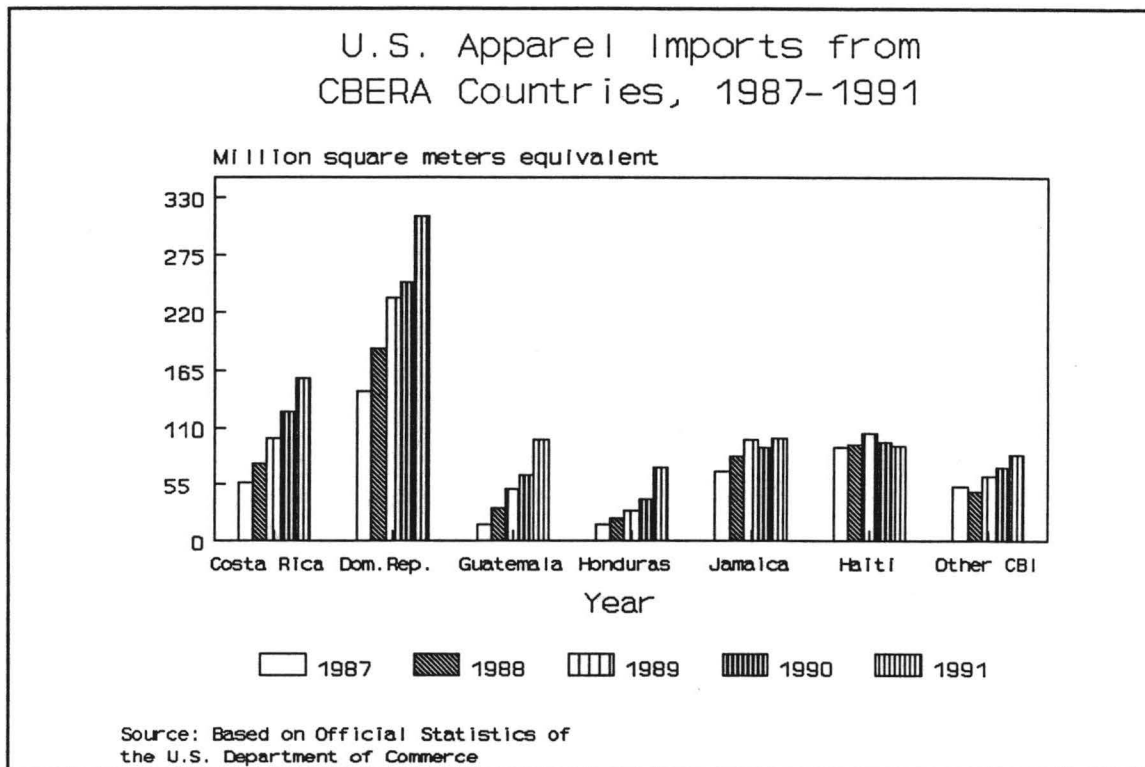
The USTR request letter asks the Commission to assess the potential effects of a NAFTA on U.S. apparel companies operating in the Caribbean and Central American region. For the purposes of this study, "U.S. apparel company" includes (1) wholly owned subsidiaries operating in the CBERA region and Mexico, (2) U.S. companies operating joint ventures with local partners, and (3) U.S. companies contracting directly with CBERA and Mexican apparel assembly plants. Many U.S. apparel firms own plants in the region while contracting from other facilities. Therefore, in order to account for all sourcing possibilities, this broad definition of a U.S. company is used in this study.

The term "production costs", used widely throughout the study, refers specifically to the manufacturing costs faced by U.S. firms producing in the CBERA countries and in Mexico. Included are costs for fabric, assembly, shipping and other miscellaneous costs such as brokers' fees. The import duties paid are also included in analysis of a NAFTA's effects on the total cost of the imported apparel.

## Country Focus

Five CBERA countries (Costa Rica, the Dominican Republic, Guatemala, Honduras, and Jamaica) account for the vast majority of CBERA apparel exports to the United States (see figure 2). U.S. companies are actively involved in sourcing in these countries, as indicated by the large percentage share of trade accounted for by 807 operations. Because of the five countries' importance as producers of apparel for export to the United States and the involvement of U.S. companies in 807 operations in these countries, observations regarding competitiveness and the investment outlook for these five countries were used to draw conclusions for the CBERA region as a whole.

Figure 2



Source: Compiled from official data of the U.S. Department of Commerce.

Historically, the only other large CBERA apparel supplier has been Haiti. However, recent political turmoil in the country and a U.S.-supported trade embargo have kept most U.S. firms from considering Haiti as an attractive investment site. Haiti has therefore been excluded from the list of countries under consideration in the study.

Given the very small volume of trade between the CBERA countries and Canada, as well as the low levels of investment by Canadian apparel firms in the Caribbean and Central America, the trade and investment effects introduced by removal of Canadian import duties and quotas on Mexican-made apparel are not discussed.

#### NAFTA Rules of Origin

The rules of origin adopted as part of the NAFTA to determine which imported products qualify for benefits under the agreement will heavily influence both investment and fabric-sourcing decisions by U.S. apparel firms. The three most commonly-discussed NAFTA rules-of-origin scenarios are (1) "substantial transformation," (2) "fabric-forward," and (3) "yarn-forward." The first scenario is the most liberal, and would extend NAFTA benefits to apparel made from fabric formed outside of the United States, Mexico, or Canada (but cut in North America). This "substantial transformation rule" is similar to the country-of-origin rule now in effect

for U.S. imports of apparel from most sources. The second scenario is more restrictive, and would limit the NAFTA benefits to apparel assembled from North American-formed fabrics. This is similar to the 807A<sup>8</sup> provision now covering a large amount of imports from the CBERA countries and Mexico. The third and most restrictive scenario is the so-called "yarn-forward" rule, which would require not only that fabrics be formed in North America, but that the yarns used in the garments also be sourced from the United States, Mexico, or Canada. Competitive implications of each of the three rules-of-origin scenarios were considered in the production cost analysis section of this report. In general, conclusions regarding NAFTA-induced investment effects apply to all three scenarios, unless specifically noted otherwise.

### Duty Rates

Throughout the report, reference is made to both nominal and "effective" duty rates on imports of apparel from the Caribbean Basin and Mexico. The nominal rate is the column 1-general duty rate published in the HTS. For 807 transactions, duties are collected only on the non-U.S. value-added component of the garment. The "effective" rate refers to the ratio of these duties collected to total Customs import value. The effective rate therefore is less than the nominal rate published in the U.S. HTS.

### Quotas

The assessment of potential NAFTA effects is based not only on analysis of the removal of duties, but also on the elimination of U.S.-administered quotas limiting the import of Mexican-made apparel. Although some consideration is given in this study to quantitative restrictions on imports from CBERA countries, the primary quota-related issue addressed in this study is the removal of quotas covering Mexican products.

Imports from Mexico are currently subject to limits in 18 product groupings. For eight of these, only one import quota applies to each of the product groupings. For ten of the product groupings, two limits exist: (1) The more liberal "SR" quota applies exclusively to apparel made from U.S. formed fabric (807A).<sup>9</sup> (2) The second limit, the "NR", is open to all apparel imports within that grouping (referred to in this report as non-807A for the sake of brevity).

### Data Sources

In collecting data for this investigation, the Commission drew upon a number of U.S. Government and private industry sources. In addition to U.S.

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<sup>8</sup> A change in the origin rules may require a change in the criteria used to classify products under the HTS. To qualify for 807A, all major fabric components--outer shell, lining, interfacing, etc.--must be U.S.-formed. The HTS uses only the outer shell for classification purposes.

<sup>9</sup> For the CBERA countries, the 807A quota is referred to as a Guaranteed Access Level (GAL).

import data supplied by the U.S. Department of Commerce, statistics were gathered from industry associations in the United States, Mexico, and the Caribbean Basin countries. In cases where official figures were not readily available from published sources, U.S. embassies abroad were contacted for supplemental information. Finally, 21 U.S.-owned apparel firms with 807 interests in the Caribbean Basin and Mexico were contacted by the Commission. Fourteen of these agreed to be interviewed and their responses to specific questions regarding investment in the region were documented.

## APPROACH

### Competitiveness Assessment

Although such factors as technological modernization and quick responsiveness to customer requirements are becoming more important for apparel companies worldwide, costs continue to play the leading role in sourcing decisions.<sup>10</sup> Particularly with regard to "commodity" apparel items like blue jeans, t-shirts, and brassieres (produced extensively in the CBERA countries and Mexico), small differences in labor and transportation costs can be critical. Easy access to manufacturing technology and the relative ease with which apparel firms can open and close assembly plants make production cost differences even more important. Changes introduced by a NAFTA will affect the relative competitiveness of CBERA countries and Mexico mainly through changes in production costs. Accordingly, while other factors will be examined in this report, to the extent that they are affected by a NAFTA, conclusions regarding changes in the relative competitiveness of the CBERA and Mexican apparel industries are based largely on an analysis of changes in production costs brought about by a NAFTA.

### Representative Product Selection

Although aggregated data are often used exclusively in discussions of an industry's competitiveness, the "averaging" effect associated with the use of data in the aggregate may disguise significant shifts in relative prices, as well as trade and investment patterns, for major items. For example, the average trade-weighted, "effective" duty rate for all apparel imported into the United States from Mexico was 5.5 percent in 1991, compared with effective duties of 18.3 percent for men's knit, cotton t-shirts viewed separately. Therefore, this report analyses the changes in the competitive position of specific products. Six representative products were selected for detailed study. From this product analysis, general conclusions were extrapolated for the industry overall.

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<sup>10</sup> Ten out of 14 companies interviewed by USITC staff cited labor costs as a critical factor in their decision to produce in CBERA countries and/or Mexico. Also, see Apparel Manufacturing Strategies, American Apparel Manufacturers Association, 1984, p. 32; Succeeding in Apparel in the Nineties, Kurt Salmon Associates, Sept. 1991. Production cost elements to be analyzed include fabric, assembly, duty, and transportation costs.

The six apparel items selected (men's blue jeans, men's knit "golf" shirts, men's t-shirts, women's suit-type coats, women's woven blouses, and brassieres) are all produced in the Caribbean Basin region and Mexico, and the products have met a number of criteria that Commission staff established to derive a truly representative basket of items manufactured by U.S. 807 companies.<sup>11</sup> Among the criteria employed in compiling the list of products were the following:

- o The volume of U.S.-CBERA trade in the item;
- o The level of U.S. company participation in CBERA and Mexican production of the item; and
- o Representative products with high and low U.S. import quota utilization rates.

It was necessary to define the selected products narrowly in order to facilitate the collection of comparable production cost data. Notable differences may exist in the styling or the fabric of a seemingly homogeneous product. For some products, particularly t-shirts and blue jeans, styling and construction differences are small, but fabric costs may vary considerably, depending upon the weight, finishing and quality of the fabric. For items like the women's coats and blouses, production costs may also be affected by the slightest differences in the styling of a garment. In each case, attempts have been made to find items of similar fabric and construction produced both in Mexico and the CBERA countries. (A detailed description of the products selected can be found in appendix B.)

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<sup>11</sup> For example, the value of trade for the men's cotton t-shirt analyzed in this report is relatively small, while U.S.-Mexican trade levels for the brassiere are valued at nearly \$40 million. Similarly, the effective duty is relatively high on U.S. imports of the men's cotton t-shirt from Mexico (compared with the dominant CBERA supplier), while the reverse is true for the women's suit-type coat. The effective duties are similar for the woman's manmade fiber blouse. A product was selected in which the quota covering that product was 80 percent or more filled in Mexico and at least two of the CBERA countries (blue jeans). A product was selected where the quota was binding in Mexico, but in none of the CBERA countries (the woman's manmade fiber blouse) and vice versa (t-shirt). There are no U.S. import quotas for any of the countries on brassieres. Differences in complexity of construction are also represented. There are few manufacturing steps in assembling t-shirts, while the women's suit-type coat is a good example of a tailored apparel item often requiring special styling features. In all cases, products selected were largely imported under 807 provisions. This is consistent with the USTR request that emphasis be placed in the report on U.S. operations. In addition, 80-90 percent of the apparel imports from this region enter under this HTS provision.

## Production Cost Analysis

For each of the six products under review, production cost data for 807 plants in the CBERA countries and Mexico are presented and analyzed. Costs are provided for U.S.-formed fabric (807A) as well as fabric from non-U.S. sources cut in the United States. In those cases where imported yarns are known to have been used in forming the fabric, the cost difference between fabrics using imported yarn and U.S. yarn is provided. In some cases, cost differentials between U.S. and non-U.S.-formed fabric can be significant, while in other instances the differences in price are negligible. In particular, cost differences for materials will be important for those items assembled from specialty fabrics that may not be sourced easily or cheaply in the United States. This appears to be the case for the women's polyester blouse, since some U.S. companies maintain that fabrics required for the production of high-quality blouses cannot be purchased at competitive prices in the United States.<sup>12</sup>

The calculated cost for items assembled in CBERA countries is a composite figure, compiled by taking a trade-weighted average of production costs in the leading Caribbean Basin supplier countries for each product. In some cases, limitations on the availability of reliable cost data have dictated the selection of only one CBERA country to be used as the regional benchmark in comparisons with Mexico. For all products, certain costs (fabric, trim, U.S. freight component) are assumed to be identical for both Mexican and CBERA production-sharing transactions. This is a reasonable assumption given the ability of U.S. firms to source fabrics and other U.S. components at similar prices, regardless of the assembly site. The crucial differences in costs, as the tables 9-14 show, are related to foreign assembly, transportation, and duties.

## Assessment of Investment Diversion

The analysis of investment diversion considers both cost competitiveness as well as additional factors specified by U.S. apparel company officials as affecting investment decisions under a NAFTA. These "additional" factors include both elimination of duties and quotas, opportunities for vertical integration and scale economies, as well as changes in the rules of origin, the investment climate, and the underlying Mexican macroeconomic trends.

Because of the lack of data on specific apparel investment flows to the CBERA countries and Mexico, and because of difficulties in measuring all of the potential impacts of NAFTA on investment incentives, it is not possible to quantify the impact of a NAFTA on apparel investment flows. Rather, a two-part approach was used to assess the likely impact of a NAFTA on investment diversion from the CBERA countries to Mexico. First, an economic trade model was developed to estimate NAFTA-induced changes in trade flows between the CBERA countries and Mexico. Second, ITC staff interviewed U.S. apparel company officials in order to obtain information about their potential

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<sup>12</sup> U.S. apparel company executive, interview by USITC staff, New York, Mar. 31, 1992.

investment strategies under a NAFTA and how the cost incentives provided by a NAFTA could affect future investment plans.

The ITC economic model is used to estimate the trade shifts that could result if duties on Mexican apparel imports were eliminated under a NAFTA. It is expected that elimination of duties on U.S. imports of Mexican apparel will result in reduced U.S. import prices for Mexican apparel and generate shifts in U.S. demand for apparel from different country sources. This, in turn, will have implications for investment flows between the CBERA countries and Mexico. The trade changes predicted by the model, therefore, indicate the likely direction of change in apparel-related investment flows that could occur under a NAFTA.

The trade diversion analysis is augmented by a discussion of the impact that NAFTA could have on factors affecting U.S. apparel investment in the CBERA countries and Mexico. These factors include elimination of duties and quotas, opportunities for vertical integration and achievement of scale economies, and changes in rules of origin, the investment climate, and underlying Mexican macroeconomic trends. This discussion is based on information provided to Commission staff through interviews conducted with officials from U.S. apparel companies that have operations in the CBERA countries and Mexico.

## REPORT STRUCTURE

The report is designed to analyze two separate but related questions: (1) the impact of NAFTA on the competitiveness of CBERA apparel operations and (2) the possibility of investment diversion away from the CBERA countries to Mexico. The report's structure reflects the attempt to address these two questions separately. Chapters II and III address the issue of changes in the relative competitiveness of apparel industries in these countries. Chapters IV and V address the issue of potential investment diversion. Chapter VI presents the conclusions of the report.

By way of background, profiles of apparel industries in the five most important CBERA supplier countries and Mexico are provided in Chapter II. Relevant industry data as well as a summary of some of the most important factors influencing the competitiveness of the apparel sector in each country are provided in this chapter. Chapter III focuses on the impact of duty elimination on production costs for six representative CBERA and Mexican apparel export items. In addition to the cost comparisons, Chapter III includes a discussion of NAFTA's expected impact on other factors related to competitiveness such as fabric and quota availability.

In Chapter IV, the focus of the report shifts to address the issue of investment diversion. Chapter IV provides information on some of the most important features of the apparel industry investment climate in each of the CBERA countries and Mexico. Chapter V combines analysis of the effects of a NAFTA on individual investment factors to provide an assessment of the overall potential for investment diversion from CBERA countries to Mexico.

## CHAPTER II

### PROFILE OF CBERA AND MEXICAN APPAREL INDUSTRIES

This chapter investigates general conditions in the apparel industries of the CBERA countries and Mexico which may affect the relative competitiveness of these industries. Some of the features examined include wages, the availability of labor, the availability of commercial transportation and the condition of the country's infrastructure. Although these may not be directly influenced by the elimination of import duties and quotas under a NAFTA, the profiles were compiled to provide an indication of advantages or disadvantages inherent in any of these countries which may outweigh NAFTA-related changes.

Because of the lack of industry-specific data in these countries, the apparel industry profiles provided below are not exhaustive. Furthermore, industry data are not always directly comparable between countries. However, a clear indication of the operating environment for apparel companies in each of the six countries emerges from the profiles. In general, with regard to the factors discussed in this chapter, the operating environments in the CBERA countries and Mexico are quite similar. These factors, therefore, are not believed to constitute a major source of competitive advantage or disadvantage for any of these countries that would outweigh the NAFTA-related changes discussed in Chapter III.

The economies of these countries are all near the same stage of development. Large pools of unskilled labor exist in each country, keeping wages low in apparel manufacturing. Labor costs, ranging between 58 cents and \$1.10 per hour for an apparel assembly worker in the CBERA countries, are sufficiently low (particularly in relation to U.S. wages) to encourage further growth in the region's apparel industries. Although transportation to the United States is somewhat more accessible in Mexico, ocean and air transport is readily available in each of the CBERA countries reviewed in the report. The frequency of cargo service, however, varies throughout the region.

The profiles also provide an indication of the size of the apparel industries in each of the CBERA countries and Mexico. This is an important reflection of short-term opportunities for expanded production. The data show that while exports from these countries have increased dramatically in recent years, the apparel export industries in the CBERA countries and Mexico are still quite small in size (relative to major apparel-producing nations around the world).

Between 1987 and 1991, total apparel exports from five of the leading CBERA apparel-producing countries and Mexico increased at an average annual rate of 24.8 percent, from \$1.4 billion in 1987 to \$3.4 billion in 1991. During the same period, these countries increased their share of total U.S. apparel imports from 6.1 percent to 12.5 percent. Still, total apparel exports in 1991 from the CBERA countries and Mexico were only about a third of total apparel exports from Hong Kong, a leading world exporter.<sup>13</sup> Looking

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<sup>13</sup> Hong Kong export data provided by the Hong Kong Economic and Trade Office, Washington, DC.

only at the U.S. market, Hong Kong's share of U.S. apparel imports in 1991, at 16.8 percent, was one-third larger than the share supplied to the U.S. market by the CBERA countries and Mexico combined.

# COSTA RICA

Table 3

Costa Rica: Selected apparel industry indicators, 1987-91

Item	1987	1988	1989	1990	1991
Exports (million U.S. dollars):					
World . . . . .	195	251	328	389	450
United States . . . . .	180	250	326	381	438
Employees (thousands) . . . . .	27	30	35	45	50
Wages <sup>1</sup> (U.S. dollars per hour) . . . . .	.54	.66	.78	.92	1.10
Exchange rate (U.S. dollars per					
Costa Rica colon) . . . . .	.014	.013	.012	.010	.007
Annual inflation rate (percent) . . . . .	16.9	20.8	16.5	19.0	25.0

<sup>1</sup> Actual wages paid to workers, including piecework incentives and benefits.

Sources: Trade, employment and wage data are based on statistics from Consejo de Cuotas Textiles (Costa Rica's textile trade council); exchange rates provided by the Costa Rican Investment and Development Bureau (CINDE); inflation rate data from the International Financial Statistics, International Monetary Fund.

Costa Rica, which has been regarded by U.S. apparel firms as possessing the safest and most stable investment climate in the CBERA region, was the primary recipient of U.S. foreign apparel investment in CBERA countries between 1986 and 1988.<sup>14</sup> As a result, between 1987 and 1991, total Costa Rican apparel exports increased by an average annual rate of 23.3 percent, increasing to \$450 million in 1991 (see table 3). During this period, exports to the United States increased from 92 percent to 97 percent of total apparel exports. In 1987, 77 percent of apparel shipped to the United States was imported under HTS heading 9802.00.80 ("807" operations). This figure increased to 82 percent in 1991.<sup>15</sup>

The Costa Rican Government has actively promoted foreign investment in its domestic apparel industry since 1987. As a result, employment in the industry increased by an average annual rate of 16.7 percent between 1987 and 1991. Recently, however, several U.S. apparel firms have noted a shift.<sup>16</sup> Industry sources contend that the Costa Rican Government is focusing its

<sup>14</sup> U.S. apparel company officials, interview by USITC staff, New York, Mar. 31, 1992.

<sup>15</sup> Compiled from official statistics of the U.S. Department of Commerce.

<sup>16</sup> U.S. apparel company officials, interview by USITC staff, New York, Mar. 31, 1992.

attention on higher value-added industries such as electronics.<sup>17</sup> Additionally, with unemployment rates ranging between 3 and 6 percent over the last 5 years (the lowest in the region), U.S. apparel companies have found labor scarce and increasingly expensive. According to the Costa Rican Investment and Development Bureau (CINDE), wages for apparel assembly workers have doubled in the last 5 years. Apparel industry sources report that labor unions have little power in the Costa Rican private sector, since less than 5 percent of the workforce is unionized.<sup>18</sup> However, worker absenteeism is reported at approximately 20 percent,<sup>19</sup> while the yearly labor turnover rate is estimated at 15 percent.<sup>20</sup> For these reasons, many U.S. apparel firms are locating new assembly operations in other CBERA countries where labor supplies are adequate and wages are lower than the Costa Rican rate.

