PRODUCTION SHARING: USE OF U.S. COMPONENTS AND MATERIALS IN FOREIGN ASSEMBLY OPERATIONS, 1994-1997

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

USITC PUBLICATION 3146
DECEMBER 1998

INVESTIGATION NO. 332-237

United States International Trade Commission, Washington, DC 20436

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Publication 3146 **December 1998**

NOTE

This report on U.S. production–sharing activity is largely based on official U.S. statistics on imports under the production–sharing provisions (PSP) of HTS Chapter 98. The 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 customs "user fee" — a 0.21 percent ad valorem fee with a $485 per entry cap).

Firms that import articles free of duty, either with an unconditional duty rate of free or under trade preference programs such as the North American–Free Trade Agreement (NAFTA), which replaced the U.S. Canada Free–Trade Agreement (CFTA), or the Caribbean Basin Economic Recovery Act (CBERA), have a greatly reduced incentive to enter those articles under the HTS PSP. Since the CFTA phased out the user fee applicable to U.S. imports from Canada qualifying as originating goods, as of January 1, 1994, only a small percentage of U.S. imports from Canada that contain U.S.–origin components have been entered under HTS PSP. As a result, the reported use of U.S. content in the foreign production of articles for the U.S. market is understated in U.S. statistics, particularly for imports from Canada. Nevertheless, the 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; many importers of duty–free articles from Mexico (a principal production–sharing partner), and certain countries in the Caribbean Basin and Southeast Asia, continue to use these provisions because of their exemption from the user fee on the value of U.S.–origin content.

A 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 NAFTA (0.19 percent ad valorem) is eliminated on July 1, 1999. Until the user fee is eliminated, however, importers of duty–free Mexican products will continue to be exempt from the merchandise processing fee on goods entered under the provisions of HTS general note 12 (concerning NAFTA) by importing under HTS PSP. Currently, many companies with production–sharing operations in Mexico whose products meet the NAFTA rules of origin requirements currently enter their products under both NAFTA and HTS PSP. The value of the 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 1997, 24 percent ($21 billion) of all imports that entered under NAFTA from Mexico were also entered under HTS PSP. As a percentage of total imports, this represents a decline from 1996 mainly because more imports from production–sharing operations are being entered under NAFTA only, particularly in the transportation and machinery sectors, as duty rates are reduced or eliminated. For many companies, the expense of complying with Customs HTS PSP record–keeping requirements exceeds the savings gained by exemption from the user fee. Other companies minimize user fees 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 $485 per entry cap only one time. See appendix A 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.

ABSTRACT

The U.S. International Trade Commission (USITC) reports annually on U.S. import trends under the production-sharing provisions of the Harmonized Tariff Schedule (HTS). The current report focuses on developments in 1997 related to the use of U.S.-made components in foreign assembly plants and places these developments in the context of trends over the past four years. Imports that incorporate U.S.-made components can enter the United States either free of duty (for certain apparel) or at reduced duties under the production-sharing provisions (PSP) of Chapter 98 of the HTS.

Rationalization of production through the use of production-sharing operations has become an increasingly integral part of global efforts to reduce manufacturing costs. 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.

Foreign assembly with U.S.-made components is expanding and continues to be an important competitive strategy for many companies. Despite certain data limitations (see text box note), the Commission's assessment of trade under these provisions currently is the only official source for documenting the use of U.S. components in foreign assembly. A significant amount of imports from production-sharing operations do not enter under the HTS PSP (Chapter 98) 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 (Automotive Parts Trade Act-ATPA or NAFTA), computer equipment and semiconductors from Southeast Asia (enter duty-free on a normal trade relations basis, formerly called Most Favored Nation status), 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, a focus on Mexico's maquiladora industry, including official Mexican statistics (chapter 2), and key industry trends (chapter 3) provide added insights on global developments that affect the competitiveness of U.S. companies in the United States and third markets.

The value of U.S.-made components contained in products entered under the production-sharing provisions of HTS Chapter 98 grew by $2.6 billion (11 percent) to $26.6 billion in 1997, with imports from Mexico accounting for $15.5 billion or 58 percent of the U.S. content in total imports under HTS PSP in 1997. However, a closer approximation of the total value of U.S. origin components used in Mexico's assembly industry is reported by official Mexican statistics as reaching $49.8 billion in 1997 (chapter 2). Total U.S. imports under HTS PSP also increased in 1997, by $11.7 billion (17 percent) over the 1996 level, to $79.2 billion. An additional $23.9 billion in production-sharing imports from Mexico is estimated to have entered separately under NAFTA (chapter 2). The principal products assembled abroad and imported by U.S. producers under the PSP are apparel from Mexico and the Caribbean Basin region; motor vehicles and auto parts from Canada and Mexico; semiconductors from Southeast Asia; and television receivers and electrical circuit apparatus from Mexico. Mexico is the principal source of U.S. imports under the HTS PSP, accounting for 36 percent of the total value of such trade in 1997.

Canada is believed to be the second-largest production-sharing partner with the United States based on the growth in U.S. exports to and imports from Canadian assembly plants.

Apparel is the industry sector most significantly affected by the reductions in duty afforded by use of the HTS PSP. Apparel imports accounted for 59 percent of the total duty savings from the use of HTS PSP in 1997, despite comprising only 15 percent of the total of such imports. The average trade-weighted rate of duty on apparel is 16 percent ad valorem (compared with about 3 percent for other products), thus increasing the economic incentive for U.S. apparel producers to use the production-sharing provisions. In addition, as a result of NAFTA, a provision was established in HTS Chapter 98 that permits apparel assembled in Mexico from U.S.-formed and -cut fabric to be imported free of duty, including the value added by labor in Mexico.

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CHAPTER 1
OVERVIEW AND FINDINGS

Background

Companies worldwide use production sharing to minimize their overall costs and improve competitiveness. This allows rationalization of production by performing a production process or series of processes at different global locations based on inherent efficiencies or reduced costs of the various production inputs.[1] Production sharing can also facilitate access to many foreign markets.[2] It is further used to gain access to certain unique foreign production technology, specialized intermediate inputs and raw materials, and labor skills. In general, production sharing increases interdependency among plants, requiring tight coordination between assembly plants and suppliers of components, materials, and transportation services.

Typically, U.S.-based companies involved in production-sharing activities retain the highly capital-intensive production of parts, subassemblies, and/or major functional elements of a product domestically, while shifting the more labor-intensive final assembly operations to a suitable foreign location. The enhanced overall competitiveness attributable to low-cost foreign assembly allows companies to maintain higher U.S. production and employment levels than might otherwise be possible.[3] This "foreign assembly" type of production sharing is an important competitive strategy for many U.S. producers of goods requiring low-cost, labor-intensive manufacturing processes. However, production-sharing operations are not unique to U.S. companies. For example, companies based in the European Union (EU) take advantage of special tariff provisions that allow duty-free entry of goods processed from EU-origin components and materials. Most EU production sharing involves apparel, auto parts, and electronic products assembled in Central Europe, mainly the Czech Republic, Hungary, Poland, and Slovenia.[4] Companies based in Japan, Korea, and Taiwan use assembly plants in China, Indonesia, Malaysia, the Philippines, and Thailand to reduce their labor costs. As a result, production sharing has become an integral part of global efforts to reduce manufacturing costs.

U.S. imports of goods that are assembled or processed abroad from U.S.-made components or materials (also referred to as the U.S. content) are eligible for a partial exemption of duty under the production-sharing provisions (PSP) of subchapter II, Chapter 98 of the Harmonized Tariff

[1] Examples of factors (inputs) that have an impact on plant location decisions include labor costs, transportation costs, skilled workforce, infrastructure, access to key materials and other industrial inputs, and proximity to strategic markets.

[2] Some companies find it easier to sell into certain markets with high tariffs and other trade barriers by exporting parts and performing final assembly operations in the intended market.

[3] Commission staff routinely monitor the effects of production sharing on U.S. industry and maintain contact with U.S. companies that take part in such arrangements. See ch. 3 for discussions of these operations in various industry sectors.

[4] Under the "outward processing trade" (OPT) tariff provision of EU customs law, the value of EU-origin content in imported articles is free of duty, much like the HTS PSP. For more information on production sharing in Eastern Europe see, "The Assembly Industry in Hungary: Implications of the Use of Production Sharing in Central Europe for U.S. Industries," USITC, *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1993-96*, USITC publication 3077, Dec. 1997.

Schedule of the United States (HTS).[5] These provisions permit a duty exemption on the value of U.S.-made components that are returned to the United States as parts of articles assembled abroad (HTS 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 9802.00.90 was created as a result of 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. For apparel entered under 9802.00.80, only the value of the U.S.-cut fabric pieces and U.S.-made fasteners (buttons and zippers) is free of duty; under 9802.00.90, the value added in Mexico (such as labor and overhead) is also free of duty.[6] During 1997, imports entered under all of the production-sharing provisions of HTS Chapter 98 were valued at $79.2 billion, accounting for 9.2 percent of total U.S. merchandise imports (table 1-1). The value of the U.S.-made components or materials contained in these imports totaled $26.6 billion, representing 34 percent of the total value of U.S. imports entered under the HTS PSP.

Scope of Report

This report provides information on developments in the use of production sharing in 1997. The report concentrates on shifts in both overall trade and product mix, and analyzes recent trends within selected industries and by principal source countries. Although the incentive to use the production-sharing provisions of HTS Chapter 98 for articles entering from Canada and Mexico has diminished as a result of reduction and/or elimination of tariffs and customs user fees under NAFTA, the production-sharing provisions of the HTS will likely remain an important component of the competitive strategies for U.S.-based companies. Key determinants of the future of production-sharing operations include the extent to which U.S. manufacturers will continue to rely on foreign assembly operations,[7] the ways 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.

The HTS PSP have historically provided the principal source of data on the use of U.S.-made components in foreign assembly and other production-sharing operations. However, the merit of using the value of imports under HTS provisions 9802.00.60-9802.00.90 as a proxy for imports from production-sharing operations has diminished somewhat over time, particularly as 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 earlier

[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 9802.00.60 and 9802.00.90 are combined with imports under heading 9802.00.80.

[6] See the section on apparel in ch. 3 for more detail.

[7] Labor costs will be a large part of U.S. manufacturers reliance on foreign assembly. See table 1-6 for a comparison of international hourly labor compensation.

Table 1-1
U.S. imports under HTS 9802.00.60, 9802.00.80, and 9802.00.90 and total imports, 1996 and 1997

Provision	1996	1997	Change 1997 from 1996	Share of total imports under the production-sharing provisions, 1997
	Million dollars		*Percentage*	
Imports under 9802.00.60:				
Dutiable[1]	155	146	-6	29
Nondutiable (U.S.-origin metal)	395	364	-8	71
Subtotal	550	510	-7	1
Imports under 9802.00.80:				
Dutiable[2]	42,551	51,324	21	69
Nondutiable (U.S. origin components)	21,409	23,361	9	31
Subtotal	63,959	74,685	17	94
Imports under 9802.00.90:				
Dutiable[3]	844	1,132	34	28
Nondutiable (U.S.-formed and -cut fabric)	2,161	2,841	31	72
Subtotal	3,005	3,972	32	5
Imports under all production-sharing provisions of HTS Chapter 98:				
Dutiable	43,550	52,602	21	66
Nondutiable (U.S.-made material)	23,965	26,565	11	34
Total	67,514	79,167	17	100
Total U.S. merchandise imports	790,470	862,426	9	(4)

[1] The dutiable portion of imports under provision 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.

[2] 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.

[3] 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.

[4] Not applicable.

Note.—Calculations based on unrounded data.

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

U.S.-Canada Free Trade Agreement (CFTA) and of NAFTA, rather than under HTS PSP.[8] Consequently, U.S. trade data are increasingly underestimating the actual amount of U.S. production-sharing activity, at the same time that foreign assembly using U.S.-made components is expanding (see chapter 3). 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.

[8] Recorded U.S. imports under HTS PSP from Mexico increased by $5.8 billion (25 percent) to $28.9 billion during 1994-97. Such imports as a share of total imports from Mexico declined however, from 47 percent to 34 percent during the same period. In contrast, recorded HTS PSP imports and the U.S. content of such imports from Canada have fallen, in part because CFTA was implemented 5 years before NAFTA, on Jan. 1, 1989. HTS PSP imports from Canada as a share of total U.S. imports from Canada have remained relatively unchanged, at 1 percent, since 1994.

Although official U.S. statistics indicate that 9.2 percent ($79.2 billion) of total U.S. imports ($862.4 billion) entered under HTS PSP in 1997 (table 1-1), USITC staff estimates that the actual share of total imports accounted for by production sharing is more than twice as large. Because most of the production-sharing imports not statistically accounted for originate in Canada and Mexico,[9] data in this report has been adjusted to more accurately reflect the use of U.S.-components and materials in assembly operations in Canada and Mexico.

It is likely that at least one-third of all imports from Canada are manufactured using U.S.-made components or materials. The value of U.S. imports from Canada under the production-sharing provisions peaked in 1989 at $26.5 billion, or 30 percent of total U.S. imports from Canada that year. The actual share of imports from Canada accounted for by products with U.S.-origin content was probably higher than 30 percent because imports of semiconductors assembled in Canada using some U.S. components, but not entering under the production-sharing provisions due to duty-free eligibility under Most-Favored-Nation status in 1989, amounted to $3.9 billion (4.5 percent of total imports from Canada). In addition, imports of motor vehicle and aircraft equipment from Canada not taking advantage of the PSP amounted to approximately $5.5 billion (6.3 percent of total imports from Canada). Such articles were eligible to enter free of duty under the Automotive Products Trade Act of 1965 (APTA) or the Civil Aircraft Agreement, and the only incentive for certain entries under the production-sharing provisions was to avoid the merchandise processing fee at that time of 0.17 percent ad valorem. This merchandise processing fee is no longer applied to qualifying goods from Canada entered under NAFTA. Based on the continuing integration of many manufacturing industries in the United States and Canada, it is unlikely that the share of imports from Canada containing U.S.-origin components and materials has decreased since 1989 and hence production-sharing imports from Canada could have amounted to over $56 billion in 1997 (i.e., one-third of 1997 imports from Canada).

To supplement the analysis of trends in production-sharing imports entering under HTS PSP, most writeups (except apparel) in chapter 3 contain a table showing data on U.S. imports from Mexico that entered separately under NAFTA[10] ("NAFTA only"), as well as total U.S. imports from Canada and from all other sources as a further supplement to the HTS PSP data. For many types of manufactured goods, such as motor vehicles[11] and auto parts,[12] the bulk of U.S. imports from Canada and Mexico are assembled from U.S.-made components, and increasingly, these imports have entered under NAFTA instead of HTS PSP. Combining U.S. imports from Mexico of manufactured goods that were entered under HTS PSP and "NAFTA only"[13] more closely approximates the extent of total imports that were likely manufactured in production-sharing operations; the combined total reached $52.8 billion in 1997, or 62 percent of total U.S. imports from Mexico.

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[9] Also, certain products that are already free of duty upon importation, such as semiconductors, mainly from Southeast Asia, also limit the effectiveness of U.S. official data on HTS PSP imports. See ch. 3 for more detail.

[10] Of the $62.8 billion in U.S. imports from Mexico that were entered under NAFTA in 1997, 33 percent, or $20.8 billion, simultaneously entered under both NAFTA and HTS PSP, while the remaining 67 percent or $42.0 billion was entered separately under NAFTA and did not claim eligibility under HTS PSP (see app. table B-5).

[11] Referred to as "Automobiles, trucks, buses, and bodies and chassis of the foregoing" in the app. B tables.

[12] Including wiring harnesses and other insulated electrical conduits, internal combustion piston engines, ignition, starting, lighting, and other electrical equipment, and certain motor-vehicle parts.

[13] Of the $42.0 billion entered separately under NAFTA, Commission staff estimates that at least $23.9 billion consisted of products that are known to be chiefly manufactured through the assembly of U.S. parts. For more information, see table 2-1.

Use of Official Mexican Data

Official statistics of Mexico's Department of Commerce and Industrial Development (SECOFI)[14] provide an important supplement to official U.S. data on imports from Mexico under the production-sharing provisions. SECOFI statistics indicate that exports to the United States from assembly plants using imported components and materials (including companies registered under the Maquiladora Program[15] as well as those registered under other temporary import programs, such as PITEX[16]) amounted to $76.4 billion in 1997, or 81 percent of total Mexican exports to the United States (table 1-2).

Official Mexican exports to the United States (SECOFI) were valued 11 percent higher than official U.S. imports from Mexico (U.S. Department of Commerce), $94 billion compared with $85 billion in 1997. Possible reasons for this difference include:[17] SECOFI data on Mexican exports are reported as Freight on Board (F.O.B.), which includes stevedoring charges; SECOFI trade data is collected in pesos and converted to U.S. dollars; and articles that are shipped from assembly plants in Mexico to distribution centers in the United States for packaging and export to third-country markets are reported in Mexico as exports to the United States, but they are not reported in the United States as imports for shipments from assembly plants registered under the Maquiladora Program and PITEX.

[14] Global Trade Information Services, Inc., *World Trade Atlas: Mexico Edition, Annual Summary, 1993-1997 (Preliminary)*, issued Mar. 31, 1998.

[15] Maquiladoras (or maquilas) 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 whose original intent was to attract foreign investment to assembly plants in towns along the border with the United States. Recently, there has been a trend for some companies to move or expand these production-sharing facilities into the interior of Mexico as well. See ch. 2 for more information.

[16] The Program for Temporary Importation to Manufacture Exported Products (PITEX) is essentially a maquiladora program for domestic Mexican corporations that devote part of their production capacity to the export market. To qualify under this program, companies must record annual exports of at least $50,000 and such exports must account for at least 30 percent of total sales. See ch. 2 for more information.

[17] Russell Patterson, Global Trade Information, USITC staff telephone interview, Sept. 22, 1998.

Table 1-2
Exports to the United States from Mexico, total and from the maquiladora industry,[1] 1996 and 1997

Product description	Total 1996	Maquila 1996	Total 1997	Maquila 1997	Maquila share of total in 1997
	Million dollars				*Percentage*
Transportation equipment:	18,689	18,392	20,781	20,413	98
Motor vehicles[2]	11,234	11,192	12,099	12,065	100
Ignition wiring harnesses[3]	4,338	4,314	4,844	4,825	100
Certain motor-vehicle parts	2,615	2,502	3,192	3,064	96
All other	502	384	646	459	71
Machinery equipment and electronic products:	28,942	27,863	35,501	34,598	97
Semiconductor devices	1,479	1,470	1,441	1,433	99
Electrical circuit apparatus	2,942	2,875	3,994	3,909	98
Television receivers	4,762	4,750	5,426	5,416	100
Medical goods	727	721	980	969	99
Measuring, testing, controlling, and analyzing instruments	565	515	913	877	96
Electric motors	1,110	1,079	1,219	1,184	97
Valves[4]	466	435	741	697	94
Electric transformers, static converters and inductors	594	563	716	707	99
Air conditioning equipment	684	666	722	710	98
All other	15,613	14,789	19,349	18,696	97
Apparel and other textile articles	3,926	3,379	5,894	5,155	87
Footwear	301	187	400	270	68
Luggage, handbags, and articles of leather	185	162	262	229	87
Furniture	1,585	1,402	2,016	1,736	86
Toys, games, and sporting goods	744	722	867	834	96
Jewelry & other articles of precious metals	660	362	676	438	65
Articles of base metals	563	469	728	629	86
Articles of rubber and plastics	1,815	1,522	2,175	1,911	88
All other	22,934	6,920	24,679	10,175	41
Total	80,344	61,380	93,979	76,388	81

[1] Maquila exports to the United States include exports from companies registered under the Maquiladora Program as well as exports from companies registered under other temporary-import (export-processing) programs, such as PITEX.

[2] Referred to as "Automobiles, trucks, buses, and bodies and chassis of the foregoing," in app. B tables.

[3] Referred to as "Wiring harnesses for motor vehicles and other insulated conduits," in app. B tables, under "Machinery and equipment." Because U.S. imports of ignition wiring harnesses for motor vehicles dominate imports of this product category, ignition wiring harnesses has been included in the transportation totals for this and other tables throughout the text.

[4] Referred to as "Taps, cocks, valves, and similar devices," in app. B tables.

Source: Compiled from official statistics of Mexico's Department of Commerce and Industrial Development (SECOFI).

Report Findings

Production sharing is used by companies to improve the relative price competitiveness of product lines, to keep capital-intensive production in the United States, and to support key markets for exports of U.S. components (see chapter 3). Important findings regarding 1997 developments in the use of production sharing by U.S. industry include:

Aggregate trends

- The value of U.S.-made components contained in imported goods entering under the production-sharing provisions of HTS Chapter 98 continued to grow in 1997 to $26.6 billion, exceeding the 1996 level by $2.6 billion (11 percent). Total U.S. imports under HTS PSP also increased in 1997, by $11.7 billion (17 percent) over the 1996 level, to $79.2 billion. U.S.-origin content accounted for 34 percent of the total value under HTS PSP in 1997 (table 1-1). Plants in Mexico, Canada, and the Caribbean Basin tend to rely more heavily on U.S.-origin components than do factories in other regions.

- Production sharing accounts for a significant share of U.S. trade with Mexico and the Caribbean Basin countries, reflecting the importance of U.S. investment in these countries, and enabling U.S.-based companies to better compete in the global market. Recorded HTS PSP imports from Mexico accounted for 34 percent of total U.S. imports from Mexico in 1997,[18] 62 percent from the Dominican Republic, and 59 percent from Honduras (table 1-3).

- Although official U.S. statistics indicate that 9.2 percent ($79.2 billion) of total U.S. imports were entered under HTS PSP in 1997, overall imports from assembly plants using U.S. components may have accounted for over 20 percent of the total. Official Mexican data show that exports to the United States from assembly plants using parts and materials primarily of U.S. origin were $23.6 billion larger than U.S. imports from Mexico reported under HTS PSP and those entered separately under NAFTA believed to be manufactured in production-sharing operations in 1997 (see chapter 2).

[18] According to statistics of the Government of Mexico, assembly/processing plants using imported components/materials accounted for 81 percent of total Mexican exports to the United States in 1997 (table 1-2).

Table 1-3
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 1997), 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
			Total imports	
Mexico	48,605	61,721	74,179	85,005
Dominican Republic	3,077	3,385	3,582	4,308
Philippines	5,712	6,990	8,174	10,419
Honduras	1,092	1,441	1,797	2,320
Malaysia	13,877	17,401	17,771	17,888
Korea	19,547	24,026	22,532	22,939
Canada	128,753	144,882	156,299	167,881
Costa Rica	1,645	1,842	1,963	2,322
Japan	117,532	122,402	114,762	120,480
El Salvador	608	813	974	1,345
All other	317,437	354,757	388,438	427,519
Total	657,885	739,660	790,470	862,426
			Production-sharing imports under HTS Chapter 98	
Mexico	23,068	24,962	27,925	28,883
Dominican Republic	1,707	1,965	2,104	2,669
Philippines	1,378	1,749	1,805	2,063
Honduras	452	676	981	1,380
Malaysia	1,938	2,778	2,382	1,911
Korea	1,724	1,798	1,787	1,881
Canada	1,663	1,539	1,579	1,511
Costa Rica	623	707	694	851
Japan	10,534	6,069	7,797	15,667
El Salvador	322	497	605	912
All other	15,902	18,139	19,857	21,437
Total	59,311	60,880	67,514	79,167
			U.S. content in imports under HTS Chapter 98	
Mexico	11,608	12,833	14,649	15,483
Dominican Republic	1,109	1,278	1,365	1,737
Philippines	640	785	773	1,058
Honduras	325	480	694	983
Malaysia	968	1,313	1,116	930
Korea	480	600	653	755
Canada	688	605	618	627
Costa Rica	411	472	481	568
Japan	500	360	265	548
El Salvador	175	276	344	544
All other	2,612	3,107	3,006	3,333
Total	19,517	22,110	23,965	26,565

Note.—Calculations based on unrounded data.

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

- Assembly plants using U.S. parts were estimated to account for over one-third ($56 billion) of Canada's exports to the United States in 1997; only $1.5 billion entered under HTS PSP, according to U.S. trade data.

- A significant share of U.S. imports of semiconductor devices (semiconductors) and computer hardware from East Asia are reported to contain U.S. components but are not entered under HTS PSP because the goods are eligible for duty-free entry (see chapter 3).

Principal products

- Growth in the value of U.S. components used in foreign assembly plants during 1996-97, as measured by the U.S. content in HTS PSP imports, reflected increased shipments of apparel from Mexico and the Caribbean Basin; semiconductors from the Philippines; and valves,[19] electrical circuit apparatus, air conditioning equipment, and measuring instruments[20] from Mexico (table 1-4). U.S. producers of these products rely on foreign assembly to reduce their production costs. The upward trend in the total value of HTS PSP imports, despite the marked shift towards importing motor vehicles, auto parts, and television receivers from Mexico under NAFTA, stemmed from continued strong demand for most products in the U.S. market in 1997 (table 1-5).[21] The rise in imports of apparel under the HTS PSP in 1997 reflected the shift in import sourcing from Asia to Mexico and the Caribbean Basin, while the rise in imports of motor vehicles under HTS PSP resulted from a doubling of the value of imported vehicles from Japan that used at least some U.S.-made parts in their assembly.

- The production of apparel and microelectronic components, chiefly semiconductors, accounted for the majority of U.S.-origin content used in foreign assembly operations, accounting for 27 and 22 percent, respectively, of the U.S. content in articles imported under HTS PSP in 1997 (table 1-5). Motor vehicles accounted for an additional 10 percent of the total value of U.S. components used in the assembly of articles imported under HTS PSP, while wiring harnesses and certain other auto parts accounted for 11 percent (tables 1-5 and B-3). Companies that manufacture these products face intense global competition that encourages production sharing, particularly in the labor-intensive, final-assembly phases, to minimize production costs. 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.

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[19] Referred to as "Taps, cocks, valves and similar devices," in app. B tables.

[20] Referred to as "Measuring, testing, controlling, and analyzing instruments" in app. B tables.

[21] Table 1-5 uses data based upon the USITC Major Industry Groupings (MIG groups) which are aggregations of the production-sharing monitoring groups that appear in app. B tables to provide a more concise summary of trends in the past year.

Table 1-4
Summary of principal trade shifts under the production-sharing provisions (PSP) of HTS Chapter 98 in 1997, by selected countries and products, annual change in value of U.S. content and percent, and reasons

Country	Product	Annual change	Reasons[1] for annual change
Mexico	Apparel	Up $729 million (34 percent)	HTS 9802.00.90. This provision (implemented by NAFTA) allows duty-free treatment for apparel sewn from U.S.-formed and -cut fabric.
Dominican Republic	Apparel	Up $285 million (28 percent)	Tax incentives and a foreign-trade zone (FTZ) program, experienced labor force
Honduras	Apparel	Up $284 million (41 percent)	Good port facilities, enhanced telecommunications infrastructure, proactive business community, and low labor costs
Philippines	Semiconductor devices	Up $283 million (40 percent)	New and/or expanded assembly facilities
El Salvador	Apparel	Up $201 million (29 percent)	Political stability and re-investment following civil war; availability of skilled workers
Mexico	Taps, cocks, and valves	Up $154 million (61 percent)	Implementation of NAFTA, and low labor costs
Japan	Motor vehicles	Up $146 million (134 percent)	Sharp increase in U.S. content in cars from Japan, possibly in response to U.S. encouragement of Japanese to purchase more U.S.-origin components
Mexico	Measuring instruments	Up $122 million (36 percent)	Expanding U.S. demand, skilled but low-cost labor
Mexico	Electrical circuit apparatus	Up $85 million (8 percent)	Assembly requires labor intensive assembly process; low labor costs; proximity to the United States
Mexico	Air conditioning equipment	Up $75 million (44 percent)	Proximity to major U.S.-based producers, strong U.S. demand for replacement equipment
Mexico	Ignition wiring harnesses	Down $406 million (21 percent)	Shift to entry under NAFTA instead of HTS PSP
Mexico	Motor vehicles	Down $218 million (9 percent)	Shift to entry under NAFTA instead of HTS PSP
Malaysia	Semiconductors	Down $211 million (19 percent)	Lack of incentive to enter under HTS PSP because semiconductors are duty free

[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, 1996 and 1997

Industry group	U.S. content (duty free)				Ratio of U.S. content value to total value	Total HTS PSP			
	1996	1997	Change 1997 from 1996	Share of total 1997	1997	1996	1997	Change 1997 from 1996	Share of total 1997
	Million dollars			*Percentage*		*Million dollars*			*Percentage*
Apparel	5,526	7,211	1,685	27	63	8,845	11,491	2,646	15
Other textile articles	348	336	-13	1	67	515	504	-11	1
Footwear	192	225	33	1	12	1,679	1,836	157	2
Electrical motors	522	579	57	2	61	859	956	97	1
Wiring harnesses for motor vehicles	2,038	1,638	-400	6	61	3,332	2,684	-648	3
Autos, trucks, and buses	2,633	2,551	-82	10	8	23,209	31,053	7,845	39
Certain auto parts including engines and other electrical apparatus	1,223	1,342	119	5	53	2,756	2,556	-200	3
Motor vehicle seats and other furniture	115	105	-10	([1])	16	734	658	-76	1
Other transportation equipment	357	381	24	1	29	1,328	1,335	6	2
Household appliances and heating ventilation and air conditioning equipment	397	482	85	2	50	870	958	88	1
Filtering and controlling equipment	449	544	95	2	63	667	866	199	1
Transformers	288	382	94	1	50	603	772	169	1
Other machinery	343	403	60	2	36	1,023	1,123	99	1
Television receivers	1,019	1,032	14	4	44	2,599	2,348	-251	3
Radio-TV and telephone equipment except television receivers	633	632	-1	2	23	2,383	2,777	395	4
Computers	318	405	87	2	25	1,297	1,635	339	2
Microelectronic components	5,332	5,929	597	22	54	10,220	10,884	664	14
Medical and scientific instruments	940	1,157	217	4	48	2,027	2,394	368	3
All other manufactured articles	1,291	1,227	-64	5	53	2,568	2,331	-237	3
Special provisions	([2])	4	3	([1])	76	([2])	5	4	([1])
Total	23,965	26,565	2,600	100	34	67,514	79,167	11,652	100

[1] Less than 0.5 percent.
[2] Less than $500,000.

Note.—Calculations based on unrounded data.

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

- U.S. imports of apparel under the production-sharing provisions of HTS Chapter 98 from Mexico and the CBERA countries continued to grow in importance relative to apparel imports from Asia. HTS heading 9802.00.90 (created pursuant to NAFTA in 1994) eliminated tariffs and quotas on garments and other textile articles that are assembled in Mexico from "fabric wholly formed and cut in the United States." As a result, imports of Mexican apparel under HTS PSP continued to rise, increasing by $1.2 billion (39 percent) to $4.2 billion during 1996-97, while the value of U.S. fabric used in the assembly of such apparel rose by $729 million (34 percent) reaching $2.8 billion. U.S. imports from the CBERA countries benefit from guaranteed access levels (GALs) but are subject to duty on the value added offshore. Nevertheless, HTS PSP imports of apparel from the Caribbean Basin also continued to expand, rising by $1.4 billion (28 percent) to $6.4 billion during 1996-97, with an increase of $817 million (25 percent) in the U.S. content level to reach $4.1 billion.

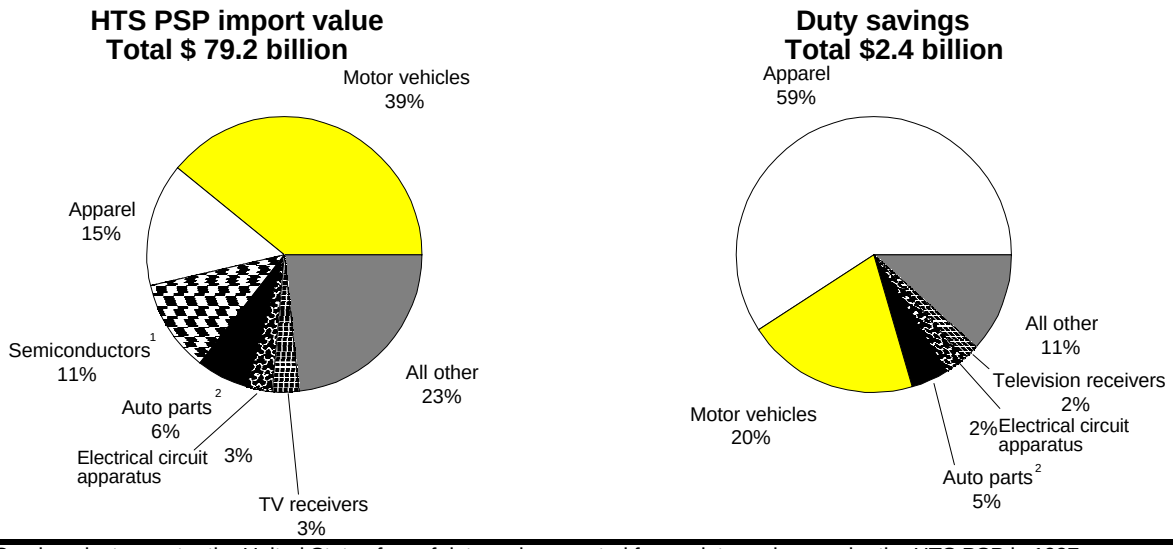
- The average trade-weighted rate of duty on apparel is 16 percent ad valorem (compared with about 3 percent for other products), thus increasing the economic incentive for U.S. apparel producers with foreign sewing operations to import under the production-sharing provisions. Apparel imports accounted for 59 percent of the total duty savings from the use of HTS PSP in 1997, despite comprising only 15 percent of the total of PSP imports by value (figure 1-1). Underwear, trousers, and shirts and blouses have experienced the greatest growth as imports under HTS PSP, mainly because the assembly processes for these items are labor-intensive and consist of standardized runs.

- The transportation sector, more than any other, illustrates the trend of companies importing under NAFTA provisions instead of under HTS PSP. U.S. imports of motor vehicles under HTS PSP rose by 34 percent ($7.8 billion) in 1997, despite an 18-percent decline ($803 million) in such imports from Mexico.[22] However, total U.S. imports of motor vehicles from Mexico increased, mainly because U.S. imports that did not enter under the production-sharing provisions climbed by 22 percent as companies shifted from importing under HTS PSP to NAFTA. According to statistics of the Government of Mexico, all of the motor vehicles (and 96 percent of auto parts) exported to the United States in 1997 were assembled from imported components, mainly of U.S.-origin, with such exports rising by $2.0 billion (11 percent) to $20.4 billion (table 1-3).

- The use of U.S. components in motor vehicles imported from Mexico far exceeds that in vehicles imported from Japan and Germany, the second and third leading sources of vehicles imported under HTS PSP, with Mexico accounting for 82 percent of the total value of U.S.-made parts incorporated in motor vehicles imported under such provisions in 1997. Canada, however, is the most important production-sharing partner for the United States in the transportation sector. U.S.-made parts constituted 56 percent ($2.1 billion) of the value of finished vehicles imported from Mexico under HTS PSP in

[22] U.S. imports of ignition wiring harnesses and certain auto parts from Mexico exhibited the same trend in 1997.

Figure 1-1
U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98, share of total value and duty savings, by selected industries, 1997



[1] Semiconductors enter the United States free of duty and accounted for no duty savings under the HTS PSP in 1997.
[2] Includes certain motor-vehicle parts, internal combustion piston engines, wiring harnesses for motor vehicles, and ignition, starting, and lighting equipment.
Source: Compiled by the U.S. International Trade Commission from official statistics of the U.S. Department of Commerce.

1997, while comprising just 1 percent of the value of vehicles imported from Japan and Germany ($255 million and $100 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 nearly all of these vehicles enter free of duty under NAFTA or APTA[23] rather than under HTS PSP.[24]

! U.S. imports of machinery and equipment[25] under HTS PSP increased by $652 million (16 percent) to $4.7 billion percent in 1997, while the U.S. content in such imports also rose, by $390 million (20 percent) to $2.4 billion. This growth has been sustained by the expanded presence of Asian- and European-owned firms in Mexico, particularly since the implementation of NAFTA. Products that require labor-intensive assembly processes, but use relatively low levels of technology, such as electric motors and generators, valves, electrical transformers, and air conditioning equipment, have experienced the most growth.

[23] For more information on the Automotive Products Trade Act of 1965 (APTA), see ch. 3.
[24] U.S.-made parts accounted for 34 percent of the value of motor vehicles from Canada that entered under the production-sharing provisions prior to the first year of CFTA, $6.4 billion out of $18.7 billion in 1989.
[25] The text on machinery and equipment in chs. 1 and 3 does not include data for wiring harnesses for motor vehicles and other insulated electrical conductors; however, wiring harnesses are classified under machinery and equipment in the app. B tables. See ch. 3 for more information.

Principal countries[26]

- Mexico is the principal source of U.S. imports under the HTS PSP, accounting for 36 percent of the total value of such trade in 1997 and 58 percent of the total value of U.S. components incorporated in imported articles entering under HTS PSP (table 1-2). Yet, when comparing official U.S. and Mexican data, HTS PSP imports captured only 38 percent of total reported Mexican exports to the United States that were assembled from imported U.S. components in 1997 (tables 1-2 and 1-3).[27] The use of NAFTA as the preferred mechanism for the entry of production-sharing imports from Mexico is becoming more common, causing Mexico's share of reported totals of HTS PSP imports to steadily decline since NAFTA's implementation. The second leading supplier of U.S. content under HTS PSP, the Dominican Republic, accounted for 7 percent of the value of U.S. content in 1997, while the Philippines, Honduras, and Malaysia each accounted for 4 percent. The principal products assembled abroad and imported by U.S. producers under HTS PSP are apparel from Mexico and the Caribbean Basin countries; auto parts, motor vehicles, TV receivers, and electrical circuit apparatus from Mexico; and semiconductors from Southeast Asia (figure 1-2).

- Although not reflected in official U.S. statistics, Canada is believed to be the second-largest production-sharing partner with the United States based on the growth in U.S. imports from and exports to Canadian assembly plants. However, there has been a steady decline in reported U.S. imports under HTS PSP from Canada. This decline reflects the staged elimination of duties and the customs user fee under NAFTA, and the predecessor CFTA, thereby reducing the incentive for importers to use these tariff provisions (see appendix A). HTS PSP imports from Canada amounted to $1.5 billion in 1997, compared with a peak of $25.7 billion in 1989.

