

Industry & Trade Summary

Carpets and Rugs



USITC Publication 2695

November 1993

**OFFICE OF INDUSTRIES
U.S. International Trade Commission
Washington, DC 20436**

UNITED STATES INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

Don E. Newquist, Chairman
Peter S. Watson, Vice Chairman
David B. Rohr
Anne E. Brunsdale
Carol T. Crawford
Janet A. Nuzum

Robert A. Rogowsky
Director of Operations

Vern Simpson
Director of Industries

This report was prepared principally by

Mary Elizabeth K. Sweet

Textiles and Apparel Branch
Energy, Chemicals, and Textiles Division

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

PREFACE

In 1991 the United States International Trade Commission initiated its current *Industry and Trade Summary* series of informational reports on the thousands of products imported into and exported from the United States. Each summary addresses a different commodity/industry area and contains information on product uses, U.S. and foreign producers, and customs treatment. Also included is an analysis of the basic factors affecting trends in consumption, production, and trade of the commodity, as well as those bearing on the competitiveness of U.S. industries in domestic and foreign markets.¹

This report on carpets and rugs primarily covers the period 1987-92 and represents one of approximately 250 to 300 individual reports to be produced in this series during the first half of the 1990s. Listed below are the individual summary reports published to date on the chemicals and textiles sectors.

<i>USITC publication number</i>	<i>Publication date</i>	<i>Title</i>
Chemicals:		
2458	November 1991	Soaps, Detergents, and Surface-Active Agents
2509	May 1992	Inorganic Acids
2548	August 1992	Paints, Inks, and Related Items
2578	November 1992	Crude Petroleum
2588	December 1992	Major Primary Olefins
2590	February 1993	Polyethylene Resins in Primary Forms
2598	March 1993	Perfumes, Cosmetics, and Toiletries
Textiles and apparel:		
2543	August 1992	Nonwoven Fabrics
2580	December 1992	Gloves
2642	June 1993	Yarns
2695	November 1993	Carpets and Rugs
2702	November 1993	Fur Goods
2703	November 1993	Coated Fabrics

¹ The information and analysis provided in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under statutory authority covering the same or similar subject matter.

CONTENTS

	<i>Page</i>
Preface	i
Introduction	1
U.S. and foreign industry profiles	2
U.S. industry	2
Structure of the industry	2
Productivity	5
Research and development	5
Channels of distribution	5
Foreign industry	7
Machine-made carpet	7
Hand-woven carpets	9
U.S. tariff and nontariff measures	9
Foreign tariff and nontariff measures	15
U.S. industry performance in domestic and foreign markets	15
U.S. market	15
U.S. consumption	15
U.S. production	18
U.S. imports	18
Products imported	18
Import levels and trends and principal suppliers	19
Foreign markets	20
Foreign market profiles	20
U.S. exports	21
U.S. trade balance	22
Figures	
1. Carpets: U.S. shipments by type and by fiber, 1992	2
2. U.S. carpet industry: Principal raw materials, producer types, major products, and principal consumers	3
3. Carpet yarn: Production shares, by type, 1980, 1987, and 1990-92	3
4. Carpets: Total factor productivity, labor productivity, and capital value indexes, 1977-89	6
5. Floor coverings: U.S. sales, by type, 1992	16
6. Floor coverings: Sales value per square yard, by type, 1992	16
7. U.S. carpet market: Sales by consumer end use, 1993	17
8. Carpet shipments and construction starts: Percent change from prior year, 1981-92	17
Tables	
1. The structure of the U.S. carpet industry, SIC 2273, 1987-92	4
2. U.S. carpet industry: New capital expenditures, 1986-91	7
3. Carpets: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan 1, 1993; U.S. exports 1992; and U.S. imports, 1992	10
4. Carpets: U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1987-92	18
5. Carpets: U.S. imports for consumption, by principal sources, 1987-92	20
6. Carpets: U.S. exports of domestic merchandise, by principal markets, 1987-92	22
7. Carpets: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1987-92	23
Appendix	
A. Explanation of tariff and trade agreement terms	A-1

INTRODUCTION

Extensive restructuring through mergers and acquisitions in recent years has significantly reshaped conditions of competition in the U.S. carpet and rug industry, the largest carpet producer in the world by far. The growing concentration of U.S. production among fewer but larger companies is likely to continue for the rest of the decade, as firms expand their production lines to broaden their product mix and achieve greater operating efficiencies in an effort to compete in a highly price-competitive market. Smaller producers are reportedly having difficulty securing capital to modernize their operations.