U.S. apparel firms that have invested in Costa Rica maintain that Costa Rica, relative to other countries in the CBERA region, provides well-developed communications, electricity, and transportation. Costa Rica also offers ports on both the Caribbean and the Pacific coasts, as well as reliable air connections to and from major U.S. cities. Ships bound for Miami depart from Costa Rican ports weekly, with shipping costs of approximately \$2,600 per 40-foot container.<sup>21</sup> Typically, ships require 3 to 5 days in transit to Miami. Shipping by sea to U.S. west coast destinations is comparable in frequency, transit time, and cost. U.S. apparel industry sources state that air transport is used for the majority of the light-weight items (like blouses), and is available at regionally competitive prices.<sup>22</sup>

In 1991 the principal apparel products exported to the United States from Costa Rica were underwear, cotton trousers, not-knit shirts, and brassieres. The U.S. Department of Commerce reports that U.S. imports of underwear, cotton trousers, and not-knit shirts from Costa Rica increased by 67.3 percent, 16.9 percent, and 5.7 percent respectively between 1990 and 1991, while the quantity of brassieres imported remained constant. In 1990, underwear represented 33 percent of total apparel exports to the United States from Costa Rica, increasing to 47 percent in 1991. Currently, there are no quota restrictions on U.S. imports of underwear from Costa Rica. In 1991, only the cotton trousers were restrained by binding U.S. import quotas. In 1991, 9 percent of all not-knit shirts, and 52.4 percent of all cotton trousers that were exported to the United States were made with U.S.-formed fabric.

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<sup>17</sup> Ibid.

<sup>18</sup> "Free Zones in Costa Rica," Corporacion de la Zona Franca de Exportacion, San Jose, Costa Rica.

<sup>19</sup> U.S. apparel company executive, interview by USITC staff, New York, Mar. 31, 1992.

<sup>20</sup> U.S. Dept. of Commerce, U.S. and Foreign Commercial Service, "Investment Climate Statement," May 1990.

<sup>21</sup> Shipping costs provided by CINDE.

<sup>22</sup> CINDE estimates that air transport from San Jose to Miami costs \$1.86/kg, \$1.41/kg, and \$0.93/kg for quantities under 45kg, over 100kg and over 500kg respectively.

## DOMINICAN REPUBLIC

Table 4

Dominican Republic: Selected apparel industry indicators, 1987-91

Item	1987	1988	1989	1990	1991
Exports (million U.S. dollars):					
World . . . . .	485	724	883	953	1,260
United States . . . . .	374	517	645	699	920
Employees (thousands) . . . . .	( <sup>1</sup> )	58	66	74	123
Wages <sup>2</sup> (U.S. dollars per hour) . .	.51	( <sup>1</sup> )	.59	.75	.77
Exchange rate (U.S. dollars per Dominican Republic peso) . . . .	.260	.164	.158	.117	.079
Annual inflation rate (percent) . .	15.9	44.4	45.4	101.0	9.0

<sup>1</sup> Not available.<sup>2</sup> Actual wages paid to worker, including piecework incentives and benefits.

Sources: Trade data based on statistics from Asociacion Dominicana de Zonas Francas Industriales (the Dominican association of industrial free zones), and the U.S. Department of Commerce; employment data from the Government of the Dominican Republic; wages from the Investment Promotion Council of the Dominican Republic; exchange rate and inflation rate data from the International Financial Statistics, International Monetary Fund.

The Dominican Republic is the leading CBERA exporter of apparel to the United States. The level of Dominican apparel exports to the United States has exceeded the corresponding total for Mexico since 1988. The growth of the Dominican apparel industry, which increased production by an estimated 150 percent between 1987 and 1991, has been driven by exports, which tripled during the 1987-91 period.<sup>23</sup> The major market for Dominican apparel is the United States. Approximately 75 percent of total production was exported to the United States in 1991.<sup>24</sup>

The Government of the Dominican Republic has actively promoted foreign investment in the country's garment industry. Policies that have benefited companies include developing free-trade zones (FTZs), upgrading the country's infrastructure, devaluing its currency, and offering tax incentives to foreign apparel investors. Foreign apparel firms have also been attracted to the Dominican Republic by its proximity to the U.S. market, and by wage rates averaging about 10 percent of U.S. apparel industry wages,<sup>25</sup> about 70 percent of Costa Rican wages, and about 90 percent of wages in Mexico. Also, the Dominican Government has implemented monetary and fiscal measures in order to

<sup>23</sup> USITC staff estimates based on data provided by the Investment Promotion Council of the Dominican Republic.

<sup>24</sup> Asociacion Dominicana de Zonas Francas Industriales, Santo Domingo, Dominican Republic.

<sup>25</sup> U.S. Department of Labor, Bureau of Labor Statistics, Occupation Wage Survey, 1983-1991.

control its inflation. U.S.-firms, which typically export most or all of their production to the United States, serve as the predominant source of foreign direct investment in the Dominican apparel sector.

Most production of apparel destined for export markets is concentrated in the Dominican FTZs. In 1991, some 262 apparel firms were manufacturing in FTZs in the Dominican Republic, an increase of 38 percent from 1988.<sup>26</sup> These firms employed over 90 percent of all Dominican apparel workers, according to Dominican Government estimates. Employment by these firms ranges from 25 to 2,000 employees per operation, with the average firm employing between 300 to 500 workers.<sup>27</sup> Apparel workers' hourly earnings, on average, are higher than the country's minimum wage, and include benefits totaling between 25 and 30 percent of the base wage. Labor is readily available in areas near Santo Domingo and the Haitian border, where unemployment is estimated at 30 percent. However, shortages have been reported in FTZs, where several industries must often compete for labor (e.g. tourism and apparel in the FTZ of La Romana).

Apparel industry sources have stated that the Dominican infrastructure has improved greatly over the past 10 years, and as a result, delays in shipments are uncommon. These sources also indicate that electricity shortages, among the most severe in the region, have a minimal effect on the larger operations, since the majority of large assembly sites are equipped with back-up generators.<sup>28</sup> Smaller operations, however, have reportedly been forced to shut down operations for periods of up to 10 hours.<sup>29</sup> However, electrical output has reportedly increased from 300 Megawatts in early 1991, to approximately 800 Megawatts as of March of 1992.<sup>30</sup>

The Dominican Republic offers cargo transport to and from the United States (Miami and New York) by both sea and air. Sea transport is the most common mode of transport for heavier items (such as pants), with departures from Dominican ports weekly. Transit time to the United States is approximately 3 to 6 days. Air transport, available daily, is used for fragile, light items such as blouses. Several industry sources have noted their preference for ocean-bound shipment from the Dominican Republic over shipment by truck from Mexico. These sources state that the cost of shipping by sea is greater than by truck, but delays crossing the U.S.-Mexican border presently add substantially to overall transport time.<sup>31</sup> On average, the cost of transporting apparel products from the Dominican Republic to the United States is comparable to that from other leading CBERA exporting countries.

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<sup>26</sup> Dominican Republic Embassy official, interviewed by USITC staff, Washington, DC, Mar. 20, 1992.

<sup>27</sup> Investment Promotion Council of the Dominican Republic, "Survey of Apparel Companies Established in the Dominican Republic," 1991.

<sup>28</sup> U.S. apparel company official, interview by USITC staff, New York, Mar. 31, 1992.

<sup>29</sup> Caribbean UPDATE, Bobbin Media Corp., Columbia, SC, Mar. 1991, p. 8.

<sup>30</sup> Investment Promotion Council of Dominican Republic official, interview by USITC staff, Washington, DC, Mar. 27, 1992.

<sup>31</sup> For more information on Mexican transport problems, see Mexican industry profile below.

In 1991, the principal apparel products exported to the United States from the Dominican Republic were trousers, nightwear, suit-type coats, shirts, blouses, brassieres, and underwear. Non-807A exports to the United States were restrained by binding quotas for five of these products: men's and boys and women's and girl's manmade fiber suit-type coats; cotton and manmade fiber knit shirts and blouses; both women's and girl's, and men's and boy's cotton and manmade fiber trousers; cotton and manmade fiber nightwear; and men's and boy's cotton and manmade fiber not-knit shirts. For 807A products, only the quota on trousers was binding.<sup>32</sup> Of the leading apparel items exported from the Dominican Republic to the United States, only brassieres and underwear remain quota-free. In 1991, 85 percent of all apparel exported to the United States was assembled from U.S. components.<sup>33</sup>

## GUATEMALA

Table 5

Guatemala: Selected apparel industry indicators, 1987-91

Item	1987	1988	1989	1990	1991
Exports (million U.S. dollars):					
World . . . . .	70	89	143	207	338
United States . . . . .	41	78	129	190	331
Employment (thousands) . . . . .	6	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	80
Wages <sup>2</sup> (U.S. dollars per hour) . .	.60	.70	.78	.90	( <sup>1</sup> )
Exchange rate (U.S. dollars per quetzal) . . . . .	.40	.39	.36	.22	.20
Annual inflation rate (percent) . .	12.3	10.8	11.4	41.2	31.3

<sup>1</sup> Not available.

<sup>2</sup> Actual wages paid to worker, including piecework incentives and benefits.

Sources: Trade data based on statistics provided by GEXPRONT (the Guatemalan Non-traditional Exporters Association), the U.S. Department of Commerce, the United Nations, and the Government of Guatemala; employment and wages from GEXPRONT, Banco de Guatemala, and U.S. Department of State; exchange rate and inflation rate data from the International Financial Statistics, International Monetary Fund.

Guatemala is the third-largest source of U.S. apparel imports from CBERA countries. Its exports of apparel are estimated to be more than three times the country's production for domestic consumption.<sup>34</sup> During 1987-91, Guatemala's apparel exports to the United States increased more than five fold (see table 5), and its share of total CBERA apparel exports to the United States rose from 4 percent to 14 percent.

<sup>32</sup> Based on statistics from the U.S. Department of Commerce.

<sup>33</sup> Compiled from official statistics of the U.S. Department of Commerce.

<sup>34</sup> Based on data from Banco de Guatemala.

The remarkable growth in Guatemala's apparel industry since 1987 is, in large part, the result of government incentives initiated in 1984 to encourage foreign investment in the country. The initial Export Promotion Law facilitated investment for export-oriented operations, including apparel production-sharing facilities. In 1989, benefits offered by this law were expanded, and a Free-Trade Zone Law was enacted to provide for the establishment of FTZs and additional incentives encouraging firms to locate operations in such zones.

The apparel industry has been one of the prime beneficiaries of these incentives. From 76 establishments in 1986, the industry has grown to over 300. Total investment in the apparel industry in Guatemala rose from \$200,000 in 1982 to \$58 million at the end of 1991.<sup>35</sup> The total capital value of the industry at the end of 1991 was reported to be \$120 million. The number of sewing machines installed in the country rose from 2,000 in 1985, to 50,000 in 1990.<sup>36</sup> Employment rose more than 10-fold from 6,000 in 1987, to approximately 80,000 workers in 1991.

There are 167 maquila apparel assembly operations--about a third of the total number of companies operating in maquilas. Of these apparel operations, 24 are U.S. owned. Many of the remaining firms are anonymous societies.<sup>37</sup> Under Guatemalan law, the latter are not required to divulge the name or nationality of the individuals involved in the corporation. Of the foreign firms operating in Guatemala, over 30 are reported to be Korean-owned.<sup>38</sup>

On average, basic wage rates and mandatory benefits for apparel workers in Guatemala are competitive with those of other countries in the CBERA region. A sharp increase in the Guatemalan inflation rate between 1989 and 1990 led to a depreciation of the country's currency, with the value of the quetzal falling from 36 cents in 1989 to 22 cents in 1990 and 20 cents in 1991. Unemployment and underemployment are reported to be as high as 25 percent and 40 percent, respectively.<sup>39</sup> The Guatemalan Nontraditional Products Exporters' Association's Apparel Commission (GEXPRONT) is currently implementing training programs for the industry, and the association reports that efforts are underway to educate engineers, supervisors, mechanics, and operators for the apparel industry.<sup>40</sup>

Transportation between the United States and Guatemala is available by both sea and air, with the country having both Pacific and Caribbean seaports. Ocean freight service is frequent, with service to some U.S. ports occurring three to four times weekly. Air cargo may be shipped to the United States from the international airport in Guatemala City, which offers a number of direct flights daily to various U.S. cities.

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<sup>35</sup> U.S. Department of State Telegram, Apr. 7, 1992, Guatemala City, Guatemala, message reference No. 03665.

<sup>36</sup> GEXPRONT, Guatemala: A Manufacturing Country by Tradition, p. 1.

<sup>37</sup> U.S. Department of State, op. cit.

<sup>38</sup> International Apparel Sourcing: Caribbean Update, "Bobbin," Feb. 1991, p. 13.

<sup>39</sup> U.S. Department of State Telegram, Apr. 7, 1992, Guatemala City, Guatemala, reference No. 03665.

<sup>40</sup> GEXPRONT, op. cit., p. 4.

The supply of electricity has been a problem in Guatemala,<sup>41</sup> as in other CBERA countries. However, the Government has recently increased generation capacity. The gains from this increased supply have been reduced somewhat by the advanced age of the Guatemalan electrical infrastructure.<sup>42</sup> In order to overcome this problem, a number of apparel firms have installed their own generators.

The main products exported to the United States from Guatemala are women's and men's cotton trousers, women's and men's cotton knit shirts, men's not-knit cotton shirts, women's coats of manmade fibers, and manmade fiber dresses. Garments assembled in Guatemala from U.S.-cut parts accounted for 69 percent of the total value of apparel exports in 1991. The only category of imports subject to import restraints under the bilateral agreement between the United States and Guatemala negotiated under the MFA covers men's and women's cotton trousers and shorts. The quota for these trousers was 95 percent filled in 1991. A guaranteed access level (GAL) under the 807A provision is provided for cotton trousers and shorts assembled in Guatemala of fabric both formed and cut in the United States (80 percent filled). Imports under this GAL accounted for 48 percent of the imports of cotton trousers from Guatemala in 1991.

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<sup>41</sup> U.S. apparel company officials, interviews by USITC staff, New York, Mar. 1992.

<sup>42</sup> U.S. Department of State Telegram, Apr. 7, 1992, Guatemala City, Guatemala, reference No1 03665.

# HONDURAS

Table 6

Honduras: Selected apparel industry indicators, 1987-91<sup>1</sup>

Item	1987	1988	1989	1990	1991
Exports (million U.S. dollars):					
World . . . . .	44	63	90	113	<sup>2</sup> 203
United States . . . . .	43	63	89	112	202
Wages <sup>3</sup> (U.S. dollars per hour) . .	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	<sup>5</sup> .88
Exchange rate (U.S. dollars per lempira) . . . . .	.35	.37	.38	.37	.37
Annual inflation rate . . . . .	2.3	4.6	9.8	23.2	38

<sup>1</sup> Employment data are not available.

<sup>2</sup> Estimated by the staff of the U.S. International Trade Commission.

<sup>3</sup> Actual wages paid to workers.

<sup>4</sup> Not available.

<sup>5</sup> Average wage for apparel workers in U.S.-owned facilities. The average wage at Asian-owned facilities is \$0.50 per hour.

Source: Trade data based on statistics from the U.S. Department of Commerce, Government of Honduras, and United Nations; wage data from U.S. Department of State; exchange rate and inflation rate data from the International Financial Statistics, International Monetary Fund.

Although apparel exports from Honduras are small relative to the other CBERA countries, they have experienced the largest percentage change since 1987. Between 1987 and 1991, apparel exports to the United States increased by approximately 370 percent, amounting to \$202.2 million in 1991 (see table 6). The United States is the largest export market for the Honduran industry. In 1991, approximately 99 percent of Honduran apparel exports were sent to the United States. Although data on Honduran apparel production are not available, a Honduran Government official indicated that the industry accounts for a significant and growing portion of total manufacturing employment in the country.<sup>43</sup>

Until recently, the Honduran Government has regulated foreign trade through the imposition of relatively high import tariffs along with restrictive foreign exchange policies. These policies reportedly have hampered the government's efforts to develop the nontraditional export sector.<sup>44</sup> In 1990, the Honduran Congress approved the Economic Structural Law, which decreased the maximum basic import tariff from 100 to 40 percent in 1990, 35 percent in 1991, and 20 percent in 1992. Currently, approximately

<sup>43</sup> Economic counselor of the Embassy of Honduras, Washington, DC, Apr. 13, 1992.

<sup>44</sup> U.S. Department of Commerce, International Trade Administration, "Investment Climate Statement: Honduras," July, 1991.

50 percent of apparel operations in Honduras are controlled by foreign investors. Approximately 25 percent of the total is owned by U.S. companies.

Currently, the official unemployment rate is 14 percent. Unofficial estimates range as high as 20 percent; however, an additional 20-25 percent of the population is underemployed.<sup>45</sup> U.S. industry officials and U.S. Government sources report that there are no labor availability problems for apparel manufacturers. The country's currency has been pegged to the U.S. dollar and therefore has been relatively stable. However, the rate of inflation has grown rapidly over the past 2 years.

Continued growth in the apparel sector is not constrained by infrastructure limitations. Electrical generating capacity reportedly is adequate to meet demand in the short term, and electricity is relatively inexpensive.<sup>46</sup> Transportation infrastructure also is adequate according to U.S. industry sources. Sea transport is available weekly and a one-way trip to the Eastern United States takes approximately 8 to 10 days. Air transport is also available.

In 1991, men's and boys' cotton trousers, men's and boys' cotton knit shirts, brassieres, cotton underwear, and men's and boys' cotton knit shirts accounted for approximately 65 percent of Honduran exports to the United States. Exports to the United States were not covered by quotas in 1991.<sup>47</sup> Approximately 73 percent of the apparel exported to the United States, however was made from U.S.-components.

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<sup>45</sup> U.S. Department of State Telegram, Mar. 26, 1992, Tegucigalpa, Honduras, message reference No. 04791.

<sup>46</sup> Rates range from \$.06 to \$.08 per kilowatt hour. Ibid.

<sup>47</sup> U.S. Department of Commerce, Performance Report, Mar. 31, 1992.

# JAMAICA

Table 7

Jamaica: Selected apparel industry indicators, 1987-91

Item	1987	1988	1989	1990	1991
Exports (million U.S. dollars):					
World . . . . .	183	221	245	279	<sup>1</sup> 284
United States . . . . .	176	206	225	247	251
Employees (thousands) . . . . .	23.6	20.6	25.3	24.5	27.0
Wages <sup>2</sup> (U.S. dollars per hour) . .	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.98	.58
Exchange rate (U.S. dollars per Jamaican dollar) . . . . .	.18	.18	.15	.14	.08
Annual inflation rate (percent) . .	6.6	8.2	14.4	21.9	58.5

<sup>1</sup> Estimated by USITC staff.

<sup>2</sup> Base wage for an apparel machine operator, to which the estimated cost of benefits has been added.

<sup>3</sup> Not available.

Source: Trade data based on statistics from the Jamaica Promotions Corp. (JAMPRO) and the U.S. Department of Commerce; Employment data from JAMPRO; wage data from U.S. Departments of Commerce and State; exchange rate and inflation rate data from the International Financial Statistics, International Monetary Fund.

Of the six countries included in this study, Jamaica is the fifth-largest exporter of apparel to the United States. The Jamaican apparel industry is dominated by the export sector. The United States is the largest export market for the Jamaican industry, which shipped an estimated 88 percent of its exports to the United States in 1991 (see table 7).

Between 1987 and 1991, total exports of apparel increased at an average annual rate of 12 percent, amounting to around \$284 million in 1991. The industry consists of 80 firms that assemble apparel for export.<sup>48</sup> Affiliates of U.S. firms account for approximately 29 percent of the Jamaican industry. All of these firms reportedly export most of their production to the United States.

Jamaica's proximity to the United States, along with its low labor costs and relatively well-developed transportation infrastructure, have influenced the decision by U.S. firms to locate operations in the country.<sup>49</sup> Other

<sup>48</sup> U.S. Department of State Telegram, Mar. 24, 1992, Kingston, Jamaica, message reference No. 02827. Information furnished by JAMPRO indicates that there may be as many as 100 companies that assemble apparel and then export to the United States.

<sup>49</sup> U.S. apparel company officials, telephone conversations with USITC staff, Mar. 1992.

factors cited include language, adequate electricity, and relative labor stability.

Compared to other countries in the region, Jamaican labor costs currently are the most competitive. The actions taken by the Government of Jamaica during 1991 to decontrol exchange rates have resulted in a sharp depreciation of the Jamaican dollar, and consequently have reduced labor costs for foreign firms. The estimated wage for a machine operator was \$0.98 per hour in 1990.<sup>50</sup> At the 1991 exchange rate,<sup>51</sup> the 1991 wage was about \$0.58 per hour. The country currently suffers from relatively high rates of unemployment (15.1 percent overall and 21.6 percent for women) and inflation.

Apparel operations in Jamaica are not hindered by infrastructure shortcomings. At present, peak demand for electricity does not exceed capacity.

Jamaica has developed an adequate transportation infrastructure.<sup>52</sup> Firms can transport their output by sea and air from Kingston and Montego Bay. However, the lack of flexibility of available transport can sometimes impede apparel operations. For example, firms can ship from Montego Bay once per week. A one-way trip takes approximately 8 to 10 days to reach the mid-Atlantic region of the United States. Although air transport offers greater flexibility, it is not cost effective on a regular basis, particularly compared to trucking costs from the Mexican border.