- Motor vehicles and auto parts (including internal combustion engines) dominate production-sharing trade with Canada, according to industry sources and a Commission study.[28] If it is assumed from an examination of 1989 data that the majority of motor vehicles and parts imported from Canada incorporate some U.S.-origin components and materials in their manufacture, then the value of production-sharing imports from Canada would exceed $50 billion in 1997.[29]

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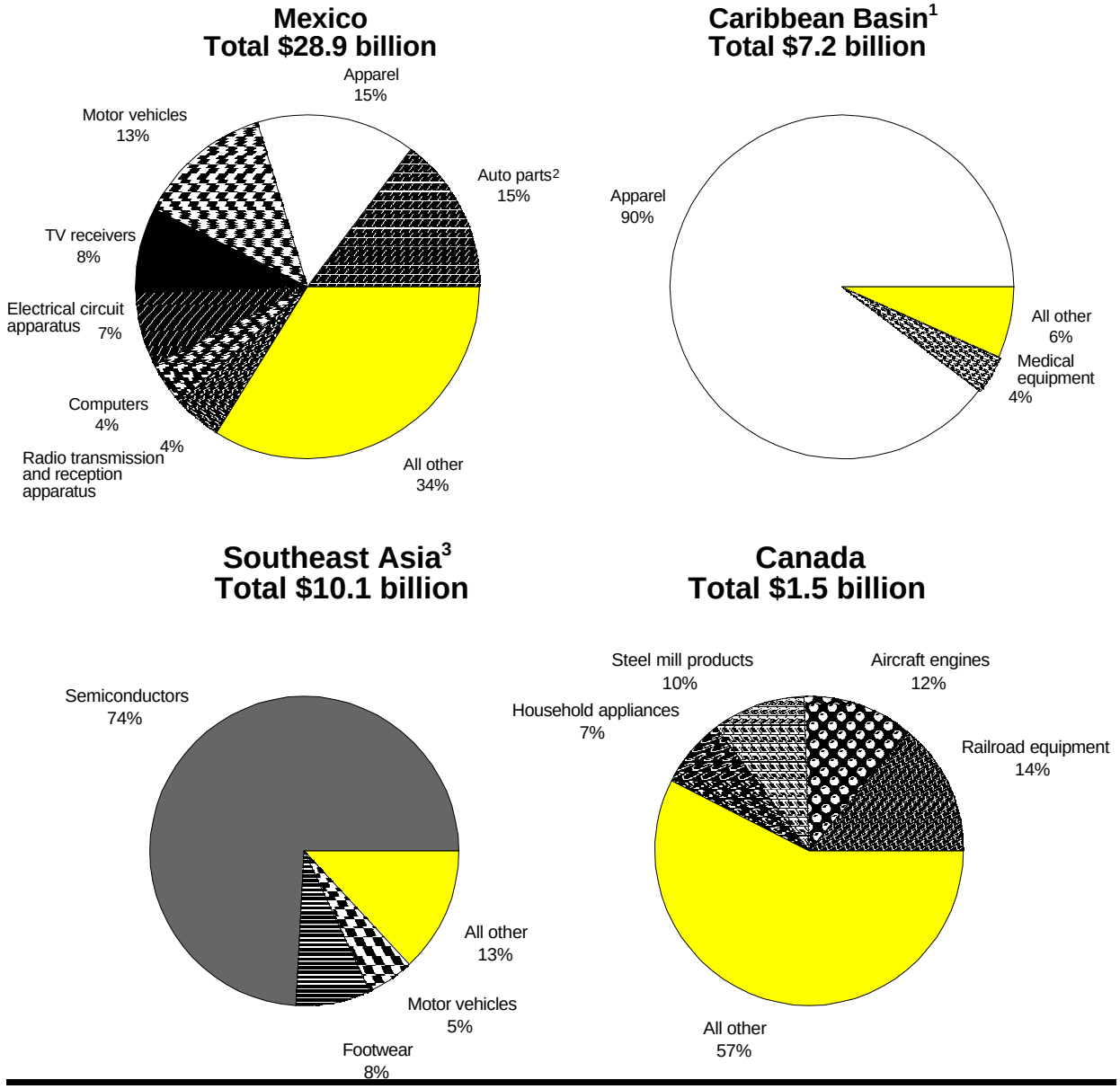
[26] This section highlights trends within Mexico (ch. 2), Canada, the Caribbean Basin, and Southeast Asia (covered in ch. 3 writeups on apparel, semiconductors, motor vehicles, and certain motor-vehicle parts).

[27] Global Trade Information Services, Inc., *World Trade Atlas: Mexico Edition, Annual Summary, 1993-97 (Preliminary)*, issued Mar. 31, 1998.

[28] HTS PSP imports from Canada accounted for 29 percent of total imports from Canada in 1989, with motor vehicles and parts reaching 86 percent of such imports and U.S.-origin content accounting for 33 percent. USITC, *Production Sharing: U.S. Imports Under Harmonized Tariff Schedule Subheadings 9802.00.60 and 9802.00.80, 1986-1989*, publication 2365, Mar. 1991.

[29] Ibid.

Figure 1-2
Comparison of the composition of U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98 from major supplying countries/regions in 1997



[1] Includes those countries that are eligible for preferential duty treatment under the Caribbean Basin Economic Recovery Act (CBERA).
[2] Includes certain motor-vehicle parts, internal combustion piston engines, wiring harnesses for motor vehicles, and ignition, starting, and lighting equipment.
[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.

- For many manufactured products, NAFTA's rules of origin effectively require that key subassemblies or a minimum portion of the value of each article's inputs be of North American origin. As a result, a number of companies have switched from non-North American (particularly Asian) sources to U.S. suppliers for certain components used in their Mexican assembly plants (see chapter 3). The $834-million (6-percent) increase in total recorded U.S. content from Mexico under HTS PSP in 1997 was concentrated in imports of apparel (up by $713 million [29 percent] to $3.2 billion) and electronic products (up by $285 million [7 percent] to $4.2 billion), and offset minor declines in such imports of machinery and of transportation equipment. U.S. imports of machinery and transportation equipment, the majority of which are assembled through production sharing, are increasingly being entered under NAFTA instead of HTS PSP.

- U.S. imports from Mexico under the HTS PSP rose by $958 million (3 percent) in 1997, to $28.9 billion, while estimated production-sharing imports entering separately under NAFTA increased at an even faster pace, by $8.3 billion (52 percent), to $23.9 billion. Official statistics of the Government of Mexico show that exports to the United States from assembly/processing plants using imported components and materials rose by $15.0 billion (24 percent) in 1997 to $76.4 billion (table 1-2). Mexico's imports of components and materials from the United States for use in maquiladora plants grew by $7.9 billion (19 percent) in 1997 to $49.8 billion (table 2-2). Further, components and materials from the United States accounted for 82 percent of total inputs imported into Mexico for use in export-processing plants registered under the Maquiladora and other temporary import programs.

- Increased investment in maquiladora plants can be attributed to (1) the relatively low cost of Mexican labor; (2) duty-free U.S. imports of apparel from Mexico under HTS heading 9802.00.90; (3) expansion of assembly operations in Mexico (using U.S.-origin components) instead of importing from Asia as companies position themselves to take advantage of preferential tariff treatment under NAFTA and of the HTS PSP;[30] (4) recovery of the Mexican economy and the prospect of servicing both the U.S. and Mexican markets directly from maquiladora operations;[31] and (5) the continued strength of U.S. consumer demand.

- Much of the recent growth in the maquiladora industry has been away from the U.S.-Mexico border.[32] Within the interior, companies are taking advantage of reduced rates of worker turnover, good public school systems, a safer environment, and improved access to major Mexican markets such as Mexico City. For example, Guadalajara has become a top location for electronics

[30] Companies operating under Mexico's Maquiladora Program are permitted to sell an increasing share of their production into the domestic market in Mexico, reaching 100 percent in 2001. Companies importing machinery and components from non-North American sources for use in assembly plants will begin paying duties on such imports as of Jan. 1, 2001. In anticipation of these changes, many Asian- and European-owned maquiladoras have switched to U.S. suppliers of components and materials or convinced non-North American suppliers to relocate to the United States or Mexico, or establish additional production facilities in North America.

[31] Companies are also hoping to use Mexico as an export platform to the rest of Latin America.

[32] See ch. 2 for more detail.

firms establishing world-class manufacturing facilities that require solid infrastructure and an educated labor force;[33] while Torreon, Aguascalientes, and Queretaro have attracted auto-parts producers supplying nearby motor vehicle assembly plants. This trend toward the interior has been accelerated by a recent change in laws affecting the maquiladora industry.

- Assembly plants in the interior of Mexico are undergoing structural transformations to a greater degree than maquiladora plants located along the U.S.-Mexico border. Interior firms registered under the Maquiladora Program or PITEX tend to sell more of their production to the domestic Mexican market, and, consequently, are less dependent on exporting to the U.S. market. Such firms tend to use more local (Mexican) sources of components and materials than those located along the border, mainly in an effort to reduce transportation costs and border delays.

- The CBERA countries accounted for 8 percent of U.S. imports under HTS PSP in 1997 and 16 percent of the total U.S. content in PSP imports. Mexico and the Caribbean Basin offer companies comparable low-cost labor and close proximity to U.S. markets, and therefore are in competition for assembly work from U.S. apparel firms (table 1-6). Reduced duties and other trade liberalization measures associated with recent trade agreements, as well as market reforms in Mexico and structural improvements in certain Caribbean countries have enabled U.S. producers of apparel to compete more effectively against low-cost imports from Asia.

- The U.S. content in HTS PSP imports from Southeast Asia rebounded from a decline in 1996, increasing by $404 million (10 percent) to $4.3 billion in 1997. The vast majority of these imports (92 percent) were semiconductors. HTS PSP shipments from the Philippines, Korea, and Taiwan rose during 1997, while declines were recorded in such shipments from Malaysia and Thailand. Industry representatives believe that production sharing for semiconductors takes place on a much larger scale than is actually reported under HTS PSP (see chapter 3). Because there is no tariff on imports of semiconductors, importers have little incentive to report the U.S. content under the HTS PSP and would incur record-keeping costs to do so. As a result, trends in data on semiconductors reported under HTS PSP may not reflect actual trends in the use of production sharing in the semiconductor industry.

[33] "Mexico Comes on Strong," *Electronics Buyers News Online*, found at Internet address http://techweb.cmp.com/ebn/outsource/1066main.html, retrieved Apr. 29, 1998.

Table 1-6
Average hourly compensation costs for production workers in manufacturing, by selected regions and countries, 1994-97

Region/country	1994	1995	1996	1997	Change in 1997 from 1993	Change in 1997 from 1996
	U.S. dollars				Percentage	
North America						
United States	16.87	17.19	17.70	18.24	8	3
Canada	15.85	16.04	16.66	16.55	4	-1
Mexico	2.47	[1]1.51	[1]1.54	1.75	-30	14
Europe						
Germany	27.03	32.22	31.79	28.28	5	-11
Belgium	23.07	26.65	25.89	22.82	-1	-12
Austria	21.51	25.21	24.66	21.92	2	-11
Sweden	18.62	21.44	24.37	22.24	19	-9
Finland	19.06	24.14	23.56	21.44	12	-9
Denmark	20.30	24.07	24.11	22.02	8	-9
Netherlands	20.80	24.02	23.08	20.61	-1	-11
France	17.63	20.01	19.92	17.97	2	-10
Italy	15.89	16.21	17.73	16.74	5	-6
United Kingdom	12.80	13.67	14.13	15.47	21	9
Ireland	12.39	13.57	13.85	13.57	10	-2
Spain	11.54	12.88	13.51	12.16	5	-10
Greece	7.73	9.17	9.59	([3])	([3])	([3])
Portugal	4.60	5.37	5.58	5.29	15	-5
Poland	1.37	2.09	([3])	([3])	([3])	([3])
Asia						
Japan	21.35	23.82	20.91	19.37	-9	-7
Singapore	6.29	7.33	8.32	8.24	31	-1
Korea	6.40	7.29	8.09	7.22	13	-11
Taiwan	5.55	5.92	5.93	5.89	6	-1
Hong Kong[4]	4.61	4.82	5.14	5.42	18	5
Malaysia	1.68	1.88	([3])	([3])	([3])	([3])
Philippines	1.15	1.32	([3])	([3])	([3])	([3])
Asian NIEs	5.78	6.40	6.87	6.65	15	-3

[1] The drop in Mexican wage rates in 1995 was due primarily to the peso devaluation in 1994.
[2] Less than 0.5 percent.
[3] Not available.
[4] Hong Kong Special Administrative Region of China.

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.

Organization

The remainder of this report consists of two chapters and two appendixes. Chapter 2 focuses on recent developments in Mexico's assembly industry. Chapter 3 provides 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 1997, including information on production-sharing imports under NAFTA. The analysis profiles the competitive strategies and level of U.S.-origin component production that are employed in foreign assembly operations. Appendix A of this report explains the preferential tariff treatment for qualifying goods applicable to the Caribbean Basin, the trade agreement status of HTS PSP, the relationship of the production-sharing provisions to preferential tariff and special access programs, and the applicability of customs merchandise processing fees. Appendix B provides statistical tables on U.S. imports under HTS PSP for the principal supplying countries and by product category. Also included in appendix B of this year's report is table B-18 showing the total and U.S. content value in 1996/1997 by Standard Industrial Classification (SIC) codes and two tables, B-19 and B-20, showing U.S.-Mexico production-sharing trade based on official Mexican statistics.

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CHAPTER 2
RECENT DEVELOPMENTS IN MEXICO'S ASSEMBLY INDUSTRY

The assembly industry in Mexico, commonly called the maquiladora industry, continued its evolution in 1997 from labor-intensive assembly plants along the U.S.-Mexico border to well-integrated manufacturers. Although many of these plants are now located in the interior of Mexico, they continue to be largely dependent on suppliers in the United States for parts. However, they are increasingly purchasing components from satellite companies that have established their own assembly and processing plants in Mexico to offer "just-in-time" supplies to the maquiladora industry. This evolution has accelerated for the following reasons:

- Changes to Mexican laws governing assembly industries that permit foreign-owned assembly plants greater access to the Mexican market;
- North American Free-Trade Agreement (NAFTA) provisions that remove quotas and tariffs on U.S. imports of apparel made in Mexico,[1] guarantee increased access to the Mexican market from maquiladora plants, and encourage Asian- and European-owned assembly plants to use parts made in North America;
- Efforts to reduce labor and training costs through plant relocation from the border region to the interior of Mexico where labor turnover rates are lower and education levels of workers are higher; and
- Growth in the Mexican market,[2] which makes production close to Mexican population centers more cost-effective.

This chapter examines the use of production sharing in Mexico in the context of total U.S.-Mexico trade and examines the evolution of Mexico's maquiladora industry in greater detail.

[1] See the section on "Apparel" in ch. 3 for a discussion of the effects of NAFTA on the apparel industry in Mexico.

[2] According to the Government of Mexico, real GDP grew by 7 percent in 1997.

The Role of Production Sharing in U.S.-Mexico Trade

According to official U.S. statistics, Mexico was the second-leading market for U.S. exports in 1997 ($68 billion) and the third-leading source of U.S. imports ($85 billion). Mexican assembly plants that export (and use components of U.S. origin) under the Maquiladora Program and PITEX [3] constitute a large share of that total trade. Many U.S. importers of products from these assembly operations are shifting from using the HTS production-sharing provisions to take advantage of less cumbersome, duty-free provisions under NAFTA. Combining U.S. imports from Mexico that were entered under HTS PSP ($28.9 billion) with those entered separately under NAFTA, however, more closely approximates the extent of total imports that were likely manufactured in Mexico's production-sharing operations. Of the $42.0 billion in products from Mexico entered under NAFTA alone, Commission staff estimate that at least $23.9 billion consisted of products that are known to be chiefly manufactured through the assembly of U.S.-made parts (table 2-1). Therefore, U.S. imports from Mexican assembly operations totaled nearly $53 billion in 1997, or about 62 percent of total imports from Mexico. According to official statistics of Mexico's Department of Commerce and Industrial Development (SECOFI), production-sharing trade accounted for 81 percent ($76.4 billion of $93.9 billion) of Mexico's exports to the United States (table 1-2). The $23.6-billion difference between official U.S. and Mexican data on production-sharing trade is partially attributable to the inclusion in Mexican data of U.S. material inputs not eligible for duty-free treatment under the HTS PSP.[4]

Although data on the U.S. content in imports entered under NAFTA cannot be ascertained from U.S. statistics to provide a more comprehensive figure for components of U.S. origin used in Mexico's assembly operations, official Mexican statistics help to provide an order of magnitude for the total value of such U.S. components. According to SECOFI, Mexican imports of parts, materials, and machinery from the United States for use in the assembly industry accounted for 82 percent of total imports under the temporary import programs, growing by $7.9 billion (19 percent) to nearly $50 million in 1997 (table 2-2). Official Mexican import statistics include U.S. machinery imported for use in the maquiladora industry; U.S. materials, such as paints, lubricants, and plastics that are not eligible for duty-free treatment under HTS PSP; U.S. materials that have undergone processing in Mexico that would disqualify them for eligibility for duty-free treatment under HTS PSP, such as metal stamping, injection molding, and cutting fabric; and U.S.-made components that are imported for assembly into products that the maquiladora industry then sells to customers

[3] The Program for Temporary Importations to Manufacture Exported Products (PITEX) was established by the Maquiladora Decree of May 3, 1990. The PITEX program was initially designed to allow Mexican companies that were producing for both the Mexican and export markets to import materials and machinery free of duty provided that they were used in making goods to be exported. Access to the Mexican market under PITEX also afforded foreign investors certain advantages (e.g., to be registered as a national supplier to the automotive industry) not originally available under the Maquiladora Program and most foreign-owned assembly plants located in the interior of Mexico are now registered under PITEX rather than the Maquiladora Program. PITEX companies, however, are subject to certain taxes (such as asset taxes) in Mexico for which plants registered in the Maquiladora Program are exempt. Assembly plants can operate only under either the Maquiladora Program or PITEX, but not both programs at the same time. By mid-1998, each program had approximately 3,000 companies registered.

[4] See pg. 1-5 for more discussion of the benefits and limitations of using the official Mexican data.

Table 2-1
U.S. imports from Mexico entered separately under NAFTA in 1997

(Million dollars)

Commodity group	Value
Motor vehicles	8,398
Textiles and apparel	2,135
Computer hardware	1,700
Ignition wiring harnesses	1,538
Internal combustion piston engines	1,589
Certain motor-vehicle parts	1,490
Television receivers	1,207
Motor vehicle seats and other furniture	1,245
Telephone and telegraph apparatus	738
Radio transmission and reception apparatus	672
Electrical transformers, static converters, and inductors	605
Electrical circuit apparatus	504
Household appliances	472
Television apparatus (except receivers and monitors)	417
Air conditioning equipment	334
Electric motors and generators	311
Measuring, testing, controlling, and analyzing instruments	308
Taps, cocks, valves, and similar devices	193
Total	23,856

Source: Compiled from official statistics of the U.S. Department of Commerce. See app. table B-5 for more information.

Table 2-2
Total imports into Mexico under the temporary import programs (Maquiladora and PITEX), by leading sources, 1994-97

Sources	1994	1995	1996	1997	Percentage of total in 1997
	Million dollars				*Percentage*
United States	26,262	34,127	41,891	49,764	82
Japan	2,264	2,510	2,507	2,357	4
Germany	659	1,100	1,227	1,516	3
Korea	292	430	992	1,151	2
Canada	311	365	559	728	1
China	102	244	289	462	1
Malaysia	134	274	328	404	1
Taiwan	196	330	431	306	[1]
Brazil	226	181	303	300	[1]
France	238	248	250	269	[1]
All other	1,476	1,600	1,936	3,120	5
Total	32,160	41,409	50,713	60,377	100

[1] Less than 1 percent.

Source: Compiled from official statistics of Mexico's Department of Commerce and Industrial Development (SECOFI).

in Mexico or other Latin American countries, instead of exporting to the United States. These data, and the inability to discern U.S. content in imports entered under NAFTA, may largely explain the $34.3-billion difference between the value of the U.S.-origin content of imports under HTS PSP from Mexico and Mexico's recorded imports from the United States of components, materials, and machinery for use in the assembly industry.[5] Only 4 percent of the imported inputs into Mexico's maquiladora industry came from Japan; 3 percent from Germany; and 2 percent from Korea, according to SECOFI.

A rapidly expanding U.S. economy has increased demand for both domestically produced and imported products, including those assembled in Mexico. Growth was particularly strong for imports from Mexico in the transportation equipment, machinery, electronic products, and apparel sectors, with the assembly industry accounting for 98 percent of Mexico's total exports of transportation equipment, machinery, and electronic products to the United States in 1997 (table 1-3). According to SECOFI, exports of transportation equipment (including wiring harnesses) to the United States from maquiladora plants, increased by $2.0 billion (11 percent) in 1997 to $20.4 billion (table 1-3). This growth can be attributed to the increasingly integrated North American motor-vehicle industry, NAFTA's rules of origin that reduced quantitative restrictions and export performance specifications, and liberalized investment rules in Mexico.[6] The U.S. transportation sector, more than any other, has shifted from importing under production-sharing provisions of HTS Chapter 98 to take advantage of the duty-free treatment under NAFTA. Because most apparel from Mexico enters under the HTS PSP rather than separately under NAFTA, apparel accounted for a larger share of imports from Mexico under HTS PSP (15 percent) than it did of Mexico's exports to the United States from the maquiladora industry (7 percent) (figure 2-1).

Machinery and electronic products also contributed significantly to the growth in maquiladora exports to the United States in 1997. This expansion was led by increased exports of television receivers, which rose by $666 million (14 percent) in 1997 to $5.4 billion, according to official Mexican data. Mexico's role as the leading exporter of televisions to the United States was reinforced in 1997, in part as a result of additional foreign direct investment by Samsung in its Tijuana facility to expand production of these products[7] (see chapter 3).

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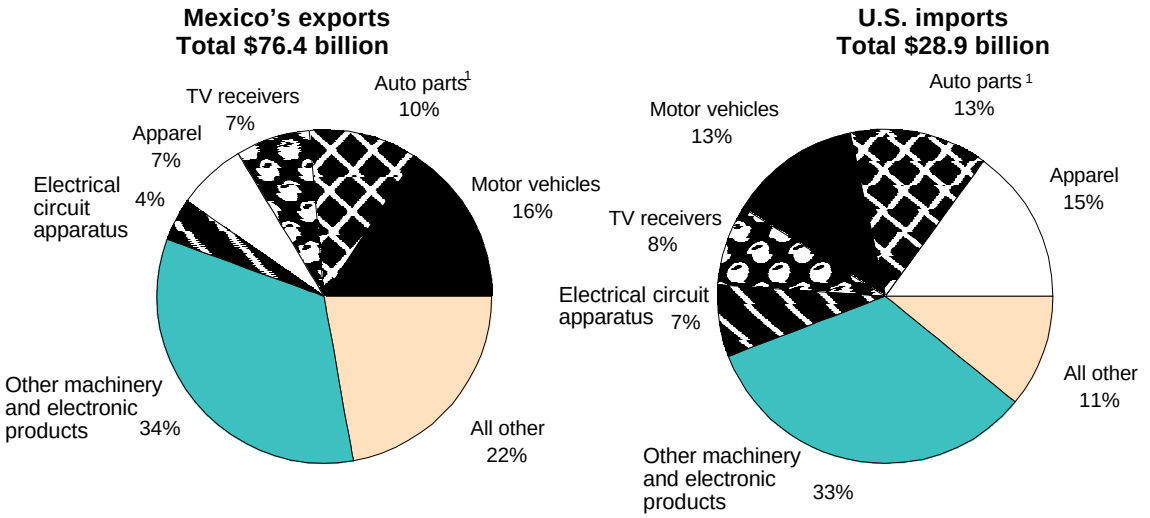
[5] Mexican export data used in last year's annual report on production sharing (covering developments in 1996) did not include data for companies registered under PITEX. Consequently, data in table 1-2 of this year's report showing Mexico's exports to the United States from companies registered under "temporary import programs" in 1996 are $14 billion greater than data appearing in tables 2-1A and 2-1B of last year's report showing exports from companies registered only under the Maquiladora Program.

[6] 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 1997, Canada is 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.

[7] Ulises Hernandez, "Samsung: Competing in the Global Era," *Reporte Infosel*, Week of June 30 to July, 6, 1997, p.18.

Figure 2-1
Mexico: Comparison of Mexico's exports to the United States from its maquiladora industry, and U.S. imports from Mexico under the production-sharing provisions (PSP), 1997



[1]Includes certain motor-vehicle parts and ignition wiring harnesses.

Source: Compiled from official statistics of Mexico Department of Commerce and Industrial Development (SECOFI) and official statistics of the U.S. Department of Commerce.

Temporary Import Programs

Since creating the Maquiladora Program (originally referred to as the Border Industrialization Program) in 1965, the Mexican Government has added temporary importation (TI) programs, allowing foreign-owned manufacturers to locate assembly plants in Mexico with varying degrees of access to the local market. The TI programs allow manufacturers to import free of duty into Mexico raw materials, parts, and components for their assembly and processing operations. The most significant of these additional programs is PITEX (see page 2-2). Approximately 6,000 firms are registered in either the Maquiladora Program or PITEX. Initially, products assembled in the maquiladoras were required to be exported; under NAFTA, however, maquiladoras are allowed to sell an increasing share of their annual production (75 percent in 1998 and 100 percent in 2001) in the Mexican domestic market. [8] However, Mexican import duties must be paid on that portion of non-Mexican industrial inputs used to make goods for consumption in Mexico. With an increasing share of maquiladora production permitted to be sold in the Mexican market, the distinction between plants operating under the Maquiladora Program and those under the PITEX program have become blurred. The vast majority of companies registered in the PITEX program are small-to-medium sized wholly owned Mexican firms operating primarily in the interior of the country in the apparel and auto parts sectors.[9]

[8] The Maquiladora Program's special tax treatment is scheduled to end effective Jan. 1, 2001. Maquiladora plants will be required to pay customs duties on imported inputs that are not of North American origin, even if the assembled products are exported.

[9] USITC staff interview with Mexican SECOFI PITEX officials on July, 15, 1998.

Program Growth

Despite Mexico's commitment under NAFTA to eliminate Maquiladora Program benefits for non-North American inputs, the number of companies reported to be operating under the Maquiladora Program has grown from 2,122 plants when NAFTA was implemented in 1994 to 2,985 plants (41 percent) during the first quarter in 1998.[10] The bulk of the maquiladora industry growth has been away from the U.S.-Mexico border, primarily in the apparel, electronics, motor vehicle, and auto parts sectors. The number of plants located in the interior has grown from fewer than 300 in 1994 to 1,092 as of April 1998 (figure 2-2). According to Government of Mexico (GOM) officials, an average of 50 new maquiladoras per month commenced operations in 1997. Such growth continued during the first quarter of 1998.

Several factors have fueled recent growth in the maquiladora industry.[11] These include (1) low labor costs in Mexico, (2) rising labor costs in Asia- -until the financial crisis in 1997, (3) proximity to the U.S. market, (4) continued duty-free entry of imported inputs, (5) dramatically lowered operating costs in the maquiladora industry, following the devaluation of the Mexican peso in December 1994,[12] (6) investments by Asian and European companies to supply the North American market from facilities in Mexico, and (7) a strong U.S. market for the types of goods assembled in the maquiladora industry. Although labor costs in the maquiladora industry have risen steadily since 1995 as the Mexican economy continues to recover from the peso crisis, these costs are still below their peak prior to the devaluation in 1994 (figure 2-3). Because the GOM was under tremendous pressure to generate hard currencies to cover the dollar-based international debt obligations following the devaluation of the peso, it instituted legal reforms and embarked on an aggressive campaign to attract FDI, particularly in maquiladora manufacturing.[13] Finally, the economic recovery in Mexico, in the years since the peso crisis, has attracted investments by companies seeking to supply the United States, Mexican, and Latin American markets from a single assembly plant.

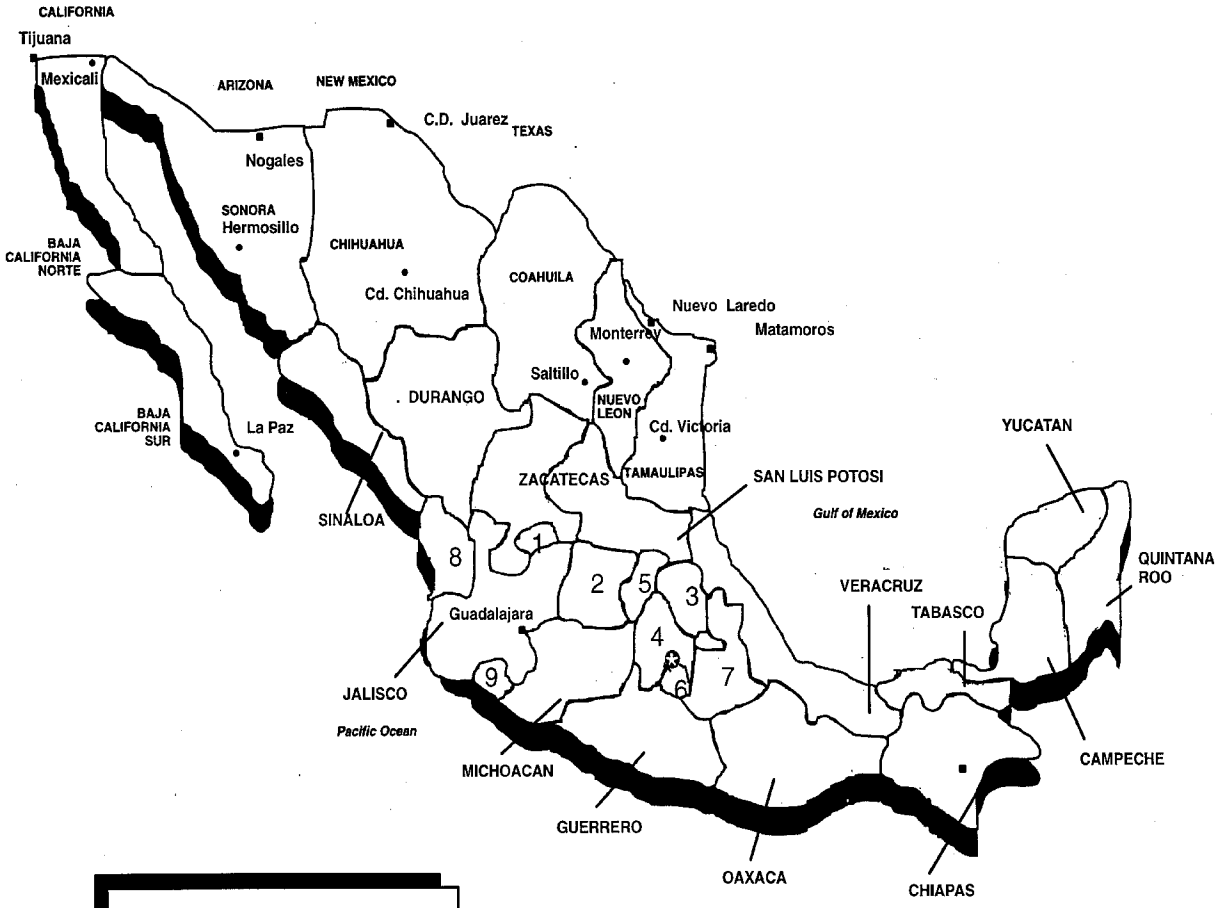
[10] Instituto Nacional de Estadistica, Geografia e Informatica (INEGI), "Maquiladora Scoreboard," *Twin Plant News*, Aug. 1998, p. 54.

[11] For more information on historical trends in the maquiladora industry, see Ralph Watkins, "Origins and Growth of the Maquiladora Industry," *Production Sharing: U.S. Imports Under Harmonized Tariff Schedule Provisions 9802.00.80, 1989-92*, USITC pub. 2729, Feb. 1994.

[12] Maquiladora budgets are typically denominated in U.S. dollars, while incurring operating costs, such as salaries, rents, and monthly utilities, are in Mexican pesos.

[13] SECOFI, *Decree for Promotion and Operation of the Maquiladora Export Industry*, June 1, 1998.

Figure 2-2
Map of Mexican States: Number of plants and employment in the maquiladora industry



Interior States

1. AGUASCALIENTES
2. GUANAJUATO
3. HIDALGO
4. ESTADO DE MEXICO
5. QUERETARO
6. MORELOS
7. TLAXCALA
8. NAYARIT
9. COLIMA
* DISTRITO FEDERAL (Mexico City)

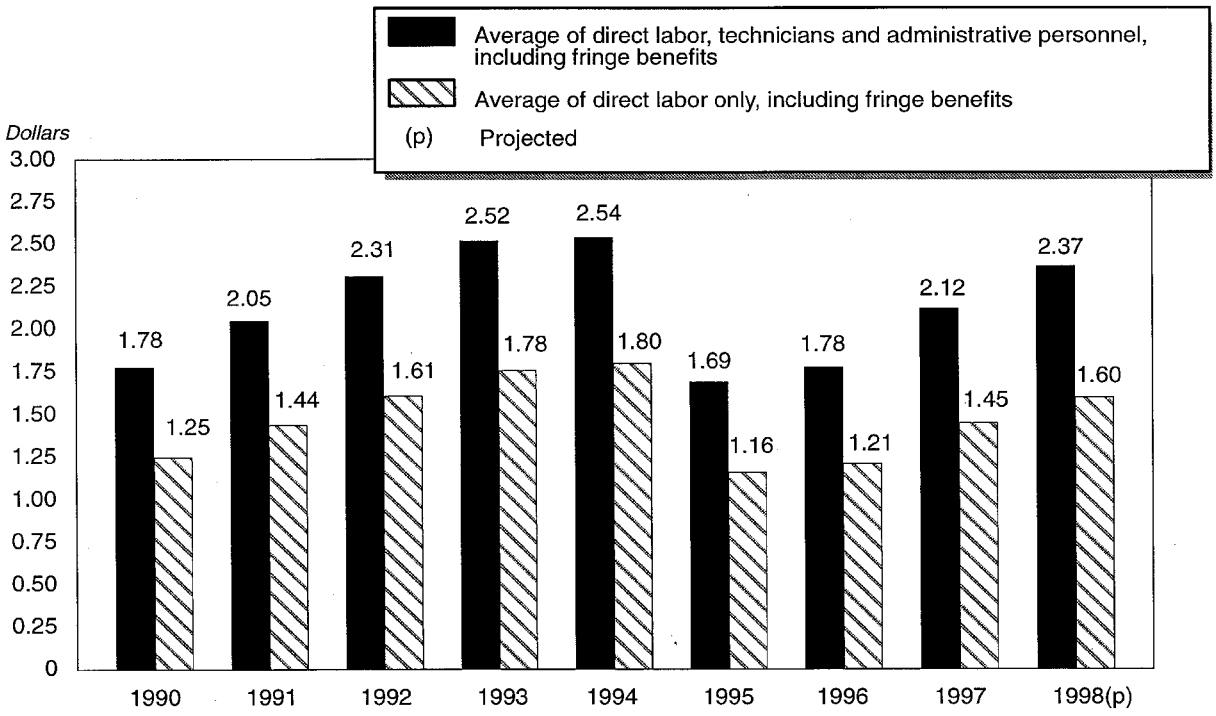
Totals[1]

	No. of Maquilas	No. of Employees
Total for border	1,810	654,767
Total for interior	1,092	328,505
Total plants and employment	2,902	983,272

[1] As of Apr. 1998.

Source: Map reprinted by permission of Mike Patten, Managing Editor, *Twin Plant News.* Not all major cities are listed. Data are derived from the Direccion de Industria Maquiladora y Devolucion de Inpuestos, Mexican Commerce Ministry (SECOFI).

Figure 2-3
Maquiladora labor costs (average hourly wages), 1990-98(p)



Source: Ciemex Wefa, May 1998.

Sources of Components and Materials for the Maquiladora Industry

The TI programs have fostered a continuous flow of inputs from foreign suppliers into Mexico and a corresponding stream of finished goods destined for the United States. The vast majority of these inputs are purchased from U.S. suppliers, followed distantly by components from Asia (table 2-2). Many Asian and European companies have recently invested in parts production facilities in Mexico so products from their assembly plants in Mexico will qualify for duty-free entry into the U.S. market under NAFTA.[14] With tariff exemption for non-North American inputs scheduled to end effective January 1, 2001, industry representatives expect companies that still rely heavily on components made in Asia or Europe in their assembly operations to encourage more supplying companies to shift production to or establish additional production capacity in Mexico.[15]

[14] For more information about tariff treatment on inputs imported into Mexico for the maquiladora industry, see Carlos Angulo, "Maquilas and NAFTA—What Happens After," *Twin Plant News,* Jan. 1, 1997, pp. 19-21; and David W. Eaton, "Transformation of the Maquiladora Industry—The Driving Force Behind the Creation of a NAFTA Regional Economy," *National Law Center for Inter-American Free Trade,* 1997., p. 2.

[15] David W. Eaton, "Supply Gap—Mexico Sourcing Needed," *Twin Plant News,* June 1998, p. 40.

According to the GOM, less than 2 percent of inputs used annually by companies registered in the Maquiladora Program are purchased from Mexican suppliers. Until recently, there have been little or no purchases from Mexican suppliers because of established supplier networks for multinational companies, strict just-in-time (JIT) delivery schedules, rigorous quality standards, and poor highway and rail connections between Mexican industrial centers in the interior of the country and assembly plants along the U.S.-Mexico border.[16] Aside from infrastructure disadvantages, major automotive parts representatives indicate that the domestic Mexican industry does not have the capacity and high investment requirements necessary for product development and testing. The cost of capital in Mexico is still quite high following the devaluation of the peso and banking crisis in 1995, making it difficult for Mexican companies to get loans to establish new facilities.[17] Consequently, most Mexican-owned firms with the potential to make auto parts and other components for foreign-owned assembly plants are not ISO 9001 or QS 9000 certified.[18]

There are many examples of Mexican production-sharing operations of companies based in Asia and Europe that have shifted sourcing of components and other inputs to North American suppliers either to reduce transportation costs and delivery times, qualify for duty-free treatment under NAFTA's rules of origin, or in anticipation of the termination of tariff exemption for imported components. Officials of Japan-based Matsushita (Panasonic) reported that in 1991, 98 percent of the firm's components and inputs used to assemble televisions in Tijuana came from Japan, 1 percent from other Asian sources, and 1 percent from NAFTA countries. By 1997, the share of the firm's purchased components made in North America had risen to 28 percent, while those imported from Japan had dropped to 37 percent; 35 percent came from other Asian countries.[19] Philips Electronics, based in the Netherlands, assembles televisions in Juarez and markets them under the Magnavox brand. Philips purchases 50 percent of its components, raw materials, and various inputs from U.S.-based suppliers, nearly 20 percent from Mexican vendors, and imports another 30 percent from Asia.[20] According to officials of Conductores Tecnological (Contec) de Mexico, a subsidiary of Sumitomo Electric Wiring Systems and producer of wiring harnesses for electrical systems, 70 percent of its components and raw materials used in Juarez to make motor-vehicle wiring harnesses are purchased from sources in the United States or Canada, and 30 percent from Asia.[21]

Daewoo Electronics, based in Korea, manufactures washing machines and refrigerators in the interior city of Queretaro, Mexico.[22] Most of these major household appliances are sold in the Mexican market, but significant shares of production are also exported to the United States and Central America. Although Daewoo continues to import high-value refrigeration compressors from Korea, two of its primary Korean suppliers (Shinwoo Mexico and Seimex) have recently established production plants in Mexico to supply low-cost, high-volume metal stampings and plastic injection components. In an attempt to minimize its transportation

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[16] USITC staff interview with officials of GM Delphi in Queretaro, Mexico, on May 19, 1998.

[17] U.S. Department of State telegram No. 005964, June 23, Mexico City.

[18] Ibid. ISO 9001/QS 9000 are internationally recognized quality management standards for the motor vehicle and parts industries, respectively.

[19] Garance Burke, "High Growth, Mixed Profile in Electronics—Assembly Plants Are Booming and Winning in the Battle with Asian Exporters," *El Financiero International Ed*, Jul 28-Aug 3, 1997, p. 16.

[20] Maria Tovar, "Maquila Supplier Trends After NAFTA," Solunet Corp. of El Paso, TX, Jan. 1997.

[21] Ibid.

[22] USITC staff interview with officials of Daewoo Electronics of Mexico in Queretaro, Mexico, on May 18, 1998.

costs, particularly since the Asian financial crisis that has limited its cash flow availability, Daewoo Electronics is planning to procure a greater share of its higher value components (e.g., electric motors) from Mexican vendors.[23]

Maquiladora Investment Grows in Mexico's Interior

As noted earlier, an important factor encouraging multinational companies to establish assembly plants in the interior of Mexico includes increased access to the Mexican market under NAFTA. Companies have also looked to interior locations to reduce turnover rates, and therefore, labor and training costs. Companies have sought out locations with an ample supply of workers with strong local ties, good public school systems, and programs to build housing for maquiladora workers. While companies in the apparel sector seek mainly to minimize labor costs, companies that produce higher technology goods often seek locations in or near cities with universities or technical schools from which the companies can recruit managers and engineers or send employees for advanced training. Foreign-owned plants in the interior of Mexico tend to be clustered in industrial parks in or near large Mexican cities such as Monterrey, Guadalajara, Queretaro, San Luis Potosi, Aguascalientes, Leon, Torreon, and Puebla.

