PRODUCTION SHARING: USE OF U.S. COMPONENTS AND MATERIALS IN FOREIGN ASSEMBLY OPERATIONS, 1993-1996

(U.S. Imports Under the Production-Sharing Provisions of *Harmonized Tariff Schedule* Chapter 98)

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PREFACE

Pursuant to section 332(b) of the Tariff Act of 1930 (19 U.S.C. 1332(b)), the U.S. International Trade Commission reports annually on U.S. import trends under the production-sharing provisions of the *Harmonized Tariff Schedule* (*HTS*). The annual analysis identifies the level and nature of U.S.-origin component production that is used in foreign assembly operations. The current report examines the 4-year period 1993-96 on a country- and product-specific basis, and presents historical data (1970-96) under these tariff provisions. In addition to the assessment on the use of the pertinent *HTS* chapter 98 provisions, this year's report includes special chapters that focus on the operations of Canadian companies in Mexico's maquiladora industry and the use of assembly plants in Hungary to reduce costs of competing in European markets.

Continuance of this investigation is subject to annual Commission reauthorization, which depends in large measure on Administration (USTR, Commerce, Labor, State) and Congressional interest related to production-sharing and trade agreements issues, as well as the extent of public interest in and use of the information presented. Foreign assembly with U.S.-made components is expanding and continues to be an important competitive strategy for many companies and, despite certain data limitations explained in the note below, this assessment of trade under these provisions currently is the only official source for documenting the use of U.S. components in foreign assembly. Production-sharing data play an important role in analyzing the effects of trade agreements and gauging the ability of U.S. industry to compete.

NOTE: This report on U.S. production-sharing activity is based on official U.S. statistics on imports under the *HTS* production-sharing provisions (PSP). The main production-sharing provisions provide a duty exemption for the value of U.S.-made components that are incorporated in imported articles that have been assembled abroad. The domestic content of U.S. imports entered under these production-sharing provisions is also exempt from the merchandise processing fee (the so-called "user fee"—a 0.17 percent ad valorem fee with a $400 per entry cap).

Firms that import articles free of duty, either with a most-favored-nation duty rate of free or under trade preference programs such as NAFTA, have a greatly reduced incentive to enter these articles under these *HTS* provisions. Consequently, the reported use of U.S. components in the foreign production of such articles for the U.S. market are likely to be understated. However, many importers of duty-free articles continue to use these provisions because of their exemption from the user fee on the value of U.S.-origin content. The U.S.-Canada Free-Trade Agreement (CFTA), since replaced by the North American Free-Trade Agreement (NAFTA), has phased out the user fee applicable to U.S. imports from Canada qualifying as originating goods as of January 1, 1994. Consequently, only a small portion of U.S. imports from Canada that contain U.S.-origin components are currently entered under the production-sharing tariff provisions. A comparably significant increase in understatement of production sharing in official statistics with regard to imports from Mexico is anticipated when the user fee applicable to imports from Mexico under the NAFTA is eliminated on July 1, 1999. Nevertheless, an examination of imports under the production-sharing provisions remains a valid and important tool for measuring the use of U.S.-made components in assembly operations conducted by U.S. trading partners, such as Mexico and certain countries in the Caribbean Basin and Southeast Asia. To the degree information is available, this report characterizes the extent and nature of imports from production-sharing operations that do not enter under *HTS* PSP.

ABSTRACT

This report provides an annual summary of developments related to the use of U.S.-made components in foreign assembly plants. Imports incorporating U.S.-made components can enter the United States either free of duty or at reduced duties under the production-sharing provisions (PSP) of Chapter 98 of the *Harmonized Tariff Schedule (HTS)*. The production-sharing tariff provisions offer a financial incentive for companies with foreign-assembly operations to use U.S.-made components in the manufacture of goods destined for the U.S. market. U.S. firms typically invest in production-sharing facilities to reduce labor costs and to improve competitiveness in U.S. and third-country markets. These firms usually retain product development and design, capital-intensive manufacturing, and marketing-related activities in the United States, while shifting labor-intensive assembly to countries with lower labor costs. Some firms have penetrated foreign markets by establishing local assembly operations when trade barriers or high transportation costs inhibit direct exports of finished products from the United States.

Imports under the production-sharing tariff provisions grew by 11 percent ($1.9 billion) in 1996 to $68 billion, and accounted for 9 percent of total U.S. imports that year. The value of U.S.-made components or materials that were contained in these imports increased 8 percent and totaled $24 billion, representing 35 percent of the total value of imports under the PSP of *HTS* Chapter 98. The principal products assembled abroad and imported by U.S. producers under the PSP are apparel from the Caribbean Basin countries and Mexico; motor vehicles, electrical circuit apparatus, television receivers, and auto parts from Mexico; and semiconductors from Southeast Asia. Mexico is the principal source of *HTS* PSP imports, accounting for 41 percent of the total value of such trade in 1996 and 61 percent of the total value of U.S.-made components. The other major suppliers, the Dominican Republic and Malaysia, accounted for 6 percent and 5 percent, respectively, of the value of U.S.-made components in *HTS* PSP imports.

The U.S. apparel sector has a greater economic incentive than any other domestic industry to use the *HTS* PSP. In 1996, apparel products accounted for 53 percent of the total duty savings from use of the *HTS* PSP, despite comprising only 13 percent of total imports under these provisions. The average trade-weighted rate of duty on apparel is 17-percent ad valorem, compared with about 3 percent ad valorem for other products. Imports of apparel from Mexico under the *HTS* PSP rose by $702 million (30 percent) in 1996 to $3.0 billion, while such imports from the Caribbean Basin grew by $500 million (11 percent) to $5.0 billion. Mexico increased its share of total U.S. imports of apparel relative to that of the Caribbean Basin due primarily to a special production-sharing provision (*HTS* 9802.00.90) created by NAFTA that allows for duty-free and quota-free entry of apparel sewn in Mexico entirely from U.S. formed-and-cut fabric. Reduced labor costs in Mexico following the devaluation of the peso and increased costs in certain Caribbean Basin supplier countries have also boosted apparel imports from Mexico that might otherwise have been sewn in the Caribbean Basin.

A significant amount of imports from production-sharing operations do not enter under the *HTS* PSP because they are already eligible for duty-free treatment under other agreements or tariff-preference programs, such as motor-vehicle equipment and electronic products from Canada (NAFTA), computer equipment and semiconductors from Southeast Asia (MFN free), a variety of articles from Mexico (NAFTA), and certain manufactured goods from the Caribbean Basin (CBERA). Where possible, this report characterizes the extent and type of production-sharing trade that takes place beyond that reported under the production-sharing provisions of *HTS* Chapter 98. In particular, profiles of selected Canadian maquiladora operations and U.S. operations in Hungary provide added insights on global developments that affect competitive capability in third markets.

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CHAPTER 1
OVERVIEW AND FINDINGS

Production sharing is the process by which companies rationalize[1] selected portions of the manufacture or assembly of products to minimize their overall costs and thereby improve their worldwide competitiveness. Production sharing may also be employed to facilitate access to otherwise closed foreign markets.[2]

The most common form that production sharing takes for U.S.-based companies involves initiating the highly capital-intensive production of parts, subassemblies, and/or major functional elements of a product domestically, and shifting the labor-intensive final assembly operations to an accessible foreign location.[3] This *"foreign-assembly"*-type of production sharing has evolved into an important competitive strategy for many U.S. producers of low-cost, labor-intensive articles. The domestic share, or content, of such operations can often be sustained as a result of the improved overall competitiveness attributable to low-cost foreign assembly. In these cases, companies are able to maintain higher U.S. production and employment levels than might otherwise be possible.[4] Such production sharing has become part of a global effort to reduce manufacturing costs.

[1] The "rationalization" of production typically occurs when companies perform a process or series of production processes at different locations to take advantage of the inherent efficiencies or reduced costs of the various production inputs (e.g., labor wage rates, skilled workforces, materials, etc.) available from each locale. Although this strategic planning often leads to increased efficiency and economies of scale, it can also heighten interdependency between plants, thereby requiring tighter coordination of production planning. The rationalization of production across international boundaries has become increasingly common in recent years.

[2] Where high tariffs or other trade barriers restrict the direct export of finished goods, companies may be able to sell into these markets by exporting parts and subassemblies and performing final assembly operations in the consuming nation. Production sharing may also be used to gain access to certain unique foreign production technology, labor skills, raw materials, or specialized components.

[3] Finished goods imported from Mexican assembly plants often go through quality-testing procedures in the United States prior to final packaging and shipping to domestic and foreign markets.

[4] In addition to information obtained from various Commission studies since 1987, Commission staff routinely monitor the effects of production sharing on U.S. industry and maintain regular contact with U.S. companies that employ foreign assembly as part of their overall competitive strategy, particularly vis-a-vis Asian producers. See ch. 3 for discussions of these operations in various industry sectors.

Customs Incentives for Entry Under the Production-Sharing Provisions of *HTS* Chapter 98 and NAFTA

Goods of Mexico that are entered under the provisions of *HTS* general note 12 (concerning the NAFTA) are subject to a customs merchandise processing fee (user fee) of 0.17 percent ad valorem, or $400 maximum per entry. Companies that enter merchandise under the production-sharing provisions (PSP) of *HTS* Chapter 98, however, receive an exemption from paying both U.S. customs duties and the user fee on the value of the U.S.-made components incorporated in the imported products. The user fee applicable to eligible goods of Canada was eliminated on January 1, 1994, pursuant to the NAFTA. Thus, there is still an incentive for importers of duty-free Mexican products to avoid the user fee by importing under *HTS* PSP until the fee is eliminated on July 1, 1999. Many companies with production-sharing operations in Mexico whose products meet the NAFTA rules of origin enter their products under both NAFTA and *HTS* PSP. The value of U.S.-origin components contained in the imported article is free of both customs duties and the user fee under *HTS* PSP, while the remaining value added to the assembled good in Mexico receives a preferential NAFTA duty rate, but is subject to the user fee.

In 1996, 37 percent ($20 billion) of all imports entering under NAFTA from Mexico also entered under *HTS* 9802. An estimated $14 billion of NAFTA imports from Mexican assembly operations that likely could have qualified for entry under *HTS* 9802 did not because for many companies, the expense of complying with Customs' *HTS* 9802 record-keeping requirements exceeds the savings gained from exemption from the user fee. Other companies minimize the effective user fee that they have to pay by entering a number of shipments from Mexico into U.S. foreign trade zones and then shipping a single entry for Customs purposes from the zone, thereby paying the $400 per entry cap once instead of several times. See appendix A; the section on Mexico in chapter 2; and the section on motor vehicles and related equipment in chapter 3 for more information about the user fee and the Customs treatment of goods from Mexico.

U.S. imports of goods that are assembled or processed abroad from U.S.-made components or materials are eligible for a partial exemption from duty under the provisions of subchapter II, chapter 98 of the *Harmonized Tariff Schedule of the United States (HTS)*.[5] These provisions provide a duty exemption on the value of U.S.-made components that are returned to the United States as parts of articles assembled abroad (9802.00.80), or as imported articles using U.S.-origin metal (except precious metal) that are returned to the United States for further processing (9802.00.60). *HTS* heading 9802.00.80 accounts for 95 percent of the imports under the production-sharing tariff provisions. *HTS* heading 9802.00.90 was created by the North American Free-Trade Agreement (NAFTA) to allow for the duty-free treatment of textile and apparel products assembled in Mexico from U.S.-formed and U.S.-cut fabric. Imports under the various production-sharing provisions were valued at $67.5 billion in 1996, accounting for 9 percent of total U.S. imports (table 1-1). The value of the U.S.-made components or materials that were contained in these imports totaled $24.0 billion in 1996, representing 35 percent of the value of total U.S. imports entered under the *HTS* PSP.

Purpose

This report provides an annual summary of the developments that have occurred during 1996 in the use of U.S. production-sharing tariff provisions, concentrating on shifts in both trade and product mix, and analyzing recent trends in imports by principal source countries and within selected industry sectors. Even though the incentive to use these provisions for articles entering from Mexico and Canada has been diminished to a certain extent as the result of reduced or eliminated tariffs and Customs user fees under the NAFTA, the production-sharing tariff provisions will likely continue to be an important element of the strategy of U.S.-based companies. Key determinants of the future of production-sharing operations include the extent to which U.S. manufacturers continue to rely on foreign assembly operations, how production sharing is employed worldwide by manufacturers to their competitive advantage, and the impact of technological and other developments on the global integration of specific industries.

[5] See app. A of this report for a discussion of the mechanics and legal framework associated with the production-sharing tariff provisions. For the legal text of the provisions, see ch. 98 of the *HTS* and applicable notes. For the purposes of this report (except as noted in table 1-1), imports under *HTS* 9802.00.5010 and heading 9802.00.90 are combined with imports under heading 9802.00.80. *HTS* 9802.00.5010 was created pursuant to the Caribbean Basin Economic Recovery Expansion Act of 1990 (CBERA). It is similar to 9802.00.8040 in that both allow duty-free treatment for goods imported from countries designated as beneficiaries of the CBERA if the goods are made from U.S.-origin components and materials, except for most apparel and other textile and petroleum products; however, 9802.00.8040 requires that the imported article be assembled entirely from U.S.-made components, whereas 9802.00.5010 is less restrictive, requiring only that the article consist entirely of U.S.-origin materials that have been advanced in value or improved in condition by any process of manufacture or other means. Under both, no U.S. duty is applied to either the value of U.S.-origin parts and materials or to the value added in the CBERA-beneficiary country. Under 9802.00.80, only the value of the U.S.-cut fabric pieces is duty-free; under 9802.00.90, the value added in Mexico (such as labor and overhead) is also duty-free. See the section on apparel in ch. 3 for more detail about 9802.00.90.

Table 1-1
U.S. imports under *HTS* 9802.00.60, 9802.00.80,[1] and 9802.00.90 and total imports, 1995 and 1996

Provision	1995	1996	Change, 1996 from 1995	Share of total imports under the production-sharing provisions, 1996
	Million dollars		*Percentage*	
Imports under 9802.00.60:				
Dutiable[2]	127	155	22	28
Nondutiable (U.S. origin metal)	377	395	5	72
Subtotal	503	550	9	1
Imports under 9802.00.80:				
Dutiable[3]	37,939	42,551	12	67
Nondutiable (U.S. origin components)	19,955	21,409	7	33
Subtotal	57,894	63,959	10	95
Imports under 9802.00.90:				
Dutiable[4]	705	844	20	28
Nondutiable (U.S. -formed and -cut fabric)	1,778	2,161	22	72
Subtotal	2,483	3,005	21	4
Imports under all production sharing provisions of *HTS* Chapter 98				
Dutiable	38,770	43,550	12	65
Nondutiable (U.S. made material)	22,110	23,965	8	35
Subtotal	60,880	67,514	11	100
Grand total U.S. imports[5]	739,660	790,470	7	([6])

[1] Separate data are not reported for imports under 9802.00.5010. Data for entries under this provision are combined with data for entries under 9802.00.80.

[2] The dutiable portion of imports under 9802.00.60 is the value added to the imported product by processing (or the cost of processing) in the foreign country. The nondutiable portion is the value of the U.S.-origin metal.

[3] The dutiable portion of U.S. imports under 9802.00.80 is the total value of the imported product less the cost or value of the U.S.- made components. The nondutiable portion is the value of U.S.-made components contained in the imported product.

[4] The value added in Mexico to the U.S. formed-and-cut fabric (the "dutiable" portion) is free of duty, as agreed to in NAFTA.

[5] For the purpose of this report, "total imports" consists of all imports entering under chapters 1-98 of the *HTS*.

[6] Not applicable.

Note.—Because of rounding, figures may not add to the totals shown.

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

The *HTS* production-sharing provisions (PSP) have historically provided the principal source of data detailing the use of U.S.-made parts in foreign assembly and other production-sharing operations. In recent years, however, U.S. firms engaged in Canadian and Mexican assembly operations have imported an increasing share of these products into the United States under the duty-reducing provisions of the Canadian Free-Trade Agreement (CFTA) and NAFTA, rather than under *HTS* PSP. Consequently, trade data are becoming an increasingly limited indicator of U.S. production-sharing activity, even though foreign assembly with U.S.-made components is expanding[6] and continues to be an important competitive strategy for many companies (see chapter 3). Consequently, where possible, this report attempts to characterize the extent and type of production-sharing trade that takes place beyond that which is reported under *HTS* PSP.

Official statistics indicate that 9 percent ($68 billion) of total U.S. imports ($790 billion) entered under *HTS* PSP in 1996. Sources contend, however, that the actual share of production-sharing imports may range between 10 and 15 percent ($80 to $120 billion) of total U.S. imports.[7] Most of the production-sharing imports that were not accounted for statistically originated in Mexico and Canada in 1996. Since many products that enter under the NAFTA without declaring eligibility under *HTS* PSP are known to be manufactured chiefly through the assembly of U.S.-made parts, it is estimated that the reported 1996 data for imports from Mexico under *HTS* PSP ($28 billion) understates actual production-sharing imports by approximately $16 billion (see chapter 2). Official statistics of Mexico's commerce department (SECOFI) indicate that exports to the United States from the maquiladora industry[8] amounted to $36.1 billion in 1996. The SECOFI data do not account for exports to the United States that are shipped from production-sharing operations that are not licensed under the Maquiladora Program.[9]

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[6] Production-sharing trade with Canada and Mexico continued to expand in 1996, particularly in motor vehicles and parts and in electrical and electronic products. In the electronics industry, U.S. multinationals such as IBM, Digital Equipment, and Hewlett Packard supply assembly operations in Canada. See ch. 2 of this report for additional information on non-9802 production-sharing trade with Mexico. Also see the Canada and Mexico country analysis sections in USITC, *Shifts in U.S. Merchandise Trade in 1996*, USITC publication 3051, July 1997, pp. 3-1 to 3-10.

[7] These estimates were provided by Professor Donald A. Michie, University of Texas, El Paso, Texas, and were also cited by other experts at a Border Trade Alliance conference in El Paso, TX, June 23-25, 1996. In addition, the Association of International Automobile Manufacturers, Inc. notes that these provisions understate the use of U.S. components by many of AIAM's members; submission in response to May 15, 1996, *Federal Register* notice concerning the April 1997 report on production sharing by the Commission covering the period 1992-95.

[8] Maquiladoras are assembly plants that use foreign-made components, most of which are imported from the United States. Most maquiladora plants are either subsidiaries of U.S. manufacturers or Mexican companies performing assembly under contract for U.S. firms. The Maquiladora Program is a Mexican Government initiative to attract foreign investment in assembly plants in towns along the border with the United States.

[9] Examples of U.S.-owned assembly plants in Mexico that do not operate within the Maquiladora Program include--Motorola (computers), Hewlett Packard (semiconductors), and Chrysler Corp. (motor vehicles). These companies did not register as maquiladoras when establishing operations in Mexico because their primary focus was to sell their production in the Mexican market, with surplus production being exported to the United States. Maquiladoras

(continued...)

To complement the analysis of trends in production-sharing imports entering under *HTS* PSP, each commodity writeup in ch. 3 includes a table that provides data on imports from Mexico that enter under NAFTA only without being simultaneously declared eligible under *HTS* PSP. For many types of manufactured goods (see the tabulation on page 2-5), the bulk of U.S. imports from Mexico are assembled from U.S.-made components. Increasingly, these imports are entering under NAFTA instead of *HTS* PSP. Such imports, designated as "NAFTA only," provide an upper limit of the extent to which statistics on imports of manufactured goods under *HTS* PSP under-report the total value of imports from production-sharing operations in Mexico. For the purpose of comparison, each table also shows total U.S. imports of the specified commodity from Canada and Mexico.

With U.S. production-sharing activity growing in importance in an increasingly globalized economy and with the use of U.S. components in these operations continuing to accelerate, alternative methods for statistical reporting are being considered by various government entities to improve data collection. An interagency committee [10] has proposed that production-sharing information for export transactions be collected in such a way that it would specify whether a shipment is destined for foreign processing and return, or for foreign consumption. This proposal would provide a core data element for a new International Trade Data System (ITDS) and coincides with the development by the U.S. Bureau of the Census of voluntary reporting measures using a new interactive electronic mechanism for exports. This approach would attempt to capture the value of products destined for foreign processing and return. These efforts remain in the formative stages and, as currently proposed, would not identify the final product incorporating U.S. components. It is uncertain whether these approaches will be successful in improving data collection for production-sharing trade.

[9] (...continued)
were not allowed to sell into the domestic market when these companies commenced operations in Mexico. Based on USITC staff interviews with company officials in Guadalajara and Toluca, Mexico, in 1987.

[10] Chaired by the U.S. Department of the Treasury and established under the National Performance Review (NPR Recommendation IT-06) to develop an International Trade Data System (ITDS), the IT06 Task Force includes the participation of 83 agencies coordinated by an interagency board of directors drawn from departments with a substantial involvement in the operation, analysis, policy development, and promotion of international trade. The board is composed of officials of Treasury, Justice, Commerce, Transportation, Agriculture, and Health and Human Services Departments, the U.S. International Trade Commission, and the Office of the United States Trade Representative.

Report Findings

U.S. companies that are significant users of production sharing regard such operations as an important tool to improve the relative price competitiveness of their product lines, to help keep capital-intensive production in the United States, and to provide important markets for exports of U.S. components (see chapter 3). Important findings regarding recent developments in the use of production sharing by U.S. industry include:

Aggregate trends

- Official statistics indicate that the volume of U.S.-made components used in imported goods continued to grow significantly in 1996. The value of U.S.-made components contained in products entered under *HTS* PSP grew by $1.9 billion (8 percent) over 1995 to $24.0 billion in 1996. Total U.S. imports under *HTS* PSP increased in 1996 by $6.6 billion (11 percent) over the 1995 level, to $67.5 billion, with U.S.-origin content accounting for 35 percent of the total value of imports under *HTS* PSP in 1996 (table B-1). Plants in Mexico and the Caribbean Basin tend to rely more heavily on components from the United States than do factories in other regions.

- Although official statistics indicate that 9 percent ($68 billion) of total U.S. imports in 1996 were entered under *HTS* PSP, industry sources contend that such imports actually range between 10 and 15 percent of total U.S. imports. Imports from Mexico under *HTS* PSP ($28 billion) in 1996 are estimated to understate the value of production-sharing imports by up to $16 billion (see chapter 2 - Mexico).

Principal countries

- Mexico is the principal source of U.S. imports under *HTS* PSP, accounting for 41 percent of the total value of such trade in 1996 and 61 percent of the total value of U.S. components incorporated in imported articles entering under *HTS* PSP (table 1-2). Even though the use of NAFTA as an alternate mechanism for the entry of production-sharing imports from Mexico is becoming increasingly common, *HTS* PSP continue to serve as an important competitive tool for companies that use low-cost foreign assembly.[11] The other major suppliers, the Dominican Republic and Malaysia, accounted for 6 and 5 percent, respectively, of the value of U.S. content in 1996. The principal products assembled abroad and imported by U.S. producers under 9802.00.80 are apparel from Caribbean Basin countries and Mexico; motor vehicles, electrical circuit apparatus, television receivers, and auto parts from Mexico; and semiconductors from Southeast Asia (figure 1-1).

[11] All but about one-sixth ($12 billion) of U.S. imports from Mexico in 1996 entered under NAFTA and/or *HTS* PSP. Nearly three-quarters ($55 billion) entered under NAFTA and 38 percent ($28 billion) entered under *HTS* PSP, with over one-quarter ($20 billion) of total imports entered as eligible for preferential treatment under both NAFTA and *HTS* PSP.

Table 1-2
U.S. imports for consumption, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal suppliers (based on the value of U.S. components in the assembled imports in 1996), 1993-96

(Million dollars)

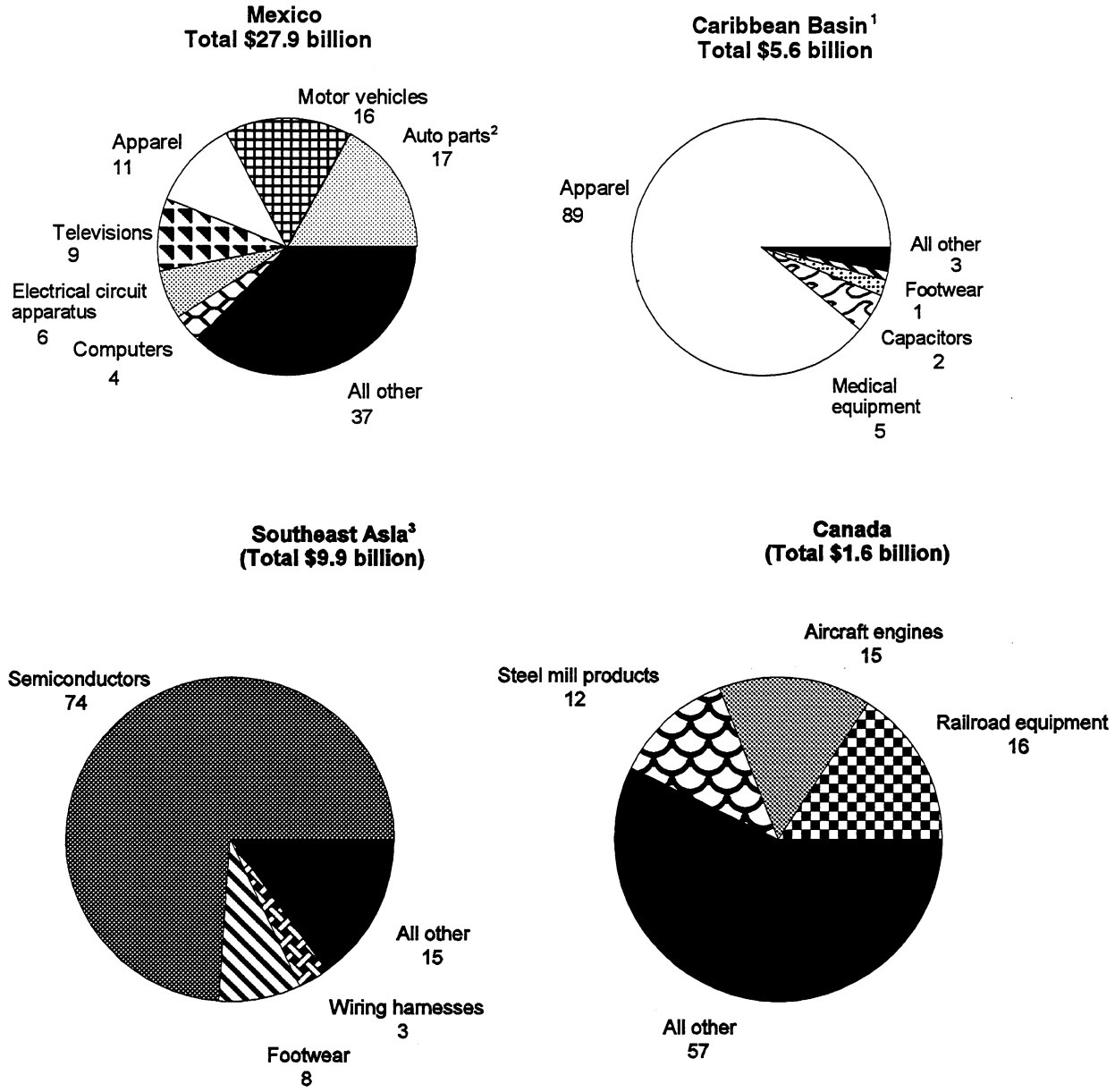
Country	1993	1994	1995	1996
	Total imports			
Mexico	38,668	48,605	61,721	74,179
Dominican Republic	2,667	3,077	3,385	3,582
Malaysia	10,482	13,877	17,401	17,771
Philippines	4,864	5,712	6,990	8,174
Honduras	914	1,092	1,441	1,797
Korea	16,986	19,547	24,026	22,532
Canada	110,482	128,753	144,882	156,299
Costa Rica	1,542	1,645	1,842	1,963
Thailand	8,539	10,276	11,337	11,324
Taiwan	24,981	26,586	28,875	29,797
All other	354,736	398,714	437,762	463,053
Total	574,863	657,885	739,660	790,470
	Production-sharing imports under *HTS* Chapter 98			
Mexico	18,992	23,068	24,962	27,925
Dominican Republic	1,531	1,707	1,965	2,104
Malaysia	1,669	1,938	2,778	2,382
Philippines	1,049	1,378	1,749	1,805
Honduras	337	452	676	981
Korea	1,664	1,724	1,798	1,787
Canada	3,035	1,663	1,539	1,579
Costa Rica	575	623	707	694
Thailand	397	594	786	789
Taiwan	961	1,127	1,193	1,048
All other	27,154	25,037	22,727	26,421
Total	57,364	59,311	60,880	67,514
	U.S. content of imports under *HTS* Chapter 98			
Mexico	9,887	11,608	12,833	14,649
Dominican Republic	1,041	1,109	1,278	1,365
Malaysia	794	968	1,313	1,116
Philippines	485	640	785	773
Honduras	236	325	480	694
Korea	478	480	600	653
Canada	1,124	688	605	618
Costa Rica	399	411	472	481
Thailand	238	353	461	423
Taiwan	337	371	424	375
All other	2,540	2,562	2,859	2,817
Total	17,560	19,517	22,110	23,965

Note.—Because of rounding, figures may not add to the totals shown.

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

Figure 1-1
Comparison of the composition of U.S. imports under the production-sharing provisions (PSP) of *HTS* Chapter 98 from major supplying countries/regions in 1996

(Percentage)



[1] Incudes those countries that are eligible for preferential duty treatment under the Caribbean Basin Economic Recovery Act. See Ch. 2 for a complete list of CBERA-eligible countries.

[2] Includes wiring harnesses and engines.

[3] For the purpose of this report, Southeast Asia includes Brunei, Burma, Cambodia, Indonesia, Hong Kong, Korea, Laos, Malaysia, the Philippines, Singapore, Taiwan, Thailand, and Vietnam.

Source: Compiled by the U.S. International Trade Commission from official statistics of the U.S. Department of Commerce.

- NAFTA's rules of origin regulations have increased demand for supplies of U.S. products to the maquiladora industry in order to meet U.S.-content requirements. The $1.8 billion (14-percent) increase in total recorded U.S. content from Mexico under *HTS* PSP in 1996 was concentrated in the following sectors: transportation equipment, up by $511 million (17 percent) to $3.6 billion; apparel, up by $483 million (30 percent) to $2.1 billion; machinery and equipment, up by $395 million (12 percent) to $3.8 billion; and electronic products, up by $310 million (8 percent) to $4.0 billion.

- U.S. imports from Mexico under *HTS* PSP rose by $3.0 billion (12 percent) in 1996 to $27.9 billion (table 1-2), reflecting the increased investment in maquiladora plants because of (1) the continued relatively low cost of Mexican labor; (2) reduced U.S. duties on apparel from Mexico under *HTS* 9802.00.90; (3) the substitution of assembly in Mexico (using U.S.-origin components) for importing from Asia as companies position themselves to take advantage of the preferential tariff treatment under NAFTA and *HTS* PSP; (4) the recovery of the economy in Mexico and the prospect of servicing both the U.S. and Mexican markets directly from maquiladora operations; and (5) the continued strength of consumer demand in the United States.[12]

- Eight percent of U.S. imports under *HTS* PSP in 1996 and 15 percent of the U.S. content came from the CBERA countries, which compete primarily with Mexico for assembly work from U.S. apparel firms. Mexico and the countries of the Caribbean Basin offer companies the benefit of both low-cost labor and close proximity to U.S. markets. The latter provides U.S. firms with greater control over production and delivery lead times than those associated with operations in Asian or other locations. The competitive position of U.S. apparel producers is increasingly dependent on the ability to react quickly to changing customer requirements. Reduced duties and other trade liberalization measures associated with recent trade agreements, as well as unilateral market reforms in Mexico and certain Caribbean countries, also have enabled numerous U.S. producers of apparel and other products to compete more effectively against low-cost imports from Asia.[13]

- Production sharing accounts for a significant share of U.S. trade with Mexico and the countries of the Caribbean, reflecting the importance of U.S. investment in these countries, which in turn, enables their manufacturing industries to compete in the global market. *HTS* PSP imports accounted for 38 percent of total U.S. imports from Mexico in 1996; 59 percent from the Dominican Republic; and 55 percent from Honduras (table 1-2).

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[12] Ch. 4 of last year's Commission report, *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1992-95*, USITC publication 3032, Apr. 1997, provides an assessment of the factors influencing changes in the maquiladora industry since the implementation of NAFTA.

[13] Ch. 3 provides more detailed illustrations of how production sharing helps retain U.S. production that otherwise might be lost to foreign producers competing in U.S. or global markets.

- The U.S. content (duty-free portion) of *HTS* PSP imports from Southeast Asia (including Korea) declined by 6 percent in 1996 to $3.9 billion. All but a small portion of these imports from the region consisted of semiconductors. *HTS* PSP shipments from export-processing locations in Malaysia, Taiwan, Hong Kong, the Philippines, and Thailand, declined during 1996, while growth occurred in such shipments from Korea, Singapore, and Indonesia. For the most part, the reduced value of imports from certain supplying countries reflects falling world prices for semiconductors rather than an actual decline in production-sharing activity.

- Official trade statistics indicate a recent decline in the use of *HTS* PSP in connection with imports from Canada. This decline reflects the staged elimination of duties and the Customs user fee under the CFTA, thereby reducing the incentive to use this tariff provision (appendix A). *HTS* PSP imports from Canada amounted to $1.6 billion in 1996 compared with a peak of $25.7 billion in 1989. Canada is believed to be the largest production-sharing partner with the United States, based on the growth in U.S. imports from and exports to Canadian assembly plants,[14] although this is not reflected in official statistics.

- The number of Canadian firms making use of Mexico's maquiladora program has increased from 9 to 29 since the implementation of NAFTA (through September 1997). These are primarily labor-intensive, low-technology firms that produce a wide variety of products ranging from automotive components to apparel. Like U.S.-based companies involved in the maquiladora industry, Canadian companies have established assembly plants in Mexico to take advantage of low-cost labor and/or to maintain their relationships as suppliers to important U.S. customers that also have assembly operations in Mexico. Unlike their U.S. counterparts, the majority of Canadian production-sharing operations are located in Mexico's interior rather than along the U.S.-Mexico border, where the bulk of the maquiladora industry is situated. Although few of the Canadian maquiladoras sold any of their production into the Mexican market during 1997, all of the companies interviewed aspire to initiate sales into the domestic market in the near future.

- Production-sharing operations in Europe[15] and Japan are motivated by the same economic incentives and considerations as those in North America. To maintain viability in the international marketplace and remain competitive with low-labor-cost manufacturers in newly industrialized or developing nations, manufacturers in the European Union (EU) and Japan also have transferred a portion of their more labor-intensive production and assembly operations principally to countries within their respective regions that provide significantly lower labor-cost structures (table 1-3).

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[14] For added detail, see USITC publication 3051, *Shifts in U.S. Merchandise Trade in 1996*, July 1997, pp. 3-6 - 3-10.

[15] European production sharing is commonly called "outward processing trade." Firms in France, Germany, and Northern Italy generally make use of low-labor-cost plants to sew apparel and assemble various electronic products in Portugal, Southern Italy, Slovenia, Croatia, Hungary, Poland, the Czech Republic, Slovakia, and North Africa. See ch. 5 of this report for a discussion of the uses of assembly plants in Hungary to reduce the costs of competing in European markets.

Table 1-3
Average hourly compensation costs for production workers in manufacturing, by selected regions and countries, 1993-96

Region/country	1993	1994	1995	1996	Change in 1996 from 1993	Change in 1996 from 1995
	U.S. dollars				Percentage	
North America						
United States	16.51	16.87	17.19	17.74	7	3
Canada	16.44	15.85	16.04	16.66	1	4
Mexico	2.40	2.47	[1]1.51	[1]1.50	[1]-38	[1]-1
Europe						
Germany	25.36	26.90	31.85	31.87	26	([2])
Belgium	21.62	23.25	26.88	26.07	21	-3
Austria	20.16	21.51	25.38	24.95	24	-2
Sweden	17.70	18.86	21.64	24.56	39	13
Finland	16.63	19.06	24.83	24.45	47	-2
Denmark	19.11	20.40	24.26	24.38	28	([3])
Netherlands	20.05	20.92	24.18	23.33	16	-4
France	16.23	17.04	19.34	19.34	19	0
Italy	16.00	16.10	16.52	18.08	13	9
United Kingdom	12.47	12.86	13.73	14.19	14	3
Ireland	12.12	12.63	13.83	14.12	17	2
Spain	11.50	11.39	12.70	13.29	16	5
Greece	7.02	7.51	8.30	([3])	([3])	([3])
Portugal	4.50	4.60	5.37	([3])	([3])	([3])
Poland	1.10	1.37	2.09	([3])	([3])	([3])
Hungary	1.48	1.65	1.8	([3])	([3])	([3])
Czech Republic	1.25	1.45	1.7	([3])	([3])	([3])
Asia						
Japan	19.01	21.07	23.66	21.04	11	-11
Singapore	5.25	6.29	7.33	8.32	58	14
Korea	5.64	6.40	7.40	8.23	46	11
Taiwan	5.19	5.49	5.82	5.86	13	1
Hong Kong	4.29	4.61	4.82	5.14	20	7
Malaysia	1.50	1.68	1.88	([3])	([3])	([3])
Philippines	1.00	1.15	1.32	([3])	([3])	([3])
Sri Lanka	0.42	0.45	0.48	([3])	([3])	([3])

[1] The drop in Mexican wage rates in 1995 was due primarily to the peso devaluation in December 1994.
[2] Less than 0.5 percent.
[3] Not available.

Source: Compiled by the U.S. International Trade Commission from U.S. Department of Labor and U.S. Department of Commerce international wage-rate comparison statistics.

- Many companies have established assembly plants in Hungary to take advantage of the combination of low labor costs and proximity to markets throughout Europe. The top investors are from Germany, the United States, and Austria. Labor costs in Germany are higher than other countries in Europe providing German industries a greater incentive to explore the advantages of production sharing in Hungary. U.S. companies seeking a low-cost manufacturing base in Europe have been able to use well-developed rail and highway links not only to distribute finished goods to Western European markets, but also to obtain components and other manufacturing inputs to supplement parts and machinery imported from the United States. U.S. companies that meet local content or transformation requirements are eligible for duty-free entry to the EU market from their Hungarian assembly plants. Leading products assembled in Hungary for European distribution include auto parts, apparel, telecommunications equipment, television and radio equipment, and printed circuit boards.

Principal products

- The growth in the U.S. content of *HTS* PSP imports in 1996 was principally attributable to increased shipments of apparel from the Caribbean Basin and Mexico; motor vehicles and wiring harnesses for motor vehicles from Mexico; medical goods from Mexico; and television receivers from Mexico (table 1-4). The upward trend in *HTS* PSP imports of apparel, motor vehicles, television receivers, wiring harnesses, and medical and scientific instruments was partially the result of strong demand for these products in the U.S. market in 1996 (table 1-5).

- The 5-percent decline in *HTS* PSP imports of semiconductors and other microelectronic devices in 1996 paralleled the 6-percent downturn in total U.S. semiconductor imports and the 9-percent contraction of the global market. *HTS* PSP imports of semiconductors fell by $449 million to $8.2 billion in 1996, while accounting for 22 percent of the annual U.S. semiconductor import total ($36.8 billion) (table B-3). Each of these declines in value reflects the global reduction in semiconductor prices in 1996; the quantity of semiconductors imported, both total and under the *HTS* PSP, actually increased in 1996. Because imports of most semiconductors are currently free of duty, they account for virtually no annual U.S. duty savings, even though they comprised 12 percent of total imports under *HTS* PSP in 1996.

- Apparel and microelectronic components (chiefly semiconductors) were the leading products imported under the *HTS* PSP, accounting for 23 and 22 percent, respectively, of the value of U.S. components contained in total imports under *HTS* PSP in 1996 (table 1-5). Motor vehicles accounted for an additional 11 percent and wiring harnesses for motor vehicles, for 9 percent of the total value of U.S. components under *HTS* PSP in 1996. Each of these product groupings requires significant labor-intensive, final-assembly operations that encourage production sharing to minimize production costs, given the intense global competition in these industries. This strategy often enables U.S. producers to retain jobs related to product development and design, capital-intensive manufacturing, and marketing in the United States.

Table 1-4
Summary of U.S. production-sharing trade shifts under the production-sharing provisions (PSP) of *HTS* Chapter 98 in 1996, value of U.S. content, by selected countries and products, annual value and percentage change, and reasons

Country	Product	Annual change	Reasons[1] for change
Mexico	Motor vehicles	Up $634 million (38 percent)	U.S. "Big Three" expanded vehicle assembly in Mexico for U.S. and local markets; low labor costs
Mexico	Apparel	Up $483 million (30 percent)	*HTS* 9802.00.90. This provision (agreed to in NAFTA) allows duty-free treatment for apparel sewn from U.S. formed and cut fabric.
Mexico	Wiring harnesses	Up $211 million (12 percent)	Strong U.S. demand for motor vehicles, increased average value of wiring sets
Honduras	Apparel	Up $209 million) (43 percent)	Political stability, good port facilities, low labor costs
Mexico	Television receivers	Up $201 million (25 percent)	NAFTA rules of origin; shift from Asian to U.S. sources; Asian investment
Mexico	Certain auto-parts	Up $76 million (9 percent)	Integration of North American motor vehicle industry; low labor costs
Mexico	Medical goods	Up $75 million (30 percent)	Supply base for Mexican and Latin American markets; low labor costs; strong U.S. demand
El Salvador	Apparel	Up $72 million (28 percent)	Continued re-investment following end of Civil War, availability of skilled workers
Mexico	Measuring instruments	Up $64 million (24 percent)	Strong U.S. demand; low labor costs; production in Mexico for both U.S. and local markets
Japan	Computer hardware	Down $100 million (-98 percent)	Duty-free entry for most computer equipment reduces incentive to use *HTS* PSP
Mexico	Internal combustion engines	Down $198 million (-78 percent)	Shift to entry under NAFTA instead of *HTS* 9802; maquila production shipped for auto assembly plants in Mexico
Malaysia	Semiconductors	Down $199 million (-15 percent)	Price reduction shrinks import value

[1] Further explanation is contained in ch. 2 and ch. 3.
Source: Compiled by staff of the U.S. International Trade Commission from official statistics of the U.S. Department of Commerce, various industry publications, and industry officials.

Table 1-5
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, total and duty-free, by major industry group, 1995 and 1996

Industry group	U.S. content (duty free) 1995	1996	Change 1996 from 1995	Share of total 1996	Ratio of U.S. content value to total value 1996	Total *HTS* PSP 1995	1996	Change 1996 from 1995	Share of total 1996
	Million dollars			*Percentage*		*Million dollars*			*Percentage*
Apparel	4,765	5,526	761	23	62	7,758	8,845	1,086	13
Other textile articles	356	348	-8	1	68	560	515	-45	1
Footwear	158	192	34	1	11	1,398	1,679	281	2
Electrical motors	475	522	47	2	61	780	859	79	1
Wiring harnesses for motor vehicles	1,843	2,038	195	9	61	3,080	3,332	252	5
Autos, trucks, and buses	2,046	2,657	611	11	11	18,659	23,322	4,664	35
Certain auto parts including engines and other electrical	1,288	1,223	-65	5	44	3,081	2,756	-325	4
Motor vehicle seats and other furniture	113	115	3	0	16	604	734	130	1
Other transportation equipment	401	333	-67	1	27	1,336	1,215	-122	2
Household appliances and heating ventilation and air condition	347	397	50	2	46	727	870	143	1
Filtering and controlling equipment	473	449	-24	2	67	714	667	-46	1
Transformers	234	288	55	1	48	591	603	12	1
Other machinery	306	343	37	1	34	960	1,023	63	2
Television receivers	835	1,031	196	4	39	2,511	2,625	114	4
Radio-TV and telephone equipment except television receivers	626	620	-6	3	26	2,062	2,356	294	3
Computer hardware	405	318	-87	1	25	1,372	1,297	-76	2
Microelectronic components	5,587	5,332	-255	22	52	10,702	10,220	-482	15
Medical and scientific instruments	740	940	200	4	46	1,724	2,027	302	3
All other manufactured articles	1,113	1,291	178	5	50	2,261	2,568	308	4
Special provisions	0	0	0	0	0	0	0	0	0
Total	22,110	23,965	1,855	100	35	60,880	67,514	6,634	100

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

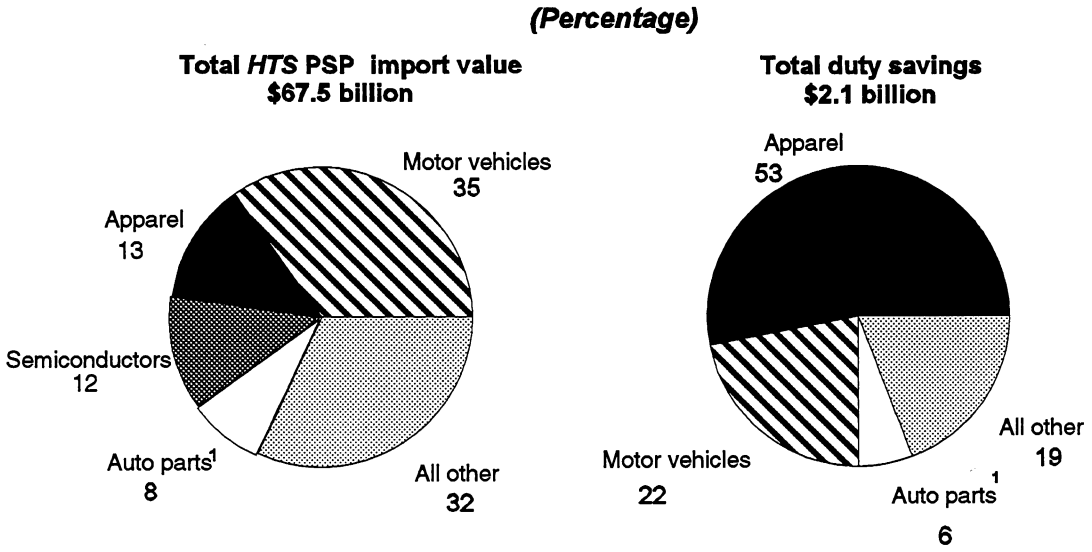
- U.S. imports of apparel under *HTS* PSP come almost entirely from Mexico and CBERA countries. *HTS* 9802.00.90 (created pursuant to NAFTA) eliminated the tariffs and quotas on garments and other textile products from Mexico that are assembled entirely from fabric formed and cut in the United States. Consequently, imports of apparel from Mexico under *HTS* PSP rose by $702 million (30 percent) in 1996 to $3.0 billion, while the value of U.S. fabric used in the assembly of this apparel reached $2.1 billion. *HTS* PSP imports of apparel from the Caribbean Basin grew by $500 million (11 percent) to $5.0 billion, with the U.S.-cut fabric used in the assembly process rising by $327 million to $3.2 billion in 1996.

- The U.S. apparel sector has perhaps a greater economic incentive than any other domestic industry to use the *HTS* PSP. In 1996, apparel products accounted for 53 percent of the total duty savings from the use of *HTS* PSP, despite comprising only 13 percent of total U.S. imports under these provisions (figure 1-2). The average trade-weighted rate of duty on apparel is 17 percent ad valorem, compared with about 3 percent ad valorem for other products. In addition, the duty-free U.S. content accounts for two-thirds of the total value of apparel imported under *HTS* PSP, compared with one-third for imports of all other products under the production-sharing provisions.

- U.S. imports of motor vehicles under *HTS* PSP rose by 35 percent to $23.3 billion in 1996. This increase was largely attributable to a continued expansion of vehicle assembly in Mexico to supply both the U.S. and Mexican markets. Lower labor costs following the devaluation of the peso encouraged greater use of assembly in Mexico (table B-5).

- The use of U.S. components in motor vehicles imported from Mexico far exceeds that in vehicles imported from Japan and Germany, which together with Canada accounted for 83 percent (by value) of total U.S. imports of motor vehicles in 1996. U.S.-made parts constituted 52 percent ($2.3 billion) of the value of finished vehicles imported from Mexico under 9802.00.80 in 1996, while they comprised just 2 percent of the value of vehicles imported from Japan and Germany ($109 million and $106 million, respectively) (tables B-6 and B-7). It is estimated that U.S.-made parts account for between one-quarter and one-third of the value of vehicles imported from Canada, but most of these vehicles enter free of duty under NAFTA rather than under *HTS* PSP.

Figure 1-2
U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98, shares of total value and duty savings, by selected industries, 1996



[1] Auto parts include engines and wiring harnesses.

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

Organization

The remainder of this report consists of four chapters and three appendixes. Chapter 2 identifies the principal countries and regions that are engaged in U.S. production-sharing trade and examines key trends affecting these assembly locations. Chapter 3 details the most significant developments that have occurred in the industries and products that have accounted for the largest growth or volume of trade under the *HTS* PSP in 1996. This analysis profiles the competitive strategies and level of U.S.-origin component production that are employed in foreign assembly operations. Chapter 4 focuses on the involvement of Canadian-based companies in Mexico's maquiladora industry. Chapter 5 explores the assembly industry in Hungary and examines the implications for U.S. industries of production sharing in Central and Eastern Europe. Appendix A of this report details the preferential tariff treatment for qualifying goods applicable to the Caribbean Basin, the trade agreement status of *HTS* PSP, and the relationship of the production-sharing provisions to preferential tariff and special access programs. Appendix B contains an extensive collection of statistical tables on U.S. imports under *HTS* PSP for the principal supplying countries, and by product category. Appendix C provides a copy of the Commission's Federal Register notice requesting comments with respect to this investigation.