In 1991, cotton underwear, women's and girls cotton trousers and cotton knit shirts, and men's and boy's cotton knit shirts accounted for approximately 54 percent of Jamaica's exports (in value terms) to the United States. Jamaican apparel exports to the United States were restrained by binding quotas for only one of the top five apparel categories: cotton underwear. The quota-fill rate in 1991 for cotton underwear was 91.1 percent for non-807A and 99.8 percent for 807A products.<sup>53</sup> Approximately 69 percent of the apparel exported to the United States was made from U.S.-cut fabric in 1991.<sup>54</sup> Apparel made with U.S.-formed fabric accounted for approximately 79 percent of total imports in those categories for which 807A data are available.

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<sup>50</sup> 1990 hourly wage rates, including benefits, ranged from \$0.82 per hour for bundle handlers to \$1.70 per hour for cutters. These rates were calculated using the 1990 exchange rate. U.S. Department of State, op. cit.

<sup>51</sup> As of Mar. 20, 1992 exchange rate was U.S.\$1.00 to J\$25.82.

<sup>52</sup> U.S. company officials, telephone conversation with USITC staff, March, 1992.

<sup>53</sup> U.S. Department of Commerce, Performance Report, Mar. 31, 1992.

<sup>54</sup> Ibid.

# MEXICO

Table 8

Mexico: Selected apparel industry indicators, 1987-91

Item	1987	1988	1989	1990	1991
Exports (million U.S. dollars):					
World . . . . .	438	523	587	698	902
United States . . . . .	425	502	552	663	857
Employees (thousands) . . . . .	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	850
Wages <sup>2</sup> (U.S. dollars per hour) . .	.97	1.19	1.39	( <sup>1</sup> )	( <sup>1</sup> )
Exchange rate (U.S. dollars per Mexican peso) . . . . .	.00073	.00044	.00041	.00035	.00033
Annual inflation rate (percent) . .	159.2	51.7	19.7	29.9	18.8

<sup>1</sup> Not available.

<sup>2</sup> Actual wages paid workers, including piecework incentives and benefits.

Sources: Trade data provided by the U.S. Department of Commerce; employment and inflation rate data provided by the U.S. Department of State; wage data provided by the U.S. Department of Labor; exchange rate data provided by International Financial Statistics, International Monetary Fund.

Mexican exports of apparel to the United States doubled between 1987 and 1991 to \$857 million (see table 8). The United States remained Mexico's largest export market for apparel throughout this period. The only CBERA country to surpass Mexico in total apparel exports to the United States in any of these years was the Dominican Republic. Over 90 percent of Mexico's total apparel exports were sent to the United States in 1991.

Between 1986 and 1990, the textile and apparel industry<sup>55</sup> in Mexico accounted for about 12 percent of total manufacturing activity in the country.<sup>56</sup> Mexico's textile and apparel industry has not kept pace with growth rates in the economy at large. Indeed, while the national economy grew by about 3 percent annually between 1987 and 1991, the textile and apparel industry growth rate remained at about 1.5 percent. In response to this sluggish growth pattern, Mexico's foreign trade ministry (SECOFI) announced in

<sup>55</sup> Includes fibers.

<sup>56</sup> U.S. Department of State Telegram, Apr. 16, 1992, Mexico City, Mexico, message reference No. 10215.

April 1992 that it was in the process of developing a program to help revitalize the textile and apparel industry.<sup>57</sup>

About 11,000 apparel firms employed an estimated 850,000 workers in 1991.<sup>58</sup> Approximately 91 percent of apparel firms in Mexico are small operations with total employment numbering less than 100 per firm. The level of technological development in these firms is low, according to U.S. industry representatives.<sup>59</sup>

A significant amount of apparel production in Mexico is concentrated in maquila assembly operations along the border with the United States. Employees in maquila operations are paid about one-tenth of the wages<sup>60</sup> earned by production workers in the United States.<sup>61</sup> As the northern border region has become more congested and geared toward higher value-added products such as electronics, however, foreign apparel companies have begun to consider production in other Mexican regions, where wages are generally lower than along the border. New areas of interest include the Yucatan peninsula and the cities of Merida, Leon, and Monterrey.<sup>62</sup> A considerable amount of production is still concentrated near the border cities of Juarez and Matamoros.

Although the supply of unskilled labor--particularly outside of Mexico City--is large, chronic shortages of skilled labor and middle-management personnel exist throughout the country.<sup>63</sup> The rate of turnover in the maquila operations is high for production workers, sometimes approaching 15 percent per month. Once trained, production workers tend to leave in search of higher wages in response to high levels of demand for skilled workers in maquila operations.<sup>64</sup> U.S. industry representatives cite a varying degree of problems with inadequate quality control, slow adaptation to style changes, poor

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<sup>57</sup> Although the official Mexican Government plan to revitalize the Mexican textile and apparel industries has not yet been announced officially, U.S. Embassy representatives indicate that the most important provision will be to guarantee the availability of investment funds for state-of-the-art textile and apparel technology. In addition, the Mexican governments plans to improve the vertical integration of the production chain from fibers to textile mill products to finished apparel. See U.S. Department of State Telegram, Mexico City, Mexico, April 16, 1992, Ref. no. 10215.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

<sup>60</sup> Fringe benefits comprise approximately one-third of total labor costs.

<sup>61</sup> Minimum wages are established for separate regions of the country each year by the National Minimum Wage Commission, comprised of government, labor and private industry representatives. Currently, three different levels are in effect, with the highest minimum wages offered along the border and in Mexico City.

<sup>62</sup> Several U.S. apparel company officials indicated that they would consider establishing operations in southern Mexico, or in the State of Coahuila, and specifically in the cities of Leon and Monterrey.

<sup>63</sup> U.S. apparel company officials, interviews by USITC staff, New York, Mar. 30-31, 1992.

<sup>64</sup> Ibid. Also see "The Maquila Industry--Where to Now?," Business Mexico, Dec. 1991, p. 50.

delivery performance, insufficient plant security, and poor employee reliability.<sup>65</sup>

One of Mexico's main competitive advantages is its geographic proximity to the United States and the 2,000-mile "land bridge" along the border that provides easy access to the U.S. market. Still, a very poor road system outside of Mexico City can lead to delays in total shipment time to the United States.<sup>66</sup> The quality of Mexico's roads is inadequate, with fewer than one-tenth of primary roads having four lanes. As of early 1992, U.S. truckers were still not allowed to enter Mexico on commercial deliveries.<sup>67</sup> Time required for a shipment to the U.S. border can vary widely.<sup>68</sup> Although most shipments arrive from Mexico in the United States in 3 or 4 days, in some cases the time may vary significantly.

While demand has increased greatly for electricity, government investment in the electrical generation sector has declined, leading to shortages of supply. Foreign investors also cite development problems with Mexico's mail and telecommunications systems.<sup>69</sup> The telephone system is antiquated and inefficient. Telephone calls--both domestic and international--have poor rates of completion.<sup>70</sup> In general, shortcomings in Mexican infrastructure are regarded as similar to those encountered by U.S. firms operating in the CBERA countries.<sup>71</sup>

In 1991 the leading apparel products exported to the United States from Mexico were trousers,<sup>72</sup> brassieres, underwear, shirts, and suit-type coats. Non-807A quota fill rates in 1991 for all cotton and manmade fiber trousers, cotton and manmade fiber nightwear, and women's and girl's cotton and manmade

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<sup>65</sup> One U.S. manufacturer indicated productivity in Mexico was 85 percent of that found in the United States, during an interview by USITC staff, New York, Mar. 30, 1992.

<sup>66</sup> Mexican-owned trucks with cargo destined for the United States must be unloaded for a U.S. Customs' inspection at the border. Some U.S. companies have "interlining" agreements with Mexican trucking firms that pick up and drop off goods on the U.S. side of the border. This procedure in general does not add to the usual time requirement to cross the border. Also see "Clearing Customs," Business Mexico, May 1991, p. 46.

<sup>67</sup> U.S. apparel company officials, interviews by a telephone conversations with USITC staff, during Mar. and Apr. 1992.

<sup>68</sup> U.S. apparel company officials, interviews by a telephone conversations with USITC staff, during Mar. and Apr. 1992.

<sup>69</sup> Posthearing brief submitted by the Retail Industry Trade Action Coalition, Apr. 3, 1992, p. 2.

<sup>70</sup> In Dec. 1990 the Mexican Government-owned telephone company was privatized, with a consortium of U.S., French and Mexican investors required to install a certain number of telephone lines per year. Currently, the Mexican system has 8 lines per 100 telephones, whereas in the United States the rate is 50 per 100.

<sup>71</sup> U.S. apparel company officials, interview with USITC staff, New York, March 31, 1992.

<sup>72</sup> During 1991 Mexico supplied over 7 percent of U.S. trouser imports in the categories of 347/348 and 647/648. Imports of shirts and blouses, underwear, overalls and coveralls are also rapidly growing.

fiber not-knit shirts and blouses were 99.5 percent, 91.7 percent, and 80.8 percent, respectively; for 807A products, only the quota on trousers was binding.<sup>73</sup> Of the leading apparel exports from Mexico, brassieres and other body-supporting garments, dressing gowns and robes, as well as men's and boys' suit-type coats, remain quota-free.<sup>74</sup> In the 19 quota categories for which data are collected, over three-quarters of the apparel exported from Mexico in 1991 was assembled from U.S. components.

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<sup>73</sup> In 1988 the United States and Mexico signed a bilateral textile trade agreement, establishing a "Special Regime" that provided for increased access to the U.S. market for most apparel products assembled in Mexico from U.S.-made and cut fabrics.

<sup>74</sup> Most wool apparel, sweaters, babies' garments, and down-filled coats from Mexico are also quota free.

CHAPTER III  
MAJOR FACTORS AFFECTING COMPETITIVENESS OF  
CBERA AND MEXICAN INDUSTRIES

This chapter examines the changes in the relative competitiveness of the apparel industries of the CBERA countries versus Mexico. Four factors influencing competitiveness are analyzed in this chapter--production costs of U.S. companies operating in Mexico and in CBERA countries, fabric availability, quota availability and quality control.

U.S. apparel companies with assembly operations in the CBERA countries and Mexico usually cite low labor and transportation costs as the primary determinants of the region's competitive position. Duty eliminations under the NAFTA will influence the costs associated with sourcing in this region. The effects of a NAFTA on non-cost factors appear to be of secondary importance in comparison with the direct effects of duty eliminations on costs in evaluating changes in the relative competitiveness of these industries. Major differences in quality control between countries are usually overcome by companies with well-established and uniformly-applied management techniques. Fabric availability has been judged to have a relatively minor effect on the relative competitiveness of most CBERA and Mexican producers. Quotas have not been a major factor in determining the relative competitiveness of Mexico compared with the CBERA countries. For three of the four product categories in which quota levels on imports from Mexico were filled in 1991, the size of the adjustments made in the quota levels during the year suggests that these quantitative restraints were not binding. Therefore, these non-cost factors are discussed only to the extent that they are affected by the NAFTA. Accordingly, changes brought about by duty eliminations in the relative costs of fabric, assembly, transportation and miscellaneous costs are examined as the primary determinants of the relative competitiveness of the CBERA countries compared with Mexico. As the data in this chapter indicate, the removal of duties on U.S. imports of Mexican-made apparel is expected to reduce the costs of production for Mexican producers and improve their competitive position relative to the CBERA producers of apparel.

PRIMACY OF PRODUCTION COST FACTORS

U.S. apparel industry executives familiar with competitive conditions in the CBERA countries and Mexico frequently point out that literally hundreds of factors must be taken into consideration in deciding upon the most appropriate location for apparel manufacturing in the region.<sup>75</sup> Ultimately, however, U.S. companies with production-sharing facilities in the CBERA region and Mexico identify production cost differences as the single most important factor in deciding upon the best place to produce apparel. The cost elements most often cited are--

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<sup>75</sup> See, for example, the testimony of Michael Rothbaum, President and CEO of the Harwood Companies, USITC hearing of Mar. 17, 1992, p. 49 of official transcript.

1. Labor costs (including base wages and fringe benefits); and
2. Transportation costs to and from major U.S. ports.

Labor costs, according to most U.S. industry officials, are the leading source of production cost savings for firms assembling apparel in the CBERA countries and Mexico. Ten out of fourteen U.S. companies interviewed by ITC staff indicated that wages were a critical factor in their decision to produce in a CBERA country or Mexico.<sup>76</sup> Wage rates can differ substantially between countries, reflecting in part differences in labor productivity and quality of workmanship. Apparel industry wage rates in CBERA countries are reported to range between 58 cents and \$1.10 per hour, while the wage rate in Mexico is generally higher.<sup>77</sup>

Evidence suggests, however, that U.S.-owned 807 operations generally offer more attractive wage packages in order to attract and retain a high-quality workforce.<sup>78</sup> Moreover, U.S. companies maintain that variation in labor productivity and quality control standards result primarily from differences in company training policies and management techniques, rather than differences in the quality of the local workforce.<sup>79</sup> Thus, while sharp differences in wages and productivity may exist between countries, the size of these gaps tends to be smaller for 807 operations.

The importance of labor costs in competitiveness comparisons relates, in large part, to the labor-intensive nature of the apparel-manufacturing process. Differences in technology rarely appear as a significant source of cost advantage or disadvantage for U.S. 807 firms operating in the CBERA countries and Mexico. Indeed, as new developments in sewing technology lead to new commercial applications, most U.S. firms are able to take advantage of them quickly, modernizing assembly facilities when necessary. The absence of differences in technological capacity among 807 firms highlights again the underlying importance of differences in labor costs.

Transportation cost data collected by USITC staff indicate that both southbound and northbound ocean freight rates are quite similar for the major CBERA countries. Mexico does appear to possess a distinct cost advantage in this area.<sup>80</sup> This is reflected in the noticeable differences between CBERA and Mexican freight cost components in the production cost sheets for the six products that follow in the next section of the report. Six of the fourteen U.S. apparel companies contacted by ITC staff noted that transportation costs

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<sup>76</sup> Out of 21 U.S. apparel companies surveyed, 14 responded. Of these, 10 specifically cited labor costs.

<sup>77</sup> For a survey of wages across the region, see individual country profiles in Chapter II and "1991 8th Annual 807/CBI Comparative Cost Analysis," Bobbin, Nov. 1991, p. 45.

<sup>78</sup> Regional variation in wage rates within a country can also exist, especially in large, economically-diverse countries like Mexico.

<sup>79</sup> U.S. apparel company official, telephone interview with USITC staff, Apr. 10, 1992.

<sup>80</sup> Analysis of CIF and FOB unit value data for key apparel items suggests that, at an aggregate level, Mexican operations can cut transport costs by as much as two-thirds over leading CBERA competitors.

were an important reason influencing their decision to produce in the Caribbean and Central American region.

#### PRODUCTION COST COMPARISONS

For the six representative apparel products selected for detailed analysis, production cost comparisons have been made between CBERA and Mexican producers. Cost analysis is performed for both 807 and 807A transactions--i.e., for apparel assembled with U.S.-cut fabric parts. Fabric costs represented in the column of tables 9-14 labeled "U.S.-Cut Fabric" apply to fabrics woven or knit outside of the United States but cut in the United States (807). The column labeled "U.S.-Formed and Cut Fabric," on the other hand, reflects the cost of fabrics both manufactured and cut in the United States (807A).

Mexican producers, in the absence of NAFTA benefits, currently have a competitive cost advantage in only one of the six products--blue jeans. Production costs for a second item, knit golf shirts, are approximately the same in Mexico and the leading CBERA supplier country. For the remaining four products, however, Mexican costs are currently higher. In some cases, the Mexican cost disadvantage is large (e.g., just under 20 percent for a typical ladies' coat). (See tables 9-14 below).

As the product-by-product analysis below indicates, duty reductions brought about by NAFTA will have a noticeable effect on total production costs across the board. At a minimum, elimination of duties on imported Mexican apparel will \* \* \* total costs for a typical Mexican producer by \* \* \*. For one product--the suit-type coat--duty removal results in a \* \* \* in total cost for Mexican producers.

In addition to the Mexican cost advantage in blue jean production, which can be expected to widen under a NAFTA, the duty-elimination effect will push Mexican producers into a position of overall cost advantage vis-a-vis their principal Caribbean competitors in the production of knit shirts and polyester blouses. For t-shirt producers, removal of the duty will improve the position of Mexican producers in comparison with CBERA competitors. With regard to women's suit-type coats and brassieres--two products with high labor cost-to-total cost ratios--Mexico will remain at a cost disadvantage even after the elimination of the duties. For these two products, relatively high labor costs in Mexico compared to leading CBERA producers will mitigate the cost savings achieved through a NAFTA duty elimination.

The calculated cost for items assembled in CBERA countries is a composite figure, compiled by taking a trade-weighted average of production costs in the leading Caribbean Basin supplier countries for each product. In some cases, limitations on the availability of reliable cost data have dictated the selection of only one CBERA country to be used as the regional benchmark in comparisons with Mexico. For all products, certain costs (fabric, trim, U.S. freight component) are assumed to be identical for both Mexican and CBERA production-sharing transactions. This is a reasonable assumption given the ability of U.S. firms to source fabrics and other U.S. components at similar prices, regardless of the assembly site. The crucial

differences in costs, as the tables will show, are related to foreign assembly, transportation, and duties.

Production cost figures for Mexico and leading CBERA suppliers, as well as an analytical overview of expected NAFTA effects for the six products, are presented below.

Table 9  
Men's cotton t-shirts<sup>1</sup>

(U.S. dollars per dozen)				
Item	Mexico		CBERA <sup>2</sup>	
	U.S.-formed and cut fabric	U.S.-cut fabric	U.S.-formed and cut fabric	U.S.-cut fabric
Fabric . . . . .	11.99	13.67	11.99	13.67
Assembly <sup>3</sup> . . . . .	***	***	***	***
Freight <sup>4</sup> . . . . .	0.97	0.97	1.21	1.21
Duty <sup>5</sup> . . . . .	1.06	1.06	0.66	0.66
Other <sup>6</sup> . . . . .	***	***	***	***
Total cost (U.S. entry port) . .	19.81	21.49	17.74	19.42

<sup>1</sup> HTS subheading 6109.10.0005; MFA quota category 352.

<sup>2</sup> Based on data collected for t-shirt producers in Jamaica. U.S. imports of t-shirts from Jamaica represented 69.0 percent of total t-shirt imports from CBERA countries in 1991.

<sup>3</sup> Includes overhead costs.

<sup>4</sup> Includes both inland U.S. and non-U.S. freight costs. Duties are assessed only on the non-U.S. portion of this item.

<sup>5</sup> For 807 and 807A transactions, duties are assessed only on the non-U.S. value added.

<sup>6</sup> Includes miscellaneous trim, brokers' fees, etc.

#### All-Cotton T-shirts

Fabric availability and cost do not appear to be critical issues for U.S. apparel companies assembling cotton undershirts in the Caribbean Basin and Mexico. Indeed, U.S. industry sources have indicated that most cotton fabrics used to make t-shirts can be sourced easily and competitively from U.S. mills. Neither the "yarn-forward" nor "fabric-forward" rule of origin, therefore, would substantially affect the competitiveness of Mexican t-shirt assembly operations under a NAFTA.

\* \* \*. The removal of a \$1.06/dozen duty on imported Mexican t-shirts lowers the total cost of the product by 5.4 percent to \$18.75 per dozen for firms using U.S.-formed and cut fabric. This reduction in cost would narrow the Mexican operation's cost disadvantage from 11.7 percent to 5.7 percent in comparison to a typical Caribbean Basin operation.

Quota liberalization for imported t-shirts does not appear to be a significant issue for U.S. 807 producers. Quota fill rates for cotton underwear and cotton knit shirts are both quite low.<sup>81</sup>

Table 10  
Men's all-cotton knit golf shirts<sup>1</sup>

(U.S. dollars per dozen)				
Item	Mexico		CBERA <sup>2</sup>	
	U.S.-formed and cut fabric	U.S.-cut fabric	U.S.-formed and cut fabric	U.S.-cut fabric
Fabric . . . . .	34.93	32.33	34.93	32.33
Assembly <sup>3</sup> . . . . .	***	***	***	***
Freight <sup>4</sup> . . . . .	1.87	1.87	3.60	3.60
Duty <sup>5</sup> . . . . .	2.80	2.80	2.47	2.47
Other <sup>6</sup> . . . . .	***	***	***	***
Total cost (U.S. entry port) . .	63.75	61.15	63.58	60.98

<sup>1</sup> HTS subheading 6105.10.0010; MFA quota category 338.

<sup>2</sup> Based on data collected for knit shirt producers in the Dominican Republic. U.S. imports of knit golf shirts from the Dominican Republic represented 25.7 percent of total golf shirt imports from CBERA countries in 1991. The Dominican Republic was the major CBERA supplier of knit golf shirts in 1991.

<sup>3</sup> Includes overhead costs.

<sup>4</sup> Includes both inland U.S. and non-U.S. freight costs. Duties are assessed only on the non-U.S. portion of this item.

<sup>5</sup> For 807 and 807A transactions, duties are assessed only on the non-U.S. value added.

<sup>6</sup> Includes miscellaneous trim, brokers' fees, etc.

#### All-Cotton Knit Golf Shirts

Assembly and freight costs together constitute \* \* \* of the total landed production cost for both CBERA and Mexican producers exporting to the United States. Although dyed cotton fabric used in the construction of this item can be sourced readily in the United States, industry sources have indicated that fabric formed outside of North America can be purchased at more competitive prices--resulting in a savings of approximately \$2.60 per dozen shirts (about 4 percent of total cost). A "fabric-forward" or "yarn-forward" rule of origin, therefore, might be expected to have a slight negative impact on the competitive position of Mexican producers who might otherwise reduce fabric costs under a "substantial transformation" rule.

<sup>81</sup> U.S. Department of Commerce data. The fill rate for Mexican underwear in 1991 was 20.3 percent. The fill rate for cotton knit t-shirts, category 338 (0) was 5.2 percent in 1991.

Under all rules of origin scenarios, however, the removal of the duty on golf shirts (21.0 percent on the foreign value-added) would place the typical Mexican producer in a position of marginal cost advantage over competitors in the Caribbean Basin. For example, a manufacturer using U.S.-formed fabric would see his bottom-line, landed cost fall by \$2.80 per dozen shirts, from \$63.75 to \$60.95--a 4.4-percent reduction in total cost. \* \* \*.