Examples of firms investing in the interior of Mexico are Lucent Technologies, which established facilities in Guadalajara for the production of certain types of telephone equipment instead of importing such equipment from Lucent's operations in Singapore;[24] Kyocera, a component supplier to Lucent Technologies, which moved its production of electronic ringers for telephones from Asia to Mexico;[25] and General Motors, which shifted production of its Chevrolet Swing model from Spain and is now assembling and selling this passenger vehicle in Mexico.[26] Volkswagen AG chose to produce its new Beetle in Mexico rather than Germany primarily because of Mexico's low production-costs, tariff advantages for exporting under NAFTA, and market proximity.[27] The nearly two-dozen parts suppliers that were lured by the German car manufacturer to establish plants in Mexico provide more than half of the components required to produce the new Beetle.[28] In most cases these increases of manufacturing production in Mexico resulted in the increased use of U.S. components.[29]

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[23] Ibid.

[24] USITC staff telephone interview with Mr. Bert Diamondstein, Director of Strategic Planning Mexico, Philips Consumer Electronics, Aug. 25, 1998. Philips Electronics discontinued its joint venture in Guadalajara, Mexico with Lucent Technologies in Sept. 1998.

[25] USITC staff interview with Mr. Curtis Beavers, Director General, Lucent Technologies, Apodaca, Mexico, June, 19, 1997.

[26] USITC staff telephone interview with Mr. John Christman, Director of Maquiladora Industry Services, CIEMEX-WEFA, Mexico City, Aug. 21, 1998.

[27] The first year of production is expected to turn out 120,000 units - 50,000 for the U.S. market, 10,000 for the Mexican market, 8,000 for Canada, with most of the remaining units destined for Europe and Japan. ""VW Struggles with New Beetle Assembly," *Automotive Industries*, May 1998, p. 56.

[28] Joel Millman, "Mexico Is Becoming Auto-Making Hot Spot," *The Wall Street Journal*, June 23, 1998, p. A 17.

[29] USITC staff interviews with Mr. John Christman, Director of Maquiladora Industry Services, CIEMEX-WEFA, Mexico City, Aug. 21, 1998.

The General Motors pickup and sport utility assembly plant in Silao, Guanajuato, which began production in 1995, is another example of investment in the interior of Mexico.[30] GM was drawn to Guanajuato by its strategic location, recently upgraded infrastructure (e.g., four-lane highways and modern telecommunications systems), a well-trained labor force (mostly young, high school and university-educated workers), ample supply of affordable housing, and low real-estate costs. These factors were complemented by the fact that unions within the State are reportedly focused on cooperation with management and have adopted flexible rules that permit workers to perform a variety of jobs depending on production needs.[31]

In recent years, the Mexican State of Aguascalientes has emerged as one of the leading destinations for investment in the interior. Table 2-3 lists some of the top foreign investors in Aguascalientes, a small state with more than 45 million people within a 500 km radius in the heart of Mexico. Traditionally an agricultural state, Aguascalientes is attracting billions of dollars in new manufacturing investment from producers of motor-vehicle parts, apparel, office equipment, and household goods. These firms typically operate under the PITEX program.[32] According to the U.S. Embassy in Mexico City, roughly 60 percent of all Japanese investment in Mexico is concentrated in Aguascalientes.[33]

Table 2-3
The top investors in the Mexican State of Aguascalientes, 1997

Name of Firm	Origin of Capital	Investment	Main Products	Type of Program
		(Million dollars)		
Nissan	Japan	1,650	Motor vehicles	PITEX
Texas Instruments	U.S.	360	Semiconductors	PITEX
Xerox	U.S.	300	Photocopiers	PITEX
Sealed Power	U.S.	70	Auto parts	PITEX
Nova Textil	Mexico	61	Printed blankets	PITEX
Calsonic	Japan	46	Air conditioners	PITEX
Ideal Standard	U.S.	44	Sanitaryware	PITEX

Source: State Government of Aguascalientes, Republic of Mexico.

Assembly plants in the interior are undergoing greater structural transformation than maquiladora plants along the border. Interior firms registered under PITEX or the Maquiladora Program tend to sell more of their production to the Mexican market and export less to the United States.[34] Because of high transportation costs and delays at ports of entry, assembly plants in the interior tend to produce goods that make greater use of local (Mexican)

[30] GM has two truck assembly plants, one car assembly plant and 29 parts plants in Mexico. With more than 70,000 workers, it is one of Mexico's largest employers.

[31] Chris Woodyard, "Global GM Plants at Strike's Center," *USA Today*, June 19, 1998, p. B-3.

[32] Jonathan Friedland, "One Mexican City Proves It Can Attract Investment, Serve As a National Model," *Wall Street Journal*, July 9, 1998, p. A 15.

[33] Since Nissan began construction of an automobile plant in Aguascalientes in 1981, nine other Japanese companies, all auto parts producers, have established manufacturing facilities in the state. U.S. Department of State telegram No. R1320532, Feb. 1998.

[34] Officials of Daewoo Electronics de Mexico, interviewed by USITC staff, El Marques, Mexico, May 18, 1998.

sources of components and materials than do maquiladora plants along the U.S.-Mexico border.[35] Similarly, facilities in the interior of Mexico tend to be more integrated manufacturers and perform higher technology manufacturing processes (e.g., metal stamping and plastic injection molding) that would disqualify the U.S.-origin content of such products from duty-free entry under the HTS PSP.[36] Some firms have installed plants in the interior in order to be close to Mexican producers of critical materials such as glass and steel. Nevertheless, because many Mexican sources of components are unable to meet quality and delivery requirements, there remains a significant reliance on U.S. suppliers for components.

Recent Reforms to the Maquiladora Program Promote Foreign Investment

Foreign Direct Investment (FDI) in Mexico amounted to $10 billion in 1997.[37] Total maquiladora industry investment in 1997 rose by $174 million (18 percent) over the 1996 level to $1.1 billion. The bulk of this foreign direct investment is concentrated in five Mexican states, Baja California, Nuevo Leon, Jalisco, Queretaro, and Aguascalientes (figure 2-4). The United States accounted for 80 percent of total FDI in Mexico in 1997, followed by Korea (12 percent) and Japan (5 percent).

Over the past two decades, competitive pressures have compelled numerous brand name suppliers throughout the world to shift their emphasis from manufacturing to marketing. Increasingly, such companies are relying on outside contractors to supply much of their demand for manufactured goods. Examples of companies that depend on a web of contract manufacturers include Nike (footwear), Liz Claiborne (apparel), Dell (personal computers), and Wilson (sporting goods). These same competitive forces and restructuring of manufacturing relationships are evident in the maquiladora industry.[38] In order to encourage foreign investment and the involvement of Mexican companies in contract manufacturing and assembly operations in Mexico, the GOM modified the Maquiladora Program in October 1997 to allow contracting firms for maquiladoras (called "indirect exporters" and "submaquiladoras") the same privileges and responsibilities as the maquiladoras themselves.[39] These reforms also make it easier for Mexican-based suppliers to the maquiladora industry to use imported components and other inputs in their manufacturing/assembly operations.

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[35] Officials of NAFTA Ventures, telephone interview by USITC staff, Mar. 26, 1998.

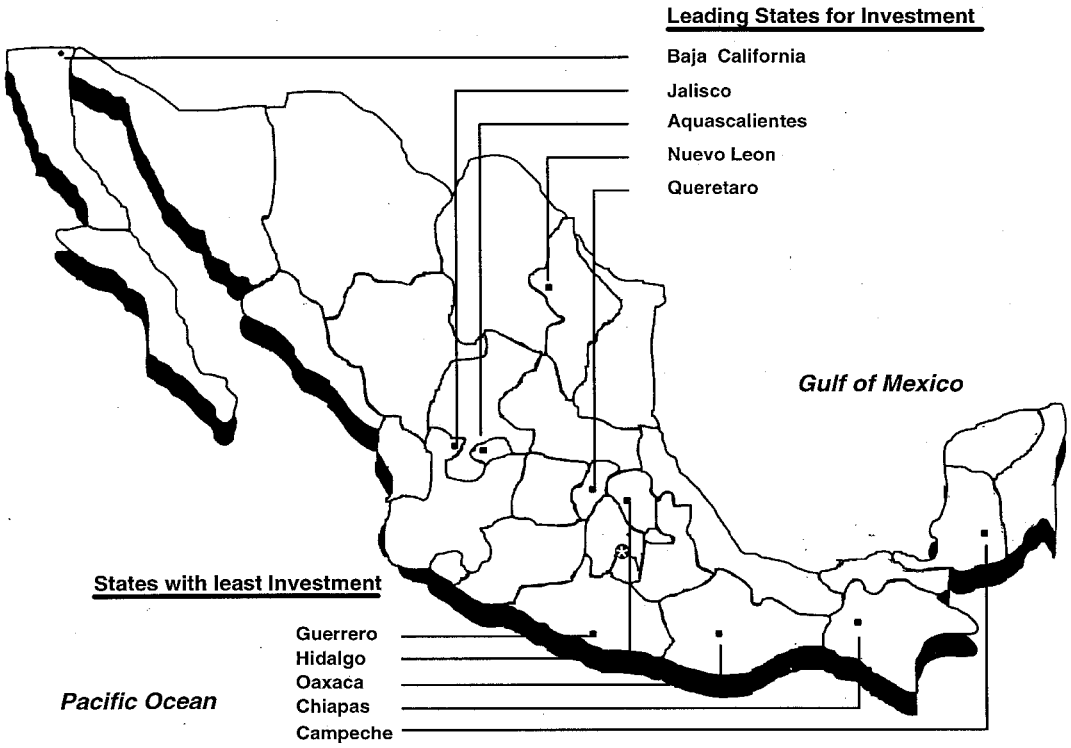
[36] U.S. content eligible for duty-free treatment under the HTS PSP is limited to identifiable components that have not been significantly altered.

[37] SECOFI, "Statistical Report Covering the Performance of Direct Foreign Investment in Mexico," National Commission of Foreign Investment, Jan.-Dec., 1997, p. 10.

[38] Stephan S. Cohen and Tim Sturgeon, "The New U.S. Model of Global Production and Electronics: The Turnkey Network," *Berkeley Round Table on International Economics, Briefing Paper*, Session II, (Washington, D.C., Dec. 17, 1997). In addition, many companies have contracted out a portion of their product lines to independent manufacturers, enabling them to focus manufacturing efforts on core products for which they are most competitive.

[39] David W. Eaton, "Transformation of the Maquiladora Industry--The Driving Force Behind the Creation of a NAFTA Regional Economy," *National Law Center for Inter-American Free Trade*, 1997, p. 70.

Figure 2-4
Map of Mexican States: States with the highest amounts of Foreign Direct Investment, 1997



Source: Monterrey Institute of Technology, Republic of Mexico.

IBM's production-sharing facility in El Salto, located in the outskirts of Guadalajara, illustrates how U.S. companies use such contractors and suppliers to perform specialized production functions that until recent years were carried out in-house. IBM manufactures three categories of products in El Salto: computers (desktop models and portable computers), subassemblies for hard disk drives, and software. To meet its production needs, IBM has constructed in-house spaces for nearly all of its suppliers and contractors, from air-conditioning installers to assembly line workers. This facility, IBM's largest in Mexico, exported 850,000 computers to markets in the Western Hemisphere in 1997.[40] IBM's El Salto plant reportedly uses some of the most advanced production and design technology in Latin America; its 150 engineers design software for use in IBM's worldwide operations.[41]

[40] IBM supplies the Mercosur market (Argentina, Brazil, Paraguay, and Uruguay) from production facilities in Brazil.

[41] Garance Burke, "IBM's Biggest Plant in Mexico Takes On The 21st Century," *Financiero International Ed.*, Jul. 28-Aug. 3, 1997, p. 16.

While approximately 7,000 people report for work each day at the El Salto computer facility, only 612 are permanent IBM employees.[42] The rest are employed by contractors to IBM. Suppliers with facilities adjacent to the IBM plant employ an additional 12,000 people.[43] IBM's strategy is to employ only highly specialized workers and contract with suppliers to provide all other intermediate assembly or manufacturing tasks.[44] Other major computer firms located nearby, such as Dell Computer, frequently use the same suppliers and contractors (including those that provide employment services, such as hiring, training, and supervising assembly workers).

Outlook

Despite the fact that Mexico's Maquiladora Program and PITEX will be terminated on January 1, 2001, assembly plants will likely continue to take advantage of a combination of relatively low labor costs, rising skill levels, proximity to the U.S. market, and economic growth in Mexico. Although maquiladoras will be placed on equal footing with the domestic industry in Mexico in that they will no longer be able to import components, inputs, and machinery free of duty from non-NAFTA member nations (thus encouraging greater use of North American components in assembly operations), the maquiladora plants will continue to be exempt from Mexico's value added taxes (IVAs) on inputs used in assembly or manufacturing processes. Unlike other Mexican companies, maquiladoras will also continue to be exempt from Mexico's product labeling and phytosanitary requirements.[45] The absorption of the maquiladora plants into Mexico's integrated production industry will maintain a manufacturing connection between the United States, Canada, and Mexico that is likely to eventually lead to the creation of a unified regional economy. Gradually, this integration process will likely expand southward into the interior of Mexico supplementing or supplanting border-town assembly plants as the country continues to modernize its physical and educational infrastructure, and as economic growth in Mexico touches an increasing portion of the country's population.

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[42] Ibid.

[43] Changes to the Maquiladora Program reduced costs for IBM and its suppliers by allowing these "submaquiladoras" to import components and equipment free of duty, provided that the product further assembled by IBM is eventually exported.

[44] Examples of contract electronics manufacturers in the Guadalajara area include Avex Electronics Inc., Dovatron International, Elamex S.A. de Mexico, Flextronics International Ltd., Jabil Circuits Inc., SCI Systems Inc., and Solectron Corp. Darrell Dunn, "Mexico Comes on Strong," *Electronic Buyers News*, July, 14, 1997.

[45] However, products exported from the maquiladora industry will have to comply with product labeling and phytosanitary requirements of the United States and other importing countries.

CHAPTER 3
KEY INDUSTRY DEVELOPMENTS IN 1997

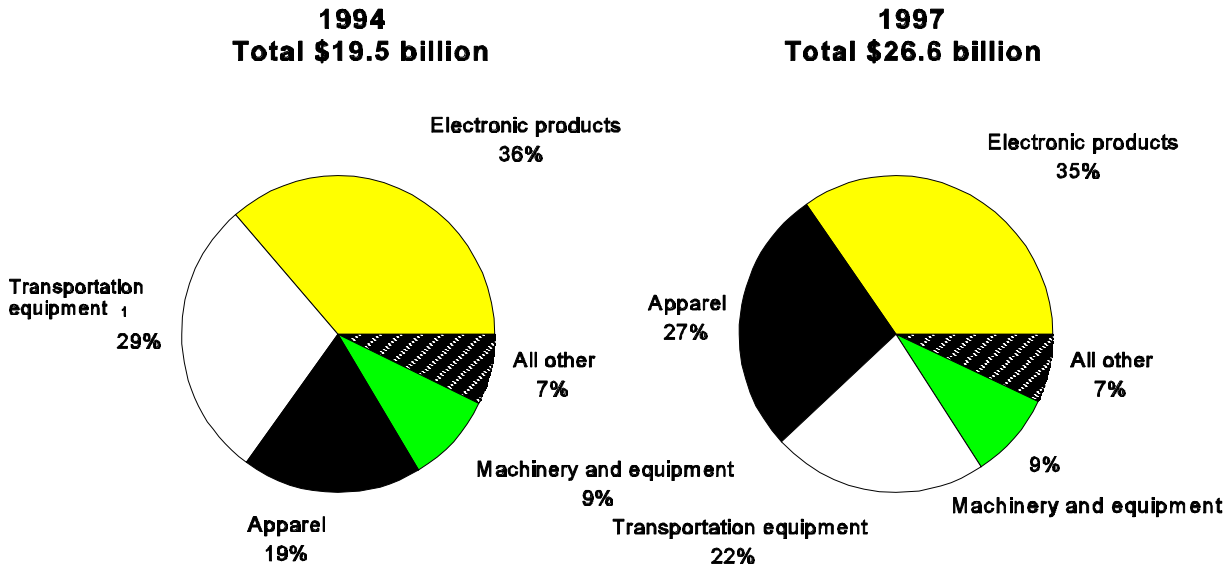
This chapter highlights the product sectors in which the U.S.-content (duty-free) portion of trade entering the United States under the production-sharing provisions (PSP) of HTS Chapter 98 equaled or exceeded $500 million, and/or where a change of at least 35 percent occurred in the level of such imports in 1997. The analysis for each product sector examines: (1) the significance of the product and its markets; (2) important shifts in trade that occurred in 1997; (3) reasons that these products are manufactured through 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, electronic products, motor vehicles and related equipment,[1] and machinery and equipment (figure 3-1). In 1997, continued strong growth in imports of apparel under HTS PSP from Mexico and the Caribbean Basin, as well as increased imports of semiconductor devices from the Philippines, motor vehicles from Japan, and machinery and equipment from Mexico, offset a decline in HTS PSP imports of motor vehicles and ignition wiring harnesses from Mexico that are increasingly being entered under provisions of the North American Free- Trade Agreement (NAFTA) and other duty-free provisions or programs instead of HTS PSP (table 1-4).

The Commission has used the duty-free, or U.S. content, portion of imports under HTS provisions 9802.00.60-9802.00.90 as a proxy for identifying the value of U.S.-made components used in foreign assembly operations. To complement the analysis of trends in production-sharing imports entering under HTS PSP, each writeup (except on apparel) contains a table showing data on U.S. imports of the specified product from Mexico that entered separately under NAFTA ("NAFTA only"), as well as total U.S. imports from Canada and from all other sources. Combining imports entered under HTS PSP and "NAFTA only" more closely approximates the extent of total imports that were likely manufactured in production-sharing operations in Mexico. As a further gauge of U.S. company association with Mexico's assembly industry, most writeups include official statistics from Mexico's Department of Commerce and Industrial Development (SECOFI) to provide an added reference point for the production-sharing data reported under both HTS PSP and the NAFTA provisions. Specifically, the SECOFI data are used to determine the share of total Mexican exports to the United States that were assembled using imported components and materials (largely of U.S. origin) under Mexico's temporary imports programs —the Maquiladora Program and the Program for Temporary Importation to Manufacture Exported Products (PITEX). In many cases, the Mexican data on exports to the United States from assembly plants are shown in conjunction with official U.S. data on imports from Mexico that entered under HTS PSP and "NAFTA only" for comparison. Although official Mexican data may

[1] Transportation equipment includes ignition wiring harnesses.

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, 1994 and 1997



[1] Includes ignition wiring harnesses.

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

exceed or understate official U.S. import data for some products, important conclusions can be drawn from the Mexican data regarding the share of U.S.-Mexico trade accounted for by production-sharing operations.[2]

Apparel

Overview

Preferential market access contributed to the growing share of U.S. imports of apparel supplied by Mexico and beneficiary countries under the Caribbean Basin Economic Recovery Act (CBERA)[3] relative to imports from Asia during 1994-97. Firms operating in Mexico and most CBERA countries have also benefitted from sustained low labor costs and lower transportation costs compared with suppliers in Asia. The devaluation of the peso further encouraged apparel production in Mexico. Apparel imports from Mexico tripled during 1994-97, growing by $3.4 billion to a total of $5.1 billion, and imports from CBERA countries rose by $3.1 billion (68 percent) to $7.6 billion (table 3-1). Imports from all other suppliers (principally countries in

[2] See pg. 1-5 for a discussion of the benefits and limitations of using the official Mexican export data.

[3] The CBERA, which entered into force in 1984, grants duty-free entry to most goods from 24 beneficiary countries. However, most apparel and textile products are statutorily excluded from duty-free treatment under CBERA. Instead, most CBERA textile and apparel products benefit from preferential quotas known as guaranteed access levels (GALs), which are explained in the section, "HTS PSP Trade."

southern and eastern Asia) increased by $5.0 billion (16 percent) to $35.5 billion. Mexico was the second-largest single-country supplier of U.S. apparel imports, having increased its share of the total from 5 percent in 1994 to 11 percent in 1997; only China had a larger U.S. market share, 15 percent ($7.4 billion). However, the CBERA countries combined accounted for 16 percent of total apparel imports, up from 12 percent 3 years earlier.

Most apparel imported from Mexico and the Caribbean Basin is sewn together from U.S. components in facilities located primarily in industrial parks in Mexico and in free-trade zones in the Caribbean Basin. U.S. firms ship garment parts to the region for assembly and re-import the assembled garments under HTS PSP. In 1997, such trade accounted for 82 percent of total apparel imports from Mexico and 84 percent from CBERA countries, compared with only 2 percent for all other suppliers (table 3-1). Collectively, Mexico and the CBERA countries accounted for 92 percent of total imports under the PSP and for 97 percent of the U.S.-cut fabric exported to foreign processing plants and returned to the United States under HTS PSP in 1997.

Reflecting the robust U.S. economy in 1997, overall apparel imports increased by $6.8 billion (16 percent) over the 1996 level, to $48.2 billion. Imports under the HTS PSP grew at a faster pace in percentage terms, by 30 percent ($2.6 billion), to $11.5 billion. The share of the value of PSP imports accounted for by U.S.-cut fabric remained unchanged at 63 percent ($7.2 billion) in 1997. U.S.-based apparel production, however, declined in 1997 for the third year in a row, falling by 1.6 percent.[4] The U.S. apparel industry, faced with intense price competition from Asian suppliers, continued to shift assembly work to Mexico and the CBERA countries to reduce production costs.

The apparel sector is the major beneficiary of duty savings under HTS PSP, reflecting the high U.S. duty rates for apparel and the significant share of the value of the imported apparel accounted for by the U.S.-origin fabric.[5] The sector accounted for 59 percent ($1.4 billion) of the total duty savings in 1997 (table B-17).

HTS PSP Trade

Competition between CBERA countries and Mexico for assembly work from U.S. apparel firms changed with the implementation of NAFTA in 1994. Mexico gained a duty advantage under NAFTA which grants both duty-free and quota-free entry to apparel imports from Mexico that are assembled from "fabric wholly formed and cut in the United States" (often referred to by its pre-1989 name as 807A imports) and entered under HTS heading 9802.00.90.[6] Imports under heading 9802.00.90 from Mexico in 1997 totaled $3.7 billion, accounting for 73 percent of all U.S. apparel imports from Mexico. These imports compete directly with most

[4] See Board of Governors of the Federal Reserve System, *Federal Reserve Bulletin*, "Industrial Production and Capacity Utilization: Annual Revision and 1997 Developments," vol. 84, Feb. 1998.

[5] The duty-free U.S. components contained in apparel imports entered under the HTS PSP accounted for 63 percent of the total value of such imports in 1997, compared with only 34 percent for all other products. The trade-weighted average duty on apparel in 1997 was 15.5 percent ad valorem ad valorem, compared with about 3 percent for other products.

[6] NAFTA also accords preferential tariff treatment to certain goods that do not satisfy NAFTA's rules of origin. Such goods may be granted preferential tariff treatment up to specified annual quantitative "tariff preference levels" (TPLs).

Table 3-1
Apparel:[1] 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 1997), 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
		Total imports		
Mexico	1,696	2,658	3,663	5,139
Dominican Republic	1,593	1,744	1,762	2,223
Honduras	645	919	1,220	1,661
El Salvador	398	583	721	1,052
Costa Rica	685	756	706	844
Jamaica	454	531	505	471
Guatemala	600	691	809	976
Colombia	363	370	316	350
Haiti	32	76	103	143
Other	30,197	31,080	31,638	35,351
Total	36,663	39,408	41,443	48,210
CBERA countries	4,525	5,455	6,039	7,616
		HTS PSP imports		
Mexico	1,523	2,331	3,033	4,204
Dominican Republic	1,377	1,565	1,601	2,060
Honduras	451	675	970	1,362
El Salvador	303	477	588	894
Costa Rica	587	670	646	793
Jamaica	371	448	437	425
Guatemala	450	520	579	651
Colombia	251	271	212	257
Haiti	30	74	96	134
Other	493	727	683	711
Total	5,836	7,758	8,845	11,491
CBERA countries	3,632	4,508	5,008	6,420
		U.S. content in HTS PSP imports		
Mexico	1,063	1,637	2,120	2,849
Dominican Republic	878	989	1,009	1,294
Honduras	325	479	688	972
El Salvador	160	260	332	533
Costa Rica	387	443	444	529
Jamaica	299	363	350	347
Guatemala	218	258	275	298
Colombia	145	169	123	153
Haiti	22	51	67	98
Other	110	116	118	138
Total	3,607	4,765	5,526	7,211
CBERA countries	2,328	2,888	3,215	4,132

[1] Includes apparel of textile materials, such as cotton, wool, manmade fiber, or silk fabrics, and nontextile materials, such as fur, leather, and plastics. Excluded are nonwoven (disposable) garments.

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

of the 9802.00.80 apparel imports from CBERA countries. Although garments from CBERA countries assembled from U.S.-formed and -cut fabrics enter under preferential quotas known as guaranteed access levels (GALs),[7] they are still subject to duty on the value added offshore.[8] In addition, Mexico benefitted from the substantial devaluation of the peso in December 1994 relative to the dollar, which effectively reduced dollar prices of its goods in the U.S. market.

As a result of these factors, apparel shipments from Mexico to the United States have grown faster than apparel shipments from CBERA to the United States have. Mexican apparel shipments under HTS PSP rose by an average annual rate of 42 percent during 1994-96, compared with an average annual growth rate of 17 percent for such imports from CBERA countries. In 1997, however, the gap in the growth rate narrowed, as apparel imports from CBERA countries under the HTS PSP increased by 29 percent, compared with an 11 percent increase in 1996, while HTS PSP apparel imports from Mexico rose by 39 percent, compared to a 69 percent increase from 1995- 96. The 1997 increase in CBERA countries' growth rates may be attributed to the need for sourcing flexibility on the part of U.S. apparel producers, increased efforts by the CBERA countries to attract more foreign investment, and expectations that NAFTA-parity treatment would be granted to CBERA countries.[9]

Aside from the six CBERA countries with GALs, Colombia was the only other country subject to U.S. import quotas to have preferential access to the U.S. market for its HTS PSP apparel shipments in 1997. In August 1995, the United States implemented "special access limits" (SALs) under heading 9802.00.80 that provided, in addition to the reduced duties, greater market access for cotton and manmade-fiber underwear and women's wool suits assembled from U.S.-made and -cut fabric.[10] The quotas and SALs for the underwear and women's suits expired on December 31, 1997. U.S. imports of HTS PSP apparel from Colombia rose by 21 percent in 1997 to $257 million (table 3-1), following a decrease of 22 percent in 1996. The U.S. content in these imports rose by $30 million (24 percent) to $153 million, which accounted for 2 percent of the total value of U.S. duty-free components contained in apparel entered under HTS PSP in 1997.

Asian countries are the principal suppliers of apparel to the United States, but they represent a small share of HTS PSP apparel trade. In 1997, the Asian countries accounted for less than 1 percent of the total U.S. content in HTS PSP apparel trade. U.S. components typically used in imports of apparel from Asia under HTS PSP are apparel fasteners (e.g., buttons, zippers, and snaps); trim, such as lace and fur; and any specialty items that are not readily available in the Asian country in the quantity, quality, or price points required. U.S. components accounted for only 11 percent of the total value of HTS PSP apparel imports from Asia, compared with 63 percent for total apparel imports under HTS PSP.

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[7] The United States currently has GALs and regular quotas with six CBERA countries--Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Jamaica.

[8] 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 1997 trade-weighted average duty on apparel of 15.5 percent to the foreign value added yields an average duty of $0.56, or an effective average ad valorem equivalent of 5.6 percent.

[9] Legislation introduced in the 105th Congress--H.R. 2644, the United States-Caribbean Trade Partnership Act-- would have made available NAFTA-like treatment to qualifying apparel and all other goods exempted from duty-free entry under the CBERA. The legislation did not pass in the House of Representatives (by a vote of 234-182 on November 4, 1997). As of August 1998, no further action on NAFTA parity legislation had taken place in the Congress.

[10] Committee for the Implementation of Textile Agreements, "Establishment of a Special Access Textile Program for Andean Trade Preference Act Countries," *Federal Register*, Aug. 30, 1995 (60 F.R. 45144).

Recent developments in major country sources of apparel

Mexico

Apparel manufacturing operations in Mexico continue to expand rapidly.[11] In February 1998, 797 textile and apparel maquiladoras (slightly less than one-third of all Mexican maquiladoras) employed almost 189,000 workers.[12] Although apparel wage rates vary widely in Mexico by region according to local labor supply and demand,[13] the average hourly apparel wage rate in Mexico during 1997 was $1.09[14] compared with an average hourly wage of $9.56 for U.S. apparel workers.[15] Although U.S. imports of apparel from Mexico under HTS PSP grew substantially during 1994-97, to $4.2 billion, the HTS PSP share of total apparel imports from Mexico declined by 8 percentage points during 1994-97, to 82 percent (table 3-2).[16]

Under NAFTA, apparel articles imported from Mexico into the United States will enter free of duty after January 1, 1999. The decline in the share of HTS PSP apparel imports to total imports from Mexico can be expected to continue as the duty is phased out. According to industry analysts, the decline in the relative importance of HTS PSP imports from Mexico reflects a shift in trade from sewing-only operations to "full-package" service, in which more value-added operations are included, such as fabric sourcing, cutting, and textile production.[17] Developments in both the U.S. and Mexican textile and apparel markets are fostering this trend. NAFTA has benefitted Mexican apparel and textile manufacturers by facilitating and expanding sector trade. These Mexican producers have also entered joint ventures and other arrangements with U.S. firms to upgrade their equipment and expand and enhance their operations to become more globally competitive.[18] As they continue to expand such activities, Mexican textile

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[11] A few examples of the most recent events pointing to expansion of apparel assembly in Mexico include: New York-based Chic by H.I.S., Inc., began to assemble casual pants at a new facility in Durango in February 1998, primarily for sale in the United States (see "Chic Opens New Mexican Plant," *Nafta Works*, Feb. 1998, p. 4); Wrangler Comercializador de Mexico announced plans to invest $30 million in 1998 to build three plants in Chihuauhua to make denim apparel for export to the United States (see "Mexico Update," *Twin Plant News*, Mar. 1998, p. 8); and U.S. Colors de Mexico, S.A. de C.V., Inc., a subsidiary of Kentucky Apparel, Scottsville, KY, opened a maquiladora in early 1998 to assemble shirts and blouses for the U.S. market (representative of U.S. Colors de Mexico, S.A. de C.V., interview with USITC staff, May 21, 1998).

[12] "Maquila Scoreboard," *Twin Plant News*, vol. 13, No. 11, June 1998.

[13] Manager of a Mexican sewing contracting firm, telephone interview with USITC staff, June 12, 1998.

[14] Information obtained through fax correspondence with Director of Maquila Industry Services, CIEMEX-WEFA, July 14. Industry sources report that most sewing operations pay piecework which usually doubles the minimum wage rate. Piecework incentives combined with bonuses for punctuality and consistent daily attendance and miscellaneous fringe benefits can bring the direct labor cost to about $2.50 per hour.

[15] U.S. Bureau of Labor Statistics, National Employment, Hours & Earnings, Series ID:EEU32230006, found at Internet address http://146.142.24/cgi-bn/dsrv, retrieved June 5, 1998.

[16] Data from Mexico's Department of Commerce and Industrial Development (SECOFI) indicate that assembly plants registered under Mexico's two temporary import programs (maquiladora and PITEX) accounted for 87 percent of Mexico's total exports of textiles and apparel to the United States in 1997. The difference between the 87 percent figure (based on Mexican data) and the 82 percent figure (based on U.S. data) might reflect the fact that U.S. imports of garments from Mexico that are made from U.S. fabric cut in Mexico are not eligible under HTS PSP, and therefore are not reported in U.S. "production-sharing" data but are reported in Mexico's "production-sharing" data.

[17] Full-package service refers to many different types of sourcing arrangements in Mexico, ranging from cutting and textile production to all the steps in garment production, from design through distribution of the finished product. For more information on full package service, see Gary Gereffi and Jennifer Bair, "U.S. Companies Eye NAFTA's Prize," *Bobbin*, Mar. 1998, p. 26.

[18] Ibid, p. 27.

Table 3-2
Apparel: Total U.S. imports, U.S. imports from Mexico and the CBERA countries under the production-sharing provisions (PSP) of HTS Chapter 98, 1994-97, and share of total imports

Source of imports	1994	1995	1996	1997
	))))))))))) *Million dollars*))))))))))			
Mexico:				
HTS PSP	1,523	2,331	3,033	4,204
U.S. content in HTS PSP imports	1,063	1,637	2,120	2,849
Total imports	1,696	2,657	3,662	5,139
HTS PSP share of total imports (*percent*)	90	88	83	82
CBERA countries:				
HTS PSP imports	3,632	4,508	5,009	6,421
U.S. content in HTS PSP imports	2,328	2,888	3,215	4,132
Total imports	4,526	5,460	6,041	7,616
HTS PSP share of total imports (*percent*)	80	83	83	84

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

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

and apparel producers will have the increased capability to shift from primarily offering assembly-only sewing operations to full package services.[19] Recent announcements by several major U.S. textile manufacturers to establish or further expand their textile operations in Mexico can be expected to encourage the growth of full package services in Mexico.[20]

In the United States, some apparel firms, such as the Sara Lee Corp., are responding to marketplace competitive pressures to keep costs down and to stay highly responsive to their customers by "de-verticalizing" (i.e., reducing their manufacturing operations) and focusing on the greatest value-generating activities, namely merchandising and marketing apparel products.

[19] Thirty of Mexico's 31 states have at least 1 textile plant, while 13 new textile maquiladora plants were authorized by the Mexican Government in March 1998 alone. See U.S. Department of State telegram No. 1356, "NAFTA: 2001 - The Tijuana Perspective," prepared by U.S. Embassy, Tijuana, Dec. 22, 1997, and "Mexico Approves 48 Maquiladora Programs," *The Journal of Commerce, Web Edition,* May 14, 1998, found at Internet address http://www.joc.com/database/getDocument.cgi?docNum=0&maxDoc=1, retrieved June 9, 1998.

[20] In July 1998, Burlington Industries announced that it was investing $80 million over the next 3 years to expand its garment-making services by building four cutting and sewing facilities in Mexico in 1999 (see Burlington Industries, "Burlington to Expand Garment-making Services," press release posted July 22, 1998, found at Internet address: http://www.burlington.com/bi_news3html, retrieved July 24, 1998) in addition to the $200 million allocated for building three thread and fabric plants in Morelos that will begin production by the end of 1999 (see Burlington Industries, "Burlington to Open Garment Service Center," press release posted June 1, 1998, found at Internet address: http://www.burlington.com/ bi_news1.html, retrieved July 6, 1998); Dupont Mexico is establishing a joint venture with Grupo Alfa, Nylon de Mexico to produce and market staple fiber (see Dupont Corp., "DuPont Dacron and Alpek S.A. de D.v. Sign Letter of Intent to Form Joint Venture," found at Internet address http://ww.dupont.com/corp/whats-new/releases/98/980504.html, retrieved July 8, 1998); Guilford Mills will set up an integrated textile plant (knitting, dyeing, finishing, and printing garments) in the Mexican Gulf Coast city of Altamiro (see "U.S. Investors Outline Plans to Expand Mexican Operations," *The Journal of Commerce Online*, Mar. 11, 1998, found at Internet address http://www.joc.com/database/getDocument.cgi? docNum=0& maxDoc=1, retrieved June 9, 1998); and Cone Mills Corp. has launched a joint venture with Mexico's largest textile producer, Compania Industrial de Parras, to produce denim for jeans assembled in Mexico and sold in the United States (see Gary Gereffi and Jennifer Bair, "U.S. Companies Eye NAFTA's Prize," *Bobbin,* Mar. 1998, p. 26).

As other U.S. companies follow suit, they will likely seek full package apparel services from both domestic and foreign suppliers.[21]

CBERA

CBERA countries as a group are the major suppliers of U.S. apparel imports under HTS PSP. In 1997, they accounted for 57 percent of the total value of U.S. components incorporated in HTS PSP apparel imports (figure 3-2). The Dominican Republic, Honduras, and El Salvador are the principal CBERA sources of apparel production sharing; their respective shares of the total value of U.S. components in CBERA apparel production-sharing trade were 31, 24, and 13 percent (figure 3-2). The sustained growth of U.S. apparel imports under HTS PSP from the Dominican Republic, whose shipments rose from $1.4 billion in 1994 to $2.1 billion in 1997, may be attributed to its ongoing expansion of foreign-trade zone programs and tax incentives that favor the apparel and textile industries such as the elimination in 1997 of tariffs on imports of machinery and basic raw materials, such as fabrics, threads, and buttons.[22] Trousers and women's foundation garments were the leading HTS PSP apparel imports from the Dominican Republic in 1997.

Extensive damage caused by Hurricane George in September 1998 to 4 of the Dominican Republic's 40 free trade zones is expected to temporarily reduce the country's exports of apparel. Two of the zones are among the largest industrial parks in the Dominican Republic: the Romana and San Pedro de Macoris. Apparel production at these facilities is expected to resume after 2-3 months.[23]

Honduras[24] was the fastest growing CBERA supplier of U.S. apparel imports under HTS PSP during 1994-97, when its shipments rose by 200 percent from $451 million to almost $1.4 billion (table 3-1). The U.S. content in HTS PSP apparel imports from Honduras tripled during the period, rising from $325 million to $972 million. Honduras offers proximity to the United States, a low-cost and readily trained labor force, recently improved roads and ports, and enhanced telecommunications that include fiber optic cables and the addition of 100,000 to 200,000 new lines a year. Its proactive business community has supported foreign investment incentives and special laws to promote the expansion of U.S. apparel assembly operations,[25] particularly in the Sula Valley, which is 45 miles from Puerto Cortes, considered one of the best deep-water ports in the Caribbean. Apparel manufacturers constitute approximately 95 percent

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[21] As part of its de-verticalization strategy (i.e. the shift from handling the entire spectrum of manufacturing processes involved in apparel making from fibers and yarn production to the finished, ready-for-sale garment to handling just a few select processes) in January 1998, Sara Lee announced its decision to divest most of its fabric manufacturing, finishing, and cutting operations. Sara Lee sold its yarn and textile operations related to its U.S. knit products business (i.e., assets including those used in cotton buying; yarn spinning; and the majority of fabric manufacturing, finishing, and cutting operations) to National Textiles, L.L.C. See Sara Lee Corp., "Sara Lee Corporation De-Verticalizes United States Yarn and Textile Manufacturing," news release posted Jan. 5, 1998, found at Internet address: http://www.saralee.com/ corporate/corpnews/ pr010598.htm, retrieved June 17, 1998.

[22] "The Dominican Republic Sheds Its Straightjacket," *Apparel Industry Internacional*, Nov./Dec. 1997, found at Internet address http://www.aiimag.com/aiieng/nstory7.html, retrieved Mar. 30, 1998.

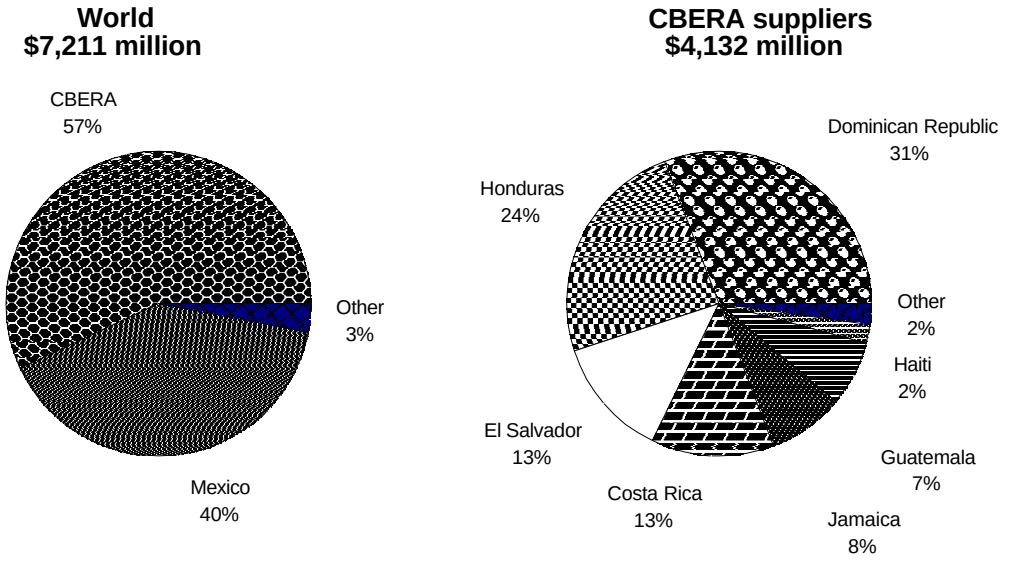
[23] Larry Luxner, "In the Path of Destruction, A Need to Rebuild," *Journal of Commerce*, Nov. 9, 1998, p. 1.