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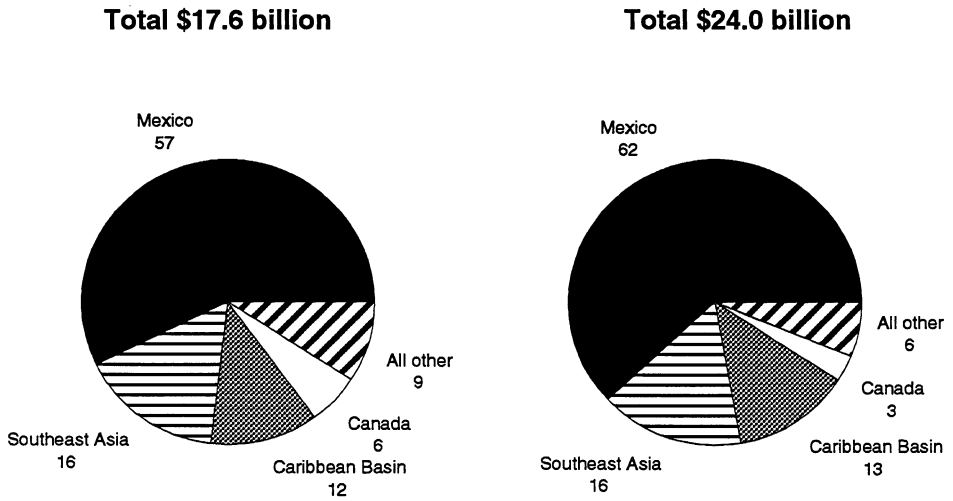
CHAPTER 2
KEY COUNTRY AND REGIONAL DEVELOPMENTS IN 1996

This chapter focuses on the principal sources of U.S. imports under the production-sharing provisions (PSP) of *HTS* Chapter 98, namely Mexico, the Caribbean Basin, and Southeast Asia. These regions accounted for 93 percent ($22.2 billion) of the U.S. content in *HTS* PSP imports in 1996 (figure 2-1). The U.S. content in *HTS* PSP imports from these sources rose by $2.0 billion (10 percent) in 1996, whereas those from all other sources declined by $122 million (7 percent). This chapter highlights the factors influencing *HTS* PSP imports from these sources, and examines the composition of U.S. production-sharing trade with principal sources, which differs significantly by region. Apparel continues to account for nearly all of the production-sharing trade with the Caribbean Basin countries that is reported under *HTS* PSP, whereas semiconductors dominate the trade with Southeast Asian countries. By contrast, U.S. production-sharing trade with Mexico is more diversified. Mexico continued to be the dominant source of production-sharing provision imports in 1996, accounting for 61 percent of the total U.S. content value, followed by the Dominican Republic with 6 percent, and Malaysia with 5 percent.

Figure 2-1
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98: U.S. content, major supplying countries/regions, 1993 and 1996

(Percentage)



Source: Compiled by the U.S. International Trade Commission from official statistics of the U.S. Department of Commerce.

Mexico

Mexico remained the overwhelming leader in production-sharing operations with the United States, as total U.S. imports under the production-sharing provisions of *HTS* Chapter 98 increased by $3.0 billion (12 percent) to $27.9 billion in 1996 (column b, table 2-1A).[1] Imports entered under the *HTS* PSP as a share of total imports from Mexico continued to decline, as more of these products became eligible for duty-free entry under NAFTA.[2] The share of total imports that entered under the *HTS* PSP declined from a high of 49 percent in 1993 to 38 percent in 1996, while the share of such imports accounted for by U.S.-made components remained steady at just over 50 percent. Following the implementation of the North American Free Trade Agreement (NAFTA) in 1994 and the 50-percent devaluation of the Mexican peso during December 1994 and January 1995,[3] firms expanded investment in

Table 2-1A
Mexico: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96[1]

Year	(a) Total imports	(b) *HTS* PSP imports	(c) U.S. content under *HTS* PSP	(d) *HTS* PSP share of total imports	U.S. content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	38,668	18,992	9,887	49	52
1994	48,605	23,068	11,608	47	50
1995	61,721	24,962	12,833	40	51
1996	74,179	27,925	14,649	38	52

[1] Data in columns designated (a) through (d) are comparable to data shown in the respectively indicated columns in table 2-1B, which provide official Mexican statistics on maquiladora trade with the United States.

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

[1] By contrast, U.S. imports under *HTS* PSP from Japan and Germany, the second- and third-leading suppliers of *HTS* 9802 imports totaled only $7.8 billion and $7.4 billion, respectively, in 1996. In terms of U.S. content in imports under *HTS* PSP, however, the Dominican Republic and Malaysia were more significant than Japan and Germany. Production-sharing trade with Canada may rival that with Mexico, particularly in the automotive sector, but little of such trade enters under these *HTS* PSP because most imports from Canada already enter the United States free of duty under NAFTA.

[2] The maquiladora industry has been profoundly affected by NAFTA's elimination of import duties, rules of origin, and increasing level of permitted sales into the Mexican domestic market. See Carlos Angulo Parra, Edmundo Elias Fernandez, and Carol S. Osmond, "Maquiladoras in the New Environment," Baker & McKenzie: Juarez, MX, June 1996.

[3] For a detailed discussion of the Mexican peso crisis, see Edwin M. Truman, "The Mexican Peso Crisis: Implications for International Finance," *Federal Reserve Bulletin*, vol. 82, No. 3 (Mar. 1996), pp. 199-209.

maquiladora[4] plants, contributing to the near doubling of total U.S. imports from Mexico during 1993-96 (column a, table 2-1A).

Further insights regarding the extent to which production sharing is occurring in Mexico beyond that reported under *HTS* PSP can be drawn from official Mexican statistics on maquiladora trade. According to Mexico's Commerce and Industrial Development Secretariat (SECOFI),[5] the maquiladora industry's exports to the United States grew by 18 percent in 1996 (from $30.7 billion to $36.1 billion) and were 67 percent higher in 1996 than in 1993, the year preceding the implementation of NAFTA (column b, table 2-1B). The SECOFI data also indicate that 91 percent of all imported inputs into the maquiladora industry came from the United States in 1996. The maquiladora's imports of components, materials, and machinery from the United States totaled $27.6 billion in 1996, 18 percent ($4.2 billion) higher than in the previous year, and 81 percent greater than in 1993 (column c, table 2-1B). Increased duty-free imports under NAFTA are most likely responsible for the $8.2 billion difference between U.S. imports under *HTS* PSP and Mexico's exports to the United States from the maquiladora industry in 1996 (column b, tables 2-1A and 2-1B). A resulting $13.0 billion difference between the value of U.S. content in *HTS* PSP imports from Mexico and the value of the maquiladora industry's imports from the United States also is attributable to the Mexican import data that include (1) U.S. materials that are not eligible for duty-free

Table 2-1B
Mexico: Exports to the United States, total and from the maquiladora industry; and imports of components, materials, and machinery into Mexico from the United States for use in the maquiladora industry, 1993-96[1]

Year	(a) Total exports	Total imports	(b) Maquiladora exports to the United States	(c) Maquiladora imports from the United States	(d) Maquiladora share of total exports to the United States	Maquiladora share of total imports from the United States
	Million dollars				*Percentage*	
1993	42,851	45,293	21,697	15,270	51	34
1994	51,645	54,837	26,112	18,328	51	33
1995	66,273	53,902	30,733	23,458	46	44
1996	80,344	67,535	36,146	27,630	45	41

[1] Data in columns designated (a) through (d) are comparable to data shown in the respectively indicated columns in table 2-1A, which provides official U.S. statistics on *HTS* PSP trade with Mexico.

Source: Compiled from official statistics of SECOFI.

[4] "Maquiladora" denotes a type of company in Mexico that performs some aspect of the manufacturing process for a product, such as assembly. Mexican plants that import components and machinery free of duty (but in bond) for processing goods for export can operate under either the Maquiladora Program or under the Program of Temporary Imports to Produce Export Articles (PITEX).

[5] The SECOFI trade statistics used in this report have been generated from the following CD-ROM: Global Trade Information Services, *World Trade Atlas: Mexico Edition, 1993-96, Preliminary* (Columbia, SC), 1997.

treatment under the production-sharing provisions, such as paints, lubricants, and plastics; (2) U.S. machinery imported for temporary use in the maquiladora industry; and (3) U.S.-made components that are imported for assembly into products that the maquiladora industry then sells to customers in Mexico or other Latin American countries, instead of exporting to the United States (column c, tables 2-1A and 2-1B).

Mexico has historically been the preferred production-sharing location for U.S. firms because of its highly competitive wage rates; developing infrastructure; proximity to U.S. markets, transportation and communications networks; and complementary manufacturing operations. Additionally, the implementation of NAFTA persuaded companies to increase investment in Mexico because U.S. duties and quotas were dropped on imports of apparel and other textile products assembled in Mexico from U.S.-formed and cut fabric; duties were substantially reduced or eliminated on many other goods; and rules of origin were adopted that encouraged greater use of U.S.-made parts. The sharp devaluation of the peso further enhanced the competitive position of Mexican production-sharing operations by effectively reducing labor costs in dollar terms, making maquiladora goods less expensive in the United States. These developments also persuaded U.S.-based and other foreign-based companies, particularly Japanese and Korean firms, to invest in maquiladoras in Mexico. As of March 1997, a record 2,624 maquiladoras (1,691 of which were located on the border), employing 861,143 workers, were operating in Mexico.[6]

Although there has been a sharp increase in the number of foreign companies investing in assembly plants in cities in the interior of Mexico, most maquiladoras remain clustered in industrial parks in cities along the border with the United States. Despite violence associated with local drug cartels in border cities such as Tijuana and Ciudad Juarez, as well as high worker turnover rates and an over-burdened infrastructure,[7] most maquiladoras in the border zone have elected to remain in their present locations and many have expanded their production capacity.[8] Proximity to the United States offers Mexican assembly plants many advantages: (1) access to communication and transportation infrastructure in the United States, (2) close association with U.S. component manufacturers and suppliers of services to the maquiladora industry, (3) shorter delivery times to customers in the United States, and (4) easier access to the plants by personnel from U.S. headquarters, as well as the ability of managers to work in Mexico and live with their families in the United States.

[6] "Maquila Scoreboard," *Twin Plant News*, Sept. 1997.

[7] In a number of locations, state and local governments in Mexico are working with private companies and industrial park operators to improve infrastructure and housing for maquiladora workers. Although the pace of infrastructure improvements has quickened since the implementation of NAFTA, providing adequate primary and secondary school education in border cities remains a significant challenge. USITC staff interview with Mike Allen, President and CEO, McAllen Economic Development Corp. and Foreign Trade Zone, McAllen, Texas, and Reynosa, Mexico, June 16, 1997.

[8] Mary Beth Sheridan, "Riding the Ripples of a Border Boom," *Los Angeles Times,* June 9, 1997.

Proximity to U.S. parts suppliers combined with the distance from potential Mexican sources in the interior of Mexico to maquiladora plants along the border has discouraged the development of Mexican suppliers. In general, companies investing in assembly operations closer to the interior of Mexico tend to be operations new to Mexico, and companies seldom move operations from the border to the interior. However, several multinational companies have established maquiladoras in the interior and persuaded their U.S. or Asian suppliers to invest in facilities near the assembly plants. Other companies have installed plants in the interior in order to be close to Mexican producers of critical materials for the plant, such as steel or glass.[9] Companies investing in the interior often establish such plants with a view towards taking advantage of NAFTA's changes to the Maquiladora Program and selling a significant portion of their assembled products to customers in the Central Valley of Mexico. These plants have the greatest incentive to develop local suppliers, working with companies in the interior to improve production methods and quality and to reduce costs.[10]

However, NAFTA's rules of origin requirements have increased demand for supplies of U.S. products to the maquiladora industry, in order to meet U.S. content requirements.[11] The $1.8 billion (14-percent) increase in total recorded U.S. content from Mexico under *HTS* PSP in 1996 was concentrated in the following sectors: transportation equipment, up by $511 million (17 percent) to $3.6 billion; apparel, up by $483 million (30 percent) to $2.1 billion; machinery and equipment, up by $395 million (12 percent) to $3.8 billion; and electronic products, up by $310 million (8 percent) to $4.0 billion (see table B-5 in appendix B).

According to official U.S. statistics, nearly three-quarters of U.S. imports from Mexico entered under NAFTA (both "NAFTA only" and "NAFTA and *HTS* PSP") in 1996, with over one-third of all imports under NAFTA also entering under the *HTS* PSP (table 2-2). Of the $34.7 billion entered under NAFTA alone, Commission staff estimates that at least $15.6 billion consisted of products that are known to be chiefly manufactured through the assembly of U.S.-made parts. The value of the leading products[12] entered under "NAFTA only" are shown in the following tabulation:

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[9] Some companies have established maquiladora operations in Monterrey, Mexico, to take advantage of the availability of graduates from the managerial and engineering programs at Monterrey Institute of Technology, many of whom are bilingual. USITC staff interview with Bill Waltensperger, general manager; Automotive Vision Systems/OMG, Donnelly Corp., Guadalupe, Mexico, June 19, 1997.

[10] The Government of Mexico has offered tax cuts, sponsored trade shows, and implemented financing and customs benefits to increase the amount of Mexican-origin goods destined for the maquiladoras. For more information, see ch. 4, "Changes in the Maquiladora Industry Since the Implementation of NAFTA," USITC, "*Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1992-95*, USITC publication 3032, Apr. 1997.

[11] For example, in order to be eligible for NAFTA entry, U.S. imports of television receivers are required to contain North American-made picture tubes.

[12] See table B-5.

Commodity group	Value
	(Million dollars)
Motor vehicles	$6,883
Internal combustion engines	1,275
Computer hardware	1,101
Certain motor-vehicle parts	909
Television receivers	859
Motor-vehicle seats and other furniture	791
Telephone and telegraph apparatus	635
Wiring harnesses for motor vehicles	591
Television apparatus, except receivers	573
Radio transmission and reception apparatus	545
Electrical transformers	462
Air-conditioning equipment	368
Household appliances	367
Measuring, testing, controlling, and analyzing instruments	262
Total	15,621

It is likely that a high proportion of these goods imported under "NAFTA only" were manufactured through the use of U.S.-origin content, yet they are not reflected in data on imports from Mexico under *HTS* PSP. From the tabulation, it can be concluded that reported 1996 data indicating imports from Mexico under the *HTS* PSP ($27.9 billion) possibly understate production-sharing imports by more than $16 billion. The fact that the *HTS* PSP understate production sharing is supported by SECOFI data, which shows Mexican maquiladora imports from the United States (a rough indicator of U.S. content) to be $27.6 billion in 1996- -$13.0 billion more than recorded U.S. data, as stated earlier.[13]

Table 2-2
Mexico: U.S. imports from Mexico under NAFTA and under the production-sharing provisions (PSP) of *HTS* Chapter 98, 1996

Type of entry	Value	Share
	(Million dollars)	*(Percentage)*
NAFTA only	34,687	47
NAFTA and *HTS* PSP	20,389	27
HTS PSP only	7,536	10
Other (MFN)	11,567	16
Total	74,179	100
Total NAFTA	55,076	47
Total *HTS* PSP	27,925	38

Source: Compiled from official statistics of the U.S. Department of Commerce. See Appendix table B-5 for product detail.

[13] A researcher familiar with SECOFI data has suggested that official Mexican statistics also may understate the value of total maquiladora exports to the United States; maquiladora operators reporting exports to SECOFI may claim a lower amount of Mexican value added in the assembly process than is reported by U.S. importers of goods from the maquiladora industry in their documents filed with the U.S. Customs Service. Isaac Mankita, University of California at Berkeley, telephone interview with USITC staff, Aug. 22, 1997.

The increasingly integrated North American motor-vehicle industry experienced record-high levels of imports and exports in 1996, mainly because of NAFTA preferential rules of origin, reduced quantitative restrictions and export performance specifications, and liberalized investment rules in Mexico.[14] The transportation sector, more than any other, has shifted from importing under the production-sharing provisions of *HTS* Chapter 98 to NAFTA to take advantage of the duty-free treatment. Because many of the components used in the assembly of motor vehicles, certain motor-vehicle parts, and ignition starting equipment are made in the United States, the value of the U.S. content in imports under *HTS* PSP has continued to expand for the transportation sector, up by $511 million (17 percent) to $3.6 billion in 1996 (tables 2-3 and B-5).

Table 2-3
Mexico: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal products, 1993-96

(Million dollars)

Product	1993	1994	1995	1996
Motor vehicles	1,758	1,768	1,676	2,310
Wiring harnesses for motor vehicles	1,055	1,554	1,758	1,970
Electrical circuit apparatus	811	1,092	1,164	1,119
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	676	839	814	1,015
Certain motor-vehicle parts	1,164	977	811	887
Shirts and blouses	149	289	464	614
Mens' and boy's trousers	209	268	412	515
Electric motors, generators, and related equipment	311	408	457	506
Women's and girls' trousers	116	174	291	422
Semiconductor devices	224	257	326	352
All other	3,413	3,982	4,660	4,941
Total	9,887	11,608	12,833	14,649

Note.—Because of rounding, figures may not add to the totals shown.

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

[14] This integration is stimulated by merging resources such as capital, labor, and technology in an effort to better compete globally. See, "North American Auto Industry Grows Under NAFTA," *NAFTA Works*, vol. 2:5 (May 1997), pp. 2 and 5. For more information on production sharing of motor vehicles in Mexico, see ch. 3 of this report. Despite minimal imports under the production-sharing provisions of *HTS* Chapter 98 from Canada in 1996, Canada is probably still the leading production-sharing partner for the United States in the motor vehicles and parts sector given the extensive cross-border integration of the industry in the two countries. The rationalization of U.S. automotive production vis-a-vis Canada, spurred decades ago by the Automotive Trade Act of 1965 (APTA), resulted in significant intraindustry trade and trade in intermediate goods. See appendix table B-14.

Mexican producers of auto parts and other components have been trying to improve the quality of their products to meet standards set by potential customers in the maquiladora industry by focusing on education and worker training.[15] U.S. companies, meanwhile, are working with current and potential Mexican suppliers in terms of production and management technology and loans for capital equipment in an effort to improve product quality and price. At the same time, U.S.-based automotive firms, as well as those in other industries, have tried to improve worker satisfaction and reduce chronic absenteeism through programs that assist maquiladora workers in buying their own homes.[16]

Preferential tariff treatment under NAFTA and low labor costs continued to aid Mexico in its competition with Caribbean locations for new investment in apparel-sewing operations.[17] U.S. companies seeking to reduce production costs by having garments sewn in Mexico continued to benefit from *HTS* heading 9802.00.90 (created as a result of NAFTA), which permits garments assembled in Mexico from fabric wholly formed and cut in the United States to enter free of duty and quota. Meanwhile, imports from sewing operations in the Caribbean Basin enter under the heading *HTS* 9802.00.80, and continue to be subject to duty on the value added offshore. The peso devaluation in December 1994 also brought Mexican labor costs closer to parity with those in the Caribbean Basin, further increasing the competitive advantages of Mexican-based firms. U.S. imports of apparel accounted for $2.1 billion (14 percent) of the total U.S. content in *HTS* PSP imports from Mexico in 1996, an increase of $483 million (30 percent) over 1995.[18]

Many electronics firms took advantage of the implementation of NAFTA, the peso devaluation, and easy access to U.S. markets by investing in Mexican maquiladoras. U.S. imports of such products entering under NAFTA increased by $2.2 billion (24 percent) in 1996 to $11.4 billion, far outpacing those which entered under the production-sharing provisions of *HTS* Chapter 98, which increased by $693 million (8 percent) to $9.3 billion (table B-5). NAFTA-mandated changes in the rules of origin requirements encouraged many of these companies to source components from the United States for further assembly and processing in Mexico. Asian firms, in particular, increased their investment in Baja California, Mexico, in large part because of the proximity to the electronics and computer

[15] "When Neighbors Embrace," *The Economist*, July 5, 1997, pp. 5-7.

[16] "Maquila Housing: GM and INFONAVIT Join Forces," *Twin Plant News*, Aug. 1996, pp. 27-29.

[17] Mexico competes directly with the Caribbean Basin for garment assembly contracts with U.S. firms. Countries such as the Dominican Republic, Honduras, Guatemala, Costa Rica, and El Salvador, use Economic Processing Zones (EPZs) to attract investment, chiefly in highly specialized areas like nightwear and undergarments. See, Gary Gereffi, "Restructuring the North American Apparel Commodity Chain: Winners and Losers," paper presented at the XX International Congress of the Latin American Studies Association, Mexico, Apr. 17- 19, 1997. Asian suppliers of apparel have seen their quotas reduced in the past few years, fueling the growth of the apparel industry in both Mexico and the Caribbean to varying degrees. James Canute, "Caribbean, Top Source of U.S. Imports of Apparel, Wary of Mexican Threat," *The Journal of Commerce*, Sept. 26, 1996.

[18] For more information on production sharing and apparel, see ch. 3 of this report.

industries in California.[19] For the electronics products sector, the level of U.S. content incorporated in imports under *HTS* PSP increased by $310 million (8 percent) in 1996 to $4.0 billion. In terms of U.S. content, electrical circuit apparatus,[20] television receivers, measuring instruments, and medical goods remained the most important electronic products imported from Mexico. Tijuana has become known as the "TV-set capital of the world," as companies like Samsung, Hyundai, Sony, Daewoo, Hitachi, and Matsushita have increased investment in the region.[21]

Although U.S. imports of machinery and equipment from Mexico that were entered under *HTS* PSP increased modestly, by $530 million (9 percent) to $6.1 billion, such imports recorded under NAFTA jumped by $1.7 billion (28 percent) to $7.9 billion in 1996, reflecting the overall trend toward entering production-sharing imports under NAFTA instead of the provisions of *HTS* Chapter 98 (table B-5). The most significant imports in this category, wiring harnesses for motor vehicles, electric motors and generators, electrical transformers, and household appliances, continued to have relatively high levels of U.S. content.

The maquiladora industry has been a key element in Mexico's passage toward becoming a modern, industrialized nation, and a leading source of foreign exchange for Mexico. According to SECOFI, the maquiladora industry[22] accounted for 72 percent ($69.0 billion) of Mexico's total exports to the world in 1996. The maquiladora industry has also served as a training ground for managers who have gone on to work for domestic producers or service industries in Mexico, taking with them experience in the latest manufacturing and management technology, all of which underscore the importance of production sharing in Mexico.

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[19] The education and skill level of the Mexican labor force, combined with a relatively developed infrastructure, typically resemble those of several Southeast Asian countries. Mexican firms also benefit from preferential access and geographic proximity to the United States. See Joel Millman, "Asian Investment Floods Into Mexican Border Region: Access to U.S. Market Draws Makers of Televisions, Toys; and Shabu-Shabu," *The Wall Street Journal*, Sept. 6, 1996; and Tim Coone, "The Aztec- Asian Connection," *Latin Trade*, Sept., 1996, p. 17.

[20] Electrical circuit apparatus was the only major electronic product to experience a decline in terms of the value of U.S. content, which fell by $45 million (4 percent) to $1.1 billion.

[21] Damon Darlin, "Maquiladora-ville," *Forbes*, May 6, 1996, pp. 111-112. The principal assembly plants for RCA and Magnavox (Philips) brand televisions are located in Juarez, Mexico, while Zenith's main assembly plant is in Reynosa.

[22] Includes companies registered under the PITEX Program.

The Caribbean Basin[23]

The Caribbean Basin region is the second-leading supplier of production-sharing provision (PSP) imports under *HTS* Chapter 98, accounting for 8 percent of total imports under the provision in 1996 and 15 percent of the U.S.-origin content. The U.S. content in imports from the Caribbean Basin under the *HTS* PSP rose by $402 million (12 percent) in 1996, to $3.6 billion (table 2-4). The growth in imports from the Caribbean Basin under these production-sharing provisions in 1996 was chiefly attributable to the expansion of U.S. apparel production-sharing operations[24] in Honduras and El Salvador, and to increased imports of medical goods and electronic circuit apparatus from assembly plants in the Dominican Republic.[25]

The sewing of apparel involves low levels of technology, modest labor skills, and nominal capital investment. As a result, global apparel assembly has migrated to regions with transitional economies that have an ample supply of low-cost labor (Asia, Mexico, the Caribbean Basin, and Eastern Europe).[26] Imports under *HTS* PSP accounted for 83 percent of total apparel imports from the Caribbean Basin in 1996 (see chapter 3, table 3-1). In contrast, production sharing does not account for a significant amount of U.S. apparel imports from East Asia because, unlike Mexico and the Caribbean Basin, East Asian apparel manufacturers do not use U.S.-made fabrics.[27] Although a number of East Asian-owned firms

[23] Caribbean Basin countries include those that are eligible for preferential U.S. duty treatment under the Caribbean Basin Economic Recovery Act (CBERA) and designated by the President (see *HTS* general note 7 (a)). CBERA countries are Antigua and Barbuda, Aruba, The Bahamas, Barbados, Belize, British Virgin Islands, Costa Rica, Dominica, the Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, Panama, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago.

[24] In contrast to U.S.-owned contracting operations that have the resources to finance the purchasing, cutting, and shipping of U.S.-made apparel kits, Caribbean-owned operations generally serve as contractors for only the sewing of apparel. Because contract operations provide manufacturing services and sell no products under their own name, their use entails little risk of pirating even if they manufacture for competitors. See Sturgeon and Cohen, *The New U.S. Model of Global Production in Electronics: The Turnkey Network,* Competitiveness Policy Council, BRIE Globalization Conference, Session II briefing paper, Dec.17, 1996.

[25] Only three nonapparel products imported from the Caribbean Basin under the *HTS* PSP had U.S. content levels that exceeded $15 million in 1996: (1) medical goods, $194 million; (2) electrical circuit apparatus, $87 million; and (3) jewelry, $26 million. Most of these products were assembled in the Dominican Republic.

[26] USITC staff telephone interview, Tom Chubb, Oxford Industries, Aug. 11, 1997.

[27] See table 5-5 in USITC, *Production Sharing: Use of U.S. Foreign Assembly Operations, 1991-1994*, USITC publication 2966, for a comparison of wage rates, f.o.b. prices, transportation costs, and duty rates between Mexico, the Dominican Republic, Korea, and Pakistan.

Table 2-4
U.S. content of imports under production-sharing provisions (PSP) of *HTS* Chapter 98 from the Caribbean Basin region for apparel, all other, and total by principal countries, 1993-1996

Country	1993	1994	1995	1996	Change 1995/1996 Absolute	Change 1995/1996 Percentage
	Million dollars					*Percentage*
Dominican Republic:						
Apparel	810	878	989	1,009	20	2
All other	231	231	289	356	67	23
Subtotal	1,041	1,109	1,278	1,365	87	7
Honduras:						
Apparel	233	325	479	688	209	44
All other	3	0	1	6	5	500
Subtotal	236	325	480	694	214	45
Costa Rica:						
Apparel	375	387	443	444	1	0
All other	24	24	29	37	8	28
Subtotal	399	411	472	481	9	2
Jamaica:						
Apparel	249	299	363	350	-13	-4
All other	5	7	6	5	-1	-17
Subtotal	254	306	369	355	-14	-4
El Salvador:						
Apparel	103	160	260	332	72	28
All other	15	15	16	12	-4	-25
Subtotal	118	175	276	344	68	25
All other:						
Apparel	320	279	354	392	38	11
All other	164	35	17	17	0	0
Subtotal	484	314	321	409	38	10
Total Caribbean						
Apparel	2,090	2,328	2,888	3,215	327	11
Other	442	312	358	433	75	21
Total	2,532	2,640	3,246	3,648	402	12

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

have set up apparel assembly operations in the Caribbean, it is believed that most of these firms assemble apparel articles from fabric produced in their home country.[28]

[28] Lower labor and transportation costs, quicker delivery, and the availability of unfilled quotas encourage East Asia owned apparel assembly operations in the Caribbean. However, some U.S. companies reportedly have been hesitant to invest in new assembly plants in El Salvador and Guatemala because of allegations regarding the denial of workers' rights and violations of labor laws by Korean and Taiwan-owned apparel sewing operations. U.S. companies have canceled or scaled back orders to firms in El Salvador. U.S. Department of State Cable, "Salvadoran Maquila Sector Report," R 112152Z, Aug. 1997, prepared by U.S. embassy, San Salvado, El Salvador. Further, total U.S. imports of apparel from Guatemala rose much more quickly than imports under *HTS* PSP in 1996 (ch. 3, table 3-1). Most of the U.S. imports of apparel from the

(continued...)

The Caribbean Basin also has been a successful site for apparel assembly operations because of (1) close proximity to the eastern half of the United States; (2) U.S. quota preferences that provide certain Caribbean countries with a significant competitive advantage over other low-cost apparel suppliers in terms of access to the U.S. market;[29] (3) infrastructures that adequately support the efficient transportation and assembly of apparel; and (4) a sophisticated network of private sector or government-owned free trade zones (FTZs) that offer a variety of incentives to foreign companies with export-oriented production.[30]

Trends in U.S. imports during 1993-96 from the Caribbean under *HTS PSP* were affected by both the NAFTA and the phasing out of section 936 tax credits for U.S.-owned businesses operating in Puerto Rico after December 31, 1993.[31] The loss of a significant portion of the tax credit further raised operating costs for assembly operations in Puerto Rico which, because of labor costs, were already high compared with other Caribbean locations.[32] As a result, a number of U.S. apparel firms with production-sharing operations in Puerto Rico (considered part of the Customs territory of the United States) have shifted their operations

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[28](...continued)
Salvador. Further, total U.S. imports of apparel from Guatemala rose much more quickly than imports under *HTS* PSP in 1996 (ch. 3, table 3-1). Most of the U.S. imports of apparel from the Caribbean Basin region that do not enter under the *HTS* PSP are believed to be accounted for by East Asian apparel assembly operations that use Asian made fabric.

[29] See the section in ch. 3 on apparel and the app. A of this report for a discussion of Guaranteed Access Levels (GALS) for U.S. imports of apparel from certain Caribbean Basin countries.

[30] Foreign trade zones (FTZs) generally--(1) allow manufacturers to import free of duty and excise taxes all machinery, equipment, spare parts, construction materials, and other resources necessary for the construction and operation of a facility; (2) exempt exports from any duties, taxes, or tributes; (3) have customs offices on-site allowing firms to reduce inventories and decrease custom clearing costs; (4) have no restrictions on foreign exchange operations; and (5) provide recruiting and training facilities. For more background information on foreign trade zones, see the following publications: U.S. International Trade Commission, "Free Trade Zones: Global Overview and Future Prospects," prepared by Gail Burns, *Industry Trade and Technology Review (ITTR)*, Washington, DC, Sept. 1995; and Kevin P. Power, *Caribbean Basin Trade and Investment Guide,* Washington International Press, Washington, DC.

[31] Originally, section 936 of the U.S. Internal Revenue Code granted a complete tax exemption on the income of qualifying U.S. corporations in Puerto Rico as long as the funds remained in Puerto Rico. In addition, Puerto Rico granted local and commonwealth tax credits to section 936 for Qualified Possession Source Investment Income (QPSII) funds deposited in Puerto Rican financial institutions. The tax credits, along with wage rates that were only 50 to 60 percent of those in the United States, were an incentive for U.S. companies to establish apparel operations in Puerto Rico. See *Impact of the Caribbean Basin Economic Recovery Act on U.S. Industries and Consumers*, Ninth Report 1993, USITC publication, 2674, Sept. 1994, p. 38.

[32] According to George Shobha, Director of Financial Services, Caribbean Latin American Action, the following is the status of Section 936 (currently Section 30A): (1) all local and commonwealth tax credits, as of July 1, 1997, on the QPSII funds have been terminated; (2) the complete tax credit offered by Section 936 was reduced to 60 percent in 1994, and 5-percent yearly reductions were taken thereafter until a floor of 40 percent is reached in 1998; (3) 936 firms with an income credit will be allowed to switch to a wage credit formula (as opposed to the income credit, the wage credit is linked to a project's labor and capital intensity); (4) a 40-percent wage credit will be allowed for existing 936 firms after 2005; and (5) 936 firms will be allowed to receive additional wage credits for expansion.

to other Caribbean countries during 1993 to 1996[33] and now take advantage of *HTS* PSP. Concurrently, however, the Caribbean has lost a certain amount of its competitiveness relative to Mexico as a result of NAFTA, which provides unique quota and tariff benefits for U.S. imports of apparel from Mexico;[34] the devaluation of the peso, which has pushed down Mexico's labor costs measured on a dollar basis;[35] and rising labor costs in certain Caribbean economies.[36]

Dominican Republic

The Dominican Republic remained the principal Caribbean Basin source of U.S. imports under *HTS* PSP in 1996, accounting for over one-third of the U.S. content contained in such imports from the region. Although apparel accounted for the bulk of the *HTS* PSP operations in the Dominican Republic (74 percent), most of the growth in imports in 1996 under these provisions ($67 million out of $87 million) was accounted for by products other than apparel, such as disposable medical goods, surgical supplies, meters, and electrical capacitors.[37]

The prominence of the Dominican Republic as a site for U.S. apparel assembly operations is partly the result of its early support of an assembly industry with tax incentives and an FTZ program. The Dominican Republic continues to account for the highest number of U.S.-affiliated apparel assembly operations in a single Caribbean Basin country.[38] In addition, the Dominican Republic has the most direct shipping routes to Miami and other Atlantic seaboard ports, allowing the country to offer lower transportation costs than competing assembly locations in the region (table 2-5). While U.S. apparel firms and Dominican-owned contractors account for the bulk of assembly plants in the Dominican Republic, companies

[33] After the repeal of section 936, Crescent Industries closed its lingerie factory in Puerto Rico, which had employed 987 people. Crescent was subsequently bought by Maidenform, which decided to transfer the operations to the Dominican Republic. Another apparel firm, Warnaco, laid off 500 workers in Puerto Rico and expanded its operations in Mexico, Honduras, and Costa Rica. "Section 936: Can Puerto Rico's Apparel Industry Prosper Without It?" *Special Report: Sourcing the Caribbean and Latin America*, Bobbin, Nov. 1996, p. 40.

[34] The Uruguay Round Agreement is expected to reduce the competitive advantage that Mexico has under NAFTA and that CBERA countries have under the GAL program. See USITC publication, *Production Sharing: Use of U.S. Foreign Assembly Operations, 1991-1994*, USITC 2966, May 1996, p. 5-7, for a more detailed discussion of the World Trade Organization Agreement on textiles and clothing.

[35] See the section on apparel in ch. 3 of this report for more information about attempts to achieve NAFTA parity for U.S. imports from the Caribbean Basin.

[36] See U.S. International Trade Commission, *Caribbean Basin Economic Recovery Act/Andean Trade Preference Act: Impact of the United States - 1996*, USITC publication No. 3058, Sept. 1997, p. 7ff.

[37] The U.S. content in imports of medical goods from the Dominican Republic under *HTS* PSP almost doubled during 1993-96 to $185 million, while the U.S. content in electrical circuit apparatus rose by $11 million (21 percent) to $60 million.

[38] *WEPZA International Directory of Exporting Processing Zones*, May 1997, The Flagstaff Institute, Flagstaff, AZ.

from Korea, Taiwan, and the EU have also made significant investments in the Dominican apparel sector.[39]

Rising labor costs relative to Honduras, El Salvador, and Mexico have caused the Dominican Republic to become a relatively more expensive assembly location for products, such as apparel, that contain little value added. As a result, the Dominican Republic has sought to diversify its production-sharing operations into higher value-added products and has demonstrated the ability to adapt to more complicated production systems.[40] The total value of U.S. imports under the *HTS* PSP rose by 7 percent ($139 million) in 1996, while such imports under CBERA rose by 10 percent ($87 million) (table 2-6). The increasing use of the CBERA, which does not provide duty preference for articles of apparel, reflects the Dominican Republic's efforts to move its export oriented production into other sectors.

Honduras

Increased imports of apparel from Honduras accounted for over one-half of the growth in the U.S. content in the production-sharing provisions of *HTS* PSP imports from the Caribbean Basin in 1996 (table 2-4). Lower labor costs combined with improved roads, ports, and aggressive marketing, have made Honduras an increasingly competitive site for U.S. apparel assembly operations. San Pedro Sula, the city where most production-sharing operations are located, is only 45 miles from Puerto Cortes, the best deep-water port in the Caribbean. Apparel assembly operations in both El Salvador and Nicaragua ship their products through this port. Further, the Honduran Government has just completed the construction of a world class highway that links San Pedro Sula to the port.[41] Industry sources report that the Association Honduran de Maquiladores has effectively marketed Honduras as a site for apparel production sharing.[42] A representative of Oxford Industries (a major producer primarily of men's apparel), for example, indicated one of the principal reasons the company located its most recent apparel assembly operation in Honduras rather than another Caribbean Basin location was that the maquiladora association offered a plant that was ready to operate.

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[39] An increasing number of apparel assembly operations in the Dominican Republic are neither U.S. nor locally owned. The following is a list provided by the Secretariat de Estado de Industria y Comercia, Consejo Nacional de Zonas Francas de Exportacion, Santo Domingo, Distrito Nacional, of the firms operating in its FTZs by country of ownership as follows: (1-5 locations) Argentina, Bahamas, Belgium/Luxemburg, Virgin Islands, Canada, Cayman Islands, Japan, Spain, France, Germany, Haiti, Hong Kong, Israel, Italy, Holland, St. Kitts and Nevis, Peru, Singapore, Switzerland, and the United Kingdom, (6-25) Panama, Taiwan, and Puerto Rico; (27) Korea; (125) Dominican Republic; (215) United States.

[40] Esteban R. Brenes, Vince Ruddy, and Rene Castro, "Free Zones in El Salvador," *Journal of Business Research 38*, 57-65 (1997), p. 61.

[41] Telephone interview with Donald McNally, Commercial Attache, U.S. Embassy in Tegucigalpa, Honduras, Aug. 28, 1997.

[42] USITC staff telephone interview with Tom Chubb, Oxford Industries, Aug. 11, 1997.

Table 2-5
Comparison of factors of competition between the Dominican Republic, Honduras, Costa Rica, El Salvador, Jamaica, and Mexico

Factors of competition	Costa Rica	Dominican Republic	El Salvador	Honduras	Jamaica	Mexico
Hourly apparel labor costs, Spring 1996[1] ($US)	2 .38	1.62	1.38	1.31	1.80	1.08
Per capita expenditures on education[2] ($US)	100.90	([2])	15.80	37.30	([3])	76.50
Ports (number)	7	5	2	5	2	76
Power system losses (percent of total output)	8	25	14	28	19	14
Phone lines per 1000 population	164	79	53	29	116	96

[1] Werner International Management Consultants, *Hourly Labor Cost in the Apparel Industry*, May 21, 1997.
[2] Latin Trade, *Educational Crisis*, Aug. 1997, p. 35. The Dominican Republic ranked the lowest in the 1990/91 survey.
[3] Not available.

Source: World Bank, Competitiveness Indicators (found at http://www.worldbank.org/html/fpd/psd/comp/crsrc.htm), Sept. 9, 1997, except as noted.

Table 2-6
Selected Caribbean Basin countries: U.S. imports under the production-sharing provisions (PSP) of *HTS* Chapter 98, and the Caribbean Basin Economic Recovery Act, 1993-96

Country	1993	1994	1995	1996	Change 1995/1996 Absolute	Change 1995/1996 Percentage
	Million dollars					
Dominican Republic:						
HTS PSP	1,531	1,707	1,965	2,104	139	7
CBERA	658	751	845	932	87	10
All other	478	619	575	546	-29	-5
Subtotal	2,667	3,077	3,385	3,582	197	6
Honduras:						
HTS PSP	337	452	676	981	305	45
CBERA	127	140	157	207	50	32
All other	450	500	608	609	1	0
Subtotal	914	1,092	1,441	1,797	356	25
Costa Rica:						
HTS PSP	575	623	707	694	-13	-2
CBERA	388	478	528	657	129	24
All other	579	544	607	612	5	1
Subtotal	1,542	1,645	1,842	1,963	121	7
Jamaica:						
HTS PSP	321	390	456	444	-12	-3
CBERA	76	69	87	96	9	10
All other	313	281	295	288	-7	-2
Subtotal	710	740	838	828	-10	-1
El Salvador:						
HTS PSP	203	322	497	605	108	22
CBERA	27	41	69	91	22	32
All other	251	245	247	278	31	13
Subtotal	481	608	813	974	161	20
Guatemala:						
HTS PSP	426	451	521	580	59	11
CBERA	208	171	168	280	112	67
All other	544	662	826	834	8	1
Subtotal	1,178	1,284	1,515	1,694	179	12
All other:						
HTS PSP	337	128	179	214	35	20
CBERA[1]	420	400	407	528	121	30
All other	1,845	2,226	2,130	2,965	835	39
Subtotal	2,602	2,754	2,716	3,707	991	36
Total Caribbean:						
HTS PSP	3,730	4,073	5,001	5,622	621	12
CBERA	1,904	2,050	2,261	2,791	530	23
All other	4,460	5,077	5,288	6,132	844	16
Total	10,094	11,200	12,550	14,545	1,995	16

[1] Chiefly petroleum and related down-stream products from Trinidad and the Netherlands Antilles.

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

Costa Rica

Costa Rica's position as a major source of apparel production-sharing imports is being eroded by its rising labor costs, interest rates, and utility expenses, as compared with those of its regional competitors. Cutbacks in public spending in 1996 and the delay of major infrastructure projects have reportedly left most of Costa Rica's highways and roads in varying degrees of disrepair. Puntarenas, the main cargo port on the Pacific coast, is considered seriously inadequate, as are landing and terminal facilities at San Jose's international airport.[43]

There was virtually no growth in U.S. imports of apparel from Costa Rica in 1996. According to Marco Vinicio Ruiz, President of the Chamber of Industries in Costa Rica, apparel assembly in Costa Rica's FTZs has declined in recent years and apparel firms now represent only 20 percent of Costa Rica's 170 operating FTZ enterprises, compared with 70 percent a few years ago.[44] There were very few new investments in Costa Rica's apparel sector and about 50 apparel assembly and manufacturing facilities closed their doors during the first 6 months of 1997,[45] while several others, including Bali, Sara Lee, and Maidenform, downsized.[46] U.S. apparel companies, such as Hanes and Loveable Brassieres, have indicated that they are not planning additional investment in Costa Rica because of Mexico's competitive advantages resulting from NAFTA and because of labor costs that average less than one-half of those of Costa Rica (table 2-5).[47] In addition, lower labor costs and manufacturing expenses in other CBERA countries, especially Honduras and El Salvador, provide competitive advantages over Costa Rica.

While losing its appeal as a low-cost labor location for apparel assembly, Costa Rica has attempted to recruit investment in the electronics sector. As a result, DSC Communications of Plano, TX, began assembling printed circuit boards in Costa Rica in 1996.[48] In addition, Costa Rica was selected by Intel Corp. in 1996 as the site for two integrated circuit chip assembly and test facilities. The first plant is scheduled for completion in April 1998, and the

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[43] Country Commercial Guide, Costa Rica, U.S. State Department, Cable R 242129Z, June 1997.

[44] U.S. Department of State, Report No. 001593, "USITC Annual Caribbean Basin Investment Survey," prepared by U.S. Embassy, San Jose, Costa Rica, May 1997.

[45] Ibid. According to Mr. Gabriela Lobo, Director of the Textile Chamber (Cateco), Costa Rican exports of apparel declined by 7 percent in 1996 from the 1995 level. The closure of 50 apparel plants has resulted in the loss of hundreds of jobs. Loveables has downsized from 3 factories in Costa Rica to 2, and operated with 500 fewer workers in 1997. Lovables concurrently expanded its operations in Panama. The Government of Panama has stepped up efforts to attract apparel assembly operations to its free trade zone in Colon.

[46] USITC staff interview with Spencer Merchant, President, Costa Rican-American Chamber of Commerce, San Jose, Costa Rica, on May 19, 1997.

[47] According to Ruben Mendez, Director of Hanes Corporation in Costa Rica, labor costs average $2.24 an hour in Costa Rica (excluding benefits), compared with $1.05 per hour in Mexico (including benefits). In an interview with USITC staff in San Jose, Costa Rica, on May 19, 1997, Celso Porras and Juan Carlos Martinez Piva of the Costa Rican Ministry of Foreign Trade stated that NAFTA has not led companies to move plants from Costa Rica to Mexico; rather, it has led to the diversion of investment in new facilities from Costa Rica to Mexico.

[48] USITC staff interview with Alvaro Valverde, Costa Rican Agency for the Promotion of Foreign Trade, San Jose, Costa Rica, May 19, 1997.

second in April 1999. Intel's total investment in Costa Rica is expected to be close to $500 million. The Intel plants will employ about 2,000 workers and assemble up to 1 million Pentium II chips per week.[49] Intel has made an arrangement with the Costa Rican Technological Institute to train and recruit workers.[50] Further, eight satellite companies are expected to move to Costa Rica as well.[51] Relatively high wage rates in Cost Rica are reportedly offset by a well-educated work force and high levels of productivity. Per capita expenditures on education are the highest of any Caribbean country (table 2-5). However, increased production in the electronics sector in Costa Rica may not be reflected in a rise in imports under the production-sharing provisions of *HTS* Chapter 98. Several U.S. producers of electronic products enter their goods from Costa Rica free of duty under CBERA instead of partially free under *HTS* PSP.[52]

Other Regional Developments

- Despite a 25-percent increase in the U.S. content in imports from El Salvador under the *HTS* PSP in 1996, new foreign investment for apparel production-sharing operations stalled. The Association of Salvadoran Apparel Industry attributed the lack of investor interest in El Salvador to increased regional competition, limited government promotion, and most notably, Mexico's preferential access to U.S. markets. However, Salvadoran political and macroeconomic stability and market-oriented policies are expected to enhance investor confidence. According to the U.S. Embassy in San Salvador, the country's abundant labor supply, low inflation, and high worker productivity will likely help draw foreign investment in the sector.[53] The major concerns for foreign investors in El Salvador are the higher transportation cost compared with its regional competitors[54] and escalating rates of street crime.

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[49] Michael Dorgan, "Costa Rica Gets on the High-Tech Map," *San Jose Mercury News*, Aug. 10, 1997, p. 11.

[50] U.S. Department of Commerce, International Trade Administration, Country Commercial Guides, U.S. Embassy, Costa Rica, June 1997.

[51] USITC staff interview with Marilyn Bruno, Economic Section, U.S. Embassy, San Jose, Costa Rica, May 19, 1997.

[52] Conair and Motorola use CBERA instead of the *HTS* PSP. Conair makes hair dryers, curling irons, and toothbrushes at its 2,000-employee plant in Cartago and uses components from both the United States and Asia. Motorola produces all of the company's quartz blanks (used in watches and other timing devices) in Guadalupe, Costa Rica. The plant also producers ceramic substrates and pagers. USITC staff interviews in Cartago and Guadalupe, Costa Rica, on May 20, 1997, with Francisco Lopez Trigo, General Manager, Conair Costa Rica, S.A., and Jose M. Campos Echeverria, General Manager, Automotive Energy and Control Group, Motorola de CentroAmerica, S.A.

[53] U.S. Department of State, Report No. 003271, "1997 *Salvadoran Maquila Sector Report*," prepared by U.S. Embassy, San Salvador, El Salvador, July 1997.

[54] Most apparel sewn in El Salvador is transported by truck to Puerto Cortes in Honduras, then by ship to U.S. ports in the Gulf of Mexico and on the Atlantic seaboard, giving Honduran assembly plants in San Pedro Sula near Puerto Cortes a transportation cost advantage over plants in El Salvador.

- The level of growth in apparel assembly operations in Guatemala using the production-sharing provisions of *HTS* Chapter 98[55] has been below expectations because of the slow progress in the Government's efforts to modernize roads and privatize electric utilities. Roads are of particular importance to Guatemala's production-sharing operations because its principal port (Puerto Barrios) is on the Caribbean Sea, while the population and labor force are more than one hundred miles away in the cooler mountain climates of Guatemala City. The Government of Guatemala is attempting to make the supply of electricity to assembly plants more dependable by negotiating the sale of power plants to both Tampa Power of Florida and Baltimore Gas and Electric.[56]

- In response to declining levels of production-sharing trade with the United States, the Jamaican Government has implemented a 2-staged, $200 million special adjustment program for its garment industry.[57] The first phase began January 1, 1997, with a reimbursement to export-oriented companies of up to 5 percent of their operating costs (rentals, security, and financing). The funds are distributed through the Jamaican National Development Bank, the National Investment Bank of Jamaica, and the Jamaican Export/ Import Bank. The second phase of the special adjustment program provides apparel firms in Jamaica with financial assistance to purchase new materials, initiate retooling, and upgrade methods of production. The government has also cut by two-thirds the certification fees charged to firms operating in industrial parks. Firms receiving the funds are expected to achieve a minimum of 10-percent improvement in productivity, stable employment over the next 2 years, and a 5-percent increase in 1998 export values over 1997.[58]

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[55] Factories operated by Korean and Taiwan companies accounted for much of the growth in U.S. apparel imports from Guatemala in 1996. For the most part, the Korean and Taiwan sewing operations used fabric produced in Asia.

[56] Telephone interview with Jeff Cunningham, Economic Office, U.S. Embassy, Guatemala City, Sept. 2, 1997.