The ongoing restructuring was precipitated in part by sluggish sales in the domestic market in recent years, following two decades of steady growth. Buoyed by strong housing activity, rising disposable income, and new product developments, U.S. consumption of carpets and rugs rose continually over the years to a high of just over \$10 billion annually in 1988 and 1989. The onset of the economic recession in 1990 reduced demand for these postponable goods. Sales fell by 4 percent that year and by a much greater 13 percent in 1991. They partially recovered by 10 percent in 1992, reaching a level of \$9.3 billion, influenced by rising consumer confidence as the recession ended and by low interest rates. U.S. producers dominate the domestic market, supplying all but a small part of consumption. Imports supply about 6-8 percent of the market and consist largely of handmade carpets.

The recent weakness in the domestic market, along with liberalization of trade policies abroad, has encouraged U.S. producers to look abroad for sales growth. U.S. exports have roughly tripled since 1987, rising to \$725 million in 1992. U.S. shipments to Canada, the major export market by far, have grown sharply since the U.S.-Canada Free-Trade Agreement (FTA) went into force in 1989. Major gains also occurred in exports to Mexico, the Middle East, and the Far East.

This report examines these and other developments in the carpet sector, concentrating on changes occurring during 1987-92. The principal products in the domestic market and their manufacturing processes are described briefly. The report then examines the U.S. carpet industry and recent changes taking place therein, followed by a brief overview of the foreign industry. The report discusses the recent performance of the U.S. carpet industry in both domestic and foreign markets and reviews recent trends in trade.

As the title indicates, this report covers both carpets and rugs. It only covers carpets and rugs made of textile materials. Floor coverings of nontextile materials are covered in other summaries, depending on the substance of which they are made. Carpet generally is a heavy floor covering, sold by the yard, covering the entire floor of the room in which it is installed, and secured to the floor. Rugs are of a specific size; when laid on the floor they seldom cover the entire surface. They are not permanently installed

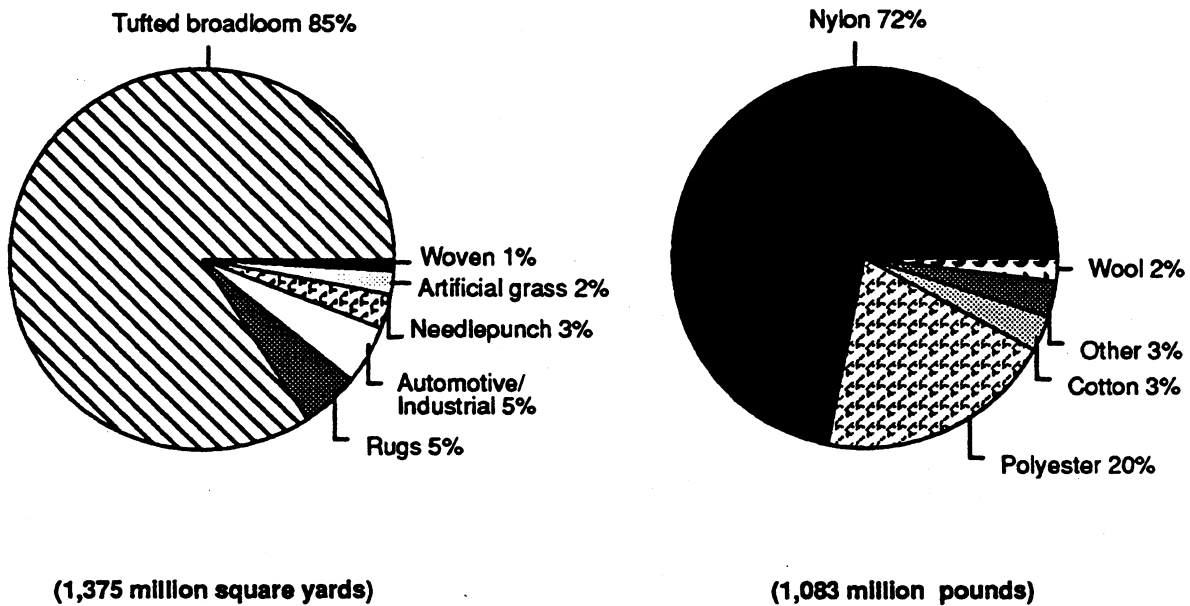
and have bound or finished edges. Broadloom carpet, which comes in widths of at least 54 inches, dominates U.S. production and, hence, the term carpet will be used as a general term referring to the entire industry. Carpet tiles are made from tufted carpet that is cut to a uniform size, generally less than one square yard, and used generally in commercial buildings. The carpet tiles are often put on a suspended floor under which wiring is run. This type of flooring system makes it easy to reach the wiring to perform repairs or reconfigure as office-space requirements change.