The removal of U.S. import quotas on Mexican-made cotton knit shirts would not, in all likelihood, have an important effect on competitiveness. In recent years the knit shirts quota for Mexico has not been highly utilized.<sup>82</sup>

Table 11  
Men's blue jeans<sup>1</sup>

(U.S. dollars per dozen)				
Item	Mexico		CBERA <sup>2</sup>	
	U.S.-formed and cut fabric	U.S.-cut fabric	U.S.-formed and cut fabric	U.S.-cut fabric
Fabric . . . . .	44.30	44.30	44.30	44.30
Assembly <sup>3</sup> . . . . .	***	***	***	***
Freight <sup>4</sup> . . . . .	1.86	1.86	3.20	3.20
Duty <sup>5</sup> . . . . .	3.92	3.92	4.94	4.94
Other <sup>6</sup> . . . . .	***	***	***	***
Total cost (U.S. entry port) . .	81.03	81.03	88.50	88.50

<sup>1</sup> HTS subheading 6203.42.4010; MFA quota category 347.

<sup>2</sup> Based on data collected for jeans producers in Costa Rica and Honduras. U.S. imports of blue jeans from Costa Rica and Honduras represented 64.3 percent of total imports of blue jeans from CBERA countries in 1991.

<sup>3</sup> Includes overhead costs.

<sup>4</sup> Includes both inland U.S. and non-U.S. freight costs. Duties are assessed only on the non-U.S. portion of this item.

<sup>5</sup> For 807 and 807A transactions, duties are assessed only on the non-U.S. value added.

<sup>6</sup> Includes miscellaneous trim, brokers' fees, etc.

### Blue Jeans

Denim fabric used by U.S. apparel producers in the Caribbean Basin and Mexico can be sourced easily in the United States, and U.S. mills rank among the world's most cost-competitive producers of this type of fabric. This fact is reflected in the fabric cost data in table 11, which shows identical prices for U.S. and non-U.S. denim fabric. Most jeans producers appear to have little difficulty finding U.S. fabric. As a result, neither the

<sup>82</sup> U.S. Department of Commerce data indicate the 1991 fill rate for category 338 (S), cotton knit shirts other than t-shirts, was 41.8 percent.

"yarn-forward" nor "fabric-forward" rule of origin scenarios would detract from the competitiveness of Mexican assembly operations under a NAFTA.

Non-U.S. freight and assembly costs for blue jeans represent \* \* \* of the total cost for Mexican-made jeans and \* \* \* for trousers assembled in a typical CBERA facility. The large volumes of blue jean production in Costa Rica (a relatively high-cost supplier) influence assembly costs in the composite CBERA product. Lower assembly costs in Mexico, in relation to Costa Rica, help explain the lower pre-NAFTA cost figure of \$81.03 per dozen--8.4-percent lower than the total cost for a typical CBERA assembly operation. Table 1 shows that removal of the duty lowers the total cost figure for Mexico by \$3.92 (a 4.8 percent reduction), and widens the Mexican cost advantage to 12.9 percent over CBERA producers.

In addition to the duty-removal effect, elimination of quotas on Mexican-made jeans can be expected to enhance the competitiveness of producers in Mexico under the NAFTA. During the 1991 quota year, the fill rates for quotas on imported Mexican trousers were 88.2 and 99.3 percent.<sup>83</sup> However, U.S. import quotas for these items were increased significantly during that year.

Table 12  
Women's polyester blouses<sup>1</sup>

(U.S. dollars per dozen)				
Item	Mexico		CBERA <sup>2</sup>	
	U.S.-formed and cut fabric	U.S.-cut fabric	U.S.-formed and cut fabric	U.S.-cut fabric
Fabric . . . . .	76.08	71.28	76.08	71.28
Assembly <sup>3</sup> . . . . .	***	***	***	***
Freight <sup>4</sup> . . . . .	2.39	2.39	3.88	3.88
Duty <sup>5</sup> . . . . .	5.23	5.23	4.66	4.66
Other <sup>6</sup> . . . . .	***	***	***	***
Total cost (U.S. entry port) . .	119.64	114.84	118.40	113.60

<sup>1</sup> HTS subheading 6206.40.3030; MFA quota category 641.

<sup>2</sup> Based on data collected for blouse producers in Guatemala and the Dominican Republic. U.S. imports of polyester blouses from Guatemala and the Dominican Republic represented 47.8 percent of total polyester blouse imports from CBERA countries in 1991.

<sup>3</sup> Includes overhead costs.

<sup>4</sup> Includes both inland U.S. and non-U.S. freight costs. Duties are assessed only on the non-U.S. portion of this item.

<sup>5</sup> For 807 and 807A transactions, duties are assessed only on the non-U.S. value added.

<sup>6</sup> Includes miscellaneous trim, brokers' fees, etc.

<sup>83</sup> U.S. Department of Commerce data for category 347/348/647/648.

## Polyester Blouses

Fabric availability appears to be a major issue for U.S. companies manufacturing blouses in the Caribbean Basin and Mexico. One U.S. apparel firm, for example, insists that the equipment necessary to spin the yarn used in the construction of the polyester fabric simply does not exist in the United States.<sup>84</sup> Informal surveys of U.S. sources revealed a price gap between certain U.S. and imported polyester fabrics used as inputs in these blouses. As a result, some U.S. companies find it difficult to assemble high-quality blouses under the 807A assembly program. Moreover, companies currently producing blouses with non-U.S. fabric would be expected to face higher fabric costs under either a "yarn-forward" or "fabric-forward" NAFTA rule of origin. Higher fabric costs would jeopardize the competitive position of post-NAFTA Mexican operations and reduce the likelihood of investment diversion away from competing blouse suppliers in CBERA countries.

For 807 assembly operations using high-priced polyester fabric of this kind, \* \* \*. The duty reduction associated with the NAFTA, would have a notable effect on the bottom-line costs of Mexican producers. Removal of a \$5.23 duty (4.4 percent of total cost) would give the typical Mexican 807A producer a 3.4 percent-cost advantage over a competing operation in the Caribbean Basin. This compares with a Mexican cost disadvantage of 1.0 percent prior to NAFTA.

The quota-fill rate for Mexican blouses surpassed 80 percent during the 1991 quota year.<sup>85</sup> This suggests that levels of Mexican production were lower as a result of U.S. import restraints than might otherwise have been the case.

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<sup>84</sup> U.S. apparel company officials, interview with USITC staff, New York, Mar. 31, 1992.

<sup>85</sup> U.S. Department of Commerce data for category 341/641, cotton and manmade fiber non-knit blouses. The quota fill rate for 1991 was 80.8 percent.

Table 13  
Brassieres<sup>1</sup>

(U.S. dollars per dozen)				
Item	Mexico		CBERA <sup>2</sup>	
	U.S.-formed and cut fabric	U.S.-cut fabric	U.S.-formed and cut fabric	U.S.-cut fabric
Fabric . . . . .	9.93	11.32	9.93	11.32
Assembly <sup>3</sup> . . . . .	***	***	***	***
Freight <sup>4</sup> . . . . .	1.08	1.08	1.49	1.49
Duty <sup>5</sup> . . . . .	1.05	1.05	0.62	0.62
Other <sup>6</sup> . . . . .	***	***	***	***
Total cost (U.S. entry port) . .	18.71	20.10	16.10	17.49

<sup>1</sup> HTS subheading 6212.10.2020; MFA quota category 649.

<sup>2</sup> Based on data collected for brassiere producers in Costa Rica, the Dominican Republic, and Honduras. U.S. imports of brassieres from Costa Rica, the Dominican Republic, and Honduras represented 78.5 percent of total U.S. brassiere imports from CBERA countries in 1991.

<sup>3</sup> Includes overhead costs.

<sup>4</sup> Includes both inland U.S. and non-U.S. freight costs. Duties are assessed only on the non-U.S. portion of this item.

<sup>5</sup> For 807 and 807A transactions, duties are assessed only on the non-U.S. value added.

<sup>6</sup> Includes miscellaneous trim, brokers' fees, etc.

### Brassieres

According to U.S. apparel industry sources, U.S. brassiere manufacturers with 807 operations in the Caribbean Basin and Mexico use U.S.-formed fabric almost exclusively. U.S. prices for synthetic fiber knit fabrics used in the construction of the brassiere are regarded as competitive compared with other major world suppliers. As a result, a strict NAFTA rule of origin would probably have little if any additional impact on the competitiveness of U.S. producers. The effects of duty elimination would therefore be similar under the "yarn-forward," "fabric-forward," and "substantial transformation" scenarios.

Based on production cost data collected for Mexico and three major CBERA suppliers, the elimination of duties on brassieres imported from Mexico would reduce the size of the cost disadvantage of assembly operations in Mexico. \* \* \*. Indeed, this proves to be the case, with the removal of a \$1.05/dozen duty resulting in a 5.6-percent reduction in overall cost for Mexican-made items. The duty removal would improve the typical Mexican producer's comparative cost position markedly--from a disadvantage of 16.2 percent in comparison with CBERA producers to a disadvantage of only 9.7 percent.

Quota liberalization is not a critical issue for brassiere producers, since Mexican brassieres are not currently restricted under the U.S. quota program.

Table 14  
Women's suit-type coats<sup>1</sup>

(U.S. dollars per dozen)				
Item	Mexico		CBERA <sup>2</sup>	
	U.S.-formed and cut fabric	U.S.-cut fabric	U.S.-formed and cut fabric	U.S.-cut fabric
Fabric . . . . .	64.44	77.97	64.44	77.97
Assembly <sup>3</sup> . . . . .	***	***	***	***
Freight <sup>4</sup> . . . . .	3.44	3.44	12.16	12.16
Duty <sup>5</sup> . . . . .	27.22	27.22	16.19	16.19
Other <sup>6</sup> . . . . .	***	***	***	***
Total cost (U.S. entry port) . .	257.47	271.00	214.66	228.19

<sup>1</sup> HTS subheading 6204.39.3010; MFA quota category 634.

<sup>2</sup> Based on data collected for coat producers in the Dominican Republic and Guatemala. U.S. imports of suit-type coats from the Dominican Republic and Guatemala represented 87.8 percent of total U.S. suit-type coats from CBERA countries in 1991.

<sup>3</sup> Includes overhead costs.

<sup>4</sup> Includes both inland U.S. and non-U.S. freight costs. Duties are assessed only on the non-U.S. portion of this item.

<sup>5</sup> For 807 and 807A transactions, duties are assessed only on the non-U.S. value added.

<sup>6</sup> Includes miscellaneous trim, brokers' fees, etc.

### Suit-type Coats

Data collected from U.S. apparel industry sources indicate that non-U.S. fabrics typically used in the construction of a manmade-fiber women's coat costs substantially more than similar U.S.-formed fabrics. The fabric cost differential is estimated at \$13.53 per dozen garments--5 percent of the total cost of a Mexican-made coat. This cost differential suggests that under a "yarn-forward" or "fabric-forward" rule of origin, U.S. companies assembling these coats in Mexico would not face higher costs than under a "substantial transformation" rule.

\* \* \*. The elimination of a \$27.22/dozen duty for a Mexican-made item would in fact lower the total cost to \$230.25 per dozen for coats assembled from U.S. fabric--a 10.6-percent reduction. This would narrow the cost disadvantage for Mexican producers compared with their CBERA counterparts from 19.9 to 7.3 percent.

Imports of Mexican-made suit-type coats are not currently restricted by U.S. quotas. As a result, the removal of quotas under NAFTA is not expected to have an important impact on the competitiveness of Mexican-made coats.

### Note on Cost Data

As the data demonstrate, wide variations can exist in the relative cost competitiveness of producers in some countries based on the type of product that is being analyzed. For certain "commodity" items such as t-shirts, improvements in factory automation and productivity can sharply reduce unit assembly costs. These differences are very difficult to predict based on aggregated comparisons of country labor cost data. Within countries, moreover, significant differences can exist in labor costs between regions. In northern Mexico, for example, labor shortages fueled by new investment in maquiladora assembly operations in apparel and other industries have put upward pressure on wages. Assembly costs in these areas may be 2 to 3 times higher than in more remote areas such as the Yucatan Peninsula. Comparisons of assembly costs between countries, therefore, may be skewed somewhat by prevailing regional variation in labor market conditions. Shifts in the relative cost competitiveness of Mexican and CBERA apparel operations may at times reflect these imperfections in data collection.

### OTHER FACTORS

In addition to objective, quantifiable cost factors such as labor and transportation costs, companies assembling apparel in the Caribbean Basin and Mexico take other noncost factors into account in performing their competitiveness analysis. Most critical in this regard are the issues of quota availability, product quality, and the availability of competitively priced fabrics--particularly those fabrics formed and cut in the United States.

Changes introduced by the NAFTA, as a general rule, will affect the relative competitiveness of the CBERA countries and Mexico primarily through changes in production costs associated with the elimination of duties. To the extent that non-cost factors are also influenced by the NAFTA, they are investigated here. Most firms operating in these countries, however, regard these factors as secondary.<sup>86</sup> Accordingly, these factors are not treated here as primary determinants of changes in relative competitiveness brought about by a NAFTA.

### Fabric Availability

Neither Mexico nor any CBERA country is a major supplier of yarns and fabrics used by U.S. assembly operations in the region. Indeed, poor fabric quality and rather high production costs are regarded as serious problems limiting the use of Mexican-made fabrics in apparel assembled for export.<sup>87</sup> Likewise, in the Caribbean Basin, the textile mill industry is underdeveloped

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<sup>86</sup> U.S. apparel company officials, interviews with USITC staff during March and April 1992.

<sup>87</sup> For a more detailed discussion of the Mexican textile mill industry and its shortcomings, see U.S. International Trade Commission, The Likely Impact on the United States of a Free Trade Agreement with Mexico, USITC publication 2353, Feb. 1991, pp. 4-38, 4-39.

and unable to supply U.S. apparel producers with sufficient quantities of top-quality fabrics. Evidence of this fact can be seen in the very high ratio of 807 trade to total apparel exports in the CBERA countries. The almost complete reliance of these countries on production-sharing programs highlights the poorly developed state of the textile industry there. None of the CBERA countries is a major exporter of basic textile products to the United States.

The absence of competitively priced, high-quality inputs produced by Mexican or CBERA sources has forced U.S. companies to study more carefully the implications of the NAFTA rules-of-origin scenarios.<sup>88</sup> Many U.S. importers of apparel contend that a restrictive NAFTA rule of origin such as the "yarn-forward" or "fabric-forward" standard would sharply limit the scope of apparel items eligible for benefits under the NAFTA, effectively pricing some U.S.-owned operations in Mexico out of the U.S. market. Importers cite the problems faced in particular by producers of blouses, shirts, and dresses, who frequently require relatively small amounts of a variety of fabrics in their assembly processes.<sup>89</sup> Finally, many companies believe that the administrative burden associated with a strict NAFTA rule of origin would introduce additional costs, undermining the competitiveness of Mexican-made apparel. U.S. apparel company executives point out that fabric choice and quality are often critical elements of their production strategies. Under a "yarn-forward" or "fabric-forward" rule of origin requiring the use of North American materials in the assembly of garments, these manufacturers expect the competitiveness of some specialty apparel items to suffer.<sup>90</sup> In performing cost analysis for the six apparel items in this report, the Commission has found that a strict rule of origin could have an effect on the competitive position of one product in particular--the polyester blouse.<sup>91</sup>

### Quality Control

With regard to quality control issues, U.S. industry officials contend that Caribbean operations tend to be very similar to those in Mexico, both in terms of the average number of defects per garment and the average number of seconds generated per production batch.<sup>92</sup> Most of the differences in quality control between CBERA and Mexican facilities, according to U.S. executives, result from differences in management techniques.<sup>93</sup> These differences usually depend more on company training policies and philosophy rather than on the

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<sup>88</sup> See the testimony of George Silva, vice president, Warnaco, USITC hearing of Mar. 17, 1992, p. 109 of official transcript.

<sup>89</sup> Testimony of Martin J. Lewin on behalf of the U.S. Association of Importers of Textiles and Apparel, USITC hearing, Mar. 17, 1992, p. 96 of official transcript.

<sup>90</sup> See testimony of George Silva, vice president, Warnaco, USITC hearing of Mar. 17, 1992, p. 117 of official transcript.

<sup>91</sup> See discussion of competitive factors in "Production Cost Comparisons" section above. In a supplemental post-hearing brief Warnaco contended that 49 out of 80 fabrics used by its men's wear division were not available in the United States.

<sup>92</sup> Testimony of George Silva, p. 121 of official transcript.

<sup>93</sup> Ibid.; also telephone interview with U.S. apparel company official, Apr. 10, 1992.

characteristics of the local workforce. Many firms maintain that they can produce high-quality apparel anywhere in the world as long as the local employees are trained according to company standards. Ultimately, therefore, quality control does not appear to be a major source of competitive advantage or disadvantage for firms operating in Mexico or the Caribbean Basin.

### Quotas

In order to fully understand the competitive effects of a NAFTA, it is also necessary to analyze the effects of a NAFTA-related removal of all U.S. import quotas on apparel assembled in Mexico.

Of all categories of Mexican-made apparel under restraint by U.S. import quotas in 1991, only four categories had quota fill rates exceeding 80 percent (a typical threshold level used in determining whether quotas are fully effective or binding).<sup>94</sup> These categories included imports of women's and girls' cotton and manmade fiber blouses, cotton and manmade fiber trousers, cotton and manmade fiber nightwear, and cotton coveralls.<sup>95</sup> Two quota categories (nightwear and coveralls) were binding for non-807A quotas only. One category (trousers) was binding in the case of both 807A and non-807A quotas, while the bound import quota for blouses included both 807A and non-807A products grouped together. For three of these four categories (trousers, nightwear, and coveralls) significant upward adjustments were negotiated in the quotas to accommodate increased imports under the 807A program. The size of these increases and the flexibility of the quotas suggest that these quantitative restraints were in fact nonbinding in 1991. The Commission has concluded that these quotas had no real effect on the competitive position of U.S.-companies operating in Mexico, particularly those importing under 807A.

Only imports of women's blouses, therefore, appeared to be effectively bound by U.S. import quotas.<sup>96</sup> Removal of import quotas on this item would therefore result in an advantage for U.S. firms producing blouses in Mexico. Although studies have attempted to estimate the extent to which binding quotas under the MFA raise the price of imported apparel,<sup>97</sup> it is unclear to what extent these estimates apply to Mexico. It is impossible, therefore, to quantify with any certainty the price effects of removing this particular quota.<sup>98</sup> Overall, however, for the reasons cited above, the elimination of U.S. import quotas will not have a substantial impact on the competitiveness of producers in Mexico vis-a-vis their principal competitors in CBERA countries.

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<sup>94</sup> Data collected from the U.S. Department of Commerce.

<sup>95</sup> Quota categories 341/641, 347/348/647/648, 351/651, and 359, respectively.

<sup>96</sup> The fill rate for category 341/641 in 1991 was 80.8 percent, according to U.S. Department of Commerce data.

<sup>97</sup> See The Economic Effects of Significant U.S. Import Restraints, Phase 1: Manufacturing, USITC Publication 2222, Oct. 1989, p. 4-2.

<sup>98</sup> Based on the analysis of quotas performed in USITC Publication 2222, the tariff-rate equivalent for imports of manmade fiber blouses is 34.1 percent. This compares with a nominal tariff rate of 29.2 percent.

As background, for the six products selected for detailed cost analysis in this report, only U.S. imports of cotton trousers were quota-bound for more than one CBERA country in 1991.<sup>99</sup> The only other bound categories applying to these six products in 1991 were the non-807A limit for men's cotton knit shirts imported from the Dominican Republic<sup>100</sup>, as well as the 807A and non-807A quotas on imports of cotton underwear from Jamaica.<sup>101</sup>

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<sup>99</sup> Men's and boys' cotton trouser quotas (category 347/348) were filled for Costa Rica, the Dominican Republic, and Guatemala in 1991.

<sup>100</sup> Category 338.

<sup>101</sup> Category 352--includes cotton undershirts.

## CHAPTER IV

### APPAREL INDUSTRY INVESTMENT IN CBERA COUNTRIES AND MEXICO

Above and beyond cost competitiveness, U.S. firms must also weigh the impact of the host country's investment climate in deciding upon a manufacturing location. The incentives offered to attract export-oriented investments, the quality of infrastructure, as well as the general macroeconomic and political environment are all elements in the investment decision-making process.

This chapter briefly analyzes some of the investment climate issues that may arise in the CBERA countries and in Mexico. Profiles of recent apparel investment trends in the CBERA countries and Mexico are also provided. These profiles describe the importance of both U.S. and Asian investment in the apparel sectors of the CBERA countries and Mexico, and they describe some of the factors that were important determinants of past investment decisions. This section serves as background for the analysis of NAFTA-induced effects on investment in Chapter V.

#### FACTORS INFLUENCING INVESTMENT DECISIONS

##### Investment Policies and Incentives

Each of the six countries under review in this report has implemented a number of investment policies designed to encourage investment in export-oriented industries. These policies also apply to U.S. apparel companies that operate in the CBERA countries and Mexico. Current applicable investment policies for all of the six countries are summarized and compared in Figure 3.

The information in Figure 3 indicates a very high degree of conformity in the treatment of foreign direct investment by the CBERA countries and Mexico. For instance, all countries provide liberal tax incentives for firms operating in FTZs--special areas designated by the host government to encourage export-oriented investment. These incentives include exemptions from income taxes, import duties, and local sales taxes on production for export purposes. In addition, foreign firms operating in FTZs in the CBERA countries and in maquiladoras in Mexico are allowed unrestricted remittances of profits and repatriation of capital. Exchange rate policies also allow relatively unhindered currency conversions for these firms. Figure 3 also shows that investment policies in the CBERA countries and Mexico tend to discourage local sales by foreign companies. Local sales are subject to taxation and--in some cases--the amount of a firm's production that can be sold locally is restricted.