[57] Relatively high labor costs and reports of an increased rate of crime have made Jamaica vulnerable to competition for apparel assembly from lower-labor-cost locations such as Mexico and Honduras. In 1996, about 15 textile and apparel factories closed, putting 7,000 employees out of work. An additional 8,000 employees in the garment industry were estimated to have lost their jobs in 1995. "Textile Bailout Moves Into Second Gear," *The Gleaner*, Kingston, Jamaica, Aug. 12, 1997, p. 1.

[58] U.S. Department of State telegram No. 181524Z, *Jamaica: Economic Wins and Woes,* prepared by U.S. Embassy Kingston, Aug. 1997.

Southeast Asia

For nearly 25 years, Southeast Asia[59] has been important to U.S. electronics companies, originally as a location for low-cost labor and more recently as a market for products from assembly plants in the region. Over the years, parts and materials from Asian sources have been substituted for U.S.-made components. The continued use of U.S.-origin parts is concentrated in semiconductor manufacturing.[60]

Southeast Asia accounted for 16 percent ($3.9 billion) of the total value of the U.S.-origin content in the production-sharing provisions of *HTS* Chapter 98 in 1996 (table 2-7). As in earlier years, semiconductors accounted for almost all (92 percent) of the U.S. content in *HTS* PSP imports from Southeast Asia in 1996. Southeast Asia was by far the preferred location for U.S. companies to maintain semiconductor assembly and test facilities, accounting for 89 percent of the U.S. content of total U.S. imports of semiconductors entered under production-sharing provisions in 1996. The value of U.S. imports in semiconductors from Southeast Asia fell by 7 percent ($2.7 billion) in 1996 from 1995 (tables B2-7), despite an increase in the quantity imported; likewise, the value of semiconductors imported under *HTS* PSP contracted by 5 percent ($449 million) in 1996, and the value of the U.S. content in such imports also decreased by 5 percent ($215 million).[61]

Regional Trends

With the exceptions of Canada and Mexico, the leading countries engaged in the semiconductor production-sharing arrangements with the United States are in Southeast Asia. In 1996, Malaysia continued as the principal participating country, accounting for nearly 30 percent of the U.S.-content value of semiconductor imports reported under *HTS* PSP, followed by the Philippines with 18 percent, and Korea with 16 percent (table 2-7). Other traditional Southeast Asian sources of production-sharing imports include Thailand, Taiwan, Hong Kong, and Singapore. As labor becomes scarce and increasingly expensive in the more established production-sharing countries, other lower labor cost countries in the region such as Indonesia and Vietnam are attracting interest and new industry investment. Among the

[59] For the purpose of this report, Southeast Asia includes Brunei, Burma, Cambodia, Indonesia, Hong Kong, Korea, Laos, Malaysia, the Philippines, Singapore, Taiwan, Thailand, and Vietnam.

[60] Semiconductors have a high value-to-weight ratio and can be economically shipped over long distances. As a result, there is little need to locate production-sharing facilities in close proximity to fabrication plants in the United States.

[61] The United States maintains no import tariff on most semiconductors and, as a result, the principal incentive for entering semiconductors under the *HTS* PSP is to receive exemption from the Customs user fee of 0.17 percent ad valorem on the value of the U.S. content, with a maximum fee of $400 per shipment. According to industry representatives (telephone interviews by USITC staff, July 22-24, 1997), it is unlikely that the amount of such savings would compensate for the costs of complying with the production-sharing provisions of *HTS* Chapter 98 documentation requirements, and a significant portion of U.S. imports of semiconductors assembled from U.S. components are not entered under *HTS* PSP.

leading Southeast Asian suppliers of semiconductors to the U.S. market, the value of the U.S. content reported in *HTS* PSP fell by 15 to 16 percent in 1996 for Malaysia, Taiwan, and Hong Kong (table 2-7). By contrast, imports from Korea under these provisions grew by 10 percent.

Table 2-7
Southeast Asia: U.S. content in imports of semiconductors and all other products under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal countries, 1993-96

Country	1993	1994	1995	1996	Change 1995/96 Absolute	Change 1995/96 Percentage
	Million dollars					
	Semiconductors					
Malaysia	783	954	1,303	1,104	-199	-15
Philippines	421	576	700	712	12	2
Korea	396	426	560	614	54	10
Thailand	200	306	410	389	-21	-5
Taiwan	282	326	371	311	-60	-16
Hong Kong	116	122	310	260	-50	-16
Singapore	230	270	178	166	-12	-7
Indonesia	25	24	51	69	18	35
All other	(1)	(1)	(1)	(1)	-2	(2)
Total	2,452	3,004	3,883	3,626	-257	-7
	All other products					
Malaysia	11	13	10	12	2	20
Philippines	64	64	85	61	-24	-28
Korea	82	54	40	39	-1	-3
Thailand	38	47	51	34	-17	-33
Taiwan	56	46	53	64	11	21
Hong Kong	15	13	14	16	2	14
Singapore	123	66	16	46	30	188
Indonesia	10	23	24	25	1	4
All other	(1)	(1)	(1)	6	6	100
Total	398	326	293	307	14	5
	Total U.S. content					
Malaysia	794	968	1,313	1,116	-197	-15
Philippines	485	640	785	773	-12	-2
Korea	478	480	600	653	53	9
Thailand	238	353	461	423	-38	-8
Taiwan	337	371	424	375	-49	-12
Hong Kong	130	135	323	276	-47	-15
Singapore	353	336	194	212	18	9
Subtotal	2,815	3,283	4,100	3,828	-272	-7
Indonesia	35	47	75	94	19	25
All other	(1)	(1)	5	17	12	240
Total	2,850	3,330	4,180	3,939	-241	-6

[1] Less than $500,000.
[2] Not applicable.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Semiconductors have remained well suited for production-sharing operations due to the clear delineation between the extremely capital-intensive fabrication stage and the more labor-intensive assembly/test stage.[62] Further, despite increased automation of semiconductor assembly in recent years, these operations have remained in Southeast Asia in part because of the increasing sophistication of the Southeast Asian semiconductor operations derived from the region's skilled workforce, advanced packaging technology, and relatively well developed infrastructure. Continued assembly of semiconductors has been encouraged by the actions of some Southeast Asian countries to liberalize trade and investment laws, and by the growth of regional manufacturing operations that are important customers of the semiconductor industry. Industry analysts indicate that with global liberalization of the telecommunications industry and the explosion of the Internet, Southeast Asia is becoming even more of a focal point for U.S. companies engaged in semiconductor production-sharing arrangements.[63] The increasing demand for personal computer (PCs) motherboards and PC laptops has turned Southeast Asia into one of the fastest-growing markets for these kinds of products, with much of the market being supplied by equipment that is assembled in the region.[64]

Malaysia

Malaysia is one of the world's largest producers of semiconductor devices and accounted for 27 percent of the reported value of the U.S. content in semiconductors under the *HTS* PSP in 1996. Components used in the assembly of semiconductors accounted for 98 percent ($1.1 billion) of all U.S.-origin components contained in *HTS* PSP imports from Malaysia in 1996 (table B-8).

Malaysian electronics exports reached $34 billion in 1996, accounting for nearly 60 percent of the country's total exports and 12 percent of the gross national product.[65] The United States is the second-largest foreign investor in Malaysia, after Japan.[66] U.S. electronics-component manufacturers are attracted to Malaysia by the advantages of low business costs, an educated work force, a stable and cooperative government, and a growing economy.[67] Moreover, production-sharing operations have access to over a dozen free trade zones

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[62] Increased demand for computers and communications equipment in Southeast Asia has expanded the market for semiconductors for use in making such equipment in the region. See the assessment of production sharing in the semiconductor industry in ch. 3 of this report.

[63] Garry Marchant, "Singapore, Welcome to the Future," *Asian Sources: Trade & Travel*, May 1997, p. 21.

[64] Mark Lapedus,, "Asia-Pacific Gets More Important in PC Assembly," *Electronic Buyers' News*, Section: Market Forces, Jan. 29, 1996 (Issue 991), found at http://techweb.cmp.com/ebn/942/outlook6.html, retrieved Aug. 14, 1997.

[65] U.S. Department of Commerce, National Trade Data Bank and Economic Bulletin Board--products of STAT-USA,

[66] U.S. investment electronics was concentrated in the sector, particularly in the manufacture of components such as semiconductor chips in which a high degree of production sharing takes place.

[67] The Malaysian economy grew by 9.5 percent in 1995; it has grown by more than 8 percent for the last 8 years, and is estimated to have expanded by 8.3 percent in 1996. U.S. Department of Commerce, International Trade Administration, *Country Commercial Guides, Malaysia: Leading Sectors for U.S. Exports & Investments*, 1997.

categorized into Free Industrial Zones (FIZs)[68] and Free Commercial Zones (FCZs),[69] located in the states of Penang, Melacca, Selangor, Johore, Perak, and Sarawak. Approximately 25 U.S.-affiliated assembly operations, including Motorola, Texas Instruments, Intel Corp., National Semiconductor, and Harris, account for over half of Malaysia's semiconductor production.[70] Several U.S. manufacturers of other electronic products, such as Seagate (computer peripherals and parts) and Komag (blank recording media), also have significant investments in Malaysia.

Recent investments in free trade zones in the state of Penang[71] that may lead to increased U.S. exports of components and/or manufacturing equipment to Malaysia include—

- In early 1996, Dell Computer Corp. opened a 238,000-square-foot facility in Penang. The $20 million facility has four lines producing desktop computers, laptops, and servers.

- In 1996, Iomega Corp. began operating a 375,000-square facility in Penang (previously owned by Quantum Corp.) that assembles disk drives. Iomega has relocated all manufacturing from its Roy, Utah, facility to Penang, where more than 1,000 workers are employed.

- In 1997, Intel completed its eighth building in Penang and employs more than 4,000 people in its complex there.

- Packard Bell NEC Inc. established a new manufacturing operation in Penang in 1997. It is currently building a new facility that will exceed $400 million in land, building, and equipment. Employment is expected to be in excess of 500 workers by 1999. Company officials reported that the export value from the facility should reach $1 billion in 5 years and local purchasing should reach $200 million in 3 years.

The immediate future remains favorable for U.S. production-sharing operations in Malaysia, as the 17 U.S. manufacturers in the Malaysian American Chamber of Commerce Electronics Industries Committee (MAEI) project combined investment in Malaysia of more than $1 billion a year for the next 2 years.[72] For the longer term, however, the Government of Malaysia is making a concerted effort to move the country away from labor-intensive manufacturing and towards higher value-added processes. A higher standard of living and

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[68] To be eligible for an FIZ, a firm generally must export all production. Raw materials and components imported for use in export production in the FIZ and subsequently exported are not subjected to duty. Malaysia also offers firms wishing to locate in other parts of the country the opportunity to establish themselves as Licensed Manufacturing Warehouses (LMWs), which operate on the same principles as an FIZ.

[69] FCZs are designed to house businesses involved in trading; goods are imported free of duty, provided the final goods are exported. Malaysia has one FCZ located in Port Klang.

[70] U.S. Department of Commerce, International Trade Administration, *Country Commercial Guides: Malaysia: Investment Climate*, 1997.

[71] Recent developments in Malaysia are cited by Michael Bordenaro in "International Development: Malaysia Moves Up the Food Chain," *Electronic Business Today,* May 1997, pp. 62-63.

[72] Ibid., p. 64.

labor shortages[73] could price Malaysia out of the competition for all but the highest level of value-added manufacturing. Moreover, wage rates have been increasing faster than corresponding gains in productivity. Sixteen plants shut down in 1996 as companies moved assembly production to the Philippines, Indonesia, and China.[74] Currently, Malaysia is being plagued with economic crises. A devalued ringgit (the Malaysian currency) has meant that imports needed for Malaysia's manufacturers and its economic development plan have become more expensive.[75] In addition, the cost of servicing foreign debts has risen. The falling stock market has meant that Malaysian companies have temporarily lost an important source of financing.[76]

Other Regional Developments

- Improving infrastructure and low labor costs are attracting more U.S. and Japanese companies to establish production-sharing operations in the Philippines, especially in the IC (integrated circuit) assembly and test industry. By October 1996, 29 U.S. electronics companies[77] had invested in the Philippines, compared with 118 Japanese companies.[78] In addition to offering some of the lowest labor costs in Asia, eligible imports from the Philippines enter the United States free of duty under the Generalized System of Preferences (GSP). [79]

- An estimated 70-percent reduction in the world price of Dynamic Random Access Memories (DRAMs) led to a 33-percent decline ($1.4 billion) in U.S. imports of DRAMs from Korea in 1996, to $2.8 billion.[80] Despite the reduction in the value of U.S. imports of DRAMs in 1996, the quantity imported actually

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[73] The Malaysian economy is at technical full employment. Firms report difficulty in obtaining and retraining workers at all skill levels. U.S. Department of Commerce, International Trade Administration, *Country Commercial Guides: Malaysia: Investment Climate*, 1997.

[74] Tom McHale, Section: News, "Multimedia Drives Future," *Electronic Buyers' News*, Jan. 27, 1997, found at http://techweb.cmp.com/ebn/942/outlook6.html, retrieved Aug. 14, 1997.

[75] According to the Malaysian prime minister, the most visible impact of the market crash is on public works projects. The falling value of the ringgit has forced the delay of several grand projects, including the schedule for building the "cybercity," part of Malaysia's Multimedia Super Corridor.

[76] Sandra Sugawara, "Economic Woes Build Anger in Asia- In Malaysia and Thailand, Foreign Speculators Are Focus of Blame for Markets' Tumble," *Washington Post*, Sept. 12, 1997, p. G1.

[77] Motorola, National Semiconductor, Philips, Intel, and Texas Instruments have production-sharing facilities in the Philippines; Intel, Philips, and Texas Instruments have recently expanded chip assembly operations.

[78] Mark Lapedus, "The Philippines—Asia's Next Silicon Valley?", *Electronic Buyers' News*, Section: Marketplace Asia, Oct. 26, 1996 (Issue 1029), found at http://techweb.cmp.com/ebn/942/outlook6.html, retrieved Aug. 14, 1997; Tom McHale, "Will Politics Kill Tiger Cub?," Electronic Buyers News, Dec. 2, 1996.

[79] Malaysia, the Philippines' biggest competitor in the assembly of electronic products, will graduate from the GSP program in late 1997.

[80] USITC, *Shifts in U.S. Merchandise Trade in 1996*, USITC publication 3051, July 1997, p. 13-9.

increased. The bulk of the DRAMs imported from Korea are fabricated there and are not the product of production-sharing operations.[81] However, imports of other types of semiconductors from Korea increased in value during 1995-96, from $2.7 billion to $3.3 billion. Similarly, the U.S. content in imports of semiconductors from Korea reported under *HTS* PSP rose by $54 million (10 percent) in 1996 to $614 million.[82]

- To remain regionally competitive, the Singapore Government has developed industrial parks for electronics and computer companies at lower labor-cost sites in nearby Johore Baru, Malaysia, and Batam Island, Indonesia. However, U.S. companies such as Dell, Gateway 2000, Packard Bell, and other PC makers reportedly are continuing to set up assembly operations[83] in Penang, Malaysia.[84] Singapore is emphasizing high value-added production, as well as becoming a regional headquarters site and research and development hub for electronic products. Singapore is also making a major push in ICs. Future plans include the building of more than 20 wafer fabrication facilities, and the government is soliciting investments from multinational semiconductor companies, including Intel Corp.[85] These fabrication facilities would compete with assembly plants operating in the region and would likely lead to a reduction in U.S. exports to the assembly plants.

[81] Samsung Electronics Co., Ltd., is the world's largest producer of DRAMs. Its U.S. customers include Apple Computer, Hewlett-Packard Co., IBM Corp., and Texas Instruments Inc. See Mark Lapedus.

[82] The U.S. semiconductor industry was somewhat insulated from the effects of the drop in DRAM prices because its manufacturing and assembly operations are generally concentrated in higher valued specialized semiconductor products, such as micro components and application specific integrated circuits (ASICs).

[83] The Malaysian Government continues to provide incentives to attract U.S. investment. For example, the Government can grant "pioneer" status, which allows companies with technologies new to the country to pay taxes on only 30 percent of income for 5 years; the government can also grant 100 percent tax exemption for 5 years if enough research and development is performed at the site. Further incentives include training grants and exemption of import duties for raw materials/components.

[84] Lapedus, "Asia-Pacific Gets More Important in PC Assembly."

[85] Lapedus, "Asia's Tigers Rule in Tough Market."

- Thailand's current financial crisis, attributed to an over reliance on credit, changing trends in the regional economy, and the uncertain policies of two successive governments,[86] could adversely impact future U.S. investment in semiconductor production-sharing arrangements.[87] Reportedly, Thailand now faces at least 2 years of austerity policies that could inhibit production in the electronics sector.[88]

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[86] Keith B. Richburg, *The Washington Post*, "Thailand's Go-Go Economy Stopped Cold by Dramatic Downturn," Aug. 10, 1997, p. A19.

[87] Examples of the effects of Thailand's financial crisis include Texas Instruments pulling out of an $1.2 billion Alpha-TI DRAM project when funds could not be raised. The pull out revealed that the fabrication complexes in Thailand owed their U.S. suppliers $200 million.

[88] Lapedus, Section: News, "Can Bangkok Control Crisis?," *Electronic Buyers' News,* July 28, 1997, found at http://techweb.cmp.com/ebn/942/outlook6.html, retrieved Aug. 27, 1997.

CHAPTER 3
KEY INDUSTRY DEVELOPMENTS IN 1996

This chapter highlights the product sectors in which the U.S. content (duty-free) portion of production-sharing trade entered under the production-sharing provisions (PSP) of *HTS* Chapter 98 equaled or exceeded $500 million in 1996 and/or where a significant change (at least 20 percent) occurred in the level of such imports. The analysis for each product sector examines: (1) the significance of the product and its markets; (2) important shifts in trade that occurred in 1996; (3) reasons that these products are involved in production sharing; and (4) the impact of production sharing on the competitiveness of U.S. producers with respect to these products.

The major product sectors in this chapter include apparel, motor vehicles and related equipment,[1] and electronic products (figure 3-1). In 1996, increased imports of apparel under *HTS* PSP from Mexico and the Caribbean Basin, as well as strong growth in Mexican assembly of motor vehicles, television receivers, medical goods, and measuring instruments, offset a decline in production-sharing provision imports of semiconductors from Southeast Asia and computers, computer peripherals, and parts mainly from Japan (tables 1-4 and B-5).

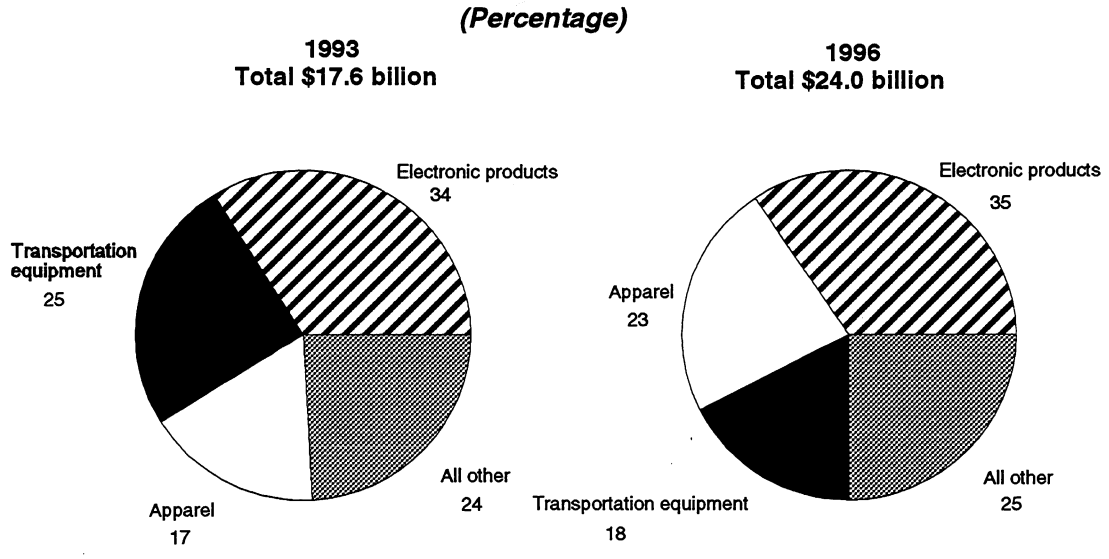
Apparel

U.S. imports of apparel under the production-sharing provisions of *HTS* Chapter 98 increased by 14 percent in 1996 over the 1995 level to $8.8 billion. With overall U.S. imports of apparel increasing by just 5 percent in 1996, the share accounted for by *HTS* PSP trade rose from 14 percent in 1993 to 21 percent in 1996. The U.S. content contained in such imports increased by 16 percent in 1996 to $5.5 billion.

The growth of U.S. imports under the production-sharing provisions is attributed largely to a competitive retail environment and the U.S. apparel producers' need to cut costs to remain competitive. Apparel is suited to production sharing because of high U.S. duty rates and the high proportion of duty-free U.S. components in apparel entering under *HTS* PSP. The trade-weighted duty on apparel in 1996 averaged 16.7 percent ad valorem, compared with about 3 percent for other products. The duty savings in the apparel sector under *HTS* PSP totaled $1.1 billion, or 53 percent of total duty savings for all products entered under these provisions (table B-17). The value of U.S. components contained in apparel imports entered

[1] Motor vehicles and related equipment discussed in this chapter include motor vehicles, ignition wiring harnesses, motor vehicle parts, and internal combustion engines.

Figure 3-1
U.S. content of U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98; by selected product sectors, 1993 and 1996



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

under the *HTS* PSP accounted for 62 percent of the total value of such imports in 1996, compared with only 31 percent for all other products.

Apparel imports under *HTS* PSP come almost entirely from Mexico and countries designated as beneficiaries of the Caribbean Basin Economic Recovery Act (CBERA)[2] (table 3-1). Mexico and CBERA countries compete with one another for assembly work from U.S. apparel firms. They offer inexpensive labor to perform labor-intensive sewing operations, and their proximity to the United States provides U.S. firms with greater management and production control, shorter lead times, and lower transportation costs than would Asian operations. As a result, overall apparel imports from Mexico and CBERA countries together grew by 20 percent in 1996 over the 1995 level, to $9.7 billion, compared with a 2-percent increase in apparel imports from all other, mostly Asian, suppliers. Apparel imports from Mexico and CBERA countries that entered under the *HTS* PSP accounted for $8 billion, or 83 percent, of their total apparel shipments in 1996 (table 3-1). U.S. apparel firms supplied

[2] The CBERA, enacted in 1984, grants duty-free entry to most goods from 24 beneficiary countries. However, most apparel are statutorily excluded from CBERA. For further information on CBERA, see USITC, *Caribbean Basin Economic Recovery Act & Andean Trade Preference Act: Impact on the United States, CBERA: Twelfth Report*, 1996 (investigation No. 332-227); *ATPA: Fourth Report 1996* (investigation No. 332-352), USITC publication 3058, Sept. 1997.

Table 3-1
Apparel: U.S. imports for consumption, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal suppliers (based on the value of U.S. components contained in *HTS* PSP imports in 1996), 1993-96[1]

(*Million dollars*)

Country	1993	1994	1995	1996
			Total imports	
Mexico	1,225	1,696	2,658	3,663
Dominican Republic	1,435	1,593	1,744	1,762
Honduras	506	645	919	1,220
Costa Rica	653	685	756	706
Jamaica	388	454	531	505
El Salvador	251	398	583	721
Guatemala	552	600	691	809
Colombia	324	363	370	316
Haiti	98	32	76	103
Other	28,260	30,197	31,080	31,638
Total	33,692	36,663	39,408	41,443
CBERA countries	4,002	4,525	5,455	6,039
			***HTS* PSP imports**	
Mexico	1,067	1,523	2,331	3,033
Dominican Republic	1,212	1,377	1,565	1,601
Honduras	332	451	675	970
Costa Rica	543	587	670	646
Jamaica	313	371	448	437
El Salvador	185	303	477	588
Guatemala	424	450	520	579
Colombia	221	251	271	212
Haiti	93	30	74	96
Other	463	493	727	683
Total	4,853	5,836	7,758	8,845
CBERA countries	3,165	3,632	4,508	5,008
			U.S. content of *HTS* PSP imports	
Mexico	739	1,063	1,637	2,120
Dominican Republic	810	878	989	1,009
Honduras	233	325	479	688
Costa Rica	375	387	443	444
Jamaica	249	299	363	350
El Salvador	103	160	260	332
Guatemala	219	218	258	275
Colombia	115	145	169	123
Haiti	63	22	51	67
Other	96	110	116	118
Total	3,002	3,607	4,765	5,526
CBERA countries	2,090	2,328	2,888	3,215

[1]Imports exclude nonwoven (disposable) apparel.

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

components valued at $5.3 billion to Mexico and CBERA countries in 1996, representing an increase of 18 percent over the 1995 level.

The rapid growth in *HTS* PSP shipments to the United States followed the institution of the special access program for CBERA countries in 1986 and the special regime for Mexico in 1988. These programs provide guaranteed access to the U.S. market for apparel assembled in Mexico and the participating CBERA countries from "fabric wholly formed and cut in the United States."[3] However, the competitive balance has shifted in favor of Mexico since the North American Free-Trade Agreement (NAFTA) went into effect in 1994. In the 3 years before NAFTA became effective, U.S. apparel imports from Mexico and the CBERA countries under the *HTS* PSP rose at similar rates of around 30 percent per year. However, during the 3-year period since NAFTA went into effect, apparel imports from Mexico under the *HTS* PSP accelerated by an average annual rate of 42 percent, while those from CBERA countries rose by an average annual rate of 17 percent. In 1996, the value of apparel imports from CBERA countries entered under the *HTS* PSP and the value of U.S. content in such imports each increased by only 11 percent—the lowest increase since 1990. By contrast, *HTS* PSP apparel imports and the U.S. content in such imports from Mexico each rose by 30 percent in 1996. At the same time, imports of apparel from Mexico that were entered under NAFTA but not simultaneously declared eligibile under the *HTS* PSP doubled, increasing their share of total apparel imports from Mexico to 16 percent (table 3-2). This increase in "NAFTA only" imports may reflect greater use of Mexican-made fabric in apparel production in Mexico, as post-NAFTA investments in textile mills in Mexico have begun to come on line.

The accelerated growth of Mexican apparel shipments under the production-sharing provisions of *HTS* Chapter 98 relative to those of CBERA countries since 1994 is attributed largely to preferential tariffs accorded under NAFTA to Mexican goods. Apparel assembled in Mexico from "fabric wholly formed and cut in the United States" enter free of duty and quota under NAFTA, whereas such garments from CBERA countries enter under guaranteed access levels (GALs) but are subject to duty on the value added offshore.[4] In 1996, apparel that was assembled in Mexico from fabric wholly formed and cut in the United States and entered the United States duty-free under the NAFTA provision represented 88 percent of the total import value of apparel from Mexico. The growth in imports from Mexico was also stimulated by the devaluation of the Mexican peso during December 1994-January 1995, which effectively reduced assembly costs of garments in Mexico, and provided competitive advantages for U.S. firms engaged in production-sharing operations in Mexico. Rising costs

[3] For further information on these U.S. trade programs, see USITC, *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1991-94,* USITC publication 2966, May 1996, p. 5-5.

[4] The United States currently has GALs and regular quotas with six CBERA countries—Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Jamaica. For every $10 in f.o.b. value, a typical CBERA garment entered under the *HTS* PSP contains $6.40 in duty-free U.S. parts and $3.60 in dutiable, foreign value-added. Applying the 1996 trade-weighted tariff for apparel of 16.7 percent to the foreign value-added yields an average duty of $0.60, or an ad valorem equivalent of 6.0 percent.

Table 3-2
Apparel: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			Percentage
Mexico:				
Total *HTS* PSP (including simultaneous imports under NAFTA):				
U.S. content	1,637	2,120	483	30
Value added	694	913	219	32
Total	2,331	3,033	702	30
NAFTA only[1]	298	598	300	101
Subtotal (NAFTA and/or *HTS* PSP)	2,629	3,631	1,002	38
Other	29	32	3	10
Total	2,658	3,663	1,005	38
Canada[2]	893	1,085	192	22
All other	35,857	36,695	838	2
Total	39,408	41,443	2,035	5

[1] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[2] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of orgin.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

in certain CBERA countries have further contributed to faster growth in imports from Mexico than from CBERA countries.[5]

Legislation was introduced in the 104th Congress to provide "NAFTA parity" for textiles and apparel from CBERA countries, as well as certain other articles presently not eligible for preferential treatment under the CBERA; however, the legislation was not passed during the 104th Congress.[6] Similar legislation (HR 2644 and S 1278) has been introduced in the 105th Congress.[7] The U.S. apparel and textile industries are divided on various provisions of the

[5] Rising labor costs have placed Costa Rica at a competitive disadvantage relative to Mexico and Honduras. See ch. 2 of this report and ch. 2 of U.S. International Trade Commission, *Caribbean Basin Economic Recovery Act/Andean Trade Preference Act: Impact on the United States - 1996*, USITC publication 3058, Sept. 1997.

[6] For further discussion of NAFTA parity, see USITC, *Production Sharing: Use of Components and Materials in Foreign Assembly Operations, 1991-94,* (Investigation No. 332-237), USITC publication 2966, May 1996, p. 5-6.

[7] The legislation would provide NAFTA-like preferential tariff treatment to all textile and apparel articles that originate in the territory of a participating CBERA country and are imported into the United States, including NAFTA equivalent duty-free treatment to any textile or apparel article that is assembled and imported from the CBERA countries from fabrics wholly formed and cut in the United States and entered under the *HTS* PSP. In addition, the legislation would establish tariff preferential levels (TPLs) for participating CBERA countries comparable to the levels established for Mexico with respect to any textile or apparel article that is imported into

(continued...)

proposed legislation. A number of companies oppose extending unilateral trade benefits to any nation without negotiating reciprocal market access for U.S. goods. U.S. textile manufacturers oppose the legislation with respect to granting trade preferences to apparel made from textiles woven in the Caribbean Basin.[8] The American Apparel Manufacturers Association opposes the administration's proposal (HR 2096 and S 984) because it includes conditions on labor and environment.[9] As of December 1997, NAFTA parity legislation had not been enacted.

Major HTS Chapter 98 sources of apparel

Mexico is the largest single-country source of U.S. apparel imports under the production-sharing provisions of *HTS* Chapter 98 (table 3-1). In addition to preferential tariff treatment for its goods under NAFTA, Mexico has benefited from the significant devaluation of the peso relative to the dollar, which has lowered its labor costs as measured in dollars. The average apparel manufacturing cost per standard allowed hour (SAH)[10] for Mexico in 1996 ($6.00) was just over one-third of that for the United States ($16.56).[11] Mexico's average SAH cost was lower than that of Costa Rica ($7.74), the third-largest CBERA supplier of apparel. Of the six major apparel suppliers studied, only China's average SAH ($5.09) was lower than that of Mexico.[12]

The Werner International Management Consultants recently conducted a cost analysis of producing a shirt in selected countries. Among the four countries studied, the United States has the highest cost structure (from raw material to made-up shirt), followed by Mexico,

[7](...continued)
the United States and that does not qualify as an originating good from the territory of a CBERA country. U.S. apparel firms with production-sharing arrangements in the CBERA countries contend that TPLs are essential in providing flexibility to use cost-competitive, non-NAFTA materials and in balancing their needs with the capabilities of CBERA countries.

[8] "Trade Bills Would Boost NAFTA Parity for Caribbean," *The Miami Herald*, distributed by Knight-Ridder/Tribune Business News, received by NewsEdge/Web, July 6, 1997.

[9] Ibid.

[10] Standard Allowed Hour (SAH) is that amount of direct labor time (hours) that is allowed for a trained operator to complete an operation, or series of operations. For example, if 200 operators are scheduled to work 45 hours a week, for a total of 9000 hours a week, and they produce 14,376 dozens of crewneck T-shirts per week, the SAH per dozen is 0.63. In other words, one direct operator takes 0.63 hour to produce a dozen crewneck T-shirts, the manufacturing cost of which can be calculated based on the hourly compensation of such operator.

[11] Kurt Salmon Associates (KSA), Atlanta, GA. The 1996 report on "Today's Apparel Manufacturing Costs," by KSA included United States, Hong Kong, Costa Rica, Thailand, Mexico, and China.

[12] For further information on SAH by selected countries, see USITC, *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1992-1995* (investigation No. 332-237), USITC publication 3032, Apr. 1997.

Thailand, and India.[13] However, production sharing between the United States and Mexico would make the production cost very competitive with other countries, as shown in table 3-3.

Table 3-3
Shirts: Comparative production costs, by location

(Dollars)

Cost items	USA	Mexico	India	Thailand	USA/Mexico
Manufacturing cost of shirt fabric	2.37	2.21	2.09	2.13	2.37
Sales and administrative cost of fabric	0.17	0.15	0.15	0.15	0.17
Profit	0.25	0.24	0.22	0.23	0.25
Total fabric cost of shirt	2.79	2.60	2.46	2.51	2.79
Production cost of shirt from fabric	4.73	2.16	1.80	2.13	2.16
Sales and administrative cost	0.25	0.19	0.21	0.23	0.25
Profit	0.78	0.50	0.45	0.49	0.52
Total f.o.b. cost of shirt	8.55	5.44	4.91	5.36	5.72
Cost of importing	0	1.22	2.18	2.21	0.47
Cost of shirt to retailer	8.55	6.66	7.09	7.57	6.19

Source: Werner International Management Consultants, New York, "Dynamics of Far Eastern Markets and Impact of Needle Migration to Latin/Central/South America," May 21, 1997.

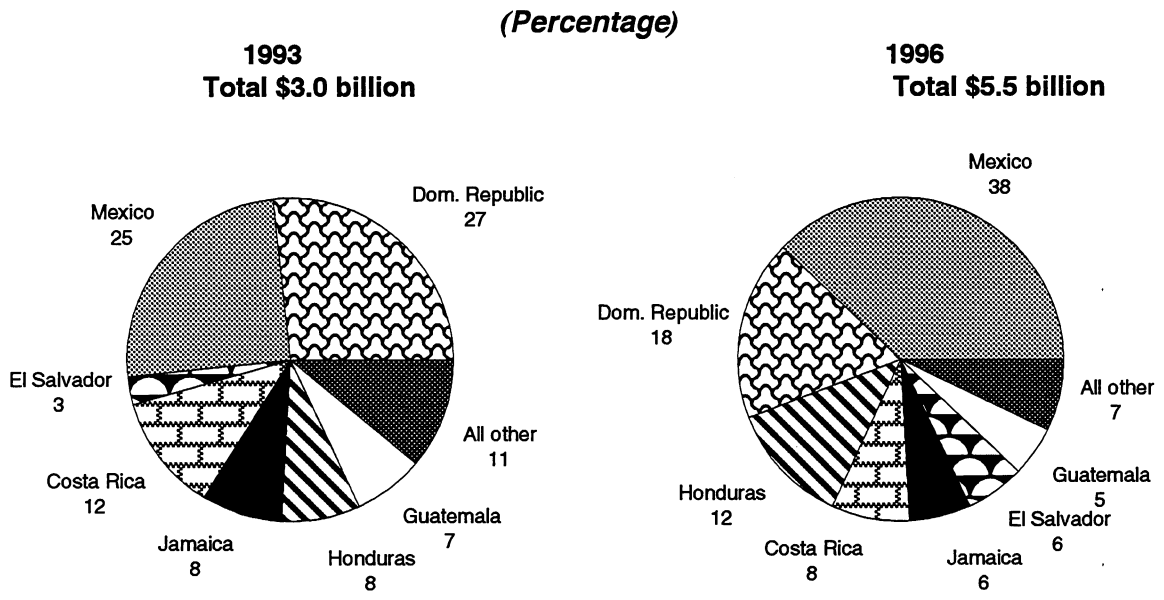
U.S. components used in Mexican apparel assembly operations accounted for 38 percent of the total U.S. content in all apparel imports under the production-sharing provisions in 1996 (figure 3-2). Among CBERA countries, Honduras and El Salvador increased the use of U.S. components in their production-sharing operations to 13 percent and 6 percent, respectively. A large part of the increase in U.S. content from Mexico, Honduras, and El Salvador is believed to have come at the expense of the Dominican Republic and Costa Rica, both of which lost shares between 1993 and 1996 (see ch. 2—The Caribbean Basin).

Growth of production sharing by product category

U.S. imports of apparel under the *HTS* PSP now account for an important and growing share of U.S. producers' shipments in almost all apparel product categories (table 3-4). The volume of imports and import growth have been especially significant in products such as underwear, pajamas and other nightwear, shirts and blouses, and trousers. Although the *HTS* PSP import share of U.S. producers' shipments declined in foundation garments, imports still made up over two-thirds of producers' shipments of foundation garments, primarily brassieres.

[13] Werner International Management Consultants, "Dynamics of Far Eastern Markets and Impact of Needle Migration to Latin/Central/South America", May 21, 1997, prepared for Textile Analysts Group 1997 Mid-Year Conference by Mary T. O'Rourke, Vice President, Werner International, Inc. The study included cost analysis to produce a shirt in the United States, Mexico, India, and Thailand and in a production-sharing operation between the United States and Mexico.

Figure 3-2
Apparel: Share of U.S. content provided by major suppliers of imports under the production-sharing provisions (PSP) of *HTS* Chapter 98, 1993 and 1996



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

Imports of underwear under the production-sharing provisions of *HTS* Chapter 98 accounted for nearly two-thirds of U.S. producers' shipments in 1996, compared with nearly one-half in 1995. This rapid growth is largely the result of keen price competition in the mass-merchandise market for these low-value-added products. Although the assembly of underwear involves relatively few steps, considerable financial incentive exists in assembling underwear offshore given the quantities involved.[14] The U.S. content in underwear imported under the *HTS* PSP rose by 18 percent in 1996 to $859 million.

Shirts, blouses, and trousers, more than any other apparel products, showed the greatest growth in the provisions of *HTS* Chapter 98 imports in 1996. The share supplied by imports under these provisions as a percentage of producers' shipments in these products nearly doubled between 1993 and 1996 (table 3-4). The assembly of these products is labor intensive and involves standardized runs, simple tasks, and few styling changes, which tend to encourage production sharing. Although the share supplied by *HTS* PSP imports of U.S.

[14] Fruit of the Loom is planning to lay off a total of 4,800 people in its move to relocate labor-intensive sewing jobs overseas to its production-sharing operations in Mexico with a view to cut costs and remain competitive. *The Journal of Commerce*, "Fired Garment Workers to be Retrained," Aug. 13, 1997.

producers' shipments of shirts and blouses doubled during 1993-96, such imports accounted for only 17 percent of total U.S. imports of shirts and blouses in 1996, largely reflecting the continued competitiveness of Asian suppliers in the U.S. market. The U.S. content in shirts and blouses showed the largest increase of all apparel products, increasing by 30 percent in 1996 (and by 164 percent during 1993-96) to $1.4 billion. Trousers were the largest apparel item entered under *HTS* PSP at $3 billion in 1996; such trade represented 38 percent of total U.S. imports of trousers. The U.S. content in trousers rose by 15 percent in 1996 to $1.8 billion.

Imports of dresses, skirts, and babies' apparel also grew rapidly under the *HTS* PSP. The share supplied by *HTS* PSP imports of U.S. producers' shipments in all these products more than doubled during 1993-96, with the majority of the growth occurring in 1996 (table 3-4).

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Table 3-4
Selected apparel products: U.S. producers' shipments and imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, 1993-96

(1,000 dozen)

Item	1993	1994	1995[1]	1996[2]
Shirts and blouses:				
U.S. producers' shipments	[3]159,415	[3]162,559	[3]159,385	[3]160,949
HTS PSP imports	16,920	22,170	25,152	49,903
Percentage share	10.6	13.6	15.8	31.0
Trousers and shorts:				
U.S. producers' shipments	93,976	95,791	97,241	92,255
HTS PSP imports	25,175	29,551	22,864	42,051
Percentage share	26.8	30.8	23.5	45.6
Coats and jackets:				
U.S. producers' shipments	9,773	9,766	9,618	9,400
HTS PSP imports	2,329	2,312	2,335	2,991
Percentage share	23.8	23.7	24.3	31.8
Foundation garments (mainly brassieres):				
U.S. producers' shipments	26,185	29,101	33,123	29,249
HTS PSP imports	19,942	20,309	23,956	19,874
Percentage share	76.2	69.8	72.3	67.9
Underwear:				
U.S. producers' shipments	169,402	168,642	154,253	150,505
HTS PSP imports	42,067	55,994	74,813	98,755
Percentage share	24.8	33.2	48.5	65.6
Pajamas and other nightwear:				
U.S. producers' shipments	10,370	10,215	9,142	6,999
HTS PSP imports	2,940	3,086	3,126	4,137
Percentage share	28.4	30.2	34.2	59.1
Swimwear:				
U.S. producers' shipments	4,996	4,441	4,370	4,451
HTS PSP imports	555	([4])	824	1,130
Percentage share	11.1	([4])	18.9	25.4
Dresses:				
U.S. producers' shipments	14,781	16,542	17,339	15,232
HTS PSP imports	897	([4])	1,544	2,549
Percentage share	6.1	([4])	8.9	16.7
Skirts:				
U.S. producers' shipments	7,943	8,036	7,432	6,985
HTS PSP imports	1,136	([4])	1,302	1,961
Percentage share	14.3	([4])	17.5	28.1
Babies' apparel:				
U.S. producers' shipments	13,259	12,952	13,192	12,640
HTS PSP imports	3,832	([4])	5,247	7,185
Percentage share	28.9	([4])	39.8	56.8

[1] Revised.
[2] Preliminary.
[3] Estimated by USITC staff based on data published by the U.S. Bureau of the Census in the *Current Industrial Reports* for apparel.
[4] Not available.

Source: U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports: Apparel Summary for 1996 (MQ23A)*, July 3, 1997, and back issues, except as stated.

Motor Vehicles and Related Equipment

In 1996, Mexico was the leading source for U.S. imports of motor vehicles and related equipment[15] reported under the production-sharing provisions (PSP) of *HTS* Chapter 98, both in terms of the total value and the value of the U.S.-origin components incorporated during the assembly process.[16] The value of the U.S.-made components, $5.2 billion, accounted for 57 percent of the value of total imports under *HTS* PSP. In contrast, U.S. components accounted for less than 2 percent of the *HTS* PSP imports from Japan and Germany. The use of a substantial amount of U.S.-made parts in Mexican motor vehicle and component systems operations reflects the significant and growing integration of the U.S. and Mexican motor vehicle industries.

Much of Mexico's output of automotive products is produced by subsidiaries of U.S. firms and exported to the United States. The Mexican operations of the U.S. Big Three (GM, Ford, and Chrysler) shifted a considerable amount of their production for the local market to export production in 1995 in response to the December 1994 peso devaluation and the weak automotive market in Mexico.[17] This trend continued in 1996, bolstered by a strong automotive market in the United States. A U.S. industry source reports that a leading cause of increased U.S. vehicle imports from Mexico is the enormous U.S. demand for GM, Ford, and Chrysler vehicles. This source states that many U.S. facilities have been operating at capacity to meet U.S. demand, and that production at Mexican facilities has helped to fill that demand.[18] As a result, total imports from Mexico rose by 27 percent to $19.7 billion in 1996. Total NAFTA imports of these products from Mexico rose by 44 percent, while total *HTS* Chapter 98 imports rose by 11 percent. This reflects the trend toward importing motor

[15] Includes motor vehicles, motor-vehicle parts, internal combustion piston engines, and wiring harnesses for motor vehicles.

[16] Canada is probably the leading production-sharing partner with the United States in this sector. Because motor vehicles and related equipment from Canada are eligible for duty-free treatment under NAFTA and the Automotive Products Trade Act of 1965 (APTA), there is little incentive to enter such trade under *HTS* Chapter 98, even though it involves production sharing. The preponderance of imports from Canada in the motor vehicle sector have traditionally entered the country under provisions of the APTA. However, beginning in 1995, imports have increasingly entered the country under NAFTA instead of APTA. In 1995, NAFTA imports from Canada accounted for 53 percent of total sector imports from Canada, and in 1996, this percentage rose to 77 percent. In 1994, NAFTA imports accounted for just 17 percent of total motor vehicle imports from Canada, with APTA accounting for 82 percent.

[17] The state of the Mexican economy is currently being debated by experts. Some argue that indicators such as increasing real GDP, improving rates of employment in some regions, and declining interest rates demonstrate that the Mexican economy is beginning to emerge from the 1995 recession. Others, however, cite increasing violence in urban centers and 1996 domestic demand continuing below 1994 levels as indicators that the economy has not recovered. Tim Coone, "Mexico: Uneven Growth," *Latin Trade*, Nov. 1996, p. 12; Hall, Kevin G., "Study: Mexico Losing Appeal to Investors," *The Journal of Commerce*, Nov. 4, 1996, p. 3A; and Malkin, Elisabeth, "Bang! Bang! Welcome to Mexico," *Business Week*, Oct. 14, 1996, p. 58.

[18] Andrew H. Card, Jr., President and CEO, American Automobile Manufacturers Association, statement before the U.S. International Trade Commission in connection with investigation No. 332-381, The Impact of the North American Free-Trade Agreement on the U.S. Economy and Industries: A Three-Year Review, May 16, 1997.

vehicles and related equipment under NAFTA instead of under *HTS* Chapter 98.[19] Industry sources note that "with the implementation of NAFTA...many U.S. importers abandoned their *HTS* 9802 programs in Mexico in lieu of the more favorable and often less onerous regulatory requirements of NAFTA."[20]

Motor Vehicles[21]

The United States is the world's largest consumer and producer of motor vehicles. In 1996, U.S. sales of cars and trucks totaled 15.1 million units, accounting for 29 percent of global sales. U.S. car and truck production reached 11.7 million units in 1996, accounting for 21 percent of global production.[22] Light trucks, which are responsible for most of the value of the U.S. content in the production-sharing provisions of *HTS* Chapter 98 imports,[23] accounted for 44 percent of the total U.S. market for passenger vehicles in 1996, with the U.S. Big Three (GM, Ford, and Chrysler) controlling over 86 percent of that segment in the United States.[24]

Canada, Japan, and Mexico together accounted for 83 percent of total U.S. imports of motor vehicles in 1996. Whereas the use of U.S.-made parts in imports of Japanese motor vehicles is small, U.S.-made parts account for a significant portion of the value of vehicles imported from Canada and Mexico. However, most of these vehicles enter free of duty under NAFTA rather than the *HTS* PSP.

The use of production-sharing provisions by the motor vehicle sector is part of the broader trend toward the internationalization of motor vehicle production. The U.S. motor vehicle industry, in particular GM and Ford, has relied heavily on foreign manufacturing and assembly operations, in part because it is more cost effective to manufacture and/or assemble vehicles in major markets, rather than to export vehicles from the United States.

Total U.S. imports of motor vehicles rose by 23 percent during 1993-95, to $84.4 billion (table 3-5). In contrast, total imports under the provisions of *HTS* Chapter 98 declined by 26 percent, to $18.7 billion for the same period, largely reflecting the reduction of the user fee on NAFTA-eligible imports from Canada to zero on January 1, 1994, removing the incentive to use the *HTS* PSP when importing vehicles from Canada. While total imports grew by 4 percent from 1995 to 1996, to $87.4 billion, imports under *HTS* PSP climbed by 25 percent

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[19] As discussed in ch. 1, many firms have an incentive to import articles assembled in Mexico both under NAFTA and under the production-sharing provisions of *HTS* Chapter 98.

[20] Association of International Automobile Manufacturers (AIAM), Inc., written submission to USITC, Sept. 20, 1996, p. 7.

[21] Includes automobiles, trucks, buses, and bodies and chassis of the foregoing.

[22] Automotive News, *1997 Market Data Book*, (MI: Crain Communications, 1997), various pages.

[23] Almost all (97 percent) imports of motor vehicles from Mexico entering under the *HTS* PSP in 1996 also entered under NAFTA (table B-5). See ch. 1 for an explanation of the incentives to enter articles under both provisions simultaneously. Imports entered under only the provisions of NAFTA likely contain a significant amount of U.S. content, but this value is not reported.

[24] U.S. Department of Commerce, International Trade Administration, Office of Automotive Affairs, "The Road Ahead," found at http://www.ita.doc.gov/industry/basic/97road.html, retrieved July 8, 1997.

(to $23.3 billion) as vehicles from U.S.-owned assembly plants in Mexico increased their share of the U.S. market (figure 3-3 and table 3-5). *HTS* PSP imports accounted for 27 percent of total motor vehicle imports in 1996, up from 22 percent in 1995, and U.S.-origin components accounted for a $2.7 billion (11-percent) share of such imports. Imports under *HTS* PSP are principally comprised of passenger cars, while duty-free U.S. content is highest for light trucks.