[24] The following assessment of the apparel industry in Honduras was written prior to the destruction of much of the country's infrastructure by Hurricane Mitch in Nov. 1998.

[25] "Special Laws and Rules to Regulate and Provide Incentives for Investment and Exports," see http://www.hondurasnet.com/business/investment.htm, retrieved May 19, 1998.

of the maquila industry's total production in Honduras[26] and employ 96,000 workers.[27] According to industry sources, the Dominican Republic's maquila industry is more profitable than that of other CBERA countries, while the Honduran industry offers greater growth potential because of its newer plant facilities and better foreign investment incentives.[28] Facilities operated by leading U.S. apparel manufacturers in Honduras include a Wrangler jeans factory in Puerto Cortes[29] and several Fruit of the Loom assembly plants in Productos San Jose and El Progreso that produce men's and women's underwear products. Knit shirts, underwear, and trousers dominated HTS PSP apparel imports from Honduras in 1997.

Figure 3-2
Apparel: U.S. content of imports under the production-sharing provisions (PSP) of HTS Chapter 98, by top suppliers, and by leading CBERA suppliers, 1997



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

[26] As of July 1997, Honduras hosted 248 maquila operations. Apparel production accounts for virtually all production-sharing activity in Honduras. Other industries, however, are also beginning to set up operations in Honduras. United Technologies recently established a manufacturing facility in Choloma, Honduras to produce automotive electrical distribution systems.

[27] Chairman of an export processing zone in Choloma, Honduras, telephone interview with USITC staff, July 23, 1998.

[28] U.S. Department of State telegram No. 000220, "Update on Maquiladora Industry in Honduras," prepared by U.S. Embassy, Tegucigalpa, Jan. 2, 1998.

[29] Mercedes Cortazar, "Honduras Survives Mexican Competition," *Apparel Industry International*, found at Internet address http://www.aaiimag.com/aiieng/nstory1.html, retrieved Mar. 30, 1998.

Asian investment in Honduras has been growing as Asian apparel and textile suppliers also seek to take advantage of Honduras' proximity to the United States, low labor rates, and investment incentives. Industry sources report that investors from China, Korea, and Taiwan own 30 percent of Honduran apparel maquiladoras.[30]

U.S. apparel imports from El Salvador under HTS PSP rose significantly during 1994-97, by almost 200 percent, to $894 million. Over 90 percent of all Salvadoran maquila output consists of apparel and in 1997, maquila exports were El Salvador's primary exports, outstripping its former principal export, coffee ($518 million in 1997).[31] Apparel companies with operations in El Salvador include Ralph Lauren, Van Heusen, K-Mart, JC Penney, Benneton, Liz Claiborne, Fruit of the Loom, and others.[32] Although El Salvador's minimum wage rate rose by 9 percent in 1997, the caliber of El Salvador's workforce and factory management combined with generous foreign investment incentives[33] continue to attract U.S. manufacturers.[34] Underwear and knit shirts led the HTS PSP apparel imports from El Salvador in 1997.

U.S. apparel imports under HTS PSP from the other three CBERA suppliers with GALs and regular quotas, Costa Rica, Guatemala, and Jamaica, grew more slowly than those of the three leading CBERA suppliers during 1994-97. Although total CBERA apparel imports under the provision rose by 77 percent during the period, those from Costa Rica, Guatemala, and Jamaica grew by only 35 percent, 15 percent, and 45 percent, respectively. Costa Rica has been experiencing higher labor costs, interest rates, and utility expenses than those of its Caribbean competitors.[35] The economic slowdown in Jamaica's apparel industry during 1994-97 largely reflected rising interest rates, a revalued Jamaican dollar, and high security costs to prevent drug smuggling in garment containers. Because they could no longer operate profitably, several major apparel manufacturers in Jamaica closed their plants in 1996 and 1997, causing a loss of over 7,000 jobs in the Jamaican apparel sector.[36]

Of all the major CBERA suppliers, Guatemala had the lowest share of U.S. content in its apparel shipments under HTS PSP in 1997; the duty-free (U.S. content) value accounted for 46 percent of the total value of its HTS PSP apparel, compared with 64 percent for overall CBERA apparel shipments under the provision. Industry sources claim that Guatemala's more developed and larger textile industry relative to its Central and Caribbean neighbors has increased its capability of producing more value-added goods. This factor combined with substantial investment in apparel and textile firms by Korean and Taiwanese companies, which tend to use fabric produced

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[30] Mercedes Cortazar, "Honduras Survives Mexican Competition," *Apparel Industry International*, found at Internet address http://www.aaiimag.com/aiieng/nstory1.html, retrieved Mar. 30, 1998. A chairman of an export processing zone in Choloma, Honduras, also reported that 18 percent of apparel maquilas in Honduras are Korean-owned.

[31] U.S. Department of State telegram No. 000667, "Quarterly Economic Roundup: El Salvador," prepared by U.S. Embassy, San Salvador, Feb. 19, 1998.

[32] U.S. Department of State telegram No. 0002245, "Ambassador Continues Tour of Maquila Plants," prepared by U.S. Embassy, San Salvador, June 20, 1998.

[33] The foreign investment law allows unlimited remittance of net profits for most types of business and manufacturing, and up to 50 percent for commercial service companies.

[34] U.S. Department of State telegram No. 0002245, "Ambassador Continues Tour of Maquila Plants," prepared by US. Embassy, San Salvador, June 12, 1998.

[35] Because of higher labor rates and transportation costs than most competing Caribbean Basin suppliers, Costa Rica has tried to diversify its export-processing industry away from apparel and towards higher value-added electronic products. Costa Rica's leading export company in 1997 was Intel, which has integrated circuit chip assembly and test facilities near San Jose.

[36] U.S. Department of State telegram No. 003899, "GOJ Dip Notes on Outstanding Worker," prepared by U.S. Embassy, Kingston, Aug. 29, 1997.

in Asia, may also explain why the share of non-9802 apparel shipments from Guatemala is much larger than the average CBERA share of non-9802 apparel shipments to the United States.

Growth of production sharing by category

U.S. apparel imports under HTS PSP account for an important and growing share of U.S. producers' shipments in almost all apparel product categories (table 3-3)**.** The volume of imports and import growth have been especially significant in products such as trousers, shirts and blouses, pajamas and other nightwear, and underwear. Although the HTS PSP import share of U.S. producers' shipments declined in foundation garments in 1997, HTS PSP imports still accounted for over one-half of these imports. Imports of underwear under HTS PSP accounted for almost three-quarters of the value of U.S. producers' shipments in 1997, compared with just under two-thirds in 1996. This rapid growth is largely the result of major producers' expanded use of HTS PSP provisions in the face of continued price competition in the mass merchandise market for these low-value-added products. The U.S. content in underwear imported under the HTS PSP rose by 34 percent in 1997 to $1.1 billion.

Underwear, trousers, shirts, and blouses showed the greatest growth in imports under HTS PSP in 1997. The share supplied by imports under these provisions as a percentage of producers' shipments in these products more than doubled between 1994 and 1997 (table 3-3). 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. producers' shipments of shirts and blouses more than doubled during 1994-97, HTS PSP accounted for only 20 percent of total U.S. imports of shirts and blouses in 1997, largely reflecting the continued competitiveness of Asian suppliers in the U.S. market. The U.S. content in shirts and blouses under HTS PSP showed the largest increase of all apparel products, increasing by 44 percent in 1997 to $2.1 billion (and by 95 percent during 1994-97). Trousers continued to be the largest apparel item entered under HTS PSP at $4 billion in 1997; such trade represented 40 percent of total U.S. imports of trousers. The U.S. content in trousers rose by 28 percent to $2.3 billion.

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Table 3-3
Selected apparel products: U.S. producers' shipments and imports for consumption under the production-sharing provisions (PSP) of HTS Chapter 98, 1994-97

(1,000 dozen)

Item	1994	1995	1996[2]	1997[1]
Shirts and blouses:				
U.S. producers' shipments	[3]162,559	[3]159,385	[3]162,721	[3]156,218
HTS PSP imports	22,170	25,152	49,903	76,196
Percentage share	13.6	15.8	30.6	48.8
Trousers and shorts:				
U.S. producers' shipments	95,791	97,241	93,854	94,061
HTS PSP imports	29,551	22,864	42,051	49,067
Percentage share	30.8	23.5	44.8	52.2
Coats and jackets:				
U.S. producers' shipments	9,766	9,618	9,589	11,111
HTS PSP imports	2,312	2,335	2,991	3,949
Percentage share	23.7	24.3	31.2	35.5
Foundation garments (mainly brassieres):				
U.S. producers' shipments	29,101	33,123	29,365	30,057
HTS PSP imports	20,309	23,956	19,874	18,380
Percentage share	69.8	72.3	67.7	61.2
Underwear:				
U.S. producers' shipments	168,642	154,253	153,721	172,078
HTS PSP imports	55,994	74,813	98,755	125,247
Percentage share	33.2	48.5	64.2	72.8
Pajamas and other nightwear:				
U.S. producers' shipments	10,215	9,142	6,982	5,793
HTS PSP imports	3,086	3,126	4,137	4,625
Percentage share	30.2	34.2	59.3	79.8
Swimwear:				
U.S. producers' shipments	4,441	4,370	4,450	4,816
HTS PSP imports	([4])	824	1,130	1,676
Percentage share	([4])	18.9	25.4	34.8
Dresses:				
U.S. producers' shipments	16,542	17,339	15,592	14,892
HTS PSP imports	([4])	1,544	2,549	2,986
Percentage share	([4])	8.9	16.3	20.1
Skirts:				
U.S. producers' shipments	8,036	7,432	7,185	6,344
HTS PSP imports	([4])	1,302	1,961	2,157
Percentage share	([4])	17.5	27.3	34.0
Babies' apparel:				
U.S. producers' shipments	12,952	13,192	12,661	13,252
HTS PSP imports	([4])	5,247	7,185	9,503
Percentage share	([4])	39.8	56.7	71.7

[1] Preliminary.
[2] Revised.
[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 1997* (MQ23A), July 3, 1998, and back issues, except as stated.

Electronic Products and Precision Manufactures[37]

U.S. producers of electronic products 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. Total U.S. imports of electronic products increased by $15.2 billion (8 percent) in 1997 to $195.7 billion, accounting for 23 percent of total U.S. imports. Imports of electronic products entered under the production-sharing provisions (PSP) of HTS Chapter 98 increased by $1.5 billion (8 percent) to $20.2 billion. The U.S.-origin content of HTS PSP imports of electronic products rose by $920 million (11 percent) to $9.3 billion.

A significant portion of U.S. imports of electronic products is believed to be imported from production-sharing operations, but are not entered under HTS PSP.[38] The elimination of duties or duty exemptions and reductions under such programs as the GSP, CFTA, NAFTA, and the Uruguay Round have removed much of the incentive for importers to report production-sharing imports under the provisions in Chapter 98. As a result, statistics on imports under HTS PSP tend to 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 HTS PSP were Mexico, the Philippines, Malaysia, and Korea, which together accounted for 75 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), electrical circuit apparatus, and automatic data processing equipment, which together accounted for 73 percent of all electronic products imported under HTS PSP in 1997.

Although Mexico accounted for only one-tenth of U.S. imports of electronic products in 1997, it accounted for one-fifth of the growth in sector imports that year (table 3-4). Imports from Mexico rose by 19 percent in 1997 to $19.7 billion, while imports from Canadian and non-North American suppliers grew by 7 percent each, to $12.4 billion and $163.6 billion, respectively. Imports from Mexico under HTS PSP and NAFTA accounted for 85 percent of total imports from Mexico.[39]

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[37] 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. Precision manufactures include medical equipment, optical goods, photographic equipment and supplies; watches and clocks; balances, surveying/navigational instruments, and drawing/mathematical and calculating instruments; and measuring and testing instruments (meters).

[38] 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 23 percent of total U.S. imports of semiconductors in 1997.

[39] This more closely approximates the extent of total imports of electronics products that were likely manufactured in production-sharing operations. For a more detailed explanation, see ch. 2.

Table 3-4
Electronic products: 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	3,952	4,238	286	7
Value added	5,347	5,935	588	11
Total	9,299	10,173	874	9
NAFTA only[2]	5,260	6,640	1,380	26
Subtotal (NAFTA and/or HTS PSP)	14,559	16,813	2,254	15
Other	1,943	2,892	949	49
Total	16,502	19,705	3,203	19
Canada[3]	11,663	12,431	768	7
All other	152,379	163,563	11,184	7
Total	180,544	195,699	15,155	8

[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.—Calculations based on unrounded data.

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

Semiconductor Devices

The United States is one of the world's largest producers and consumers of semiconductor devices, with 1997 imports and exports totaling $36.9 billion and $29.0 billion, respectively. Semiconductors are integral components in nearly all electronic products including computers, telecommunications equipment, consumer electronics, automobiles, appliances, and industrial machinery. Semiconductors can be classified into one of three groups—namely, integrated circuits (ICs), discretes, and hybrids—with ICs accounting for the vast majority of both U.S. trade and production.[40]

Production sharing plays an important role in the manufacture of semiconductors and, according to industry representatives, nearly all major U.S. producers are currently engaged in production-sharing arrangements.[41] The manufacture of semiconductors is particularly well suited to the use of production sharing because of the two differing and easily divided stages in the production process. These two stages are usually referred to as fabrication and assembly/test. Customarily, U.S. producers conduct the fabrication stage in the United States and have the assembly/test stage performed abroad. The fabrication stage is extremely capital-intensive and involves the repeated use of expensive lithography, etching, and implantation equipment to transfer numerous

[40] USITC staff estimates based on official statistics of the U.S. Department of Commerce.
[41] U.S. industry representative, telephone interview by USITC staff, May 6, 1998.

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 often 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 ICs, encapsulating the ICs in either plastic or ceramic, wire bonding metal leads to the ICs, solder plating the metal leads, and trimming and forming the leads into a desired shape.[42] The finished semiconductors are then usually returned to the United States or sent to a third country market.

The assembly and test stage may 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, economy of scale, flexibility, and existing infrastructure to keep overall production costs down and enhance competitiveness. Contract assemblers are typically responsible for both assembly/test research and development (R&D) and equipment and facility costs, allowing the U.S. fabricators to concentrate their resources on IC design and fabrication.[43]

Production sharing in semiconductors occurs on a very large scale, but accurate tracking of trade data is problematic. Industry representatives have estimated that the value of the U.S. content in semiconductor imports may be two to three times higher than reported under the production-sharing provisions.[44] The United States maintains no tariff on the importation of semiconductors, and, as a result, importers have very little incentive to report the U.S. content under HTS PSP. The principal incentive for entering semiconductors under HTS PSP is to receive an exemption from the Customs user fee of 0.21 percent ad valorem on the value of the U.S. content, with a maximum fee of $485 per shipment.[45] 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.[46] The result is that the aggregate totals for imports of semiconductors under HTS PSP and certain country totals likely substantially understate the actual use of production sharing. Trends in the data reported under HTS PSP may not reflect actual trends in the use of semiconductor production sharing.

Most of the major markets engaged in semiconductor production-sharing arrangements with the United States are in East Asia.[47] The global semiconductor assembly industry began shifting to this region during the 1970s. Chief among the East Asian partners are Malaysia, the Philippines,

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[42] U.S. industry representative, e-mail to USITC staff, Jan. 20, 1998.

[43] Lewis Young, "Business Trends," *Electronic Business* (Colorado: Cahners Publishing, May 1997), p. 28, and Eric Larson, "A Turnkey Remedy for IC Ills," *Electronic Business*, Feb. 1998, found at Internet address http://www.eb-mag.com/registrd/issues/9802/0298comm1.htm, retrieved Feb. 6, 1998.

[44] Industry representatives, telephone interviews by USITC staff, July 22-24, 1997.

[45] The user fee for NAFTA-eligible goods from Mexico is 0.19 percent ad valorem.

[46] Ibid.

[47] Semiconductors have a high value-to-weight ratio and can be shipped economically over long distances. As a result, there is currently little need to locate production-sharing facilities in close proximity to fabrication plants in the United States. However, some industry analysts believe that further automation of chip-assembly facilities and increasing pressures to shorten delivery times may result in a portion of future assembly facilities being built in the United States in close proximity to fabrication sites. Robert Lineback, "An Idea Whose Time Has Come," *Semiconductor Business News*, Aug. 1997, found at Internet http://techweb.cmp.com/sbn/pub/0897/backend.htm, retrieved, Mar. 27, 1998.

Korea, Taiwan, and Singapore. Initially, U.S. semiconductor manufacturers shipped unfinished products to these markets 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 decreasing 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 an experienced labor force are strong competitive assets. In addition, the decision to locate assembly facilities in these markets is further strengthened by the close proximity to the East Asian electronic equipment manufacturing industries that are primary consumers of semiconductors.[48]

NAFTA partners Canada and Mexico are also significant production-sharing partners for the United States. Although Canada does not appear on the list of principal sources of semiconductor imports under HTS PSP, it is believed to be one of the largest production-sharing partners of the United States.[49] Canada does not have a large semiconductor fabrication industry, and it is likely that a substantial share of the $2.2 billion in Canadian semiconductor exports to the United States in 1997 is in fact U.S. content.[50]

According to Mexico's Department of Commerce and Industrial Development (SECOFI), products assembled under Mexico's temporary import programs (Maquiladora and PITEX) accounted for 99 percent of Mexico's total exports of semiconductors to the United States in 1997.[51] Although imports of semiconductors from Canada grew by $143 million (7 percent) in 1997 to $2.2 billion and imports from Mexico climbed by $116 million (15 percent) to $915 million, while imports from all other suppliers decreased by $152 million (less than 1 percent) to $33.7 billion, non-North American sources accounted for 91 percent of total U.S. imports of semiconductors (table 3-5).

U.S. imports of semiconductor devices reported under HTS PSP increased by $373 million (5 percent) in 1997 from the total for 1996, rising to $8.5 billion (table 3-6). Of this, $4.6 billion was U.S. content. According to official U.S. statistics, the Philippines and Malaysia are the two largest semiconductor production-sharing partners of the United States and in 1997 accounted for 22 percent and 20 percent, respectively, of the value of U.S. content in semiconductor imports reported under HTS PSP (table 3-7). Many of the major U.S. semiconductor manufacturers, including Intel Corp., Texas Instruments, Motorola Corp., and Advanced Micro Devices, have assembly affiliates in these countries. In 1997, the U.S. content in reported HTS PSP exports to the United States from the Philippines increased by 40 percent ($283 million), to $995 million

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[48] Craig Addison "Shifting Patterns of Semiconductor Production," *Channel*, Nov.-Dec. 1998, found at Internet address http://www.supersite.net/channeln2/9711/emerging1.htm, retrieved May 29, 1998.

[49] 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 NAFTA. As a result, there is now no incentive for Canadian exporters to report U.S. content under HTS PSP when exporting to the United States. HTS PSP reporting from Mexico is also likely to decrease in 1999 when the Customs user fee is eliminated under NAFTA for U.S. imports from Mexico (see ch. 1).

[50] U.S. industry representative, telephone interviews by USITC staff, Jul. 23 and Aug. 8, 1997, and IBM Corp, "Manufacturing and Development," found at Internet address http://www.can.ibm.com/about/manu/, retrieved Jun. 4, 1998.

[51] Official U.S. and Mexican data for bilateral trade in semiconductors vary significantly, with Mexico (SECOFI) reporting $1.4 billion in total exports to the United States in 1997, while the U.S. Department of Commerce reported $915 million in total imports from Mexico. See pg. 1-5 for possible explanations for this discrepancy.

Table 3-5
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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	352	339	-13	-4
Value added	237	358	121	51
Total	589	697	108	18
NAFTA only[2]	0	0	0	0
Subtotal (NAFTA and/or HTS PSP)	589	697	108	18
Other	209	218	9	4
Total	798	915	116	15
Canada[3]	2,104	2,247	143	7
All other	33,869	33,717	-152	0
Total	36,771	36,878	107	0

[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.—Calculations based on unrounded data.

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

Table 3-6
Semiconductor devices: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
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
1997	36,878	8,537	4,558	23	53

Note.—Calculations based on unrounded data.

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

Table 3-7
Semiconductor devices: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Philippines	576	700	712	995
Malaysia	954	1,303	1,104	893
Korea	426	560	614	705
Taiwan	326	371	311	411
Thailand	306	410	389	362
Mexico	257	326	352	339
Hong Kong	122	310	260	338
Singapore	270	178	166	236
Japan	45	69	70	164
Indonesia	24	51	69	53
All other	6	23	39	63
Total	3,311	4,302	4,087	4,558

Note.—Calculations based on unrounded data.

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

In contrast, reported U.S. content in HTS PSP semiconductor exports from Malaysia declined by 19 percent ($211 million), to $893 million.[52] Korea and Taiwan experienced growth in the reported value of the U.S. content in HTS PSP exports to the United States in 1997: Korea, by $91 million (15 percent) to $705 million; and Taiwan, by $100 million (32 percent) to $411 million.

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Electrical Circuit Apparatus

Electrical circuit apparatus are components or subassemblies employed in products such as power generation equipment, industrial automation equipment, building and construction equipment, computers, consumer electronics, and telecommunications equipment.[53] The United States is a global leader in the manufacture and consumption of such products, and production sharing plays an important role for many U.S. companies.

The technology and technical ability to manufacture many of these items are widely available internationally. Successful production and sale of many of these products are largely contingent upon price competition, and therefore on the ability to minimize manufacturing costs.[54] Some

[52] In 1997, U.S. exports of unfinished semiconductors to Malaysia rose by $287 million (11 percent), while imports of semiconductors from Malaysia rose by $112 million (2 percent). As such, in contrast to the 19-percent decline reported under the HTS PSP provisions, the level of semiconductor production sharing between the United States and Malaysia likely remained relatively stable in 1997.

[53] This category includes a broad and somewhat disparate group of electrical and electronic items such as capacitors, resistors, printed circuits, connectors, fuses, circuit breakers, switches, surge suppressors, lampholders, plugs, and sockets, as well as certain boards, panels, and consoles incorporating them.

[54] U.S. industry representative, telephone interview by USITC staff, June 11, 1998.

U.S. producers rely upon production sharing as a means of reducing these costs. The initial stages in the production process occur in the United States and are often capital intensive, with the value of labor representing a relatively small share of overall U.S.-based manufacturing costs. The conclusion of the manufacturing process often requires more labor-intensive assembly stages, which are performed by production-sharing affiliates in countries with lower labor costs.[55] Though some of the assembly processes may be automated, labor-intensive operations are often required, such as manual fitting and insertion of parts, as well as manual testing and inspection of the final products.[56]

The value of U.S. production-sharing imports of electrical circuit apparatus reported under the HTS PSP increased in 1997 by $290 million (14 percent) to $2.3 billion (table 3-8). The U.S. content in electrical circuit apparatus imports under the HTS PSP was 58 percent in 1997, reflecting the relatively "finished" state of the products when shipped to the production-sharing destinations for assembly and packaging.

Table 3-8
Electrical circuit apparatus: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	8,855	1,985	1,219	22	61
1995	10,407	2,089	1,285	20	62
1996	10,520	2,056	1,245	20	61
1997	11,915	2,346	1,371	20	58

Note.—Calculations based on unrounded data.

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

In 1997, total imports of electrical circuit apparatus from Mexico grew by $474 million (22 percent) to $2.6 billion, with 96 percent entering under HTS PSP and NAFTA combined (table 3-9). According to official Mexican data, products assembled under Mexico's temporary import programs (Maquiladora and PITEX) accounted for 98 percent of Mexico's total exports of electrical circuit apparatus to the United States in 1997.[57] Mexico accounted for $1.2 billion (88 percent) of the U.S. content in imports reported under HTS PSP for this group (table 3-10). Experienced labor and existing industrial infrastructure have continued to attract U.S. companies to establish production-sharing ties and in many cases directly invest in this region.[58] In addition, Mexico offers tariff benefits under NAFTA, wages competitive with many Asian electronics manufacturing countries, and proximity to the United States which can afford better supervision and quicker response than assembly plants in Asia.[59]

[55] Matthew Sheerin, "In All the Equations, Let's Not Forget the People," *Electronic Buyers News*, found at Internet address http://techweb.cmp.com/ebn/942/col/1086matt.html, retrieved June 8, 1998.

[56] U.S. industry representatives, interview by USITC staff, Myrtle Beach, SC, Feb. 1997.

[57] Official U.S. and Mexican data for bilateral trade in electrical circuit apparatus vary significantly, with Mexico (SECOFI) reporting $4 billion in total exports to the United States in 1997, while the U.S. Department of Commerce reported $2.6 billion in total imports from Mexico. See page pgs 1-5 and 1-7 for possible explanations for this discrepancy.

[58] KEMET Corp., "Monterrey Plant III Inauguration Ceremony Conducted," found at Internet address http://www.kemet.com/kemet/web/kechome.nsf/pages/new51, retrieved June 8, 1998.

[59] U.S. industry representative, telephone interview by USITC staff, June 11, 1998.

Table 3-9
Electrical circuit apparatus: 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))))))))) *Million dollars*)))))))))))))))			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	1,119	1,204	85	8
Value added	667	809	142	21
Total	1,786	2,013	227	13
NAFTA only[2]	277	504	227	82
Subtotal (NAFTA and/or HTS PSP)	2,063	2,517	454	22
Other	83	103	20	24
Total	2,146	2,620	474	22
Canada[3]	967	1,065	98	10
All other	7,407	8,230	823	11
Total	10,520	11,915	1,395	13

[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.—Calculations based on unrounded data.

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

Table 3-10
Electrical circuit apparatus: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97
(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	1,092	1,164	1,119	1,204
Dominican Republic	65	57	60	93
Canada	13	8	14	16
El Salvador	15	16	12	11
Ireland	7	10	9	9
China	4	3	4	7
Costa Rica	5	6	6	5
Taiwan	3	5	2	5
Jamaica	5	5	4	4
Singapore	1	1	2	4
All other	10	11	12	13
Total	1,219	1,285	1,245	1,371

Note.—Calculations based on unrounded data.

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

The U.S. content in Canadian exports to the United States reported under HTS PSP increased by $2.5 million (19 percent) to $16 million in 1997 (table 3-10). However, official statistics on the use of PSP may not reflect actual U.S.-Canadian production sharing in electrical circuit apparatus. Under the provisions of the United States-Canada Free-Trade Agreement (CFTA), most Canadian electrical circuit apparatus exports to the United States enter free of duty[60] and in 1994, the Customs user fee on Canadian exports to the United States was completely phased out. The result has been that Canadian production-sharing exporters have had little incentive to use HTS PSP. In 1997, total Canadian exports of electrical circuit apparatus to the United States were $1.1 billion.

The use of assembly plants in Mexico (low-cost labor) and Canada (rationalization of production) contributes to the competitiveness of U.S. producers of electrical circuit apparatus. Nevertheless, non-North American sources continue to account for the bulk of U.S. imports of the products, supplying 69 percent ($8.2 billion) of the total in 1997 (table 3-9).

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Television Receivers[61]

The United States is the world's largest market for color television receivers (CTVs), video monitors, and cathode-ray tubes. It is also one of the leading producers of parts used in the assembly of televisions. U.S. shipments of these products in 1997 are estimated at $8.2 billion, of which color television receivers and monitors accounted for 51 percent and cathode-ray tubes for 49 percent.[62] The U.S. industry consists of 13 companies producing CTVs and 7 producing color television picture tubes (CPTs).[63] 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.

Narrowing profit margins in consumer electronics have influenced U.S. producers' choice of assembly facilities for decades and led to the relocation of TV assembly plants to Mexico to take advantage of lower labor costs. By the late 1980s, every U.S. producer 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; however, most 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 remained 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's U.S. employment was reduced from about 4,700 at year-end 1996 to less than

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[60] In 1997, the United States still maintained a duty of 0.5 percent on the import from Canada of certain items in this group. However, these remaining duties will be eliminated Dec. 31, 1998 and, as a result, Canadian exporters will have no further incentive to use HTS PSP.

[61] Also includes video monitors, picture tubes, and other cathode-ray tubes.

[62] USITC staff estimate based on USDOC data. 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.

[63] Color television picture tubes account for about 90 percent of all cathode-ray tubes produced in the United States.

3,500 by the end of 1997.[64] Zenith continues to manufacture CPTs in the United States.[65] Another major U.S. producer, Thomson Consumer Electronics, shut down its remaining U.S. CTV assembly plant in Bloomington, Indiana, in April 1998 and moved all assembly to Mexico, while continuing to operate its two CPT plants in the United States. As a result of this shutdown, Thomson laid off over 1,100 employees. A representative of Thomson noted that the move was made because Mexican products cost less to manufacture, owing to lower labor rates, and were of higher quality than the goods produced in Bloomington.[66]

U.S. imports of television receivers and tubes peaked at $5.7 billion in 1995, then declined to $5.3 billion in 1997 (table 3-11). Imports of CTVs alone declined by $95 million (2 percent) to $4.4 billion in response to declining U.S. demand. U.S. imports of picture tubes and other cathode-ray tubes decreased by $111 million (11 percent) to $877 million, as a result of the shrinking U.S. assembly industry and the implementation of NAFTA.

Table 3-11
Television receivers: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	5,323	2,582	839	49	33
1995	5,656	2,466	819	44	33
1996	5,486	2,599	1,019	47	39
1997	5,280	2,348	1,032	45	44

Note.—Calculations based on unrounded data.

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

Mexican subsidiaries 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. U.S. imports of televisions and tubes from Mexico increased by $160 million (5 percent) in 1997 to $3.6 billion, accounting for 68 percent of total U.S. sector imports and 98 percent of the U.S. content in sector imports under the HTS PSP (table 3-12). According to official Mexican data, products assembled under Mexico's temporary import programs (Maquiladora and PITEX) accounted for 100 percent of Mexico's total exports of television receivers to the United States in 1997.[67] Similarly, official U.S. imports of television receivers under HTS PSP and NAFTA accounted for 98 percent of total imports in 1997 (table 3-13).[68] While total imports from Mexico grew, imports under the HTS PSP declined by $219 million (9 percent) to $2.3 billion. The increase in imports from Mexico resulted from the relocation of the U.S. CTV assembly plants of Zenith

[64] Zenith Electronics Corp., "Zenith to Cut U.S. Workforce By 25 percent," Dec. 18, 1996, http://www.zenith.com/main/news_archive/pr.corporate.121896.0.html, July 21, 1998.

[65] Zenith Electronics, 1997 10-K report, World Wide Web, http://www.zenith.com/, retrieved June 15, 1998.

[66] Thomson representative, USITC staff telephone interview, June 15, 1998.

[67] Official U.S. and Mexican data for bilateral trade in television receivers vary significantly, with Mexico (SECOFI) reporting $5.4 billion in total exports to the United States in 1997, while the U.S. Department of Commerce reported $3.6 billion in total imports from Mexico. See page 1-5 for possible explanations for this discrepancy.

[68] Imports under the HTS PSP accounted for 64 percent of total U.S. imports of television receivers from Mexico in 1997 (table 3-13).

and Thomson to Mexico. The shift in imports from PSP to NAFTA will likely continue when the Customs user fee is eventually eliminated on July 1, 1999.

Table 3-12
Television receivers: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	829	800	1,002	1,025
Italy	8	18	13	5
Brazil	2	1	2	2
Canada	(1)	1	(1)	1
All other	(1)	(1)	1	0
Total	839	819	1,019	1,032

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

Table 3-13
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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))))))))) *Million dollars*)))))))))))))))			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	1,002	1,025	23	2
Value added	1,527	1,285	-242	-16
Total	2,529	2,310	-219	-9
NAFTA only[2]	858	1,207	349	41
Subtotal (NAFTA and/or HTS PSP)	3,387	3,517	130	4
Other	43	73	30	70
Total	3,430	3,590	160	5
Canada[3]	103	16	-87	-84
All other	1,953	1,674	-279	-14
Total	5,486	5,280	-206	-4

[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.—Calculations based on unrounded data.

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

Most CTV imports from Mexico are likely assembled from a combination of U.S. and Asian parts. U.S.-origin content of CTVs imported under the HTS PSP rose from 33 percent in 1994 to 44 percent in 1997 (table 3-11), due in large part to NAFTA's rules of origin. The picture tube represents an increasing percentage of the value of a CTV,[69] and 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 American tubes.[70] However, television assembly remains the sector of the maquiladora industry most reliant on similar Asian products that generally do not contain North parts imported from Asia.[71]

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Medical Goods[72]

The United States is the world's largest producer of medical goods. In 1997, U.S. manufacturers accounted for $30.2 billion,[73] or 45 percent of world output of medical goods. The U.S. trade surplus in medical goods increased $481 million (10 percent) to $5.3 billion in 1997, as U.S. exports grew $1.0 billion (10 percent) to $11.2 billion, while U.S. imports grew $527 million (10 percent) to $5.9 billion. Improved medical imaging capabilities and faster scanning speeds continued to sustain U.S. competitiveness in global markets for advanced-technology medical imaging devices such as magnetic-resonance-imaging (MRI), computed tomographic (CT), ultrasound, and x-ray equipment.[74] Other high-technology devices developed in the United States, such as pacemakers, cardioverter defibrillators, coronary stents, and electrosurgical equipment, also benefited from increased global demand in 1997.[75] Such medical goods account

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[69] During 1994-97, U.S. exports of CPTs to Mexico more than doubled, and in 1997 increased by 33 percent to $2.1 billion.

[70] Some importers of articles that are otherwise free of duty continue to have an incentive to declare eligibility for entry under the HTS PSP. Under that provision, the U.S.-origin content of such imports is exempt from the Customs user fee, which is currently 0.21 percent ad valorem, with a maximum fee of $485 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 0.19 percent ad valorem user fee 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.

[71] Consequently, most Japanese and Korean television assembly plants are 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.

[72] Medical goods include all products classified in HTS headings 9018-9022.

[73] 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, June 17, 1998.

[74] U.S. investment analysts, interviews by USITC staff, Sept. 25-26, 1997; and DRI/McGraw-Hill, Standard & Poor's, U.S. Department of Commerce, *U.S. Industry & Trade Outlook 1998* (New York: McGraw-Hill Companies, Inc., 1998), p. 46-2.

[75] U.S. industry representative, interview by USITC staff, May 15, 1998; and U.S. investment analysts, interviews by USITC staff, New York, Sept. 24-25, 1997.

for a substantial share of U.S. trade in medical equipment and increased global demand for them contributed significantly to the increase in the U.S. trade surplus for medical goods.

A number of the largest U.S. producers of medical equipment, such as Abbott Laboratories, Baxter Healthcare, Becton Dickinson, and Johnson & Johnson, have been able to continue competing in less technology-intensive, commodity hospital consumable products, such as catheters, blood administration, and intravenous products, by establishing significant production-sharing operations in lower wage countries. Some of the most popular sites for such operations include Mexico, the Dominican Republic, and Costa Rica, where U.S.-manufactured components are assembled into finished apparatus and kits. Small and mid-sized U.S. medical goods manufacturers also engage in production sharing, often using contract manufacturers in the lower wage countries to assemble medical equipment from U.S.-made components and assemblies.[76] In addition to using the production-sharing provisions (PSP) of HTS Chapter 98 to reduce customs duties when the final assembled goods are imported into the United States, other provisions used by companies engaged in production sharing to reduce customs duties include NAFTA, GSP, and CBERA.

In 1997, total U.S. imports of medical goods under the HTS PSP increased by $101 million (10 percent) from 1996; however, their share of total imports of medical goods remained at the same level at 19 percent (table 3-14). Mexico and the Dominican Republic both continued to be important sources of import growth to the United States, while production-sharing imports from Costa Rica declined.

Table 3-14
Medical goods: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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			*Percent*age	
1994	4,405	617	290	14	47
1995	4,951	829	428	17	52
1996	5,368	994	543	19	55
1997	5,895	1,095	596	19	54

Note.—Calculations based on unrounded data.

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

[76] Partnerships with full-service Mexican contract manufacturers, such as Elamex, which has expertise in assembly of medical devices for U.S. and other foreign-based companies, enable U.S.-headquartered firms to concentrate on their core competencies of research and development; product design and technology; software development; marketing, sales and distribution; and customer service and support to increase their competitiveness in the U.S. and global markets for medical goods. "Maquilia of the Month: Elamex," *Twin Plant* News, Apr. 1998, p. 43.

Mexico remained the leading supplier of production-sharing imports of medical equipment to the United States, contributing $640 million (58 percent) of the total in 1997 (table B-5). This represented an increase of $71 million (12 percent) during 1996-97, with imports under HTS PSP accounting for 82 percent of total imports of medical goods from Mexico in that year.[77] According to SECOFI, products assembled under Mexico's temporary import programs (Maquiladora and PITEX) accounted for 99 percent of Mexico's total exports of medical goods to the United States in 1997.[78] U.S.-origin (duty-free) content of HTS PSP imports from Mexico amounted to $356 million in 1997, or 60 percent of the total production-sharing imports from that county (table 3-15). U.S. manufacturers continue to expand production in Mexico to take advantage of lower wage costs and proximity of that country to the U.S. market. [79]

Table 3-15
Medical goods: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	198	249	324	356
Dominican Republic	63	143	185	209
Netherlands	10	12	12	12
Costa Rica	6	8	9	5
Canada	6	7	6	5
Japan	2	1	2	3
Ireland	0	2	1	2
Malaysia	(1)	(1)	(1)	1
China	(1)	(1)	1	1
Denmark	1	1	(1)	1
All other	4	3	3	2
Total	290	428	543	596

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

[77] Some U.S. companies continued to import products assembled in Mexico at reduced duties under HTS PSP 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 the production-sharing provisions after duties on medical went to free 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.

[78] Official U.S. and Mexican data for bilateral trade in medical goods vary significantly, with Mexico (SECOFI) reporting $980 million in total exports to the United States in 1997, while the U.S. Department of Commerce reported $783 million in total imports from Mexico. See pg. 1-5 for possible explanations for this discrepancy.

[79] In 1997, Johnson & Johnson moved assembly activities representing approximately 800 jobs from plants in Florida and the Netherlands to its production-sharing facility in Juarez, Mexico. U.S. industry representatives, telephone interviews by USITC staff, June 10-12, 1998; and "Mexico Update," *Twin Plant News*, Nov. 1997, p. 9.

Mexico has benefited from its production-sharing relationships with U.S.-based medical goods producers over the past decade, allowing it to steadily improve its own skilled-labor and production base in the medical goods sector. As a result, there has been an increase in U.S.-Mexican joint-venture manufacturing operations. One former venture partner, Compania Mexicana de Radiologia (CMR), a producer of medical x-ray equipment, is now 100-percent Mexican owned and uses a substantial amount of high-value, U.S.-origin inputs.[80] The largest portion of CMR's production is for the Mexican market; however, CMR expects to increase exports to other Latin American countries.[81]

Despite the $114-million (17 percent) growth in U.S. imports of medical goods from Mexico in 1997, imports from non-North American suppliers rose by $374 million (8 percent) to $4.9 billion and accounted for 84 percent of total imports (table 3-16). The leading foreign suppliers were Japan, Germany, France, and the United Kingdom. The use of assembly plants in Mexico and the Dominican Republic contributes to the competitiveness of U.S. producers in certain niche markets.[82]

Table 3-16
Medical 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
		Million dollars		*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	324	356	32	10
Value added	245	284	39	16
Total	569	640	71	12
NAFTA only[2]	47	65	18	38
Subtotal (NAFTA and/or HTS PSP)	616	705	89	14
Other	53	78	25	47
Total	669	783	114	17
Canada[3]	134	172	38	28
All other	4,565	4,939	374	8
Total	5,368	5,894	526	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.—Calculations based on unrounded data.