Interviews with U.S. apparel company officials indicate that the investment incentive packages offered by the CBERA Governments and Mexico affect investment location decisions only marginally, if at all. Only 3 out of the 14 companies interviewed by ITC staff identified host government incentives as a significant factor influencing their decision to locate in a particular country. Rather than reflecting the insignificance of these policies, this apparent indifference probably underscores the fact that the incentive programs offered throughout the region are practically identical.

## INVESTMENT POLICIES

	<i>Costa Rica</i>	<i>Dominican Republic</i>	<i>Guatemala</i>	<i>Honduras</i>	<i>Jamaica</i>	<i>Mexico</i>
<b>INCOME TAX POLICY</b>	<ul style="list-style-type: none"> <li>• 100% exemption first 12 years, 50% next 6 years in designated areas of FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption 15-20 years in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption for 12 years in FTZs</li> <li>• 100% exemption for 10 years for revenue obtained from goods exported outside Cen. America</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption for perpetuity in FTZs<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption for perpetuity in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal tax paid in maquilas<sup>1</sup></li> </ul>
<b>IMPORTS OF MACHINERY, EQUIPMENT AND INPUTS FOR PRODUCTION</b>	<ul style="list-style-type: none"> <li>• Duty-free in FTZs and under Temporary Admission System</li> <li>• Duty exemption proportional to export sales in the Export Contract Syst.</li> </ul>	<ul style="list-style-type: none"> <li>• Duty-free in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Duty-free</li> </ul>	<ul style="list-style-type: none"> <li>• Duty-free in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Duty-free in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Duty-free in the maquiladoras</li> </ul>
<b>PROFIT REMITTANCES</b>	<ul style="list-style-type: none"> <li>• Unrestricted in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted</li> </ul>
<b>CAPITAL REPATRIATION</b>	<ul style="list-style-type: none"> <li>• No controls in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• No controls in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• No controls</li> </ul>	<ul style="list-style-type: none"> <li>• No controls in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• With prior approval, 100% permitted up to original investment without Central Bank intervention</li> </ul>	<ul style="list-style-type: none"> <li>• No controls</li> </ul>
<b>EXCHANGE RATE POLICIES</b>	<ul style="list-style-type: none"> <li>• Unrestricted currency conversion in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted currency conversion in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted currency conversion</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted currency conversion in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Unrestricted currency conversion</li> </ul>	<ul style="list-style-type: none"> <li>• Government requires conversions in the maquiladora operations, but at market rate</li> </ul>
<b>FINANCING ARRANGEMENTS</b>	<ul style="list-style-type: none"> <li>• Eligible for 936 funds<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Eligible for 936 funds</li> <li>• FTZ operators eligible for preferential interest rates on Central Bank loans</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of government-backed financing at preferential rates for certain projects</li> </ul>	<ul style="list-style-type: none"> <li>• Eligible for 936 funds</li> </ul>	<ul style="list-style-type: none"> <li>• Eligible for 936 funds</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>
<b>CUSTOMS PROCEDURES</b>	<ul style="list-style-type: none"> <li>• Expedited on-site in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Expedited on-site in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Expedited on-site in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Expedited on-site in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Expedited on-site in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Government assistance in customs clearance in maquilas</li> </ul>
<b>EMPLOYEE TRAINING PROGRAMS</b>	<ul style="list-style-type: none"> <li>• Government-sponsored training at the Costa Rican National Training Institute and Technological Institute</li> </ul>	<ul style="list-style-type: none"> <li>• Government-sponsored training offered through the Instituto Nacional de Formacion Técnico Profesional</li> </ul>	<ul style="list-style-type: none"> <li>• Training provided through the Guatemalan NonTraditional Product Exporters Association</li> </ul>	<ul style="list-style-type: none"> <li>• Limited</li> </ul>	<ul style="list-style-type: none"> <li>• Government-sponsored training offered</li> </ul>	<ul style="list-style-type: none"> <li>• Government-sponsored training offered</li> <li>• Some maquila-sponsored training offered</li> </ul>
<b>TAX EXEMPTIONS AND OTHER POLICIES</b>	<ul style="list-style-type: none"> <li>• 100% exemption from sales, export, local, and consumer taxes in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption from import, export, business license, municipal and production taxes</li> <li>• Industrial Development Corporation may offer lease space at subsidized rents in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption from taxes and other charges applicable to raw materials necessary to produce electricity in FTZs</li> <li>• 100% exemption from VAT, legal paper tax, stamp tax, property tax (5 years) in FTZs</li> <li>• Government guarantees of reimbursement in cases of inconvertibility or expropriation</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption from import, export, local, sales and excise taxes in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• 100% exemption from property, import and export taxes in FTZs</li> </ul>	<ul style="list-style-type: none"> <li>• Government assistance in complying with registration requirements</li> <li>• 100% refund of VAT in maquilas if goods are re-exported</li> </ul>
<b>SALES TO LOCAL MARKET</b>	<ul style="list-style-type: none"> <li>• With government authorization, 40% of local production permitted with payment of import duties</li> </ul>	<ul style="list-style-type: none"> <li>• 20% of local production permitted with payment of import duties if 25% or more local value added, or if product not elsewhere manufactured in DR</li> </ul>	<ul style="list-style-type: none"> <li>• With government authorization, 20% of production permitted with payment of import duties</li> </ul>	<ul style="list-style-type: none"> <li>• Currently none permitted</li> </ul>	<ul style="list-style-type: none"> <li>• Currently none permitted</li> </ul>	<ul style="list-style-type: none"> <li>• With government authorization and payment of VAT and import duties, the lesser of (1) up to 50 percent of the prior year's production or (2) value of the current year's operating expenses to date</li> </ul>

Figure 3

#### FOOTNOTES

<sup>1</sup> Taxable revenues for maquilas are calculated from sales of maquila services, e.g. assembly, which includes Mexican labor and overhead. Therefore, even under Mexico's federal corporate income tax rate of 35 percent, the taxes paid to the Mexican authorities tend to be minimal.

<sup>2</sup> Outside of the FTZs and industrial parks, companies are taxed at varying rates and are subject to limitations on profit remittances and capital repatriation.

<sup>3</sup> Under Section 936 of the U.S. Internal Revenue Code, qualified investors can borrow tax-deferred funds belonging to U.S. subsidiaries operating in U.S. possessions such as Puerto Rico. In 1986, modifications to U.S. and Puerto Rican tax laws allowed such funds deposited with Puerto Rican banks to be made available as loans to eligible borrowers for qualified projects at below-market rates. Financing using 936 funds is only available for investments in the Caribbean countries which have signed a Tax Information Exchange Agreement with the United States.

Sources: Compiled by USITC staff based on information provided by the Costa Rican Investment and Development Agency; Dominican Republic Investment Promotion Council; Embassy of Jamaica; Embassy of Honduras; U.S. Department of Commerce; U.S. Department of State; U.S. Department of the Treasury; U.S. Agency for International Development; U.S. apparel company officials; U.S. and Mexican attorneys.

Thus, on the margin, such similar programs do not have a critical effect on investment location decisions.

### Other factors

Political stability was cited frequently by firms as an important determinant of investment decisions. There does not seem to be a significant difference in the perception of the stability between any of the five CBERA countries and Mexico, however. In addition, firms often protect themselves from political instability by setting-up plants in more than one country, establishing plants in the FTZs, or by forming a joint venture with a national interest.

Ease and reliability of transportation to and from the United States also seems to be a major factor for companies in each of the five CBERA countries under review in this report. Ocean freight service can be booked relatively easily to the United States, though the frequency of service varies greatly. At the very least, a cargo ship leaves from the major Caribbean port of each country on a weekly basis. For some countries, such as the Dominican Republic, several ships leave for Miami or New York each week.

Most companies interviewed by the Commission staff indicated that shipments by sea from the Caribbean take between 3 to 8 days, depending on the CBERA country of origin, with customs clearance in Miami requiring another 1 to 2 days.<sup>102</sup> Trucking time from Mexico, depending upon the distance of the plant from the border, can require 1 to 4 days. On average, then, transport times for apparel shipped from Mexico are shorter than from the CBERA region.

Exchange rate fluctuations, though not significant for every country, do have a concrete effect on the export competitiveness of some Caribbean and Mexican assembly operations. Changes in Mexican exchange rates, within the context of the NAFTA, are discussed in Chapter V.

## RECENT TRENDS IN CBERA AND MEXICAN APPAREL INVESTMENT

### Costa Rica

Costa Rica was one of the first countries selected by U.S. apparel companies looking to set up assembly operations in the Caribbean and Central America. Many of these firms selected Costa Rica because of its reputation for political stability and its literate workforce (over 90-percent literacy). Costa Rica also offered wages that were considerably lower than those in the United States. However, as U.S. apparel firms gained experience in managing overseas operations, they diversified their investments into countries with lower wages and a more plentiful labor supply. As a result, Costa Rica is no longer the dominant recipient of direct investment by U.S. apparel companies.

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<sup>102</sup> U.S. apparel company officials, telephone interview with USITC staff, during Mar. and Apr. 1992. Honduras and Jamaica can be exceptions, see p. 22 and p. 24 of this report.

The Government of Costa Rica has encouraged the development of the apparel assembly industry through investment incentive programs (see Figure 3). As a result, in 1991, 29 apparel companies were located in FTZs<sup>103</sup>, 42 apparel companies were registered under the Export Contract system<sup>104</sup>, and 158 apparel companies were registered under the Temporary Admission system<sup>105, 106</sup>.

Although the United States remains the predominant foreign investor in Costa Rica's apparel sector, Korean investment increased dramatically between 1987 and 1991.<sup>107</sup> In addition, there is a growing amount of investment originating from Hong Kong and China. Most of the Asian investment is in the form of small assembly operations.<sup>108</sup>

One of the most significant investment barriers to U.S. apparel investment stems from an inefficient bureaucracy that slows approval of documents necessary for many transactions.<sup>109</sup> For example, even though no unusual restrictions are imposed on the repatriation of earnings, royalties, or capital, delays in receiving dollars for these transactions or for imports can range from 2 to 4 weeks.<sup>110</sup> These delays can add considerably to an investor's operating expenses.

#### Dominican Republic

In general, U.S. apparel firms have been attracted to the Dominican Republic by its large supply of available labor and its geographical proximity to the United States. Additionally, although the United States is the primary export market for Dominican-made apparel, some U.S. investors have been attracted to the Dominican Republic by its membership in the Lome IV Convention, which allows certain Dominican-made products duty-free access to the European Community.<sup>111</sup>

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<sup>103</sup> Products must undergo substantial transformation to qualify for manufacturing incentives.

<sup>104</sup> Exports must be non traditional goods shipped to locations outside of Central America. Costa Rican manufacturing firms act as subcontractors for foreign investors. Foreign investors only have control over quality.

<sup>105</sup> All materials imported for manufacturing must also be exported from Costa Rica. Most 807 apparel operations are registered under this regime. These firms are subject to normal customs regulations.

<sup>106</sup> Free Zone and CENPRO, San Jose, Costa Rica.

<sup>107</sup> CINDE, the Costa Rican Investment and Development Agency.

<sup>108</sup> U.S. apparel company official, interview with USITC staff, New York, Mar. 31, 1992.

<sup>109</sup> U.S. Department of State, Trade Act Report, Costa Rica, 1991.

<sup>110</sup> U.S. Department of Commerce, U.S. Foreign Commercial Service, Investment Climate Statement for Costa Rica, May 1990.

<sup>111</sup> The Dominican Republic joined the Lome IV Convention in Mar. 1990. In a survey completed by the Investment Promotion Council of the Dominican Republic in 1991, several U.S. apparel companies noted this as a factor that influenced their decision to locate operations in the Dominican Republic.

The Government of the Dominican Republic has promoted an outward-oriented domestic economic program, pursuing policies designed to achieve macroeconomic stability and the reduction of external payment imbalances (see Figure 3).<sup>112</sup> As a result, exchange controls have been liberalized, and nominal import tariff rates have been reduced to between 5 and 35 percent. Over 25 private and public FTZs have been established (more than any other CBERA country), offering foreign apparel investors duty-free treatment for all raw materials and equipment, as well as on site customs inspection. Presently, up to 20 percent of goods produced in the FTZs can be sold domestically.

Although the United States remains the predominant source of foreign investment in the Dominican Republic's apparel sector, Korean and Chinese investment increased dramatically between 1987 and 1991.<sup>113</sup> The Government of Taiwan has expressed interest in establishing an industrial park in the Dominican Republic for businesses from Taiwan in order to promote exports to the U.S. market.<sup>114</sup>

The most significant barriers to U.S. apparel investment in the Dominican Republic are customs delays, recurring electricity shortages, insufficient quotas,<sup>115</sup> and high worker turnover rates.<sup>116</sup> Apparel companies surveyed by the Investment Promotion Council of the Dominican Republic cited worker monthly turnover rates ranging from 5 percent to 60 percent in 1991.

#### Guatemala

Guatemala has been encouraging foreign investment in its manufacturing sector through investment incentives and increased political stability.<sup>117</sup> The Government provides specific incentives to attract export-oriented firms to invest in the country (see Figure 3). The main laws governing these incentives are the Export Promotion (Drawback) Law (Law 29-89) and the Free Trade Zone Law (Law 65-89), which were enacted in 1989. The Export Promotion Law expands on incentives established in a 1984 law, which initiated the growth of foreign investment in export-oriented manufacturing. The success of these incentives is reflected in the growth in investment in the apparel industry, from \$200,000 at the end of 1982 to \$58 million at the end of 1991.<sup>118</sup>

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<sup>112</sup> The Dominican Republic, 1492-1992. The Central Bank of the Dominican Republic, July 1991.

<sup>113</sup> Ibid.

<sup>114</sup> Caribbean UPDATE, Aug. 1990, p. 8.

<sup>115</sup> Specifically for cotton knit shirts (category 338) and for cotton trousers (category 347/8).

<sup>116</sup> Survey of Apparel Companies Established in the Dominican Republic, 1991, Investment Promotion Council of the Dominican Republic.

<sup>117</sup> U.S. Department of State Telegram, Guatemala, Apr. 7, 1992, message reference No. 03665 and GEXPRONT, Guatemala: A Manufacturing Country by Tradition.

<sup>118</sup> U.S. Department of State Telegram, Guatemala, Apr. 7, 1992, message reference No. 03665 and GEXPRONT, Guatemala: A Manufacturing Country by Tradition.

One advantage offered by Guatemala to foreign investors that is particularly attractive to apparel manufacturers is the Export Promotion Law's provision that investors benefit from incentives whether or not the firm operates in a FTZ.<sup>119</sup> These incentives are substantial enough to encourage many apparel firms to operate under this law, and thereby establish operations anywhere in the country. This allows firms to locate in areas with an ample supply of labor.

Representatives of U.S. firms operating in Guatemala have stated that the Guatemalan Government's proinvestment attitude was a main reason for setting up operations there.<sup>120</sup> This proinvestment policy has served to attract not only U.S.-owned firms but also firms from other foreign countries--primarily Korea--as well as Guatemalan investors.<sup>121</sup> Of the registered maquila apparel firms in early 1992, 24 were U.S. owned, 82 were owned by Guatemalans, and 61 by owners from other countries. Another 134 apparel firms are incorporated without the disclosure of the name and nationality of the owners.

### Honduras

Investment in the apparel sector in Honduras has grown over the past 5 years, partly as a result of measures taken by the Government of Honduras to encourage the development of the country's manufacturing sector. The Government incentives are somewhat limited in scope, however, and reportedly are hindered by bureaucratic inefficiency and frequent changes in government policies.

Over the past year, the Government of Honduras has encouraged foreign direct investment in nontraditional industries such as apparel by offering various tax incentives. According to the Honduran Export Development Foundation (FIDE), total new investment in the apparel sector amounted to \$83.4 million during 1985-1991.<sup>122</sup> Of this amount, infrastructure investment in export-processing zone industrial parks accounted for 43 percent. Foreign direct investment accounted for 53 percent of total investment. Apparel investment amounts, by country source, and the number of firms currently operating in Honduras are presented below:

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<sup>119</sup> U.S. apparel company officials, interview with USITC staff, New York, Mar. 31, 1992.

<sup>120</sup> Ibid.

<sup>121</sup> U.S. Department of State Telegram, Guatemala, Apr. 7, 1992, message reference No. 03665 and GEXPRONT, Guatemala: A Manufacturing Country by Tradition.

<sup>122</sup> Investment during this period amounted to approximately \$94 million, at prevailing exchange rates.

	Million <u>dollars</u>	<u>No. of Firms</u>
Honduras (including industrial parks) . . .	39.5	51
United States . . . . .	21.2	25
Korea . . . . .	12.2	23
Hong Kong . . . . .	7.0	4
Taiwan . . . . .	2.3	1
Singapore . . . . .	<u>1.2</u>	<u>1</u>
Total . . . . .	83.4	105

Tariff liberalization and exchange rate reforms instituted by the Honduran Government in 1990 have improved the relative competitiveness of Honduras and consequently have contributed positively to the country's investment climate. The Government continues to place certain restrictions on companies operating in the country. For example, 90 percent of a company's labor force must consist of Honduran nationals. Companies operating within FTZs are afforded tax breaks, but companies outside FTZs are taxed at a rate of 15 percent for earnings under lempiras (LPS) 100,000 (\$37,000) and 35 percent for earnings over that amount. In addition, the Government assesses additional surcharges for corporations earning over LPS 500,000 (\$185,000). Companies operating outside of FTZs and industrial parks are also subject to limitations on remittances of profits and capital.

The Honduran Government operates two free zones (in Puerto Cortes and La Ceiba). Privately owned FTZs are extensions of the Puerto Cortes zone. Companies also may gain free zone status if they locate in specifically-designated areas. In addition to the FTZs, there are a number of privately-owned industrial parks. The benefits are similar to those offered in the FTZs. All of the Government's incentive regimes require substantial product transformation.

### Jamaica

During the 1980s, the Government of Jamaica took a series of steps to deregulate various sectors of the economy and create a climate of relative macroeconomic stability. U.S. industry officials cite these changes along with other factors including language (Jamaica is an English-speaking country), proximity to the United States, low labor costs, and sufficient infrastructure as reasons for locating operations in Jamaica. The primary impediment to investment cited by industry officials was government red tape.

Investment incentives, combined with favorable bilateral trade agreements with the United States, allowed Jamaica to attract foreign direct investment in the apparel sector during the 1980s. JAMPRO-approved

investment<sup>123</sup> increased sevenfold between 1982 and 1991, amounting to \$96 million in 1991.<sup>124</sup>

Of the 80 firms producing apparel for export from Jamaica, 23 are wholly owned affiliates of U.S. companies and 18 are owned by other foreign nationals or companies.<sup>125</sup> U.S. investors accounted for 28 percent of foreign direct investment in the industry in 1991, Hong Kong manufacturers accounted for 27 percent, and Korean manufacturers were responsible for 4.5 percent. In terms of employment, approximately 45 percent of the industry operates out of three FTZs (Kingston, Montego Bay, and Garmex).

### Mexico

A number of major investment policy reforms have occurred in Mexico since 1987. Government policy has been directed toward the achievement of price stability and a liberalization of investment barriers that have historically discouraged foreign companies from investing in Mexico. Between 1987 and 1990, the Mexican inflation rate fell from an annual rate of 159.2 percent to 18.8 percent. Within this context, U.S. apparel companies have expanded their presence in Mexico, primarily through contract relationships with assembly operators. A number of companies have expressed interest in increasing direct investment in the country rather than relying exclusively on contractors.<sup>126</sup>

Incentives offered to the maquila operations that are concentrated along the U.S.-Mexico border include duty-free treatment for imports of machinery, equipment, and other inputs used in the apparel production process, liberalized quota access to the U.S. market,<sup>127</sup> low land prices, and a highly developed infrastructure along the border.<sup>128</sup>

A number of U.S. companies have indicated that they established operations in Mexico to diversify their sourcing options.<sup>129</sup> Several industry representatives indicated transportation time via land from Mexico could be relatively short, between 1 and 2 days, compared to 3 to 8 days required to ship by sea from the CBERA countries, particularly in the case of heavy, bottom-weight apparel such as jeans. Most U.S. apparel producers who provided local employees with in-house training stated that high levels of productivity

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<sup>123</sup> The investments approved by JAMPRO (the Jamaican trade and investment promotion office) do not represent total investment in the Jamaican apparel sector.

<sup>124</sup> U.S. Department of State Telegram, Kingston, Jamaica, Mar. 24, 1992, message ref. No. 02827.

<sup>125</sup> Ibid.

<sup>126</sup> U.S. apparel company official, telephone interview with USITC staff, Mar. 18, 1992.

<sup>127</sup> For those maquila operations using U.S.-formed and cut fabric, liberalized quota access is granted through the so-called "Special Regime" negotiated between the United States and Mexico.

<sup>128</sup> Interviews with U.S. industry representatives by U.S. International Trade Commission staff during Mar. and Apr. 1992.

<sup>129</sup> Ibid.

could be achieved and that finished-product quality tended to be good.<sup>130</sup> The Mexican Government also offers incentives such as providing training to those working in apparel production.<sup>131</sup>

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<sup>130</sup> Ibid.

<sup>131</sup> Ibid.

CHAPTER V  
EFFECTS OF THE NAFTA ON INVESTMENT

This chapter reports on the potential of apparel investment diversion from the CBERA countries to Mexico as a result of a NAFTA. Because investment flows are part of a dynamic process in which firms make decisions as to the location of production over time, the investment analysis should consider both cost competitiveness as well as additional factors that have been specified by U.S. apparel company officials as affecting their apparel-related investment decisions under a NAFTA. In addition to duty elimination, these factors include opportunities for vertical integration and achievement of scale economies, as well as changes in quotas, the rules of origin, the investment climate and the underlying Mexican macroeconomic trends.