Imports from Mexico have consistently had the highest amount of U.S. content of all foreign sources in imports of motor vehicles under the *HTS* PSP. In 1996, the U.S. content in motor vehicle imports from Mexico under the provisions of *HTS* Chapter 98 totaled $2.3 billion, accounting for 87 percent of the total U.S. content of motor vehicle imports from all sources under the such provisions (figure 3-4). U.S. Big Three production in Mexico accounts for 70 percent of total Mexican car and truck production,[25] and most of that production is exported back to the United States. The Mexican operations of the U.S. Big Three shifted a considerable amount of their production for the Mexican market to export production in 1995 in response to the December 1994 peso devaluation that weakened the automotive market in Mexico. This trend continued in 1996, bolstered by a strong automotive market in the United States. While Mexican motor vehicle sales increased by 80 percent in 1996, Mexican industry officials estimate that the market will not return to pre-peso devaluation levels until 2000.[26] U.S. Big Three production for export was 63 percent of total Mexican production in 1994, 88 percent in 1995, and 84 percent in 1996.[27] The significant and growing integration between the U.S. and Mexican motor vehicle industries is reflected in the use of a substantial amount of U.S.-made parts in Mexican operations.

Total imports of motor vehicles from Mexico increased by 40 percent during 1995-96[28], with imports entering under the production-sharing provisions of *HTS* Chapter 98 rising by 51 percent and NAFTA importsthat did not also enter under the *HTS* PSP (labeled "NAFTA only" in table 3-6) climbing by 53 percent. Imports under the *HTS* PSP accounted for 39 percent of total motor vehicle imports from Mexico in 1996. U.S. content in *HTS* PSP imports, which decreased in 1995, rose by 38 percent in 1996 to $2.3 billion. U.S.-made parts are believed to continue to account for a significant portion of the total parts used in the assembly of vehicles in Canada and Mexico, even for those no longer entered under the provisions of *HTS* Chapter 98.

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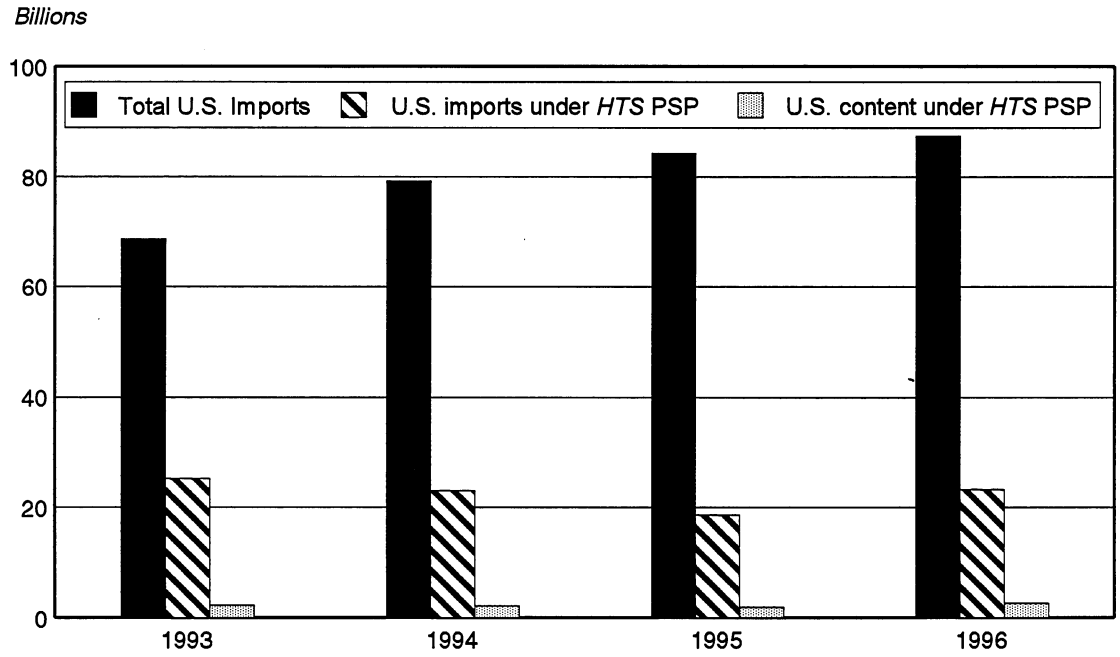
[25] Automotive News, *1997 Market Data Book* (MI: Crain Communications, 1997), p. 27. Of the five non-U.S. automakers producing in Mexico—BMW, Honda, Mercedes-Benz, Nissan, and Volkswagen—only Nissan and Volkswagen produce for export to the United States. These automakers likely use some U.S.-origin auto parts in such vehicles.

[26] Guillermo Lira, "Mexico Sales Up, But Far Below '94," *Automotive News*, Mar. 17, 1997, p. 20D.

[27] Automotive News, *1997 Market Data Book* (MI: Crain Communications, 1997), p. 27.

[28] According to Mexican finance ministry officials, the on-going recovery in the Mexican economy has enabled foreign-owned auto assembly plants to sell an increasing share of their production to the Mexican market in 1997, reducing the share of production that is exported. Consequently, the growth rate in U.S. imports of motor vehicles from Mexico dropped from 40 percent in 1995-96 to 2 percent during January-August of 1996-97.

Figure 3-3
Motor vehicles: Total U.S. imports under the production-sharing provisions (PSP) of *HTS* Chapter 98, and U.S. content under *HTS* PSP, 1993-96



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

Table 3-5
Motor vehicles: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

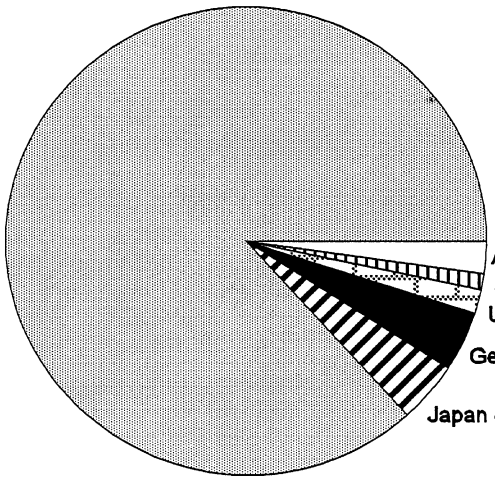
Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S. content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	68,607	25,337	2,331	37	9
1994	79,240	23,095	2,234	29	10
1995	84,384	18,659	2,046	22	11
1996	87,366	23,322	2,657	27	11

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

Figure 3-4
Motor vehicles: U.S. content of imports under the production-sharing provisions (PSP) of *HTS* Chapter 98, 1996

(Percentage)

Total $2.7 billion



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

Table 3-6
Motor vehicles: Total U.S. imports, U.S. imports from NAFTA partners, and from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	1,676	2,310	634	38
Value added	1,329	2,229	900	68
Total	3,005	4,539	1,534	51
NAFTA only[2]	4,505	6,883	2,378	53
Subtotal (NAFTA and/or *HTS* PSP)	7,510	11,422	3,912	52
Other	877	292	-585	-67
Total	8,388	11,714	3,326	40
Canada[3]	33,277	33,727	450	1
All other	42,719	41,926	-793	-2
Total	84,384	87,367	2,983	4

[1] Encompasses imports that entered under both *HTS* PSP and NAFTA.
[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.
Note.—Because of rounding, figures may not add to the totals shown.

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

The Mexican motor vehicle industry consists principally of U.S., German, and Japanese-owned facilities that assemble vehicles largely from imported parts or parts assembled in the maquiladora industry. U.S. automakers account for 70 percent of total Mexican car and truck production. In addition to expanding their exports of motor vehicles to the United States during 1993-96, the Big Three auto producers have increased their use of assembly plants in Mexico to supply markets in Central and South America where products from Mexico often receive preferential treatment with regard to tariff and/or nontariff trade barriers. Mexico's exports of vehicles to other Latin American countries rose by an average of 44 percent annually during 1993-96, compared with a 41-percent average annual increase in exports to the United States. Mexico's exports of motor vehicles to Central and South America reached $915 million in 1996, accounting for 7 percent of Mexico's total sector exports; exports to the United States accounted for 83 percent ($11.2 billion). Principal Latin American markets for Mexican motor vehicles exports in 1996 included Chile ($255 million), Brazil ($201 million), and Argentina ($129 million).[29]

Japan accounted for 4 percent of the total U.S. content in motor vehicle imports under the *HTS* PSP from all sources in 1996 (table 3-7), regaining its position as the second-leading source of such imports. The value of U.S. content in motor vehicle imports from Japan under production-sharing provisions rose by 11 percent, from $98 million in 1995 to $109 million in 1996. This increase was significant in light of the fact that total motor vehicle imports from Japan decreased by 7 percent in 1996. U.S. content in motor vehicles imported from Japan under the *HTS* PSP is found primarily in passenger car imports.

Table 3-7
Motor vehicles: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96
(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	1,758	1,768	1,676	2,310
Japan	237	164	98	109
Germany	59	89	118	106
United Kingdom	31	34	35	51
Canada	185	125	64	23
Sweden	26	14	17	20
Belgium	7	13	17	20
All other	28	27	20	17
Total	2,331	2,234	2,046	2,657

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

[29] Global Trade Information Services, *World Trade Atlas: Mexico Edition, 1993-96, Preliminary*, Columbia, SC, 1997.

The Japanese industry has extensive automotive parts production facilities in the United States, from which some components are sourced for motor vehicle assembly in Japan.[30] In addition, Japanese motor vehicle producers have been under intense political pressure to increase their purchases of U.S.-made parts for motor vehicle assembly in Japan. According to the third *U.S.-Japan Automotive Agreement Monitoring Report*, exports of U.S.-made automotive parts to Japan rose to $2.0 billion in 1996, an increase of 20 percent from 1995.[31] An official of the Japan Automobile Manufacturers Association reported that this increase is attributable, at least in part, to increased "design-in" arrangements between Japanese manufacturers and U.S. suppliers, in which both parties work together on parts design beginning at the blue print stage.[32] There is no U.S.-based motor vehicle manufacturing in Japan; imports under the production-sharing provisions of *HTS* Chapter 98 are entirely attributable to assembly by Japanese manufacturers, who use a very limited number of U.S.-made parts.[33]

Although total vehicle imports and imports under the provisions of *HTS* Chapter 98 from Germany rose in 1996, the value of the U.S. content in total motor vehicle imports from Germany under such provisions fell by 10 percent to $106 million. U.S. content increased steadily before 1996 as a result of heightened demand for German-made motor vehicles in the United States, and increased purchases of U.S. components by German motor vehicle manufacturers prompted by various industry and macroeconomic conditions.[34] Similarly, U.S. exports of automotive parts to Germany had been rising steadily for years before dropping off by 3 percent to $896 million in 1996. Although the U.S. content decline was not a significant shift in terms of value, this trend reversal in 1996 may be attributed to increased sourcing by German automakers of parts from third markets such as Mexico. Some 80 German auto parts firms have reportedly established Mexican production bases in recent years to enable Volkswagen to meet NAFTA rules of origin requirements for duty-free treatment. With production of the new Beetle, Volkswagen reportedly expects another 40 firms to set up operations in Mexico.[35] U.S. content is found primarily in passenger car imports from Germany.

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[30] According to a member survey conducted by the Japan Auto Parts Industry Association, reverse imports from the United States will outperform equivalent domestically-produced components when the exchange rate is ¥91.6 to the dollar. Darrell Moran, "Despite 'Hollowing Out' Anxiety, Parts Makers Move Offshore at Record Pace," *The Japan Automotive Digest*, Jan. 27, 1997, p. 7.

[31] U.S. parts exports to Japan were double the level recorded in 1992. Office of the United States Trade Representative, "USTR Barshefsky and Commerce Secretary Daley Commend Progress But Voice Concern Over Deregulation Issues in U.S.-Japan Automotive Agreement," press release issued Apr. 18, 1997.

[32] "Japan's U.S. Auto Part Imports Set Record in Fiscal Year 1996," *BNA International Trade Daily*, Article No. 41891005, July 8, 1997.

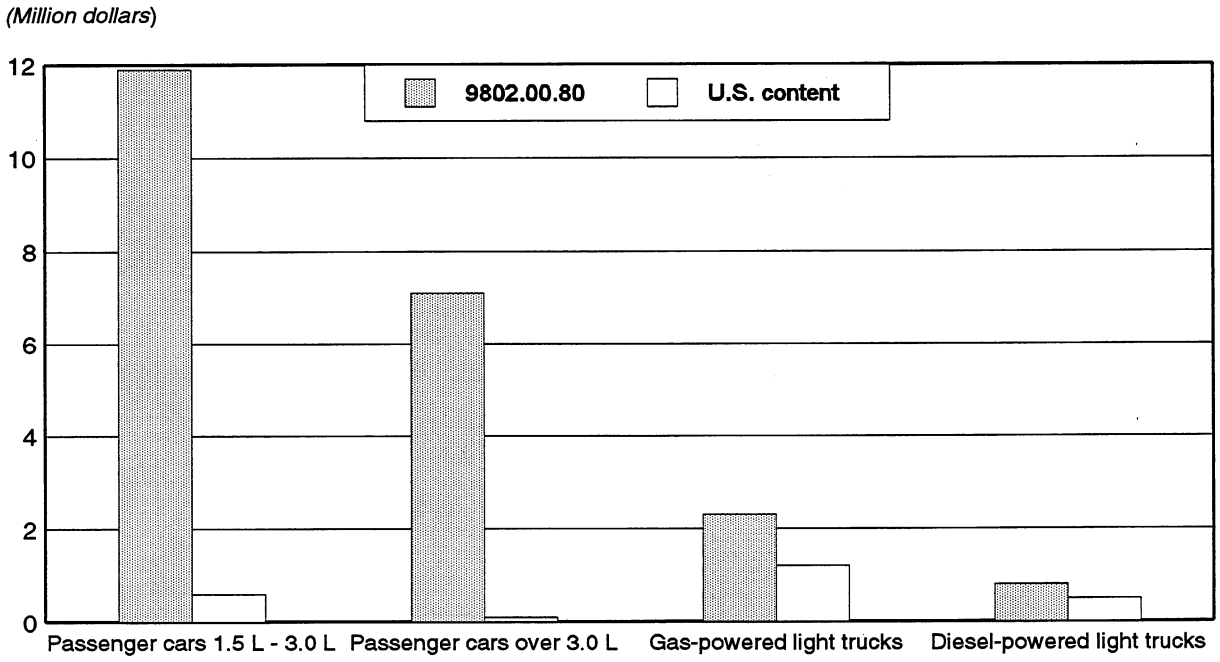
[33] The types of U.S.-origin parts most frequently employed by motor vehicle producers in Japan include catalytic converters and leather seat covers.

[34] For a more detailed discussion of conditions in the German auto industry, see *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1992-95*, USITC publication 3032, Apr. 1997, p. 3-9.

[35] Mary Beth Sheridan, "For Mexico, NAFTA Means That Giant Job-Plucking Sound," received by NEWSEDGE/LAN, Dec. 6, 1996.

Although light trucks accounted for just 13 percent of total *HTS* PSP imports in 1996, gasoline-powered light trucks contained the largest share, and diesel-powered light trucks the third-largest share, of U.S. content in total motor vehicle imports under such provisions (figure 3-5). These two categories accounted for a combined 66 percent of the total value of U.S. content in total *HTS* 9802 imports in 1996. U.S. automakers, which account for over 90 percent of the light truck production in Mexico,[36] realize a significant duty advantage from *HTS* PSP when exporting these trucks to the United States. The value of U.S.-origin parts used in the assembly of these vehicles is high, and is not subject to duty under the provisions in *HTS* Chapter 98. This resulted in an applied tariff rate on light trucks lower than the already reduced rate of 5 percent *ad valorem* for Mexico in 1996. By contrast, U.S. imports of light trucks from Japan, which generally contain few U.S. parts, are assessed a duty of 25 percent *ad valorem*.

Figure 3-5
Leading motor vehicle products, total imports under *HTS* heading 9802.00.80 and U.S. content of imports under *HTS* 9802.00.80, 1996



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

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[36] Automotive News, *1997 Market Data Book* (MI: Crain Communications, 1997), p. 27.

Ignition Wiring Harnesses [37]

Ignition wiring harnesses are one of the leading products assembled in Mexico's maquiladora industry, accounting for 9 percent of the value of the U.S. components in all imports under the production-sharing provisions (PSP) of *HTS* Chapter 98 in 1996, and 13 percent of the U.S. content in such imports from Mexico. The production of ignition wiring harnesses[38] is related almost exclusively to new, original equipment manufacture (OEM) motor-vehicle assembly operations worldwide. Over 90 percent of these devices are constructed for OEM applications, with the remainder being consumed in the automotive replacement aftermarket.[39] The global design and production of ignition wiring harnesses (sets) mirrors that for motor vehicles, and are closely managed to assure an uninterrupted flow of sets into the vehicle manufacturing process.[40] The assembly of ignition wiring sets typically involves numerous product line changeovers to accommodate a wide variety of motor-vehicle model and accessory packages. In addition, the final assembly process incorporates a myriad of intricate and complex operations that are not economically or practically feasible to automate.[41] As a result, over 90 percent of the wiring sets that are consumed in U.S. motor vehicle assembly operations are assembled in countries with low labor costs. This labor-cost advantage, coupled with its geographic proximity to the United States and business relationships with the

[37] Although the data in this commodity grouping cover all insulated electrical conductors, the majority of total U.S. imports (62 percent), *HTS* PSP imports (86 percent), and U.S. content of those imports (85 percent) in 1996 were of ignition wiring sets. The only other notable product categories that were involved in production-sharing operations during 1993-96 were insulated conductors of 80 volts or less, and conductors of from 81 volts to 1,000 volts, both of which were fitted with electrical connectors.

[38] Ignition wiring harnesses are assemblies of multiple insulated electrical conductors that have been fitted with assorted terminals, plugs, connectors, sockets, and other wiring devices. They are used to connect various electrical components (e.g., lights, instruments, and motors) to a power source (typically batteries and generators), and/or to carry high-voltage currents between selected starting and ignition components (such as starters, generators, coils, distributors, and spark plugs) in motor vehicles, aircraft, and ships. Most motor vehicles contain several harness assemblies, the most notable of which are those for the engine compartment and the instrument panel. Harnesses are also fabricated for door panel, passenger compartment, and rear light assembly applications.

[39] Although these assemblies may be used in aircraft or ships, such applications do not currently represent a significant portion of either U.S. industry shipments or international trade.

[40] In 1996, 14.1 million cars and trucks were produced in the United States and Canada; 16.6 million vehicles were produced in Europe; 17.5 million in the Asian Pacific region; and 3.6 million in Latin America (including Mexico). *Automotive News, 1997 Market Data Book,* May 28, 1997, pp. 12 and 14.

[41] The operations that are typically performed offshore by U.S.-based suppliers include one or more of the following: affixing assorted electrical terminal connectors to the ends of color-coded electrical or signal wire; bundling or pairing the terminated conductors through the use of wiring "trees" or other harness forming apparatus; wrapping or otherwise jacketing the assembled harnesses; and performing limited finishing operations such as testing and labeling. The U.S.-origin components that are most often consumed in the production of wiring harnesses are bulk electrical or signal wire, electrical terminal and connector components, and jacketing materials (electrical tape and flexible conduit). Based principally upon information obtained by staff of the USITC as the result of tours of maquiladora facilities of major harness manufacturers conducted during Sept. 1996 in Juarez, Mexico.

Big Three U.S. automakers, has made Mexico the leading foreign location for the assembly of ignition wiring harnesses. In 1996, estimated U.S. consumption of ignition wiring harness was between $3.8 billion and $4.1 billion.[42]

Two U.S.-owned and two foreign-owned multinational companies are responsible for supplying a major portion of the ignition wiring sets that are consumed in the North American market. The strength of these companies in the region is derived principally from their long-term subsidiary relationships with major U.S. and foreign vehicle manufacturers. These firms account for an estimated 60 percent of the global market for wiring harnesses. All have set up operations for the final assembly of wiring harnesses in Mexico as well as other foreign locations (in particular, the Philippines, Thailand, and Taiwan) to better supply their worldwide markets and strengthen their competitive positions in the North American market.

The trend in imports of wiring harnesses reflected the strong growth in U.S. production of motor vehicles during 1993-96. Total imports and imports under the production-sharing provisions of *HTS* Chapter 98 grew at comparable rates (67 and 68 percent, respectively) during the period, with over half of all imports of wiring harnesses entering under the *HTS* PSP (table 3-8). The value of the U.S. components contained in these *HTS* PSP imports grew by $195 million (11 percent) between 1995 and 1996, to $2.0 billion (61 percent of the total value of these imports) (table 3-9).

Table 3-8
Ignition wiring harnesses: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S. content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	3,564	1,979	1,122	56	57
1994	4,810	2,858	1,617	59	57
1995	5,398	3,080	1,843	57	60
1996	5,935	3,332	2,038	56	61

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

[42] Although no official data for the value of apparent U.S. consumption of wiring harnesses exists, owing to the assimilation of these articles in the final assembly process for motor vehicles, a reasonable estimate of this value can be derived by multiplying an estimated average unit value of between $325 to $350 per vehicle by annual U.S. motor-vehicle production, which amounted to 11.7 million units in 1996.

Table 3-9
Ignition wiring harnesses: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96
(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	1,055	1,554	1,758	1,969
Philippines	32	29	54	33
Thailand	0	8	9	9
China	0	0	4	6
All other	35	24	18	21
Total	1,122	1,615	1,843	2,038

Note.—Because of rounding, figures may not add to the totals shown.

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

Mexico was once again the pre-eminent foreign assembly source of U.S. imports of ignition wiring harnesses under the *HTS* PSP, accounting for 91 percent ($3.0 billion) of total imports under such provisions in 1996 (table 3-10). The value of imports from Mexico under *HTS* PSP rose by $267 million (10 percent), principally in response to relatively strong U.S. motor vehicle sales, the continued expansion of U.S.- and foreign-owned production operations in Mexico, and the increased complexity of wiring harnesses required for each new vehicle produced.[43] The U.S.-origin components contained in these imports rose by $211 million (12 percent) to $2.0 billion in 1996 and accounted for 65 percent of the value of the *HTS* PSP entries from Mexico (table 3-10). Imports under the *HTS* PSP accounted for 84 percent of the wiring harnesses imported from Mexico under the combined provisions of *HTS* Chapter 98 and NAFTA in 1996.[44] The bulk of the $591 million in imports entering under NAFTA, but not the provisions of *HTS* Chapter 98, is believed to be assembled from U.S.-made components.

The only other significant foreign sources of U.S. production-sharing imports of wiring harnesses in 1996 were the Philippines and Thailand. Thailand has only recently emerged as an important supplier to the U.S. market, due to the establishment of wiring harness facilities by major Japanese manufacturers as an adjunct to their U.S. and global assembly operations. Major global automakers have rapidly expanded production capacity in Thailand to keep up with growing demand for vehicles there and in other Far Eastern and world markets. This expansion has indirectly created economies of scale for manufacturers of wiring sets in Thailand, where wage rates remain low relative to those in other newly industrialized countries in the region. As a result, U.S. imports of ignition wiring harnesses from Thailand have partially displaced higher cost products from Taiwan. Most wiring harnesses assembled in the Philippines and Thailand enter the United States free of duty under the Generalized System of Preferences (GSP) instead of under the provisions of *HTS* Chapter 98. Total imports of

[43] The growing complexity of automotive electrical systems has increased the number of functions within the vehicle for which wiring harnesses are required, as well as the value of the wiring harnesses required in each vehicle. As a result, the value of wiring harness imports increased in 1996 even though the total number of vehicles produced fell slightly.

[44] See the explanation of "Customs Incentives for Entry Under *HTS* 9802 and NAFTA" on p. 1-2.

Table 3-10
Ignition wiring harnesses: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Percentage change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	1,758	1,969	212	12
Value added	1,009	1,065	56	6
Total	2,767	3,034	267	10
NAFTA only[2]	446	591	145	32
Subtotal (NAFTA and/or *HTS* PSP)	3,213	3,625	412	13
Other	114	136	22	19
Total	3,327	3,761	434	13
Canada[3]	403	433	30	7
All other	1,668	1,741	73	4
Total	5,398	5,935	535	10

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.
[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

wiring harnesses from Thailand rose by 9 percent to $208 million in 1996, while those from the Philippines fell by 19 percent to $234 million.

The use of ignition wiring harness assembly plants in Mexico has enabled U.S. producers to maintain their price competitiveness with respect to imports from Thailand, the Philippines, and China, the last of which was the leading non-production-sharing supplier of wiring harness imports to the U.S. market in 1996. Total harness imports from China rose by 11 percent during 1996 to $364 million. U.S. imports from China under the *HTS* PSP have risen from $18,000 in 1993 to $20 million ($6 million of which were of duty-free U.S. content) in 1996. In addition, Sumitomo of Japan recently announced plans to establish a joint venture with at least two other Chinese companies to produce wire harness parts in Tianjin, China.[45] The plant's output will likely be consumed domestically by Chinese automakers. In addition, it currently appears that the ignition wiring harness industry in China is not yet sufficiently developed to pose a significant competitive challenge to current suppliers to the U.S. market.

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[45] Jorge Riberio, "Asian Focus," *Wire Journal International*, May 1997, p. 8.

Certain Motor-Vehicle Parts[46]

The United States is a major producer of motor-vehicle parts, accounting for an estimated one-quarter ($92 billion) of the global production of these products in 1996. The U.S. motor-vehicle parts producing industry is in the midst of considerable restructuring spurred by changing automaker requirements, such as the shifts toward systems integration and a reduced supplier base. To meet the global sourcing strategies of automakers, the U.S. motor-vehicle parts industry has also accelerated its expansion into foreign markets to better serve its customers.

Although the U.S. motor-vehicle parts industry consists mostly of small producers, the leading auto parts manufacturers are subsidiaries of the U.S. Big Three automotive producers, all of which produce parts mainly for captive use.[47] In general, the smaller firms in the industry produce a limited number of auto parts products for niche markets, whereas the larger independent and captive suppliers make a wide range of products for different market segments. Systems integration is contributing to ongoing industry consolidation, however, as larger component manufacturers in particular pursue mergers with, and acquisitions of, suppliers of complementary technologies or components to enhance their automotive systems capabilities.

As automakers demand cost reductions from their parts suppliers, production sharing has been integral to U.S. parts makers' competitive strategy in lowering production costs. However, the use of *HTS* heading 9802.00.80 will likely decline[48] because of increased use of NAFTA

[46] Certain motor-vehicle parts include bumpers, safety seat belts, brakes, gear boxes, axles, road wheels, suspension shock absorbers, radiators, exhaust systems, clutches, steering equipment, double flanged wheel hub units, airbags, half-shafts, drive shafts, and parts of the foregoing. For purposes of this analysis, ball and roller bearings are also included. Primary motor-vehicle parts that are not covered in this analysis include engines and engine parts, seats, fuel pumps, catalytic converters, meters, automotive storage batteries, lighting equipment, and ignition wiring harnesses. The parts covered by this analysis account for approximately 70 percent of all automotive parts production.

[47] Subsidiaries of the Big Three are gaining greater independence, however, and are being encouraged to pursue sales beyond their traditional clients. General Motors' Delphi Automotive Systems, for example, has recently taken steps to expand its customer base outside General Motors, and may be spun off as an independent company. Ford's Automotive Products Operations has been reorganized, in part to better compete in the new global parts supply market.

[48] According to the Association of International Automobile Manufacturers (AIAM), the use of *HTS* heading 9802.00.80 understates the value of U.S. components incorporated in foreign assembly operations because of a variety of factors, including extensive and poorly defined documentation requirements, inconsistent interpretation and documentation requirements, restrictions against the commingling of U.S. and foreign components, and the use of NAFTA and GSP provisions. The AIAM states that, as a result, "many of the major importers which have historically used 9802 have either temporarily suspended or permanently terminated all or part of their 9802 programs...." Statement submitted by AIAM in connection with investigation No. 332-237, *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1992-95*, Sept. 20, 1996.

and the elimination of the customs user fee.[49] Other automotive industry developments likely to be more critical than the use of tariff preferences to U.S. parts makers' operating strategies include efforts to improve productivity and cost effectiveness; the capability to supply complete automotive systems; component commonality;[50] increased globalization and outsourcing by U.S. automakers; the ability to assume more responsibility in areas such as financing and research and development; and greater technological innovation.

During 1995-96, U.S. imports of certain motor-vehicle parts under the production-sharing provisions of *HTS* Chapter 98 rose by 4 percent to $1.9 billion and the value of U.S.-origin components contained in imports under such provisions increased by 10 percent to $905 million, reversing declines in both measures posted during 1993-95 (table 3-11). The recovery of the Mexican economy and the automotive sector, the expansion of the Mexican auto parts industry, and the continued strength of the U.S. automotive market were largely responsible for this growth. U.S.-origin components accounted for 48 percent of the value of auto parts imported under the *HTS* PSP in 1996, with safety seat belts, miscellaneous parts and accessories,[51] and airbag inflators and modules representing about 84 percent of the value of U.S. content.

Table 3-11
Certain motor-vehicle parts: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S.content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	15,760	2,265	1,243	14	55
1994	17,387	2,023	1,005	12	50
1995	17,818	1,808	825	10	46
1996	18,393	1,875	905	10	48

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

Mexico was the leading supplier of motor-vehicle parts imported under *HTS* PSP during 1995-96, in part because of its proximity to the U.S. market, lower wage rates, and integration into the North American automotive industry. The value of auto parts imports from Mexico under these provisions increased by 6 percent in 1996 to $1.5 billion, and U.S.-origin components rose by 9 percent to $887 million (table 3-12). NAFTA provisions, however, have become increasingly more significant to U.S.-Mexican trade flows. Ninety-one percent

[49] Importers of articles that are otherwise free of duty continue to have an incentive to declare eligibility for entry under *HTS* heading 9802.00.80. Under that provision, the U.S.-origin content of such imports is exempt from the Customs user fee of 0.17 percent ad valorem, with a maximum fee of $400 per entry. Under the NAFTA, the user fee was phased out entirely on imports from Canada as of Jan. 1, 1994, and imports from Mexico will be subject to the user fee until June 30, 1999, at which time the fee will be eliminated. See app. A for additional information about the Customs user fee.

[50] This term refers to the use of common parts across an automaker's various platforms.

[51] This category includes, but is not limited to, plastic brake hoses, double flanged wheel hub units not incorporating ball bearings, slide-in campers, radiator cores, and cable traction devices.

of imports of certain auto parts from Mexico under the provisions of *HTS* Chapter 98 also entered under NAFTA (table B-5). Whereas auto parts imported under the *HTS* PSP exhibited 6-percent growth to $1.5 billion during 1995-96, "NAFTA only" imports rose by 44 percent to $909 million (table 3-13). Imports under NAFTA that were not also declared eligible for entry under *HTS* PSP increased their share of total imports from Mexico to 36 percent, whereas imports under *HTS* PSP accounted for 60 percent.

Table 3-12
Certain motor-vehicle parts: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96

(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	1,164	977	811	887
Canada	68	11	3	8
All other	11	17	11	10
Total	1,243	1,005	825	905

Note.—Because of rounding, figures may not add to the totals shown.

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

Table 3-13
Certain motor-vehicle parts: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	811	887	76	9
Value added	630	636	6	1
Total	1,441	1,523	82	6
NAFTA only[2]	633	909	276	44
Subtotal (NAFTA and/or *HTS* PSP)	2,074	2,432	358	17
Other	129	101	-28	-22
Total	2,203	2,533	330	15
Canada[3]	6,537	6,917	380	6
All other	9,078	8,943	-135	-1
Total	17,818	18,393	575	3

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.

[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.

[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.

Note.—Because of rounding, figures may not add to the totals shown.

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

Imports from Mexico accounted for 98 percent of the total value of U.S.-origin components used in the production-sharing provisions of *HTS* Chapter 98 assembly of certain motor-vehicle parts in 1996 (tables B-3 and B-5). U.S. components accounted for 58 percent of the value in sector imports from Mexico under *HTS* PSP in 1996, with safety seat belts and miscellaneous parts and accessories accounting for 80 percent of total U.S. origin. TRW, Inc., Breed Technologies, and AlliedSignal Automotive, as well as a new market entrant, Takata Corp. (Japan), manufacture safety seat belts in Mexico for the North American market.

Canada was the second-leading source of U.S. content in imports under *HTS* PSP in 1996, with a 3-fold increase from the 1995 level to $8.2 million. U.S.-origin components accounted for 24 percent of the value of auto parts imports ($33.8 million) under such provisions in 1996, with brakes and brake parts and miscellaneous parts and accessories representing 87 percent of U.S. content. Because of the extensive integration of the Canadian and U.S. automotive industries since the mid-1960s resulting from the implementation of the U.S.-Canadian Auto Pact, Canada is the leading U.S. trading partner for motor-vehicle parts. Canadian parts manufacturers, the Big Three, and other foreign car makers and parts producers manufacture components in Canada for use in North American vehicle production, and rationalize output of this production to suit individual company needs. Although U.S. imports of certain motor-vehicle parts from Canada are believed to incorporate a significant level of U.S.-origin components, the bulk of such parts imports do not enter under the provisions of *HTS* Chapter 98.

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Internal Combustion Engines

The internal combustion engine segment of the U.S. motor-vehicle parts industry is highly concentrated, with the Big Three (Chrysler, Ford, and General Motors) and foreign-owned transplant automakers accounting for the majority of U.S. production of an estimated $43 billion in 1996. The engine sector is highly integrated throughout North America because of the dominance of these automakers in the region, with production rationalized according to company needs. As part of the larger automotive industry, this sector is also subject to many of the same trends influencing the direction of motor-vehicle parts production, such as globalization and outsourcing. Parts (other than cast iron) for diesel and internal combustion engines and gasoline-powered engines of a cylinder capacity exceeding 2000cc for motor vehicles are the leading industry segments, accounting for 55 percent of all internal combustion engine imports under *HTS* 9802.00.80 in 1996.[52]

U.S. imports of internal combustion engines reported under the production-sharing provisions of *HTS* Chapter 98 declined by 63 percent from the previous year total to $318 million in 1996, representing 3 percent of total U.S. imports of internal combustion engines (table 3-14). The value of U.S.-origin components contained in *HTS* PSP imports fell by 73 percent during the period to $73 million, accounting for 23 percent of the total value of internal combustion engines imported under such provisions. The declines recorded in 1996 are in marked contrast to steady increases in both measures reported during 1993-95, and are primarily attributable to a significant shift in reporting imports from Mexico under NAFTA rather than *HTS* Chapter 98.

Table 3-14
Internal combustion engines: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S.content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	6,623	629	122	10	19
1994	7,798	771	177	10	23
1995	8,863	858	272	10	32
1996	9,914	318	73	3	23

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

Mexico remained the leading source of U.S. content in imports of internal combustion engines under the *HTS* PSP in 1996, despite registering an 83-percent decline to $104 million in sector imports under the provisions of *HTS* Chapter 98 during 1995-96. The value of U.S. content in engine imports from Mexico under *HTS* PSP exhibited a comparable decline—78 percent—during the period to $55 million (table 3-15). Whereas the share of total imports

[52] These segments include marine propulsion engines, spark-ignition reciprocating piston engines for motor vehicles, rotary internal combustion piston engines for motor vehicles, and compression-ignition internal combustion engines (diesel or semidiesel) for motor vehicles, and parts thereof.

of internal combustion engines from Mexico accounted for by imports under *HTS* PSP dropped from 39 percent in 1995 to 6 percent in 1996, the share accounted for by imports under NAFTA that were not simultaneously declared eligible under the *HTS* PSP grew from 46 percent to 74 percent. "NAFTA only" imports increased by 74 percent during this 2-year period, totaling $1.3 billion in 1996 (table 3-16). In particular, imports of internal combustion engines with a cylinder capacity over 2000cc, the largest import category in 1995, exhibited a notable shift to NAFTA from *HTS* PSP in 1996. There were no U.S. imports of these engines reported under *HTS* PSP from Mexico in 1996 compared to the previous year's total of $481 million, whereas "NAFTA only" imports grew by 72 percent to $714 million during the same period.

Table 3-15
Internal combustion engines: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96

(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	91	144	253	55
Germany	19	25	10	12
Japan	5	5	6	4
All other	6	2	3	0
Total	122	177	272	73

Note.—Because of rounding, figures may not add to the totals shown.

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

Table 3-16
Internal combustion engines: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	253	55	-198	-78
Value added	375	49	-326	-87
Total	628	104	-524	-83
NAFTA only[2]	733	1,275	542	74
Subtotal (NAFTA and/or *HTS* PSP)	1,361	1,379	18	1
Other	245	334	89	36
Total	1,606	1,713	107	7
Canada[3]	1,829	2,572	743	41
All other	5,428	5,629	201	4
Total	8,863	9,914	1,051	12

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.

[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.

[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Germany was the second-leading source of U.S. content in internal combustion engine imports under *HTS* PSP, with a 12-percent increase from the 1995 level to nearly $12 million in 1996; this corresponded with a 10-percent growth in overall sector imports under these provisions. Germany initially emerged as a major U.S. supplier of engines with the start-up of BMW's assembly facility in South Carolina, which incorporates German engines in its U.S.-made vehicles. In an effort to reduce production costs, German automakers, as well as foreign automakers with German operations, have also increased their purchases of parts from U.S. component manufacturers.[53]

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[53] U.S. Department of State, Market Research Report, *Germany - Automotive Parts and Services*, Frankfurt, June 1, 1996, ISA 960601.

Electronic Products, Medical Equipment, and Precision Manufactures[54]

U.S. producers of electronic products, medical equipment, and precision manufactures (as a group, referred to as electronic products) continued to shift labor-intensive operations to regions with lower labor costs to remain price competitive in the global marketplace. U.S. imports of electronic products increased by $4.1 billion (2 percent) in 1996 to $180.5 billion, accounting for 23 percent of total U.S. imports. Imports of electronic products entered under the production-sharing provisions of *HTS* Chapter 98 increased by $142.6 million (1 percent) to $18.8 billion and accounted for 28 percent of all imports under the *HTS* PSP. The U.S.-origin content in *HTS* PSP imports of electronic products rose by $60.0 million (1 percent) to $8.3 billion.

A significant portion of U.S. imports of electronic products is believed to be imported from production-sharing operations (and contain U.S.-made components) but is not entered under *HTS* PSP.[55] The elimination of duties or duty exemption under the GSP, NAFTA, and the Uruguay Round of GATT removed much of the incentive for importers to report production-sharing imports under *HTS* PSP. As a result, statistics on imports under these provisions reflect those production-sharing operations for which U.S. import duties and/or customs user fees still apply.

The principal supplier countries of electronic products to the United States under the production-sharing provisions of *HTS* Chapter 98 were Mexico, Malaysia, the Philippines, and Korea, which together accounted for 76 percent of total U.S. sector imports. The principal electronic products entered under *HTS* PSP were semiconductor devices, television receivers (including picture tubes and other electron tubes), and electrical circuit apparatus, which together accounted for 68 percent of all electronic products imported under *HTS* PSP in 1996.

[54] *Electronic products* include office machines; telephone and telegraphic apparatus including optical fiber; microphones, loudspeakers, and audio amplifiers; tape recorders and players; video cassette recorders and compact disc players; recorded and unrecorded media; radio transmission and reception apparatus; television receivers (video monitors, cathode-ray tubes, and other special purpose tubes); television apparatus (cameras, camcorders, and cables); electric sound and visual signaling apparatus and other electrical and electronic articles; computer hardware; and electronic components such as semiconductors, capacitors, printed circuit boards, and connectors. *Medical equipment* includes medical and optical goods. *Precision manufactures* include photographic equipment and supplies; watches and clocks; balances, surveying/navigational instruments, and drawing/mathematical and calculating instruments; and measuring and testing instruments (meters).

[55] For example, according to semiconductor industry representatives, imports of semiconductors reported under *HTS* PSP understate imports from production-sharing operations by at least half. Imports under *HTS* PSP accounted for 22 percent of total U.S. imports of semiconductors in 1996.

Semiconductor Devices

Semiconductor devices are one of the most significant articles of U.S. international trade, accounting for 5 percent of total U.S. imports in 1996 and 17 percent of the value of U.S. components in production-sharing imports reported under the production-sharing provisions of *HTS* Chapter 98. Semiconductor devices are integral components in nearly all electronic products including computers, communications equipment, and automotive and consumer electronics. Semiconductors can be divided into three categories: discretes, integrated circuits (ICs), and hybrids, with ICs constituting roughly 90 percent of the value of U.S. production and trade.[56] Despite a significant decline in the U.S. and global semiconductor markets in 1996, the United States remains the world's largest consumer and one of the largest producers of semiconductor devices. U.S. production in 1996 was approximately $40 billion with a domestic market of approximately $48 billion.[57] The U.S. semiconductor industry is comprised of hundreds of firms, including Intel, Motorola, Texas Instruments (TI), Advanced Micro Devices (AMD), IBM, and Micron Technology. According to industry representatives, all but one of the major U.S. semiconductor manufacturers are engaged in production-sharing arrangements.[58]

Semiconductors are particularly well suited to production sharing because of the two easily delineated stages involved in the manufacturing process. These two stages are commonly referred to as fabrication and assembly/test. The fabrication stage is extremely capital intensive and is conducted in the United States. Fabrication involves the repeated use of expensive lithography and implantation equipment to transfer numerous identical copies of microscopic circuits, or semiconductors, to different locations on a circular silicon wafer. Each wafer may contain hundreds of separate but identical semiconductors.

At the conclusion of the fabrication process, the silicon wafers are transported abroad for the lower technology, lower-value-added steps of assembly and testing. These steps are somewhat more labor intensive than fabrication and often entail sawing the silicon wafers into individual semiconductors, attaching metal leads, packaging the semiconductors in plastic or ceramic carriers, and final testing for defects.[59] The finished semiconductors are either returned to the United States or sent to third countries. The assembly stages can be conducted by a foreign subsidiary of the U.S. manufacturer or, as is becoming increasingly popular, by foreign contract assemblers. Contract assemblers can be particularly useful to small and medium-sized U.S. semiconductor fabricators that rely on the contractor's expertise and existing

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[56] Semiconductor Industry Association (SIA), *World Semiconductor Forecast, 1996-1999* (San Jose, CA: SIA, May 1996), p. 26; and Integrated Circuit Engineering (ICE), Bill McLean, ed., *Mid-Term 1996, A Report on the Integrated Circuit Industry* (Scottsdale, AZ: ICE, 1996), p. 1-18.

[57] USITC staff estimates based on *Yearbook of World Electronics Data, 1996, Vol. 2, America, Japan, and Asia Pacific*, Elsevier Science Ltd., Apr. 1996, pp. 229-236; and Semiconductor Industries Association (SIA), *Chip Industry Statistics: World Market Sales and Shares 1991-1996*, found at http://www.semichips.org/indstats/shares.htm, retrieved July 17, 1997.

[58] Industry representatives, telephone interviews by USITC staff, Sept.-Oct. 1996 and July 22-24, 1997. According to the market research firm Integrated Circuit Engineering, U.S. semiconductor producers account for over a quarter of the value of world semiconductor fabrication but less than 10 percent of the value of world semiconductor assembly.

[59] McLean, ed., *Mid-Term 1996,* p. 5-37.

infrastructure to keep overall production costs down and retain competitiveness. Contract assemblers are typically responsible for assembly/test research and development (R&D) and equipment and facility costs, allowing the U.S. fabricators to concentrate their resources on semiconductor design and fabrication.[60]

With the exceptions of Canada and Mexico, most of the major participating countries engaged in semiconductor production-sharing arrangements with the United States are located in East Asia.[61] The semiconductor assembly industry has largely been shifting to this region since the 1970s. Chief among these East Asian locations are Malaysia, the Philippines, Korea, and Singapore. Initially, U.S. semiconductor manufacturers shipped unfinished products to these countries to take advantage of lower labor costs in a relatively labor-intensive assembly process. Over time, the assembly of semiconductors has become more automated, with labor comprising lower percentages of assembly costs. Despite increased automation, the semiconductor assembly industry has remained in East Asia in part because the industrial infrastructure, advanced packaging technology, and experienced labor are strongly in place. However, even with the increased levels of automation involved in assembly and test, lower-labor-cost countries in the region such as the Philippines, China, and Indonesia are attracting a significant share of new industry investment.[62]

Production sharing in the manufacture of semiconductors occurs on a very large scale. U.S. industry representatives have conservatively estimated that the annual value of the U.S. content of the operations may be as high as $12 billion to $15 billion.[63] However, accurately tracking the level of production sharing in semiconductors is problematic. The United States maintains no tariff on semiconductors and, as a result, importers have very little incentive to report the U.S. content in the *HTS* PSP. The principal existing incentive for entering semiconductors under the production-sharing provisions is to receive an exemption from the Customs user fee of 0.17 percent ad valorem on the value of the U.S. content, with a maximum fee of $400 per shipment. However, according to industry representatives, the amount of savings from the Customs user fee exemption frequently does not compensate for the costs of complying with the *HTS* PSP documentation requirements and importers often do not use the provision.[64] The results are that both the aggregate totals for imports of semiconductors under the *HTS* PSP and certain country totals likely substantially understate the actual use of production sharing, and trends in the data reported under the *HTS* PSP may not accurately reflect trends in semiconductor production sharing.

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[60] Lewis Young, "Business Trends," *Electronic Business Today* (Colorado: Cahners Publishing, May 1997), p. 28.

[61] Semiconductors have a high value-to-weight ratio and can be economically shipped over long distances. As a result, there is little need to locate production-sharing facilities in close proximity to fabrication plants in the United States.

[62] Lapedus, "Asia's Tigers Rule"; and Paul Hyman, "Silicon Valley, Manila-Style,"*Electronic Buyers' News Daily News Digest*, Sept. 25, 1996, found at Electronic Buyers' News, http://techweb.cmp.com/ebn/942/news0926.html, retrieved Jul. 18, 1997.

[63] Industry representatives, telephone interviews by USITC staff, Jul. 22-24, 1997.

[64] Ibid.

Although Canada does not appear on the list of principal sources of semiconductor imports under the provisions of *HTS* Chapter 98, it is likely one of the primary production-sharing partners of the United States.[65] According to IBM Corp., one of the largest U.S. semiconductor manufacturers, approximately 90 percent of its U.S. semiconductor production is assembled or tested in Quebec, Canada, before being returned to the U.S. market.[66] Canada does not have a substantial semiconductor fabrication industry, and therefore, it is probable that a large share of the value of Canadian semiconductor exports to the United States in 1996 is, in fact, U.S. content. Total U.S. imports of semiconductors from Canada grew by 24 percent ($409 million) in 1996 to $2.1 billion (table 3-17).

U.S. imports of semiconductor devices reported under the production-sharing provisions of *HTS* Chapter 98 decreased by 5 percent in 1996 from the total for 1995, dropping to $8.2 billion (table 3-18). Of this, $4.1 billion was U.S. content. The 5- percent decline in imports of semiconductors reported under *HTS* PSP paralleled the 6-percent decrease in overall U.S. semiconductor imports for 1996 from the previous year and the 9-percent downturn in the global market. Malaysia is the largest supplier of semiconductors imported under the production-sharing provisions of *HTS* Chapter 98. In 1996, Malaysia accounted for 27 percent of the value of U.S. content of semiconductor imports under *HTS* PSP (table 3-19). Many of the major U.S. manufacturers, including Intel, AMD, and TI, have assembly affiliates in Malaysia. Malaysian semiconductor exports to the United States reported under *HTS* PSP declined by 15 percent ($199 million) to $1.1 billion in 1996 compared with 1995, while total Malaysian semiconductor exports to the United States grew by 0.2 percent ($12 million).[67] The reported value of the U.S. content in *HTS* PSP imports from Taiwan and Hong Kong also fell in 1996: Taiwan by $60 million (16 percent) to $311 million, and Hong Kong by $50 million (16 percent) to $260 million. By contrast, Korea experienced the most significant growth in 1996 in the reported value of the U.S. content of *HTS* PSP exports to the United States, with such exports rising by $54 million (10 percent) to $614 million.

[65] The lack of comprehensive production-sharing data is especially pronounced in regard to Canada and Mexico, and is likely to worsen. In addition to semiconductors being free of duty, the Customs user fee has been eliminated on all Canadian exports to the United States under the NAFTA. As a result, there is now no incentive for Canadian exporters to use the *HTS* PSP when exporting to the United States. *HTS* PSP reporting from Mexico is also likely to decrease substantially in 1999 when the customs user fee is eliminated under the North American Free-Trade Agreement for U.S. imports from Mexico (see Chapter 1).

[66] Representative of IBM Corp., telephone interviews by USITC staff, Jul. 23 and Aug. 8, 1997; IBM Canada, "Manufacturing and Development."http://www.can.ibm.com/about/manu/, retrieved Jul. 9, 1997.

[67] The U.S. content in imports reported under the production-sharing provisions of *HTS* Chapter 98 accounted for 21 percent of all semiconductor imports from Malaysia in 1996. By contrast, the U.S. content of imports reported in *HTS* PSP accounted for 28 percent of total U.S. semiconductor imports from the Philippines; 10 percent from Korea; 0.8 percent from Japan; and 44 percent from Mexico.

Table 3-17
Semiconductor devices: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	326	352	26	8
Value added	273	237	-36	-13
Total	599	589	-10	-2
NAFTA only[2]	0	0	0	0
Subtotal (NAFTA and/or *HTS* PSP)	599	589	-10	-2
Other	140	209	69	49
Total	739	798	59	8
Canada[3]	1,695	2,104	409	24
All other	36,733	33,869	-2,864	-8
Total	39,167	36,771	-2,396	-6

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.
[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3-18
Semiconductor devices: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S. content share of total under *HTS PSP*
	Million dollars			*Percentage*	
1993	19,466	5,051	2,715	26	54
1994	26,020	6,243	3,311	24	53
1995	39,168	8,613	4,302	22	50
1996	36,771	8,164	4,087	22	50

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

Table 3-19
Semiconductor devices: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96

(*Million dollars*)

Source/country	1993	1994	1995	1996
Malaysia	783	954	1,303	1,104
Philippines	421	576	700	712
Korea	396	426	560	614
Thailand	200	306	410	389
Mexico	224	257	326	352
Taiwan	282	326	371	311
Hong Kong	116	122	310	260
Singapore	230	270	178	166
Japan	35	45	69	70
Indonesia	25	24	51	69
All other	3	6	23	39
Total	2,715	3,311	4,302	4,087

Note.—Because of rounding, figures may not add to the totals shown.