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

[80] Mexican industry representative, interview by USITC staff, Queretaro, Mexico, May 20, 1998.
[81] Ibid.
[82] U.S. and Japanese medical industry representatives, telephone interviews by USITC staff, June 10-12, 1998.

In 1997, total production-sharing imports of medical equipment from the Dominican Republic increased by $13 million (5 percent) to $261 million, with U.S.-origin (duty-free) content accounting for $209 million, or 80 percent of the total. Major U.S. producers of commodity hospital products such as blood transfusion and intravenous sets, and related tubing and connectors, and certain dental products, continued to expand assembly operations in the Dominican Republic. U.S. industry representatives indicate that they use the Dominican Republic as an important assembly base to take advantage of low labor costs, low employee turnover, low corporate taxes, and proximity to Puerto Rico.[83] Puerto Rico is the location of related subsidiaries of large U.S.-based hospital supply companies, such as Baxter, Johnson & Johnson, and Abbott Laboratories, that supply important inputs for the Dominican Republic assembly operations. Another reason for the increase in production-sharing imports from that country was the loss of duty-free eligibility under GSP as the Dominican Republic exceeded its competitive-need limitations under that program in 1997.

In 1997, total production-sharing imports from Costa Rica declined by almost 12 percent to $9 million after several years of steady increases in such imports. The U.S.-origin content of imports from Costa Rica under HTS PSP declined even faster (by 44 percent over 1996), and accounted for just 56 percent of the total in 1997. U.S. industry representatives reported that the decline in such imports was the result of decisions by U.S. owners of an affiliate Costa Rican production-sharing operation to increase the proportion of its Costa Rican sales relative to U.S. sales. Further, an upgrading of the manufacturing capabilities and employee skill level of the affiliate of a major U.S.-headquartered firm in that country resulted in an increase in the portion of the value of medical goods contributed by its Costa Rican manufacturing facilities, resulting in the decline in the U.S.-origin content of such goods. The principal products imported by the United States from Costa Rica were transfusion apparatus and blood collection sets assembled from components manufactured by Baxter Healthcare in its Puerto Rican and mainland U.S. facilities.[84]

Meanwhile, advanced EU and Japanese producers of electromedical goods continued to take advantage of U.S. production-sharing provisions in 1997 to reduce tariff costs on the value of U.S.-made parts, components, and subassemblies in their manufacture of medical goods. Such components, however, represented a relatively small portion of the total cost of the finished medical goods exported to the United States. Major EU electromedical firms taking advantage of the production-sharing provisions include Philips (Netherlands) and Siemens (Germany) and subsidiaries of U.S.-based manufacturers in the Netherlands and Ireland.[85] Major Japanese electromedical producers include Toshiba, Hitachi, and Yokagawa Medical Systems, a wholly owned subsidiary of U.S.-based General Electric Medical Systems.

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[83] Representatives of Dominican Republic subsidiaries of U.S.-based medical and dental goods manufacturers, interviews by USITC staff, Itbo, Haina, Dominican Republic, June 4, 1998.

[84] Ibid.

[85] U.S. and EU-based medical goods producers, telephone interviews by USITC staff, June 10-12, 1998.

Measuring, Testing, Controlling, and Analyzing Instruments [86]

The United States accounted for almost one-half of the global output of measuring, testing, controlling, and analyzing instruments (measuring and controlling instruments) in 1997, and remained the world's largest producer and consumer of such products. Expanding demand for high-technology, user-friendly instruments produced in the United States precipitated a $1.7-billion (6 percent) rise in U.S. shipments during the period, which totaled an estimated $30.9 billion.[87] The global competitiveness of the U.S. industry was also strong during 1997, as reflected in the sector's trade surplus which increased by 19 percent to $6.5 billion. Process control instruments; analytical and scientific instruments; and equipment for testing electrical, radio, and communication circuits accounted for slightly more than one-half of U.S. shipments. Manufacturing and process industries; industrial, institutional, scientific, and commercial laboratories; and public utility companies were the principal end users of measuring and controlling instruments during 1997.

An increasing number of U.S. producers of measuring and controlling instruments rely on affiliated operations in Mexico for labor-intensive assembly and manufacturing functions performed under the production-sharing provisions (PSP) of HTS Chapter 98. These producers consider production sharing to be a highly effective means of lowering production costs and enhancing price competitiveness. Mexico's relatively low labor costs and the ease with which U.S.-affiliated producers can monitor quality and manufacturing efficiency encourage production sharing in that country. The improved skills of Mexican workers and the country's continuing efforts to upgrade its infrastructure also have made production sharing more attractive for U.S. manufacturers of measuring and controlling instruments. The use of assembly plants in Mexico helps U.S. producers compete more effectively with suppliers outside North America, which accounted for 70 percent ($5.7 billion) of total U.S. imports of measuring and controlling instruments in 1997 (table 3-17).

In addition to affiliates in Mexico, U.S. producers have similar but much smaller operations in China, Singapore, Taiwan, and Hong Kong to capitalize on the production-sharing concept of lower costs through reduced tariffs. Although labor costs within these Asian countries may be lower than 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 production-sharing provisions of Chapter 98 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 indicate that U.S. producers also rely upon the more sophisticated assembly techniques provided by operations in more developed countries. Production sharing with developed countries also may reflect the use of high-quality, low-cost, and/or specialized U.S.-made components in foreign manufacturing operations.

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[86] 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.

[87] Based on revised 1996 data estimated by USITC staff.

Table 3-17
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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))) *Million dollars*)))))))))))))			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	336	458	122	36
Value added	412	459	47	11
Total	748	917	169	23
NAFTA only[2]	262	308	46	18
Subtotal (NAFTA and/or HTS PSP)	1,010	1,225	215	21
Other	281	337	56	20
Total	1,291	1,562	271	21
Canada[3]	814	846	32	4
All other	5,031	5,681	650	13
Total	7,136	8,089	953	13

[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.—Calculations based on unrounded data.

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

U.S. employment in the measuring and controlling instruments industry totaled approximately 225,000 workers in 1997. Although employment has remained relatively stable during recent years, certain companies have reportedly transferred certain labor-intensive assembly operations offshore to capitalize on lower labor costs and advantages provided by NAFTA.[88] According to industry sources, however, the transfer of those assembly functions is not expected to have an adverse impact on industry-wide employment, because many U.S. producers constantly seek domestic employees who are capable of upgrading current product lines and manufacturing new products that offer more efficient technologies.[89]

U.S. imports of measuring and controlling instruments under HTS PSP rose by $231 million (28 percent) to $1.0 billion, while other imports grew by $722 million (11 percent) to $7.0 billion (table 3-18). The value of U.S.-origin components contained in HTS PSP imports increased by 38 percent ($133 million) to $486 million. The bulk of this growth was accounted for by imports from Mexico, which increased by $122 million to $458 million (table 3-19). In 1997, production-sharing operations in Mexico accounted for 94 percent of the U.S. components used in the foreign assembly and reimport of measuring and controlling instruments under HTS PSP.

[88] U.S. industry representative, telephone interview by USITC staff, June 9, 1998.
[89] Ibid.

Table 3-18
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, 1994-97

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*	
1994	5,727	682	298	12	44
1995	6,665	713	283	11	40
1996	7,136	815	353	11	43
1997	8,089	1,046	486	13	46

Note.—Calculations based on unrounded data.

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

Table 3-19
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, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	275	272	336	458
China	([1])	1	3	4
Singapore	6	([1])	([1])	4
Taiwan	3	2	3	3
Hong Kong	1	([1])	1	3
Malaysia	1	1	1	2
Dominican Republic	1	1	2	2
Brazil	([1])	([1])	1	2
United Kingdom	1	1	1	2
Barbados	([1])	([1])	1	2
All other	9	4	4	6
Total	298	283	353	486

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

Speedometers, tachometers, certain process control instruments, and thermostats for air conditioning, refrigeration, and heating equipment continued to be the leading measuring and controlling instruments imported under the production-sharing provisions in 1997. Significant factors contributing to increased imports of these products from assembly plants in Mexico included a strong demand in the U.S. market for measuring and controlling instruments used in the manufacturing and process industries[90] and continued effects of 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 increased capacity of Mexican assembly plants, which raised assembly capabilities in anticipation of NAFTA's favorable effects on demand in that country.

U.S. producers have expanded assembly and manufacturing operations in Mexico to capitalize on the duty-free provisions of NAFTA and the lower costs that followed the devaluation of the peso. In addition, several Asian-based manufacturers of measuring and controlling instruments have established operations along the U.S./Mexico border and incorporate 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.[91] According to official Mexican data, products assembled under Mexico's temporary import programs (Maquiladora and PITEX) accounted for 96 percent of Mexico's total exports of measuring and controlling instruments to the United States in 1997.[92] Similarly, official U.S. data show imports under HTS PSP and NAFTA combined accounted for 78 percent of total U.S. imports of measuring instruments in 1997 (table 3-17).

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[90] Total U.S. consumption of measuring and controlling instruments increased by about 3 percent to an estimated $24.5 billion during 1996-97.

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

[92] Official U.S. and Mexican data for bilateral trade in measuring and controlling instruments vary significantly, with Mexico (SECOFI) reporting $913 million in total exports to the United States in 1997, while the U.S. Department of Commerce reported $1.6 billion in total imports from Mexico. See pg. 1-5 for possible explanations of this discrepancy.

Motor Vehicles and Related Equipment[93]

In 1997, Mexico was the leading source for U.S. imports of motor vehicles and related equipment reported under the production-sharing provisions (PSP) of HTS Chapter 98, both in terms of total value and the value of U.S.-origin components incorporated during the assembly process, although Canada is probably the leading production-sharing partner overall.[94] The value of U.S.-made components, $4.8 billion, accounted for 60 percent of the value of total HTS PSP imports in 1997. 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. Since the implementation of NAFTA, Mexico has received $7.7 billion in new auto and auto parts facilities, making it one of the most important locations for auto production.[95]

Much of Mexico's output of automotive products is produced by subsidiaries of the U.S. Big Three firms, General Motors (GM), Ford, and Chrysler, which then export a large portion of the products to the United States. These subsidiaries shifted a considerable amount of their home market production to export production in 1995 and 1996 in response to the December 1994 peso devaluation that weakened the automotive market in Mexico. In 1997, however, domestic motor vehicle sales in Mexico increased by nearly 50 percent, and Mexican industry observers predict that the market will return to 1994 levels in 1998. Strong demand in the United States for GM, Ford, and Chrysler vehicles contributed to the continued growth in motor vehicle imports from these automakers' plants in Mexico; total motor vehicle and related equipment imports from Mexico increased by 10 percent in 1997 to $22.2 billion. Total NAFTA imports of these products from Mexico rose by 12 percent, while total HTS PSP imports decreased by 16 percent. This reflects the trend toward importing more motor vehicles and related equipment under NAFTA instead of under HTS PSP.

While imports of all transportation equipment[96] from Mexico under HTS PSP fell by $1.5 billion (15 percent) in 1997, imports entering separately under NAFTA ("NAFTA only") rose by $3.5 billion (30 percent) (table 3-20). Overall, total imports of transportation equipment from Mexico grew by $2.3 billion (11 percent) in 1997 to $23.3 billion. By comparison, imports from Canada climbed by $3.6 billion (7 percent) to $53.5 billion and imports from non-North American suppliers rose by $8.1 billion (10 percent) to $85.8 billion. Non-North American sources accounted for 53 percent of total U.S. imports of transportation equipment in 1997, while Canada accounted for 33 percent and Mexico, 14 percent.

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[93] Includes motor vehicles; certain motor-vehicle parts; internal combustion piston engines; wiring harnesses for motor vehicles and other insulated electrical conduits; and ignition, starting, lighting, and other electrical equipment.

[94] Because motor vehicles and related equipment from Canada are eligible for duty-free treatment, initially under the Automotive Products Trade Act of 1965 (APTA) and now also NAFTA, there is little incentive to enter such trade under HTS PSP, even though it involves production sharing. The preponderance of imports from Canada in the motor vehicle sector have traditionally entered under provisions of the APTA. However, beginning in 1995, imports increasingly entered the country under NAFTA. Because all tariffs on U.S. and Canadian motor vehicles and parts were eliminated under NAFTA as of January 1, 1998, 1997 was the final year that APTA was the only duty-free program available to importers.

[95] Joel Millman, "Mexico is Becoming Auto-Making Hot Spot," *Wall Street Journal*, June 23, 1998, p. A17.

[96] Transportation equipment includes motor vehicles and related equipment, aircraft and parts, railway locomotives and rolling stock, boats and ships, and specialty vehicles for activities such as construction and mining.

Table 3-20
Transportation equipment:[1] 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	---------- *Million dollars* ----------			*Percentage*
Mexico:				
HTS PSP[2]				
U.S. content	5,526	5,034	-492	-9
Value added	4,321	3,338	-983	-23
Total	9,847	8,372	-1,475	-15
NAFTA only[3]	10,035	13,498	3,463	35
Subtotal (NAFTA and/or HTS PSP)	19,882	21,870	1,988	10
Other	1,154	1,427	273	24
Total	21,036	23,297	2,261	11
Canada[4]	49,988	53,547	3,559	7
All other	77,733	85,811	8,078	10
Total	148,757	162,655	13,898	9

[1] Includes motor vehicles and related equipment (including ignition wiring harnesses), aircraft and parts, railway locomotives and rolling stock, boats and ships, and specialty vehicles for activities such as construction and mining. Sector data for transportation equipment in App. B tables does not include ignition wiring harnesses.

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

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

[4] 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.—Calculations based on unrounded data.

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

Motor Vehicles[97]

The United States is the world's largest consumer and producer of motor vehicles. In 1997, U.S. sales of cars and light trucks totaled 15.2 million units, accounting for 28 percent of global sales. U.S. car and truck production reached 12.1 million units in 1997, accounting for 21 percent of global production.[98] Light trucks, which are responsible for most of the value of the U.S. content in HTS PSP imports, accounted for 45 percent of the total U.S. market for passenger vehicles in 1997, with the U.S. Big Three controlling over 86 percent of that segment in the United States.[99]

Total U.S. imports of motor vehicles rose by 18 percent during 1994-97, to $93.0 billion (table 3-21). Canada, Japan, and Mexico together accounted for 82 percent of total U.S. imports of motor vehicles in 1997. U.S.-made parts account for a significant portion of the value of vehicles imported from Canada and Mexico. Most of the vehicles from Canada and Mexico enter free of duty under NAFTA rather than HTS PSP, although the increased use of production-sharing

[97] Referred to as "Automobiles, trucks, buses, and bodies and chassis of the foregoing" in app. B tables.

[98] Automotive News, *1998 Market Data Book* (MI: Crain Communications, 1998), various pages.

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

operations as a whole remains indicative 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, partially because it is more cost effective to manufacture and/or assemble vehicles in major consumer markets than to export vehicles from the United States.

Table 3-21
Motor vehicles: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	79,086	23,026	2,224	29	10
1995	84,217	18,571	2,032	22	11
1996	87,116	23,209	2,633	27	11
1997	92,988	31,053	2,551	33	8

Note.—Calculations based on unrounded data.

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

Total HTS PSP imports rose by $7.8 billion (34 percent) to $31.1 billion in 1997, accounting for 33 percent of total motor vehicle imports. The U.S. content in vehicles imported under the HTS PSP, however, dropped by $82 million (3 percent) in 1997 to $2.6 billion, or 8 percent, of total HTS PSP imports. Passenger cars from Japan, which accounted for the bulk of the rise in imports under HTS PSP in 1997, incorporate fewer U.S.-made components than vehicles imported from Mexico or Canada. HTS PSP imports are comprised principally of passenger cars, while duty-free U.S. content is highest for light trucks.

Imports from Mexico consistently have the highest amount of U.S. content of all foreign sources of HTS PSP imports of motor vehicles. In 1997, the U.S. content in such imports totaled $2.1 billion, accounting for 82 percent of the total U.S. content in motor vehicle HTS PSP imports from all sources. The Mexican motor vehicle industry consists primarily of U.S.-, Japanese-, and German-owned facilities that assemble vehicles largely from imported parts or parts assembled in the maquiladora industry. U.S. Big Three production in Mexico accounted for 67 percent of total Mexican car and truck production in 1997, most of which was exported back to the United States.[100] 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 and 1996 in response to the December 1994 peso devaluation; however, domestic motor-vehicle sales in Mexico increased by nearly 50 percent in 1997, as the Mexican economy continued to recover. Mexican industry observers predict that the market will return to pre-peso devaluation levels in 1998.[101] 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.

[100] Guillermo Lira, "December Sales Gain Caps Strong Year in Mexico," *Automotive News*, Jan. 26, 1998, p. 36.

[101] Economist Intelligence Unit, "Mexico's Automotive Sector: Rapid Recovery Continues," ch. 3 in *Motor Business International*, 2nd quarter 1998 (London: Economist Intelligence Unit, 1998), p. 44.

Total imports of motor vehicles from Mexico increased by 5 percent during 1996-97; while total HTS PSP imports declined by 18 percent, imports entering separately under NAFTA ("NAFTA only" in table 3-22) climbed by 22 percent. U.S. imports under HTS PSP and NAFTA accounted for 99 percent of total motor vehicle imports from Mexico in 1997. Likewise, vehicles assembled under Mexico's two temporary import programs (Maquiladora and PITEX) amounted to $12.1 billion in 1997 and accounted for nearly 100 percent of total vehicle exports to the United States, according to official Mexican data. U.S. content in HTS PSP imports declined by $218 million (9 percent) in 1997, as companies shifted from importing under HTS PSP to importing under NAFTA. HTS PSP imports from Mexico and the U.S. content value in such imports declined in 1997 for passenger cars, but increased for various truck segments. U.S.-made parts continued 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 HTS PSP. Total NAFTA imports from Canada reached $25.2 billion in 1997, while total HTS PSP imports totaled just $58 million.

Table 3-22
Motor vehicles: 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))))))))) *Million dollars*)))))))))))))			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	2,310	2,092	-218	-9
Value added	2,229	1,645	-584	-26
Total	4,539	3,736	-803	-18
NAFTA only[2]	6,883	8,398	1,515	22
Subtotal (NAFTA and/or HTS PSP)	11,422	12,134	712	6
Other	292	135	-157	-54
Total	11,714	12,270	556	5
Canada[3]	33,676	35,884	2,208	7
All other	41,726	44,834	3,108	7
Total	87,116	92,988	5,872	7

[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.—Calculations based on unrounded data.

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

Japan accounted for 10 percent of total U.S. content in total motor vehicle HTS PSP imports from all sources in 1997 (table 3-23), up from 4 percent in 1996. The value of U.S. content in motor vehicle HTS PSP imports from Japan rose by 134 percent, from $109 million in 1996 to $255 million in 1997. This increase was significant in light of the fact that total motor vehicle imports from Japan increased by a modest 4 percent in 1997. U.S. content in motor vehicles imported from Japan under production-sharing provisions is found primarily in passenger car imports; the value of U.S. content in gasoline-powered passenger car imports from Japan with engine displacement of 1.5 liters and over totaled $233 million, a 140-percent increase over 1996

levels. However, the value of U.S. content in gasoline-powered light truck imports from Japan increased over 400 percent to $9.5 million, reflecting increased imports of light trucks from Japan, and increased use of U.S. parts in such imports.

Table 3-23
Motor vehicles: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	1,768	1,676	2,310	2,092
Japan	164	98	109	255
Germany	89	118	106	100
Canada	125	64	23	34
Belgium	13	17	20	26
United Kingdom	23	21	28	16
Sweden	14	17	20	12
Korea	21	14	10	7
Hungary	1	2	3	4
France	4	4	3	3
All other	1	([1])	1	2
Total	2,224	2,032	2,633	2,551

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

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.[102] In addition, Japanese motor vehicle producers have been under diplomatic pressure to increase their purchases of U.S.-made parts for motor vehicle assembly in Japan. Exports of U.S.-made automotive parts to Japan rose by 13 percent to $2.3 billion in 1997; however, U.S. officials characterize sales of original equipment parts to Japan as persistently low.[103] An official of the Japan Automobile Manufacturers Association reported that increased U.S. auto parts exports are 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 blueprint stage.[104] There is no U.S. motor vehicle manufacturing in Japan; HTS PSP imports are entirely attributable to assembly by Japanese manufacturers.

[102] 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.

[103] Office of the United States Trade Representative, *1998 National Trade Estimate on Foreign Trade Barriers*, p. 233.

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

While total vehicle imports from Germany rose by $1.4 billion (16 percent) in 1997, the value of the U.S. content in total motor vehicle HTS PSP imports from Germany fell for the second consecutive year, by $6 million (6 percent) to $100 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.[105] While the decline was not a significant shift in terms of value, this trend may be attributed to increased sourcing by German automakers of parts from third markets such as Mexico. German auto parts firms have established Mexican production bases in recent years to enable Volkswagen to meet NAFTA's rules-of-origin requirements for duty-free treatment. In contrast, U.S. exports of automotive parts to Germany rebounded in 1997 after falling 3 percent in 1996; these exports reached $1.0 billion, a 12-percent increase over 1996. U.S. content in vehicle imports from Germany is found primarily in passenger cars.

Although light trucks accounted for just 11 percent of total HTS PSP imports in 1997, gasoline-powered light trucks contained the largest share, and diesel-powered light trucks the second-largest share, of U.S. content in total motor vehicle HTS PSP imports. These two categories accounted for a combined 71 percent of the total value of U.S. content in total HTS PSP imports of motor vehicles in 1997. U.S. automakers, which account for over 90 percent of the light truck production in Mexico,[106] realize a significant duty advantage from production-sharing provisions when exporting these trucks to the United States. The value of U.S.-origin parts used in the assembly of light trucks is high, and is not subject to duty under HTS PSP. This resulted in an applied tariff rate lower than the already reduced rate of 2.5 percent ad valorem for Mexico in 1997. In contrast, U.S. imports of light trucks from Japan, which generally contain few U.S. parts, are assessed an applied duty of 25 percent ad valorem.

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[105] 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.

[106] Automotive News, *1998 Market Data Book* (MI: Crain Communications, 1998), p. 27.

Ignition Wiring Harnesses[107]

Ignition wiring harnesses[108] are the fourth-largest production-sharing group,[109] accounting for $2.7 billion of HTS PSP entries and $1.6 billion of the U.S. content in these imports in 1997. Industry experts estimate that over 90 percent of U.S. imports of ignition wiring harnesses resulting from offshore assembly are consumed in new U.S. motor vehicle production.[110] The remainder are used in motor vehicle replacement applications as well as in vessels and aircraft.

The U.S.- and foreign-owned companies that design and fabricate these products work closely with the major U.S. vehicle manufacturers to assure the timely delivery of high quality harnesses for final automotive assembly. These deliveries must accurately mirror the increasing diversity of model line and accessory packages demanded by the consuming public, as well as continual product modifications that in some cases affect the "fit" of the harness into each vehicle. As a result, most of the design and layout work on harness assembly has been automated through the use of sophisticated Computer-Aided Design and Manufacture (CAD/CAM) systems that can be rapidly modified to respond to the idiosyncracies and uncertainties of automotive production lines.

Most wiring harness assembly operations also have been adapted to "just-in-time" environments in order to reduce work-in-progress inventories and streamline the final assembly process, which is highly labor intensive.[111] Machinery that is employed to cut to length, strip, and terminate individual electrical conductors are located in close proximity to the final assembly process stations so that the distances that materials have to travel in the plant are minimized. The operations that are performed during the final assembly phase are extremely difficult or economically unfeasible to automate. For this reason, over 90 percent of the harnesses used in U.S. automotive assembly operations are assembled in countries with low wage rates. Mexico's proximity to the U.S. automotive industry, together with its highly competitive wage rates, have made it the preferred location for offshore processing of wiring harnesses. U.S. consumption of

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[107] The data presented for this commodity group represents imports of all insulated electrical conductors. However, wiring harnesses for motor vehicles dominate with 72 percent of total imports, 80 percent of HTS PSP imports, and 79 percent of the U.S. content in PSP imports in 1997. Insulated conductors of 80 volts or less and conductors of 81 volts to 1,000 volts, both of which were fitted with connectors, were the only other significant product categories in this group during 1997. Ignition wiring harnesses are referred to as "Wiring harnesses for motor vehicles and other insulated electrical conduits," in app. B tables.

[108] Ignition wiring harnesses are assemblages of multiple stranded electrical conductors to which assorted terminals, plugs, connectors, sockets, and other wiring devices have been affixed. These assemblies are fitted into vehicles, aircraft, and vessels to establish electrical connections between various apparatus (e.g., lights, instruments, audio equipment, and motors) and a power source (typically a battery or generator), and/or to conduct high-voltage currents between starting and ignition components (such as starters, alternators, coils, distributors, and spark plugs). The typical motor vehicle is equipped with numerous harnesses including those for the engine compartment, instrument panel, door panel, passenger compartment, and rear light and wiper assemblies.

[109] Behind motor vehicles, semiconductors, and apparel.

[110] Based upon conversations with U.S. industry officials during Sept. 1998.

[111] The final assembly process, which typically involves numerous product line changes, is performed on wiring tree boards, that are moved from station to station, where one or more color coded wiring circuits are manually added to the harness. At the last station, the harness is usually manually jacketed with electrical tape or flexible conduit. The harnesses are then tested for electrical continuity and packaged for shipment.

ignition wiring harnesses for motor vehicles was estimated to be in the $4.2 billion to $4.5 billion range in 1997.[112]

A major portion (60 percent) of the worldwide market for wiring harnesses is accounted for by 4 companies. These companies (two U.S.-owned and two foreign-owned)[113] have extensive, long-term relationships with the major U.S.- and foreign-owned motor vehicle manufacturers, and have established facilities in Mexico and other foreign locations (including the Philippines, Thailand, and Indonesia) to maximize their worldwide presence and reduce their dependence on a single foreign source of supply.

The steadily upward trend in the value of U.S. imports of wiring harnesses not only reflects the steady growth in U.S. motor vehicle production in recent years, but also the addition of optional electrical and electronic equipment that has increased the complexity and cost of modern wiring harnesses. Total U.S. imports of wiring harnesses and other electrical conductors rose by $884 million (15 percent) to $6.8 billion in 1997 (table 3-24). Although U.S. imports under HTS PSP declined by $648 million (19 percent) to $2.7 billion and the U.S. content in these entries fell by 20 percent ($400 million) to $1.6 billion, this downturn was largely attributable to companies switching from the entry of products under HTS PSP to importing under NAFTA.

Table 3-24
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, 1994-97

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*	
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
1997	6,819	2,684	1,638	39	61

Note.—Calculations based on unrounded data.

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

Mexico accounted for nearly two-thirds of U.S. imports of wiring harnesses in 1997. Such imports rose by $728 million (19 percent) in 1997 to $4.5 billion.[114] The value of HTS PSP entries, however, declined by $573 million (19 percent) to $2.5 billion, while the U.S. content in such imports declined by $406 million (21 percent) to $1.6 billion in 1997 (table 3-25). Nevertheless, Mexico accounted for 95 percent of the U.S. content in HTS PSP entries from all sources (table 3-26). The downward trend in Mexican HTS PSP entries is indicative of the increasing preference of companies operating in the Mexican maquiladora industry to use the duty-free provisions of NAFTA that apply to the entire value of imported merchandise, rather

[112] These estimates were derived by multiplying the annual U.S. production of motor vehicles, which amounted to 12.0 million units in 1997, by an estimated average unit value of between $350 and $375 per vehicle. Production estimates were sourced from the *Automotive News Data Center*.

[113] Delphi Packard Electric, Yazaki Corp., Sumitomo Electric Wiring Systems, and United Technologies Automotive.

[114] By comparison, imports from non-NAFTA suppliers rose by just $82 million (5 percent) in 1997 to $1.8 billion (table 3-25).

than the HTS PSP that provide duty-free treatment just to the value of the U.S.-origin content. U.S. imports under HTS PSP and NAFTA combined accounted for 89 percent of total U.S. imports of ignition wiring harnesses from Mexico. Official Mexican data, by contrast, indicate that 100 percent of Mexican exports of ignition wiring harnesses to the United States were assembled under the Maquiladora Program or PITEX (table 1-3).

Table 3-25
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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
		Million dollars		*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	1,969	1,563	-406	-21
Value added	1,064	898	-166	-16
Total	3,034	2,461	-573	-19
NAFTA only[2]	591	1,538	947	160
Subtotal (NAFTA and/or HTS PSP)	3,625	3,999	374	10
Other	137	491	354	258
Total	3,762	4,490	728	19
Canada[3]	433	507	74	17
All other	1,740	1,822	82	5
Total	5,935	6,819	884	15

[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.—Calculations based on unrounded data.

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

Table 3-26
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, 1994-97
(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	1,554	1,758	1,969	1,563
Philippines	29	54	33	42
Thailand	8	9	9	10
Honduras	0	0	5	7
China	(1)	4	6	4
Taiwan	3	4	5	3
Canada	7	6	3	3
Costa Rica	(1)	(1)	(1)	2
Dominican Republic	12	2	2	1
Indonesia	3	3	3	1
All other	2	3	1	1
Total	1,617	1,843	2,038	1,638

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

The Philippines and Thailand, which at one time appeared to be emerging as major suppliers of wiring harnesses to the U.S. market, are hampered by their significant distance from U.S. markets and the U.S. automotive industry's increasing drive to reduce lead times for essential automotive components. Suppliers of wiring harnesses in the Philippines and Thailand use the duty-free provisions of the Generalized System of Preferences (GSP) more than the production-sharing provisions of HTS Chapter 98. Increased domestic consumption by the infant, expanding Chinese automotive industry is thought to be reducing the quantity of harnesses available for export from China.

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Certain Motor-Vehicle Parts[115]

The United States is a major world producer of motor-vehicle parts, accounting for an estimated one-quarter of the global production of these products in 1997. Although the U.S. motor-vehicle parts producing industry consists mostly of small producers, the leading auto parts manufacturers are subsidiaries of the Big Three automotive producers, all of which produce parts mainly for captive use.[116] 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.

Changing automaker requirements, such as shifts toward greater research and development responsibilities undertaken by suppliers, a reduced supplier base, and systems integration, are spurring the ongoing restructuring of the U.S. motor-vehicle parts producing industry. Larger component manufacturers in particular have pursued mergers with, and acquisitions of, suppliers of complementary technologies or components to enhance their automotive systems capabilities. Interior automotive systems have been a major focus of this movement to systems integration. To meet the global sourcing strategies of automakers, the U.S. motor-vehicle parts industry also has accelerated its expansion into foreign markets to better serve its customers.

Production sharing has been integral to U.S. parts makers' efforts to lower production costs, particularly as automakers demand greater cost reductions from their parts suppliers. However, the use of the HTS production-sharing provisions will likely continue to decline because of increased use of NAFTA provisions and the elimination of the customers user fee.[117] Industry

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[115] 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.

[116] The captive position of the Big Three parts subsidiaries is in transition as automakers pursue greater independence for these operations. General Motors' Delphi Automotive Systems, for example, is taking steps to expand its customer base outside General Motors, and will be spun off as an independent company. Ford's Automotive Products Operations division has been renamed Visteon, and is reorganizing operations with a focus on increased outside sales and expansion into new motor-vehicle parts markets.

[117] Importers of articles that are otherwise duty free continue to have an incentive to declare eligibility for entry under HTS provision 9802.00.80. Under that provision, the U.S.-origin content of such imports is exempt from the Customs user fee of 0.21 percent ad valorem, with a maximum fee of $485 per entry. Under NAFTA,

strategies that will likely be more critical for competitiveness than the use of production-sharing preferences include efforts to improve productivity and cost effectiveness; the capability to supply complete automotive systems; component commonality;[118] increased globalization and outsourcing by U.S. automakers; the ability to take on functions such as financing and research and development; and greater technological innovation.

During 1996-97, U.S. imports of certain motor-vehicle parts under production-sharing provisions fell by 12 percent to nearly $1.7 billion, whereas the value of U.S.-origin components contained in imports under such provisions increased by 8 percent to $978 million (table 3-27). The recovery of the Mexican economy and the automotive sector, the expansion of the Mexican auto parts industry, and the significant role played by U.S. parts makers in NAFTA-partner automotive industries were largely responsible for the continued growth in U.S. content. U.S.-origin components accounted for 59 percent of the value of auto parts imported under HTS PSP in 1997, with safety seat belts, miscellaneous body parts and accessories,[119] and other miscellaneous motor-vehicle parts and accessories[120] representing about 83 percent of the value of U.S. content.

Table 3-27
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, 1994-97

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*	
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
1997	19,420	1,651	978	9	59

Note.—Calculations based on unrounded data.

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

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 0.19 percent 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.

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

[119] This category includes, but is not limited to, convertible tops, sun roofs, stampings, and truck caps.

[120] 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.

Mexico was the leading supplier of motor-vehicle parts imported under HTS PSP during 1996-97, in part because of its proximity to the U.S. market, lower wage rates, increased U.S. and foreign investment,[121] and integration into the North American automotive industry.[122] The value of auto parts imports from Mexico under HTS PSP dropped by 11 percent in 1997 to nearly $1.4 billion, whereas the value of U.S.-origin components rose by 6 percent to $943 million (table 3-28). Despite the growth in U.S. content under HTS PSP, NAFTA has become increasingly significant to U.S.-Mexican trade flows. Imports entered separately under "NAFTA only" rose by 64 percent to $1.5 billion, accounting for 49 percent of imports from Mexico in 1997. Imports entered under both HTS PSP and NAFTA accounted for 94 percent of total imports of auto parts from Mexico in 1997 (table 3-29). Likewise, official Mexican data show that exports of auto parts from the Maquiladora Program and PITEX comprised 96 percent of total exports to the United States, the majority of which incorporated U.S. components and materials.

Imports from Mexico accounted for 96 percent of the total value of U.S.-origin components used in the assembly of certain motor-vehicle parts in 1997 (tables B-3 and B-5). U.S. components accounted for 70 percent of the value of HTS PSP imports from Mexico in 1997, with safety seat belts, miscellaneous body parts and accessories, and other miscellaneous motor-vehicle parts and accessories accounting for 84 percent of the value of total U.S.-origin components (table 3-29). TRW, Inc., Breed Technologies, AlliedSignal Automotive, and 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 motor-vehicle parts imports under HTS PSP in 1997. 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. Despite this limitation, U.S. content nearly doubled from the 1996 level to $16 million, whereas the value of automotive parts imports under HTS PSP rose 5 percent to nearly $36 million in 1997. U.S.-origin components accounted for 45 percent of the value of auto parts imports under such provisions in 1997, with miscellaneous parts and accessories, and parts of bumpers representing 59 percent of U.S. content. Imports under NAFTA, on the other hand, rose by 28 percent ($389 million) to $1.8 billion, and represented 24 percent of U.S. imports of automotive parts from Canada.

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[121] An estimated $1.2 billion of foreign investment was made in the Mexican auto parts industry in 1997. *Mexico - Automotive Original Equipment Manufacturers - ISA 970801*, Market Research Report, U.S. Department of State, dated Aug. 1, 1997, found at http://www.stat-usa.gov/, retrieved Dec. 1, 1997. For example, see "Delphi Builds Ignition Plant," *Automotive Industries*, Jan. 1997, p. 69; "Rockwell Opens Plant," *Automotive Industries*, Feb. 1997, p. 206; and "Aisin Seiki Opens Mexico Facility, Plans $40 Million Engine Parts Plant in Kentucky," *The Japan Automotive Digest*, Sept. 1, 1997, p. 9.

[122] Delphi Automotive Systems, the parts-making operation of General Motors, reportedly exports almost $5 billion in components annually to Mexican plants to be used in the manufacture of Delphi automotive parts or systems, most of which are exported to the United States or Canada. "Peso Crisis Turbo-Charges Revolution in Motor Trade," *Financial Times*, June 11, 1997, p. 6.

Table 3-28
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, 1994-97

(*Million dollars*)

Product	1994	1995	1996	1997
Mexico	977	811	887	943
Canada	11	3	8	16
Germany	1	(1)	1	7
France	7	5	4	4
Korea	0	0	0	4
United Kingdom	1	2	2	1
Japan	4	2	1	1
Brazil	1	1	1	1
Singapore	2	1	1	1
Netherlands	0	(1)	(1)	1
All other	1	(1)	1	(1)
Total	1,005	825	905	978

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

Table 3-29
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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	---------- *Million dollars* ----------			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	887	943	56	6
Value added	636	411	-225	-35
Total	1,523	1,354	-169	-11
NAFTA only[2]	909	1,490	581	64
Subtotal (NAFTA and/or HTS PSP)	2,432	2,844	412	17
Other	101	183	82	81
Total	2,533	3,027	494	20
Canada[3]	6,917	7,527	610	9
All other	8,943	8,866	-77	-1
Total	18,393	19,420	1,027	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.—Calculations based on unrounded data.

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

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 all 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. The Canadian industry has reportedly strengthened its position in the global auto parts market by consolidating operations, developing higher value-added components, and being more responsive to automakers' requirements, such as providing automotive systems in lieu of individual components.[123]

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[123] "Canadian Auto Industry - Big Winner Under Free Trade," *Scotiabank Economic Reports*, Mar. 31, 1998, found at http://scotiabank.ca/autoreport.htm, retrieved Apr. 22, 1998.

Machinery and Equipment[124]

Production-sharing operations continue to be an important strategic tool of U.S. producers of machinery and equipment. U.S. imports of machinery and equipment under the production-sharing provisions (PSP) of HTS Chapter 98 rose by $652 million (16 percent) during 1997 to $4.7 billion, or 8 percent of total U.S. imports ($61.9 billion) (table B-3). The U.S. content in HTS PSP imports rose by $391 million (20 percent) in 1997 to $2.4 billion. There has been an ongoing change in the composition of imports from Mexico, particularly as an increasing share of machinery and equipment is entered under NAFTA instead of HTS PSP.

U.S. imports of machinery and equipment from Mexico that were simultaneously declared as eligible for entry under HTS PSP and separately under NAFTA rose by $1.1 billion (22 percent) in 1997 to $6.2 billion, accounting for 93 percent of total sector imports from Mexico (table 3-30). Imports from Mexico that did not receive lower duties under either HTS PSP or NAFTA increased by $86 million (22 percent) to $477 million. The growth in the latter import grouping likely is due to the expanded presence of European and Asian suppliers in Mexico that are unable to meet U.S. requirements for reduced duty entry of products under either NAFTA or HTS PSP. The increase in NAFTA entries likely is attributable to the fact that more companies are aware of and comply with NAFTA eligibility and documentation requirements and that the total value of such shipments (not just the U.S. content) are subject to substantially reduced or eliminated import duties.

The four largest categories of machinery and equipment imported under HTS PSP in 1997 were electric motors and generators; valves; electrical transformers; and air conditioning equipment. Together, these product groups accounted for 59 percent of total HTS PSP imports of machinery and equipment and 69 percent of the U.S. content in sector entries. Most of these products either have production processes that are extremely difficult to automate or have a high labor content relative to total production and transportation costs. They also typically are associated with relatively unsophisticated technology in their components and construction. Production-sharing trade in electric motors and generators; valves; electrical transformers; and air-conditioning equipment, which collectively grew by $493 million (22 percent) in 1997 to $2.8 billion, is discussed in more detail below.

[124] Machinery and equipment include air conditioning equipment; commercial machinery; household appliances; centrifuges, filtering and purifying equipment, and pumps for liquids; semiconductor manufacturing equipment and robots; taps, cocks, valves, and similar devices; electric motors, generators, and related equipment; electrical transformers, static converters, and inductors; powered hand tools and parts; flashlights and other electric lamps; and miscellaneous machinery and equipment. The data for wiring harnesses for motor vehicles and other insulated electrical conductors, which is included as part of the machinery and equipment totals shown in appendix B, has been removed from this writeup and included in the sectoral analysis for motor vehicles and related equipment.