The Commission utilized a two-step process to analyze the likely effect of NAFTA on apparel investment. First, an econometric trade model was developed to estimate the static trade effects of duty elimination under a NAFTA. Second, ITC staff interviewed U.S. apparel firms with operations in the CBERA countries and Mexico in order to gain information on their investment strategies and on how the cost incentives under a NAFTA could affect future investment flows.

The findings of this chapter indicate that the NAFTA will introduce incentives that will tend to favor the shift of apparel investment from the CBERA countries to Mexico. The results of the trade analysis indicate that changes in costs relating to duty elimination lower prices of U.S. apparel imports from Mexico, increase U.S. imports of apparel sourced in Mexico, and lead to some diversion of trade from the CBERA countries to Mexico. The trade diversion projected by the economic model is small, but the trade analysis, by itself, only indicates the likely direction of change in investment rather than the magnitude of future investment flows. This is because the NAFTA is expected to provide opportunities for some companies to achieve further cost savings through scale economies and upstream vertical integration, and it is expected to improve the investment climate in Mexico. Elimination of quotas on U.S. imports of Mexican apparel will also allow Mexican producers increased access to the U.S. market relative to CBERA producers, particularly for quota-bound items. In general, however, U.S. import quotas on Mexican apparel are not binding.

Because of the lack of data on specific apparel investment flows to the CBERA countries and Mexico, it was not possible to quantify the level of any investment shifts that might result from a NAFTA or any changes associated with the three rules of origin discussed in this report. NAFTA-induced changes in U.S. trade and investment were used as a proxy for all foreign investment because of the lack of data on apparel investment, especially data differentiated by country.

## ECONOMIC MODEL OF APPAREL TRADE DIVERSION

### The Model and Its Results

A standard economic model of U.S. import demand for the six apparel products has been used to examine the impact of the NAFTA on CBERA exports to the United States. The economic model is based on U.S. demand for apparel at three different levels. At level 1 is the aggregate demand for the apparel; at level 2, aggregate demand is divided into an aggregate of imported apparel and U.S.-produced apparel; at level 3, imports are broken into three different import sources: the five CBERA countries as an aggregate, Mexico, and the rest of the world (ROW).

The demands at each level are price-sensitive. Thus, the application of the model is as follows. Assuming a decline in the price of apparel imported from Mexico, the price index for aggregate apparel (level 1) falls slightly, and U.S. apparel demand increases. At level 2, the decline in the Mexican price lowers the price index for imports from all sources, and imports of apparel rise relative to domestic production. Because domestic and imported apparel are considered to be imperfect substitutes, the extent of the increase depends upon the elasticity of substitution between the domestically-produced apparel product and the imported product. At level 3, imports from Mexico will also tend to rise relative to imports from the CBERA countries and the rest of the world. Imports from the different import sources are also assumed to be imperfect substitutes; thus changes in imports among the three sources depend upon the elasticity of substitution among import sources.

The import demand model was applied to U.S. consumption and imports of the six apparel products using a base year of 1991. U.S. imports of the apparel products from Mexico, the CBERA countries, and the ROW are shown in Table 15. In addition to the elasticity parameters, the model results at levels II and III are also governed by share parameters reflecting 1991 purchases. The model is described in detail in Appendix C.

Table 15  
Selected apparel imports, 1991<sup>1</sup>

(Thousands of 1991 dollars)				
Item	Mexico	CBERA <sup>2</sup>	Rest of World	Total
Men's and boys' cotton trousers, not knit . . . .	122,578.6	280,876.5	602,109.1	1,005,564.2
Men's and boys' cotton t-shirts, all white . . . .	515.2	37,568.2	26,129.3	64,212.7
Men's and boys' cotton knit shirts . . . . .	2,045.7	48,676.7	413,002.0	463,724.4
Brassieres MMF woven . . . .	55,307.0	131,685.3	140,865.0	327,857.3
Women's MMF woven blouses . . . . .	21,885.8	33,941.0	787,991.6	843,818.4
Women's, girls', and infants' suit-type jackets of man-made fibers, not knit . . .	5,599.6	57,181.3	194,784.9	257,565.8

<sup>1</sup> C.i.f. imports for consumption.

<sup>2</sup> Selected CBERA countries include Costa Rica, Dominican Republic, Guatemala, Honduras, and Jamaica.

Source: Calculated from official statistics of the U.S. Department of Commerce.

The price elasticity at level 1 and the elasticities of substitution at level 2 were taken from other studies. The elasticities of substitution at level 3 were specifically estimated for this study by ITC staff. The estimation method assumed that the level 3 elasticities of substitution for both CBERA and the rest of the world are the same.<sup>132</sup> Because trade results from economic models are sensitive to the parameters used, two sets of results are presented: low-elasticity and high-elasticity simulations.<sup>133</sup>

The economic model was used to estimate trade shifts among Mexico, the CBERA countries, and the ROW after eliminating U.S. import duties on Mexican apparel. Simulations were conducted separately for each of the six apparel

<sup>132</sup> Because production-sharing operations make up a greater percentage in the CBERA countries' exports to the United States than in the rest of the world's exports, it could reasonably be argued that the import substitution elasticity for the CBERA countries and the rest of the world should not be the same. However, Commission staff have not yet been successful in estimating import substitution elasticities with techniques that allow the elasticities to differ among sources.

<sup>133</sup> The values assigned to the elasticities are discussed in Appendix C.

items. The effective tariffs for Mexican products were set equal to zero, thus lowering the price of apparel imports from Mexico.<sup>134</sup> These tariffs currently range from 4.8 percent on men's and boy's cotton knit shirts to 13.6 percent on men's and boy's cotton t-shirts. The model was simulated without considering any changes in rules of origin.<sup>135</sup>

The trade results of these simulations are shown in Table 16. For each apparel item in both the low- and high-elasticity cases, imports from Mexico increase. These increases range from a low of \$70.6 thousand in the case of men's and boys' all-white cotton t-shirts under the low-elasticity case to a high of \$24.9 million in the case of men's and boys' cotton trousers, not knit under the high-elasticity case.

As Table 16 shows, however, U.S. imports from the selected CBERA countries and the rest of the world decrease. This is known as trade diversion. In volume terms, more trade is diverted from the rest of the world than from the selected CBERA countries for all apparel items except men's and boys' cotton, all-white t-shirts. This simply reflects the fact that the ROW is in all but this case a more significant import source than the CBERA countries.

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<sup>134</sup> The effective tariffs were calculated by taking the amount of duties collected in 1991 on each apparel item and subtracting the offshore assembly discounts. Thus, they include the duties paid by both 807 and non-807 firms. Companies operating under the 807 and 807A provisions pay duties that are slightly below the average effective tariff, while non-807 firms pay the full applicable duty.

<sup>135</sup> The potential price effects from eliminating quotas on Mexican exports are ignored in this section for the reasons described in the second section of this chapter.

Table 16

Simulated changes in U.S. imports from Mexico, CBERA and the rest of the world under low and high elasticity cases

(Thousands of 1991 dollars)						
Item	Mexico		CBERA <sup>1</sup>		Rest of World	
	Low <sup>2</sup>	High <sup>3</sup>	Low <sup>2</sup>	High <sup>3</sup>	Low <sup>2</sup>	High <sup>3</sup>
Men's and boys' cotton trousers, not knit . . . .	8,702.4	24,928.8	-1,519.4	-3,989.4	-3,586.3	-9,416.0
Men's and boys' cotton t-shirts, all white . . . .	70.6	270.2	-19.5	-77.2	-15.2	-60.2
Men's and boys' cotton knit shirts . . . . .	128.2	431.2	-8.0	-29.5	-69.6	-257.0
Brassieres MMF woven . . . . .	3,373.1	7,779.3	-1,022.4	-1,948.2	-1,184.1	-2,256.3
Women's MMF woven blouses . . . . .	2,905.1	11,028.1	-61.4	-259.0	-1,516.9	-6,389.7
Women's, girls', and infants' suit-type jackets of manmade fibers, not knit . . . .	555.3	1,636.5	-70.0	-194.9	-268.7	-747.9

<sup>1</sup> Selected CBERA countries include Costa Rica, Dominican Republic, Guatemala, Honduras, and Jamaica.

<sup>2</sup> Simulation utilizes the low elasticities presented in appendix C.

<sup>3</sup> Simulation utilizes the high elasticities presented in appendix C.

Source: Estimated by Commission staff.

The trade diversion effects estimated for the selected CBERA countries are very small in percentage terms. This is because of the relatively low effective tariffs on Mexican imports, and in some cases, because of the relatively low levels of imports from the CBERA countries. The largest trade diversion effect is -1.4 percent of the Table 15 trade flows in the case of brassieres under the high-elasticity case.

#### Inferences Drawn from the Trade Diversion Model

The estimates of NAFTA-induced trade diversion from eliminating duties on U.S. apparel imports from Mexico indicate that the direction of change in

apparel-related investment flows following a NAFTA could favor Mexico. The trade analysis only considered the static effect of duty elimination on U.S. import demand; therefore, it does not indicate the magnitude of any changes in future investment flows.

Low rates of trade diversion do not necessarily indicate that the amount of investment diverted will also be low for several reasons. First, the trade diversion results do not indicate the extent to which future investment could be diverted from the CBERA countries to Mexico. Second, the cost savings from duty elimination, when evaluated in the context of a firm's overall investment strategy, could provide even greater cost incentives for investment in Mexico. For example, as discussed in the following section, duty elimination will potentially allow apparel firms to achieve additional cost savings by moving cutting or other upstream operations to Mexico. Finally, duty elimination could interact with other NAFTA-related incentives to encourage increased apparel investment in Mexico.

The economic model quantifies the static effect of duty elimination under the current rules of origin. The model does not quantify changes under the yarn-forward or fabric-forward scenarios. To the extent that the proposed rules of origin will raise the fabric costs of firms operating in Mexico, however it can be inferred that the estimated trade shifts will be less under the more restrictive rules of origin proposals. (See the section below on "Rules of Origin").

The effect of a NAFTA on the volume of investment in the CBERA countries and Mexico will depend on how U.S. apparel companies view the cost savings from a NAFTA in light of their sourcing and investment strategies. To augment the information obtained from the trade diversion analysis, ITC staff interviewed U.S. industry officials in an effort to collect information on probable investment strategies of firms in the U.S. apparel industry in anticipation of and in response to a NAFTA.<sup>136</sup> The information supplied by the industry officials suggests that investment decisions will be determined by a variety of factors, of which the duty savings on foreign assembly costs is only one.

#### FACTORS AFFECTING INVESTMENT UNDER A NAFTA

The apparel companies interviewed for this study indicated that investment strategies are designed to minimize both economic costs and political risks. These strategies involve contracting, owning plants, and/or entering into joint ventures, as well as locating operations in a number of different countries. Specific investment incentives offered to apparel firms by host governments have often played an important role in determining locations for existing assembly operations. However, investment incentives currently offered by the CBERA countries and Mexico do not differ significantly (see Figure 3). Thus NAFTA benefits for Mexico may play an important role in the location of future apparel investment.

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<sup>136</sup> ITC staff contacted 21 firms, of which 14 supplied information. Virtually all of these firms operate through production-sharing arrangements.

For companies considering to relocate existing investment from CBERA to Mexico, a rational decision-making process would be to weigh the stream of benefits provided from a NAFTA against the costs of relocating to Mexico. Some of the companies interviewed mentioned that if they moved their operations, they would do so gradually to avoid disrupting their production flow and to maintain reasonable levels of productivity.<sup>137</sup> Company officials indicated that this process could take up to 3 years. Startup costs include those associated with permit processing, site location and acquisition, obtaining and training labor, importing machinery, and, if the firm moves immediately, lost revenue during the startup period. In addition, the companies noted that they would likely incur a loss on existing investment in the CBERA countries. In the case of contracting operators, a move could be made more quickly, but the firm would still incur costs associated with establishing a relationship with a new contractor. For new investment, the investor only has to weigh the costs of investing in Mexico under NAFTA against the costs of locating in another country.

The following section examines some of the factors that could influence U.S. companies' decisions to locate new investments in Mexico and/or move existing investments from the CBERA countries to Mexico following implementation of a NAFTA. These factors, which include both NAFTA-related incentives and disincentives to Mexican investment, are summarized in Table 17. The discussion of each individual factor assumes that the rules of origin will remain the same. The proposed changes in the rules of origin are discussed as a distinct and separate factor. Viewed separately, these investment factors may not be critical elements in any one company's investment strategy, but their cumulative effect could make an important difference on apparel-related investment decisions.

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<sup>137</sup> U.S. apparel company officials, telephone conversation with USITC staff, March and April 1992.

Table 17

Factors influencing U.S. apparel investment in Mexico under a NAFTA

<u>Favoring Mexican investment</u>	<u>Not favoring Mexican investment</u>
Cost-savings from duty elimination: <ul style="list-style-type: none"> <li>° Provides one-time increase in Mexican apparel manufacturing cost-competitiveness</li> <li>° Provides one-time decline in cost of Mexican assembly, including direct labor, relative to CBERA countries</li> </ul>	Projected appreciation in peso value vis-a-vis the dollar
Opportunities for: <ul style="list-style-type: none"> <li>° Vertical integration</li> <li>° Scale economies</li> </ul>	Changes in rules of origin
Elimination of quotas <ul style="list-style-type: none"> <li>° Provides increased access to U.S. market for quota-bound items</li> </ul>	
Improved Mexican investment climate	
Projected macroeconomic effects: <ul style="list-style-type: none"> <li>° Reduced Mexican inflation</li> <li>° Improved economic growth in Mexico</li> </ul>	

Source: Compiled by the staff of the International Trade Commission

Duty Savings

The impact of duty elimination under a NAFTA on the cost competitiveness of Mexican-produced apparel is discussed in Chapter III. The trade diversion analysis also shows that improved cost competitiveness for Mexican apparel will result in increased U.S. demand for Mexican-produced apparel, which in turn, has implications for apparel production sourced in Mexico.

In addition, industry sources indicated that direct labor costs are one of the most significant determinants of assembly location.<sup>138</sup> Since apparel import duties are applicable on the full cost of foreign wages under production-sharing provisions, implementation of a NAFTA will result in a one-time reduction in the cost of Mexican labor used in these operations relative to the cost in the CBERA countries by the full value of the nominal applicable

<sup>138</sup> U.S. apparel company officials, telephone conversation with USITC staff, Mar. and Apr. 1992.

duties. For the six products studied in this report, these nominal duties range from 18 to 29 percent.<sup>139</sup>

The percentage changes in the costs of assembling the six apparel products studied in Mexico under 807 or 807A operations after eliminating U.S. import tariffs are shown in Table 18. These cost changes exclude fabric costs and, therefore, isolate the effect of duty elimination on the costs U.S. companies incur when sourcing in Mexico.<sup>140</sup> \* \* \*.

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<sup>139</sup> Non-807 firms that are currently operating in Mexico will be able to get the full duty reduction on the entire product cost assuming that the current rules of origin apply and that the product is cut in Mexico.

<sup>140</sup> \* \* \*.

Table 18

Cost of foreign assembly operations (including materials and freight) to U.S. companies sourcing in CBERA countries and Mexico, with and without NAFTA, under current rules of origin

Item	<u>Mexican assembly cost</u>		Percent change
	Without NAFTA <sup>1</sup>	With NAFTA <sup>2</sup>	in Mexican
	-----Per dozen-----	-----Per dozen-----	assembly cost with NAFTA ----Percent----
Brassieres . . . . .	***	***	***
Women's suit-type coats . . . . .	***	***	***
Men's blue jeans . . .	***	***	***
Men's all-cotton golf shirts . . . . .	***	***	***
Women's polyester blouses . . . . .	***	***	***
Men's all cotton knit t-shirts . . . . .	***	***	***

<sup>1</sup> Calculated from cost data presented in chapter III according to the following formula:

Assembly cost to U.S. companies =  $(1+T) \times \text{Foreign Assembly cost} + \text{Shipping cost}$ , where T = the applicable nominal U.S. tariff. See J.M. Finger, "Trade and Domestic Effects of the Offshore Assembly Provision in the U.S. Tariff," The American Economic Review, vol. 66, No. 4 (September 1976), pp. 598-609 for a discussion.

<sup>2</sup> Cost of assembly less applicable Mexican duties.

Because a NAFTA is expected to create jobs in both the United States and Mexico, an important issue is what could happen to Mexican wage rates post-NAFTA. Two macroeconomic studies have looked at the possible effects of a

NAFTA on average wage rates in Mexico.<sup>141</sup> Both studies assume that due to high rates of unemployment among unskilled Mexican workers, increased demand for Mexican workers under a NAFTA will not have a significant effect on nominal wages. The analyses show an increase in real wages due to a NAFTA, but these increases result from declines in consumer prices or in projected rates of inflation.<sup>142</sup>

Industry sources suggested that wages may increase around the border area following a NAFTA. However, most of these sources indicated that they would probably locate plants further in the interior where there is greater availability of labor should wage pressures become significant.

### Opportunities for Upstream Integration and Large Scale Economies

Duty-savings under current production-sharing provisions promote use of U.S. components (cut fabrics) in foreign apparel operations. This discourages operations that are integrated upstream because duties must be paid on the foreign cost component. Eliminating the duty applicable to Mexico under a NAFTA could promote Mexico as a location for future investment in vertically-integrated operations.<sup>143</sup> This may be particularly applicable to apparel made from knit fabrics and knit-to-shape items. The former are difficult to cut for assembly abroad. The latter, which are knit-to-shape from yarns, do not qualify under current regulations for production-sharing related duty reductions.

A NAFTA may also provide opportunities for some companies to achieve scale economies. Some of the firms interviewed indicated that locating an operation in Mexico following implementation of a NAFTA would enable them not only to sell products without duty to the United States, but also to increase their presence in the Mexican market.<sup>144</sup> Currently, U.S. firms must pay duties on the inputs imported for local sales in Mexico in addition to the

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<sup>141</sup> Gary Clyde Hufbauer and Jeffrey J. Schott, North American Free Trade: Issues and Recommendations (Washington, DC: Institute for International Economics, 1992) and F. Gerard Adams, Mario Alanis, and Abel Beltran del Rio, "The Mexico-United States Free Trade and Investment Area Proposal: A Macroeconometric Evaluation of Impacts on Mexico," Journal of Policy Modeling, vol. 14, No. 1 (Feb. 1992), pp. 99-119. The effect of a NAFTA on Mexican wage rates is discussed in a more limited manner in U.S. International Trade Commission, Economy-wide Modeling of the Economic Implications of a FTA with Mexico and a NAFTA with Canada and Mexico (Addendum to the Report on Investigation No. 332-317), USITC Publication 2508, May 1992.

<sup>142</sup> These studies assume that all trade barriers are eliminated between the United States and Mexico. Other studies have analyzed the macroeconomic effects of a NAFTA under the assumption that the stock of Mexican laborers is fixed. Using this assumption, two studies projected real wage increases in the range of 2 to 3 percent, while a third projected an increase of over 16 percent. See Hufbauer and Schott, North American Free Trade, pp. 58-59.

<sup>143</sup> U.S. apparel company officials, telephone conversation with USITC staff, Mar. and Apr. 1992.

<sup>144</sup> U.S. apparel company officials, telephone conversation with USITC staff, Mar. and Apr. 1992.

applicable value-added taxes (see Figure 3). While it is currently difficult for U.S. firms to sell products locally in Mexico, the NAFTA negotiations could result in liberalization of the local sales rules and in elimination of the duties paid on inputs imported by U.S. firms. Duty savings on export sales to the United States, combined with any liberalization in the regulations governing sales to the Mexican market under a NAFTA, could provide an important incentive for U.S. firms to locate an apparel operation in Mexico.

### Investment Climate

Political stability and the desire to diversify plant locations were cited frequently by apparel industry officials as important determinants of investment decisions.<sup>145</sup> By setting into law the rules that will govern future economic relationships between the United States and Mexico, a NAFTA could improve the Mexican investment climate by reducing risks from political and economic instability.<sup>146</sup> As a result, Mexico could become a more inviting location for new investment, on the margin, than the CBERA countries. Additionally, a NAFTA could possibly result in some diversion of existing investment from the CBERA countries to Mexico to the extent that apparel firms perceive a lesser need for diversification following a NAFTA.

### Elimination of Quotas

U.S. imports from Mexico of women's woven blouses have been subject to binding quotas. In theory, binding import quotas allow foreign producers to raise the prices of goods sold in the United States and to capture quota rents that accrue from actions taken by the United States to artificially restrain imports from cheaper foreign sources.<sup>147</sup> Thus, elimination of quotas on these items could allow apparel producers in Mexico to increase sales in the U.S. market by further lowering the prices of apparel sold in the United States.

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<sup>145</sup> U.S. apparel company officials, telephone conversation with USITC staff, Mar. and Apr. 1992.

<sup>146</sup> For instance, some studies have argued that a NAFTA will increase investor confidence in Mexico and therefore reduce the risk premium that investors currently require for investment in Mexico. See Robert K. McCleery, "An Intertemporal, Linked Macroeconomic CGE-Model of the United States and Mexico Focussing on Demographic Change and Factor Flows", in U.S. International Trade Commission, Economy-Wide Modeling of the Economic Implications of a FTA, pp. 371-442.

<sup>147</sup> See U.S. International Trade Commission, The Economic Effects of Significant U.S. Import Restraints, Phase I: Manufacturing (investigation No. 332-262), USITC publication 2222, Oct. 1989.

The price effects of eliminating quotas on Mexican apparel imports were not explicitly considered in the econometric trade analysis.<sup>148</sup> This is largely because of the lack of specific information on the extent to which U.S. quota arrangements with Mexico raise the prices of apparel supplied to the U.S. market from Mexico.<sup>149</sup> However, to the extent that apparel producers in Mexico would be able to expand exports to the United States and be unencumbered by quota restrictions, then investment should increase in Mexican facilities producing quota-bound items at the expense of the CBERA countries.

Additionally, apparel companies operating in CBERA countries are allowed more liberal access to the U.S. market (under 807A) provided that fabrics that are both cut and formed in the United States are used in the assembly operations. Eliminating quotas on Mexican apparel, however, could give apparel producers in Mexico an investment edge over CBERA 807A operators because the Mexican-sited companies might be able to achieve cost savings by having material cut and/or fabric made in Mexico (depending on the rule of origin adopted for NAFTA) while at the same time receiving preferential access to the U.S. apparel market.