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

The U.S. content in the PSP of *HTS* Chapter 98 imports from Mexico grew by $26 million (8 percent) in 1996 to $352 million (table 3-17). All imports from Mexico under NAFTA also entered under *HTS* PSP. Imports under the *HTS* PSP accounted for 74 percent of total imports of semiconductors from Mexico in 1996. Imports from Mexico ($798 million) accounted for 2 percent of total imports of semiconductors in 1996, while imports from Canada accounted for 6 percent.

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Television Receivers[68]

The United States is the world's largest market for color television receivers (CTVs), video monitors, cathode-ray tubes, and other electronic tubes. It is also one of the leading producers of parts used in the assembly of televisions. U.S. shipments of these products in 1996 are estimated at $8.5 billion, of which color television receivers and monitors accounted for 55 percent, cathode-ray tubes for 40 percent, and other electronic tubes for 6 percent.[69] The U.S. industry producing CTVs consists of 14 companies with affiliates or subsidiaries that produce color television picture tubes (CPTs), which account for about 90 percent of all cathode-ray tubes. Prior to the mid-1980s, the major U.S. CTV producers were also U.S.-owned; however, within the last decade, all U.S. CTV and CPT producers were purchased by European or Asian companies. There are about 40 U.S. producers of other electronic tubes.

Narrowing profit margins in consumer electronics have influenced U.S. producers' choice of assembly facilities for decades, and led to the relocation of U.S. TV assembly plants to Mexico to take advantage of lower labor costs, beginning in 1976 with RCA. By the late 1980s, every U.S. producer of CTVs had moved the assembly of CTVs with high labor content (generally CTVs with screen sizes under 20 inches in viewable diagonal measurement) to maquiladora plants just south of the U.S.-Mexico border.[70] Most U.S. producers continued to assemble higher-value, large-screen CTVs in the United States. The design and R&D facilities of formerly U.S.-owned producers also remain in the United States.

In 1996, LG Electronics, a Korean firm, bought a controlling interest in Zenith Electronics, the last U.S.-owned CTV producer, and moved Zenith's remaining CTV assembly operations to Mexico. Zenith continues to manufacture CPTs in the United States.[71] Another major U.S. producer, Thomson Consumer Electronics, plans to shut down its remaining U.S. CTV assembly plant in Indiana in 1998 and move all assembly to Mexico, while continuing to operate its two CPT plants in the United States.[72] The Korean company Samsung built several factories on a multiplant site in March 1996 in Tijuana, Mexico. Now making CPTs, the Samsung facility eventually will make CTVs, TV-VCR combinations, tuners, and other products.[73]

U.S. imports of television receivers grew steadily during 1993-95, but decreased by 3 percent in 1996 to $5.7 billion (table 3-20). Imports of CTVs alone declined by 1 percent to $4.5 billion in response to declining U.S. demand. Imports of picture tubes and other cathode-ray tubes decreased by 12 percent to just under $1 billion, as Asian-made tubes that were

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[68] Also includes video monitors, picture tubes, other cathode-ray tubes, magnetrons, klystrons, and other electronic tubes.

[69] Some double counting exists in that some of the picture tubes produced in the United States are consumed in the production of television receivers in the United States.

[70] Television receivers and related equipment accounted for 9 percent of total U.S. imports from Mexico under *HTS* heading 9802.00.80 in 1996, and 27 percent of the such imports of electronic products from Mexico (table B-5).

[71] USITC staff telephone interview with Zenith representative, July 14, 1997.

[72] Ibid.

[73] Found at http://www.samsung.co.kr/present/learn/global2.html, retrieved July 17, 1997,

Table 3-20
Television receivers: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S.content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	4,600	2,257	701	49	31
1994	5,538	2,606	850	47	33
1995	5,930	2,511	835	42	33
1996	5,738	2,625	1,031	46	39

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

formerly sent to U.S. factories were sent to Mexican assembly plants instead. At the same time, U.S. CPT exports to Mexican factories increased by 13 percent to almost $1 billion.

The majority of cathode-ray tubes for CTVs imported from Mexico are produced in the United States and then shipped to Mexico for assembly into complete receivers. NAFTA provides that the 15-percent ad valorem duty on U.S. imports of color television picture tubes will not be assessed on tubes of North American origin. As a result, Mexican-assembled CTVs hold a considerable duty advantage over similar Asian products, which generally do not contain North American tubes.[74]

U.S. imports of television receivers and tubes entered under the production-sharing provisions of *HTS* Chapter 98 increased by 5 percent in 1996 (table 3-20), while imports from NAFTA countries increased by 7 percent (table 3-21). The U.S. content in television receivers and tubes entering under these provisions increased by $196 million during 1996, largely as a result of Zenith moving its U.S. assembly operations to Mexico (tables 3-20 and 3-22). Consequently, the share of *HTS* PSP imports accounted for by U.S.-made parts rose from 33 percent in 1995 to 39 percent in 1996.

Mexican affiliates of U.S., Asian, and European electronics producers have been the largest suppliers of sector products to the United States for a number of years. Mexico accounted for 60 percent of total U.S. sector imports and 97 percent of imports under *HTS* PSP. Total imports of televisions and tubes from Mexico increased by 8 percent in 1996 to $3.5 billion and imports under *HTS* PSP rose by 6 percent to $2.6 billion as more U.S. assembly operations were shifted to Mexico (table 3-21).

[74] Importers of articles that are otherwise free of duty continue to have an incentive to declare eligibility for entry under *HTS* PSP. Under that provision, the U.S.-origin content in such imports is exempt from the customs user fee, which is currently 0.17 percent ad valorem, with a maximum fee of $400 per entry. Under the CFTA, the user fee was phased out entirely on imports from Canada as of Jan. 1, 1994. Under NAFTA, imports from Mexico will be subject to the user fee of 0.19 percent ad valorem (with a $400 per entry cap) until June 30, 1999, after which the fee will be reduced to zero. See app. A of this report for additional information about the customs user fee.

Table 3-21
Television receivers: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	814	1,015	201	25
Value added	1,607	1,540	-67	-4
Total	2,421	2,555	134	6
NAFTA only[2]	724	860	136	19
Subtotal (NAFTA and/or *HTS* PSP)	3,145	3,415	270	9
Other	95	51	-44	-46
Total	3,240	3,466	226	7
Canada[3]	124	117	-7	-6
All other	2,566	2,154	-412	-16
Total	5,930	5,738	-192	-3

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.
[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S. origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3-22
Television receivers: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96
(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	676	839	814	1,015
Italy	18	8	18	13
All other	5	2	3	3
Total	701	850	835	1,031

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Ninety-one percent of all television receivers from Mexico that entered under the production-sharing provisions of *HTS* Chapter 98 in 1996 also entered under NAFTA (table B-5). Imports under NAFTA that did not also claim eligibility under *HTS* PSP rose by $136 million (19 percent) in 1996 to $860 million, and accounted for 25 percent of total imports from Mexico (table 3-21).[75] Such "NAFTA only" imports were likely assembled from a combination of U.S. and Asian parts. The value of the U.S.-made parts contained in *HTS* PSP imports from Mexico increased by $201 million (25 percent) in 1996 to $1.0 billion. The picture tube represents an increasing percentage of the value of a CTV, and the majority of televisions imported from Mexico incorporate U.S.-made picture tubes. However, television assembly remains the sector of the maquiladora industry most reliant on parts imported from Asia.[76]

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[75] Imports under the production-sharing provisions of *HTS* Chapter 98 accounted for 74 percent of total U.S. imports of television receivers from Mexico in 1996 (table 3-21).

[76] Consequently, most Japanese and Korean television assembly plants are located in Tijuana and elsewhere in Baja California. Asian-made television components are usually brought to the maquiladora operations in sealed containers via the Port of Long Beach, CA. Zenith, RCA, and Philips are less reliant on components from Asia, and their assembly plants generally are located across the border from Texas, with good interstate access to sister plants in Missouri, Illinois, Indiana, and Tennessee.

Computer Hardware[77]

The United States is one of the world's largest producers of and markets for computers, computer peripherals, and computer parts or components. U.S. shipments of these products totaled $78.9 billion in 1996.[78] They are also a significant part of U.S. trade, accounting for 8 percent of total U.S. imports in 1996. The U.S. industry producing computer hardware consists of hundreds of companies with the largest, such as IBM, Hewlett-Packard, Compaq Computer, Digital Equipment Corp., Apple Computer, Seagate Technology, and Dell Computer, comprising a majority of total sales. Prior to the 1980s, the industry was dominated by vertically organized corporations that produced virtually all of the components of a computer system. However, since the 1980s, the industry has become intensely competitive and driven by rapid technological innovation, increasing product performance, and continual price reductions. Today, U.S. companies lead the world in the development of innovative products by focusing on the research, development, and design of new computer technologies. U.S. companies are increasing their reliance on U.S.-owned foreign manufacturing and assembly facilities, contract manufacturing by third-parties based in the United States or overseas,[79] and high levels of international investment and collaboration to reduce costs.[80] In addition, U.S. computer hardware producers lead the world in lowering the costs of shipping, inventory, and delivery to the end user through the efficient management of the product supply chain and distribution channels.[81]

Total U.S. imports of computer hardware increased by $5.1 billion (9 percent) during 1995-96 (table 3-23). The average annual growth rate of these imports during 1993-96 was even higher at 18 percent, rising from $37.9 billion in 1993 to $61.4 billion in 1996. These imports mainly consist of computer hardware produced by manufacturing facilities owned by U.S. firms, or by Asian suppliers that provide computer components and peripheral equipment to be configured into computers or computer systems by companies in the United States. Typically, a finished computer hardware product sold in the United States will consist of various parts and components sourced from the United States and other countries. As such, it is difficult to track the actual U.S. content and value of production sharing that goes into

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[77]Computer hardware includes computers, computer peripheral equipment, and computer parts or components.

[78]Estimated by USITC staff based on official statistics of the U.S. Department of Commerce.

[79]Bernard Levine and Fred Guinther, "Contract Industry in Growth Mode," *Electronic News*, Oct. 7, 1996, p. 1; TechSearch, http://www.techweb.com/, retrieved Feb. 6, 1997; and Albert Pang, "SCI: The secret behind the giant PC makers," *Computer Reseller News*, June 3, 1996.

[80]Graham Vickery, "Globalization in the Computer Industry," ch. 3 in *Globalization of Industry: Overview and Sector Reports* (Paris: Organization for Economic Cooperation and Development (OECD)), 1996. For a detailed discussion of globalization in the electronics industry, including the computer sector, see also Dieter Ernst, *From Partial to Systemic Globalization: International Production Networks in the Electronics Industry*, Joint Publication of The Data Storage Industry Globalization Project Report 97-02, Graduate School of International Relations and Pacific Studies, University of California at San Diego and BRIE Working Paper No. 98, Berkeley Roundtable on the International Economy, University of California at Berkeley, Apr. 1997.

[81]Michael Kanellos, "Compaq distributes its PC making," *C/Net*, July 29, 1997, found at http://www.news.com/, retrieved July 30, 1997.

Table 3-23
Computer hardware: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S.content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	37,906	1,693	452	4	27
1994	46,161	1,307	390	3	30
1995	56,308	1,372	405	2	30
1996	61,457	1,297	318	2	25

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

the manufacture and assembly of a finished computer system. For instance, logic chips and microprocessors may be sourced from the United States or Japan; storage units from the United States or Singapore; memory chips from Japan or Korea; CD-ROM drives from Japan, Singapore, or Taiwan; motherboards from the United States or Taiwan; keyboards and mice from Taiwan; and computer monitors from Taiwan, Singapore, Korea, or Mexico.[82]

A significant portion of computer hardware imported from production-sharing operations are not entered under the production-sharing provisions of *HTS* Chapter 98 because they are free of duty. Examples of computer hardware with a free rate of duty include certain unhoused computer motherboards, unhoused disk drives, unassembled printers, printed circuit assemblies, and parts for computers.[83] The incentive for entering duty-free computer hardware under *HTS* PSP is to receive exemption from the customs user fee of 0.17 percent ad valorem on the value of the U.S. content, with a maximum fee of $400 per entry.[84] The cost of associated documentation, however, may outweigh the duty savings of complying with the *HTS* PSP requirements. Therefore, it is likely that importers often refrain from claiming entry under these provisions.[85] With this in mind, reported *HTS* PSP trade data at both the aggregate and country levels are likely to be substantially less than the actual production sharing that occurs in the computer hardware industry.

U.S. imports of computer hardware reported under *HTS* PSP declined to $1.3 billion, or 2 percent of all computer hardware imports in 1996, compared with $1.7 billion, or 4 percent of all computer hardware imports in 1993. In addition, the reported U.S. content in computer hardware imports under such provisions decreased by $134 million (30 percent) during 1993-96, from $452 million in 1993 to $318 million in 1996. During 1995-96, the reported U.S. content in computer hardware imports under *HTS* PSP fell by $87 million (21 percent) from

[82]Industry representatives, interviews by USITC staff, Fall 1996, Apr. 25, 1997, and Aug. 5-6, 1997; and Mark Lapedus, "Asia-Pacific Gets More Important in PC Assembly," *Electronic Buyers' News*, Jan. 29, 1996, TechSearch, found at http://www.techweb.com/se, retrieved Feb. 6, 1997.

[83] In the case of Mexico, all computer products and parts have been allowed duty-free entry into the United States since the implementation of NAFTA in 1994.

[84] Under NAFTA, the customs user fee applicable to goods of North American origin from Mexico will be eliminated on July 1, 1999.

[85] Industry representatives, interviews by USITC staff, Aug. 5-6, 1997.

$405 million in 1995. The reported U.S.-content share in *HTS* PSP imports of computer hardware also decreased from 30 percent in 1995 to 25 percent in 1996.

Several factors may explain the decrease in reported U.S. content in *HTS* PSP computer hardware imports during 1995-96. In 1996, an *HTS* reclassification that was implemented to distinguish computer hardware shipped as part of a complete system from stand-alone units caused some confusion as nearly all finished products were given new classification numbers. In addition, a $100-million drop, from $102 million to $2 million, in reported U.S. content in *HTS* PSP imports of computer hardware from Japan may reflect the establishment or expansion of computer hardware production operations in countries such as Vietnam,[86] Singapore,[87] and elsewhere in Asia (table 3-24).[88] A decrease of $30 million in U.S. content in *HTS* PSP computer hardware imports from Mexico during 1995-96 may be due to increased entry of such products under NAFTA, instead of *HTS* PSP (table 3-25).[89]

Table 3-24
Computer hardware: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96
(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	161	135	281	251
Singapore	84	28	0	33
Ireland	15	7	2	12
Korea	32	7	1	8
Japan	126	177	102	2
China	3	4	3	2
Indonesia	0	3	2	2
Taiwan	7	9	4	2
All other	24	20	8	6
Total	452	390	405	318

Note.—Because of rounding, figures may not add to the totals shown.

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

[86] Japan External Trade Relations Organization (JETRO), "Japanese Manufacturers Surge Into Vietnam," Feb. 1997, found at http://www.jetro.go.jp, retrieved Sept. 10, 1997.

[87] Although the reported U.S. content in *HTS* PSP computer products from Singapore rose from zero in 1995 to $33 million in 1996, a Singapore Trade Development Board official indicated that computer hardware manufactured in Singapore and exported to the United States, including goods sent for further manufacturing and shipped back to the parent companies, increased steadily during 1993-96.

[88] Lapedus, "Asia-Pacific Gets More Important in PC Assembly," See also, JETRO, "Parts Procurement Goes Global," July/Aug. 199, found at http://www.jetro.go.jp, retrieved Sept. 10, 1997. For a detailed discussion of globalization in the electronics industry, including the computer sector, see Dieter Ernst, *From Partial to Systemic Globalization: International Production Networks in the Electronics Industry*, Joint Publication of The Data Storage Industry Globalization Project Report 97-02, Graduate School of International Relations and Pacific Studies, University of California at San Diego and BRIE Working Paper No. 98, Berkeley Roundtable on the International Economy, University of California at Berkeley, Apr. 1997.

[89] Reported imports of computer hardware from Mexico under NAFTA that did not also claim eligibility under *HTS* Chapter 98 increased to $1.1 billion from $376 million in 1995 (table 3-25).

Table 3-25
Computer hardware: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percent*
Mexico:				
HTS PSP[1]				
U.S. content	281	251	-30	-11
Value added	515	753	238	46
Total	796	1,004	208	26
NAFTA only[2]	376	1,101	725	193
Subtotal (NAFTA and/or *HTS* PSP)	1,172	2,105	933	80
Other	746	956	210	28
Total	1,918	3,061	1,143	60
Canada[3]	4,057	3,450	-607	-15
All other	50,333	54,946	4,613	9
Total	56,308	61,457	5,149	9

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.
[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

It is likely that reported production-sharing imports of computer hardware worldwide will decline even further as tariffs on computer hardware are gradually reduced and eliminated as a result of the NAFTA, the GATT Uruguay Round, and the Information Technology Agreement. The incentive to declare these products under the production-sharing provisions of *HTS* Chapter 98 will remain negligible as importers are unlikely to claim an exemption due to documentation costs. While reported production-sharing imports will likely decline, sourcing of computer products from foreign operations and suppliers still remains an important element of U.S. competitiveness in the global market.

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Measuring, Testing, Controlling, and Analyzing Instruments [90]

The United States retained its position as the largest global producer and consumer of measuring, testing, controlling, and analyzing instruments (measuring and controlling instruments) in 1996, accounting for approximately 45 percent of the world's output of such products. U.S. producers continued to experience expanding demand for their high-technology, user-friendly instruments, as reflected in a $2 billion rise in total U.S. shipments to an estimated $33.9 billion in 1996. U.S. exports accounted for 37 percent of these shipments during the period. The global competitiveness of the U.S. industry also remained relatively strong during 1996, as the trade surplus in measuring and controlling instruments increased by 11 percent to $5.4 billion. Process control instruments, analytical and scientific instruments, and equipment for testing electrical, radio, and communication circuits accounted for approximately 55 percent of U.S. shipments. The major end users of these instruments included manufacturing and process industries; industrial, institutional, scientific, and commercial laboratories; and public utility companies.

Although U.S. producers are largely technology oriented and employ a relatively highly skilled workforce, a significant portion of the industry's labor-intensive assembly and manufacturing operations is performed in Mexico and reported under the production-sharing tariff provisions of *HTS* Chapter 98.[91] Production sharing with Mexico (which has consistently been the industry's principal partner country for such operations) is considered to be an essential means of lowering production costs to enhance the price competitiveness of U.S. producers. The relatively low-labor costs in Mexico and the ease with which U.S.-affiliated producers can monitor the quality and efficiency of production have encouraged production sharing in that country. The improved skills of Mexican workers and the country's ongoing efforts to upgrade its infrastructure also have made production sharing more attractive to the U.S. industry.

With respect to other countries, intracompany shipments of subassemblies, components, and manufactured products among U.S. affiliated operations in the United Kingdom, Japan, China, and Thailand have supported the production-sharing concept of lower costs through reduced tariffs.[92] Although labor costs within certain Asian countries (such as Thailand and China) may be less than such costs in Mexico, the cost of shipping merchandise to and from those countries is considerably higher. While the largest volume of U.S. imports under the *HTS* PSP primarily reflects U.S. producers' use of low-cost assembly operations in Mexico's maquiladora industry, a relatively smaller value of these imports from Canada and the United Kingdom may indicate that U.S. producers also rely upon the more sophisticated assembly techniques provided by operations in those countries. Production-sharing imports from

[90] Measuring, testing, controlling, and analyzing instruments are devices that make calibrated measurements of physical, electrical, or chemical quantity, which they may display, transmit, and/or automatically control. The name of an instrument often describes the function for which it was designed, such as a hardness tester, flowmeter, revolution counter, and voltage meter.

[91] Imports under *HTS* PSP accounted for 11 percent of total U.S. imports of measuring and controlling instruments in 1996 (table 3-26).

[92] U.S. industry representative, telephone interview by USITC staff, July 22, 1997.

developed countries may also reflect the use of high-quality, low-cost, and/or specialized U.S.-made components in foreign manufacturing operations.

Imports of measuring and controlling instruments under the production-sharing provisions of *HTS* Chapter 98 grew by 14 percent ($102 million) in 1996 from 1995, twice as fast as the rise in total sector imports (table 3-26). The value of U.S.-origin components contained in these *HTS* PSP imports climbed by 25 percent ($70 million) to $353 million. Most of this growth ($64 million) was accounted for by imports from Mexico (table 3-27). Production-sharing operations in Mexico accounted for 95 percent of the U.S. components used in the foreign assembly and reimport of measuring and controlling instruments under Chapter 98 in 1996.

Table 3-26
Measuring, testing, controlling, and analyzing instruments: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S.content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	4,553	647	286	14	44
1994	5,727	682	298	12	44
1995	6,665	713	283	11	40
1996	7,136	815	353	11	43

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

Table 3-27
Measuring, testing, controlling and analyzing instruments: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96

(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	265	275	272	336
Taiwan	2	3	2	3
China	0	0	1	3
Dominican Republic	1	1	1	2
All other	18	18	7	9
Total	286	298	283	353

Note.—Because of rounding, figures may not add to the totals shown.

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

The leading measuring and controlling instruments imported under *HTS* PSP were speedometers, tachometers, certain process control instruments, and thermostats for air conditioning, refrigeration, and heating equipment. Significant factors contributing to the increase in these imports entering under the production-sharing provisions (including U.S. component imports) included a strong demand in the U.S. market for measuring and controlling instruments used in the manufacturing and process industries[93] and the devaluation of the peso, which stymied industrial growth in Mexico and encouraged export shipments to the United States. In addition, shipments to the United States were encouraged by the increased capacity of Mexican assembly plants, which raised assembly capabilities in anticipation of NAFTA's favorable effects on demand in the home market.

Imports of measuring and controlling instruments from Mexico under *HTS* PSP rose by 40 percent to $748 million in 1996 over 1995, and accounted for 58 percent of sector imports from Mexico (table 3-28).[94] Thirty-five percent of the imports under *HTS* PSP also entered under NAFTA. NAFTA imports that did not simultaneously declare eligibility to enter under *HTS* PSP increased by 44 percent in 1996 to $262 million and accounted for 20 percent of sector imports from Mexico. Since the implementation of NAFTA, coupled with the growing popularity of production sharing, U.S. producers have expanded assembly and manufacturing operations in Mexico to capitalize on the duty-free provisions. In addition, several Asian-based manufacturers of measuring and controlling instruments have established operations in the border region of Mexico (using U.S.-made components) to benefit from lower production costs in Mexico and duty-free access to the U.S. market (provided the companies' operations meet NAFTA rules-of-origin requirements).[95]

[93]Total U.S. consumption of measuring and controlling instruments increased by about 5 percent to an estimated $28.5 billion during 1995-96.

[94] The U.S. content in these imports from Mexico grew by 24 percent ($64 million) to $336 million.

[95]U.S. industry representative, telephone interview by USITC staff, July 22, 1997.

Table 3-28
Measuring, testing, controlling, and analyzing instruments: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	272	336	64	24
Value added	263	412	149	57
Total	535	748	213	40
NAFTA only[2]	182	262	80	44
Subtotal (NAFTA and/or *HTS* PSP)	717	1,010	293	41
Other	573	281	-292	51
Total	1,290	1,291	1	([2])
Canada[3]	766	814	48	6
All other	4,609	5,031	422	9
Total	6,665	7,136	471	7

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.
[2] Less than 0.5 percent.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S. origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

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Medical Goods[96]

The United States is the world's largest producer of medical goods. In 1996, U.S. manufacturers accounted for $28.9 billion,[97] or 45 percent of world output of medical goods. The U.S. trade surplus in medical goods increased by almost 22 percent to $4.8 billion in 1996 from the previous year; U.S. exports grew by 14 percent to $10.2 billion, while U.S. imports grew more slowly, by 8 percent, to $5.4 billion. [98] Much of the growth in U.S. exports is of high-value-added, high-technology medical equipment in which U.S. producers excel, including sophisticated electromedical and electrosurgical equipment and cardiology devices such as pacemakers, coronary stents, and cardiac catheters.

In response to pressures by government and private-sector health care insurers to contain rapidly increasing health care costs, U.S. medical goods suppliers have had to reduce manufacturing costs to maintain their competitiveness in an increasingly price-sensitive product market.[99] Consequently, large U.S. medical manufacturers, including Baxter Healthcare, Johnson & Johnson, Abbott Laboratories, and Becton Dickinson, have established significant production-sharing operations in Singapore, Mexico, the Dominican Republic, and Costa Rica to take advantage of relatively low wage rates to reduce the costs of assembling U.S.-made components into finished medical goods. Although many of these companies have been able to use the production-sharing provisions of *HTS* Chapter 98 to reduce customs duties when the final assembled goods are imported into the United States, the provision is one of several vehicles used by companies engaged in production sharing to reduce customs duties (others include NAFTA, GSP, and CBERA).

In 1996, Mexico, the Dominican Republic, and Costa Rica continued to be important sources of import growth for the United States, as U.S.-based producers of highly price-sensitive hospital consumables have continued to increase their use of low-wage assembly in those countries to keep products competitive in cost-conscious health care markets.[100] As a result, production-sharing imports of medical goods reported under *HTS* PSP increased by 20 percent ($165 million) in 1996 over 1995 to $994 million and increased their share of total imports of medical goods to 19 percent (table 3-29).

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[96] The data and analysis in this section are limited to medical goods trade and, thus, are a subset of the data presented in appendix B tables that pertain to total trade in both the medical and optical goods industries. The medical goods covered include all products classified in *HTS* headings 9018-9022.

[97] Estimated by USITC staff based on official statistics of the U.S. Department of Commerce; Health Industry Manufacturers Association, *1997 Global Market Technology Update: The Challenges Facing U.S. Industry and Policy Makers*; and U.S. industry representatives, telephone interviews by USITC staff, July 15-17, 1997.

[98] U.S. trade data in this report consist of official statistics of the U.S. Department of Commerce.

[99] This has particularly had an effect on major suppliers of commodity hospital supplies such as bougies, catheters, drains, disposable surgical trays, and blood transfusion and collection equipment. However, such cost pressures have also affected producers of certain more specialized respiratory, dental, and electrodiagnostic equipment.

[100] U.S. medical industry representatives, telephone interviews by USITC staff, Apr. 8, 1997.

Table 3-29
Medical goods: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of *HTS* Chapter 98, U.S. content, and percentage shares, 1993-96

Year	Total U.S. imports	*HTS* PSP imports	U.S. content under *HTS* PSP	*HTS* PSP share of total imports	U.S.content share of total under *HTS* PSP
	Million dollars			*Percentage*	
1993	4,381	595	303	14	51
1994	4,405	617	290	14	47
1995	4,951	829	428	17	52
1996	5,368	994	543	19	55

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

Mexico was the leading supplier of such imports, contributing $566 million (57 percent) of total U.S. production-sharing imports reported under *HTS* PSP in 1996 (tables B-3 and B-5). This represented an increase of $75 million (30 percent) in 1996, with imports under *HTS* PSP accounting for 85 percent of total imports of medical goods from Mexico in that year. [101] U.S.-origin (duty-free) content in *HTS* PSP imports from Mexico amounted to $324 million, or 60 percent of the total (table 3-30). Many U.S. industry representatives assert that lower wage costs and proximity to the United States have been the factors that most influenced initial decisions to invest in production-sharing facilities in Mexico.[102] Increasingly, however, U.S.-based manufacturers of medical goods are interested in Mexico as a production and supply base for goods destined for Mexico's own market and emerging health care markets in other Latin American countries.[103] Further, there has been an increase in the number of more sophisticated products assembled in Mexico and imported into the United States under *HTS* PSP. Some of these products include anesthetic instruments, electrosurgical equipment, and other electromedical apparatus.

[101] Some U.S. companies continued to import products assembled in Mexico at reduced duties under *HTS* 9802 even after the rate of duty was reduced to free under NAFTA because of initial uncertainty by the companies regarding documentation required to qualify for duty-free treatment under NAFTA's rules of origin. Some companies also indicated that they continued to import goods under production-sharing provisions after duties on medical and optical goods were eliminated under NAFTA on Jan. 1, 1994, because they were not aware of the elimination of tariffs under NAFTA. U.S. industry officials, telephone interviews by USITC staff, Aug. 26-29, 1996 and July 29, 1997.

[102] U.S. industry representatives, telephone interviews by USITC staff, July 15-17, 1997.

[103] Ibid.

Table 3-30
Medical goods: U.S. content in imports to the United States under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1993-96
(Million dollars)

Source/country	1993	1994	1995	1996
Mexico	208	198	249	324
Dominican Republic	64	63	143	185
Netherlands	13	10	12	12
Costa Rica	3	6	8	9
Canada	7	6	7	6
All other	9	7	7	7
Total	303	290	428	543

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Imports under the production-sharing provisions of *HTS* Chapter 98 accounted for over 80 percent of the medical goods imported from Mexico under the combined provisions of *HTS* Chapter 98 and NAFTA in 1996 (table 3-31).[104] The bulk of the imports entering under NAFTA but not *HTS* PSP in 1996 is believed to be assembled from U.S.-made components. Imports under *HTS* PSP accounted for 79 percent of total imports of medical and optical goods from Mexico in 1996, while imports under NAFTA that did not simultaneously enter under *HTS* PSP accounted for 13 percent.

The Dominican Republic has emerged in just the past several years as the fourth leading supplier of all medical goods to the United States. Starting from having virtually no medical goods industry a decade ago; in 1996, it was the second-largest supplier of U.S. imports under the provisions of *HTS* Chapter 98, in terms of U.S.-origin content, accounting for 34 percent of the total. Total production-sharing imports from the Dominican Republic increased by 33 percent from 1995 to $248 million, with U.S.-origin (duty-free) content accounting for $185 million, or 75 percent of the total. Products imported under the *HTS* PSP included blood and plasma transfusion products, blood collection sets, solution administration sets, and sterile feeding tubes.[105] Large U.S.-based manufacturers with significant production facilities in Puerto Rico initially established assembly operations in the Dominican Republic in the late 1980s to take advantage of preferential tax treatment provided under section 936 of the United States Internal Revenue Code, which was designed to promote further Caribbean development.[106] They also benefited from various laws and incentives provided by the

[104] See the explanation of "Customs Incentives for Entry Under the Production-Sharing Provisions of *HTS* Chapter 98 and NAFTA" on p. 1-2. Also, note that although the data presented in table 3-31 pertain to both medical and optical goods, the portion of *HTS* PSP trade reflected in the table related to optical goods is negligible.

[105] Representatives of Dominican Republic subsidiaries of U.S. companies, telephone interviews by USITC staff, June 16, 1997.

[106] That provision provided incentives for U.S. producers with Puerto Rican manufacturing operations to establish assembly facilities in Caribbean countries to promote development in both Puerto Rico and neighboring countries. The Puerto Rican subsidiaries of these companies perform the more capital-intensive functions in the manufacture of medical devices and supplies, then send the semifinished goods and components to Dominican subsidiaries for final assembly.

Table 3-31
Medical and optical goods: Total U.S. imports, U.S. imports from NAFTA partners, and imports from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, 1995 and 1996

Source of imports	1995	1996	Change in value 1995-96	Change 1995-96
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	253	325	72	28
Value added	202	246	44	22
Total	455	571	116	25
NAFTA only[2]	92	95	3	3
Subtotal (NAFTA and/or *HTS* PSP)	547	666	119	22
Other	46	53	7	15
Total	593	719	126	21
Canada[3]	198	213	15	8
All other	6,980	7,550	570	8
Total	7,771	8,482	711	9

[1] Encompasses imports that are entered under both *HTS* PSP and NAFTA.
[2] Excludes imports declaring eligibility simultaneously under both NAFTA and *HTS* PSP.
[3] Most imports from Canada enter free of duty and customs user fees under NAFTA. A significant share of imports of manufactured goods from Canada are believed to incorporate various amounts of U.S.-origin components or metals. Such imports have an incentive to enter under *HTS* PSP only when use of non-North American components and materials disqualifies the goods from eligibility to enter under NAFTA rules of origin.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Dominican Republic that reduced the costs and simplified regulations for foreign producers to assemble goods in free trade zones.[107] The finished goods from these facilities were exported to the United States, where various U.S. tariff provisions and tariff preference programs, such as the production-sharing provisions of *HTS* Chapter 98, CBERA, or GSP, were used to reduce or eliminate customs duty costs. U.S. industry representatives indicate that they have been pleased with the success of their Dominican assembly operations, as well as the development of a viable workforce in that country, and have continued to increase manufacturing capacity each year.[108] This has contributed to the increase in U.S. imports from the Dominican Republic under the *HTS* PSP (and CBERA).

Another Caribbean supplier, Costa Rica, accounted for $8.5 million of U.S.-content in production-sharing imports under the *HTS* PSP in 1996, an increase of 3 percent over 1995. U.S.-based Baxter Healthcare, the largest producer of hospital supplies in the world, moved a significant portion of its production from Singapore to Costa Rica in 1994. Rising wages in Singapore and the advantages of Costa Rica's proximity to the United States have made

[107] U.S. industry representatives, telephone interviews by USITC staff, July 28, 1997; Counselor for Economic Affairs, Embassy of the Dominican Republic, letter dated Aug. 30, 1996; and Central Bank of the Dominican Republic, "Free Zones as a Development Model in the Dominican Republic," 1996, pp. 19-24.
[108] U.S. industry representatives, telephone interviews by USITC staff, July 28, 1997.

the latter country an increasingly attractive location for assembly of price-sensitive, commodity hospital products.[109]

The principal products imported from Costa Rica are transfusion apparatus and blood collection sets assembled from components manufactured by Baxter in its Puerto Rican and mainland U.S. facilities.[110] Similar to the Dominican Republic, the U.S. content of medical products imported from Costa Rica under *HTS* PSP is relatively high, accounting for about 85 percent of the value of *HTS* PSP imports of medical goods from that country in 1996.

Producers of more advanced medical goods in the Netherlands and other EU countries continued to take advantage of U.S. production-sharing provisions during 1993-96, primarily to reduce tariff costs on the value of U.S.-made parts, components, and subassemblies, which, nevertheless, represented a relatively small portion of the total cost of the finished medical goods exported to the United States.

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[109] Representatives of Costa Rican subsidiary of Baxter Healthcare, interview by USITC staff, Cartago, Costa Rica, May 20, 1997.
[110] Ibid.

CHAPTER 4
CANADIAN INVOLVEMENT IN MEXICO'S MAQUILADORA INDUSTRY

Canadian Maquiladoras Before and After NAFTA

Prior to NAFTA, a small number of Canadian firms with little or no experience in direct manufacturing investment abroad were initially drawn to the maquiladora program because it permitted up to 100 percent non-Mexican ownership and enabled the establishment of a plant anywhere in the country. Canadian firms benefited from shifting the labor-intensive portions of assembly operations to Mexico and from the use of U.S.-made components to reduce the price (or increase the profitability) of their goods, particularly when serving the U.S. market.[12] This chapter will examine experiences of Canadian firms engaged in production sharing prior to the NAFTA, as well as the rapid growth in the number of Canadian firms with established maquiladoras operations in Mexico after NAFTA (table 4-1).

In late 1992, Canadian interest in Mexico's maquiladora industry increased significantly when the United States, Canada, and Mexico ratified NAFTA. Prior to the conclusion of the NAFTA negotiations, Canada traditionally accounted for about 1 percent of Mexico's total export market and provided approximately 2 percent of Mexican imports. During 1992, Canada's principal exports to Mexico were seeds, motor vehicles and parts, cereals, paper and pulp, ores, machinery and mechanical appliances, and engines; Mexico's primary exports to Canada were motor vehicles and parts, machinery, mechanical appliances and engines, and electrical equipment. The bulk of motor vehicle parts exported by Canada to Mexico were destined for the maquiladora industry.[3]

Several of the first Canadian firms with investment in Mexico's maquiladora program prior to NAFTA were automotive accessory and apparel firms seeking to maintain their price competitiveness and their strategic customer base in the U.S. market. Nearly all of the first

[1] Canada does not have a tariff incentive program comparable to the U.S. production-sharing tariff provisions of *HTS* Chapter 98.

[2] Guy Beaumier, *Free Trade in North America: The Maquiladora Factor* (Canadian Library of Parliament Research Branch: BP-247E, Dec. 1990), Ottawa, p.5.

[3] According to Statistics Canada officials, Canadian merchandise exports to Mexico may be understated by as much as 40 percent due to significant transshipments of goods via the United States.

Table 4-1
Canadian firms with assembly plants in Mexico as of September 1997

Canadian affiliated company (location)	Maquila subsidiary (location)	Type of product	Number of employees	Start up
American Sensors (Toronto, Ontario)	Dicon Safety Products (Cd. Juarez, Chihuahua)	Smoke alarms	160	1994
A.P.S. Canada Automotive Parts (Mississauga, Ontario)	Autopartes y Manufacturas de Mexico (Manijita, Chihuahua)	Automotive components	200	1997
Bauerhin Electro (Montreal, Quebec)	Bauerhin Technologia S.A. (Cd. Acuna, Cohuila)	Baby seats	75	1993
Bay Mills Ltd. (Oakville, Ontario)	Bay Mills S.A. (Chihuahua City, Chihuahua)	Decorative window panels	70	1996
Bay Mills Co. (Oakville, Ontario)	Dor Seal, S.A. (Nogales, Sonora)	Ornamental glass windows	75	1995
Beck Electric (Concord, Ontario)	Sistemas y Conexiones (Imuris, Sonora)	Automotive wire harnesses	400	1993
Conformex Inc. of Canada (Montreal, Quebec)	Accesorios Decorativos de Mexico (Puebla, Puebla)	Decorative pillows/cushions	([1])	([1])
Conross Corp. (Scarborough, Ontario)	American Fire Logs (Cd. Juarez, Chihuahua)	Fire logs	75	1988
Company Resentel (Quebec, Quebec)	Corporacion Resentel, S.A. (Saltillo, Coahuila)	Bicycle parts	50	[2]1994
Custom Trim Ltd. (Waterloo, Ontario)	Auto Trim de Mexico (Matamoros, Tamaulipas)	Leather wheel covers	2,800	1984
DOT Plastic Ltd. (Winston, Ontario)	Winston de Mexico (Agua Prieta, Sonora)	Plastic injection molding	45	1989
IFS (Aurora, Ontario)	Missalla Manfred Friedreich (San Luis Potosi, San Luis, Potosi)	Metal frame parts	9	([3])
La Compagnie Rosentel Ltd. (Marieville, Quebec)	Corporacion Resentel, S.A. (Reynosa, Tamaulipas)	Plastic articles	([1])	[4]1994
Neozum Manufacturing (Langley, British Columbia)	Industria Nauticas de Noreste (Ensenada, Baja California)	Scuba diving suits	90	1991
Northern Telecom (Montreal, Quebec)	Nortel de Mexico (Monterrey, Nuevo Leon)	Digital telephone sets/pay telephones	1,600	1994
Noma Industries Ltd. (Tillsonburg, Ontario)	Noma Appliances (Nogales, Sonora)	Appliance wire harnesses	2,000	1994
Noma Industries Ltd. (Tillsonburg, Ontario)	Noma de Mexico (Cd. Juarez, Chihuahua)	Christmas trees and lights	([1])	([1])

See notes at end of table.

Table 4-1—*Continued*
Canadian firms with assembly plants in Mexico as of September 1997

Canadian affiliated company (location)	Maquila subsidiary (location)	Type of product	Number of employees	Start up
Pilgrim Live Aboard Yachts Inc. (Toronto, Ontario)	Manufacturera Internacional Marina, S.A. (Merida, Yucatan)	Fiber glass pleasure craft	([1])	([1])
Siemens Electric (Chatham, Ontario)	Siemens Automotive (Cd. Juarez, Chihuahua)	Automotive sensors & bulbs	560	1994
Span Manufacturing Ltd. (Markham, Ontario)	Span de Mexico (Chihuahua City, Chihuahua)	Electrical, metal, and electric components	250	1991
Stuard Entertainment Inc. (St Catherine, Ontario)	Stuard Entertainment, S.A. (Reynosa, Tamaulipas)	Bingo cards	275	1991
Tan-Jay/Alia Div. of Nygard International (Winnipeg, Manitoba)	Majilosa Tehuazan (Puebla, Puebla)	Apparel for women	250	1994
Tan-Jay/Alia Div. of Nygard International (Winnipeg, Manitoba)	Zhalpulco Agro Industrias (Puebla, Puebla)	Apparel	250	1994
TecTrol Inc. (Toronto, Ontario)	Industrias Techtrol de Mexico (Nogales, Sonora)	Wire harnesses and cable	420	1993
Travel Way Group International (Saint-Laurent, Quebec)	Three Way S.A. (Puebla, Puebla)	Playera shirts and t-shirts	95	1994
Versatech Ltd. (Mississauga, Ontario)	Gecamex (Villa Acuna, Coahuila)	Automotive parts	240	1994
Vogue Brassiere Inc. (London, Ontario)	Vogue Dessous, S.A. (Merida, Yucatan)	Woman's undergarmets	([1])	([1])
Ventra Group (Cambridge, Ontario)[5]	VentraMex (Queretaro, Queretaro)	Automotive parts	50	1994
W.J. Holdings Inc. (Rodney, Ontario)	Emblematico de Mexico (Matamoros, Tamaulipas)	Metallic broaches	([1])	([1])

[1] Not available.
[2] Declared Canadian bankruptcy in Nov. 1996.
[3] Sold to an undisclosed U.S. firm, Feb. 1997.
[4] Discontinued maquiladora operations in Reyosa, Tampulipas, and relocated to Saltillo, Coahuila.
[5] Operates under Program of Temporary Imports to Produce Export Articles (PITEX). The PITEX program allows duty-free imports of inputs, fuels, and lubricants used in the production of exports if a minimum of 30 percent of a firm's production is exported. Additionally, PITEX provides exemptions from Mexican value-added taxes on purchases of inputs that go into products for export for firms that export a minimum of $3 million annually.

Source: Solunet Inc. of El Paso, Texas, and Consejo Nacional de la Industria Maquiladora de Exportacion, Mexico City, Library of the Embassy of Canada in Washington, DC, and USITC staff telephone conversations with listed companies.

Canadian firms to establish maquiladora operations were low- technology, labor-intensive assembly firms. Several of these Canadian firms indicated that they purchased their plants from U.S. firms who were moving their manufacturing operations to plants in Mexico's interior where the labor market was more abundant.

By 1993, there were a total of nine Canadian maquiladoras operating in Mexico, principally small- to medium-sized companies that produced products ranging from electrical and electronic components to scuba diving suits. These Canadian firms were primarily located along the U.S.-Mexico border to benefit from established distribution channels and warehousing facilities, which were less available in Mexico's interior. Six of the nine Canadian firms were situated along the U.S.-Mexico border, with the remainder situated within 250 miles from the border.

Under NAFTA, Mexico agreed to eliminate it's Maquiladora Program by January 1, 2001. The phase-out of the program permits maquiladora firms to direct an increasingly larger proportion of their production to the Mexican domestic market. In 1994, maquiladora operations were permitted to sell up to the equivalent of 55 percent of their previous year's production to the domestic market. That amount is scheduled to rise to 100 percent in the year 2001. Although most of the contacted Canadian maquiladora operations have postponed selling directly to the domestic Mexican market due to the large amount of documentation required to gain permission from the approving authorities in Mexico, several Canadian firms have indicated that they plan to explore ways to increase their sales to the domestic market or to other maquiladora operations.[4]

Since implementation of NAFTA, the number of Canadian firms making use of Mexico's maquiladora program has increased from 9 to 29. Canadian firms and U.S. companies were attracted to the maquiladora industry for the same reasons. Several Canadian firms established maquiladora operations in Mexico to maintain their supplier relationships with the Big Three automotive producers. Other important factors were the elimination of U.S. quotas and duties on apparel and textile products sewn in Mexico making use of U.S. formed and cut fabric. Additionally, various Canadian and U.S. firms established maquiladora operations in the interior of Mexico to take advantage of a more suitable labor supply for production of labor-intensive articles that do not require advanced labor skills.[5] Additionally, various state governments in Mexico have actively sought to lure foreign firms away from the U.S.-Mexico border by providing assistance with worker training, moratoriums in real estate taxes, and

[4] Industry sources report that, on the whole, the bureaucratic process for gaining approval of applications to sell directly from maquiladora operations into Mexico has improved. Although reporting and performance requirements have been added, procedures are now more transparent, and the treatment of applications is more consistent. Currently, it is less difficult to obtain approval for sales between maquiladoras, but industry representatives are optimistic that Government approval to sell to nonmaquiladora customers in Mexico will come more expeditiously as the domestic economy continues to improve and local producers adapt to increased competition under NAFTA.

[5] Bureau of National Affairs, "NAFTA Breathes Life Into Maquiladoras," *International Trade Reporter*, Aug. 3, 1995, p. 133.

providing exemptions on sales taxes to firms that make use of local suppliers.[6] Finally, devaluation of the Mexican peso in December 1994 was influential in attracting a record amount of new investment in Mexico's maquiladora program as foreign assembly operations benefited from lower labor costs and the improved price competitiveness of Mexican exports to world markets.

Profile of Selected Canadian Maquiladoras and Outlook for the Maquiladora Sector

In 1997, there were a total of 29 Canadian maquiladoras operating in Mexico. Of these, 54 percent were located in the interior, away from the U.S.-Mexico border where the majority of the maquiladora industry is located. Automotive and apparel assembly were the leading sectors attracting Canadian maquiladora operations (figure 4-1). Nearly all Canadian automotive components maquiladoras are in Mexico because local producers in Mexico have yet to make significant inroads in providing inputs to the Big Three U.S. producers,[7] and because of the Mexican peso devaluation in December 1994. Canadian apparel firms have been attracted to Mexico's maquiladora program because of the absence of quotas and duty-free entry to the U.S. market. Wire harness producers make up approximately 8 percent of all Canadian maquiladoras operating in Mexico in 1997. The labor-intensive manufacturing processes in this industry make it essential that Canadian firms operate in Mexico to remain price competitive. Practically all wiring harnesses for the U.S. motor vehicle market are assembled in Mexico.

The following company profiles provide a cross section of Canadian firms with assembly plants in Mexico.

Northern Telecom (Nortel de Mexico)[8]

In 1994, Nortel commenced operations in Mexico and presently employs 1,600 workers in its Monterrey, Mexico establishment. The facility produces digital telephone sets, pay telephones, advanced power systems, and cable harnesses primarily for export to the United States and Canada. Ten percent of total production is currently marked for the Mexican market. Mexico's Avantel (telephone company) is one of Nortel de Mexico's largest Mexican clients. Principal competitors in Mexico include Lucent Technologies, Motorola, and AT&T. In 1998, Nortel de Mexico plans to introduce digital wireless products (e.g., cellular telephones) and to divert a much larger share of its total product line to the Mexican and Latin American markets to benefit from Mexico's preferential trade agreements with several Latin markets, for products "made in Mexico." Thus, Nortel de Mexico has established operations

[6] "Maquiladoras Change Rules,"*North American Free Trade & Investment Report*, Oct. 31, 1996, pp. 3-4.

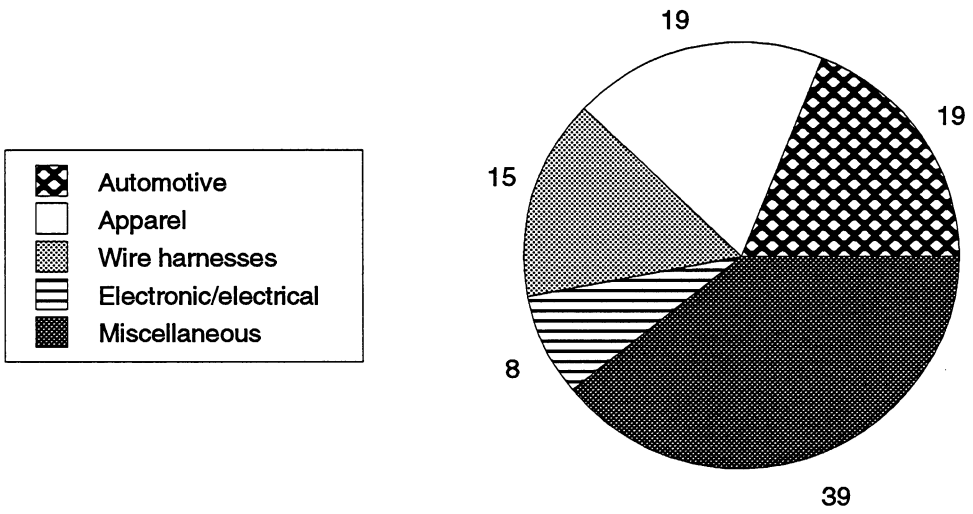
[7] U.S. Department of State Telegram, Aug. 9, 1997, Mexico City, Message Reference No. 12356.