Table 3-30
Machinery and equipment:[1] 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))))))))))) *Million dollars*))))))))))))))))			*Percentage*
Mexico:				
HTS PSP[2]				
U.S. content	1,819	2,175	356	20
Value added	1,294	1,528	234	18
Total	3,113	3,703	590	19
NAFTA only[3]	2,028	2,558	530	26
Subtotal (NAFTA and/or HTS PSP)	5,141	6,261	1,120	22
Other	391	477	86	22
Total	5,531	6,738	1,207	22
Canada[4]	7,563	8,006	443	6
All other	44,212	47,168	2,956	7
Total	57,306	61,912	4,606	8

[1] Excludes data for ignition wiring harnesses.
[2] Encompasses imports that are entered under both HTS PSP and NAFTA.
[3] Excludes imports declaring eligibility simultaneously under both NAFTA and HTS PSP.
[4] 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.—Calculations based on unrounded data.

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

Electric Motors, Generators, and Related Equipment[125]

During 1994-97, imports from the production-sharing operations of U.S. producers of electric motors, generators, and related equipment (motors and generators) grew at a faster pace than total U.S. imports of these products. While total U.S. imports of motors and generators rose by $722 million (21 percent) to $4.2 billion in 1997, HTS PSP imports increased by $239 million (33 percent) to $956 million (table 3-31). As a result, the share of total imports accounted for by HTS PSP entries rose gradually from 21 to 23 percent. The U.S. content share of HTS PSP imports of motors and generators remained relatively constant during 1995-97 at 61 percent.

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[125] In addition to electric motors and generators and parts, this product group covers diesel, gasoline, and other generating sets; permanent magnets and electromagnetic and magnetic devices; carbon electrodes, brushes, and related electrical articles of carbon or graphite; and electrical insulators and insulating fittings.

Table 3-31
Electric motors, generators, and related equipment: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	3,457	717	426	21	59
1995	3,880	780	475	20	61
1996	3,875	859	522	22	61
1997	4,179	956	579	23	61

Note.—Calculations based on unrounded data.

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

The vast majority of production-sharing operations for electric motors and generators is concentrated in alternating current (AC) motors of from 1/10 horsepower to 1 horsepower and in stators, rotors, and other parts for motors. AC motors are used in a wide range of electrical products including household appliances (food processors, mixers, etc.), heating and air-conditioning equipment, and power tools and related equipment. The relatively small size and lower average unit values of these motors limits the degree to which production processes can be feasibly and economically automated. In addition, the relatively low bulk and weight of these motors does not significantly inhibit shipping from low-cost suppliers along the Pacific Rim (notably China, Taiwan, Korea, and Singapore). Consequently, U.S. manufacturers have established assembly facilities in Mexico to rationalize labor-intensive operations such as winding rotors with magnet wire, stacking stator laminations, and final assembly of components, in order to effectively compete against these suppliers.[126]

Mexico was by far the leading source of sector HTS PSP imports in 1997. Such imports rose by $98 million (12 percent) to $901 million in 1997, accounting for 94 percent of the total from all sources. The U.S. content in entries from Mexico also rose by 12 percent ($60 million) to $566 million, accounting for 98 percent of the sector's world total in 1997 (table 3-32).

A growing portion of U.S. imports of motors and generators from Mexico are being entered under NAFTA instead of HTS PSP. Such imports accounted for nearly one-quarter of total imports from Mexico in 1997 ($311 million) (table 3-33). Most of these entries are believed to be assembled from U.S. components, given that there are few Mexican manufacturers of the required production inputs. U.S. imports entered under both HTS PSP and NAFTA accounted for 94 percent of total U.S. imports of motors and generators from Mexico in 1997. Official Mexican data indicate that exports of motors and generators from the Maquiladora Program or PITEX to the United States rose by $105 million (10 percent) in 1997 to $1.2 billion, and accounted for 97 percent of total exports (table 1-3). The use of assembly plants in Mexico has helped U.S. firms remain competitive with non-North American sources. Imports of motors and generators from Mexico grew by $271 million (27 percent) in 1997 to $1.3 billion (31 percent of total imports), while imports from non-North American suppliers rose by only $44 million (2 percent) to $2.5 billion (59 percent of total imports).

[126] Emerson Electric, USITC staff telephone interview, Sept. 1998.

Table 3-32
Electric motors, generators, and related equipment: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	408	457	506	566
United Kingdom	5	6	5	5
Costa Rica	6	6	6	2
St Kitts-Nevis	1	1	2	2
Thailand	0	(1)	1	1
Canada	2	(1)	1	1
Japan	1	1	(1)	1
All other	3	2	2	(1)
Total	426	475	522	579

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

Table 3-33
Electric motors, generators, and related equipment: 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	Million dollars			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	506	566	60	12
Value added	297	334	37	12
Total	803	901	98	12
NAFTA only[2]	164	311	147	90
Subtotal (NAFTA and/or HTS PSP)	967	1,212	245	25
Other	50	76	26	52
Total	1,017	1,288	271	27
Canada[3]	420	427	7	2
All other	2,420	2,464	44	2
Total	3,857	4,179	322	8

[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.—Calculations based on unrounded data.

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

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Taps, Cocks, Valves, and Similar Devices

The United States is the world's largest single producer and consumer of all types of taps, cocks, valves and similar devices (hereafter referred to as valves and parts).[127] Markets for these products include such diverse industries as shipbuilding and repair, petroleum refining, petrochemicals, pulp and paper, water and sewage treatment facilities, processed food and beverages, and power generation. Together, these industries account for about 45 percent of total U.S. demand for all types of valves and parts. Demand for valves and parts is dependent upon investment in new capital goods as well as the replacement of valves in existing piping systems.

Because of narrowing price margins resulting from intense price competition, the U.S. valve and parts industry has become more globalized in recent years. Developing countries such as Mexico, Brazil, and China specialize primarily in the manufacture of low-technology, commodity-type valves, whereas the industrialized countries typically dominate the manufacture of more high-tech, highly engineered (customized) valves. The U.S. valve and parts industry consists principally of small- and medium-sized firms that are technology oriented and employ a relatively high skilled workforce. A growing, significant portion of the industry's labor-intensive assembly and manufacturing operations is performed in Mexico and U.S. imports are reported under the HTS PSP or enter free of duty under NAFTA.

Since the implementation of NAFTA, multinational firms from the United States and the European Union have established production facilities in Mexico. Mexico's proximity to the United States, highly competitive wages, and duty-free access to the North American market have led U.S. producers of valves and parts to rely more heavily on assembly operations in Mexico. Major valve and parts producers such as the Walworth Co. (an independent division of Lanzagorta Group-Mexico), Fisher-Rosemont (a division of Emerson Electric Corp.), and Dresser Valve and Controls (a division of Dresser Industries), typically obtain precision, high-quality valve components (electronic/hydraulic actuators) from countries such as the United States and Austria, and low-cost, high-volume valves and parts from countries such as Mexico. Products such as iron and steel valves produced in Mexico frequently contain high-value U.S.-made components such as hydraulic or electronic actuators used in computer-based diagnostics systems for production process systems. These valves and parts are typically sold to U.S. end-users such as paper and pulp, power generation, and petrochemical industries.

U.S. imports of valves and parts under HTS PSP grew by $204 million (50 percent) to $611 million in 1997 from 1996, twice as fast as the rise in total sector imports (table 3-34). The value of U.S.-origin components contained in these HTS PSP imports increased by $149 million (54 percent) to $426 million. Most of this growth was accounted for by imports from Mexico (table 3-35). Production-sharing operations in Mexico accounted for the overwhelming majority (95 percent) of the U.S. components used in the foreign assembly and reimport of valves and parts under HTS PSP in 1997.

[127] A valve is a device that isolates or controls fluid direction, or flow rate. Principal types of valves imported from abroad include multi-turn (gate, globe, and diaphragm), quarter-turn (plug, ball, and butterfly), and self-actuated (check and relief) valves. Valves are produced from copper, iron or steel, cast iron, and a variety of other materials. A valve may be manufactured from a combination of metals, such as steel for the valve body and bronze for internal parts.

Table 3-34
Taps, cocks, valves, and similar devices: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	2,600	360	247	14	69
1995	2,931	386	260	13	67
1996	3,128	407	277	13	68
1997	3,566	611	426	17	70

Note.—Calculations based on unrounded data.

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

Table 3-35
Taps, cocks, valves, and similar devices: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97
(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	221	229	252	406
Austria	24	30	23	20
Canada	2	2	1	1
All other	([1])	([1])	([1])	([1])
Total	247	260	277	426

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

U.S. imports of valves and parts under HTS PSP and NAFTA combined accounted for 98 percent of total U.S. imports from Mexico in 1997 (table 3-36), while official Mexican data indicate that 94 percent of total Mexican exports were from the Maquiladora Program and PITEX (table 1-3). Approximately 50 percent ($340 million) of these exports were low-pressure valves made of copper and hand-operated (plumbing valves) used largely in home and commercial office construction. Safety and relief valves (used primarily in the petroleum and chemical industries) accounted for 24 percent, or $170 million.

The use of production sharing in Mexico lowers costs for U.S. valve and parts producers and improves their competitive position with non-North American suppliers.[128] While total imports of valves and parts from Mexico grew by $278 million (57 percent) in 1997 to $770 million (22 percent of total imports), imports from non-North American sources rose by just $134 million (6 percent) to $2.5 billion (69 percent of total imports) (table 3-36).

[128] Official of Fisher-Rosemont, interview by USITC staff, June 22, 1998.

Table 3-36
Taps, cocks, valves, and similar 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))))))))) *Million dollars*))))))))))))))))			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	252	406	154	61
Value added	95	157	62	65
Total	347	563	216	62
NAFTA only[2]	133	193	60	45
Subtotal (NAFTA and/or HTS PSP)	480	756	276	58
Other	12	14	2	17
Total	492	770	278	57
Canada[3]	308	334	26	8
All other	2,328	2,462	134	6
Total	3,128	3,566	438	14

[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.—Calculations based on unrounded data.

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

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Electrical Transformers, Static Converters, and Inductors[129]

U.S. imports of transformers, static converters, and inductors (hereafter transformers) under HTS production-sharing provisions increased more rapidly in 1997 than the corresponding rise in total imports of these products. HTS PSP imports of transformers rose by $169 million (28 percent) to $772 million, with the U.S. content in these shipments rising by $94 million (one third) to $382 million (table 3-37). At the same time, total U.S. imports of transformers were up by $659 million (18 percent) to $4.3 billion, with imports under HTS PSP accounting for 18 percent of the total.

[129] This product group covers liquid and solid (including lamp ballasts) dielectric electrical transformers; speed drive controllers for electric motors; power supplies other than for automatic data processing equipment; electrical inverters and inductors; and parts of all of the foregoing, all of which are classified under HTS heading 8504.

Table 3-37
Electrical transformers, static converters, and inductors: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	2,713	496	202	18	41
1995	3,537	591	234	17	40
1996	3,631	603	288	17	48
1997	4,290	772	382	18	50

Note.—Calculations based on unrounded data.

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

The production-sharing activities in the transformer sector center on four product categories: static converters (predominately power supplies for apparatus other than automatic data processing equipment[130]), ballasts for fluorescent and other electric discharge lamps, solid dielectric transformers rated at less than 1 kilovolt ampere (kVA), and miscellaneous inductors.[131] Transformers (sometimes in conjunction with other components) provide a host of electrical and electronic apparatus with specific and controlled electrical power. In general, production-sharing operations are best suited for lower valued, universal or common "off the shelf" items that are demanded in large and/or predictable quantities. Custom-engineered or designed equipment that is made to exacting customer specifications is typically made exclusively in the home market, because low-cost imported substitutes are usually not available.[132]

In support of foreign production-sharing operations for transformers, U.S. producers export a variety of components including metal stampings and fabricated metal products, magnet and other insulated wire, steel sheet and strip, various electronic components (including semiconductors, capacitors, resistors, diodes, transistors, etc.), ferrites, printed circuit boards, and other components. The labor-intensive operations that are performed on these materials include coil winding, stamping and stacking of metal laminations, soldering of components onto printed circuit boards, assembly of metal housings, and final assembly of all components (including electrical wire connections).[133]

[130] For example, audio and video equipment (including CD and tape players, video games, and camcorders); calculators; cellular and other telephone and telecommunications equipment; portable power tools; and battery chargers.

[131] These devices usually consist of a coil or coils of wire wound around a core of magnetic or nonmagnetic material. They can be fixed, adjustable, or variable so that when a low-voltage direct current is applied to them, a high-voltage alternating current or high-voltage pulses are induced into the circuit. They are used in the ignition systems of automobiles, as well as in electric wave filters, tuned circuits, electrical measuring circuits, and in energy storage devices.

[132] General Electric, USITC staff telephone interview, Sept. 1998.

[133] Ibid.

The proximity of Mexico, together with its transportation connections to U.S. shipping routes, availability of significant numbers of skilled workers, and low wage rates, make it the preferred location for U.S. producers to establish foreign assembly operations. In 1997, the majority (91 percent) of HTS PSP imports of transformers entered from Mexico. Such imports rose by $198 million (39 percent) to $705 million in 1997. The U.S. content in these imports rose by $89 million (33 percent) to $357 million, or 51 percent of the HTS PSP total from Mexico (table 3-38 and 3-39). U.S. imports of transformers entered under HTS PSP and NAFTA only combined accounted for 94 percent of total imports from Mexico in 1997. It is believed that the bulk of these transformers were assembled from U.S. components because there are few Mexican producers with the ability to produce the required inputs. Official Mexican data for exports of transformers to the United States support this analysis, indicating that 99 percent of these were from the Mexican Maquiladora and PITEX programs (table 1-3).

Table 3-38
Electrical transformers, static converters, and inductors: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97

(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	180	217	267	357
Dominican Republic	2	5	10	18
Singapore	([1])	1	1	2
China	4	7	5	2
Haiti	([1])	1	1	1
Malaysia	([1])	([1])	1	1
All other	14	2	3	1
Total	202	234	288	382

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

While total imports of transformers from Mexico rose by $342 million (33 percent) in 1997 to $1.4 billion (32 percent of total imports), imports from non-North American sources grew by $272 million (12 percent) to $2.6 billion (60 percent of total imports) (table 3-39).

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Table 3-39
Electrical transformers, static converters, and inductors: 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
	))))))))))))))) *Million dollars*))))))))))))))))			*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	267	357	90	34
Value added	239	349	110	46
Total	507	705	198	39
NAFTA only[2]	462	605	143	31
Subtotal (NAFTA and/or HTS PSP)	969	1,310	341	35
Other	83	84	1	1
Total	1,052	1,394	342	33
Canada[3]	290	335	45	16
All other	2,289	2,561	272	12
Total	3,631	4,290	659	18

[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.—Calculations based on unrounded data.

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

Air Conditioning Equipment[134]

The United States and Japan are the world's largest consumers and producers of air conditioning equipment. Worldwide demand for these products was estimated to be between $40 and $45 billion in 1996.[135] The U.S. industry is very competitive globally, as evidenced by a trade surplus that reached $1.3 billion in 1997, up from $412 million the previous year. During 1994-97, U.S. exports of air conditioning equipment increased by $738 million (15 percent) to $5.1 billion, while U.S. imports of air conditioning equipment decreased by $14.3 million (3 percent) to $4.7 billion. Imports under the production-sharing provisions (PSP) of HTS Chapter 98 accounted for 10 percent ($437 million) of total U.S. imports in 1997 (table 3-40).

[134] Parts and components are included as air conditioning equipment.
[135] Officials of the Air-Conditioning and Refrigeration Institute, interviewed by USITC staff, June 20, 1997.

Table 3-40
Air conditioning equipment: U.S. imports for consumption, total, under the production-sharing provisions (PSP) of HTS Chapter 98, U.S. content, and percentage shares, 1994-97

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*	
1994	3,666	257	134	7	52
1995	4,129	294	140	7	48
1996	4,576	414	179	9	43
1997	4,433	437	255	10	58

Note.—Calculations based on unrounded data.

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

To remain globally competitive, this industry has established production and assembly facilities abroad. Intra-company shipment of components, subassemblies, and finished products among the various worldwide facilities has enabled these firms to take advantage of production-sharing provisions, enabling them to reduce their manufacturing costs. According to industry sources, price is the single most important factor in purchasing air conditioning equipment, followed by quality, after-sales support, and operating costs. A growing number of major U.S. producers, such as Carrier Corp (a division of United Technologies), York International Corp., Emerson Electric, and Trane Corp. (a division of American Standard Co.), maintain production sharing facilities in Mexico. In 1997, Mexico supplied 97 percent of air conditioning equipment containing U.S. content ($247 million) imported into the United States under HTS PSP (table 3-41).

Table 3-41
Air conditioning equipment: U.S. content in imports to the United States under the production-sharing provisions (PSP) of HTS Chapter 98, by principal sources, 1994-97
(*Million dollars*)

Country	1994	1995	1996	1997
Mexico	126	132	172	247
United Kingdom	([1])	([1])	1	3
Canada	3	2	2	3
All other	5	6	4	2
Total	134	140	179	255

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

According to company officials, the Trane Corp. established a production-sharing facility in Mexico to enable it to maintain a cost advantage over its major U.S. and Asian competitors. This action allows the Trane Corp. to retain high-value jobs in engineering, marketing, and research and development in the United States, whereas production requiring less sophisticated technology and more labor-intensive processes has been transferred to Mexico. For example, the bulk of the labor-intensive subassemblies for energy efficient air conditioning systems such as coils, condensers, and exchanger units will be produced in Trane's plant in Mexico using U.S.-made parts.[136]

[136] USITC staff interview with officials of the Trane Corp. on June 29, 1998.

Mexico accounted for just 18 percent ($805 million) of total U.S. imports of air conditioning equipment in 1997 (table 3-42), with Asian sources accounting for the bulk of the remainder. About one- half ($402 million) of the air conditioning equipment imports from Mexico entered under HTS PSP, but combined with NAFTA, such imports accounted for 91 percent of total imports. Likewise, according to official Mexican data, the maquiladora industry's exports of air conditioning equipment to the United States increased by $44 million (7 percent) to $710 million in 1997, and accounted for 98 percent of Mexico's total exports of air conditioning equipment to the United States (table 1-3).[137] The value of U.S.-made components incorporated in imports of conditioning equipment from Mexico under HTS PSP grew by $75 million (44 percent) in 1997 to $247 million (table 3-42). The inclusion of high-value U.S. components such as rotary and scroll compressors increased the U.S. content share of total imports from Mexico under the HTS PSP to 61 percent in 1997 (table 3-42).

Table 3-42
Air conditioning equipment: 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, 1996 and 1997

Source of imports	1996	1997	Change in value 1996-97	Percentage change 1996-97
		Million dollars		*Percentage*
Mexico:				
HTS PSP[1]				
U.S. content	172	247	75	44
Value added	213	155	-58	-27
Total	385	402	17	4
NAFTA only[2]	368	334	-34	-9
Subtotal (NAFTA and/or HTS PSP)	753	736	-17	-2
Other	47	69	22	47
Total	800	805	5	1
Canada[3]	263	279	16	6
All other	3,513	3,349	-164	-5
Total	4,576	4,433	-143	-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.—Calculations based on unrounded data.

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

The greatest share of air conditioning equipment from Mexico consists of lower valued, labor-intensive products such as room air conditioners, and a wide assortment of parts and components such as blowers, fans, and vacuum pumps. A strong U.S. demand for replacement, modernization, and more energy efficient air conditioning machinery spurred modest (4 percent)

[137] Compressors of all types (refrigeration, air and gas) were the next largest category of Mexican exports amounting to $160 million, or 23 percent of air conditioning exports in 1997.

growth in HTS PSP imports from Mexico, while imports from other countries fell by 5 percent. The major end users of these products included residential, commercial office buildings, public and institutional buildings, hotels, and industrial sectors such as power-generation, and petrochemical production.

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

The tariff provisions covered by this appendix provide conditional duty treatment for certain classes of goods that are exported from the United States, advanced in value or improved in condition abroad by assembly or particular processes, and then returned to the customs territory. While the duty reductions or exemptions for eligible goods must be claimed by importers under these chapter 98 provisions, the goods remain classifiable in appropriate provisions of chapters 1 through 97 of the Harmonized Tariff Schedule of the United States (HTS), and the statistical data are "double reported" using both the "permanent" and the chapter 98 tariff categories. This nonautomatic duty treatment must be justified under current Customs Service regulations (including 19 C.F.R. 10.9, 10.11-10.26) for each entry. Subheading 9802.00.60 and heading 9802.00.80 of the HTS were discussed in detail in earlier Commission reports on production sharing; these provisions, along with heading 9802.00.90, can be found in the HTS. 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 included as well.

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 to set the tariff treatment and origin of 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, importers must claim this chapter 98 duty treatment and comply with applicable Customs requirements.

In general terms, this note specifies two key aspects of the customs treatment of these goods. First, these CBERA-assembled goods are not considered foreign articles; although this legal language would seem to require by implication that the goods have domestic (U.S.) origin, Customs regulations do not so provide.[2] Second, the note provides that these goods are not subject to duty upon entry into the U.S. customs territory.[3] Some confusion and compliance difficulties have resulted because the duty treatment of such goods is set forth in a tariff legal note, not the rates-of-duty columns of tariff headings. The legal note's rate of duty is "free" instead of the duty rates[4] enacted by Congress for the chapter 98 provisions covered by this

[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).

[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*; duties must generally be paid each time the goods 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 if the ordinary tariff provisions in chs. 1 through 97 provide for a duty rate other than "free," but no duty is payable on the U.S. content.

report, although the goods are still described by the scope of the chapter 98 headings. To help with this problem, a nonlegal 10-digit statistical reporting category (9802.00.8040) was created under heading 9802.00.80 to capture separately the trade in assembled goods entered under the legal note. Congress has considered proposals to create a discrete tariff heading or subheading for these goods, to clarify the requirements and to simplify administration, but to date no such provision has been enacted.

Trade Agreement Status and Special Tariff Treatment

The column 1-general rates of duty in the chapter 98 provisions outlined in this appendix, unlike most general rates in 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 as they apply to goods certified for use in civil aircraft.[5] Schedule XX does not legally require the United States to have these tariff provisions, but requires only that the agreed duty treatment for civil aircraft goods is provided somewhere in the HTS. 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 refer to or require them. Thus, with certain provisos, these tariff rate lines could be changed or repealed, though such an action could amount to a duty increase on the subject goods, to the extent that the U.S. value in such goods would become dutiable. Two U.S. free-trade agreements—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 or APTA require that the United States continue current duty treatment for eligible goods, however that may be reflected in the HTS. Accordingly, various Presidential proclamations have included preferential duty rates in column 1-special for the 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 nonpreferential shipments covered by the 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 that are accorded entry in these chapter 98 tariff provisions, column 1-special of the HTS states that 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 the corresponding general notes to the HTS.

[5] Pursuant to concessions negotiated in the Uruguay Round of multilateral negotiations, the duty rate for eligible civil aircraft goods 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.

[6] The U.S.-Israel FTA provides that all goods described by and imported under these two HTS provisions must be admitted free of duty, along with all other products of Israel (HTS general note 8).

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 that is other than "free."[7] 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 (19 C.F.R. part 102) as a good of Mexico, the HTS indicates that importers can claim the appropriate NAFTA tariff rate on non-U.S. content from the normal tariff category for the goods in question. Then, if Customs decides that the goods originate in North America, that special duty rate (other than "free") in the "permanent" provision would apply to the non-U.S.-origin part of the shipment's value, and the importer could claim the U.S. value as free of duty under chapter 98. 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. Similar customs treatment would likely be given to goods covered by the CBERA or the Andean Trade Preference Act that are given rates of duty other than "free" in the special subcolumn for the "permanent" tariff category; the other preferences provided in the chapter 98 provisions give "free" rates of duty to eligible goods in the "permanent" categories.

Special Access Program

The tariff preferences accorded under the CBERA do not apply to textile and apparel articles subject to textile agreements, although such goods—including those assembled in whole or in part from U.S. inputs—are a significant part of trade with beneficiary countries. Under U.S. law (7 U.S.C. 1854 and pertinent regulations) and the multilateral Agreement Regarding Trade in Textiles,[8] the United States has negotiated bilateral agreements with many countries to limit and/or monitor 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 is considered to define the boundaries of the statutory exclusion from the CBERA tariff preference. Accordingly, most goods of cotton, of wool/fine animal hair, of man-made fibers, or of blends of those materials cannot enter free of duty under the CBERA. To limit some of the impact of the exclusion from duty-free entry, a partial relaxation of otherwise applicable quota and other restrictions is accorded by the United States in limited circumstances.

Statistical reporting number 9802.00.8015 is used by importers to enter "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

[7] NAFTA-eligible goods of Canada enter free of duty as of January 1, 1998.

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

Agreements (CITA)."[9] Importers must report the value of 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.[10] The former Special Regime (SR), which had applied to textile and apparel products of Mexico, was replaced by other preference provisions under the NAFTA as of January 1, 1994—primarily heading 9802.00.90.[11]

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. Exporters have been able to request increases in GALs unless 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.[12] Special CBI[13] 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 recently.

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 three 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 0.17 percent ad valorem; it was later restructured and continued at the 0.17-percent rate but with a floor and a cap as of October 1, 1990; and it reached a level of 0.21 percent ad valorem following enactment of the Uruguay Round Agreements Act. Current Customs regulations concerning the user fee appear in 19

[9] 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.

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

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

[12] 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.

[13] Caribbean Basin Initiative.

C.F.R. 24.23, with the fee set at 0.21 percent ad valorem for formal entries and with a minimum fee of $25 and a cap of $485 per entry. For the chapter 98 provisions, 19 C.F.R. 24.23(c)(2) provides that, in addition to the ad valorem fee on dutiable value, the surcharge and specific fees do apply to the goods entered there. A $3 surcharge is added to each entry processed manually, informal entries are assessed fees of from $2 to $9 each, and other rules govern the aggregation of the ad valorem fee for particular monthly entry programs. Customs regulations also set other fees, such as the harbor maintenance fee.

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 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."[14] 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. 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 a shipment includes value 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 merchandise processing fee, with limited exceptions for products of preference-eligible countries (notably CBERA beneficiaries and the insular possessions of the United States). 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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[14] This is a term of art in the HTS covering goods imported from and the product of Canada (even if not marked as such) that qualify for NAFTA duty rates as originating in the NAFTA region. This test varies 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 provisions 9802.00.60 and 9802.00.80,[1] 1971-1997

(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	141.3	73,031.8	73,173.1	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
1997	509.7	78,657.0	79,166.7	145.8	52,455.8	52,601.7	363.8	26,201.2	26,565.0

[1] HTS 9802.00.80 includes HTS 9802.00.90.

Note.—Calculations based on unrounded data.

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, 1994-97

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
All other	18,795	110	15	2.9	0.2	0.1
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	([1])
Haiti	59	35	25	([1])	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 note(s) 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, 1994-97

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	0.5	0.1	0.1
Austria	1,951	73	32	0.3	0.1	0.1
All other	21,469	101	219	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	([1])	0.1	0.3
India	5,702	38	4	0.8	0.1	([1])
All other	65,764	266	86	8.9	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 note(s) 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, 1994-97

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	([1])	0.2	0.3
Hungary	676	46	7	0.1	0.1	([1])
All other	82,785	366	98	10.5	0.5	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

See note(s) 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, 1994-97

Source	1997					
	Total imports	Imports under HTS PSP	U.S. content	Total imports	Imports under HTS PSP	U.S. content
	Million dollars			*Percentage*		
Japan	120,480	15,667	548	14.0	19.8	2.1
Germany	42,793	8,541	142	5.0	10.8	0.5
United Kingdom	32,412	1,665	124	3.8	2.1	0.5
Canada	167,881	1,511	627	19.5	1.9	2.4
Sweden	7,265	1,433	15	0.8	1.8	0.1
Belgium	7,870	1,105	35	0.9	1.4	0.1
France	20,126	323	55	2.3	0.4	0.2
Netherlands	7,269	173	41	0.8	0.2	0.2
Spain	4,547	156	8	0.5	0.2	([1])
Italy	19,228	119	29	2.2	0.2	0.1
Ireland	5,823	105	32	0.7	0.1	0.1
Austria	2,202	59	21	0.3	0.1	0.1
All other	24,512	58	13	2.8	0.1	([1])
Total, developed countries	462,407	30,915	1,690	53.6	39.0	6.4
Mexico	85,005	28,883	15,483	9.9	36.5	58.3
Dominican Republic	4,308	2,669	1,737	0.5	3.4	6.5
Philippines	10,419	2,063	1,058	1.2	2.6	4.0
Malaysia	17,888	1,911	930	2.1	2.4	3.5
Korea	22,939	1,881	755	2.7	2.4	2.8
Honduras	2,320	1,380	983	0.3	1.7	3.7
China	61,996	1,319	180	7.2	1.7	0.7
Taiwan	32,474	1,248	510	3.8	1.6	1.9
El Salvador	1,345	912	544	0.2	1.2	2.0
Singapore	19,982	904	258	2.3	1.1	1.0
Costa Rica	2,322	851	568	0.3	1.1	2.1
Thailand	12,546	750	385	1.5	0.9	1.4
Hong Kong	10,235	720	354	1.2	0.9	1.3
Guatemala	1,984	652	299	0.2	0.8	1.1
Indonesia	9,055	517	72	1.0	0.7	0.3
Jamaica	721	430	352	0.1	0.5	1.3
Colombia	4,615	268	160	0.5	0.3	0.6
Brazil	9,510	259	21	1.1	0.3	0.1
Haiti	188	140	102	([1])	0.2	0.4
Vietnam	390	78	8	([1])	0.1	([1])
All other	89,777	415	118	10.4	0.5	0.4
Total, less developed countries	400,019	48,252	24,875	46.4	61.0	93.6
Grand total	862,426	79,167	26,565	100.0	100.0	100.0

[1] Less than 0.5 percent.

Note.—Calculations based on unrounded data.

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, 1994-97

(Thousand dollars)

Commodity group	1994			1995		
	Total imports	Imports under HTS PSP	U.S. content	Total imports	Imports under HTS PSP	U.S. content
Agricultural products	35,049,304	27,190	1,342	37,806,506	7,503	1,637
Forest products	24,037,462	86,122	45,343	29,154,780	83,280	42,002
Chemicals, coal, petroleum, natural gas, and related products:						
Fabricated plastic and rubber products	11,639,350	136,545	87,302	12,955,349	157,175	85,854
Other energy and chemical products	89,387,538	53,961	38,048	99,832,855	111,309	70,903
Total	101,026,888	190,506	125,351	112,788,204	268,483	156,757
Textiles, apparel, and footwear:						
Textiles and textile products	9,352,247	283,998	150,171	10,190,513	336,592	198,435
Medical apparel	436,644	194,687	131,979	475,512	223,342	157,601
Mens' and boy's suits and sports coats	747,665	138,295	78,309	850,473	146,899	76,715
Mens' and boy's coats and jackets	1,772,918	55,894	28,291	1,692,303	75,786	44,226
Mens' and boy's trousers	3,144,823	1,330,623	824,422	3,755,379	1,700,119	1,022,948
Women's and girls' trousers	3,582,689	732,857	417,421	3,670,148	929,616	544,827
Shirts and blouses	10,839,910	1,134,936	731,314	11,986,425	1,692,681	1,095,159
Women's and girls' suits, skirts and coats	3,260,820	484,281	237,236	3,547,993	600,374	279,104
Women's and girls' dresses	1,259,893	117,475	52,882	1,442,954	181,836	75,730
Robes, nightwear, and underwear	2,196,518	768,530	521,122	2,672,815	1,104,736	726,623
Hosiery	291,268	137,960	129,088	362,928	163,666	153,279
Foundation garments	750,987	558,807	375,250	926,720	685,945	463,852
Gloves, including gloves for sports	1,499,020	58,274	29,286	1,733,310	51,939	28,838
Headwear	821,213	40,360	20,623	842,213	40,626	22,420
Other wearing apparel and accessories	6,494,941	277,392	161,854	5,924,113	384,186	230,982
Footwear and parts	11,713,987	1,142,819	167,580	12,095,267	1,397,721	158,191
Total	58,165,542	7,457,189	4,056,829	62,169,069	9,716,063	5,278,930
Minerals and metals:						
Steel mill products	12,434,672	184,567	124,285	11,785,730	236,522	176,568
Copper and related products	2,655,256	87,018	66,551	3,401,325	78,064	63,241
Aluminum mill products	1,446,111	50,432	37,534	2,048,034	14,617	9,738
Builders' hardware	708,643	85,409	47,617	762,571	96,896	51,044
Other metal products	39,533,681	526,814	266,941	45,025,967	576,302	251,071
Total	56,778,363	934,241	542,928	63,023,627	1,002,402	551,663
Miscellaneous manufacturers:						
Luggage, handbags, and flat goods	3,008,291	66,775	33,998	3,332,520	81,133	45,293
Jewelry	4,091,534	85,868	76,058	4,135,631	92,013	83,608
Motor vehicle and other furniture	7,637,556	640,127	170,452	8,423,237	604,115	112,567
Lamps and lighting fixtures	1,956,291	65,294	40,359	2,198,137	93,921	59,401
Other miscellaneous manufactured articles	19,551,440	369,391	104,094	21,277,482	386,473	94,991
Total	36,245,112	1,227,454	424,961	39,367,007	1,257,655	395,860
Machinery and equipment:						
Air conditioning equipment	3,666,077	257,434	134,200	4,129,220	293,680	140,329
Commercial machinery	1,081,931	67,051	23,713	1,191,025	55,527	20,064
Household appliances, including heating and drying equipment	3,858,075	414,122	197,017	4,073,901	433,448	206,527

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1994-97

(Thousand dollars)

Commodity group	1994			1995		
	Total imports	Imports under HTS PSP	U.S. content	Total imports	Imports under HTS PSP	U.S. content
Machinery and equipment—*Continued*						
Centrifuges, filtering and purifying equipment, and pumps for liquids	2,844,277	359,270	270,912	3,177,276	327,620	212,760
Semiconductor equipment, robots, and other equipment	1,831,378	15,372	4,079	2,053,256	15,404	3,993
Taps, cocks, valves, and similar devices	2,600,291	359,512	247,336	2,931,255	386,309	260,472
Electric motors, generators, and related equipment	3,457,321	717,143	426,336	3,879,726	780,214	474,953
Electrical transformers, static converters, and inductors	2,713,076	495,773	202,220	3,537,228	590,903	233,561
Powered handtools and parts thereof	1,039,842	99,045	40,723	1,142,444	135,973	50,436
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	1,030,232	153,252	85,910	1,097,119	188,194	88,791
Wiring harnesses for motor vehicles and other insulated electrical conduits	4,810,413	2,858,020	1,617,283	5,398,336	3,079,857	1,842,862
Miscellaneous machinery and equipment	23,499,885	473,460	126,396	27,480,211	565,059	142,613
Total	52,432,799	6,269,454	3,376,125	60,090,997	6,852,189	3,677,361
Transportation equipment:						
Aircraft engines and gas turbines	5,824,895	202,422	32,132	5,285,140	295,031	78,105
Internal combustion piston engines	7,797,600	770,651	177,141	8,981,922	858,442	272,099
Construction, mining, and industrial vehicles	4,576,990	417,681	64,390	4,948,199	508,222	101,734
Certain motor-vehicle parts	17,386,522	2,023,337	1,004,628	17,818,184	1,807,615	824,647
Primary cells and batteries, and electric storage batteries	1,440,956	190,404	90,266	1,636,963	230,107	83,545
Ignition starting, lighting, and other electrical equipment	1,699,067	128,144	62,459	1,832,824	184,406	107,985
Rail locomotive and rolling stock	1,161,012	222,656	74,501	1,291,549	258,216	87,088
Automobiles, trucks, buses, and bodies and chassis of the foregoing	79,085,970	23,026,016	2,223,587	84,216,729	18,571,228	2,032,052
Aircraft, spacecraft, and related equipment, except engines	6,430,591	314,886	90,952	6,135,254	75,289	23,285
Ships, tugs, pleasure boats, and similar vessels	653,064	65,175	12,481	919,399	87,410	16,447
Motorcycles and miscellaneous vehicles and transportation related equipment	2,395,726	132,966	76,953	2,671,345	199,770	107,838
Total	128,452,393	27,494,337	3,909,490	135,737,507	23,075,736	3,734,822
Electronic products:						
Office machines	5,780,790	93,388	8,806	6,365,708	52,537	12,542
Telephone and telegraph apparatus, including optical fiber	7,552,039	294,810	110,532	7,896,564	194,800	102,835
Microphones, loudspeakers, audio amplifiers, and combinations thereof	1,826,649	183,938	56,705	2,000,815	218,701	69,010
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	6,283,068	141,711	23,407	6,732,859	124,736	23,730

Table B-3—*Continued*
U.S. imports for consumption under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1994-97

(Thousand dollars)

Commodity group	1994 Total imports	1994 Imports under HTS PSP	1994 U.S. content	1995 Total imports	1995 Imports under HTS PSP	1995 U.S. content
Electronic products—*Continued*						
Records, tapes, compact discs, computer software, and other media, whether or not recorded	2,698,670	33,308	11,994	2,852,806	40,126	15,836
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	8,201,980	456,410	151,156	9,050,516	706,735	167,581
Television receivers, video monitors, and cathode ray tubes	5,323,050	2,582,299	839,043	5,655,957	2,465,730	819,333
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	3,265,361	359,603	117,284	3,881,372	505,761	157,606
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	2,927,977	254,598	93,812	3,485,339	316,511	105,514
Electrical circuit apparatus	8,854,642	1,984,795	1,218,641	10,407,171	2,088,683	1,285,230
Semiconductor devices	26,019,660	6,242,568	3,311,390	39,167,784	8,613,036	4,301,684
Computer hardware	46,160,941	1,306,873	390,196	56,308,251	1,372,105	404,800
Photographic equipment and supplies	4,097,371	173,703	69,839	4,496,485	109,868	45,139
Medical goods	4,405,032	616,605	289,782	4,951,441	828,756	427,901
Optical goods	2,385,005	4,052	2,094	2,819,967	7,953	5,121
Balances surveying/navigational instruments, and drawing/ mathematical and calculating and measuring instruments	820,077	125,113	21,090	991,664	174,784	23,938
Watches, clocks and timing devices	2,550,940	87,342	21,323	2,672,551	83,216	20,150
Measuring, testing, controlling, and analyzing instruments	5,727,246	681,922	297,919	6,665,280	712,706	282,919
Total	144,880,496	15,623,039	7,035,011	176,402,530	18,616,743	8,270,868
Special provisions	20,816,298	1,217	45	23,120,192	285	115
Grand total	657,884,659	59,310,749	19,517,427	739,660,419	60,880,340	22,110,015

See note(s) 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, 1994-97

(Thousand dollars)