### Rules of Origin

As shown in Chapter III, changes in the rules of origin to require either a "yarn-forward" or "fabric-forward" rule will, by themselves, lessen the incentive for producers of all-cotton knit type shirts and women's woven blouses to move assembly operations to Mexico. For products such as these, the incentive to move operations from the CBERA countries to Mexico to take advantage of the duty elimination will be reduced, all other things held constant, because fabric costs will be raised, on the margin, by these origin

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<sup>148</sup> To the extent that elimination of quotas would allow apparel producers in Mexico to lower their prices even more than indicated by the elimination of duties, than the trade effects presented in the first section of this chapter are underestimated. See Sam Laird and Alexander J. Yeats, "The Magnitude of Two Sources of Bias in Standard Partial Equilibrium Trade Simulation Models," Journal of Policy Modeling, vol. 14, No. 1 (Feb. 1992), pp. 121-130.

<sup>149</sup> Some studies have attempted to estimate the extent to which the quotas under the MFA raise the prices of U.S. apparel supplied from foreign sources (see for example, USITC, The Economic Effects of Significant Import Restraints). However, the extent to which these estimates can be applied to Mexican supply prices is unclear because quota arrangements that are negotiated bilaterally, such as those under the MFA, tend to discriminate among sellers and result in supply prices that vary by source (see Rich Jones, Trien T. Nguyen, and John Whalley, "Computation of a World General Equilibrium Under Bilateral Quotas and an Application to the Analysis of Textile Trade Restrictions," Journal of Policy Modeling, vol. 12, No. 3, (Fall 1990), pp. 511-526. Additionally, under 807 and 807A production sharing programs, quota rents for apparel products tend to be split between producers involved in cutting and fabric operations and those involved in assembly operations. See Finger, "Trade and Domestic Effects of the Offshore Assembly Provision".

requirements.<sup>150</sup> Investment decisions of firms that are already using U.S. fabrics and yarns will probably be unaffected by rules of origin changes.

A "yarn-forward" or "fabric-forward" rule could reduce the number of products eligible for duty-free benefits under a NAFTA. Based on the data currently available, at least 76 percent of the apparel imported from Mexico is made with U.S.-formed materials. The incentive for the Mexican producers who use foreign fabrics to increase their apparel investment in Mexico under a NAFTA will therefore be reduced to the extent that the cumulative apparel-related NAFTA benefits are less than the additional cost of using U.S.- or Mexican-formed fabric for apparel production in Mexico. The industry officials surveyed indicated that virtually all of the U.S.-formed fabric used in 807 operations is made from U.S. yarn.

#### Macroeconomic Effects of a NAFTA

Aside from the specific incentives that will be provided for apparel trade and investment, economy-wide macroeconomic effects of NAFTA could also have important implications for investment incentives in Mexico. Exchange rate changes and inflationary pressures that induce wage increases and raise the prices of foreign-produced inputs all contribute to increased production costs for U.S. firms with operations abroad.

The two macroeconomic studies of the impact of a NAFTA mentioned earlier (Hufbauer and Schott; Adams, Alanis, and Beltran del Rio) also examined the potential effects of a NAFTA on the U.S. dollar/peso exchange rate and on projected inflation in Mexico. These studies both found that the value of the peso in terms of the U.S. dollar would tend to rise and that inflationary pressures would decline under a NAFTA. In relation to investment, an increase in the value of the peso relative to the U.S. dollar will tend to raise the U.S. cost of local expenditures in Mexico. Reduced inflationary pressures, on the other hand, could moderate future demands for wage increases among Mexican workers.

The NAFTA is also expected to result in improved economic growth for both the U.S. and Mexico.<sup>151</sup> To the extent that Mexico's increased economic growth translates into a better fed, more literate, and more productive labor force over time, then U.S. investment in Mexico would probably be favored over investment in CBERA countries.

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<sup>150</sup> Even if the more restrictive rules of origin keep some companies that use foreign fabrics from moving to Mexico under NAFTA, investors that use U.S. and/or Mexican-formed fabrics could concentrate their operations in Mexico. This could still represent a sizeable loss to the CBERA countries in terms of existing investment and future investment flows. Additionally, garments that are knit-to-shape from yarns would be eligible for duty and quota reductions under a NAFTA, even under the more restrictive yarn-forward rule. Currently, these garments do not qualify for 807-duty reductions.

<sup>151</sup> See Hufbauer and Schott, North American Free Trade, pp. 61-62.

## URUGUAY ROUND

Concurrent with the negotiation of a NAFTA is a proposal to phase out the Multifiber Arrangement (MFA). Because the CBERA countries' apparel trade and investment will be affected by this phase out, this section includes a brief discussion of its potential effect on the CBERA countries.

A major component of the current multilateral trade negotiations (the Uruguay Round) is the proposed phase out of the MFA. According to the draft text released by the secretary-general of the GATT, the MFA's system of bilateral quotas would be phased out over a period of 10 years.<sup>152</sup> In addition, the negotiations included proposals for phased reductions of tariffs applied to manufactures, including textiles and apparel.

The trade and investment analysis described above does not take the proposed MFA phase-out and tariff reductions into account. The implementation of the proposed Uruguay Round agreement would marginally reduce the quota and tariff advantages given to both Mexico and the CBERA countries by existing production-sharing programs (807 and 807A).<sup>153</sup> The effect on these countries' overall competitiveness vis a vis the ROW is indeterminate in the absence of extensive quantitative analysis.<sup>154</sup> Similarly, it is difficult to predict the interactive effects of the implementation of the proposed agreement and the NAFTA. Nonetheless, a few general points can be made.

As discussed earlier in this chapter, changes in tariffs resulting from the NAFTA probably would cause an increase in U.S. imports from Mexico at the expense of U.S. imports from CBERA countries and the ROW. With tariff reductions resulting from the Uruguay Round, the difference in the effective duty gap (between CBERA and Mexico and ROW and Mexico) would be smaller. As a result, any difference in the percentage reductions in trade from CBERA and the ROW would be reduced.<sup>155</sup> In the absence of quantitative analysis that explicitly incorporates these tariff rate changes, it is difficult to predict absolute changes in trade patterns from any of these sources.

The impact of phasing out the MFA would have similar effects on trade patterns. The existing bilateral arrangements under the MFA have caused some

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<sup>152</sup> GATT Secretariat, "Draft Final Act Embodying The Results Of The Uruguay Round of Multilateral Trade Negotiations," Dec. 20, 1991.

<sup>153</sup> The effects of these programs are discussed in chapter I.

<sup>154</sup> To date, quantitative economic analysis examining these changes has not been completed. However, the CBERA apparel-exporting countries expect to lose their competitive edge as a result of the implementation of the round. See, for example, Peter C.V. King, "Textiles and Apparel Trade in the 1990s: A Perspective From Jamaica," The Fletcher Forum, winter 1992, pp. 27-34.

<sup>155</sup> It is also probable that the relative increase in U.S. imports from Mexico would also be lower because the NAFTA duty elimination would be offset by the multilateral reductions.

trade diversion from various Asian suppliers to the CBERA region.<sup>156</sup> Therefore, phasing out the MFA probably would result in an increase in sourcing from countries that have lower production costs, all other factors held constant. Again, without conducting extensive analysis of the effects of quota elimination on the overall competitiveness of the various foreign suppliers, it is impossible to project the actual impact of the elimination of the MFA in conjunction with NAFTA.

To the extent that these changes in trade patterns affect (or are affected by) investment, levels of apparel investment in the CBERA countries also could be affected by the elimination of quotas and changes in across-the-board tariff rates. Foreign investment in the CBERA countries' apparel sectors that has resulted from quota restrictions placed on other countries could shift to lower-cost countries once the quota restrictions are lifted. However, because investment decisions are based on factors other than direct costs, it is not clear what the magnitude of the change might be.

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<sup>156</sup> Refik Erzan, Junichi Goto, and Paula Holmes, "Effects of the Multi-Fibre Arrangement on Developing Countries' Trade: An Empirical Investigation," in Carl B. Hamilton, ed., Textiles Trade and the Developing Countries: Eliminating the Multi-Fibre Arrangement in the 1990s (Washington, DC: The World Bank, 1990), pp. 63-102.

## CHAPTER VI

### CONCLUSIONS

In this report the Commission has addressed two separate but related questions regarding the potential effects of a North American Free Trade Agreement (NAFTA) on competitiveness and investment in the apparel industries of the Caribbean and Central American region. The Commission has assumed that a NAFTA will result in the complete and immediate elimination of all U.S. import duties and quotas on Mexican-made apparel.

The Commission has identified foreign assembly and transportation costs as the primary determinants of competitiveness for U.S. operations in the CBERA region and Mexico. The size of the non-U.S. cost component for identical products in apparel production-sharing operations is similar in the CBERA countries and Mexico. Elimination of duties and quotas on imports from Mexico, therefore, will improve the relative cost competitiveness of Mexican producers compared with their counterparts in the Caribbean and Central America--particularly in those products with a large foreign assembly cost component.

The findings of the investment diversion analysis indicate that a NAFTA will introduce incentives that will tend to favor apparel investment shifts from the CBERA countries to Mexico. However, it was not possible to quantify the magnitude of any shifts for any of the countries or apparel products studied because of the lack of data on specific investment flows. The most significant findings related to the central issues of CBERA apparel industry competitiveness and investment are presented below.

#### COMPETITIVENESS

The Commission has quantified the impact of a NAFTA on six discrete products assembled in the CBERA region and Mexico (Chapter III). This cost analysis demonstrates that the elimination of duties on Mexican-made apparel imported into the United States will have a noticeable one-time effect on the cost competitiveness of Mexican producers after the implementation of the NAFTA. NAFTA, therefore, can be expected to detract from the cost competitiveness of U.S. apparel operations in the CBERA region relative to their competitors in Mexico.

As seen in Tables 9-14, elimination of U.S. import duties under a NAFTA lowers the total landed cost of Mexican-made apparel by an amount equivalent to the effective duty rate. For the six products analyzed in this report, this effective duty is shown in the right-hand column of Tables 19 and 20. Mexican producers, according to this analysis, will gain or maintain an absolute cost advantage in three of the six products. CBERA producers, on the other hand, are expected to retain a cost advantage (though reduced after implementation of a NAFTA) in three of the six representative apparel products.

Under a "substantial transformation" NAFTA rule of origin, Mexican and CBERA apparel producers can purchase fabric inputs from the least expensive sources worldwide. Based on the assumption that Mexican operations will be

able to purchase fabric at the lowest of the two prices for each of the six products analyzed in Chapter III, the cost differentials between CBERA and Mexican producers shown in Table 19 would result.<sup>157</sup>

Table 19  
CBERA and Mexican production costs under a "substantial transformation" rule of origin

Item	Total cost		Difference	Effective duty (Mexico)
	Mexico	CBERA		
Men's t-shirts . . . . .	19.81	17.74	+11.7%	5.4%
Knit golf shirts . . . . .	61.15	60.98	+0.3%	4.6%
Men's blue jeans . . . . .	81.03	88.50	-8.4%	4.8%
Women's polyester blouses . . . . .	114.84	113.60	+1.1%	4.6%
Brassieres . . . . .	18.71	16.10	+16.2%	5.6%
Women's suit-type coats . . . . .	257.47	214.66	+19.9%	10.6%

Source: Based on official figures of the U.S. Department of Commerce.

Under the "fabric-forward" rule of origin, Mexican producers would be forced to use North American-formed fabrics in their garments in order to qualify for NAFTA benefits. Therefore, post-NAFTA cost savings for Mexican producers will be reduced somewhat in comparison with a "substantial transformation" rule. The cost differentials resulting from an incorporation of the fabric-forward sourcing assumption into the Chapter III cost analysis are shown in Table 20.

<sup>157</sup> For each of the six items, the lowest-cost source of fabric is used for both Mexican and CBERA apparel producers to reflect competitive conditions under a "substantial transformation" rule of origin (see Tables 9-14).

Table 20  
CBERA and Mexican production costs under a "fabric-forward" rule of origin

Item	Total cost		Difference	Effective duty (Mexico)
	Mexico	CBERA		
Men's t-shirts . . . . .	19.81	17.74	+11.7%	5.4%
Knit golf shirts . . . . .	63.75	60.98	+4.5%	4.4%
Men's blue jeans . . . . .	81.03	88.50	-8.4%	4.8%
Women's polyester blouses .	119.64	113.60	+5.3%	4.4%
Brassieres . . . . .	18.71	16.10	+16.2%	5.6%
Women's suit-type coats . .	257.47	214.66	+19.9%	10.6%

Source: Based on official figures of the U.S. Department of Commerce.

As the figures in Tables 19 and 20 indicate, removal of U.S. import duties on Mexican-made apparel can be expected to have very similar effects on the cost competitiveness of four of the six products. Only in the case of men's knit golf shirts and women's polyester blouses would Mexican producers face higher costs under a "fabric-forward" rule of origin. In these two cases, the enhancement of Mexican competitiveness associated with a NAFTA would be reduced under a restrictive rule of origin such as the "fabric-forward" standard.

With very few exceptions, U.S.-formed fabrics are either woven or knit using U.S.-made yarns. Therefore, potential effects of a NAFTA under a "yarn-forward" rule of origin are assumed to be identical to those under the "fabric-forward" rule.

In order to extend the competitiveness analysis provided for the six products to the CBERA and Mexican apparel industries overall, it is necessary to look at patterns of trade between the United States and Mexico in other apparel items. Using the effective duty rate on 1991 U.S. imports of apparel from Mexico, it is possible to present a broader picture of the cost competitiveness effects of NAFTA duty reductions, at least under the "substantial transformation" rule. From Table 21, it is clear that the vast majority of apparel items in the U.S. tariff schedule are imported from Mexico with effective duty rates ranging between 0 and 10 percent (148 out of 210 line items with a 1991 import value of \$588 million).

Table 21  
Effective duty rate ranges for U.S. imports of apparel from Mexico, 1991

Effective duty range	No. of HTS subheadings imported from Mexico	Total U.S. import value, 1991 Million of dollars
0-5% . . . . .	73	249
6-10% . . . . .	75	339
11-15% . . . . .	20	36
16% or more . . . . .	42	16

Source: Based on official figures of the U.S. Department of Commerce.

Of the 73 tariff schedule line items with effective duty rates of 5 percent or less, 21 (29 percent) were imported from Mexico at unit values very similar to products classified under the same HTS heading and imported from CBERA countries (less than 10 percent difference between Mexican and CBERA unit import values). Although duty elimination may not provide an absolute cost advantage for Mexico in many items, it will produce some change in Mexico's favor, even in cases where the effective duty is relatively small. Using these general findings as a guide, it appears that the cost shifts predicted for the six products seem to mirror closely the likely effects on imports of Mexican-made apparel in general.

Finally, it is important to briefly discuss the issue of NAFTA-related quota elimination. It has been assumed throughout this report that the NAFTA will also result in the removal of all U.S. quotas on imports of Mexican apparel. However, with few exceptions, U.S.-administered quotas on Mexican-made apparel are underutilized. For those items with high-quota utilization rates, it has been determined that removal of the quotas will not have an important impact on costs (Chapter III).

#### INVESTMENT DIVERSION

The investment diversion chapter (Chapter V) indicates that a NAFTA is expected to introduce incentives that will tend to favor apparel investment shifts from the CBERA countries to Mexico. However, it was not possible in this study to quantify the level of any shifts that might occur for any of the countries or apparel products studied because of the lack of data on specific investment flows.

An economic model of trade diversion was used to estimate the static trade effects of duty elimination under a NAFTA. The model results for the six apparel products studied in this report indicate that trade diversion is likely to occur under the NAFTA, but the estimated effects for the selected CBERA countries are very small. This is because of the relatively low average effective tariffs on Mexican imports, and in some cases, because of the relatively low levels of apparel imports from the CBERA countries. In addition, the trade diversion model only isolated the static effect of duty elimination on U.S. apparel trade.

Analysis of additional investment-related factors which also affect apparel companies' future decisions under a NAFTA, indicates that it is most likely that the diversion of investment from the CBERA countries to Mexico will be larger than that indicated by the trade diversion model. As summarized in Table 22, the NAFTA's effect on these factors will provide a number of advantages to apparel producers in Mexico. In addition to the cost savings from duty elimination, these advantages include opportunities for vertical integration and for scale economies, expanded access to the U.S. market through elimination of quotas, and an improved investment and macroeconomic environment for investment in Mexico. Viewed separately, these investment advantages may not be critical elements in any one company's investment strategy, but their cumulative effect is likely to make an important difference for apparel-related investment decisions.

These NAFTA benefits, on the other hand, could be somewhat offset by adoption of more restrictive rules of origin. Mexican investment could concentrate in production of apparel that uses U.S.-or Mexican-formed fabrics and yarns. Also, the cumulative cost-saving benefits of NAFTA will allow some scope for producers to substitute U.S.- or Mexican-formed fabrics, even if they are more expensive. Therefore, a "fabric-" or "yarn-forward" rule of origin may reduce, but will not offset, the incentives for investment shifts under a NAFTA.

The investment incentives offered by the CBERA countries were shown to be quite liberal in Chapter IV. Thus, aside from efforts to improve their macroeconomic environments by adopting policies that make export-oriented investments more attractive, there is little these countries can do to offset the NAFTA benefits for Mexico except to provide companies with even greater cost-saving incentives. However, such incentives will reduce the benefits of additional foreign investment to the CBERA countries. The NAFTA, on the other hand, will transfer benefits to Mexico by increasing opportunities for foreign investment and trade.

Table 22

Incentives and disincentives for increased Mexican apparel investment under a NAFTA

	<u>Mexican Investment</u>	
	<u>Incentives</u>	<u>Disincentives</u>
Cost savings from duty elimination	X	
Upstream Integration	X	
Scale economies	X	
Expanded access to U.S. market through quota elimination	X	
Improvement in Mexican investment climate	X	
Mexican Macroeconomic climate <sup>1</sup>	X	
Changes in rules of origin		X

<sup>1</sup> As discussed in Chapter V, macroeconomic studies project a reduction in Mexican inflation and an appreciation in the value of the Mexican peso in relation to the U.S. dollar under a NAFTA. However, even if these two factors offset each other in investment cost calculations, increased Mexican economic growth, through an improved workforce and an expanding local market, should provide incentive for increased investment in Mexico.

**APPENDIX A**

**USTR REQUEST LETTER AND FEDERAL REGISTER NOTICE**

NUMBER

63

Office of the  
Secretary  
Intl. Trade CommissionTHE UNITED STATES TRADE REPRESENTATIVE  
Executive Office of the President  
Washington, D.C. 20506

Office of Industries

The Honorable Anne E. Brunsdale  
Acting Chairman  
U.S. International Trade Commission  
500 E Street, S.W.  
Washington, D.C. 20436Dear Chairman Brunsdale: *Anne*

As you are aware, we are currently negotiating a North American Free Trade Agreement (NAFTA) with the Governments of Mexico and Canada. Among our objectives in these negotiations is the elimination of tariff and non-tariff barriers to apparel trade. U.S. apparel manufacturers co-producing in the Caribbean and Central America are concerned that a NAFTA could have a detrimental effect on the competitiveness of their operations in the region. Also, the countries that are eligible for benefits under the Caribbean Basin Economic Recovery Act (CBERA) have expressed concern over the potential effects of a NAFTA on the levels of investment in the region's apparel industry.

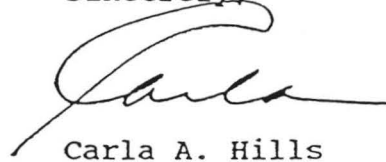
I request the Commission, pursuant to section 332(g) of the Tariff Act of 1930, under the authority delegated by the President, to advise the President, to the extent possible, of the potential effects of providing duty-free and quota-free treatment for U.S. imports of apparel from Mexico under a NAFTA on the levels of apparel investment in the CBERA countries, and on the competitiveness of U.S. apparel operations in these countries. In your analysis, I request that you examine in particular those operations that produce primarily for import into the United States under heading 9802.00.80 of the Harmonized Tariff Schedule of the United States. I request that you provide a report to me by June 1, 1992.

In accordance with USTR policy, I direct you to mark as "Confidential" such portions of the Commission's report and its working papers as my Office will identify in a classification guide. Information Security Oversight Office Directive No. 1, Section 2001.21 (implementing Executive Order 12356, Sections 2.1 and 2.2) requires that classification guides identify or categorize the elements of information which require protection. Accordingly, I request that you provide my Office with an outline of this report as soon as possible. Based on this outline and my

Office's knowledge of the information to be covered in the report, a USTR official with original classification authority will provide detailed instructions.

The Commission's assistance in this matter is greatly appreciated.

Sincerely,

A handwritten signature in cursive script, appearing to read "Carla", with a long horizontal flourish extending to the right.

Carla A. Hills

UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C. 20436

Investigation No. 332-321

Potential Effects of a North American Free Trade Agreement on  
Apparel Investment in CBERA Countries

**AGENCY:** United States International Trade Commission

**ACTION:** Institution of investigation and scheduling of public hearing

**EFFECTIVE DATE:** January 2, 1992

**FOR FURTHER INFORMATION CONTACT:** Mr. William Warlick (202-205-3459), Office of Industries, U.S. International Trade Commission, Washington, D.C. 20436. For information on legal aspects of this investigation, contact Mr. William Gearhart (202-205-3091), Office of the General Counsel, U.S. International Trade Commission, Washington, D.C. 20436.