[8] USITC staff telephone interview with officials of Nortel de Mexico officials on Aug. 29, 1997.

in Mexico not only to benefit from duty-free entry into the U.S. market for their products, but to gain long-term access to the Mexican and other Latin American domestic markets.

Figure 4-1
Distribution of Canadian companies involved in Mexico's maquiladora industry by sector, 1997

(Percentage)



Source: Compiled by the U.S. International Trade Commission from telephone interviews and published sources.

According to company officials, Monterrey's highly rated educational system was a primary factor influencing the selection of this location by Northern Telecom. Monterrey's location near the U.S.-Mexico border, relatively new infrastructure, flexible labor unions and strong business environment were other major factors cited. Nortel's Monterrey facility is ISO 9000 certified[9] as are all of its vendors, including local suppliers. The bulk (90 percent) of all components and parts are purchased from firms in the United States and Canada, with a very small amount provided by companies in the Far East. Nortel makes use of just-in-time (JIT) inventory practices. Local suppliers in the Monterrey area include Kemet (South Carolina) for capacitors, MPS (Connecticut) for plastic components, and Thomas and Betts (Tennessee) for electronic connectors. Mexican suppliers outside the maquiladora sector account for less than 3 percent of the value of all parts and components required by Nortel de Mexico. Nortel's suppliers include wholly owned Mexican producers of plastics, metal components, and packaging materials.

[9] A discussion of the global trend to adopt International Organization for Standardization (ISO) quality standards is contained in USITC "Emerging Focus on Quality Systems Registration Enhances Market Prospects...," *Industry, Trade*, and *Technology Review*, Oct. 1994.

Nygard International, Tan Jay Division (Nygard S.A.)[10]

Nygard International of Winnipeg, Canada, is reportedly the largest women's apparel producer in Canada. Nygard has several operating divisions: Bianca, Bianca Signature, Tan-Jay; Tan-Jay/Alia; each of which operates as a profit center. The Tan-Jay/Alia division of Nygard operates several contract manufacturing facilities in Mexico and exports approximately 75 percent of its production of woman's trousers to the United States. The remaining 25 percent of apparel production is shipped to Canada (the duty rate in Canada for these products is very high, whereas qualifying U.S. imports are free of duty). The bulk of production for the U.S. market is shipped to the Los Angeles and Southern California areas by truck. Tan-Jay/Alia woman's trousers are marketed in the low-to-medium price range of $20 to $40. Presently, Tan-Jay/Alia procures its raw materials such as zippers and threads in the domestic market. The company currently does not sell in the local market, but it plans do so within the next 2 years. Major competitors in Mexico are Hagger and Cheloid. The availability of a stable low-cost labor force was the principal factor in locating in Mexico's interior.

Noma Appliance and Electronics (Noma Appliances)[11]

Noma Appliance and Electronics operates two maquiladora facilities.[12] Noma Appliance and Electronics exports nearly all of its Mexican wire harnesses production to U.S. producers of major household appliances such as Whirlpool, Maytag, and Frigidaire. Noma also sells a very small amount of its production to other Mexican maquiladora operations. Noma has two principal raw material suppliers in the United States, Aircraft Marine Products (Harrisburg, Pennsylvania) and Molex Inc. (Chicago, Illinois). Noma also has a facility in Cd. Juarez that produces artificial Christmas lights and trees.

[10] USITC staff interview with officials of Nygard International on Aug. 15 and Aug. 27, 1997.

[11] USITC staff interview with officials of Noma Appliances and Electronics on Aug. 22, 1997.

[12] Prior to 1994, the maquiladora facilities were owned by Fleck Industries. Noma purchased Fleck in 1994 and continues to use the Fleck name in Canada. Noma operates in the United States as Electronic Systems Inc.

Beck Electric Co., subsidiary of Noma Industries (Sistemas y Conexiones)[13]

In 1994, Noma Industries acquired Beck Electric from Fleck industries. Beck employs 400 workers at its plant in Imuris, Sonora. Beck Electric ships all of its production of automotive wiring harnesses to the Big Three U.S. auto producers. Major U.S. competitors include SysMex of Chrysler, Cincinnati Electronics, and Delphi Electronics. Beck's wire harnesses typically go into a single car model assembly line. Because of the long lead times required to bid on an automotive contract (on average 18 to 24 months including the time involved in producing a prototype), the Big Three U.S. producers require Beck to have a JIT facility in Mexico. Beck's maquiladora plant does not sell any of its products in the Mexican market, but plans to do so within the next 2 years if the Mexican market continues to become more open.

Outlook

The structure of Canadian maquiladoras is likely to change substantially after Mexico's maquiladora Program is legally phased out. As of January 1, 2001, assembly plants will be placed on an equal footing with the domestic industry in Mexico, and will no longer be able to import components, materials, and machinery duty-free from non-NAFTA member nations. At the same time, foreign-owned assembly plants will have unrestricted access to the Mexican market. Consequently, both foreign-owned assembly plants and the domestic industry will have an incentive to import required inputs from the United States and Canada rather than from Europe or Asia because of duty-free (or reduced duty) treatment under NAFTA. In addition, Canadian companies (as well as U.S. firms) may find opportunities as suppliers to assembly plants in Mexico that are trying to increase their North American-origin content. This is especially true for operations that have relocated to Mexico from Asia in order to qualify under NAFTA's rules of origin for duty-free treatment when goods enter the United States or Canada.[14]

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[13] USITC staff interview with officials of Beck Electric Co., Aug. 26, 1997.

[14] Joel Millman, "Asian Investment Floods Into Mexican Border Region: Access to U.S. Markets Draws Makers of Televisions, Toys,---and Shabu-Shabu," *Wall Street Journal,* Sept. 6, 1996, p. 10.

CHAPTER 5
THE ASSEMBLY INDUSTRY IN HUNGARY: IMPLICATIONS OF THE USE OF PRODUCTION SHARING IN CENTRAL EUROPE FOR U.S. INDUSTRIES[1]

U.S. and European Union (EU)-based companies forge economic ties and business relationships in Central Europe (CE)[2] for reasons that include the search for new markets, the attempt to secure competitive production and assembly through lower labor costs, and the need to enhance price competitiveness in the global marketplace. Production-sharing trade between the EU and the three leading CE trading partners (the Czech Republic, Hungary, and Poland) has been structured in ways that are similar to U.S. assembly in Mexico.

EU customs law has an "outward processing trade" (OPT) tariff provision,[3] which is comparable to production-sharing provisions (PSP) of *HTS* Chapter 98. The value of the EU-origin content in imported articles is exempt from duty, provided that record-keeping requirements are complied with and all necessary permits are obtained prior to exporting the EU-origin materials to be processed. The EU, however, has many preferential tariff arrangements that minimize the incentive to import under OPT.[4] As a result, apparel and other textile products account for the bulk of EU imports under OPT from CE; most

[1] This chapter is based on fieldwork conducted by USITC staff in Hungary during July-Aug. 1997, including interviews with Hungarian officials and representatives of private firms engaged in assembly operations.

[2] For purposes of this discussion, Central Europe is defined as the original founding members of the Visegrad countries (Czech Republic, Hungary, Poland, and Slovakia), as well as Croatia and Slovenia. Although Romania and Bulgaria have expressed an interest to be included in this geographical conglomerate, they are frequently regarded as part of Eastern Europe, a region that also includes the ex-Soviet republics flanking the east-Carpathian mountains.

[3] "Outward processing relief arrangements" allow EU goods to be temporarily exported from the customs territory of the EU for the purpose of processing operations. Products resulting from such production-sharing activities may be granted partial relief from duties upon importation into the EU. The types of operations that may benefit from EU production-sharing provisions include the working (including fitting or assembly or adaptation to other uses), processing, and repair of goods. By contrast, U.S. production-sharing provisions are applicable only to goods that have been assembled or metal that has been processed.

[4] Shortly after pro-Soviet communist leadership was removed from power in Central and Eastern Europe, the EU signed trade agreements with most of these nations permitting duty-free access to the EU market for a wide range of articles. Most agricultural, steel, and textile products were exempted from this preferential tariff arrangement.

production sharing between the EU and CE in the motor vehicles and parts, electronic products, and machinery sectors is free of duty and is not reported under OPT.[5] Moreover, the ratio of EU OPT imports to total EU imports was approximately 2 percent in 1996, whereas U.S. imports under the PSP of *HTS* Chapter 98 accounted for roughly 10 percent of total U.S. imports.

Hungary quickly emerged as a leading location for U.S.- and EU-based companies for new investment during the CE transition to market-based economies beginning in 1989. During 1989-96, Western companies invested $16.5 billion in Hungary, making it by far the leading recipient of foreign direct investment in the ex-Warsaw Pact region, attracting over one-third of total foreign direct investment in Central and Eastern Europe (including the former Soviet Union) since 1989 (figure 5-1). U.S. companies accounted for $4.5 billion (27 percent) of the investment in Hungary.[6] EU and U.S. firms have chosen Hungary as a manufacturing and distribution center because of Hungary's central location to supply all of Europe, low labor costs, skilled labor, good educational and training facilities, evolving transportation and financial infrastructures, and the clustering of high-technology companies to service the region.

Good highway and rail connections to Germany through Austria have been particularly important in boosting the flow of investment into Western Hungary, making the Vienna-Budapest highway an assembly corridor. Industrial parks operating as free-trade zones has been established along the route, attracting maquiladora-type assembly operations. These transportation networks and proximity make it feasible to import materials and components from Western Europe and to re-export finished goods to leading customers in Austria and Germany.

Products manufactured at least in part by foreign-owned companies are estimated to have accounted for nearly 70 percent of Hungary's total exports in 1996.[7] Although trade preference programs with the EU and liberalized EU customs laws continue to reduce the incentive to use these provisions, the OPT, or "contract work,"[8] sector in Hungary is an

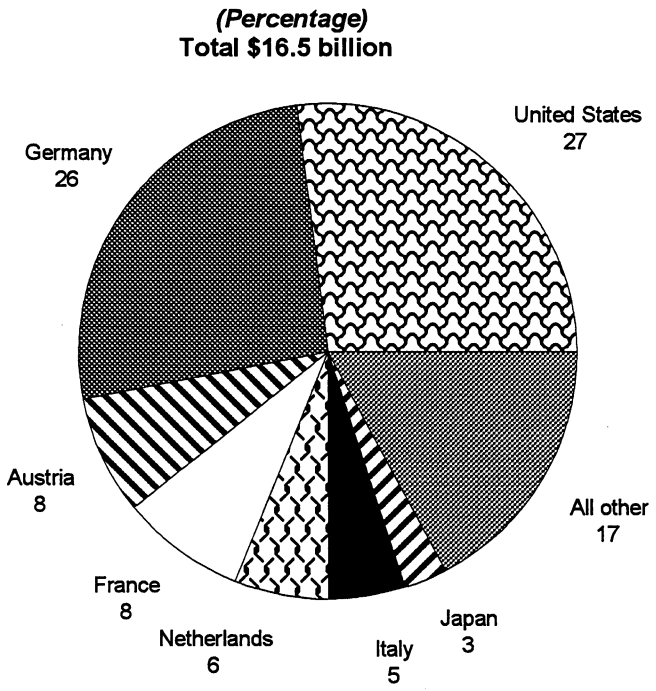
[5] Hungary has been an associate member of the EU since 1994. The Association Agreement, which came into effect in February 1994, provided for an asymmetrical liberalization of trade over the next 5 years. At the Copenhagen summit conference in 1994, further EU concessions were announced which exempted over 90 industrial products from customs duties and quotas beginning Jan. 1, 1995 (2 years before it would have been officially required by the Association Agreement).

[6] USITC staff interview with officials of the U.S. Commercial Service, Budapest, Hungary, July 8, 1997.

[7] U.S. Department of State, U.S. Embassy, Budapest, *1998 Country Commercial Guide: Hungary,* prepared by U.S. Embassy, Budapest, p. 4.

[8] Assembly in Hungary is called "bermunka," or in literal translation "contract work." Hungarian literature typically describes assembly and/or production-sharing type activities as contract work.

Figure 5-1
Accumulated investment in Hungary 1989-96, by source country



Source: Estimated by USITC staff from data obtained from the International Trade Development Agency, Budapest, Hungary and the Embassy of the Republic of Hungary, Washington, DC.

important and growing source of export earnings and employment for the country, accounting for roughly 27 percent of Hungary's total exports in 1996.[9]

During 1993-96, Hungary accounted for an average of 10 percent of total EU OPT imports and it contributed about 20 percent of EU OPT imports from the region defined as Central Europe. Poland was the largest source of EU OPT imports, contributing 40 percent of all such imports from CE countries. The Czech Republic accounted for an average of 19 percent of total EU OPT imports from Central Europe during the period.[10] KOPINT-DATORG, a leading Hungarian source for international trade statistics, estimated that the export value of contract or assembly activities from Hungary amounted to $3.5 billion in 1996. Only about one-third ($1.3 billion) of those activities was reported under the EU OPT program in 1995.

[9] KOPINT-DATORG, *Guide to Hungarian Exporters and Subcontractors, 1997*, p. 8.
[10] Compiled by USITC staff from Eurostat trade statistics.

The Role of Hungary in EU Trade

The importance of Hungary for EU and U.S. companies lies in the country's geographic location at the crossroads of Central and Eastern Europe, its flexible and longstanding adherence to western economic standards,[11] its historic role as a banking and financial center in Central Europe (particularly Budapest), a relatively skilled and well educated work force, and its commitment to privatization, modernization, and investment. Hungary also has a good reputation for strict adherence to debt repayment schedules.[12]

Many U.S. and EU firms forged business relationships in Hungary after the transition to a market economy began in 1989, establishing either a manufacturing or distribution presence in Hungary to serve surrounding markets in the region. The new wave of investors included firms such as Audi, Ford, General Electric, General Motors (Opel), Levi Strauss, Merck Sharp & Dohme, Microsoft, Nabisco, Oracle, Packard Bell, Pepsi Cola International, Philips, Siemens, Unilever, and United Technologies.[13]

Since 1989, the Government of Hungary has made significant strides to ease the regulatory burden, to reduce trade barriers, and to curb duty rates. At a WTO meeting in Singapore in December 1996, the Hungarian minister of trade reiterated Hungary's intention to decrease average import duty rates from 13 percent to 8 percent. However, Hungarian officials confirmed that they have no intention to take part in an accelerated phasing out of duties and added that, at this time, Hungary was not interested in joining the group that aims to phase out duties on information technology and telecommunication products.[14]

Trade between the EU and Hungary is defined primarily by traditional alliances and geographical proximity. Therefore, the three most important trading partners for Hungary continue to be Austria, Germany, and Italy. The three countries together consumed 48 percent of Hungary's total exports and more than three-quarters (84 percent) of its exports resulting from contract work (assembly) in 1996 (figure 5-2). Roughly one-half of all of Hungary's production from contract work is sold to Germany. Hungary's industrial duty-free zones (DFZs) experienced a sharp increase in foreign trade in 1996, increasing their role in

[11] The Hungarian Government broke ranks with Soviet-style economic management principles as early as 1968, when the country embarked on a major reform, called the "New Economic Mechanism." The essence of the reform was to incorporate market principles and introduce production incentives in the management of state-owned enterprises and to allow private ownership for small- to-medium-sized businesses.

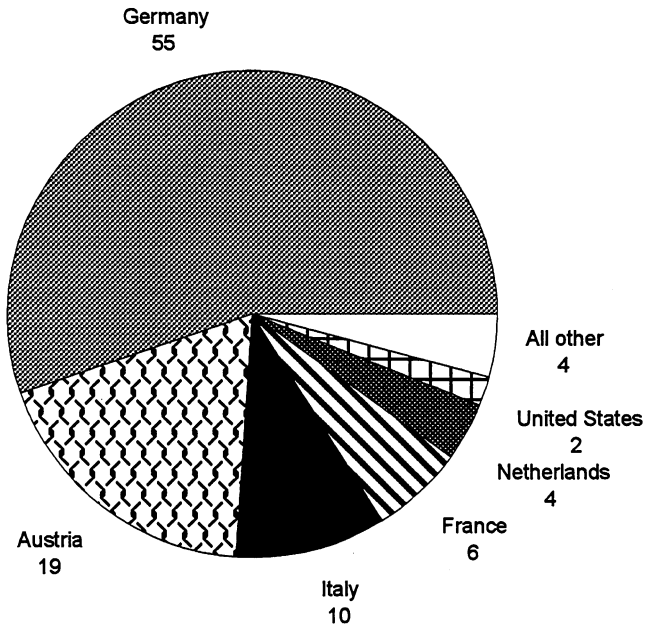
[12] U.S. Department of State, *1998 Country Commercial Guide: Hungary,* p. 6.

[13] General Motors and Ford Motor Co. expanded their manufacturing operations in Europe during the past decade. GM assembles cars in Germany, Spain, the Czech Republic, and Hungary, while Ford has manufacturing locations in the United Kingdom, Belgium, Germany, and Spain. GM and Ford have benefitted from the Association Agreement between Hungary and the EU, which provides for the staged elimination of Hungary's 43 percent rate of duty on vehicles imported from the EU. By contrast, Chrysler does not have an auto assembly plant in the EU and its vehicles are subject to the full 43 percent Hungarian duty.

[14] *The Hungarian Economy, A Quarterly Economic and Business Review*, vol. 24, No. 4, 1996, p. 19.

Figure 5-2
Hungary's exports from production-sharing operations (contract work) by leading markets, 1996

(Percentage)
Total $3.3 billion



Source: Compiled by the U.S. International Trade Commission from official statistics of KOPINT-DATORG Co. Ltd. Budapest, Hungary, 1997.

Hungary's overall economy. Hungarian exports originating from DFZs amounted to $2.8 billion in 1996, an increase of 73 percent compared with the previous year, while imports into DFZs totaled $2.4 billion, an increase of 83 percent.[15]

However, the most important recent development influencing trade between the EU and Hungary has been the so-called Pan-European Cumulation System (PECS), comprising a set of EU bilateral agreements, which aims to harmonize standards and rules-of-origin laws between the EU, EFTA, CEFTA, and other countries (a total of 28 countries) that includes the EU-15 plus Bulgaria, the Czech Republic, Estonia, Hungary, Iceland, Latvia, Lithuania, Norway, Poland, Romania, the Slovak Republic, Slovenia, and Switzerland. The Government of Hungary signed an agreement conforming to the PECS with the EU on December 28, 1996; it became effective on July 1, 1997. Under the PECS, companies that import inputs from outside the cumulation region must pay duty in order to take advantage of free-trade preferences when exporting their finished goods to PECS countries. If, on the other hand, the importer opts to receive a so-called duty drawback (credit for duty paid when the input is imported), eligibility for preferences is lost and the finished product is exported on a most-favored-nation basis. Maximum duty rates and exemptions have been allowed during a co-called transition period to mitigate any negative effects of the new regime.

[15] Compiled by USITC staff from KOPINT-DATORG statistics.

Hungary's trade agreements with the EU, EFTA, and CEFTA member states traditionally set the rate of local content requirement at 50 percent for industrial products to qualify for preferential treatment. However, under the new regulations on certificates of origin (the so-called "diagonal rule-of-origin cumulation"), if raw materials and/or components originating in any of these countries are processed in Hungary and then re-exported to EU territory, the value of raw materials and components will be considered local content.[16] Separate agreements were also signed between the EU and these partner countries to validate the PECS and implement the bilateral rules-of-origin cumulation. The agreement allows Hungary to treat materials and components originating in the EU as articles of Hungarian origin, provided that those materials and components comprise a finished product manufactured in Hungary.[17]

Although Hungarian exports accounted for only about 2 percent of total EU imports in 1995, Hungary is important to EU companies as a partner for low-cost assembly. Despite the EU's dominance in Hungarian trade, the United States and several other countries have also developed key roles in the assembly industry in Hungary.

The Assembly Industry in Hungary

Assembly or contract work has existed between Hungary and its neighbors since the 1970s. Operations were typically located by Western firms in the more developed areas, such as the West-Transdanubian counties bordering Austria (e.g., Gyor-Moson-Sopron, Vas, and Zala counties), where infrastructure and a more developed labor force attracted investment.

One community that has attracted a significant amount of foreign investment is Szekesfehervar. The free- trade zone there is home to subsidiaries of Ford Motor Co., Philips Electronics, IBM, and Alcoa. According to Robert Pel, Managing Director of the Philips' plant, despite the relatively high taxes paid by foreign assembly plants to the local government, Szekesfehervar is a good place to establish an assembly plant because of its "technically skilled workforce, a location close to European borders and a good infrastructure."[18]

Critics in Hungary contend that unlike foreign investments in Poland and the Czech Republic, where foreign investors have purchased state-owned companies and tried to upgrade them into profitable concerns, multinationals investing in Hungary have largely set up assembly operations that do not rely heavily on local inputs. One official expressed concern that there is a "dual structure" in the economy, noting that multinationals do not pull domestic suppliers along with them, but rather tend to import, assemble, and export with hardly a link to the local economy.[19] Others hold that assembly is advantageous for Hungary because foreign

[16] *The Hungarian Economy*, p. 13.

[17] The reverse also applies; i.e., materials and components originating in Hungary will be treated as EU articles provided that they are incorporated into a finished product manufactured in the EU.

[18] Donal Power, "Szekesfehervar Imposes Tax Hikes," in *Business Hungary*, American Chamber of Commerce in Hungary, April 1997.

[19] USITC staff interview with an official of the Ministry of Industry and Trade, Budapest, Hungary, July 30, 1997.

investment in modern assembly operations has enabled Hungarian companies to acquire technological know-how and special machinery that would have otherwise taken years to develop.[20]

According to the U.S. Embassy in Budapest, the 12 largest foreign investments in Hungary since 1989 include the following:

Investor	**Country**	**Amount (*Millions of U.S. dollars*)**	**Industry**	**Company name**
Ameritech/Deutche Telecom	United States and Germany	2,700	Telecommunications	MATAV
General Electric	United States	690	Light Bulbs	Tungsram
General Motors	United States	650	Finished autos, auto parts	Opel Hungary
Volkswagen/Audi	Germany	550	Finished autos, auto parts	Audi Hungary
Eridania	France	540	Sugar	Eridania Beghin-Say
RWE Energie-EVS	Germany	350	Electricity	Elmu Supply Co.
Scandinavian PTTS	Finland, Sweden, Denmark, the Netherlands	340	Telecommunications	Pannon GSM
U.S. West International	United States	330	Telecommunications	Westel
Suzuki	Japan	300	Finished autos	Magyar Suzuki
CGE Telecom	France	300	Telecommunications	Deltav Rt. CG Tel. Div.
UTS	The Netherlands	300	Telecommunications	UTS

Although apparel dominates production-sharing trade reported under OPT (about one-half of all garments sewn in Hungary are exported to Germany), Hungarian statistics verify that exports resulting from contract work are much more diverse. Hungarian exports from production-sharing operations include articles such as ignition wiring sets (Loranger, Ford, UT Automotive); record and cassette players (Videoton); footwear; television and radio

[20] KOPINT-DATORG Co. Ltd., *Guide to Hungarian Exporters and Subcontractors, 1997*, p. 8.

equipment (Philips); brassieres (Styl Clothing Factory); seats for motor vehicles; and printed circuit boards and disc drives (IBM).

EU companies often express concern that the social cost[21] of production in Hungary and other countries in CE is relatively high, and therefore prefer to set up structures that enable them to avoid these costs. For example, Italian firms have typically established joint ventures with Hungarian partners in which they retain majority ownership, then use contract work within this arrangement to avoid Hungarian health care, pension, and other related costs.[22]

Company Profiles and Outlook

To provide insight into the operating strategies of companies that have established production-sharing subsidiaries in Hungary, six facilities are profiled below.

Ford Motor Company's Alba Plant[23]

Ford has invested $146 million in its wholly owned subsidiary in Szekesfehervar, Hungary. Construction began in 1990 and the Alba plant opened its first shift in 1992. Employment at the plant is currently 1,340. The plant maintains a 1 to 2 percent employee turnover rate compared with an industry average of 6 to 8 percent. Ford received a 5-year tax holiday for the plant. Production line wages are about $2 to $3 per hour.

Principal products assembled at the plant include fuel pumps, ignition coils, and starter motors for motor vehicles. Car models using these products include Fiesta, Escort, Mondeo, Scorpio, Ka, Transit, and Galaxy. Vehicle assembly plants using these auto parts are located as follows:

[21] "Social costs" include contributions to programs such as health care, social security, and employee housing.

[22] USITC staff interview with an official of KOPINT-DATORG Co. Ltd., Budapest, Hungary, August 1997.

[23] Based on USITC staff interviews with the following Ford representatives in Szekesfehervar, Hungary, in July 1997: Dan Linder, Production Manager; Edit Gyulai, Treasurer; and Izolda Mayer, Customs Specialist.

Country	Plant Location
Germany	Cologne, Merkenaich, Karmann, and Saarlouis
Belgium	Genk
Spain	Valencia
United Kingdom	Bridgend, Enfield, Dagenham, Daventry, Southampton, and Halewood
United States	Rawsonville, Ypsilanti, and Bedford

Motor vehicle parts from the Alba plant are also exported to Ford operations in Argentina, Brazil, India, Malaysia, Poland, South Africa, Taiwan, and Thailand. The only Alba customer outside Ford Motor Company is Mazda in Japan.

There are 73 suppliers to the Alba Plant, of which most ship components and materials from EU and U.S. locations by sea containers and truck. Ford reports there are 5 sea containers and 30 truck shipments weekly. Hungarian suppliers include Loranger (see discussion below), Le Carbone, Berva, and Bakony Muvek. Together, these Hungarian suppliers represent 20 percent of Alba's purchases of components and materials.

Loranger Ipari Kft.[24]

Ford Motor Co. prefers that its suppliers have production or assembly facilities located close to its vehicle assembly plants in order to provide JIT delivery, participate in coordinated design and production planning, and reduce transportation costs. At the urging and assistance of Ford, Loranger established a plant to manufacture precision-molded engineered plastic components for Ford's Alba plant. Both facilities are located in Szekesfehervar, with the Loranger plant, which has a workforce of about 200 employees, located on space previously occupied by a Soviet military base. Loranger's investment there totaled about $30 million. Loranger representatives claimed that Szekesfehervar is one of the most cost-effective locations in Europe for assembly and manufacturing.

Loranger is a family-owned company based in Warren, Pennsylvania that specializes in the thermoplastic molding technology, an area in which the Loranger plant in Hungary also focuses. Although the company currently serves as an exclusive supplier to Ford, Loranger officials stated that the company is considering the expansion of its customer base in Hungary and elsewhere in Europe, targeting Opel and Audi for supplier contracts.

[24] Based on USITC staff interviews with the following Loranger representatives in Szekesfehervar, Hungary, in July 1997: Sandy Roth, general manager, and Nandor Szvetko, production manager.

GM-Opel/General Motors Hungary[25]

The General Motors-Opel plant in Szentgotthard represents the third-largest foreign investment in Hungary, valued at $650 million. The plant assembles approximately 12,000 Opel Astra automobiles annually from imported components. Although most of the Astras are sold in the Hungarian market, vehicles are also exported to Italy, Greece, and China. The bulk of the plant's 1,245 workers, however, are involved in the production of cylinder heads, drive axles, and engines, principally for export to the EU and other foreign markets (including Mexico).

Opel is the market leader in Hungary with a 21-percent share of the market in 1996. Suzuki was second with a 19-percent market share, followed by Daewoo, Volkswagen, and Ford. Opel Hungary has approximately 250 suppliers; 25 of these use JIT delivery requiring no inventories. Hungarian sources supplied 8 percent of the components and materials used in the auto assembly plant in 1996 and 4 percent of those used in the engine plant. Examples of parts supplied by Hungarian producers include wiring harnesses, batteries, windshield wipers, tires, and inside sun shades.

Audi Hungaria Motor Kft./Volkswagen-Audi [26]

The Audi plant in Gyor has facilities for both the manufacture of engines and the assembly of engines from imported parts. Cylinder heads and engines are assembled inside railway cars that are equipped with assembly kits. Most of the components in the kits are made in Germany. Workers do not unload the components or kits, but are positioned in and around the railway cars to perform the necessary assembly work. Once the work is completed, the train returns to Germany. The total elapsed time from departure from the plant in Germany, to assembly in Hungary, to return to the plant in Germany is usually 24 hours or less. The engine blocks are all imported into Hungary directly from the Volkswagen foundry in Germany; parts made in Hungary account for 6 to 8 percent of the value of all parts used to make the complete engine. Finished engines are sent to Audi's main vehicle assembly plant in Ingolstadt, Germany.

The Volkswagen Group established Audi Hungaria Motor Kft. (AMH) in 1993 with an equity of about $1.5 million. Audi has invested about $550 million in the Gyor facility thus far, but is on schedule to invest an additional $200 million to bring the plant up to full capacity producing 4-, 6- and 8-cylinder engines and the TT coupe Roadster in Gyor by 1998. Audi picked Gyor out of 180 competing sites. Key elements in making their decision were the existence of an operational assembly facility (previously owned by the Raba railway company), an excellent railway connection, and the flexibility displayed by Hungarian

[25] Based on USITC staff interviews with the following General Motors representatives in Szentgotthard, Hungary, in July 1997: Edit Legradi, public relations manager; Gyula Herkli, Customs Coordinator; and Tamas Vass, supervisor of purchasing.

[26] Based on interviews with trade officials in Budapest, Hungary, July 1997.

authorities to accommodate Audi's needs.[27] The Government of Hungary has made the AMH facility a free trade zone, expediting the movement of goods in and out of the plant.

IBM Storage Products Kft. [28]

IBM Storage Products Kft. is a wholly owned subsidiary of IBM producing hard disk drives for desktop computers. Total production exceeded 1 million drives in 1996 and IBM expects to triple its output in 1997. IBM is Hungary's largest exporter, with foreign sales valued at more than $1 billion in 1996. The plant, which employs nearly 3,000 people, is in Szekesfehervar and operates in a free- trade zone.

The manufacturing process for hard disc drives is labor-intensive. It takes about 15 hours to assemble a single hard drive. Components are source from Italy, Malaysia, Thailand, and Germany. Two-thirds of the plant's production is sold to original equipment manufacturers in Europe, such as Apple, Gateway 2000, and Compaq. The principal competition for IBM Hungary are manufacturers in Southeast Asia, where wages are often lower than in Hungary.

IBM Hungary currently produces 2.1-, 2.6-, and 3.2- gigabyte hard disk assemblies. The Szekesfehervar hard disk drive units make use of magneto-resistive (MR) heads and No-ID sector formatting technology, which were both developed by IBM. The company's magnet disk storage unit production is centered in San Jose, California. However, plants in China, Germany (Mainz), Hungary (Szekesfehervar), Japan (Fujisawa), Mexico (Guadalajara), Singapore, and Thailand also assemble storage technology products for IBM, with most using some parts made in San Jose.

IR3 Video International Kft.[29]

Philips and Grundig established IR3[30] Video in Szekesfehervar for the assembly of VCRs and VCR-television combos. The plant assembles 450 different models of VCRs and VCR-television combos, with annual production estimated at 5 million units. The facility employed 1,200 people in 1997. About 70 percent of the value of all of the components used in the assembly process are of EU origin; most of the EU components are produced in Austria and the United Kingdom. Components made in Hungary account for a small share of the products value. All of the assembled products are exported, with most going to the EU or South America.

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[27] For example, Hungarian authorities agreed that Audi could schedule production around the clock every day of the week. By contrast, German labor laws prescribe a 5-day work week and the consent of both the trade union and the factory council is needed for any weekend hours or overtime work, which hampered flexible response in German production facilities.

[28] Based on USITC staff interview with Norbert Wolpert, Finance Manager, IBM Storage Products, Szekesfehervar, Hungary, July 1997.

[29] Based on USITC staff interview with Robert Pel, General Manager, IR3 Video International Kft., in Szekesfehervar, Hungary, July 1997.

[30] The company's name IR3 is an acronym for image, reception, recording, and replay.

Prior the shifting assembly to Hungary, Philips used Portugal as its main European location for assembly. However, wages in Portugal doubled relative to wages in the Netherlands, rising from about 20 percent as high as Dutch wages in the late 1980s to approximately 40 percent as high in 1997. By contrast, Hungarian wages in 1997 were approximately 20 percent as high as wages in the Netherlands or Germany.[31]

Outlook

Companies continue to establish assembly plants in Hungary to take advantage of the combination of low labor costs, skilled workforce, economic and political stability, and proximity to markets throughout Europe.[32] U.S. companies seeking a low-cost manufacturing base in Europe have been able to use well-developed transportation links to distribute finished goods to Western European markets. Investment in assembly operations in Hungary has also positioned U.S. companies to take advantage of anticipated growth in markets in Central and Eastern Europe.

U.S. companies that have met local content or transformation requirements have been eligible for preferential tariff treatment in the EU market from their Hungarian assembly plants. Hungary's recent Association Agreement with the EU will assure many U.S. companies with continued and expanded preferential access to the EU market from their Hungarian manufacturing bases. Some U.S. companies, however, will be placed at a competitive disadvantage because membership in the EU[33] will require Hungary to adopt the EU common external tariff (CET), which are sometimes higher than the Hungarian rates of duty. U.S.-made components that are currently imported free of duty into Hungary's free trade zones for processing and re-export to the EU will be subject to duty when the EU CET becomes applicable. Furthermore, in response to pressure from the EU, Hungary recently has established new regulations that make it much more difficult to establish a free trade zone.[34]

All U.S. companies with manufacturing operations in countries in Central and Eastern Europe that have negotiated association agreements with the EU will have duty-free access to the EU from their qualifying assembly operations in the region, but will ultimately be subject to the EU CET on imports of components and materials from the United States or other countries that are not parties to the association agreements. Some firms, however, will benefit when Hungary joins the EU. The duty rate on Chrysler vehicles, for example, will be reduced from the current Hungarian rate of 43 percent to the EU CET rate of 10 percent.

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[31] Hungarian wages went down by about 7 percent in 1996 because of the appreciation of the U.S. currency.

[32] U.S. Department of State, *1998 Country and Commercial Guide: Hungary*, p. 3.

[33] According to Hungarian Government officials, Hungary is expected to become a full member of the EU by 2002.

[34] *Ibid.*, p. 23.

APPENDIX A
THE CUSTOMS TREATMENT OF CERTAIN AMERICAN GOODS RETURNED (*HTS* 9802.00.5010, 9802.00.60, 9802.00.80, AND 9802.00.90)

The goods eligible for duty treatment under the tariff provisions discussed in this appendix are those exported from the United States and returned to the customs territory after being advanced in value or improved in condition abroad by assembly or particular processing operations. Goods for which conditional duty reductions or exemptions are claimed in chapter 98 remain classifiable in the appropriate legal categories in chapters 1 through 97 of the *Harmonized Tariff Schedule of the United States (HTS)*; the duty treatment available under chapter 98 is not automatic but must be claimed and justified by the importer under the terms of applicable Customs Service regulations. Subheading 9802.00.60 and heading 9802.00.80 of the *HTS* were discussed in greater detail in earlier Commission reports on production sharing, and the legal text of these provisions and of subheading 9802.00.50 and heading 9802.00.90 can be found in the *HTS*. Reference should also be made to current Customs regulations (19 C.F.R. 10.9, 10.11-10.24). The customs treatment available to goods resulting from qualifying Caribbean Basin assembly and processing, the trade agreement status of these chapter 98 provisions and their relation to preferential tariff programs, and the special access program are briefly discussed below; an update on the merchandise processing (user) fee is likewise included.

Caribbean Basin Assembly or Processing

Section 222 of the Customs and Trade Act of 1990 created U.S. note 2(b) to subchapter II of *HTS* chapter 98. The note provides the tariff and country-of-origin treatment available to certain U.S.-fabricated components, materials, or ingredients that are exported for assembly or processing in a designated Caribbean Basin Economic Recovery Act (CBERA) beneficiary country. It was enacted because certain goods resulting from such assembly or processing do not otherwise qualify for duty-free entry, under CBERA rules of preference, in subheadings of chapters 1 through 97 because (1) no substantial transformation in the beneficiary country is found to have occurred, or (2) inadequate value is added in or attributable to the beneficiary country, or (3) the goods otherwise are considered preference-ineligible.[1] Again, it is noted that an importer must claim this duty status and comply with applicable Customs requirements.

In general terms, this note specifies two key aspects of the customs treatment of these goods. First, the note provides that such CBERA-assembled goods shall not be considered foreign articles; though this language effectively would seem to require by implication that they have domestic (U.S.) origin, Customs regulations do not so provide.[2] Second, the note provides

[1] The CBERA requires that the cost or value of materials from one or more beneficiary countries plus the direct costs of processing (including labor) therein must total 35 percent of the appraised value of goods for which duty-free entry is claimed, and that the goods be a "product of" a beneficiary country. The cost or value of U.S. materials (not counting those of Puerto Rico) may be counted toward that value threshold in an amount not to exceed 15 percent of the finished goods' appraised value upon entry. See *HTS* general note 7.

[2] See 19 C.F.R. 12.130(c)(1).

that these goods are not subject to duty upon entry into the U.S. customs territory.[3] Some confusion has resulted because the duty treatment of such goods is set forth in a tariff legal note, rather than in the rate of duty columns of a tariff heading, and significant administrative and compliance difficulties have reportedly arisen as well. To help Customs carry out the note, because the rate of duty it accords is "free" instead of the duty rates[4] enacted by Congress for the tariff provisions covered by this report, a nonlegal 10-digit statistical reporting category (numbered 9802.00.8040) was created under heading 9802.00.80 to capture trade in assembled goods entered by importers under the terms of the U.S. note. A complementary statistical category (numbered 9802.00.5010) was created under subheading 9802.00.50 to capture trade in goods that were processed (but not assembled) in whole from materials or ingredients (other than water) that are the product of the United States and entered by importers under the terms of U.S. note 2(b). Congress has considered proposals to create a separate legal tariff heading or subheading for these goods, to clarify the requirements and to simplify administration; to date no such provision has been enacted.

Trade Agreement Status and Special Tariff Treatment

The general rates of duty in column 1 for subheadings 9802.00.5010 and 9802.00.60 and headings 9802.00.80 and 9802.00.90, unlike most general rates in headings of *HTS* chapters 1 through 97, are not "bound" concession rates under schedule XX to the General Agreement on Tariffs and Trade (known as GATT 1994), except with respect to goods certified for use in civil aircraft.[5] Nor does schedule XX impose on the United States a legal obligation to maintain these tariff provisions, but merely to ensure that the agreed tariff treatment for civil aircraft goods is somehow provided. Moreover, because these tariff provisions fall in chapter 98—not part of the nomenclature structure of the Harmonized Commodity Description and Coding System (HS)—the international convention establishing the HS does not require them and they are unique to the United States. Thus, with certain provisos, these tariff rate lines could be amended or repealed, even though such an action could amount to an effective duty

[3] No blanket duty exemption for goods of U.S. origin—even those imported by or for most U.S. Government agencies—is afforded elsewhere in the *HTS*; and duties must generally be paid on such goods each time they are entered unless the *HTS* specifies another tariff treatment. See general note 1 to the *HTS*.

[4] Goods described in heading 9802.00.80 are partially dutiable, to the extent that the pertinent tariff provision in chs. 1 through 97 provides for a duty rate other than "free," but no duty is payable on the U.S. content.

[5] Pursuant to concessions negotiated in the Uruguay Round of multilateral negotiations, the duty rate under these provisions for goods certified for use in civil aircraft is bound at "free." A tariff binding is a stated ceiling: GATT contracting parties giving bindings on individual tariff categories agree not to exceed the bound rates other than in circumstances provided for in the GATT (such as actions taken for emergency balance of payments reasons). If a country exceeds a bound rate in cases not covered by any GATT provision, other parties may initiate dispute settlement, undertake limited retaliation, or request compensation. U.S. tariff bindings and other concessions are enumerated in schedule XX; other numbered GATT schedules list the bindings and concessions of other contracting parties.

increase on goods now allowed entry thereunder. Two U.S. free-trade agreements (FTAs), one with Israel[6] and the other with Canada and Mexico (the North American Free Trade Agreement or NAFTA), and the Automotive Products Trade Act (APTA) require that the United States continue current duty treatment for eligible goods, however, it is reflected in the *HTS*. Accordingly, various Presidential proclamations have included preferential duty rates in the "special" rate subcolumn of rate of duty column 1 for the covered production-sharing provisions of chapter 98 to carry out these U.S. obligations. Eligible goods entered under the civil aircraft program are also accorded a "free" rate to meet GATT obligations.

For goods not eligible for tariff preferences and covered by the first 3 production-sharing provisions, the general duty rates from the applicable permanent tariff categories in chapters 1 through 97 must be paid on the declared foreign value, including costs of labor. For shipments of preference-eligible goods, the special subcolumn of the "Rates of Duty 1" column of the *HTS* for these chapter 98 tariff provisions states that, if such goods are accorded entry thereunder, the duty payable would be computed by applying the otherwise applicable special duty rate from chapters 1 through 97 to the foreign value. In most instances, the special rate provided in chapters 1 through 97 for the eligible preference programs is "Free" and no duty advantage from claiming entry under chapter 98 would appear possible. The designated preference programs, as indicated above, are the APTA, the Agreement on Trade in Civil Aircraft, the NAFTA, and the U.S.-Israel FTA, under the terms of applicable general notes to the *HTS*.

In the case of the NAFTA, however, the special subcolumn for the applicable provision in chapters 1 through 97 may state a rate of duty for goods of Mexico (and for goods of Canada through the close of December 31, 1997) that is other than "free." If a good is eligible for a tariff preference under the terms of general note 12 as an originating good and qualifies to be marked under Customs regulations (see 19 C.F.R. part 102) as a good of Canada or of Mexico, the *HTS* indicates that importers can claim that the appropriate NAFTA tariff rate on non-U.S. content from the normal tariff category would apply to the goods in question. Thus, if Customs deems that the goods originate, then the appropriate special duty rate, if other than "free," would be applied to the non-U.S.-origin part of the shipment's value, while the U.S. value would be free of duty. However, if goods originate in the NAFTA region but do not qualify to be marked as goods of a single NAFTA country, Customs regulations provide that the special NAFTA rate of duty applicable to the last NAFTA country of significant processing would be assessed on the foreign content. If the "marking rules" indicate that an originating good is a product of the United States for NAFTA purposes, and the good was merely advanced in value or improved in condition in another NAFTA country, the rate of duty for the last NAFTA country of processing would be imposed. See 19 C.F.R. 102.19. In addition, heading 9802.00.90 applies only to certain textile and apparel articles that are assembled in Mexico from U.S.-formed-and-cut fabric components and has a general rate of duty of "free" for qualifying goods; these imports need not be originating goods under *HTS* general note 12.

[6] The FTA with Israel specifies that all goods described by and imported under these two *HTS* provisions should be admitted free of duty, along with all other products of Israel as provided in *HTS* general note 8.

Special Access Program

Pursuant to 7 U.S.C. 1854 and pertinent regulations, under the legal umbrella of the multilateral Agreement Regarding Trade in Textiles,[7] the United States has negotiated bilateral agreements with numerous countries to impose quantitative limitations and monitoring requirements on imports of enumerated textile and apparel products. The combined product scope found in these agreements (the Arrangement plus bilaterals) as of the date of enactment of the CBERA has been determined to define the range of the statutory exclusion from duty-free entry for textile and apparel goods from beneficiary countries. Accordingly, most goods of cotton, of wool/fine animal hair, of man-made fibers, or of blends thereof cannot enter free of duty under the CBERA. However, such goods—including goods assembled in whole or in part from U.S. materials or components in such CBERA countries—represent a significant portion of overall exports from these countries. Thus, to obviate in part the exclusion from duty-free entry, a partial relaxation of otherwise applicable quota and related restrictions has been accorded by the United States under specified circumstances.

Statistical reporting number 9802.00.8015 is used by importers in making entry of "articles eligible pursuant to bilateral textile agreements for entry under a Special Access Program and entered in compliance with procedures established by the Committee for the Implementation of Textile Agreements (CITA)."[8] Importers are required to report the value of the U.S.-fabricated components included in the merchandise and the shipment's dutiable value (total value less the value of U.S.-fabricated components), pursuant to statistical note 1(b), subchapter II, chapter 98. The Special Access Program (SAP) is available only to designated CBERA beneficiary countries that have bilateral textile agreements with the United States;[9] the former Special Regime (SR), which had applied to textile and apparel products of Mexico, was replaced by other preference provisions in the NAFTA as of January 1, 1994—primarily heading 9802.00.90.[10]

SAP bilateral agreements have contained two categories of restraints: guaranteed access levels (GALs) for apparel assembled in the particular CBERA country from U.S.-formed-and-cut fabric, and regular quota limits for apparel of the applicable MFA categories but not of such fabric. In general terms, a GAL is negotiated for each MFA category covered by a SAP bilateral agreement, along with a specific limit (SL) or a designated consultation level (DCL) for regular quotas. It has been possible to increase the GALs upon exporter request unless

[7] Commonly called the Multifiber Arrangement or MFA. Under the Agreement on Textiles and Clothing of GATT 1994, MFA quantitative restraints must be eliminated as of Jan. 1, 2005, fully integrating this sector into GATT 1994 and its disciplines. As restrictions are gradually removed under this agreement, the SAP and other preferential regimes also lose their previous access advantages.

[8] See *HTS* ch. 98, subch. II, for the legal text of the provisions and applicable notes, and Customs regulations at 19 C.F.R. 12.130-131. The Office of Textiles and Apparel of the U.S. Department of Commerce can be consulted for further information.

[9] Announced by President Reagan on Feb. 20, 1986, and implemented June 11, 1986 (51 FR 21208).

[10] See *HTS* heading 9802.00.90 and the notes to section XI. The special regime was discussed in earlier Commission reports on production sharing.

market disruption occurs, while SLs are subject to agreed allowable annual percentage increases and DCLs are raised only after bilateral consultation. GAL shipments under heading 9802.00.80 generally have duties assessed only on the value added overseas.[11] Special CBI[12] Export Declarations must be filed at the time the U.S.-formed-and-cut fabric parts are exported from the customs territory, and Customs can request documentary proof concerning such garment parts during Post-Entry Compliance Reviews. According to the Office of Textiles and Apparel, foreign-origin findings, trimmings, and elastic strips not exceeding 25 percent of the cost of components in the assembled product do not disqualify an apparel article from entry under the GAL/SAP, but other components must be formed and cut in the United States. Also, CBERA assemblers must file declarations, and goods must be accompanied by the textile visas and certificates of origin specified in the bilaterals. The program has not undergone significant changes in the year covered by this report.

User Fees

Enacted in 1986 as a temporary revenue measure and set at 0.22 percent ad valorem on imported goods, the so-called user fee has been continued to help defray costs of Customs Service operations. Customs regulations treat the fee—properly known as the merchandise processing fee—as a customs duty; it is applied to the dutiable value or cost (the foreign value added) of imports under the four production-sharing provisions of *HTS* chapter 98 covered by this report, but not to the nondutiable portion of value attributable to domestic materials. From October 1, 1987 through December 31, 1989, the fee was reduced to 0.17 percent ad valorem; subsequently, the fee was restructured and continued at the 0.17-percent rate but with a floor ($21 minimum fee per entry) and cap ($400 maximum fee) as of October 1, 1990. Current Customs regulations concerning the user fee are set forth in 19 C.F.R. 24.23. Although the merchandise processing fee for formal entries has for short periods been at a higher level (such as the 0.21 percent ad valorem level following enactment of the Uruguay Rounds Agreements Act), the current fee set by Customs regulations is 0.19 percent ad valorem for formal entries, with the minimum fee set at $21 and the cap at $400 per entry. A $3 surcharge is added to each entry processed manually, informal entries are assessed fees of from $2 to $8 each, and other rules govern the aggregation of the ad valorem fee for particular monthly entry programs. Other fees, such as the harbor maintenance fee, are also provided for in Customs regulations.

Under article 403 of the U.S.-Canada Free-Trade Agreement, since suspended (and section 24.23 of the Customs regulations), goods originating in the territory of Canada were assessed the merchandise-processing fee under a negotiated phase-out scheme, with the fee scheduled to be eliminated as of January 1, 1994. This previously-agreed treatment was continued under

[11] Ibid., pp. 1-2. New origin rules for this sector are based upon enumerated changes of tariff classification (from inputs to more advanced goods); some administrative practices changed because of Customs' implementation of the Uruguay Round Agreements Act. See 19 C.F.R. 102.21, as well as sections 12.130-12.132.

[12] Caribbean Basin Initiative.

the NAFTA when it was implemented on January 1, 1994, so that no fees are collected on "goods of Canada under the terms of general note 12 to the *HTS*."[13] Goods of Mexico can be assessed the ordinary fee until June 30, 1999, as of which date no such fee can be charged under article 310 and annex 310.1 of the NAFTA and section 204 of the NAFTA Implementation Act. In both cases, the marking rules adopted pursuant to annex 311 of the NAFTA determine the status of the goods with respect to whether they qualify as goods of Canada or of Mexico for purposes of the user fee. In simpler terms, because of the differential duty rates, fees, and staging applicable to goods of Canada and of Mexico under the NAFTA, the treatment of composite goods (containing content from 2 or 3 NAFTA countries) during the staging period is determined by the marking rules published and administered by Customs, after goods are found to be "originating" in the 3-country region under the rules of origin set forth in *HTS* general note 12 (when it includes content or inputs from non-NAFTA countries).