Commodity group	1996 Total imports	1996 Imports under HTS PSP	1996 U.S. content	1997 Total imports	1997 Imports under HTS PSP	1997 U.S. content
Agricultural products	41,526,077	2,560	1,171	45,839,326	6,045	1,993
Forest products	28,957,450	118,333	56,007	30,456,362	140,871	81,556
Chemicals, coal, petroleum, natural gas, and related products:						
Fabricated plastic and rubber products	13,383,416	183,169	95,504	14,558,153	184,606	99,140
Other energy and chemical products	120,493,520	145,335	73,245	125,523,349	156,630	73,494
Total	133,876,936	328,504	168,749	140,081,502	341,237	172,634
Textiles, apparel, and footwear:						
Textiles and textile products	10,368,559	318,880	201,813	12,034,571	313,625	191,502
Medical apparel	456,032	196,442	146,675	548,181	190,212	144,149
Mens' and boy's suits and sports coats	924,183	161,855	85,856	1,053,958	226,051	125,925
Mens' and boy's coats and jackets	1,783,145	77,763	44,667	2,229,545	106,776	58,034
Mens' and boy's trousers	4,082,582	1,834,041	1,088,688	4,932,815	2,326,292	1,320,939
Women's and girls' trousers	3,948,005	1,198,421	721,107	5,096,730	1,686,687	989,884
Shirts and blouses	12,376,939	2,057,892	1,428,466	14,415,815	2,897,418	2,055,796
Women's and girls' suits, skirts and coats	3,857,068	721,348	333,636	4,144,023	780,628	348,625
Women's and girls' dresses	1,573,759	215,351	90,210	1,635,964	244,066	96,988
Robes, nightwear, and underwear	2,947,087	1,291,082	859,377	3,596,847	1,704,776	1,149,299
Hosiery	404,282	165,279	151,802	566,042	265,291	242,100
Foundation garments	864,383	607,628	410,783	968,474	633,188	433,847
Gloves, including gloves for sports	1,893,499	47,849	32,369	2,003,935	50,588	33,247
Headwear	883,070	39,438	24,755	866,639	32,970	21,324
Other wearing apparel and accessories	5,905,356	426,803	254,408	6,700,939	536,412	334,769
Footwear and parts	12,708,385	1,678,736	191,716	13,951,034	1,835,513	224,855
Total	64,976,333	11,038,807	6,066,327	74,745,512	13,830,494	7,771,283
Minerals and metals:						
Steel mill products	12,755,527	260,219	188,781	13,601,558	216,257	166,010
Copper and related products	3,471,892	90,176	75,357	3,743,322	77,139	54,824
Aluminum mill products	1,737,499	19,336	11,894	2,008,697	26,866	15,832
Builders' hardware	865,975	119,942	61,687	907,567	140,637	68,423
Other metal products	47,359,971	706,060	318,977	52,947,905	511,028	251,589
Total	66,190,864	1,195,733	656,696	73,209,049	971,926	556,678
Miscellaneous manufacturers:						
Luggage, handbags, and flat goods	3,511,861	122,234	65,986	3,778,972	142,533	76,204
Jewelry	4,251,413	72,272	64,959	4,484,937	65,772	56,198
Motor vehicle and other furniture	9,497,327	734,323	115,279	11,223,773	658,459	105,489
Lamps and lighting fixtures	2,422,026	110,518	76,092	2,729,463	124,427	85,742
Other miscellaneous manufactured articles	22,831,912	383,190	112,255	26,737,159	343,053	100,571
Total	42,514,539	1,422,538	434,572	48,954,305	1,334,244	424,204
Machinery and equipment:						
Air conditioning equipment	4,576,021	414,210	179,092	4,432,627	437,046	255,151
Commercial machinery	1,223,091	53,746	20,729	1,328,917	59,624	21,357
Household appliances, including heating and drying equipment	4,261,106	455,846	217,648	4,592,810	520,848	226,887

Table B-3—***Continued***
U.S. imports for consumption under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1994-97

(Thousand dollars)

Commodity group	1996 Total imports	1996 Imports under HTS PSP	1996 U.S. content	1997 Total imports	1997 Imports under HTS PSP	1997 U.S. content
Machinery and equipment—*Continued*						
Centrifuges, filtering and purifying equipment, and pumps for liquids	3,414,101	260,580	172,098	3,493,529	255,291	118,016
Semiconductor equipment, robots, and other equipment	2,187,594	4,561	1,014	2,568,566	14,937	642
Taps, cocks, valves, and similar devices	3,127,789	406,872	277,048	3,566,259	610,728	426,398
Electric motors, generators, and related equipment	3,875,491	859,374	522,087	4,179,430	956,326	578,707
Electrical transformers, static converters, and inductors	3,631,103	603,013	288,330	4,290,176	771,885	382,195
Powered handtools and parts thereof	1,291,244	205,270	69,669	1,500,014	245,995	92,937
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	1,153,410	153,020	80,033	1,214,573	168,049	99,235
Wiring harnesses for motor vehicles and other insulated electrical conduits	5,934,544	3,332,141	2,038,045	6,818,674	2,684,279	1,637,673
Miscellaneous machinery and equipment	28,439,752	606,550	171,710	30,745,501	634,032	188,714
Total	63,115,247	7,355,181	4,037,502	68,731,077	7,359,040	4,027,911
Transportation equipment:						
Aircraft engines and gas turbines	6,241,224	281,525	72,819	8,380,319	239,626	65,197
Internal combustion piston engines	10,044,082	318,277	72,870	10,553,966	241,948	63,458
Construction, mining, and industrial vehicles	4,935,432	384,322	71,380	6,047,507	466,602	80,110
Certain motor-vehicle parts	18,392,963	1,874,944	904,683	19,419,611	1,650,998	977,930
Primary cells and batteries, and electric storage batteries	1,709,778	230,915	83,348	1,896,497	268,642	106,980
Ignition starting, lighting, and other electrical equipment	2,032,462	331,830	162,101	2,169,676	394,674	193,867
Rail locomotive and rolling stock	1,312,004	347,833	115,660	1,371,944	331,065	108,447
Automobiles, trucks, buses, and bodies and chassis of the foregoing	87,115,738	23,208,851	2,633,047	92,987,590	31,053,424	2,551,490
Aircraft, spacecraft, and related equipment, except engines	7,352,988	26,937	17,010	9,459,223	37,299	28,333
Ships, tugs, pleasure boats, and similar vessels	1,130,263	153,530	23,853	923,763	111,672	23,903
Motorcycles and miscellaneous vehicles and transportation related equipment	2,555,401	134,253	56,067	2,625,978	148,522	74,671
Total	142,822,335	27,293,217	4,212,839	155,836,073	34,944,473	4,274,385
Electronic products:						
Office machines	6,295,635	48,817	25,013	6,687,721	43,105	24,390
Telephone and telegraph apparatus, including optical fiber	8,417,670	213,463	114,543	9,533,172	256,547	146,940
Microphones, loudspeakers, audio amplifiers, and combinations thereof	2,108,045	232,479	79,208	2,168,286	309,012	92,227
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	5,872,788	117,513	15,782	6,128,440	154,776	18,228

Table B-3—***Continued***
U.S. imports for consumption under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1994-97

(Thousand dollars)

Commodity group	1996			1997		
	Total imports	Imports under HTS PSP	U.S. content	Total imports	Imports under HTS PSP	U.S. content
Electronic products—*Continued*						
Records, tapes, compact discs, computer software, and other media, whether or not recorded	3,065,602	53,122	19,326	3,071,532	27,734	8,012
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	8,664,984	798,563	126,937	9,751,389	1,262,945	162,409
Television receivers, video monitors, and cathode ray tubes	5,485,603	2,598,730	1,018,811	5,279,517	2,347,670	1,032,426
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	4,352,576	655,836	177,800	4,039,041	458,610	100,517
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	3,607,115	311,663	99,308	3,897,801	307,831	103,787
Electrical circuit apparatus	10,520,206	2,055,643	1,245,151	11,915,198	2,346,436	1,370,639
Semiconductor devices	36,771,266	8,164,008	4,086,895	36,878,268	8,537,335	4,557,918
Computer hardware	61,457,046	1,296,559	317,787	69,953,180	1,635,224	405,285
Photographic equipment and supplies	4,599,995	100,581	41,617	5,030,137	121,146	48,965
Medical goods	5,367,566	994,361	543,463	5,894,587	1,095,110	595,512
Optical goods	3,114,226	57,224	22,675	3,397,099	72,894	42,507
Balances surveying/navigational instruments, and drawing/ mathematical and calculating and measuring instruments	992,180	160,154	20,687	1,226,348	179,760	33,353
Watches, clocks and timing devices	2,714,633	85,720	22,683	2,758,178	31,179	22,135
Measuring, testing, controlling, and analyzing instruments	7,136,357	814,891	353,151	8,089,286	1,046,401	485,580
Total	180,543,493	18,759,325	8,330,836	195,699,180	20,233,716	9,250,832
Special provisions	25,946,440	283	113	28,873,960	4,659	3,564
Grand total	790,469,714	67,514,482	23,964,813	862,426,346	79,166,706	26,565,040

Note.—Calculations based on unrounded data.

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, 1997

Sources	Total value		Duty-free value	
	Value	Percentage of total	Value	Percentage of total
	Million dollars		*Million dollars*	
Grand total	79,167	100.0	26,565	100.0
Top 10 sources	66,226	83.7	21,419	80.6
Mexico	28,883	36.5	15,483	58.3
Japan	15,667	19.8	548	2.1
Germany	8,541	10.8	142	0.5
Dominican Republic	2,669	3.4	1,737	6.5
Philippines	2,063	2.6	1,058	4.0
Malaysia	1,911	2.4	930	3.5
Korea	1,881	2.4	755	2.8
United Kingdom	1,665	2.1	124	0.5
Canada	1,511	1.9	627	2.4
Sweden	1,433	1.8	15	0.1
All other	12,941	16.3	5,146	19.4

Note.—Calculations based on unrounded data.

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, 1997

(Thousand dollars)

Commodity group	Entered under					Total NAFTA	Total HTS PSP	U.S. content under HTS PSP
	Total	NAFTA and HTS PSP	NAFTA only	HTS PSP only	All other			
Agricultural products	4,824,588	4,287	3,246,189	1,139	1,572,973	3,250,476	5,426	1,688
Forest products	967,439	92,286	536,123	19,396	319,634	628,409	111,682	72,809
Chemicals, coal, petroleum, natural gas, and related products:								
Fabricated plastic and rubber products	918,982	107,077	689,281	25,426	97,198	796,358	132,503	80,506
Other energy and chemical products	9,591,270	5,591	7,142,285	17,252	2,426,142	7,147,876	22,843	9,118
Total	10,510,253	112,668	7,831,566	42,678	2,523,340	7,944,235	155,346	89,624
Textiles, apparel, and footwear:								
Textiles and textile products	1,148,867	102,308	873,221	142,366	30,974	975,528	244,673	162,999
Medical apparel	248,684	15,773	70,614	161,876	420	86,388	177,650	133,922
Mens' and boy's suits and sports coats	94,906	20,664	68,160	5,951	132	88,824	26,615	17,618
Mens' and boy's coats and jackets	42,645	15,032	10,001	17,522	90	25,033	32,554	22,219
Mens' and boy's trousers	1,175,524	151,915	145,267	876,829	1,512	297,182	1,028,744	599,715
Women's and girls' trousers	1,019,048	216,114	73,661	726,325	2,947	289,776	942,440	604,060
Shirts and blouses	1,416,825	163,438	237,326	1,009,425	6,636	400,764	1,172,863	922,032
Women's and girls' suits, skirts and coats	150,050	46,641	10,918	86,287	6,203	57,560	132,929	69,109
Women's and girls' dresses	121,212	30,182	14,271	71,755	5,003	44,454	101,938	51,900
Robes, nightwear, and underwear	372,312	70,065	90,095	210,262	1,890	160,160	280,328	201,632
Hosiery	159,923	21,147	56,217	82,324	235	77,364	103,472	90,215
Foundation garments	223,819	74,847	61,675	87,061	237	136,521	161,908	115,630
Gloves, including gloves for sports	54,087	10,385	33,912	8,534	1,255	44,298	18,919	14,556
Headwear	48,545	17,088	21,534	9,479	444	38,622	26,568	17,163
Other wearing apparel and accessories	261,479	74,055	80,720	100,952	5,752	154,775	175,007	122,729
Footwear and parts	384,053	52,325	287,709	32,894	11,126	340,034	85,218	68,649
Total	6,921,980	1,081,981	2,135,301	3,629,843	74,855	3,217,282	4,711,825	3,214,149
Minerals and metals:								
Steel mill products	1,205,937	69,009	1,026,238	52	110,637	1,095,248	69,062	47,555
Copper and related products	424,539	218	321,200	685	102,436	321,418	903	465
Aluminum mill products	31,640	2,198	29,349	0	93	31,547	2,198	1,758

See note(s) 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, 1997

(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—*Continued*								
Builders' hardware	179,311	139,439	22,734	1,101	16,037	162,173	140,540	68,354
Other metal products	3,309,151	348,723	1,993,730	12,317	954,382	2,342,453	361,039	196,128
Total	5,150,578	559,587	3,393,252	14,154	1,183,585	3,952,838	573,741	314,259
Miscellaneous manufacturers:								
Luggage, handbags, and flat goods	130,967	19,510	22,870	77,698	10,889	42,380	97,208	61,719
Jewelry	160,655	28,794	129,322	0	2,539	158,116	28,794	25,594
Motor vehicle and other furniture	1,919,364	643,722	1,245,852	6,463	23,328	1,889,574	650,185	100,858
Lamps and lighting fixtures	317,977	112,884	200,546	3,137	1,410	313,430	116,021	83,621
Other miscellaneous manufactured articles	1,099,252	114,631	417,165	70,671	496,785	531,796	185,302	71,938
Total	3,628,216	919,541	2,015,755	157,969	534,950	2,935,297	1,077,510	343,729
Machinery and equipment:								
Air conditioning equipment	805,499	377,867	334,302	24,437	68,893	712,169	402,304	247,130
Commercial machinery	207,006	35,621	166,602	1,660	3,122	202,224	37,282	17,275
Household appliances, including heating and drying equipment	837,942	289,592	471,908	24,033	52,409	761,500	313,625	188,330
Centrifuges, filtering and purifying equipment, and pumps for liquids	356,475	165,246	123,914	47,613	19,701	289,161	212,859	108,490
Semiconductor equipment, robots, and other equipment	10,300	135	8,504	0	1,661	8,639	135	34
Taps, cocks, valves, and similar devices	769,798	539,644	193,218	24,160	12,777	732,861	563,803	405,704
Electric motors, generators, and related equipment	1,288,058	856,597	311,347	44,038	76,075	1,167,945	900,636	566,420
Electrical transformers, static converters, and inductors	1,394,157	507,360	605,267	197,686	83,843	1,112,628	705,047	356,529
Powered handtools and parts thereof	236,502	148,000	44,264	15,067	29,171	192,264	163,067	83,319
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	189,521	121,184	36,951	22,065	9,321	158,135	143,249	91,615
Wiring harnesses for motor vehicles and other insulated electrical conduits	4,490,296	2,193,563	1,538,407	267,241	491,085	3,731,970	2,460,805	1,562,940
Miscellaneous machinery and equipment	642,445	191,691	261,468	69,712	119,573	453,160	261,404	109,866
Total	11,227,999	5,426,502	4,096,153	737,714	967,631	9,522,655	6,164,215	3,737,653

See note(s) 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, 1997

(Thousand dollars)

Commodity group	Entered under					Total NAFTA	Total HTS PSP	U.S. content under HTS PSP
	Total	NAFTA and HTS PSP	NAFTA only	HTS PSP only	All other			
Transportation equipment:								
Aircraft engines and gas turbines	81,058	43,173	746	4,723	32,416	43,919	47,896	39,118
Internal combustion piston engines	1,920,571	66,061	1,589,233	17,523	247,753	1,655,294	83,585	48,605
Construction, mining, and industrial vehicles	293,738	0	228,913	0	64,826	228,913	0	0
Certain motor-vehicle parts	3,026,919	1,242,954	1,489,974	111,090	182,901	2,732,928	1,354,044	943,479
Primary cells and batteries, and electric storage batteries	360,097	151,113	82,133	60,084	66,767	233,246	211,197	98,862
Ignition starting, lighting, and other electrical equipment	478,408	273,707	90,086	69,322	45,293	363,792	343,029	176,818
Rail locomotive and rolling stock	147,372	0	47,070	25	100,277	47,070	25	22
Automobiles, trucks, buses, and bodies and chassis of the foregoing	12,269,551	3,694,014	8,398,323	42,132	135,083	12,092,336	3,736,145	2,091,576
Aircraft, spacecraft, and related equipment, except engines	37,578	0	636	11,883	25,059	636	11,883	6,725
Ships, tugs, pleasure boats, and similar vessels	6,828	34	4,640	0	2,154	4,674	34	26
Motorcycles and miscellaneous vehicles and transportation related equipment	185,860	122,069	28,078	740	34,974	150,146	122,808	65,807
Total	18,807,981	5,593,124	11,959,830	317,523	937,504	17,552,954	5,910,647	3,471,037
Electronic products:								
Office machines	206,547	30,015	116,019	3,434	57,080	146,034	33,448	22,495
Telephone and telegraph apparatus, including optical fiber	928,436	104,123	738,466	39,907	45,940	842,590	144,031	80,799
Microphones, loudspeakers, audio amplifiers, and combinations thereof	435,000	170,054	117,076	125,306	22,564	287,130	295,360	88,780
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	470,505	41,114	307,747	113,633	8,010	348,861	154,748	18,210
Records, tapes, compact discs, computer software, and other media, whether or not recorded	270,099	448	193,387	26,751	49,513	193,835	27,199	7,907
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,866,387	760,818	671,519	345,431	88,619	1,432,337	1,106,248	141,322
Television receivers, video monitors, and cathode ray tubes	3,589,574	2,144,901	1,206,824	164,945	72,904	3,351,725	2,309,846	1,024,648

See note(s) 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, 1997

(Thousand dollars)

Commodity group	Entered under					Total NAFTA	Total HTS PSP	U.S. content under HTS PSP
	Total	NAFTA and HTS PSP	NAFTA only	HTS PSP only	All other			
Electronic products—*Continued*								
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	722,217	261,405	417,125	4,066	39,621	678,529	265,471	88,905
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	368,830	235,801	96,878	26,140	10,012	332,679	261,940	87,623
Electrical circuit apparatus	2,619,858	1,747,546	504,116	265,354	102,841	2,251,663	2,012,901	1,203,845
Semiconductor devices	914,714	4,719	398	692,804	216,794	5,117	697,523	338,633
Computer hardware	4,654,792	337,819	1,699,729	884,928	1,732,315	2,037,549	1,222,748	275,933
Photographic equipment and supplies	158,042	3	136,609	13,886	7,544	136,612	13,889	4,000
Medical goods	784,294	565,095	65,234	75,263	78,702	630,329	640,358	355,753
Optical goods	55,451	2,580	51,358	1,075	439	53,938	3,655	1,829
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	63,119	36,861	4,163	1,002	21,093	41,024	37,863	17,755
Watches, clocks and timing devices	34,393	28,218	4,907	902	366	33,125	29,120	21,636
Measuring, testing, controlling, and analyzing instruments	1,562,480	545,132	308,275	371,445	337,628	853,407	916,577	457,611
Total	19,704,738	7,016,651	6,639,831	3,156,273	2,891,984	13,656,482	10,172,924	4,237,686
Special provisions	3,261,021	0	176,841	9	3,084,171	176,841	9	1
Grand total	85,004,793	20,806,627	42,030,842	8,076,698	14,090,626	62,837,468	28,883,325	15,482,635

Note.—Calculations based on unrounded data.

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, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	457,538	0	0
Forest products	491,042	61	15
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	2,081,279	600	135
Other energy and chemical products	6,380,712	0	0
Total	8,461,991	600	135
Textiles, apparel, and footwear:			
Textiles and textile products	534,700	244	171
Medical apparel	60,213	24	18
Mens' and boy's suits and sports coats	967	0	0
Mens' and boy's coats and jackets	1,097	0	0
Mens' and boy's trousers	1,164	0	0
Women's and girls' trousers	13,671	0	0
Shirts and blouses	3,518	48	44
Women's and girls' suits, skirts and coats	16,443	0	0
Women's and girls' dresses	1,467	0	0
Robes, nightwear, and underwear	1,404	4	4
Hosiery	6,272	0	0
Foundation garments	99	0	0
Gloves, including gloves for sports	6,059	0	0
Headwear	21,930	0	0
Other wearing apparel and accessories	21,531	0	0
Footwear and parts	3,236	0	0
Total	693,770	320	237
Minerals and metals:			
Steel mill products	1,604,582	5	2
Copper and related products	181,811	43,979	25,696
Aluminum mill products	121,734	19,781	11,217
Builders' hardware	44,767	0	0
Other metal products	3,537,544	226	58
Total	5,490,438	63,991	36,973
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	4,603	0	0
Jewelry	19,405	2	2
Motor vehicle and other furniture	115,935	0	0
Lamps and lighting fixtures	29,782	0	0
Other miscellaneous manufactured articles	3,768,030	6,391	1,560
Total	3,937,754	6,394	1,563
Machinery and equipment:			
Air conditioning equipment	709,874	0	0
Commercial machinery	138,539	14	10
Household appliances, including heating and drying equipment	290,977	0	0
Centrifuges, filtering and purifying equipment, and pumps for liquids	514,355	165	54
Semiconductor equipment, robots, and other equipment	1,372,656	237	44
Taps, cocks, valves, and similar devices	485,694	0	0
Electric motors, generators, and related equipment	783,740	1,059	580
Electrical transformers, static converters, and inductors	432,388	25	5
Powered handtools and parts thereof	299,755	44	22
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	196,751	18	11
Wiring harnesses for motor vehicles and other insulated electrical conduits	221,184	96	56
Miscellaneous machinery and equipment	7,462,527	70,272	3,582
Total	12,908,440	71,930	4,365

See note(s) 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, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	377,040	0	0
Internal combustion piston engines	3,024,701	70,062	7,831
Construction, mining, and industrial vehicles	1,469,668	114,468	24,093
Certain motor-vehicle parts	4,038,515	36,109	732
Primary cells and batteries, and electric storage batteries	882,303	46,702	5,787
Ignition starting, lighting, and other electrical equipment	688,414	0	0
Rail locomotive and rolling stock	44,818	16,952	4,871
Automobiles, trucks, buses, and bodies and chassis of the foregoing	27,905,857	14,701,689	254,838
Aircraft, spacecraft, and related equipment, except engines	1,248,295	0	0
Ships, tugs, pleasure boats, and similar vessels	33,568	0	0
Motorcycles and miscellaneous vehicles and transportation related equipment	1,258,700	84	([1])
Total	40,971,880	14,986,066	298,153
Electronic products:			
Office machines	3,156,256	2	2
Telephone and telegraph apparatus, including optical fiber	1,558,409	2,546	784
Microphones, loudspeakers, audio amplifiers, and combinations thereof	210,208	0	0
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	1,915,746	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	1,111,305	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,079,542	2,818	38
Television receivers, video monitors, and cathode ray tubes	713,609	5	([1])
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	2,142,436	19,349	2,613
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	879,435	0	0
Electrical circuit apparatus	2,689,116	3,494	621
Semiconductor devices	7,830,873	251,808	164,025
Computer hardware	14,738,306	193,599	28,749
Photographic equipment and supplies	1,818,695	0	0
Medical goods	1,052,512	49,982	3,063
Optical goods	869,963	3,459	2,214
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	200,558	5,592	3,190
Watches, clocks and timing devices	770,170	105	92
Measuring, testing, controlling, and analyzing instruments	1,785,168	4,838	821
Total	44,522,308	537,597	206,213
Special provisions	2,545,196	0	0
Grand total	120,480,356	15,666,960	547,652

[1] Less than $500.

Note.—Calculations based on unrounded data.

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, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	792,414	0	0
Forest products	593,744	0	0
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	743,403	105	64
Other energy and chemical products	6,115,811	9,178	4,324
Total	6,859,214	9,283	4,388
Textiles, apparel, and footwear:			
Textiles and textile products	406,155	2	1
Medical apparel	17,132	0	0
Mens' and boy's suits and sports coats	5,829	41	(1)
Mens' and boy's coats and jackets	1,213	0	0
Mens' and boy's trousers	1,118	0	0
Women's and girls' trousers	8,108	56	4
Shirts and blouses	11,302	0	0
Women's and girls' suits, skirts and coats	33,726	86	14
Women's and girls' dresses	5,527	0	0
Robes, nightwear, and underwear	1,038	0	0
Hosiery	4,119	0	0
Foundation garments	178	0	0
Gloves, including gloves for sports	3,380	0	0
Headwear	2,955	0	0
Other wearing apparel and accessories	21,393	0	0
Footwear and parts	76,904	122	22
Total	600,075	307	40
Minerals and metals:			
Steel mill products	1,157,847	0	0
Copper and related products	181,862	3	1
Aluminum mill products	231,475	0	0
Builders' hardware	47,806	0	0
Other metal products	1,802,828	10,912	4,065
Total	3,421,817	10,915	4,065
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	12,088	0	0
Jewelry	35,111	12	9
Motor vehicle and other furniture	159,890	0	0
Lamps and lighting fixtures	46,378	0	0
Other miscellaneous manufactured articles	658,113	296	27
Total	911,580	308	36
Machinery and equipment:			
Air conditioning equipment	311,346	8,595	452
Commercial machinery	118,185	0	0
Household appliances, including heating and drying equipment	289,947	2,663	385
Centrifuges, filtering and purifying equipment, and pumps for liquids	642,555	439	124
Semiconductor equipment, robots, and other equipment	380,539	12,721	241
Taps, cocks, valves, and similar devices	375,654	62	61
Electric motors, generators, and related equipment	290,908	4,485	180
Electrical transformers, static converters, and inductors	156,998	4	2
Powered handtools and parts thereof	155,453	1,816	1,492
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	89,928	0	0
Wiring harnesses for motor vehicles and other insulated electrical conduits	88,053	7	(1)
Miscellaneous machinery and equipment	5,730,457	51,905	4,903
Total	8,630,023	82,696	7,841

See note(s) 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, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	851,612	0	0
Internal combustion piston engines	781,291	78,933	6,043
Construction, mining, and industrial vehicles	552,940	147	2
Certain motor-vehicle parts	990,001	21,340	6,937
Primary cells and batteries, and electric storage batteries	26,579	0	0
Ignition starting, lighting, and other electrical equipment	200,591	23,770	10,074
Rail locomotive and rolling stock	53,412	4,529	358
Automobiles, trucks, buses, and bodies and chassis of the foregoing	9,761,139	8,295,332	99,844
Aircraft, spacecraft, and related equipment, except engines	217,821	11	10
Ships, tugs, pleasure boats, and similar vessels	7,796	0	0
Motorcycles and miscellaneous vehicles and transportation related equipment	151,662	172	60
Total	13,594,844	8,424,234	123,327
Electronic products:			
Office machines	109,820	0	0
Telephone and telegraph apparatus, including optical fiber	99,943	133	93
Microphones, loudspeakers, audio amplifiers, and combinations thereof	30,941	0	0
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	24,593	14	10
Records, tapes, compact discs, computer software, and other media, whether or not recorded	201,509	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	96,170	132	81
Television receivers, video monitors, and cathode ray tubes	26,791	0	0
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	16,205	0	0
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	148,519	0	0
Electrical circuit apparatus	794,765	351	114
Semiconductor devices	605,600	233	91
Computer hardware	654,158	1,231	920
Photographic equipment and supplies	349,457	0	0
Medical goods	1,014,081	2,630	355
Optical goods	251,408	60	9
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	69,880	0	0
Watches, clocks and timing devices	55,132	0	0
Measuring, testing, controlling, and analyzing instruments	979,390	8,496	980
Total	5,528,363	13,280	2,653
Special provisions	1,860,874	0	0
Grand total	42,792,947	8,541,023	142,350

[1] Less than $500.

Note.—Calculations based on unrounded data.

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

Table B-8
U.S. imports for consumption from the Dominican Republic, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997
(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	673,080	21	12
Forest products	4,541	0	0
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	25,301	52	16
Other energy and chemical products	9,298	56	36
Total	34,599	108	52
Textiles, apparel, and footwear:			
Textiles and textile products	37,678	18,216	12,293
Medical apparel	11,212	241	23
Mens' and boy's suits and sports coats	113,409	101,433	74,725
Mens' and boy's coats and jackets	21,841	18,042	9,184
Mens' and boy's trousers	660,940	653,416	351,134
Women's and girls' trousers	256,211	249,491	142,959
Shirts and blouses	310,608	246,307	185,022
Women's and girls' suits, skirts and coats	190,165	183,789	112,503
Women's and girls' dresses	12,527	5,867	3,775
Robes, nightwear, and underwear	338,451	333,340	220,690
Hosiery	3,129	3,129	2,634
Foundation garments	170,467	169,127	121,250
Gloves, including gloves for sports	111	110	73
Headwear	44,171	2,265	1,445
Other wearing apparel and accessories	100,637	93,866	68,968
Footwear and parts	291,568	107,207	70,808
Total	2,563,125	2,185,847	1,377,486
Minerals and metals:			
Steel mill products	1,447	0	0
Copper and related products	3,999	2	(1)
Aluminum mill products	128	0	0
Builders' hardware	10,150	0	0
Other metal products	117,047	5,243	4,111
Total	132,770	5,245	4,112
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	35,803	7,141	2,339
Jewelry	119,851	21,174	17,957
Motor vehicle and other furniture	4,679	18	10
Lamps and lighting fixtures	18	0	0
Other miscellaneous manufactured articles	25,023	7,216	4,052
Total	185,374	35,549	24,359
Machinery and equipment:			
Air conditioning equipment	18	0	0
Commercial machinery	712	2	1
Household appliances, including heating and drying equipment	60	0	0
Centrifuges, filtering and purifying equipment, and pumps for liquids	20	0	0
Semiconductor equipment, robots, and other equipment	27	0	0
Taps, cocks, valves, and similar devices	0	0	0
Electric motors, generators, and related equipment	537	423	197
Electrical transformers, static converters, and inductors	27,402	25,786	17,852
Powered handtools and parts thereof	4	0	0
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	2	0	0
Wiring harnesses for motor vehicles and other insulated electrical conduits	3,575	1,183	875
Miscellaneous machinery and equipment	938	31	14
Total	33,293	27,424	18,939

See note(s) at end of table.

Table B-8—*Continued*

U.S. imports for consumption from the Dominican Republic, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	32	0	0
Internal combustion piston engines	18	0	0
Construction, mining, and industrial vehicles	12	0	0
Certain motor-vehicle parts	49	0	0
Primary cells and batteries, and electric storage batteries	3	0	0
Ignition starting, lighting, and other electrical equipment	4,102	0	0
Aircraft, spacecraft, and related equipment, except engines	3	0	0
Ships, tugs, pleasure boats, and similar vessels	5	0	0
Motorcycles and miscellaneous vehicles and transportation related equipment	0	0	0
Total	4,223	0	0
Electronic products:			
Office machines	30	0	0
Telephone and telegraph apparatus, including optical fiber	8,977	3,009	2,126
Microphones, loudspeakers, audio amplifiers, and combinations thereof	5	5	3
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	2	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	27	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	78	68	25
Television receivers, video monitors, and cathode ray tubes	30	28	11
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	4	0	0
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	55,770	9,962	5,391
Electrical circuit apparatus	213,771	133,331	92,796
Semiconductor devices	1,905	16	8
Computer hardware	352	15	6
Photographic equipment and supplies	6	0	0
Medical goods	299,953	261,217	209,389
Optical goods	15	0	0
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	5	0	0
Watches, clocks and timing devices	0	0	0
Measuring, testing, controlling, and analyzing instruments	7,818	7,435	1,998
Total	588,748	415,086	311,754
Special provisions	88,616	0	0
Grand total	4,308,370	2,669,279	1,736,713

[1] Less than $500.

Note.—Calculations based on unrounded data.

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

Table B-9
U.S. imports for consumption from the Philippines, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997
(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	770,636	0	0
Forest products	107,453	26	([1])
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	43,908	0	0
Other energy and chemical products	32,737	0	0
Total	76,645	0	0
Textiles, apparel, and footwear:			
Textiles and textile products	87,984	888	292
Medical apparel	1,298	0	0
Mens' and boy's suits and sports coats	19,615	0	0
Mens' and boy's coats and jackets	112,554	64	1
Mens' and boy's trousers	130,977	1,999	37
Women's and girls' trousers	153,655	2,991	15
Shirts and blouses	419,067	5,384	110
Women's and girls' suits, skirts and coats	172,663	3,663	296
Women's and girls' dresses	138,118	3,276	182
Robes, nightwear, and underwear	63,580	438	12
Hosiery	4,551	0	0
Foundation garments	46,795	30,633	13,968
Gloves, including gloves for sports	75,271	4,111	497
Headwear	29,380	11	1
Other wearing apparel and accessories	281,981	9,047	241
Footwear and parts	103,247	35	([1])
Total	1,840,736	62,539	15,654
Minerals and metals:			
Steel mill products	4,259	0	0
Copper and related products	501	0	0
Aluminum mill products	46	0	0
Builders' hardware	1,926	0	0
Other metal products	91,920	134	115
Total	98,652	134	115
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	192,656	985	56
Jewelry	6,656	0	0
Motor vehicle and other furniture	196,613	0	0
Lamps and lighting fixtures	39,699	0	0
Other miscellaneous manufactured articles	112,042	4	1
Total	547,666	989	56
Machinery and equipment:			
Air conditioning equipment	3,767	0	0
Commercial machinery	109	0	0
Household appliances, including heating and drying equipment	745	0	0
Centrifuges, filtering and purifying equipment, and pumps for liquids	1,558	0	0
Semiconductor equipment, robots, and other equipment	641	0	0
Taps, cocks, valves, and similar devices	5,489	0	0
Electric motors, generators, and related equipment	8,817	0	0
Electrical transformers, static converters, and inductors	49,399	15	10
Powered handtools and parts thereof	47	0	0
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	16,522	0	0
Wiring harnesses for motor vehicles and other insulated electrical conduits	230,239	103,061	42,347
Miscellaneous machinery and equipment	1,648	0	0
Total	318,980	103,076	42,357

See note(s) at end of table.

Table B-9—*Continued*

U.S. imports for consumption from the Philippines, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	14,839	0	0
Internal combustion piston engines	862	0	0
Construction, mining, and industrial vehicles	160	0	0
Certain motor-vehicle parts	22,139	0	0
Primary cells and batteries, and electric storage batteries	7,432	0	0
Ignition starting, lighting, and other electrical equipment	202	0	0
Rail locomotive and rolling stock	62	0	0
Automobiles, trucks, buses, and bodies and chassis of the foregoing	18	0	0
Aircraft, spacecraft, and related equipment, except engines	27,241	694	317
Ships, tugs, pleasure boats, and similar vessels	4	0	0
Motorcycles and miscellaneous vehicles and transportation related equipment	2,020	0	0
Total	74,979	694	317
Electronic products:			
Office machines	21,499	0	0
Telephone and telegraph apparatus, including optical fiber	570,555	0	0
Microphones, loudspeakers, audio amplifiers, and combinations thereof	34,971	11	5
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	3,145	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	1,078	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	163,718	799	762
Television receivers, video monitors, and cathode ray tubes	14,359	0	0
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	53,440	1,330	547
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	142,649	7,312	2,121
Electrical circuit apparatus	50,157	193	103
Semiconductor devices	3,312,190	1,883,358	994,756
Computer hardware	1,794,594	2,657	1,249
Photographic equipment and supplies	55,937	0	0
Medical goods	1,214	0	0
Optical goods	26,783	0	0
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	444	0	0
Watches, clocks and timing devices	158,967	2	1
Measuring, testing, controlling, and analyzing instruments	29,844	240	159
Total	6,435,544	1,895,902	999,704
Special provisions	147,356	0	0
Grand total	10,418,647	2,063,360	1,058,203

[1] Less than $500.

Note.—Calculations based on unrounded data.

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

Table B-10
U.S. imports for consumption from Malaysia, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	249,738	3	2
Forest products	192,863	64	17
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	66,985	0	0
Other energy and chemical products	626,868	0	0
Total	693,853	0	0
Textiles, apparel, and footwear:			
Textiles and textile products	67,605	0	0
Medical apparel	0	0	0
Mens' and boy's suits and sports coats	0	0	0
Mens' and boy's coats and jackets	80,754	428	11
Mens' and boy's trousers	64,052	957	15
Women's and girls' trousers	47,484	2	(1)
Shirts and blouses	291,104	20,127	1,211
Women's and girls' suits, skirts and coats	39,242	282	6
Women's and girls' dresses	33,840	0	0
Robes, nightwear, and underwear	20,413	0	0
Hosiery	19	0	0
Foundation garments	2,316	0	0
Gloves, including gloves for sports	596,575	0	0
Headwear	3,986	0	0
Other wearing apparel and accessories	63,960	0	0
Footwear and parts	1,913	65	9
Total	1,313,262	21,860	1,252
Minerals and metals:			
Steel mill products	16,612	0	0
Copper and related products	26,077	0	0
Aluminum mill products	731	0	0
Builders' hardware	6,364	0	0
Other metal products	299,861	0	0
Total	349,644	0	0
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	14,451	0	0
Jewelry	13,775	0	0
Motor vehicle and other furniture	413,835	0	0
Lamps and lighting fixtures	27,037	0	0
Other miscellaneous manufactured articles	287,397	0	0
Total	756,496	0	0
Machinery and equipment:			
Air conditioning equipment	67,387	98	7
Commercial machinery	3,024	872	58
Household appliances, including heating and drying equipment	92,821	19,109	2,142
Centrifuges, filtering and purifying equipment, and pumps for liquids	1,533	0	0
Semiconductor equipment, robots, and other equipment	5,688	0	0
Taps, cocks, valves, and similar devices	2,325	0	0
Electric motors, generators, and related equipment	21,406	465	203
Electrical transformers, static converters, and inductors	117,796	6,511	1,085
Powered handtools and parts thereof	5,287	377	26
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	1,822	295	166
Wiring harnesses for motor vehicles and other insulated electrical conduits	29,339	170	159
Miscellaneous machinery and equipment	11,839	0	0
Total	360,267	27,897	3,847

See note(s) at end of table.

Table B-10—*Continued*
U.S. imports for consumption from Malaysia, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	6,662	0	0
Internal combustion piston engines	1,306	0	0
Construction, mining, and industrial vehicles	667	0	0
Certain motor-vehicle parts	8,976	0	0
Primary cells and batteries, and electric storage batteries	20,913	0	0
Ignition starting, lighting, and other electrical equipment	2,407	0	0
Rail locomotive and rolling stock	4,928	0	0
Automobiles, trucks, buses, and bodies and chassis of the foregoing	0	0	0
Aircraft, spacecraft, and related equipment, except engines	740	0	0
Ships, tugs, pleasure boats, and similar vessels	2,889	2,685	669
Motorcycles and miscellaneous vehicles and transportation related equipment	10,115	0	0
Total	59,604	2,685	669
Electronic products:			
Office machines	140,225	0	0
Telephone and telegraph apparatus, including optical fiber	630,284	0	0
Microphones, loudspeakers, audio amplifiers, and combinations thereof	129,537	0	0
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	1,195,150	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	120,613	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,090,393	825	647
Television receivers, video monitors, and cathode ray tubes	230,348	0	0
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	52,229	8	3
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	166,804	15,288	4,098
Electrical circuit apparatus	210,757	9,186	1,429
Semiconductor devices	5,246,057	1,772,920	892,773
Computer hardware	4,237,923	44,023	21,949
Photographic equipment and supplies	143,850	0	0
Medical goods	39,585	1,173	918
Optical goods	3,383	0	0
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	2,171	0	0
Watches, clocks and timing devices	40,458	0	0
Measuring, testing, controlling, and analyzing instruments	39,502	15,516	2,442
Total	13,719,269	1,858,939	924,261
Special provisions	193,440	0	0
Grand total	17,888,436	1,911,448	930,050

[1]Less than $500.

Note.—Calculations based on unrounded data.