**SUMMARY:** The Commission instituted the investigation following receipt on November 26, 1991, of a request from the United States Trade Representative (USTR), pursuant to authority delegated by the President, for an investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)). As requested by the USTR, the Commission will seek in its report on the investigation to provide advice to the President, to the extent possible, of the potential effects of providing duty-free and quota-free treatment for U.S. imports of apparel from Mexico under a North American Free Trade Agreement (NAFTA) on the levels of apparel investment in the Caribbean Basin Economic Recovery Act (CBERA) countries, and on the competitiveness of U.S. apparel operations in these countries. As also requested by USTR, the Commission will seek to examine in particular the effects on those operations that produce primarily for import into the United States under heading 9802.00.80 of the Harmonized Tariff Schedule of the United States. Under this heading, cut fabric pieces are exported from the United States, assembled abroad, and then re-imported as finished apparel, with duties assessed only on the non-U.S. value added.

In her letter requesting the investigation, the USTR stated that U.S. apparel manufacturers co-producing in the Caribbean and Central America are concerned that a NAFTA could have a detrimental effect on the competitiveness of their operations in the region, and that countries eligible for benefits under the CBERA have expressed concern over the potential effects of a NAFTA on the levels of investment in the region's apparel industry.

The USTR has requested that the Commission submit its report by June 1, 1992. USTR indicated that the Commission's report and certain Commission staff working papers may be classified as confidential.


**PUBLIC HEARING:** A public hearing in connection with this investigation will be held beginning at 9:30 a.m. on March 17, 1992, at the U.S. International Trade Commission Building, 500 E Street, SW, Washington, DC. All persons have the right to appear by counsel or in person, to present information, and to be heard. Requests to appear at the public hearing should be filed with the Secretary, United States International Trade Commission, 500 E Street, SW, Washington, DC 20436, not later than the close of business (5:15 p.m.) on March 3, 1992. In addition, persons testifying at the hearing are encouraged to file prehearing briefs or statements (a signed original and 14 copies) with the Secretary by the close of business on March 6, 1992. The deadline for filing posthearing briefs or statements is the close of business on April 3, 1992. Any confidential business information included in such briefs or statements or to be submitted at the hearing must be submitted in accordance with the procedures set forth in section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6).

In the event that no requests to appear at the hearing are received by the close of business on March 3, 1992, the hearing will be cancelled. Any person interested in attending the hearing as an observer or non-participant may call the Secretary to the Commission (202-205-2000) after March 5, 1992 to determine whether the hearing will be held.

**WRITTEN SUBMISSIONS:** Interested persons are invited to submit written statements relating to the investigation in addition to or in lieu of appearing at the hearing. Commercial or financial information that a party wishes the Commission to treat as confidential must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6)--that is, it must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. (Generally, submission of separate confidential and public versions, each so marked, of the document would be appropriate.) All written submissions, except for confidential business information, will be made available for inspection by interested persons in the Office of the Secretary to the Commission. In order to be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted at the earliest possible date and should be received no later than April 3, 1992. All submissions should be addressed to the Secretary to the Commission at the Commission's office in Washington, D.C.

Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1809.

By order of the Commission.



Kenneth R. Mason  
Secretary

Issued: January 2, 1992



**APPENDIX B**

**PRODUCT DESCRIPTIONS FOR COST COMPARISON**

#### Blue Jeans

Style: Men's western style, five-pocket construction.  
Fabric: Cotton, blue denim, approximately 14-oz. per sq. yard.  
HS Number: 6203.42.4010

#### Women's Polyester Blouse

Style: Women's blouse, full-front opening with buttons, fashion collar, no pockets, long sleeves with cuffs.  
Fabric: Poly/cotton printcloth, approximately 3.5-oz. per sq. yard, solid color.  
HS Number: 6206.40.3030

#### Suit-type Coat

Style: Women's, three-panel, two-button coat, with collar and three pockets, lined.  
Fabric: Rayon/polyester twill, 6.5-oz. per sq. yard, solid color.  
HS Number: 6204.39.3010

#### Knit Shirt

Style: Men's collar and placket. Fashion collar, three-button placket front, pocket, three-quarter sleeves, bottom and sleeves hemmed but not ribbed.  
Fabric: Cotton jersey, approximately 5-oz. per sq. yard, solid color.  
HS Number: 6105.10.0010

#### T-Shirt

Style: Men's, bleached, all-white, quarter-sleeve, rounded-neck t-shirt.  
Fabric: 100 % cotton jersey, tubular in shape, mechanically preshrunk with 5-8% shrinkage allowance, approximately 3.8 to 4.0-oz. per sq. yd.  
HS Number: 6109.10.0005

#### Brassiere

Style: Women's  
Fabric: MMF, no lace or ornamentation  
HS Number: 6212.10.2020

**APPENDIX C**

**DESCRIPTION OF THE TRADE DIVERSION MODEL**

## APPENDIX C. DESCRIPTION OF THE TRADE DIVERSION MODEL

The appendix describes the economic model used in Chapter V to generate estimates of trade diversion under a NAFTA. It addresses two subjects relating to the economic analysis of U.S. apparel import demand. First, it presents the formal model used in the analysis and it shows how the model was applied to the analysis of apparel import demand. Second, it describes the data used in the formal model, including the sources for the elasticities.

### A MODEL OF U.S. APPAREL DEMAND

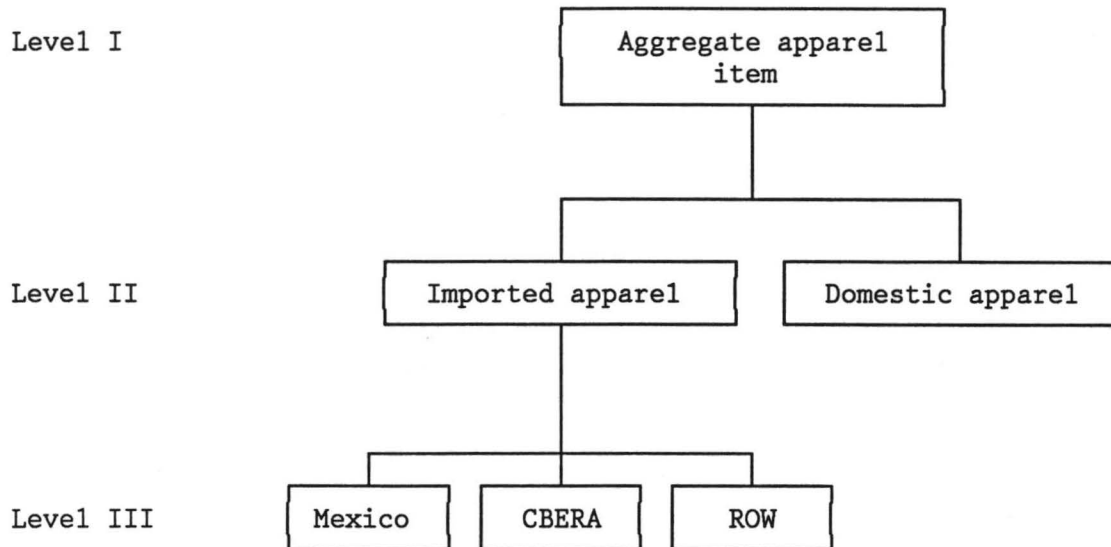
#### Basic Approach

The basic approach of the model is presented in graphical form in figure C1. At level I of the analysis, demand for the apparel item under consideration from both domestic production and import sources is represented by the box labeled "aggregate apparel item."<sup>1</sup> The demand for the aggregate apparel item varies inversely with a price index defined over imports as a whole and domestic production. That is, the lower the aggregate apparel item price, the more will be demanded.

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<sup>1</sup> The term "aggregate" does not refer to an aggregation across apparel items, but rather to aggregation across domestic and imported varieties of the item. See next paragraph.

Figure C-1  
Model structure



At level II of the analysis, demand for the aggregate apparel item under consideration is divided into two parts. The first part is imported apparel, which is, in turn, an aggregate of imports from all sources. The second part is domestic apparel. Domestic apparel and imported apparel are considered to be imperfect substitutes in the demand for the aggregate apparel item, and the division between these two parts is sensitive to their relative prices. For example, if the imported apparel component of the aggregate apparel item were to fall in price, there would be a tendency for the domestic component to become smaller and the imported component to become larger.

At level III of the analysis, the imported apparel item is divided among three import sources: the five CBERA countries as an aggregate, Mexico, and the rest of the world (ROW). Imports from these three sources are imperfect substitutes in total import demand for the apparel item under consideration, and the division of total imports into imports from these different sources is sensitive to their relative prices. For example, if imported apparel from Mexico were to fall in price, there would be a tendency for imports from other sources to fall and imports from Mexico to increase.

The application of this analytical framework to the question of the impact of the NAFTA on CBERA apparel exports is as follows. Implementation of the NAFTA will reduce the severity of U.S. restraints on imports from Mexico of the apparel item under consideration. The price of the item from Mexico to domestic importers in the United States will therefore fall. At level III in figure C-1, there will be a tendency for imports from Mexico to rise. Imports of the apparel item from the CBERA countries and the ROW would tend to fall. At level II, the price index for imports from all sources would fall. Therefore, there would be a tendency for the import portion of the aggregate apparel item to rise and the domestic portion of the aggregate apparel item to

fall. Finally, at level I, the price index for the aggregate apparel item would fall slightly, and there would be a tendency for apparel demand to increase. This increase in demand would be transmitted down through levels II and III. The key effect, however, will be the potential reduction in imports of apparel from CBERA at level III.

The import demand system represented graphically in figure 1 is constructed as a standard economic model and is applied to a base year of 1991. The sensitivity of demands to prices at levels II and III in the model are governed by share parameters reflecting 1991 purchases and behavioral parameters reflecting responsiveness of producers and consumers to price changes. At level II of figure 1, a single behavioral parameter determines the degree to which consumers substitute between the imported and domestic versions of the apparel item under consideration in response to changes in their relative prices. At level III, a single behavioral parameter determines the degree to which importers substitution among import sources in response to changes in their relative prices. The use of a single parameter implies that imports from CBERA and the ROW are equally substitutable for imports from Mexico. These behavioral parameters are the price and import source substitution elasticities. Each elasticity has a low and a high level as described below.

### Theoretical Model

Domestic production of the apparel item under consideration is modeled using a relation in which domestic supply ( $s_d$ ) is positively related to the price of domestic apparel ( $p_d$ ):

$$s_d = s_d(p_d; \epsilon_s) \quad (1)$$

where  $\epsilon_s$  is the elasticity of domestic supply.

Domestic demand for an aggregate of domestically-produced and imported apparel is modeled using a relation in which domestic demand ( $d_q$ ) is negatively related to a price index of domestic and imported apparel ( $p_q$ ):

$$d_q = d_q(p_q; \epsilon_d) \quad (2)$$

$$p_q d_q = p_d d_d + p_m d_m \quad (3)$$

where  $\epsilon_d$  is the elasticity of domestic demand,  $d_q$  is a constant elasticity of substitution (CES) aggregation of imports and the domestic good,  $d_d$  is the demand for domestic-produced apparel,  $p_m$  is the import price index, and  $d_m$  is the demand for a CES aggregation of imports from the different import sources.<sup>2</sup> The equations for  $d_d$  and  $d_m$  are CES demand functions:

$$d_d = d_d(p_d, p_m, d_q; \sigma_q) \quad (4)$$

$$d_m = d_m(p_d, p_m, d_q; \sigma_q) \quad (5)$$

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<sup>2</sup> On the CES aggregation of imports and domestic goods, see K. Dervis, J. de Melo, and S. Robinson, *General Equilibrium Models for Development Policy*, Cambridge University Press, Cambridge, 1982, p. 222.

where  $\sigma_q$  is the elasticity of substitution between imports and domestic supply. The implication of equations (4) and (5) are that domestically-produced and imported apparel are imperfectly substitutable in the CES aggregate  $d_q$ .

Equilibrium in the domestic market for the apparel item requires that demand for domestic apparel equals domestic supply of domestic apparel:

$$d_d = s_d \quad (6)$$

Imports by source are given by the following CES demand functions:

$$m_{cb} = m_{cb}(p_{cb}, p_{mx}, p_{rw}, d_m; \sigma_m) \quad (7)$$

$$m_{mx} = m_{mx}(p_{cb}, p_{mx}, p_{rw}, d_m; \sigma_m) \quad (8)$$

$$m_{rw} = m_{rw}(p_{cb}, p_{mx}, p_{rw}, d_m; \sigma_m) \quad (9)$$

where  $m_{cb}$  is imports of the apparel item from CBERA countries,  $m_{mx}$  is imports from Mexico,  $m_{rw}$  is imports from the rest of the world,  $p_{cb}$ ,  $p_{mx}$ , and  $p_{rw}$  are the associated import prices, and  $\sigma_m$  is the elasticity of substitution among imports of the different sources. The implication of equations (7), (8), and (9) is that the degree of substitutability between any two of the three import types is the same.

The aggregate price of imports is given by:

$$p_m m = p_{cb} m_{cb} + p_{mx} m_{mx} + p_{rw} m_{rw} \quad (10)$$

Finally, the prices of the imported apparel items need to be specified. These are determined by world prices and protection levels as follows:

$$p_{cb} = (1 + \tau_{cb}) \pi_{cb} \quad (11)$$

$$p_{mx} = (1 + \tau_{mx}) \pi_{mx} \quad (12)$$

$$p_{rw} = (1 + \tau_{rw}) \pi_{rw} \quad (13)$$

where  $\tau_i$  is an *ad valorem* measure of the protection level on imports from source  $i$  and  $\pi_i$  is the world price of imports from source  $i$  where  $i = cb, mx, rw$ .

The endogenous variable to be determined by these equations are  $s_d$ ,  $d_q$ ,  $p_q$ ,  $d_d$ ,  $d_m$ ,  $p_d$ ,  $p_m$ ,  $m_{cb}$ ,  $m_{mx}$ ,  $m_{rw}$ ,  $p_{cb}$ ,  $p_{mx}$ , and  $p_{rw}$ .

### Elasticities

The equations presented above require information about four elasticities. These are the elasticity of domestic supply ( $\epsilon_s$ ), the elasticity of domestic demand ( $\epsilon_d$ ), the elasticity of substitution between domestic and imported apparel ( $\sigma_q$ ), and the elasticity of substitution among imported apparel sources ( $\sigma_m$ ). For each of these, a low and high value were adopted.

Elasticities of supply are notoriously difficult to estimate. For this reason, values of 1.0 and 10.0 were used as low and high elasticities. A great deal more information on elasticities of demand for apparel is

available. Table C-1 presents the results of a few studies. Based on these estimates, values of -0.30 and -0.60 were used as low and high elasticities.

The elasticity of substitution between domestic and imported apparel was estimated by Reinert and Roland-Holst at a value of 0.45.<sup>3</sup> This estimate was used as a low value and 1.50 was used as a high value.

The elasticity of substitution among imported apparel sources was estimated directly for this study, following a methodology developed by Reinert and Shiells.<sup>4</sup> The rest of this appendix describes this estimation and the results.

The preparation of the data for estimation began with the concordance of the relevant HTS number to the corresponding TSUSA numbers for each of the quarters during the 1978-1988 period. This necessitated expanding the apparel items considered by a very small amount for a few of the HTS numbers. Next, a time series of quarterly import data for the 1978 to 1988 period was extracted from U.S. Department of Commerce data tapes for the 7-digit TSUSA items corresponding to each HTS number separately for the three suppliers: the five CBERA countries as a whole, Mexico, and the ROW. Series of quantities and c.i.f. values were assembled, yielding a full time series for each HTS number except for HTS 6109.10.0005, Mens' and boys' all white, cotton t-shirts. For this item, imports into the United States did not begin recently enough to support estimation. For all items, unit values were calculated to be used as prices.<sup>5</sup>

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<sup>3</sup> K.A. Reinert and D.W. Roland-Holst, "Disaggregated Armington Elasticities for the Mining and Manufacturing Sectors of the United States," *Journal of Policy Modeling*, vol. 14, No. 5, (1992). This study addressed apparel as a whole, but it would be difficult to obtain domestic price and quantity series to estimate an elasticity of substitution between disaggregated domestic and imported apparel items.

<sup>4</sup> K.A. Reinert and C.R. Shiells, "Trade Substitution Elasticities for Analysis of a North American Free Trade Area," unpublished working paper, July 1991.

<sup>5</sup> Given the changing nature of the concordance between any given HTS item and the corresponding TSUSA numbers, it was not possible to create a Laspeyres price index over the TSUSA numbers as in Reinert and Roland-Holst (1992) and Reinert and Shiells (1991).

Table C-1  
Elasticities of Demand for Apparel

Study	Estimated Elasticity
Blanciforti and Green (1983) . . . . .	-0.57
Eastwood and Craven (1981) . . . . .	-0.55
Houthakker and Taylor (1970) . . . . .	-0.57
Phillips (1972) . . . . .	-0.30
Maki (1988) . . . . .	-0.37

Source: L. Blanciforti and R. Green, "An Almost Ideal Demand System Incorporating Habits: An Analysis of Expenditures on Food and Aggregate Commodity Groups," *Review of Economics and Statistics*, vol. 65, No. 3, (Aug. 1983), pp. 511-515; D.B. Eastwood and J.A. Craven, "Food Demand and Savings in a Complete, Extended, Linear Expenditure System," *American Journal of Agricultural Economics*, vol. 63 (Aug. 1981), pp. 544-549; H.S. Houthakker and L.D. Taylor, *Consumer Demand in the United States: Analyses and Projection*, (Harvard University Press, Cambridge, 1970); L. Phillips, "A Dynamic Version of the Linear Expenditure Model," *Review of Economics and Statistics*, vol. 54, (1972), pp. 450-458; A. Maki, "The Estimation of a Complete Demand System Using the Marginal Rates of Substitution: An Indifference Map Interpretation of the Houthakker-Taylor Model," *Economic Studies Quarterly*, vol. 39, No. 1, (Mar. 1988), pp. 64-76.

Table C-2  
Estimated Elasticities of Substitution by Import Source

Items	HTS Numbers <sup>1</sup>	Elasticity <sup>2</sup>	t Statistic <sup>3</sup>
Men's and boy's cotton trousers, not knit . . .	6203.42.4005 6203.42.4010 6203.42.4025 6203.42.4045 6203.42.4015 6203.42.4035	1.11	1.71
Men's and boy's cotton t-shirts, all white <sup>4</sup> . .	6109.10.0005	-	-
Men's and boys' cotton knit shirts . . . . .	6105.10.0010 6105.10.0020 6105.10.0030	0.99	1.15
Brassieres MMF woven . . .	6212.10.2020	1.37	1.42
Women's MMF woven blouses .	6206.40.3030	0.10	17.84
Women's, girls', and infants' suit-type jackets of manmade fibers, not knit . . . .	6204.33.10 6204.39.20 6204.33.20 6204.39.30 6204.33.40 6204.33.50	1.04	7.95

<sup>1</sup> In those cases where there are more than one HTS number, the additional numbers were necessitated by the concordance to TSUSA numbers for the generation of time series.

<sup>2</sup> Elasticity of substitution between imports from the five CBERA countries as a group, Mexico and the rest of the world.

<sup>3</sup> Given the sample size and using a one-tail test, a t statistic greater than 1.30 indicates the estimated elasticity is significant at the 10 percent level. A t statistic of greater than 1.68 indicates the estimated elasticity is significant at the 5 percent level.

<sup>4</sup> Data availability was too limited to support estimation.

The estimation technique used was the second of three techniques employed by Reinert and Shiells in a study of trade substitution elasticities for modeling the NAFTA.<sup>6</sup> This technique estimates the elasticity of

<sup>6</sup> Reinert and Shiells, p. for further details.

substitution based on the CES functional form and utilizes the true CES price aggregator rather than the simple, log-linear price aggregator. The resulting equations are nonlinear in parameters and are therefore estimated using a nonlinear, maximum-likelihood procedure. The technique abstracts from problems of simultaneity and distributed lags, but corrects for first-order and, where necessary, second-order autocorrelation.<sup>7</sup>

The results of the estimation procedure are given in table C-2. Each estimate has the correct sign, ranging from 0.10 to 1.37. For items 1, 3, 4, and 6, the estimates from table C-2 were used as low values and 3.00 was used as high values. There is strong evidence that quotas were binding for item 5, women's MMF woven blouses, over the sample period. This is the likely cause of the very low estimate of 0.10 for this sector and brings into question the validity of the estimation procedure for this sector. Therefore, for items 2 and 5, a low value of 0.90 and a high value of 3.00 were used.

### Effective Tariff Rates

The apparel items considered are produced abroad under offshore assembly arrangements and therefore are subject to duty discounts. Larger portions of imports from Mexico and the selected CBERA countries are eligible for these duty discounts than imports from the rest of the world. Consequently, the effective tariff rates for imports from the selected CBERA countries and Mexico are lower than for those from the rest of the world. Additionally, the effective tariff rates on imports from the rest of the world are only slightly lower than the official rates in the tariff schedule. Effective ad valorem tariff rates for imports from each of the three sources are presented in table C-3.

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<sup>7</sup> The Reinert and Shiells study found that, in general, accounting for simultaneity and distributed lags did not substantially effect the estimation results. In practice, correcting for these problems requires using the log-linear price aggregator in place of the correct CES price aggregator. Commission staff felt that maintaining the CES price aggregator was more important.

Table C-3

Effective ad valorem tariff rates on selected apparel imports, 1991<sup>1</sup>

(Percent)			
Item	Mexico	CBERA <sup>2</sup>	Rest of World
Men's and boys' cotton cotton trousers, not knit . .	6.5	5.7	16.4
Men's and boys' cotton t-shirts, all white . . . . .	13.6	6.7	19.7
Men's and boys' cotton knit shirts . . . . .	6.2	16.7	19.5
Brassieres MMF woven . . . . .	4.8	4.4	13.1
Women's MMF woven blouses . . .	13.3	18.5	26.0
Women's, girls', and infants' suit-type jackets of manmade fibers, not knit . . . . .	8.4	11.1	25.2

<sup>1</sup> Estimated ad valorem tariff rates accounting for duty discounts due to offshore assembly.

<sup>2</sup> Selected CBERA countries include Costa Rica, Dominican Republic, Guatemala, Honduras, and Jamaica.

Source: Calculated from official statistics of the U.S. Department of Commerce.



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