Customs regulations separately specify the user fee status of other classes of goods, such as agricultural products of the United States that are processed and packed in a U.S. foreign trade zone. Notably for this report, goods from most non-NAFTA countries entered under *HTS* chapter 98 are subject to the imposition of the fee, with limited exceptions for products of preference-eligible countries (notably CBERA beneficiaries and the insular possessions of the United States). In addition, all products of Israel, under the free-trade agreement with that country, are eligible for exemption from user fees for such time as the United States Trade Representative determines that reciprocal treatment for U.S. products exists.

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[13] This phrase is a term of art in the *HTS* covering goods imported from and the product of Canada (regardless of whether they are marked as such) that are deemed to qualify for preferential duty rates under the NAFTA as goods originating in the NAFTA region. This test represents a departure from the normal rule requiring that imported goods be marked with a single country of origin.

APPENDIX B
STATISTICAL TABLES

Table B-1
U.S. imports for consumption under *HTS* headings 9802.00.60 and 9802.00.80[1], 1971-96

(Million dollars)

Year	Total value			Dutiable value			U.S. content value		
	9802.00.60	9802.00.80	Total	9802.00.60	9802.00.80	Total	9802.00.60	9802.00.80	Total
1971	199.4	2,566.4	2,765.8	75.1	2,030.8	2,105.9	124.3	535.6	659.9
1972	318.3	3,090.5	3,408.8	130.3	2,410.1	2,540.4	187.9	680.4	868.3
1973	462.6	3,784.5	4,247.1	212.9	3,025.4	3,238.3	249.7	759.1	1,008.8
1974	543.7	4,828.1	5,371.8	240.4	3,818.6	4,059.0	303.3	1,009.5	1,312.8
1975	454.6	4,707.8	5,162.4	192.6	3,703.9	3,896.5	262.0	1,003.9	1,265.9
1976	474.0	5,247.5	5,721.5	199.2	3,976.2	4,175.4	274.8	1,271.3	1,546.1
1977	465.1	6,723.4	7,188.5	190.7	5,021.4	5,212.1	274.4	1,702.0	1,976.4
1978	398.1	9,337.1	9,735.2	154.8	6,988.9	7,143.7	243.2	2,348.3	2.591.5
1979	407.7	11,559.3	11,967.0	172.8	8,468.3	8,641.1	234.9	3,091.0	3,325.9
1980	254.1	13,762.2	14,016.5	83.5	10,178.2	10,261.8	170.5	3,584.0	3,754.7
1981	256.5	15,924.0	16,180.8	80.3	11,653.9	11,734.2	176.2	4,270.3	4,446.6
1982	358.0	17,950.8	18,308.8	116.0	13,473.2	13,589.2	242.0	4,477.5	4,719.5
1983	341.5	21,234.4	21,575.9	112.5	16,076.8	16,189.3	229.0	5,157.6	5,386.6
1984	450.2	28,122.4	28,572.6	140.9	21,221.2	21,362.1	309.3	6,901.2	7,210.5
1985	419.7	30,115.4	30,535.1	144.6	24,565.7	24,710.3	275.0	5,549.7	5,824.7
1986	465.5	36,031.5	36,496.9	157.1	30,059.3	30,216.4	308.4	5,972.1	6,280.5
1987	953.9	67,595.1	68,549.0	538.4	55,067.9	55,606.2	415.6	12,527.2	12,942.8
1988	929.1	72,803.5	73,732.6	459.2	56,449.4	56,908.5	469.8	16,354.1	16,823.9
1989	1,141.3	73,031.8	74,173.1	444.2	54,110.5	54,554.7	697.1	18,921.3	19,618.4
1990	1,379.8	75,122.2	76,502.0	561.4	54,302.9	54,864.3	818.4	20,819.2	21,637.6
1991	1,142.1	56,412.8	57,554.9	514.3	42,521.2	43,035.5	627.8	13,891.6	14,519.4
1992	1,003.4	55,437.6	56,441.0	406.5	40,676.5	41,083.0	596.9	14,761.1	15,358.0
1993	836.6	56,526.4	57,363.0	280.3	39,522.7	39,803.0	556.3	17,003.7	17,560.0
1994	600.3	58,709.7	59,310.0	219.2	39,573.8	39,793.0	381.2	19,135.8	19,517.0
1995	503.4	60,376.6	60,880.0	126.6	38,643.4	38,770.0	376.8	21,733.2	22,110.0
1996	549.6	66,964.9	67,514.5	154.8	43,394.9	43,549.7	394.8	23,570.0	23,964.8

[1] *HTS* 9802.00.80 includes *HTS* 9802.00.90 and 9802.00.5010.

Note.—Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted. Minor adjustments to official statistics were made to correct cases of misreporting.

Table B-2
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98: Total imports; imports under *HTS* PSP and U.S. content, by principal sources, 1993-96

Source	1993					
	Total Imports	Imports under HTS PSP	U.S. content	Total Imports	Imports under HTS PSP	U.S. content
	Million dollars			*Percentage*		
Japan	106,163	14,185	489	18.5	24.7	2.8
Germany	28,103	4,586	87	4.9	8.0	0.5
Canada	110,482	3,035	1,125	19.2	5.3	6.4
United Kingdom	21,303	1,009	93	3.7	1.8	0.5
Sweden	4,447	955	29	0.8	1.7	0.2
France	14,953	810	84	2.6	1.4	0.5
Belgium	5,151	654	11	0.9	1.1	0.1
Netherlands	5,406	261	65	0.9	0.5	0.4
Italy	13,056	129	34	2.3	0.2	0.2
Ireland	2,480	82	24	0.4	0.1	0.1
Australia	3,268	68	5	0.6	0.1	0.0
Spain	2,964	51	6	0.5	0.1	0.0
Austria	1,395	41	15	0.2	0.1	0.1
All other	13,970	43	9	2.4	0.1	0.0
Total, developed countries	333,141	25,908	2,075	58.0	45.2	11.8
Mexico	38,668	18,992	9,887	6.7	33.1	56.3
Malaysia	10,482	1,669	794	1.8	2.9	4.5
Korea	16,986	1,664	478	3.0	2.9	2.7
Dominican Republic	2,667	1,531	1,041	0.5	2.7	5.9
Singapore	12,744	1,461	353	2.2	2.5	2.0
Philippines	4,864	1,049	485	0.8	1.8	2.8
Taiwan	24,981	961	337	4.3	1.7	1.9
Costa Rica	1,542	575	399	0.3	1.0	2.3
Guatemala	1,178	426	220	0.2	0.7	1.3
China	31,425	405	52	5.5	0.7	0.3
Thailand	8,539	397	238	1.5	0.7	1.4
Hong Kong	9,418	338	130	1.6	0.6	0.7
Honduras	914	337	236	0.2	0.6	1.3
Jamaica	710	321	254	0.1	0.6	1.4
Brazil	7,763	272	16	1.4	0.5	0.1
Colombia	3,010	223	116	0.5	0.4	0.7
El Salvador	481	203	118	0.1	0.4	0.7
Bahamas	342	155	149	0.1	0.3	0.8
Indonesia	5,342	146	35	0.9	0.3	0.2
Haiti	154	108	73	0.0	0.2	0.4
India	4,536	53	10	0.8	0.1	0.1
All other	54,974	170	64	9.6	0.3	0.4
Total, less developed countries	241,722	31,456	15,485	42.0	54.8	88.2
Grand total	574,863	57,364	17,560	100.0	100.0	100.0

See notes at end of table.

Table B-2—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98: Total imports; imports under *HTS* PSP and U.S. content, by principal sources, 1993-96

Source	1994					
	Total imports	Imports under HTS PSP	U.S. content	Total imports	Imports under HTS PSP	U.S. content
	Million dollars			*Percentage*		
Japan	117,532	10,534	500	17.9	17.8	2.6
Germany	31,566	5,877	128	4.8	9.9	0.7
Canada	128,753	1,663	688	19.6	2.8	3.5
United Kingdom	24,529	1,212	110	3.7	2.0	0.6
Belgium	6,319	1,021	18	1.0	1.7	0.1
Sweden	4,999	859	17	0.8	1.4	0.1
France	16,299	710	80	2.5	1.2	0.4
Netherlands	5,970	161	40	0.9	0.3	0.2
Spain	3,496	117	18	0.5	0.2	0.1
Italy	14,572	69	12	2.2	0.1	0.1
Ireland	2,889	66	17	0.4	0.1	0.1
Austria	1,726	60	24	0.3	0.1	0.1
Australia	3,228	41	3	0.5	0.1	0.0
Switzerland	6,278	20	3	1.0	0.0	0.0
All other	9,289	49	9	1.4	0.1	0.0
Total, developed countries	377,443	22,460	1,667	57.4	37.9	8.5
Mexico	48,605	23,068	11,608	7.4	38.9	59.5
Malaysia	13,877	1,938	968	2.1	3.3	5.0
Korea	19,547	1,724	480	3.0	2.9	2.5
Dominican Republic	3,077	1,707	1,109	0.5	2.9	5.7
Philippines	5,712	1,378	640	0.9	2.3	3.3
Singapore	15,287	1,231	336	2.3	2.1	1.7
Taiwan	26,586	1,127	371	4.0	1.9	1.9
Costa Rica	1,645	623	411	0.3	1.1	2.1
China	38,572	603	74	5.9	1.0	0.4
Thailand	10,276	594	353	1.6	1.0	1.8
Honduras	1,092	452	325	0.2	0.8	1.7
Guatemala	1,284	451	219	0.2	0.8	1.1
Jamaica	740	380	306	0.1	0.6	1.6
Hong Kong	9,621	329	135	1.5	0.6	0.7
El Salvador	608	322	175	0.1	0.5	0.9
Colombia	3,132	252	146	0.5	0.4	0.7
Indonesia	6,416	205	47	1.0	0.3	0.2
Brazil	8,847	147	17	1.3	0.2	0.1
India	5,286	50	4	0.8	0.1	0.0
Haiti	59	35	25	0.0	0.1	0.1
All other	60,173	233	100	9.1	0.4	0.5
Total, less developed countries	280,442	36,851	17,851	42.6	62.1	91.5
Grand total	657,885	59,311	19,517	100.0	100.0	100.0

See notes at end of table.

Table B-2—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98: Total imports; imports under *HTS* PSP and U.S. content, by principal sources, 1993-96

Source	1995					
	Total Imports	Imports under HTS PSP	U.S. content	Total Imports	Imports under HTS PSP	U.S. content
	Million dollars			*Percentage*		
Germany	37,126	6,526	153	5.0	10.7	0.7
Japan	122,402	6,069	360	16.5	10.0	1.6
United Kingdom	26,594	1,628	120	3.6	2.7	0.5
Canada	144,882	1,539	605	19.6	2.5	2.7
Sweden	6,208	1,375	21	0.8	2.3	0.1
Belgium	5,996	812	35	0.8	1.3	0.2
France	16,497	431	72	2.2	0.7	0.3
Spain	3,814	174	27	0.5	0.3	0.1
Netherlands	6,309	151	34	0.9	0.2	0.2
Italy	16,339	129	30	2.2	0.2	0.1
Ireland	4,067	73	18	0.6	0.1	0.1
Austria	1,951	73	32	0.3	0.1	0.1
All other	21,469	101	19	2.9	0.2	0.1
Total, developed countries	413,652	19,081	1,526	55.9	31.3	6.9
Mexico	61,721	24,962	12,833	8.3	41.0	58.0
Malaysia	17,401	2,778	1,313	2.4	4.6	5.9
Dominican Republic	3,385	1,965	1,278	0.5	3.2	5.8
Korea	24,026	1,798	600	3.2	3.0	2.7
Philippines	6,990	1,749	785	0.9	2.9	3.6
Taiwan	28,875	1,193	424	3.9	2.0	1.9
Singapore	18,493	958	194	2.5	1.6	0.9
China	45,370	873	109	6.1	1.4	0.5
Thailand	11,337	786	461	1.5	1.3	2.1
Costa Rica	1,842	707	472	0.2	1.2	2.1
Honduras	1,441	676	480	0.2	1.1	2.2
Hong Kong	10,232	637	323	1.4	1.0	1.5
Guatemala	1,515	521	259	0.2	0.9	1.2
El Salvador	813	497	276	0.1	0.8	1.3
Jamaica	838	456	369	0.1	0.7	1.7
Indonesia	7,340	410	75	1.0	0.7	0.3
Colombia	3,807	272	169	0.5	0.4	0.8
Brazil	8,989	178	20	1.2	0.3	0.1
Haiti	129	79	54	0.0	0.1	0.2
India	5,702	38	4	0.8	0.1	0.0
Hungary	547	32	5	0.1	0.1	0.0
All other	65,217	234	81	8.8	0.4	0.4
Total, less developed countries	326,008	41,800	20,584	44.1	68.7	93.1
Grand total	739,660	60,880	22,110	100.0	100.0	100.0

See notes at end of table.

Table B-2—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98: Total imports; imports under *HTS* PSP and U.S. content, by principal sources, 1993-96

Source	1996					
	Total imports	Imports under *HTS* PSP	U.S. content	Total imports	Imports under *HTS* PSP	U.S. content
	Million dollars			*Percentage*		
Japan	114,762	7,797	265	14.5	11.5	1.1
Germany	39,215	7,414	153	5.0	11.0	0.6
Sweden	7,118	1,758	23	0.9	2.6	0.1
United Kingdom	28,574	1,758	132	3.6	2.6	0.6
Canada	156,299	1,579	618	19.8	2.3	2.6
Belgium	6,745	845	35	0.9	1.3	0.1
France	17,914	408	52	2.3	0.6	0.2
Netherlands	6,582	182	40	0.8	0.3	0.2
Spain	4,231	160	17	0.5	0.2	0.1
Italy	18,036	97	18	2.3	0.1	0.1
Ireland	4,749	87	24	0.6	0.1	0.1
Austria	2,082	61	24	0.3	0.1	0.1
All other	23,296	111	20	2.9	0.2	0.1
Total, developed countries	429,602	22,256	1,421	54.3	33.0	5.9
Mexico	74,179	27,925	14,649	9.4	41.4	61.1
Malaysia	17,771	2,382	1,116	2.2	3.5	4.7
Dominican Republic	3,582	2,104	1,365	0.5	3.1	5.7
Philippines	8,174	1,805	773	1.0	2.7	3.2
Korea	22,532	1,787	653	2.9	2.6	2.7
China	51,209	1,153	145	6.5	1.7	0.6
Taiwan	29,797	1,048	375	3.8	1.6	1.6
Honduras	1,797	981	694	0.2	1.5	2.9
Singapore	20,249	964	212	2.6	1.4	0.9
Thailand	11,324	789	423	1.4	1.2	1.8
Costa Rica	1,963	694	481	0.2	1.0	2.0
El Salvador	974	605	344	0.1	0.9	1.4
Guatemala	1,694	580	276	0.2	0.9	1.2
Hong Kong	9,820	579	276	1.2	0.9	1.2
Indonesia	8,079	546	94	1.0	0.8	0.4
Jamaica	828	444	355	0.1	0.7	1.5
Colombia	4,421	216	126	0.6	0.3	0.5
Brazil	8,871	144	12	1.1	0.2	0.1
Haiti	143	102	70	0.0	0.2	0.3
Hungary	676	46	7	0.1	0.1	0.0
India	6,145	43	4	0.8	0.1	0.0
Sri Lanka	1,392	38	2	0.2	0.1	0.0
All other	75,247	285	91	9.5	0.4	0.4
Total, less developed countries	360,868	45,258	22,544	45.7	67.0	94.1
Grand total	790,470	67,514	23,965	100.0	100.0	100.0

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-3
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1993 Total imports	1993 Imports under *HTS* PSP	1993 U.S. content	1994 Total imports	1994 Imports under *HTS* PSP	1994 U.S. content
Agricultural products	32,534,186	37,063	1,279	35,049,304	27,190	1,342
Forest products	21,393,721	65,613	31,942	24,037,462	86,122	45,343
Chemicals, coal, petroleum, natural gas and related products:						
Fabricated plastic and rubber products	10,140,902	121,181	79,799	11,639,350	136,545	87,302
Other energy and chemical products	83,553,368	175,964	156,794	89,387,538	53,961	38,048
Total	93,694,269	297,146	236,593	101,026,888	190,506	125,351
Textiles, apparel, and footwear:						
Textiles and textile products	8,502,227	261,986	149,958	9,352,247	283,998	150,171
Medical apparel	434,718	195,195	134,529	436,644	194,687	131,979
Mens' and boy's suits and sports coats	663,834	101,450	54,277	747,665	138,295	78,309
Mens' and boy's coats and jackets	1,562,679	51,444	22,499	1,772,918	55,894	28,291
Mens' and boy's trousers	2,797,164	1,078,870	718,055	3,144,823	1,330,623	824,422
Women's and girls' trousers	3,354,366	628,304	344,768	3,582,689	732,857	417,421
Shirts and blouses	10,041,821	889,550	542,384	10,839,910	1,134,936	731,314
Women's and girls' suits, skirts, and coats	3,243,974	516,825	275,935	3,260,820	484,281	237,236
Women's and girls' dresses	1,081,726	89,084	41,453	1,259,893	117,475	52,882
Robes, nightwear, and underwear	1,908,669	606,773	415,445	2,196,518	768,530	521,122
Hosiery	230,548	98,185	92,060	291,268	137,960	129,088
Foundation garments	639,049	484,473	324,309	750,987	558,807	375,250
Gloves, including gloves for sports	1,349,071	43,141	22,771	1,499,020	58,274	29,286
Headwear	778,419	28,082	15,947	821,213	40,360	20,623
Other wearing apparel and accessories	6,040,443	236,380	131,982	6,494,941	277,392	161,854
Footwear and parts	11,105,366	1,134,499	193,746	11,713,987	1,142,819	167,580
Total	53,734,076	6,444,242	3,480,117	58,165,542	7,457,189	4,056,829
Minerals and Metals:						
Steel mill products	8,669,505	164,998	108,707	12,434,672	184,567	124,285
Copper and related products	2,067,968	61,475	47,276	2,655,256	87,018	66,551
Aluminum mill products	1,095,666	246,042	201,433	1,446,111	50,432	37,534
Builders' hardware	645,832	45,209	28,152	708,643	85,409	47,617
Other metal products	33,766,764	436,649	193,035	39,533,681	526,814	266,941
Total	46,245,736	954,373	578,602	56,778,363	934,241	542,928

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1993 Total imports	1993 Imports under *HTS* PSP	1993 U.S. content	1994 Total imports	1994 Imports under *HTS* PSP	1994 U.S. content
Miscellaneous Manufactures						
Luggage, handbags, and flat goods	2,584,443	68,051	34,283	3,008,291	66,775	33,998
Jewelry	3,775,881	71,597	61,343	4,091,534	85,868	76,058
Motor vehicle and other furniture	6,298,062	120,557	64,900	7,637,556	640,127	170,452
Lamps and lighting fixtures	1,712,479	66,826	41,827	1,956,291	65,294	40,359
Other miscellaneous manufactured articles	19,075,833	332,885	127,915	19,551,440	369,391	104,094
Total	33,446,698	659,916	330,268	36,245,112	1,227,454	424,961
Machinery and equipment:						
Air conditioning equipment	3,055,031	212,590	97,067	3,666,077	257,434	134,200
Commercial machinery	963,986	75,741	25,863	1,081,931	67,051	23,713
Household appliances, including heating and drying equipment	3,570,430	374,072	187,993	3,858,075	414,122	197,017
Centrifuges, filtering and purifying equipment, and pumps for liquids	2,183,827	87,940	42,967	2,844,277	359,270	270,912
Semiconductor equipment, robots, and other equipment	1,179,077	41,642	7,093	1,831,378	15,372	4,079
Taps, cocks, valves, and similar devices	2,175,278	285,283	194,650	2,600,291	359,512	247,336
Electric motors, generators, and related equipment	2,973,568	586,345	333,990	3,457,321	717,143	426,336
Electrical transformers, static converters, and inductors	2,466,743	566,470	230,541	2,713,076	495,773	202,220
Powered handtools and parts thereof	909,799	41,325	13,593	1,039,842	99,045	40,723
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	964,530	123,833	73,230	1,030,232	153,252	85,910
Wiring harnesses for motor vehicles and other insulated electrical conduits	3,563,535	1,978,836	1,122,425	4,810,413	2,858,020	1,617,283
Miscellaneous machinery and equipment	19,218,276	588,690	169,661	23,498,455	473,447	126,393
Total	43,224,079	4,962,765	2,499,073	52,431,369	6,269,441	3,376,123
Transportation equipment:						
Aircraft engines and gas turbines	5,734,721	276,927	50,954	5,824,895	202,422	32,132
Internal combustion piston engines	6,622,894	629,484	121,751	7,797,600	770,651	177,141
Construction, mining, and industrial vehicles	3,027,120	359,319	65,623	4,425,332	348,484	54,033
Certain motor-vehicle parts	15,760,073	2,265,430	1,242,933	17,386,522	2,023,337	1,004,628
Primary cells and batteries, and electric storage batteries	1,079,066	151,548	79,012	1,440,956	190,404	90,266

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1993 Total imports	1993 Imports under *HTS* PSP	1993 U.S. content	1994 Total imports	1994 Imports under *HTS* PSP	1994 U.S. content
Transportation equipment—*Continued*						
Ignition starting, lighting, and other electrical equipment	1,494,814	283,331	167,913	1,699,067	128,144	62,459
Rail locomotive and rolling stock	728,936	63,621	27,401	1,161,012	222,656	74,501
Automobiles, trucks, buses, and bodies and chassis of the foregoing	68,607,283	25,337,208	2,330,576	79,240,132	23,095,296	2,233,981
Aircraft, spacecraft, and related equipment, except engines	6,254,837	710,891	298,390	6,430,591	314,886	90,952
Ships, tugs, pleasure boats, and similar vessels	1,019,201	84,400	10,128	653,064	65,175	12,481
Motorcycles and miscellaneous vehicles and transportation related equipment	2,352,355	97,874	53,967	2,394,652	132,896	76,919
Total	112,681,299	30,260,032	4,448,649	128,453,823	27,494,350	3,909,493
Electronic products:						
Office machines	5,052,011	164,321	35,610	5,780,790	93,388	8,806
Telephone and telegraph apparatus, including optical fiber	6,232,535	166,378	71,621	7,552,039	294,810	110,532
Microphones, loudspeakers, audio amplifiers, and combinations thereof	1,473,156	111,812	36,136	1,826,649	183,938	56,705
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	5,445,325	103,280	13,948	6,283,068	141,711	23,407
Records, tapes, compact discs, computer software, and other media, whether or not recorded	2,544,224	100,881	33,973	2,698,670	33,308	11,994
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	6,828,611	513,920	129,176	8,201,980	456,410	151,156
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	4,600,118	2,256,761	701,197	5,537,557	2,606,391	849,904
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	2,632,967	200,980	54,365	3,265,361	359,603	117,284
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	2,248,188	164,431	54,677	2,713,469	230,506	82,951
Electrical circuit apparatus	7,434,845	1,508,351	922,367	8,854,642	1,984,795	1,218,641
Semiconductor devices	19,465,816	5,050,585	2,715,496	26,019,660	6,242,568	3,311,390
Computer hardware	37,905,881	1,693,052	451,696	46,160,941	1,306,873	390,196
Photographic equipment and supplies	3,825,683	246,106	98,180	4,097,371	173,703	69,839

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1993 Total imports	1993 Imports under *HTS* PSP	1993 U.S. content	1994 Total imports	1994 Imports under *HTS* PSP	1994 U.S. content
Electronic products—*Continued*						
Medical and optical goods, including ophthalmic goods	6,562,014	602,406	307,240	6,790,037	620,657	291,875
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	748,724	54,951	11,416	820,077	125,113	21,090
Watches, clocks, and timing devices	2,447,389	97,572	30,330	2,550,940	87,342	21,323
Measuring, testing, controlling, and analyzing instruments	4,552,740	646,515	285,615	5,727,246	681,922	297,919
Total	120,000,226	13,682,301	5,953,041	144,880,496	15,623,039	7,035,011
Special provisions	17,908,639	319	219	20,816,298	1,217	45
Grand Total	574,862,928	57,363,771	17,559,784	657,884,659	59,310,749	19,517,427

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1995 Total imports	1995 Imports under *HTS* PSP	1995 U.S. content	1996 Total imports	1996 Imports under *HTS* PSP	1996 U.S. content
Agricultural products	37,806,506	7,503	1,637	41,526,077	2,560	1,171
Forest products	29,154,780	83,280	42,002	28,957,450	118,333	56,007
Chemical, coal, petroleum, natural gas, and related products:						
Fabricated plastic and rubber products	12,955,349	157,175	85,854	13,383,416	183,169	95,504
Other energy and chemical products	99,832,855	111,309	70,903	120,493,520	145,335	73,245
Total	112,788,204	268,483	156,757	133,876,936	328,504	168,749
Textiles, apparel, and footwear:						
Textiles and textile products	10,190,513	336,592	198,435	10,368,559	318,880	201,813
Medical apparel	475,512	223,342	157,601	456,032	196,442	146,675
Mens' and boy's suits and sports coats	850,473	146,899	76,715	924,183	161,855	85,856
Mens' and boy's coats and jackets	1,692,303	75,786	44,226	1,783,145	77,763	44,667
Mens' and boy's trousers	3,755,379	1,700,119	1,022,948	4,082,582	1,834,041	1,088,688
Women's and girls' trousers	3,670,148	929,616	544,827	3,948,005	1,198,421	721,107
Shirts and blouses	11,986,425	1,692,681	1,095,159	12,376,939	2,057,892	1,428,466
Women's and girls' suits, skirts, and coats	3,547,993	600,374	279,104	3,857,068	721,348	333,636
Women's and girls' dresses	1,442,954	181,836	75,730	1,573,759	215,351	90,210
Robes, nightwear, and underwear	2,672,815	1,104,736	726,623	2,947,087	1,291,082	859,377
Hosiery	362,928	163,666	153,279	404,282	165,279	151,802
Foundation garments	926,720	685,945	463,852	864,383	607,628	410,783
Gloves, including gloves for sports	1,733,310	51,939	28,838	1,893,499	47,849	32,369
Headwear	842,213	40,626	22,420	883,070	39,438	24,755
Other wearing apparel and accessories	5,924,113	384,186	230,982	5,905,356	426,803	254,408
Footwear and parts	12,095,267	1,397,721	158,191	12,708,385	1,678,736	191,716
Total	62,169,069	9,716,063	5,278,930	64,976,333	11,038,807	6,066,327
Minerals and Metals:						
Steel mill products	11,785,730	236,522	176,568	12,679,508	260,219	188,781
Copper and related products	3,401,325	78,064	63,241	3,471,892	90,176	75,357
Aluminum mill products	2,048,034	14,617	9,738	1,737,499	19,336	11,894
Builders' hardware	762,571	96,896	51,044	865,975	119,942	61,687
Other metal products	45,026,110	576,302	251,071	47,437,590	706,060	318,977
Total	63,023,770	1,002,402	551,663	66,192,464	1,195,733	656,696

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1995 Total imports	1995 Imports under *HTS* PSP	1995 U.S. content	1996 Total imports	1996 Imports under *HTS* PSP	1996 U.S. content
Miscellaneous Manufactures:						
Luggage, handbags, and flat goods	3,332,378	81,133	45,293	3,511,861	122,234	65,986
Jewelry	4,135,631	92,013	83,608	4,251,413	72,272	64,959
Motor vehicle and other furniture	8,423,237	604,115	112,567	9,497,327	734,323	115,279
Lamps and lighting fixtures	2,198,137	93,921	59,401	2,422,026	110,518	76,092
Other miscellaneous manufactured articles	21,277,482	386,473	94,991	22,831,912	383,190	112,255
Total	39,366,865	1,257,655	395,860	42,514,539	1,422,538	434,572
Machinery and equipment:						
Air conditioning equipment	4,129,220	293,680	140,329	4,576,021	414,210	179,092
Commercial machinery	1,191,025	55,527	20,064	1,223,091	53,746	20,729
Household appliances, including heating and drying equipment	4,073,901	433,448	206,527	4,261,106	455,846	217,648
Centrifuges, filtering and purifying equipment, and pumps for liquids	3,296,188	327,620	212,760	3,544,067	260,587	172,099
Semiconductor equipment, robots, and other equipment	2,053,256	15,404	3,993	2,185,993	4,561	1,014
Taps, cocks, valves, and similar devices	2,931,255	386,309	260,472	3,127,789	406,872	277,048
Electric motors, generators, and related equipment	3,879,726	780,214	474,953	3,875,491	859,374	522,087
Electrical transformers, static converters, and inductors	3,537,228	590,903	233,561	3,631,103	603,013	288,330
Powered handtools and parts thereof	1,142,444	135,973	50,436	1,291,244	205,270	69,669
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	1,097,119	188,194	88,791	1,153,410	153,020	80,033
Wiring harnesses for motor vehicles and other insulated electrical conduits	5,398,336	3,079,857	1,842,862	5,934,544	3,332,141	2,038,045
Miscellaneous machinery and equipment	27,478,044	565,059	142,613	28,436,643	606,520	171,684
Total	60,207,742	6,852,189	3,677,361	63,240,503	7,355,158	4,037,477
Transportation equipment:						
Aircraft engines and gas turbines	5,285,140	295,031	78,105	6,241,224	281,525	72,819
Internal combustion piston engines	8,863,010	858,442	272,099	9,914,116	318,270	72,870
Construction, mining, and industrial vehicles	4,783,941	420,737	87,802	4,689,653	270,764	47,726
Certain motor-vehicle parts	17,818,184	1,807,615	824,647	18,392,963	1,874,944	904,683
Primary cells and batteries, and electric storage batteries	1,636,963	230,107	83,545	1,709,778	230,915	83,348

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1995 Total imports	1995 Imports under *HTS* PSP	1995 U.S. content	1996 Total imports	1996 Imports under *HTS* PSP	1996 U.S. content
Transportation equipment—*Continued*						
Ignition starting, lighting, and other electrical equipment	1,832,824	184,406	107,985	2,032,462	331,830	162,101
Rail locomotive and rolling stock	1,291,549	258,216	87,088	1,312,004	347,833	115,660
Automobiles, trucks, buses, and bodies and chassis of the foregoing	84,384,110	18,658,744	2,046,011	87,366,986	23,322,438	2,656,728
Aircraft, spacecraft, and related equipment, except engines	6,135,254	75,289	23,285	7,352,988	26,937	17,010
Ships, tugs, pleasure boats, and similar vessels	919,399	87,410	16,447	1,130,263	153,530	23,853
Motorcycles and miscellaneous vehicles and transportation related equipment	2,670,388	199,739	107,810	2,553,041	134,253	56,067
Total	135,620,762	23,075,736	3,734,822	142,695,478	27,293,240	4,212,865
Electronic products:						
Office machines	6,365,708	52,537	12,542	6,295,635	48,817	25,013
Telephone and telegraph apparatus, including optical fiber	7,896,564	194,800	102,835	8,417,670	213,463	114,543
Microphones, loudspeakers, audio amplifiers, and combinations thereof	2,000,815	218,701	69,010	2,108,045	232,479	79,208
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	6,732,859	124,736	23,730	5,872,788	117,513	15,782
Records, tapes, compact discs, computer software, and other media, whether or not recorded	2,852,806	40,126	15,836	3,065,602	53,122	19,326
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	9,050,516	706,735	167,581	8,664,984	798,563	126,937
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	5,930,226	2,510,787	835,294	5,737,668	2,624,920	1,031,259
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	3,881,372	505,761	157,606	4,352,576	655,836	177,800
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	3,211,070	271,453	89,553	3,355,050	285,473	86,860
Electrical circuit apparatus	10,407,171	2,088,683	1,285,230	10,520,206	2,055,643	1,245,151
Semiconductor devices	39,167,784	8,613,036	4,301,684	36,771,266	8,164,008	4,086,895
Computer hardware	56,308,251	1,372,105	404,800	61,457,046	1,296,559	317,787
Photographic equipment and supplies	4,496,485	109,868	45,139	4,599,995	100,581	41,617

See notes at end of table.

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1993-96
(Thousand dollars)

Commodity group	1995 Total imports	1995 Imports under *HTS* PSP	1995 U.S. content	1996 Total imports	1996 Imports under *HTS* PSP	1996 U.S. content
Electronic products—*Continued*						
Medical and optical goods, including ophthalmic goods	7,771,407	836,709	433,022	8,481,793	1,051,585	566,138
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	991,664	174,784	23,938	992,180	160,154	20,687
Watches, clocks, and timing devices	2,672,551	83,216	20,150	2,714,633	85,720	22,683
Measuring, testing, controlling, and analyzing instruments	6,665,280	712,706	282,919	7,136,357	814,891	353,151
Total	176,402,530	18,616,743	8,270,868	180,543,493	18,759,325	8,330,836
Special provisions	23,120,192	285	115	25,946,440	283	113
Grand Total	739,660,419	60,880,340	22,110,015	790,469,714	67,514,482	23,964,813

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-4
U.S. imports for consumption under the production-sharing provisions (PSP) of *HTS* Chapter 98, by principal sources, 1996

Sources	Total value		Duty-free value	
	Value	Percentage of total	Value	Percentage of total
	Million dollars		*Million dollars*	
Grand total	67,514	100.0	23,965	100.0
Top 10 sources, total	56,308	83.4	19,747	82.4
Mexico	27,925	41.4	14,649	61.1
Japan	7,797	11.5	265	1.1
Germany	7,414	11.0	153	0.6
Malaysia	2,382	3.5	1,116	4.7
Dominican Republic	2,104	3.1	1,365	5.7
Philippines	1,805	2.7	773	3.2
Korea	1,787	2.6	653	2.7
Sweden	1,758	2.6	23	0.1
United Kingdom	1,758	2.6	132	0.6
Canada	1,579	2.3	618	2.6
All other	11,207	16.6	4,218	17.6

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-5
U.S. imports for consumption from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Entered under: Total	NAFTA and *HTS* PSP	NAFTA only	*HTS* PSP only	All other	Total NAFTA	Total *HTS* PSP	U.S. content under *HTS* PSP
Agricultural products	4,392,311	590	2,983,846	812	1,407,062	2,984,437	1,403	792
Forest products	846,585	80,088	463,640	15,832	287,025	543,728	95,920	49,248
Chemicals, coal, petroleum natural gas, and related products:								
Fabricated plastic and rubber products	745,395	116,119	552,884	22,935	53,457	669,003	139,054	78,829
Other energy and chemical products	9,564,032	3,836	7,458,576	8,890	2,092,730	7,462,412	12,726	5,923
Total	10,309,427	119,955	8,011,460	31,825	2,146,186	8,131,416	151,780	84,752
Textiles, apparel, and footwear:								
Textiles and textile products	932,846	142,071	650,062	109,409	31,305	792,133	251,479	174,776
Medical apparel	205,439	27,779	18,876	158,682	102	46,654	186,461	139,752
Mens' and boy's suits and sports coats	66,306	12,176	50,176	3,618	336	62,352	15,794	10,948
Mens' and boy's coats and jackets	26,700	13,985	3,636	8,924	154	17,622	22,910	16,267
Mens' and boy's trousers	895,902	92,064	61,344	741,781	714	153,408	833,844	515,270
Women's and girls' trousers	648,825	111,836	35,797	499,591	1,601	147,633	611,427	422,145
Shirts and blouses	980,153	119,792	211,970	645,402	2,988	331,762	765,195	613,515
Women's and girls' suits, skirts, and coats	123,891	36,296	8,245	75,226	4,124	44,541	111,522	70,677
Women's and girls' dresses	98,148	16,108	7,105	64,086	10,850	23,212	80,193	45,262
Robes, nightwear, and underwear	262,072	53,233	46,225	161,354	1,259	99,458	214,588	156,510
Hosiery	80,105	23,734	46,827	9,393	151	70,560	33,127	28,157
Foundation garments	187,551	77,046	18,369	91,985	152	95,415	169,031	122,861
Gloves, including gloves for sports	49,126	11,254	30,749	6,099	1,025	42,003	17,352	14,247
Headwear	50,047	21,155	15,313	13,111	468	36,469	34,266	21,370
Other wearing apparel and accessories	194,389	44,014	62,240	79,573	8,561	106,255	123,588	83,257
Footwear and parts	306,378	47,457	211,063	36,362	11,496	258,520	83,820	66,051
Total	5,107,878	850,000	1,477,997	2,704,596	75,285	2,327,997	3,554,596	2,501,065

See notes at end of table.

Table B-5—*Continued*
U.S. imports for consumption from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Entered under: Total	NAFTA and *HTS* PSP	NAFTA only	*HTS* PSP only	All other	Total NAFTA	Total *HTS* PSP	U.S. content under *HTS* PSP
Minerals and Metals:								
Steel mill products	1,028,519	66,211	889,836	40	72,433	956,047	66,250	50,038
Copper and related products	402,556	48	284,479	1,187	116,842	284,527	1,236	502
Aluminum mill products	34,262	3,305	30,760	1	196	34,064	3,306	2,583
Builders' hardware	157,481	117,207	23,075	2,735	14,463	140,283	119,942	61,687
Other metal products	3,046,237	541,759	1,626,511	14,436	863,531	2,168,270	556,195	270,809
Total	4,669,055	728,530	2,854,661	18,399	1,067,465	3,583,191	746,929	385,620
Miscellaneous manufactures:								
Luggage, handbags, and flat goods	119,027	18,974	19,294	73,925	6,834	38,268	92,899	57,053
Jewelry	136,844	16,675	117,716	9	2,445	134,391	16,684	14,760
Motor vehicle and other furniture	1,524,772	702,156	790,859	23,122	8,635	1,493,015	725,277	113,761
Lamps and lighting fixtures	253,130	101,728	147,882	1,531	1,989	249,610	103,260	73,610
Other miscellaneous manufactured articles	1,000,079	104,496	357,095	76,621	461,868	461,590	181,116	71,961
Total	3,033,852	944,029	1,432,845	175,207	481,771	2,376,874	1,119,236	331,146
Machinery and equipment:								
Air conditioning equipment	800,817	355,927	368,132	29,103	47,655	724,059	385,030	172,391
Commercial machinery	157,576	33,293	122,037	1,010	1,237	155,330	34,302	17,116
Household appliances, including heating and drying equipment	703,186	279,933	366,815	11,703	44,734	646,748	291,636	189,061
Centrifuges, filtering and purifying equipment, and pumps for liquids	356,345	216,219	117,063	582	22,481	333,282	216,801	158,710
Semiconductor equipment, robots, and other equipment	4,287	101	2,901	0	1,284	3,002	101	62
Taps, cocks, valves, and similar devices	491,764	318,884	132,918	28,588	11,374	451,802	347,472	252,240
Electric motors, generators, and related equipment	1,016,896	737,865	164,158	65,188	49,686	902,022	803,053	506,011
Electrical transformers, static converters, and inductors	1,051,867	366,720	462,131	140,263	82,753	828,851	506,982	267,489
Powered handtools and parts thereof	174,953	121,992	18,286	13,387	21,288	140,278	135,379	63,062
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	171,944	112,936	29,041	20,442	9,525	141,977	133,378	74,079
Wiring harnesses for motor vehicles and other insulated electrical conduits	3,761,247	2,564,469	590,577	469,302	136,898	3,155,047	3,033,772	1,969,396
Miscellaneous machinery and equipment	601,318	219,559	244,033	39,209	98,518	463,591	258,768	118,510
Total	9,292,201	5,327,898	2,618,093	818,776	527,434	7,945,991	6,146,674	3,788,127

See notes at end of table.

Table B-5—*Continued*
U.S. imports for consumption from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Entered under: Total	NAFTA and *HTS* PSP	NAFTA only	*HTS* PSP only	All other	Total NAFTA	Total *HTS* PSP	U.S. content under *HTS* PSP
Transportation equipment:								
Aircraft engines and gas turbines	68,346	31,395	4,625	2,512	29,814	36,020	33,908	28,804
Internal combustion piston engines	1,712,861	69,667	1,274,668	34,092	334,434	1,344,335	103,759	55,092
Construction, mining, and industrial vehicles	181,471	0	155,474	0	25,996	155,474	0	0
Certain motor-vehicle parts	2,532,645	1,382,085	908,828	140,630	101,102	2,290,913	1,522,715	886,697
Primary cells and batteries, and electric storage batteries	339,652	134,198	89,853	77,361	38,239	224,051	211,560	77,728
Ignition starting, lighting, and other electrical equipment	392,971	216,178	46,542	76,618	53,632	262,720	292,796	147,854
Rail locomotive and rolling stock	130,611	24	38,174	0	92,414	38,197	24	16
Automobiles, trucks, buses, and bodies and chassis of the foregoing	11,714,324	4,421,645	6,883,384	117,751	291,544	11,305,029	4,539,396	2,309,875
Aircraft, spacecraft, and related equipment, except engines	23,520	0	265	9,231	14,023	265	9,231	4,808
Ships, tugs, pleasure boats, and similar vessels	5,197	57	4,928	0	212	4,985	57	43
Motorcycles and miscellaneous vehicles and transportation related equipment	168,618	99,029	32,877	745	35,967	131,906	99,774	45,738
Total	17,270,214	6,354,278	9,439,618	458,942	1,017,377	15,793,896	6,813,218	3,556,655
Electronic products:								
Office machines	233,009	16,648	89,366	12,805	114,190	106,014	29,453	21,217
Telephone and telegraph apparatus, including optical fiber	754,956	89,798	634,824	16,323	14,011	724,622	106,121	48,274
Microphones, loudspeakers, audio amplifiers, and combinations thereof	365,195	95,894	134,870	121,567	12,864	230,764	217,460	75,451
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	367,881	55,472	213,309	61,865	37,234	268,782	117,337	15,648
Records, tapes, compact discs, computer software, and other media, whether or not recorded	307,136	10,994	229,543	31,754	34,844	240,537	42,748	18,114

See notes at end of table.

Table B-5—*Continued*
U.S. imports for consumption from Mexico under NAFTA and the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Entered under: Total	NAFTA and *HTS* PSP	NAFTA only	*HTS* PSP only	All other	Total NAFTA	Total *HTS* PSP	U.S. content under *HTS* PSP
Electronics—*Continued*								
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,375,130	232,096	544,996	537,764	60,273	777,092	769,860	122,179
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	3,466,065	2,335,096	859,487	219,757	51,724	3,194,583	2,554,854	1,014,600
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	1,081,663	469,176	573,337	36,016	3,134	1,042,513	505,192	157,640
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	308,087	190,012	79,979	29,367	8,728	269,991	219,379	74,127
Electrical circuit apparatus	2,146,591	1,447,863	277,468	337,948	83,312	1,725,331	1,785,811	1,118,810
Semiconductor devices	797,855	4,351	498	584,809	208,198	4,848	589,159	352,002
Computer hardware	3,060,554	181,447	1,100,520	822,276	956,312	1,281,967	1,003,723	250,585
Photographic equipment and supplies	165,694	1,401	160,155	621	3,517	161,557	2,022	453
Medical and optical goods, including ophthalmic goods	719,492	502,170	94,760	68,643	53,919	596,930	570,813	325,076
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	33,333	10,815	3,221	375	18,922	14,036	11,189	5,471
Watches, clocks, and timing devices	28,013	20,191	4,874	1,596	1,352	25,065	21,787	15,776
Measuring, testing, controlling, and analyzing Instruments	1,291,328	319,732	261,542	428,172	281,882	581,274	747,905	336,254
Special provisions	2,755,615	0	142,477	109	2,613,029	142,477	109	74
Total	19,257,597	5,983,157	5,405,228	3,311,766	4,557,446	11,388,384	9,294,923	3,951,752
Grand total	74,179,119	20,388,525	34,687,388	7,536,155	11,567,051	55,075,913	27,924,680	14,649,157

Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-6
U.S. imports for consumption from Japan, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	375,568	(1)	(1)
Forest products	420,391	231	53
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	2,059,928	1	0
Other energy and chemical products	5,863,887	(1)	(1)
Total	7,923,815	1	0
Textiles, apparel, and footwear:			
Textiles and textile products	486,142	294	183
Medical apparel	62,788	(1)	(1)
Mens' and boy's suits and sports coats	1,036	(1)	(1)
Mens' and boy's coats and jackets	906	(1)	(1)
Mens' and boy's trousers	1,552	(1)	(1)
Women's and girls' trousers	11,456	(1)	(1)
Shirts and blouses	2,332	(1)	(1)
Women's and girls' suits, skirts, and coats	14,578	(1)	(1)
Women's and girls' dresses	1,354	(1)	(1)
Robes, nightwear, and underwear	1,180	(1)	(1)
Hosiery	8,030	(1)	(1)
Foundation garments	24	(1)	(1)
Gloves, including gloves for sports	5,616	(1)	(1)
Headwear	21,227	(1)	(1)
Other wearing apparel and accessories	19,371	(1)	(1)
Footwear and parts	2,373	17	0
Total	639,965	311	183
Minerals and metals:			
Steel mill products	1,378,829	12	11
Copper and related products	147,492	28,619	19,278
Aluminum mill products	87,721	11,028	5,801
Builders' hardware	39,369	(1)	(1)
Other metal products	3,255,801	2,465	74
Total	4,909,211	42,124	25,165
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	5,666	12	9
Jewelry	13,524	(1)	(1)
Motor vehicle and other furniture	136,071	(1)	(1)
Lamps and lighting fixtures	24,301	(1)	(1)
Other miscellaneous manufactured articles	2,578,747	3,518	344
Total	2,758,309	3,530	353
Machinery and equipment:			
Air conditioning equipment	855,433	(1)	(1)
Commercial machinery	121,027	79	36
Household appliances, including heating and drying equipment	276,288	79	36
Centrifuges, filtering and purifying equipment, and pumps for liquids	574,231	11	11
Semiconductor equipment, robots, and other equipment	1,195,495	516	270
Taps, cocks, valves, and similar devices	460,906	41	25
Electric motors, generators, and related equipment	826,321	448	180
Electrical transformers, static converters, and inductors	460,720	(1)	(1)

See notes at end of table.

Table B-6—*Continued*
U.S. imports for consumption from Japan, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Powered handtools and parts thereof	257,203	468	51
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	189,743	(1)	(1)
Wiring harnesses for motor vehicles and other insulated electrical conduits	238,336	20	2
Miscellaneous machinery and equipment	6,507,428	25,240	2,728
Total	11,963,132	26,900	3,338
Transportation equipment:			
Aircraft engines and gas turbines	294,425	39	24
Internal combustion piston engines	3,135,804	38,249	4,400
Construction, mining, and industrial vehicles	1,285,078	112,729	25,136
Certain motor-vehicle parts	4,332,867	6,885	978
Primary cells and batteries, and electric storage batteries	790,936	9,287	940
Ignition starting, lighting, and other electrical equipment	745,843	(1)	(1)
Rail locomotives and rolling stock	71,525	59,203	7,819
Automobiles, trucks, buses, and bodies and chassis of the foregoing	26,861,622	7,193,343	109,087
Aircraft, spacecraft, and related equipment, except engines	750,582	9	7
Ships, tugs, pleasure boats, and similar vessels	81,913	(1)	(1)
Motorcycles and miscellaneous vehicles and transportation related equipment	1,294,298	367	1
Total	39,644,892	7,420,110	148,393
Electronic products:			
Office machines	3,054,899	14	7
Telephone and telegraph apparatus, including optical fiber	1,494,323	9,913	2,272
Microphones, loudspeakers, audio amplifiers, and combinations thereof	251,484	104	35
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	1,753,541	(1)	(1)
Records, tapes, compact discs, computer software, and other media, whether or not recorded	1,061,819	(1)	(1)
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,105,072	3,478	36
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	989,281	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	2,311,447	57,689	5,990
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	721,378	(1)	(1)
Electrical circuit apparatus	2,515,056	5,911	949
Semiconductor devices	8,631,175	142,004	69,932
Computer hardware	13,918,576	37,799	2,383
Photographic equipment and supplies	1,751,736	(1)	(1)
Medical and optical goods, including ophthalmic goods	1,881,167	34,835	1,930
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	185,561	5,393	3,190
Watches, clocks, and timing devices	768,453	1,530	257
Measuring, testing, controlling, and analyzing instruments	1,568,647	4,691	441
Total	43,963,615	303,363	87,423
Special provisions	2,163,358	(1)	(1)
Grand total	114,762,256	7,796,570	264,908

[1] Less than $500.

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-7
U.S. imports for consumption from Germany, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	786,836	(1)	(1)
Forest products	560,109	(1)	(1)
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	735,246	(1)	(1)
Other energy and chemical products	4,959,784	21,892	11,282
Total	5,695,031	21,892	11,282
Textiles, apparel, and footwear:			
Textiles and textile products	387,586	68	33
Medical apparel	15,955	(1)	(1)
Mens' and boy's suits and sports coats	6,383	(1)	(1)
Mens' and boy's coats and jackets	1,566	1	0
Mens' and boy's trousers	1,756	1	0
Women's and girls' trousers	8,068	(1)	(1)
Shirts and blouses	11,719	59	54
Women's and girls' suits, skirts, and coats	44,402	(1)	(1)
Women's and girls' dresses	7,047	(1)	(1)
Robes, nightwear, and underwear	1,354	(1)	(1)
Hosiery	4,730	(1)	(1)
Foundation garments	234	(1)	(1)
Gloves, including gloves for sports	3,165	(1)	(1)
Headwear	2,825	(1)	(1)
Other wearing apparel and accessories	18,223	(1)	(1)
Footwear and parts	67,734	161	10
Total	582,747	289	96
Minerals and metals:			
Steel mill products	1,169,162	(1)	(1)
Copper and related products	188,814	(1)	(1)
Aluminum mill products	191,854	(1)	(1)
Builders' hardware	46,956	(1)	(1)
Other metal products	1,701,579	7,093	2,732
Total	3,298,366	7,093	2,732
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	17,343	(1)	(1)
Jewelry	29,605	(1)	(1)
Motor vehicle and other furniture	130,964	(1)	(1)
Lamps and lighting fixtures	42,314	4	4
Other miscellaneous manufactured articles	625,793	1,378	380
Total	846,019	1,382	384
Machinery and equipment:			
Air conditioning equipment	318,048	2,261	85
Commercial machinery	118,861	(1)	(1)
Household appliances, including heating and drying equipment	269,215	4,235	551
Centrifuges, filtering and purifying equipment, and pumps for liquids	659,953	120	54
Semiconductor equipment, robots, and other equipment	290,299	(1)	(1)
Taps, cocks, valves, and similar devices	375,347	41	13
Electric motors, generators, and related equipment	318,665	(1)	(1)
Electrical transformers, static converters, and inductors	157,582	(1)	(1)

See notes at end of table.