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, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	189,321	0	0
Forest products	161,145	60	(1)
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	525,593	63	16
Other energy and chemical products	485,671	100	5
Total	1,011,263	163	22
Textiles, apparel, and footwear:			
Textiles and textile products	908,461	2,684	399
Medical apparel	1,492	0	0
Mens' and boy's suits and sports coats	17,611	17	(1)
Mens' and boy's coats and jackets	225,604	227	1
Mens' and boy's trousers	31,049	56	1
Women's and girls' trousers	110,297	12,082	53
Shirts and blouses	590,557	6,440	135
Women's and girls' suits, skirts and coats	206,745	34,472	1,740
Women's and girls' dresses	82,976	9,846	250
Robes, nightwear, and underwear	21,098	37	1
Hosiery	39,886	0	0
Foundation garments	3,359	0	0
Gloves, including gloves for sports	25,552	17	12
Headwear	51,182	0	0
Other wearing apparel and accessories	258,916	2,016	29
Footwear and parts	234,666	93,806	6,195
Total	2,809,452	161,700	8,815
Minerals and metals:			
Steel mill products	635,165	0	0
Copper and related products	20,269	9	(1)
Aluminum mill products	3,948	0	0
Builders' hardware	26,004	0	0
Other metal products	675,320	134	49
Total	1,360,706	144	49
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	177,059	8,733	35
Jewelry	138,073	706	428
Motor vehicle and other furniture	48,024	0	0
Lamps and lighting fixtures	29,325	0	0
Other miscellaneous manufactured articles	531,356	358	145
Total	923,837	9,798	609
Machinery and equipment:			
Air conditioning equipment	141,700	0	0
Commercial machinery	16,473	0	0
Household appliances, including heating and drying equipment	415,513	0	0
Centrifuges, filtering and purifying equipment, and pumps for liquids	33,135	9,040	3,192
Semiconductor equipment, robots, and other equipment	49,645	0	0
Taps, cocks, valves, and similar devices	80,216	0	0
Electric motors, generators, and related equipment	82,846	2	1
Electrical transformers, static converters, and inductors	100,143	0	0
Powered handtools and parts thereof	2,773	0	0
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	69,515	0	0
Wiring harnesses for motor vehicles and other insulated electrical conduits	12,460	0	0
Miscellaneous machinery and equipment	261,001	13,601	1,430
Total	1,265,420	22,643	4,623

See note(s) 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, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	49,922	0	0
Internal combustion piston engines	29,600	0	0
Construction, mining, and industrial vehicles	288,012	7,287	2,218
Certain motor-vehicle parts	191,435	8,420	3,570
Primary cells and batteries, and electric storage batteries	28,596	0	0
Ignition starting, lighting, and other electrical equipment	65,661	12,892	3,702
Rail locomotive and rolling stock	14,210	0	0
Automobiles, trucks, buses, and bodies and chassis of the foregoing	1,900,169	478,929	7,101
Aircraft, spacecraft, and related equipment, except engines	90,718	0	0
Ships, tugs, pleasure boats, and similar vessels	4,413	0	0
Motorcycles and miscellaneous vehicles and transportation related equipment	24,479	0	0
Total	2,687,216	507,529	16,591
Electronic products:			
Office machines	64,335	0	0
Telephone and telegraph apparatus, including optical fiber	362,656	0	0
Microphones, loudspeakers, audio amplifiers, and combinations thereof	143,141	0	0
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	144,674	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	217,851	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	214,911	504	408
Television receivers, video monitors, and cathode ray tubes	83,425	0	0
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	107,198	0	0
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	122,148	4	2
Electrical circuit apparatus	239,719	0	0
Semiconductor devices	5,976,632	1,143,358	705,015
Computer hardware	4,139,581	33,006	18,411
Photographic equipment and supplies	55,201	0	0
Medical goods	27,579	0	0
Optical goods	128,617	8	3
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	5,731	0	0
Watches, clocks and timing devices	26,384	0	0
Measuring, testing, controlling, and analyzing instruments	47,697	2,086	854
Total	12,107,481	1,178,966	724,694
Special provisions	423,167	0	0
Grand total	22,939,009	1,881,002	755,402

[1] Less than $500.

Note.—Calculations based on unrounded data.

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

Table B-12
U.S. imports for consumption from Canada, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	9,345,157	563	276
Forest products	20,686,736	28,110	8,543
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	4,109,705	31,460	10,782
Other energy and chemical products	26,833,980	64,907	24,863
Total	30,943,685	96,368	35,645
Textiles, apparel, and footwear:			
Textiles and textile products	1,453,678	9,233	1,834
Medical apparel	47,322	0	0
Mens' and boy's suits and sports coats	206,994	0	0
Mens' and boy's coats and jackets	29,513	388	216
Mens' and boy's trousers	101,021	295	149
Women's and girls' trousers	167,201	215	32
Shirts and blouses	288,035	14,833	9,771
Women's and girls' suits, skirts and coats	101,525	2,746	414
Women's and girls' dresses	47,738	18	11
Robes, nightwear, and underwear	54,340	7	(1)
Hosiery	60,981	0	0
Foundation garments	5,385	138	83
Gloves, including gloves for sports	17,286	0	0
Headwear	32,086	0	0
Other wearing apparel and accessories	231,549	1,349	93
Footwear and parts	117,383	0	0
Total	2,962,037	29,221	12,603
Minerals and metals:			
Steel mill products	2,476,883	147,179	118,450
Copper and related products	1,383,967	31,709	28,372
Aluminum mill products	1,049,490	4,887	2,857
Builders' hardware	84,829	91	69
Other metal products	12,042,731	89,161	33,500
Total	17,037,900	273,027	183,248
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	34,349	6,783	265
Jewelry	135,849	0	0
Motor vehicle and other furniture	3,458,338	5,477	4,455
Lamps and lighting fixtures	146,389	7,268	1,776
Other miscellaneous manufactured articles	779,943	7,027	1,127
Total	4,554,868	26,556	7,624
Machinery and equipment:			
Air conditioning equipment	278,967	9,156	2,627
Commercial machinery	255,874	13,383	3,411
Household appliances, including heating and drying equipment	390,023	108,136	25,954
Centrifuges, filtering and purifying equipment, and pumps for liquids	581,933	11,034	1,546
Semiconductor equipment, robots, and other equipment	161,498	4	3
Taps, cocks, valves, and similar devices	333,777	1,474	787
Electric motors, generators, and related equipment	426,557	2,234	809
Electrical transformers, static converters, and inductors	334,788	352	202
Powered handtools and parts thereof	38,707	4	2
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	130,383	17,824	5,716
Wiring harnesses for motor vehicles and other insulated electrical conduits	506,957	5,140	2,937
Miscellaneous machinery and equipment	5,073,473	107,285	47,914
Total	8,512,937	276,025	91,909

See note(s) at end of table.

Table B-12—*Continued*
U.S. imports for consumption from Canada, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	1,159,498	185,611	21,620
Internal combustion piston engines	2,854,913	311	116
Construction, mining, and industrial vehicles	748,689	7,030	1,940
Certain motor-vehicle parts	7,527,049	35,534	15,885
Primary cells and batteries, and electric storage batteries	32,694	7,760	1,300
Ignition starting, lighting, and other electrical equipment	148,729	0	0
Rail locomotive and rolling stock	889,598	219,308	92,886
Automobiles, trucks, buses, and bodies and chassis of the foregoing	35,884,322	58,354	34,033
Aircraft, spacecraft, and related equipment, except engines	2,738,185	24,446	21,138
Ships, tugs, pleasure boats, and similar vessels	464,923	29,381	6,447
Motorcycles and miscellaneous vehicles and transportation related equipment	591,697	24,149	8,719
Total	53,040,296	591,885	204,084
Electronic products:			
Office machines	223,909	38	8
Telephone and telegraph apparatus, including optical fiber	2,003,572	88,051	49,928
Microphones, loudspeakers, audio amplifiers, and combinations thereof	75,442	11,001	2,593
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	5,172	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	247,386	50	12
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	971,141	351	224
Television receivers, video monitors, and cathode ray tubes	16,084	954	529
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	95,944	0	0
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	371,103	1,883	582
Electrical circuit apparatus	1,064,664	50,563	16,080
Semiconductor devices	2,246,947	1,986	659
Computer hardware	3,497,043	1,933	469
Photographic equipment and supplies	288,794	20	12
Medical goods	171,707	11,576	4,757
Optical goods	163,785	131	63
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	132,576	16,226	6,359
Watches, clocks and timing devices	9,605	1,082	255
Measuring, testing, controlling, and analyzing instruments	846,031	3,718	566
Total	12,430,903	189,562	83,096
Special provisions	8,366,492	174	120
Grand total	167,881,010	1,511,492	627,148

[1] Less than $500.

Note.—Calculations based on unrounded data.

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

Table B-13
U.S. imports for consumption from the United Kingdom, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	1,061,696	0	0
Forest products	725,689	57	38
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	536,222	60	31
Other energy and chemical products	6,540,965	32,343	25,756
Total	7,077,186	32,404	25,788
Textiles, apparel, and footwear:			
Textiles and textile products	374,008	0	0
Medical apparel	11,103	0	0
Mens' and boy's suits and sports coats	9,443	0	0
Mens' and boy's coats and jackets	11,743	0	0
Mens' and boy's trousers	2,193	0	0
Women's and girls' trousers	3,913	0	0
Shirts and blouses	50,833	23	(1)
Women's and girls' suits, skirts and coats	20,134	0	0
Women's and girls' dresses	10,471	0	0
Robes, nightwear, and underwear	6,859	0	0
Hosiery	6,790	0	0
Foundation garments	3,248	0	0
Gloves, including gloves for sports	6,016	0	0
Headwear	7,642	0	0
Other wearing apparel and accessories	103,219	126	10
Footwear and parts	240,447	0	0
Total	868,064	148	10
Minerals and metals:			
Steel mill products	402,011	0	0
Copper and related products	73,008	52	29
Aluminum mill products	88,675	0	0
Builders' hardware	16,811	0	0
Other metal products	1,753,348	3,331	2,689
Total	2,333,853	3,383	2,718
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	7,663	5	4
Jewelry	36,234	0	0
Motor vehicle and other furniture	203,929	0	0
Lamps and lighting fixtures	19,905	0	0
Other miscellaneous manufactured articles	1,187,030	2,022	329
Total	1,454,760	2,027	333
Machinery and equipment:			
Air conditioning equipment	229,071	9,940	3,340
Commercial machinery	35,249	0	0
Household appliances, including heating and drying equipment	61,894	0	0
Centrifuges, filtering and purifying equipment, and pumps for liquids	295,762	7,913	2,252
Semiconductor equipment, robots, and other equipment	118,222	521	190
Taps, cocks, valves, and similar devices	223,532	19	9
Electric motors, generators, and related equipment	218,484	26,998	4,536
Electrical transformers, static converters, and inductors	114,977	281	143
Powered handtools and parts thereof	72,147	0	0
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	27,447	0	0
Wiring harnesses for motor vehicles and other insulated electrical conduits	52,909	1,482	161
Miscellaneous machinery and equipment	1,930,759	59,301	10,651
Total	3,380,455	106,456	21,283

See note(s) at end of table.

Table B-13—*Continued*
U.S. imports for consumption from United Kingdom, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997
(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	2,732,604	1,576	800
Internal combustion piston engines	485,749	0	0
Construction, mining, and industrial vehicles	932,062	142,209	29,624
Certain motor-vehicle parts	377,134	26,472	1,151
Primary cells and batteries, and electric storage batteries	35,977	0	0
Ignition starting, lighting, and other electrical equipment	94,877	0	0
Rail locomotive and rolling stock	10,737	0	0
Automobiles, trucks, buses, and bodies and chassis of the foregoing	1,667,536	1,266,984	16,366
Aircraft, spacecraft, and related equipment, except engines	1,187,910	35	32
Ships, tugs, pleasure boats, and similar vessels	81,620	20,519	3,953
Motorcycles and miscellaneous vehicles and transportation related equipment	54,975	0	0
Total	7,661,183	1,457,794	51,925
Electronic products:			
Office machines	266,281	0	0
Telephone and telegraph apparatus, including optical fiber	159,263	0	0
Microphones, loudspeakers, audio amplifiers, and combinations thereof	85,196	9	7
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	34,115	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	121,823	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	178,065	31	30
Television receivers, video monitors, and cathode ray tubes	44,987	0	0
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	39,504	376	125
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	289,681	355	165
Electrical circuit apparatus	328,454	410	232
Semiconductor devices	464,752	659	479
Computer hardware	2,143,612	4,705	582
Photographic equipment and supplies	293,008	34,033	14,372
Medical goods	261,974	158	157
Optical goods	100,343	0	0
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	229,217	38	36
Watches, clocks and timing devices	10,493	0	0
Measuring, testing, controlling, and analyzing instruments	892,685	17,957	1,836
Total	5,943,452	58,732	18,020
Special provisions	1,905,281	4,471	3,440
Grand total	32,411,619	1,665,472	123,555

[1] Less than $500.

Note.—Calculations based on unrounded data.

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

Table B-14
U.S. imports for consumption from Sweden, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Agricultural products	266,658	0	0
Forest products	235,793	0	0
Chemicals, coal, petroleum, natural gas, and related products:			
Fabricated plastic and rubber products	94,746	0	0
Other energy and chemical products	561,668	0	0
Total	656,414	0	0
Textiles, apparel, and footwear:			
Textiles and textile products	21,057	27	13
Medical apparel	943	0	0
Mens' and boy's suits and sports coats	5	0	0
Mens' and boy's coats and jackets	161	0	0
Mens' and boy's trousers	155	0	0
Women's and girls' trousers	252	0	0
Shirts and blouses	879	0	0
Women's and girls' suits, skirts and coats	248	0	0
Women's and girls' dresses	204	0	0
Robes, nightwear, and underwear	527	0	0
Hosiery	312	0	0
Foundation garments	104	0	0
Gloves, including gloves for sports	110	0	0
Headwear	7,280	0	0
Other wearing apparel and accessories	3,064	0	0
Footwear and parts	2,077	0	0
Total	37,377	27	13
Minerals and metals:			
Steel mill products	305,601	0	0
Copper and related products	55,160	0	0
Aluminum mill products	34,281	0	0
Builders' hardware	8,920	0	0
Other metal products	330,512	177	138
Total	734,475	177	138
Miscellaneous manufacturers:			
Luggage, handbags, and flat goods	159	0	0
Jewelry	182	0	0
Motor vehicle and other furniture	64,858	0	0
Lamps and lighting fixtures	4,709	0	0
Other miscellaneous manufactured articles	59,274	1,599	330
Total	129,183	1,599	330
Machinery and equipment:			
Air conditioning equipment	31,799	0	0
Commercial machinery	25,678	0	0
Household appliances, including heating and drying equipment	156,004	0	0
Centrifuges, filtering and purifying equipment, and pumps for liquids	106,223	0	0
Semiconductor equipment, robots, and other equipment	53,741	0	0
Taps, cocks, valves, and similar devices	30,487	0	0
Electric motors, generators, and related equipment	34,767	0	0
Electrical transformers, static converters, and inductors	32,130	0	0
Powered handtools and parts thereof	108,099	0	0
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	383	0	0
Wiring harnesses for motor vehicles and other insulated electrical conduits	29,791	0	0
Miscellaneous machinery and equipment	585,326	1,381	218
Total	1,194,429	1,381	218

See note(s) at end of table.

Table B-14—*Continued*
U.S. imports for consumption from Sweden, total and under the production-sharing provisions (PSP) of HTS Chapter 98, by commodity groups, 1997

(Thousand dollars)

Commodity group	Total imports	Total under HTS PSP	U.S. content
Transportation equipment:			
Aircraft engines and gas turbines	118,751	12	10
Internal combustion piston engines	125,152	0	0
Construction, mining, and industrial vehicles	266,086	49,454	557
Certain motor-vehicle parts	219,783	4,156	11
Primary cells and batteries, and electric storage batteries	6,736	0	0
Ignition starting, lighting, and other electrical equipment	5,076	0	0
Rail locomotive and rolling stock	36,999	27,536	1,898
Automobiles, trucks, buses, and bodies and chassis of the foregoing	1,860,476	1,348,137	11,662
Aircraft, spacecraft, and related equipment, except engines	168,418	0	0
Ships, tugs, pleasure boats, and similar vessels	10,836	0	0
Motorcycles and miscellaneous vehicles and transportation related equipment	10,052	0	0
Total	2,828,365	1,429,296	14,138
Electronic products:			
Office machines	29,522	0	0
Telephone and telegraph apparatus, including optical fiber	71,626	0	0
Microphones, loudspeakers, audio amplifiers, and combinations thereof	5,621	0	0
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	204	0	0
Records, tapes, compact discs, computer software, and other media, whether or not recorded	10,291	0	0
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	179,227	0	0
Television receivers, video monitors, and cathode ray tubes	2,388	0	0
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	897	0	0
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	12,043	0	0
Electrical circuit apparatus	97,712	0	0
Semiconductor devices	64,384	5	3
Computer hardware	98,134	0	0
Photographic equipment and supplies	19,983	0	0
Medical goods	92,601	0	0
Optical goods	13,679	0	0
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	15,528	0	0
Watches, clocks and timing devices	802	0	0
Measuring, testing, controlling, and analyzing instruments	112,213	99	98
Total	826,856	103	101
Special provisions	355,790	0	0
Grand total	7,265,339	1,432,584	14,938

Note.—Calculations based on unrounded data.

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, 1997
(*Thousand dollars*)

Monitoring group	Canada	Mexico	Japan	Germany	China	All other	Total
Steel mill products	136,858	68,648	5	0	0	11	205,521
Copper and related products	30,276	2	43,979	3	0	394	74,654
Other metal products	11,575	2,698	0	10,775	3,060	9,043	37,151
Aircraft engines and gas turbines	0	25,756	0	0	0	1,937	27,693
Certain motor-vehicle parts	9,472	33,860	0	809	0	10	44,151
All other	16,575	68,617	20,010	9,035	2,398	3,868	120,503
Total	204,756	199,580	63,994	20,623	5,458	15,263	509,674

Note.—Calculations based on unrounded data.

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, 1996 and 1997

(Thousand dollars)

Monitoring group	1996	1997
Chemicals, coal, petroleum, natural gas, and related products:		
Fabricated plastic and rubber products	708	([1])
Other energy and chemical products	10	([1])
Textiles, apparel, and footwear:		
Textiles and textile products	96,936	116,992
Medical apparel	176,420	169,075
Mens' and boy's suits and sports coats	9,412	4,498
Mens' and boy's coats and jackets	15,487	24,523
Mens' and boy's trousers	806,111	962,211
Women's and girls' trousers	542,143	805,093
Shirts and blouses	722,011	1,092,050
Women's and girls' suits, skirts and coats	91,168	88,189
Women's and girls' dresses	39,096	53,866
Robes, nightwear, and underwear	156,690	198,655
Hosiery	33,117	103,199
Foundation garments	99,775	88,948
Gloves, including gloves for sports	6,872	9,479
Headwear	14,639	9,775
Other wearing apparel and accessories	89,308	118,874
Miscellaneous manufacturers:		
Luggage, handbags, and flat goods	68,472	75,210
Motor vehicle and other furniture	7,358	4,210
Other miscellaneous manufactured articles	10	([1])
Machinery and equipment:		
Taps, cocks, valves, and similar devices	9	([1])
Electrical transformers, static converters, and inductors	([1])	5
Flashlights and other similar electric lights, light bulbs and florescent tubes; arc lights	([1])	15
Miscellaneous machinery and equipment	([1])	50
Transportation equipment:		
Certain motor-vehicle parts	23,901	46,606
Primary cells and batteries, and electric storage batteries	28	([1])
Electronic products:		
Electrical circuit apparatus	([1])	110
Medical goods	5,739	610
Optical goods	10	([1])
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	([1])	6
Measuring, testing, controlling, and analyzing instruments	4	([1])
Special provisions	30	([1])
Total	3,005,465	3,972,250

[1] Less than $500.

Note.—Calculations based on unrounded data.

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 group, 1997

Monitoring group	Total value	U.S. content	Percent dutiable	Nominal rate[1]	Effective rate[2]	Duty savings
	Thousand dollars		*Percent*			*Thousand dollars*
Agricultural products	6,045	1,993	67	8	6	124
Forest products	140,871	81,556	42	4	2	2,583
Fabricated plastic and rubber products	184,606	99,140	46	4	2	3,965
Other energy and chemical products	156,630	73,494	53	2	1	1,581
Textiles and textile products	313,625	191,502	39	6	3	11,736
Medical apparel	190,212	144,149	24	5	1	7,859
Mens' and boy's suits and sports coats	226,051	125,925	44	23	10	30,224
Mens' and boy's coats and jackets	106,776	58,034	46	19	8	12,234
Mens' and boy's trousers	2,326,292	1,320,939	43	20	8	266,213
Women's and girls' trousers	1,686,687	989,884	41	20	8	200,396
Shirts and blouses	2,897,418	2,055,796	29	24	7	503,510
Women's and girls' suits, skirts and coats	780,628	348,625	55	20	10	72,413
Women's and girls' dresses	244,066	96,988	60	15	9	14,729
Robes, nightwear, and underwear	1,704,776	1,149,299	33	14	4	164,463
Hosiery	265,291	242,100	9	16	1	39,182
Foundation garments	633,188	433,847	31	18	6	78,432
Gloves, including gloves for sports	50,588	33,247	34	18	5	6,507
Headwear	32,970	21,324	35	6	2	1,273
Other wearing apparel and accessories	536,412	334,769	38	16	6	55,299
Footwear and parts	1,835,513	224,855	88	14	12	40,241
Steel mill products	216,257	166,010	23	5	1	8,184
Copper and related products	77,139	54,824	29	3	1	1,559
Aluminum mill products	26,866	15,832	41	4	2	633
Builders' hardware	140,637	68,423	51	5	3	3,261
Other metal products	511,028	251,589	51	4	2	10,902
Luggage, handbags, and flat goods	142,533	76,204	47	16	7	12,640
Jewelry	65,772	56,198	15	9	1	4,928
Motor vehicle and other furniture	658,459	105,489	84	1	1	1,906
Lamps and lighting fixtures	124,427	85,742	31	7	2	6,111
Other miscellaneous manufactured articles	343,053	100,571	71	5	4	4,789
Air conditioning equipment	437,046	255,151	42	2	1	4,692
Commercial machinery	59,624	21,357	64	2	1	462
Household appliances, including heating and drying equipment	520,848	226,887	56	3	1	5,949
Centrifuges, filtering and purifying equipment, and pumps for liquids	255,291	118,016	54	2	1	1,838
Semiconductor equipment, robots, and other equipment	14,937	642	96	3	3	18
Taps, cocks, valves, and similar devices	610,728	426,398	30	3	1	13,742

See note(s) at end of table.

Table B-17—*Continued*
Duty savings from use of the production-sharing provisions (PSP) of HTS Chapter 98, by monitoring group, 1997

Monitoring group	Total value	U.S. content	Percent dutiable	Nominal rate[1]	Effective rate[2]	Duty savings
	Thousand dollars		*Percent*			*Thousand dollars*
Electric motors, generators, and related equipment	956,326	578,707	39	4	2	22,823
Electrical transformers, static converters, and inductors	771,885	382,195	50	3	1	11,771
Powered handtools and parts thereof	245,995	92,937	62	1	1	991
Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lights	168,049	99,235	41	4	2	3,119
Wiring harnesses for motor vehicles and other insulated electrical conduits	2,684,279	1,637,673	39	5	2	77,337
Miscellaneous machinery and equipment	634,032	188,714	70	3	2	4,482
Aircraft engines and gas turbines	239,626	65,197	73	3	2	1,817
Internal combustion piston engines	241,948	63,458	74	2	1	1,371
Construction, mining, and industrial vehicles	466,602	80,110	83	1	1	1,120
Certain motor-vehicle parts	1,650,998	977,930	41	3	1	27,087
Primary cells and batteries, and electric storage batteries	268,642	106,980	60	4	2	3,762
Ignition starting, lighting, and other electrical equipment	394,674	193,867	51	3	1	4,787
Rail locomotive and rolling stock	331,065	108,447	67	12	7	16,076
Automobiles, trucks, buses, and bodies and chassis of the foregoing	31,053,424	2,551,490	92	5	4	490,963
Aircraft, spacecraft, and related equipment, except engines	37,299	28,333	24	1	([3])	411
Ships, tugs, pleasure boats, and similar vessels	111,672	23,903	79	1	1	355
Motorcycles and miscellaneous vehicles and transportation related equipment	148,522	74,671	50	1	1	921
Office machines	43,105	24,390	43	2	1	589
Telephone and telegraph apparatus, including optical fiber	256,547	146,940	43	6	3	9,120
Microphones, loudspeakers, audio amplifiers, and combinations thereof	309,012	92,227	70	5	3	4,519
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players	154,776	18,228	88	2	2	575
Records, tapes, compact discs, computer software, and other media, whether or not recorded	27,734	8,012	71	1	1	84

See note(s) at end of table.

Table B-17—*Continued*
Duty savings from use of the production-sharing provisions (PSP) of HTS Chapter 98, by monitoring group, 1997

Monitoring group	Total value	U.S. content	Percent dutiable	Nominal rate[1]	Effective rate[2]	Duty savings
	Thousand dollars		*Percent*			*Thousand dollars*
Radio transmission and reception apparatus, navigational aid radar, and related apparatus	1,262,945	162,409	87	3	3	4,387
Television receivers, video monitors, and cathode ray tubes	2,347,670	1,032,426	56	5	3	50,983
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	458,610	100,517	78	3	2	2,607
Electric sound and visual signaling apparatus, and other miscellaneous electrical and electronic articles	307,831	103,787	66	2	1	2,307
Electrical circuit apparatus	2,346,436	1,370,639	42	4	2	56,536
Semiconductor devices	8,537,335	4,557,918	47	([3])	([3])	16
Computer hardware	1,635,224	405,285	75	1	1	1,407
Photographic equipment and supplies	121,146	48,965	60	3	2	1,483
Medical goods	1,095,110	595,512	46	2	1	15,222
Optical goods	72,894	42,507	42	6	3	2,588
Balances surveying/navigational instruments, and drawing/mathematical and calculating and measuring instruments	179,760	33,353	81	4	4	1,137
Watches, clocks and timing devices	31,179	22,135	29	9	3	1,991
Measuring, testing, controlling, and analyzing instruments	1,046,401	485,580	54	2	1	11,101
Special provisions	4,659	3,564	24	0	0	0
Total	79,166,706	26,565,040	66	6	3	2,430,418

[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.—Calculations based on unrounded data.

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

Table B-18
U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98 for all countries, by Standard Industrial Classification (SIC) code, 1996 and 1997

(*Million dollars*)

SIC code	Description	1996 Total	1996 U.S. content	1997 Total	1997 U.S. content
013	Field crops, except cash grains	(1)	(1)	(1)	(1)
016	Vegetables and melons	1	(1)	(1)	(1)
018	Horticultural specialties	1	(1)	1	1
027	Animal specialties	0	0	0	0
081	Timber tracts	(1)	(1)	(1)	(1)
083	Forestry products, nspf	0	0	0	0
149	Nonmetallic minerals, nspf, except fuels	0	0	0	0
201	Meat products and meat packing products	0	0	0	0
203	Canned and preserved seafood, fruits, vegetables, jams, etc	1	(1)	(1)	(1)
204	Grain mill products	(1)	(1)	(1)	(1)
206	Sugar and confectionery products	0	0	0	0
207	Fats and oils	(1)	(1)	(1)	(1)
208	Beverages and flavoring extracts	0	0	0	0
209	Food preparations and related products, nspf	(1)	(1)	4	1
212	Cigars, cheroots, and cigarillos	0	0	0	0
221	Broad woven fabrics, cotton	(1)	(1)	(1)	(1)
222	Broad woven fabrics, manmade fibers and silk	(1)	(1)	(1)	(1)
223	Broad woven fabrics, wool	1	1	(1)	(1)
224	Narrow woven fabrics	11	4	9	4
225	Hosiery and knit fabrics	167	152	266	242
227	Floor coverings	6	5	6	5
228	Yarn and thread, textile fibers	(1)	(1)	(1)	(1)
229	Textile goods, nspf	33	19	37	21
231	Suits and coats, men's and boys', except raincoats	192	105	266	151
232	Shirts, nightwear, underwear, trousers, and work clothing, men's and boys	3,964	2,553	5,336	3,478
233	Blouses, waists, dresses, suits, coats, and skirts, women's and misses' new, not knit or crocheted	1,473	820	1,783	986
234	Nightwear and underwear, women's, girls', children's' and infants'; corsets and allied garments	1,175	781	1,340	884
235	Headwear, except rubber or plastic	26	15	22	13
236	Outerwear, nspf, textile fibers	1,868	1,157	2,456	1,492
237	Fur clothing and other articles made of furskins, nspf	(1)	(1)	(1)	(1)
238	Wearing apparel and accessories, nspf	136	63	175	84
239	Fabricated textile articles, nspf	831	603	930	692
241	Logs, pulpwood, utility line poles, piling etc	(1)	(1)	0	0
242	Sawmill and planing mill products	(1)	(1)	(1)	(1)
243	Millwork, veneer, plywood, and structural wood products	22	7	31	10
244	Wooden containers	(1)	(1)	(1)	(1)
245	Wood buildings and mobile homes	(1)	(1)	1	(1)
249	Miscellaneous wood products	6	3	7	3
251	Household furniture	1	1	(1)	(1)
254	Partitions, shelving, lockers, and office and store fixtures	(1)	(1)	(1)	(1)
259	Venetian blinds and parts, iron, steel or aluminum; furniture, nspf	746	114	654	103
262	Paper mill products	(1)	(1)	(1)	(1)
265	Paperboard containers and boxes	(1)	(1)	(1)	(1)
267	Converted paper and paperboard products, except containers and boxes	14	9	15	10
273	Books and pamphlets	(1)	(1)	(1)	(1)
274	Miscellaneous publications	0	0	0	0
275	Commercial printed matter	14	6	21	19
276	Manifold business forms and interleaved carbon sets	0	0	0	0
277	Greeting cards	19	14	20	15
278	Blankbooks, loose leaf binders and devices	49	21	53	29
281	Industrial inorganic chemicals	4	2	5	3
282	Plastics materials and synthetic resins; synthetic rubber; synthetic and other manmade fibers, except glass	1	(1)	(1)	(1)

See note(s) at end of table.

Table B-18—*Continued*
U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98 for all countries, by Standard Industrial Classification (SIC) code, 1996 and 1997

(*Million dollars*)

SIC code	Description	1996		1997	
		Total	U.S. content	Total	U.S. content
283	Drugs	34	27	34	27
284	Soaps, detergents, and cleaning preparations; perfumes, cosmetics, and other toilet preparations	76	28	86	31
285	Paints, varnishes, lacquers, and enamels	0	0	(1)	(1)
286	Industrial organic chemicals	1	1	3	2
287	Agricultural chemicals	0	0	0	0
289	Miscellaneous chemicals	7	3	13	5
291	Petroleum refinery products	(1)	(1)	(1)	(1)
299	Petroleum and coal products, nspf	(1)	(1)	0	0
301	Tires and inner tubes	0	0	(1)	(1)
302	Rubber and plastic footwear	695	41	731	40
305	Rubber and plastics hose and belting	27	13	36	15
306	Fabricated rubber products, nspf	38	22	43	26
308	Miscellaneous plastics products	111	60	111	55
311	Leather, tanned or finished	(1)	(1)	0	0
313	Prepared parts of footwear, all materials other than rubber, elastomer resin, metal, and asbestos	64	49	77	61
314	Footwear, except rubber and plastic	914	100	1,018	122
315	Leather gloves, except sport gloves	15	9	15	9
316	Luggage and related items	95	52	110	60
317	Handbags and other personal leather goods	27	14	33	16
319	Leather goods, nspf	1	(1)	1	1
321	Flat glass	(1)	(1)	(1)	(1)
322	Glass containers; pressed and blown glass and glassware	3	1	2	1
323	Products of purchased glass, nspf	22	12	25	13
325	Structural clay products	(1)	(1)	0	0
326	Pottery and related products	51	13	54	10
327	Concrete, gypsum and plaster products, and lime	0	0	0	0
328	Cut stone and stone products	(1)	(1)	(1)	(1)
329	Abrasive, asbestos, and miscellaneous nonmetallic mineral products	18	9	8	3
331	Blast furnace, steel works, rolling mill, and finishing mill products	262	191	218	167
332	Iron and steel products	1	1	1	(1)
333	Smelter and refined nonferrous metal	3	2	4	3
335	Rolled, drawn, and extruded nonferrous metal	680	464	746	488
336	Nonferrous metal castings and forgings	(1)	(1)	2	1
339	Primary metal products, nspf	(1)	(1)	(1)	(1)
341	Cans, used for transport of goods, of iron, steel, or aluminum	3	2	4	3
342	Cutlery, hand tools, and hardware, nspf	259	158	277	168
343	Heating equipment, except electric and warm air; and plumbing fixtures	20	11	23	13
344	Fabricated structural metal products	43	10	38	11
345	Bolts, nuts, screws, rivets, washers and similar articles of base metals	(1)	(1)	(1)	(1)
346	Metal forgings and stampings	(1)	(1)	(1)	(1)
348	Ordnance and accessories, except vehicles and guided missiles	5	(1)	5	1
349	Fabricated metal products, nspf	471	316	676	463
351	Engines and turbines, and parts and accessories, nspf	155	88	130	65
352	Farm and garden machinery and equipment, and parts and attachments, nspf	47	22	52	28
353	Construction, mining, and materials handling machinery	612	167	695	172
354	Metalworking machines and equipment, and parts, accessories and attachments, nspf	367	83	501	133
355	Special industry machines and equipment, nspf, and parts, accessories and attachments, nspf	67	10	36	6

See note(s) at end of table.

Table B-18—*Continued*

U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98 for all countries, by Standard Industrial Classification (SIC) code, 1996 and 1997

(*Million dollars*)

SIC code	Description	1996		1997	
		Total	U.S. content	Total	U.S. content
356	General industrial machines and equipment, nspf, and parts and attachments, nspf	405	236	422	212
357	Office, computing, and accounting machines, and parts and accessories, nspf	1,249	306	1,594	393
358	Refrigeration and service machinery, and parts and attachments, nspf	405	154	386	205
359	Flexible tubing and piping of base metal; and machine parts, nspf, nonelectric, nspf	10	6	27	8
361	Electric transmission and distribution equipment, and parts, nspf	349	213	418	242
362	Electrical industrial apparatus	1,225	712	1,408	801
363	Household appliances, and parts, nspf	816	336	679	279
364	Electric lighting and wiring equipment	1,172	708	1,230	721
365	Radio and tv receiving sets; phonographs; recorders; microphones; loudspeakers; audio amplifiers; & other audio equipment & accessories	3,278	1,130	3,560	1,162
366	Communication equipment and apparatus	985	303	874	269
367	Electronic components and accessories	9,747	4,817	10,425	5,495
369	Electrical machinery, apparatus, and parts, nspf	3,444	1,930	2,774	1,529
371	Motor vehicles and motor vehicle equipment, and parts, nspf	24,962	3,216	32,458	3,148
372	Aircraft and parts, nspf	242	43	228	54
373	Ship and boat building and repairing	153	24	112	24
374	Railroad equipment	347	115	331	108
375	Motorcycles, motor scooters, motorbikes, and cycles, not motorized, nspf, and parts, nspf	114	15	101	18
379	Miscellaneous transportation equipment, and parts, nspf	7	1	8	1
381	Aircraft flight, nautical & navigational, laboratory & scientific, geophysical, surveying & drafting instruments, & parts, nspf	31	12	96	36
382	Instruments for measuring, detecting, testing, and/or controlling nonelectric quantities, nspf, and parts & accessories, nspf	1,013	387	1,200	537
384	Surgical, medical, and dental instruments and supplies	1,068	628	1,140	659
385	Ophthalmic focus lenses, unmounted, including contact lenses; and spectacles, and parts, nspf	5	2	3	1
386	Photographic equipment and supplies	108	43	128	50
387	Watches, clocks, clockwork operated devices, and parts, nspf	65	8	6	2
391	Jewelry of precious metal; jewelry findings; precious and semiprecious stones, not set or strung; silverware and plated ware	66	61	52	47
393	Musical instruments, and parts and accessories, nspf	29	10	40	13
394	Toys and sporting, athletic, and gymnastic goods, appliances, apparatus or accessories, nspf	165	45	139	35
395	Pens, pencils, and other office and stationery supplies, and artists' materials	41	27	38	24
396	Jewelry, nspf; buttons, needles, and miscellaneous notions	32	26	18	13
399	Brooms and brushes; linoleum and other floor coverings with a textile base; matches; candles, tapers and similar items	24	11	18	7
910	Scrap and waste	(1)	(1)	(1)	(1)
920	Used or second-hand merchandise	1	(1)	(1)	(1)
980	Goods imported from Canada and returned to Canada without having been advanced in value or improved in condition or combined with other articles	(1)	(1)	5	4
990	Special classification provisions, nspf	(1)	(1)	(1)	(1)

See note(s) at end of table.

Table B-18—*Continued*
U.S. imports under the production-sharing provisions (PSP) of HTS Chapter 98 for all countries, by Standard Industrial Classification (SIC) code, 1996 and 1997

(*Million dollars*)

SIC code	Description	1996		1997	
		Total	U.S. content	Total	U.S. content
	Total	67,514	23,965	79,167	26,565

[1] Less than $500,000.

Note.—Calculations based on unrounded data.

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

Table B-19
Mexico: Exports to the United States under the temporary import programs[1] (Maquiladora and PITEX), by leading sectors, 1994-97

Product description	1994	1995	1996	1997
			Million dollars	
Transportation equipment:	8,825	13,498	18,392	20,413
Motor vehicles[2]	3,834	7,671	11,192	12,065
Ignition wiring harnesses[3]	2,871	3,325	4,314	4,825
Certain motor-vehicle parts	1,578	2,087	2,502	3,064
All other	542	415	384	459
Machinery equipment, & electronic products:	19,473	23,630	27,863	34,598
Semiconductor devices	710	850	1,470	1,433
Electrical circuit apparatus	2,125	2,917	2,875	3,909
Television receivers	3,970	4,386	4,750	5,416
Medical goods	413	493	721	969
Measuring, testing, controlling, and analyzing instruments	367	349	515	877
Electric motors	730	771	1,079	1,184
Valves[4]	353	350	435	697
Electric transformers, static converters, and inductors	377	443	563	707
Air conditioning equipment	381	475	666	710
All other	10,047	12,596	14,789	18,696
Apparel and other textiles articles	1,582	2,473	3,379	5,155
Footwear	125	137	187	270
Luggage, handbags, and articles of leather	130	118	162	229
Furniture	937	952	1,402	1,736
Toys, games, and sporting goods	503	676	722	834
Jewelry and other articles of precious metals	92	206	362	438
Articles of base metals	411	300	469	629
Articles of rubber and plastics	1,190	1,294	1,522	1,911
All other	4,692	5,656	6,920	10,175
Total	37,960	48,940	61,380	76,388

[1] Maquila exports to the United States include exports from companies registered under the Maquiladora Program as well as exports from companies registered under other temporary-import (export-processing) programs, such as PITEX.

[2] Referred to as "Automobiles, trucks, buses, and bodies and chassis of the foregoing," in other app. B tables.

[3] Referred to as "Wiring harnesses for motor vehicles and other insulated conduits," in other app. B tables, under "Machinery and Equipment." Because U.S. imports of ignition wiring harnesses for motor vehicles dominate imports of this product category, ignition wiring harnesses has been included in the transportation totals for this table.

[4] Referred to as "Taps, cocks, valves, and similar devices," in other app. B tables.

Source: Compiled from official statistics of Mexico's Department of Commerce and Industrial Development (SECOFI).

Table B-20
Mexico: Total exports to the United States, by leading sectors, 1994-97

Product description	1994	1995	1996	1997
			Million dollars	
Transportation equipment:	10,067	14,041	18,689	20,781
Motor vehicles[1]	4,859	7,845	11,234	12,099
Ignition wiring harnesses[2]	2,911	3,362	4,338	4,844
Certain motor-vehicle parts	1,947	2,175	2,615	3,192
All other	350	659	502	646
Machinery, equipment, & electronic products:	20,468	24,768	28,942	35,501
Semiconductor devices	711	855	1,479	1,441
Electrical circuit apparatus	2,176	2,975	2,942	3,994
Television receivers	3,973	4,392	4,762	5,426
Medical goods	417	502	727	980
Measuring, testing, controlling, and analyzing instruments	389	378	565	913
Electric motors	753	796	1,110	1,219
Valves[3]	375	372	466	741
Electric transformers, static converters, and inductors	379	453	594	716
Air conditioning equipment	392	498	684	722
All other	10,903	13,547	15,613	19,349
Apparel and other textile articles	1,902	2,842	3,926	5,894
Footwear	178	215	301	400
Luggage, handbags, and articles of leather	142	136	185	262
Furniture	1,031	1,057	1,585	2,016
Toys, games, and sporting goods	513	691	744	867
Jewelry and other articles of precious metals	326	514	660	676
Articles of base metals	452	359	563	728
Articles of rubber and plastics	1,398	1,626	1,815	2,175
All other	15,168	20,026	22,934	24,679
Total	51,645	66,273	80,344	93,979

[1] Referred to as "Automobiles, trucks, buses, and bodies and chassis of the foregoing," in other app. B tables.

[2] Referred to as "Wiring harnesses for motor vehicles and other insulated conduits," in other app. B tables, under "Machinery and Equipment." Because U.S. imports of ignition wiring harnesses for motor vehicles dominate imports of this product category, ignition wiring harnesses has been included in the transportation totals for this table.

[3] Referred to as "Taps, cocks, valves, and similar devices" in other app. B tables.

Source: Compiled from official statistics of Mexico's Department of Commerce and Industrial Development (SECOFI).