Table B-7—*Continued*
U.S. imports for consumption from Germany, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Powered handtools and parts thereof	149,242	(1)	(1)
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	94,200	(1)	(1)
Wiring harnesses for motor vehicles and other insulated electrical conduits	89,893	18	5
Miscellaneous machinery and equipment	5,625,716	56,220	4,609
Total	8,467,020	62,896	5,317
Transportation equipment:			
Aircraft engines and gas turbines	685,755	33	2
Internal combustion piston engines	786,447	161,922	11,630
Construction, mining, and industrial vehicles	496,458	(1)	(1)
Certain motor-vehicle parts	1,047,114	4,635	1,466
Primary cells and batteries, and electric storage batteries	22,861	(1)	(1)
Ignition starting, lighting, and other electrical equipment	207,275	24,147	9,781
Rail locomotive and rolling stock	34,770	(1)	(1)
Automobiles, trucks, buses, and bodies and chassis of the foregoing	8,347,245	7,102,444	105,505
Aircraft, spacecraft, and related equipment, except engines	202,822	(1)	(1)
Ships, tugs, pleasure boats, and similar vessels	10,253	(1)	(1)
Motorcycles and miscellaneous vehicles and transportation related equipment	161,119	164	37
Total	12,002,117	7,293,346	128,421
Electronic products:			
Office machines	103,967	(1)	(1)
Telephone and telegraph apparatus, including optical fiber	87,093	2,287	860
Microphones, loudspeakers, audio amplifiers, and combinations thereof	35,035	(1)	(1)
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	32,156	(1)	(1)
Records, tapes, compact discs, computer software, and other media, whether or not recorded	181,460	13	1
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	54,529	(1)	(1)
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	72,369	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	8,235	(1)	(1)
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	92,201	321	91
Electrical circuit apparatus	811,078	135	31
Semiconductor devices	585,113	52	29
Computer hardware	650,235	226	163
Photographic equipment and supplies	293,698	464	71
Medical and optical goods, including ophthalmic goods	1,272,129	20,245	2,798
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	52,171	(1)	(1)
Watches, clocks, and timing devices	59,780	0	0
Measuring, testing, controlling, and analyzing instruments	948,815	3,603	689
Total	5,340,063	27,346	4,734
Special provisions	1,636,378	(1)	(1)
Grand total	39,214,686	7,414,243	152,966

[1] Less than $500.

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-8
U.S. imports for consumption from Malaysia, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	200,879	(1)	(1)
Forest products	238,445	(1)	(1)
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	72,414	(1)	(1)
Other energy and chemical products	585,291	(1)	(1)
Total	657,705	0	0
Textiles, apparel, and footwear:			
Textiles and textile products	60,457	(1)	(1)
Medical apparel			
Mens' and boy's suits and sports coats			
Mens' and boy's coats and jackets	75,018	568	9
Mens' and boy's trousers	60,260	2,072	33
Women's and girls' trousers	45,482	165	1
Shirts and blouses	301,026	11,981	610
Women's and girls' suits, skirts, and coats	47,267	181	4
Women's and girls' dresses	36,858	(1)	(1)
Robes, nightwear, and underwear	20,800	(1)	(1)
Hosiery	4	(1)	(1)
Foundation garments	2,058	(1)	(1)
Gloves, including gloves for sports	594,091	(1)	(1)
Headwear	5,435	(1)	(1)
Other wearing apparel and accessories	53,825	15	1
Footwear and parts	2,688	141	24
Total	1,305,270	15,122	681
Minerals and metals:			
Steel mill products	26,411	(1)	(1)
Copper and related products	21,169	(1)	(1)
Aluminum mill products	552	(1)	(1)
Builders' hardware	5,587	(1)	(1)
Other metal products	211,767	2	2
Total	265,486	2	2
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	10,534	(1)	(1)
Jewelry	37,936	(1)	(1)
Motor vehicle and other furniture	395,599	(1)	(1)
Lamps and lighting fixtures	20,190	(1)	(1)
Other miscellaneous manufactured articles	385,181	(1)	(1)
Total	849,440	(1)	(1)
Machinery and equipment:			
Air conditioning equipment	91,467	(1)	(1)
Commercial machinery	3,392	(1)	(1)
Household appliances, including heating and drying equipment	99,739	(1)	(1)
Centrifuges, filtering and purifying equipment, and pumps for liquids	2,973	(1)	(1)
Semiconductor equipment, robots, and other equipment	4,730	(1)	(1)
Taps, cocks, valves, and similar devices	2,620	(1)	(1)
Electric motors, generators, and related equipment	21,900	280	119
Electrical transformers, static converters, and inductors	106,178	5,038	814
Powered handtools and parts thereof	954	(1)	(1)

See notes at end of table.

Table B-8—*Continued*
U.S. imports for consumption from Malaysia, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Machinery and equipment—*Continued*			
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	2,006	94	47
Wiring harnesses for motor vehicles and other insulated electrical conduits	32,774	12	11
Miscellaneous machinery and equipment	11,008	(1)	(1)
Total	379,741	5,423	991
Transportation equipment:			
Aircraft engines and gas turbines	11,461	(1)	(1)
Internal combustion piston engines	1,031	(1)	(1)
Construction, mining, and industrial vehicles	230	(1)	(1)
Certain motor-vehicle parts	5,688	12	10
Primary cells and batteries, and electric storage batteries	11,497	(1)	(1)
Ignition starting, lighting, and other electrical equipment	1,593	779	627
Rail locomotive and rolling stock	3,473	(1)	(1)
Automobiles, trucks, buses, and bodies and chassis of the foregoing			
Aircraft, spacecraft, and related equipment, except engines	302	(1)	(1)
Ships, tugs, pleasure boats, and similar vessels	5,188	4,153	773
Motorcycles and miscellaneous vehicles and transportation related equipment	9,251	(1)	(1)
Total	49,715	4,944	1,410
Electronic products:			
Office machines	148,693	(1)	(1)
Telephone and telegraph apparatus, including optical fiber	769,363	21	5
Microphones, loudspeakers, audio amplifiers, and combinations thereof	142,056	(1)	(1)
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	1,373,052	(1)	(1)
Records, tapes, compact discs, computer software, and other media, whether or not recorded	71,111	2,626	378
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,341,612	21	16
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	240,285	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	70,932	(1)	(1)
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	137,118	31,661	4,918
Electrical circuit apparatus	148,948	1,430	770
Semiconductor devices	5,134,972	2,316,764	1,104,437
Computer hardware	3,700,638	1,439	768
Photographic equipment and supplies	181,967	(1)	(1)
Medical and optical goods, including ophthalmic goods	31,806	346	226
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	1,717	(1)	(1)
Watches, clocks, and timing devices	24,232	(1)	(1)
Measuring, testing, controlling, and analyzing instruments	58,296	2,011	1,048
Total	13,576,798	2,356,320	1,112,567
Special provisions	247,336	(1)	(1)
Grand total	17,770,816	2,383,194	1,116,035

[1] Less than $500.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-9
U.S. imports for consumption from Dominican Republic, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	492,750	16	8
Forest products	4,489	(1)	(1)
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	37,111	94	41
Other energy and chemical products	6,825	172	111
Total	43,936	266	153
Textiles, apparel, and footwear:			
Textiles and textile products	34,352	17,421	13,067
Medical apparel	10,247	267	24
Mens' and boy's suits and sports coats	86,058	74,318	54,562
Mens' and boy's coats and jackets	15,319	11,327	6,320
Mens' and boy's trousers	459,586	453,278	245,762
Women's and girls' trousers	196,442	192,601	114,298
Shirts and blouses	249,960	187,710	137,215
Women's and girls' suits, skirts, and coats	183,536	176,765	111,383
Women's and girls' dresses	7,519	6,563	4,111
Robes, nightwear, and underwear	273,749	264,066	166,520
Hosiery	4	(1)	(1)
Foundation garments	153,464	152,708	109,702
Gloves, including gloves for sports	13	10	7
Headwear	48,641	1,671	1,026
Other wearing apparel and accessories	88,004	79,644	57,959
Footwear and parts	253,911	72,244	49,740
Total	2,060,806	1,690,593	1,071,697
Minerals and metals:			
Steel mill products	622	(1)	(1)
Copper and related products	5,164	(1)	(1)
Aluminum mill products	15	(1)	(1)
Builders' hardware	7,832	(1)	(1)
Other metal products	159,361	6,826	5,330
Total	172,994	6,826	5,330
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	29,082	1,323	944
Jewelry	114,407	24,698	22,808
Motor vehicle and other furniture	5,413	(1)	(1)
Lamps and lighting fixtures	37	(1)	(1)
Other miscellaneous manufactured articles	22,380	6,906	2,971
Total	171,319	32,927	26,722
Machinery and equipment:			
Air conditioning equipment	20	(1)	(1)
Commercial machinery	434	(1)	(1)
Household appliances, including heating and drying equipment	45	(1)	(1)
Centrifuges, filtering and purifying equipment, and pumps for liquids	4	(1)	(1)
Semiconductor equipment, robots, and other equipment	10	(1)	(1)
Taps, cocks, valves, and similar devices	9	(1)	(1)
Electric motors, generators, and related equipment	574	558	257

See notes at end of table.

Table B-9—*Continued*
U.S. imports for consumption from Dominican Republic, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Electrical transformers, static converters, and inductors	17,737	16,011	10,245
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	4	(1)	(1)
Wiring harnesses for motor vehicles and other insulated electrical conduits	8,078	2,660	2,175
Miscellaneous machinery and equipment	509	(1)	(1)
Total	27,424	19,229	12,677
Transportation equipment:			
Aircraft engines and gas turbines	5	(1)	(1)
Internal combustion piston engines	6	(1)	(1)
Construction, mining, and industrial vehicles	3	(1)	(1)
Certain motor-vehicle parts	8	(1)	(1)
Primary cells and batteries, and electric storage batteries	21	(1)	(1)
Ignition starting, lighting, and other electrical equipment	4,572	(1)	(1)
Aircraft, spacecraft, and related equipment, except engines	(1)	(1)	(1)
Ships, tugs, pleasure boats, and similar vessels	(1)	(1)	(1)
Motorcycles and miscellaneous vehicles and transportation related equipment	0	(1)	(1)
Total	4,616	0	0
Electronic products:			
Office machines	48	(1)	(1)
Telephone and telegraph apparatus, including optical fiber	4,031	11	9
Microphones, loudspeakers, audio amplifiers, and combinations thereof	3	(1)	(1)
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	35	(1)	(1)
Records, tapes, compact discs, computer software, and other media, whether or not recorded	20	(1)	(1)
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	393	92	62
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	(1)	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	5	3	2
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	47,577	3,254	1,743
Electrical circuit apparatus	163,966	94,682	60,234
Semiconductor devices	781	164	57
Computer hardware	543	9	4
Photographic equipment and supplies	27	(1)	(1)
Medical and optical goods, including ophthalmic goods	295,726	248,106	185,071
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	15	5	2
Watches, clocks, and timing devices	4	(1)	(1)
Measuring, testing, controlling, and analyzing instruments	8,537	8,003	1,551
Total	521,713	354,328	248,736
Special provisions	81,546	(1)	(1)
Grand total	3,581,593	2,104,185	1,365,313

[1] Less than $500.
Note—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-10
U.S. imports for consumption from the Philippines, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	706,439	(1)	(1)
Forest products	106,736	11	1
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	42,199	(1)	(1)
Other energy and chemical products	31,157	(1)	(1)
Total	73,356	0	0
Textiles, apparel, and footwear:			
Textiles and textile products	80,787	1,618	546
Medical apparel	558	(1)	(1)
Mens' and boy's suits and sports coats	16,362	0	0
Mens' and boy's coats and jackets	94,419	560	16
Mens' and boy's trousers	125,751	1,919	54
Women's and girls' trousers	101,894	873	15
Shirts and blouses	371,492	1,351	24
Women's and girls' suits, skirts, and coats	170,784	2,317	77
Women's and girls' dresses	143,180	2,993	96
Robes, nightwear, and underwear	75,313	10,616	622
Hosiery	3,291	(1)	(1)
Foundation garments	66,159	40,317	15,996
Gloves, including gloves for sports	80,076	3,743	428
Headwear	51,480	6	0
Other wearing apparel and accessories	268,048	17,722	349
Footwear and parts	83,789	47	0
Total	1,733,381	84,082	18,224
Minerals and metals:			
Steel mill products	2,096	(1)	(1)
Copper and related products	273	(1)	(1)
Aluminum mill products	(1)	(1)	(1)
Builders' hardware	1,208	(1)	(1)
Other metal products	84,443	(1)	(1)
Total	88,020	0	0
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	153,858	4	1
Jewelry	6,298	(1)	(1)
Motor vehicle and other furniture	168,918	(1)	(1)
Lamps and lighting fixtures	38,209	(1)	(1)
Other miscellaneous manufactured articles	131,673	193	95
Total	498,957	198	96
Machinery and equipment:			
Air conditioning equipment	2,441	(1)	(1)
Commercial machinery	119	(1)	(1)
Household appliances, including heating and drying equipment	1,094	69	17
Centrifuges, filtering and purifying equipment, and pumps for liquids	978	(1)	(1)
Semiconductor equipment, robots, and other equipment	219	(1)	(1)
Taps, cocks, valves, and similar devices	6,733	(1)	(1)
Electric motors, generators, and related equipment	1,155	(1)	(1)
Electrical transformers, static converters, and inductors	19,444	59	2
Powered handtools and parts thereof	407	(1)	(1)

See notes at end of table.

Table B-10—*Continued*
U.S. imports for consumption from the Philippines, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	15,757	(1)	(1)
Wiring harnesses for motor vehicles and other insulated electrical conduits	233,679	103,487	32,867
Miscellaneous machinery and equipment	2,124	(1)	(1)
Total	284,150	103,615	32,886
Transportation equipment:			
Aircraft engines and gas turbines	7,756	(1)	(1)
Internal combustion piston engines	376	(1)	(1)
Construction, mining, and industrial vehicles	554	(1)	(1)
Certain motor-vehicle parts	16,040	2	2
Primary cells and batteries, and electric storage batteries	6,861	(1)	(1)
Ignition starting, lighting, and other electrical equipment	124	(1)	(1)
Rail locomotive and rolling stock	5	(1)	(1)
Automobiles, trucks, buses, and bodies and chassis of the foregoing	48	(1)	(1)
Aircraft, spacecraft, and related equipment, except engines	2,917	571	158
Ships, tugs, pleasure boats, and similar vessels	285	280	31
Motorcycles and miscellaneous vehicles and transportation related equipment	1,742	(1)	(1)
Total	36,709	854	191
Electronic products:			
Office machines	11,193	(1)	(1)
Telephone and telegraph apparatus, including optical fiber	401,652	(1)	(1)
Microphones, loudspeakers, audio amplifiers, and combinations thereof	36,528	23	15
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	4,224	(1)	(l)
Records, tapes, compact discs, computer software, and other media, whether or not recorded	944	(1)	(1)
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	173,566	1,640	1,548
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	5,911	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	65,599	(1)	(1)
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	92,909	7,799	970
Electrical circuit apparatus	42,088	160	2
Semiconductor devices	2,506,605	1,540,642	712,302
Computer hardware	925,775	6,263	416
Photographic equipment and supplies	57,816	22	21
Medical and optical goods, including ophthalmic goods	28,093	(1)	(1)
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	502	(1)	(1)
Watches, clocks, and timing devices	166,288	59,215	5,912
Measuring, testing, controlling, and analyzing instruments	36,310	187	110
Total	4,556,003	1,615,950	721,296
Special provisions	90 103	(1)	(1)
Grand total	8,173,855	1,804,709	772,694

[1] Less than $500.00
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-11
U.S. imports for consumption from Korea, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	183,740	(1)	(1)
Forest products	132,638	132	0
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	519,425	7	3
Other energy and chemical products	436,358	120	6
Total	955,783	127	10
Textiles, apparel, and footwear:			
Textiles and textile products	777,349	885	89
Medical apparel	798	(1)	(1)
Mens' and boy's suits and sports coats	16,630	159	2
Mens' and boy's coats and jackets	204,748	369	11
Mens' and boy's trousers	35,661	9	0
Women's and girls' trousers	84,373	10,265	49
Shirts and blouses	553,617	3,300	50
Women's and girls' suits, skirts, and coats	215,294	38,651	2,091
Women's and girls' dresses	66,131	10,632	355
Robes, nightwear, and underwear	25,826	(1)	(1)
Hosiery	34,507	(1)	(1)
Foundation garments	2,350	(1)	(1)
Gloves, including gloves for sports	22,816	(1)	(1)
Headwear	45,671	(1)	(1)
Other wearing apparel and accessories	225,066	2,671	41
Footwear and parts	339,980	183,174	10,190
Total	2,650,815	250,115	12,878
Minerals and metals:			
Steel mill products	570,972	32	27
Copper and related products	15,735	17	0
Aluminum mill products	3,458	(1)	(1)
Builders' hardware	24,045	(1)	(1)
Other metal products	604,036	1,276	176
Total	1,218,245	1,325	203
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	197,200	8,648	8
Jewelry	148,627	85	26
Motor vehicle and other furniture	46,624	(1)	(1)
Lamps and lighting fixtures	30,367	(1)	(1)
Other miscellaneous manufactured articles	572,304	2,350	376
Total	995,122	11,083	410
Machinery and equipment:			
Air conditioning equipment	173,170	(1)	(1)
Commercial machinery	18,471	(1)	(1)
Household appliances, including heating and drying equipment	437,601	(1)	(1)
Centrifuges, filtering and purifying equipment, and pumps for liquids	39,575	15,009	5,727
Semiconductor equipment, robots, and other equipment	4,705	(1)	(1)
Taps, cocks, valves, and similar devices	80,928	(1)	(1)
Electric motors, generators, and related equipment	60,743	(1)	(1)
Electrical transformers, static converters, and inductors	114,360	217	41
Powered handtools and parts thereof	2,495	(1)	(1)

See notes at end of table.

Table B-11—*Continued*
U.S. imports for consumption from Korea, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996

(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	70,319	3,712	903
Wiring harnesses for motor vehicles and other insulated electrical conduits	13,522	(1)	(1)
Miscellaneous machinery and equipment	305,422	2,621	384
Total	1,321,312	21,559	7,055
Transportation equipment:			
Aircraft engines and gas turbines	38,739	(1)	(1)
Internal combustion piston engines	15,622	(1)	(1)
Construction, mining, and industrial vehicles	252,763	89	11
Certain motor-vehicle parts	163,792	(1)	(1)
Primary cells and batteries, and electric storage batteries	33,297	(1)	(1)
Ignition starting, lighting, and other electrical equipment	37,878	287	33
Rail locomotive and rolling stock	6,565	(1)	(1)
Automobiles, trucks, buses, and bodies and chassis of the foregoing	1,847,132	380,399	10,491
Aircraft, spacecraft, and related equipment, except engines	58,351	(1)	(1)
Ships, tugs, pleasure boats, and similar vessels	3,857	(1)	(1)
Motorcycles and miscellaneous vehicles and transportation related equipment	20,307	(1)	(1)
Total	2,478,304	380,776	10,534
Electronic products:			
Office machines	57,282	(1)	(1)
Telephone and telegraph apparatus, including optical fiber	227,741	563	88
Microphones, loudspeakers, audio amplifiers, and combinations thereof	143,008	406	204
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	336,623	171	130
Records, tapes, compact discs, computer software, and other media, whether or not recorded	253,423	(1)	(1)
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	245,015	54	38
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	80,226	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	121,088	(1)	(1)
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	122,324	(1)	(1)
Electrical circuit apparatus	210,885	10	6
Semiconductor devices	6,227,651	1,109,724	613,762
Computer hardware	3,856,388	10,674	7,868
Photographic equipment and supplies	49,998	17	17
Medical and optical goods, including ophthalmic goods	147,173	(1)	(1)
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	7,215	(1)	(1)
Watches, clocks, and timing devices	22,943	16	0
Measuring, testing, controlling, and analyzing instruments	43,852	43	35
Total	12,152,835	1,121,679	622,149
Special provisions	442,802	62	0
Grand Total	22,531,596	1,786,858	653,238

[1] Less than $500.

Note.—Because of rounding, figures may not add to the totals shown.

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

Table B-12
U.S. imports for consumption from United Kingdom, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	1,033,322	(1)	(1)
Forest products	701,600	63	29
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	448,538	262	35
Other energy and chemical products	6,573,266	34,251	26,733
Total	7,021,804	34,514	26,768
Textiles, apparel, and footwear:			
Textiles and textile products	341,177	267	85
Medical apparel	7,309	(1)	(1)
Mens' and boy's suits and sports coats	9,420	(1)	(1)
Mens' and boy's coats and jackets	11,606	(1)	(1)
Mens' and boy's trousers	1,919	(1)	(1)
Women's and girls' trousers	5,206	(1)	(1)
Shirts and blouses	33,107	152	1
Women's and girls' suits, skirts, and coats	20,060	(1)	(1)
Women's and girls' dresses	11,077	3	0
Robes, nightwear, and underwear	11,300	(1)	(1)
Hosiery	6,904	(1)	(1)
Foundation garments	2,824	(1)	(1)
Gloves, including gloves for sports	2,353	9	0
Headwear	8,128	4	0
Other wearing apparel and accessories	78,613	67	0
Footwear and parts	152,670	20	2
Total	703,673	522	88
Minerals and metals:			
Steel mill products	455,791	75	34
Copper and related products	56,047	2	0
Aluminum mill products	79,107	(1)	(1)
Builders' hardware	13,213	(1)	(1)
Other metal products	1,484,899	1,682	988
Total	2,089,056	1,759	1,022
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	6,736	(1)	(1)
Jewelry	25,658	54	13
Motor vehicle and other furniture	167,087	(1)	(1)
Lamps and lighting fixtures	14,076	200	140
Other miscellaneous manufactured articles	1,066,081	11,721	10,194
Total	1,279,639	11,974	10,346
Machinery and equipment:			
Air conditioning equipment	239,850	2,604	835
Commercial machinery	41,159	(1)	(1)
Household appliances, including heating and drying equipment	66,674	(1)	(1)
Centrifuges, filtering and purifying equipment, and pumps for liquids	258,038	9,521	3,020
Semiconductor equipment, robots, and other equipment	110,744	99	15
Taps, cocks, valves, and similar devices	195,226	157	136
Electric motors, generators, and related equipment	197,429	25,208	4,614
Electrical transformers, static converters, and inductors	106,235	995	444
Powered handtools and parts thereof	58,313	(1)	(1)

See notes at end of table.

Table B-12—*Continued*
U.S. imports for consumption from United Kingdom, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	21,487	([1])	([1])
Wiring harnesses for motor vehicles and other insulated electrical conduits	47,568	1,019	88
Miscellaneous machinery and equipment	1,627,016	61,256	10,677
Total	2,969,740	100,858	19,830
Transportation equipment:			
Aircraft engines and gas turbines	1,632,226	1,126	421
Internal combustion piston engines	398,806	8	6
Construction, mining, and industrial vehicles	447,441	3,289	719
Certain motor-vehicle parts	348,576	27,437	1,504
Primary cells and batteries, and electric storage batteries	30,343	([1])	([1])
Ignition starting, lighting, and other electrical equipment	46,176	([1])	([1])
Rail locomotive and rolling stock	9,205	([1])	([1])
Automobiles, trucks, buses, and bodies and chassis of the foregoing	1,690,211	1,506,271	51,028
Aircraft, spacecraft, and related equipment, except engines	934,936	9	7
Ships, tugs, pleasure boats, and similar vessels	53,097	11,441	1,659
Motorcycles and miscellaneous vehicles and transportation related equipment	38,138	243	15
Total	5,629,154	1,549,824	55,359
Electronic products:			
Office machines	241,428	([1])	([1])
Telephone and telegraph apparatus, including optical fiber	133,765	1,101	440
Microphones, loudspeakers, audio amplifiers, and combinations thereof	82,683	8	7
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	38,331	([1])	([1])
Records, tapes, compact discs, computer software, and other media, whether or not recorded	110,835	([1])	([1])
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	143,435	490	56
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	71,561	3,814	833
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	27,720	2,248	700
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	289,363	128	47
Electrical circuit apparatus	251,283	529	162
Semiconductor devices	482,389	761	242
Computer hardware	1,945,721	12,675	1,413
Photographic equipment and supplies	292,636	30,076	13,919
Medical and optical goods, including ophthalmic goods	334,772	54	27
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	160,612	537	48
Watches, clocks, and timing devices	9,992	([1])	([1])
Measuring, testing, controlling, and analyzing instruments	727,197	5,822	1,161
Total	5,343,723	58,245	19,055
Special provisions	1,802,154	([1])	([1])
Grand Total	28,573,866	1,757,758	132,497

[1] Less than $500.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-13
U.S. imports for consumption from Sweden, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	232,254	(1)	(1)
Forest products	200,500	(1)	(1)
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	67,366	(1)	(1)
Other energy and chemical products	477,022	(1)	(1)
Total	544,388	0	110
Textiles, apparel, and footwear:			
Textiles and textile products	18,891	(1)	(1)
Medical apparel	1,241	(1)	(1)
Mens' and boy's suits and sports coats	10	(1)	(1)
Mens' and boy's coats and jackets	39	(1)	(1)
Mens' and boy's trousers	96	(1)	(1)
Women's and girls' trousers	128	(1)	(1)
Shirts and blouses	432	(1)	(1)
Women's and girls' suits, skirts, and coats	109	(1)	(1)
Women's and girls' dresses	205	(1)	(1)
Robes, nightwear, and underwear	739	(1)	(1)
Hosiery	448	(1)	(1)
Foundation garments	94	(1)	(1)
Gloves, including gloves for sports	107	(1)	(1)
Headwear	5,145	(1)	(1)
Other wearing apparel and accessories	3,181	(1)	(1)
Footwear and parts	1,861	(1)	(1)
Total	32,724	0	0
Minerals and metals:			
Steel mill products	331,589	(1)	(1)
Copper and related products	52,741	(1)	(1)
Aluminum mill products	27,512	(1)	(1)
Builders' hardware	5,702	(1)	(1)
Other metal products	276,777	(1)	(1)
Total	694,322	0	0
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	465	(1)	(1)
Jewelry	182	(1)	(1)
Motor vehicle and other furniture	61,888	(1)	(1)
Lamps and lighting fixtures	4,096	(1)	(1)
Other miscellaneous manufactured articles	61,707	1,616	196
Total	128,338	1,616	196
Machinery and equipment:			
Air conditioning equipment	25,277	(1)	(1)
Commercial machinery	18,080	(1)	(1)
Household appliances, including heating and drying equipment	149,698	(1)	(1)
Centrifuges, filtering and purifying equipment, and pumps for liquids	111,815	(1)	(1)
Semiconductor equipment, robots, and other equipment	49,069	(1)	(1)
Taps, cocks, valves, and similar devices	28,578	(1)	(1)
Electric motors, generators, and related equipment	26,195	(1)	(1)
Electrical transformers, static converters, and inductors	29,697	(1)	(1)
Powered handtools and parts thereof	104,707	(1)	(1)

See notes at end of table.

Table B-13—*Continued*
U.S. imports for consumption from Sweden, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment—*Continued*			
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	420	(1)	(1)
Wiring harnesses for motor vehicles and other insulated electrical conduits	31,668	7	4
Miscellaneous machinery and equipment	562,441	307	21
Total	1,137,645	314	25
Transportation equipment:			
Aircraft engines and gas turbines	106,286	(1)	(1)
Internal combustion piston engines	114,693	(1)	(1)
Construction, mining, and industrial vehicles	170,534	36,747	440
Certain motor-vehicle parts	228,686	44,135	103
Primary cells and batteries, and electric storage batteries	14,195	(1)	(1)
Ignition starting, lighting, and other electrical equipment	4,678	(1)	(1)
Rail locomotive and rolling stock	42,328	27,177	1,738
Automobiles, trucks, buses, and bodies and chassis of the foregoing	1,948,590	1,647,216	20,197
Aircraft, spacecraft, and related equipment, except engines	244,406	(1)	(1)
Ships, tugs, pleasure boats, and similar vessels	4,471	(1)	(1)
Motorcycles and miscellaneous vehicles and transportation related equipment	8,992	(1)	(1)
Total	2,887,860	1,755,274	22,479
Electronic products:			
Office machines	27,448	(1)	(1)
Telephone and telegraph apparatus, including optical fiber	90,131	(1)	(1)
Microphones, loudspeakers, audio amplifiers, and combinations thereof	4,488	(1)	(1)
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	3,145	(1)	(1)
Records, tapes, compact discs, computer software, and other media, whether or not recorded	9,682	(1)	(1)
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	217,605	595	42
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	3,151	(1)	(1)
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	693	(1)	(1)
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	8,092	(1)	(1)
Electrical circuit apparatus	94,115	(1)	(1)
Semiconductor devices	63,522	(1)	(1)
Computer hardware	155,864	(1)	(1)
Photographic equipment and supplies	28,082	(1)	(1)
Medical and optical goods, including ophthalmic goods	90,698	(1)	(1)
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	12,614	(1)	(1)
Watches, clocks, and timing devices	626	(1)	(1)
Measuring, testing, controlling, and analyzing instruments	109,784	(1)	(1)
Total	919,739	595	42
Special provisions	340,057	(1)	(1)
Grand Total	7,117,826	1,757,800	22,742

[1] Less than $500.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-14
U.S. imports for consumption from Canada, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Agricultural products	8,465,940	732	331
Forest products	19,944,005	21,800	6,574
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	3,660,938	30,558	9,586
Other energy and chemical products	24,870,355	46,072	18,347
Total	28,531,292	76,630	27,933
Textiles, apparel, and footwear:			
Textiles and textile products	1,291,329	13,806	3,446
Medical apparel	41,257	271	259
Mens' and boy's suits and sports coats	176,566	44	28
Mens' and boy's coats and jackets	25,443	114	66
Mens' and boy's trousers	98,766	123	88
Women's and girls' trousers	103,567	39	24
Shirts and blouses	222,653	167	113
Women's and girls' suits, skirts, and coats	79,283	1,853	278
Women's and girls' dresses	34,830	26	16
Robes, nightwear, and underwear	38,516	36	26
Hosiery	35,693	(1)	(1)
Foundation garments	4,169	141	70
Gloves, including gloves for sports	16,914	(1)	(1)
Headwear	31,517	(1)	(1)
Other wearing apparel and accessories	217,431	4,269	2,281
Footwear and parts	102,253	277	18
Total	2,520,187	21,166	6,712
Minerals and metals:			
Steel mill products	2,530,479	190,426	136,367
Copper and related products	1,412,704	59,593	55,157
Aluminum mill pm ducts	888,158	4,943	3,470
Builders' hardware	101,531	(1)	(1)
Other metal products	10,885,077	93,519	27,141
Total	15,817,950	348,481	222,136
Miscellaneous manufactures:			
Luggage, handbags, and flat goods	30,665	4,874	191
Jewelry	114,770	(1)	(1)
Motor vehicle and other furniture	2,902,587	1,137	770
Lamps and lighting fixtures	116,241	6,518	2,287
Other miscellaneous manufactured articles	722,662	9,002	1,267
Total	3,886,925	21,532	4,514
Machinery and equipment:			
Air conditioning equipment	262,770	9,025	2,218
Commercial machinery	236,222	13,825	3,198
Household appliances, including heating and drying equipment	349,667	90,293	20,916
Centrifuges, filtering and purifying equipment, and pumps for liquids	639,787	11,293	3,989
Semiconductor equipment, robots, and other equipment	118,394	557	266
Taps, cocks, valves, and similar devices	308,382	2,169	1,398
Electric motors, generators, and related equipment	420,240	3,233	554
Electrical transformers, static converters, and inductors	289,755	108	43

See notes at end of table.

Table B-14—*Continued*
U.S. imports for consumption from Canada, total and under the production-sharing provisions (PSP) of *HTS* Chapter 98, by commodity groups, 1996
(Thousand dollars)

Commodity group	Total imports	Total under *HTS* PSP	U.S. content
Machinery and equipment-*Continued*			
Powered handtools and parts thereof	35,722	1,202	51
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	108,859	15,465	4,854
Wiring harnesses for motor vehicles and other insulated electrical conduits	433,256	5,608	3,396
Miscellaneous machinery and equipment	4,793,435	1,100,461	22,583
Total	7,996,488	253,238	163,467
Transportation equipment:			
Aircraft engines and gas turbines	1,153,026	241,423	39,784
Internal combustion piston engines	2,572,125	954	417
Construction, mining, and industrial vehicles	636,414	13,906	5,861
Certain motor-vehicle parts	6,916,715	33,822	8,245
Primary cells and batteries, and electric storage batteries	35,997	6,108	2,399
Ignition starting, lighting, and other electrical equipment	174,543	40	30
Rail locomotive and rolling stock	907,611	250,922	103,258
Automobiles, trucks, buses, and bodies and chassis of the foregoing	33,727,331	40,483	23,055
Aircraft, spacecraft, and related equipment, except engines	2,190,944	3,957	2,375
Ships, tugs, pleasure boats, and similar vessels	635,613	37,561	7,192
Motorcycles and miscellaneous vehicles and transportation related equipment	550,262	31,872	10,010
Total	49,500,581	661,049	202,627
Electronic products:			
Office machines	183,259	2,694	153
Telephone and telegraph apparatus, including optical fiber	1,839,789	81,219	54,208
Microphones, loudspeakers, audio amplifiers, and combinations thereof	68,106	14,043	3,369
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	5,392	2	1
Records, tapes, compact discs, computer software, and other media, whether or not recorded	337,242	36	30
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	770,859	445	379
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	116,936	650	366
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	73,905	([1])	([1])
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	300,782	3,595	864
Electrical circuit apparatus	966,879	38,961	13,514
Semiconductor devices	2,104,160	741	326
Computer hardware	3,450,359	5,391	969
Photographic equipment and supplies	273,921	142	77
Medical and optical goods, including ophthalmic goods	243,824	15,299	6,330
Balances, surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	100,798	6,439	1,347
Watches, clocks, and timing devices	13,050	815	202
Measuring, testing, controlling, and analyzing instruments	814,098	3,902	1,397
Total	11,663,359	174,374	83,533
Special provisions	7,971,875	([1])	([1])
Grand Total	156,298,602	1,579,002	617,828

[1] Less than $500.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-15
U.S. imports for consumption under *HTS* heading 9802.00.60, by country and commodity, 1996
(Thousand dollars)

Monitoring Group	Canada	Mexico	Japan	Germany	Netherlands	All other	Total
Steel mill products	181,961	66,122	12	([1])	([1])	3,504	251,599
Copper and related products	58,157	([1])	28,619	([1])	593		87,369
Other metal products	4,881	2,905	([1])	6,989	2,293	8,545	25,613
Other miscellaneous manufactured articles	25	32,545	([1])	([1])	([1])	2,267	34,838
Certain motor-vehicle parts	873	37,412	([1])	23	([1])	80	38,389
All other	14,557	55,003	11,399	21,172	3,542	6,107	111,781
Total	260,455	193,987	40,030	28,184	6,428	20,504	549,588

[1] Less than $500.
Note.—Because of rounding figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-16
U.S. imports for consumption under *HTS* heading 9802.00.90 from Mexico, by commodity, 1995 and 1996

(Thousand dollars)

Monitoring Group	1995	1996
Chemicals, coal, petroleum, natural gas, and related products:		
Fabricated plastic and rubber products	1,112,339	708
Other energy and chemical products	([1])	10
Textiles, apparel, and footwear:		
Textiles and textile products	108,855	96,936
Medical apparel	211,104	176,420
Mens' and boy's suits and sports coats	2,255	9,412
Mens' and boy's coats and jackets	19,386	15,487
Mens' and boy's trousers	652,009	806,111
Women's and girls' trousers	385,486	542,143
Shirts and blouses	554,894	722,011
Women's and girls' suits, skirts, and coats	54,907	91,168
Women's and girls' dresses	27,315	39,096
Robes, nightwear, and underwear	168,928	156,690
Hosiery	1,193	33,117
Foundation garments	127,531	99,775
Gloves, including gloves for sports	5,334	6,872
Headwear	16,057	14,639
Other wearing apparel and accessories	95,940	89,308
Miscellaneous manufactures:		
Luggage, handbags, and flat goods	42,272	68,472
Motor vehicle and other furniture	7,016	7,358
Other miscellaneous manufactured articles	58	10
Machinery and equipment:		
Taps, cocks, valves, and similar devices	([1])	9
Transportation equipment:		
Certain motor-vehicle parts	([1])	23,901
Primary cells and batteries, and electric storage batteries	([1])	28
Electronic products:		
Medical and optical goods, including ophthalmic goods	58	5,750
Measuring, testing, controlling, and analyzing instruments	([1])	4
Special provisions	25	30
Total	2,482,961	3,005,465

[1] Less than $500.
Note.—Because of rounding, figures may not add to the totals shown.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-17
Duty savings from use of the production-sharing provisions (PSP) of *HTS* Chapter 98, by monitoring groups, 1996

Monitoring group	Total value	U.S. content	Percent dutiable	Nominal rate[1]	Effective rate[2]	Duty savings
	Thousand dollars		*Percent*			*Thousand dollars*
Agricultural products	2,560	1,171	54	5	4	44
Forest products	118,333	56,007	53	4	2	2,168
Fabricated plastic and rubber products	183,169	95,504	48	4	2	4,087
Other energy and chemical products	145,335	73,245	50	3	2	2,318
Textiles and textile products	318,880	201,813	37	6	2	12,386
Medical apparel	196,442	146,675	25	5	1	7,514
Men's and boys' suits and sports coats	161,855	85,856	47	23	10	21,435
Men's and boys' coats and jackets	77,763	44,667	43	19	7	9,170
Men's and boys' trousers	1,834,041	1,088,688	41	19	8	216,087
Women's and girls' trousers	1,198,421	721,107	40	20	7	146,712
Shirts and blouses	2,057,892	1,428,466	31	24	7	354,376
Women's and girls' suits, skirts, and coats	721,348	333,636	54	19	10	67,558
Women's and girls' dresses	215,351	90,210	58	15	9	13,738
Robes, nightwear, and underwear	1,291,082	859,377	33	13	4	121,318
Hosiery	165,279	151,802	8	17	1	25,375
Foundation garments	607,628	410,783	32	18	6	75,050
Gloves, including gloves for sports	47,849	32,369	32	18	5	6,137
Headwear	39,438	24,755	37	7	3	1,549
Other wearing apparel and accessories	426,803	254,408	40	15	6	41,341
Footwear and parts	1,678,736	191,716	89	15	12	37,575
Steel mill products	260,219	188,781	27	6	1	10,573
Copper and related products	90,176	75,357	16	4	1	2,694
Aluminum mill products	19,336	11,894	38	4	2	483
Builders' hardware	119,942	61,687	49	5	3	3,211
Other metal products	706,060	318,977	55	4	2	13,251
Luggage handbags and flat goods	122,234	65,986	46	17	8	11,259
Jewelry	72,272	64,959	10	8	1	4,867
Motor vehicle and other furniture	734,323	115,279	84	2	2	2,824
Lamps and lighting fixtures	110,518	76,092	31	7	2	5,495
Other miscellaneous manufactured articles	383,190	112,255	71	5	4	5,004
Air conditioning equipment	414,210	179,092	57	2	1	3,826
Commercial machinery	53,746	20,729	61	3	1	556
Household appliances including heating and drying equipment	455,846	217,648	52	3	2	6,773

See notes at end of table.

Table B-17—*Continued*
Duty savings from use of production-sharing provisions (PSP) of *HTS* Chapter 98, by monitoring groups, 1996

Monitoring group	Total value	U.S. content	Percent dutiable	Nonimal rate[1]	Effective rate[2]	Duty savings
	Thousand dollars		*Percent*			*Thousand dollars*
Centrifuges, filtering and purifying equipment, and pumps for liquids	260,587	172,099	34	2	1	3,912
Semiconductor equipment, robots, and other equipment	4,561	1,014	78	3	2	28
Taps, cocks, valves, and similar devices	406,872	277,048	32	3	1	9,311
Electric motors, generators, and related equipment	859,374	522,087	39	4	2	21,326
Electrical transformers, static converters, and inductors	603,013	288,330	52	3	1	8,867
Powered handtools and parts thereof	205,270	69,669	66	2	1	1,068
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	153,020	80,033	48	4	2	2,571
Wiring harnesses for motor vehicles and other insulated electrical conduits	3,332,141	2,038,045	39	5	2	99,662
Miscellaneous machinery and equipment	606,520	171,684	72	3	2	3,636
Aircraft engines and gas turbines	281,525	72,819	74	4	3	2,498
Internal combustion piston engines (other than aircraft) and other miscellaneous motors and engines	318,270	72,870	77	2	2	1,734
Construction, mining, and industrial vehicles	270,764	47,726	82	1	1	606
Certain motor-vehicle parts	1,874,944	904,683	52	3	2	26,308
Primary cells and batteries, and electric storage batteries	230,915	83,348	64	4	3	3,432
Ignition starting, lighting, and other electrical equipment	331,830	162,101	51	3	1	4,435
Rail locomotive and rolling stock	347,833	115,660	67	13	8	17,292
Automobiles, trucks, buses, and bodies and chassis of the foregoing	23,322,438	2,656,728	89	6	4	467,918
Aircraft, spacecraft, and related equipment, except engines	26,937	17,010	37	2	([3])	359
Ships, tugs, pleasure boats, and similar vessels	153,530	23,853	84	1	1	357
Motorcycles and miscellaneous vehicles and transportation related equipment	134,253	56,067	58	2	1	1,089
Office machines	48,817	25,013	49	3	1	735
Telephone and telegraph apparatus, including optical fiber	213,463	114,543	46	8	4	8,823
Microphones, loudspeakers, audio amplifiers, and combinations thereof	232,479	79,208	66	5	3	3,881
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	117,513	15,782	87	3	2	548

See notes at end of table.

Table B-17—*Continued*
Duty savings from use of production-sharing provisions (PSP) of *HTS* Chapter 98, by monitoring groups, 1996

Monitoring group	Total value	U.S. content	Percent dutiable	Nonimal rate[1]	Effective rate[2]	Duty savings
	Thousand dollars		*Percent*			*Thousand dollars*
Records, tapes, compact discs, computer software, and other media, whether or not recorded	53,122	19,326	64	2	2	474
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	798,563	126,937	84	3	3	4,492
Television receivers, video monitors, cathode ray tubes, and other special purpose tubes	2,624,920	1,031,259	61	5	3	51,745
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	655,836	177,800	73	3	2	5,193
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	285,473	86,860	70	3	2	2,295
Electric capacitors and resistors and electrical circuit apparatus	2,055,643	1,245,151	39	5	2	63,189
Semiconductor devices	8,164,008	4,086,895	50	([3])	([3])	36
Computer hardware	1,296,559	317,787	75	1	1	3,437
Photographic equipment and supplies	100,581	41,617	59	3	2	1,321
Medical and optical goods, including ophthalmic goods	1,051,585	566,138	46	3	1	21,530
Balances, surveying/navigational instruments and drawing/mathematical and calculating and measuring instruments	160,154	20,687	87	5	4	874
Watches, clocks, and timing devices	85,720	22,683	74	8	6	1,978
Measuring, testing, controlling and analyzing instruments	814,891	353,151	57	3	2	9,512
Special Provisions	283	113	60	([3])	([3])	0
Totals	67,514,482	23,964,813	65	6	3	2,093,226

[1]Trade-weighted average rate of duty applicable to the products imported under *HTS* 9802.00.80 for each monitoring group. This is the rate that is applied to the dutiable portion of such imports.

[2]Trade-weighted average rate of duty after accounting for the duty-free U.S.-origin content of imports under provision 9802.00.80.

[3]Less than 0.5 percent.

Note.—Because of rounding figures may not add to the totals shown.

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

APPENDIX C
FEDERAL REGISTER NOTICE REQUESTING COMMENTS

b. The accuracy of Reclamation's estimate of the burden of the collection of information including the validity of the methodology and assumptions used;

c. The quality, utility, and clarity of the information to be collected; and

d. How to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated electronic, mechanical, or other forms of information technology.

Reclamation's intention to seek renewal of this information collection and request for public comment was published in **Federal Register** notice 62 FR 16605, Apr. 7, 1997. No comments were received in response to this notice.

Stan Dunn,

Director, Administrative Service Center.

[FR Doc. 97–19265 Filed 7–22–97; 8:45 am]

BILLING CODE 4310–94–M

INTERNATIONAL TRADE COMMISSION

[Investigation No. 332–237]

Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1993–96 (U.S. Imports Under Production-Sharing Provisions of Harmonized Tariff Schedule Heading 9802)

AGENCY: United States International Trade Commission.

EFFECTIVE DATE: July 17, 1997.

ACTION: Opportunity to submit written statements in connection with the report which covers developments in 1996.

SUMMARY: The Commission has prepared and published annual reports on production sharing under this series since 1986. The Commission plans to publish the next report in December 1997, which will cover U.S. import data on production sharing for 1993–96.

Alternative collection methods for production-sharing trade data are being considered by various government entities to improve this statistical review, as noted in the recently published report. Comments and suggestions regarding this issue are welcome in written submissions as specified below. The latest report for the period 1992–1995 (USITC Publication 3032, April 1997) may be obtained from the ITC's Internet server (http://www.usitc.gov or ftp://ftp.usitc.gov). A printed report may be requested by contacting the Office of the Secretary at 202–205–2000, or by fax at 202–205–2104.

FOR FURTHER INFORMATION CONTACT: Questions about the production-sharing report may be directed to Ralph J. Watkins, Office of Industries (202–205–3492). For information on legal aspects, please contact Mr. William W. Gearhart, Office of General Counsel (202–205–3091). The media should contact Ms. Margaret O'Laughlin, Public Affairs Officer (202–205–1819). Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on (202–205–1810).

Background: The initial notice of institution of this investigation was published in the **Federal Register** of September 4, 1986 (51 F.R. 31729). The report has been published in the current series under investigation No. 332–237 annually since December 1986. The report, originally entitled "Imports Under Items 806.30 and 807.00 of the Tariff Schedules of the United States, 1982–85," has undergone a number of changes in the title to reflect the adoption of the Harmonized Tariff Schedule (HTS) and modifications to the applicable provisions of that schedule.

As in past years, the report will provide an analysis of developments in U.S. imports under the production-sharing provisions of the HTS, focusing on shifts in trade and product mix as well as trends by principal country sources and industry groups. The report will also assess U.S. production generated as a result of foreign assembly, the use of production sharing by foreign manufacturers, the effect of the North American Free Trade Agreement (NAFTA) on U.S. parts producers, and developments in the global integration of specific industries. The report will also contain a special section on the use of maquiladoras in Mexico by Canadian companies and their relationship with parts producers in the United States.

Written Submissions: No public hearing is planned. However interested persons are invited to submit written comments on developments in production-sharing trade. Commercial or financial information that a submitter desires the Commission to treat as confidential must be provided on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. 201.6). All written submissions, except for confidential business information, will be made available in the Office of the Secretary of the Commission for inspection by interested persons. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted to the Commission at the earliest practical date and should be received no later than the close of business on September 2, 1997. All submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street, SW, Washington, DC 20436.

Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at (202) 205–2000.

List of Subjects: Production sharing, foreign assembly, infrastructure, globalization, apparel, NAFTA.

Issued: July 18, 1997

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 97–19399 Filed 7–22–97; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Investigation 332–372]

The Economic Implications of Liberalizing APEC Tariff and Nontariff Barriers to Trade

AGENCY: United States International Trade Commission.

ACTION: Scheduling of public symposium.

EFFECTIVE DATE: July 14, 1997.

SUMMARY: Following receipt on November 1, 1996 of a request from the U.S. Trade Representative (USTR), the Commission instituted investigation No. 332–372, *The Economic Implications of Liberalizing APEC Tariff and Nontariff Barriers To Trade*, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)). The USTR asked that the Commission provide an objective, critical report, based on a symposium to be held by the Commission, on the identification and assessment of the impact of nontariff barriers (NTBs) to trade and investment in APEC and on the general equilibrium modeling of APEC trade liberalization. As indicated in the notice published in the **Federal Register** of December 4, 1996 (61 F.R. 64365) announcing institution of the investigation, the symposium schedule was to be published in a subsequent **Federal Register** Notice.

FOR FURTHER INFORMATION CONTACT: Nancy Benjamin, Office of Economics, at (202) 205–3125. The media should contact Margaret O'Laughlin, Office of External Relations (202–205–1819).