The development of the carpet-tufting process in the United States in the 1950s and the availability of nylon and other manmade fibers for civilian use after World War II revolutionized the domestic industry. Technological improvements and yarn developments over the years have enabled the industry to produce inexpensive carpet with improved performance features, resulting in affordable floor coverings for consumers at all income levels. Today, tufting produces carpet at speeds of about 1,000 rows of tufts a minute versus 30 rows for weaving on a loom, the traditional form of production. Manmade fibers specifically engineered for carpet use generally cost half as much as the wool yarns traditionally used in woven carpet. As a result, tufting has all but supplanted the weaving of carpets on looms, and manmade fibers have all but replaced wool in carpet production in the United States, as shown in figure 1.

Tufting machines are similar to huge multineedle sewing machines that insert hundreds of yarn loops, or tufts, simultaneously into a primary backing material to form the surface pile of the carpet. An adhesive applied to the back side of this backing locks the loops into place, over which a secondary backing of woven fabric or latex foam is applied. The tops of the loops can be slit to form cut-pile carpets or remain uncut for loop-pile carpets. Other surface textures can be attained by varying the height of the loops or cutting only some loops. Carpets generally are made with dyed yarns; those made with uncolored yarns are either piece-dyed or printed with a pattern.

Other methods used for making carpets commercially in the United States are weaving, needling, knitting, braiding, hooking, stitch-bonding, and flocking. Because these processes account for a very small portion of U.S. carpet output, the discussion of the U.S. industry in this report will focus on the tufting segment. Two other methods, hand knotting and flat weaving, are used to make a significant portion of U.S. carpet imports. In the production of hand-knotted oriental carpets, which are made on a vertical loom, lengths of wool or silk yarn that form the pile are knotted around the lengthwise warp yarns as the carpet is woven by hand. This method of making carpets has spread from the traditional producing regions of Iran and Turkey to North Africa, India, Pakistan, and China. Flat woven rugs, also known as dhurries or druggets, have become popular in the U.S. market in recent years. These rugs are made by Native Americans or are imported from India and also Turkey, China, and some Latin American nations.

Figure 1
Carpets: U.S. shipments by type and by fiber, 1992



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

U.S. AND FOREIGN INDUSTRY PROFILES

U.S. Industry

Establishments producing primarily carpet are classified for statistical reporting purposes in Standard Industrial Classification (SIC) No. 2273, Carpets and Rugs. Also included are firms engaged primarily in dyeing and finishing carpets, whether made in the United States or imported. The structure of the industry illustrating the various elements from materials to consumers is presented in figure 2. The items under each category are listed in their general sequence of importance.

Vertically integrated mills producing tufted carpet for the residential market dominate the U.S. carpet industry. They produce the yarn as well as the finished carpet. Tufting mills also make tufted carpet but from purchased yarn, commonly referred to in the trade as sales yarn. Carpet yarn produced in the United States for captive use¹ increased steadily in importance during 1980-92. Just over half the carpet yarn made domestically in 1992 was for captive use, as shown in

¹ "Captive use" in this context means that the yarn is used to make carpet by the firm that produces the yarn. In the case of filament yarn, the firms produce the filaments from polymers generally purchased from chemical companies. In the case of spun yarn, the firms purchase fibers from external sources and process them into spun yarn.

figure 3. The greatest gain was in filament yarn for captive use, which rose from 7 percent of total carpet yarn output in 1980 to 31 percent in 1992. In contrast, spun sales yarn fell from 21 of the total to 8 percent. Filament yarn, both for captive use and as sales yarn, remains the principal carpet yarn, having increased its share of total carpet yarn output from 60 percent in 1980 to 66 percent in 1992.

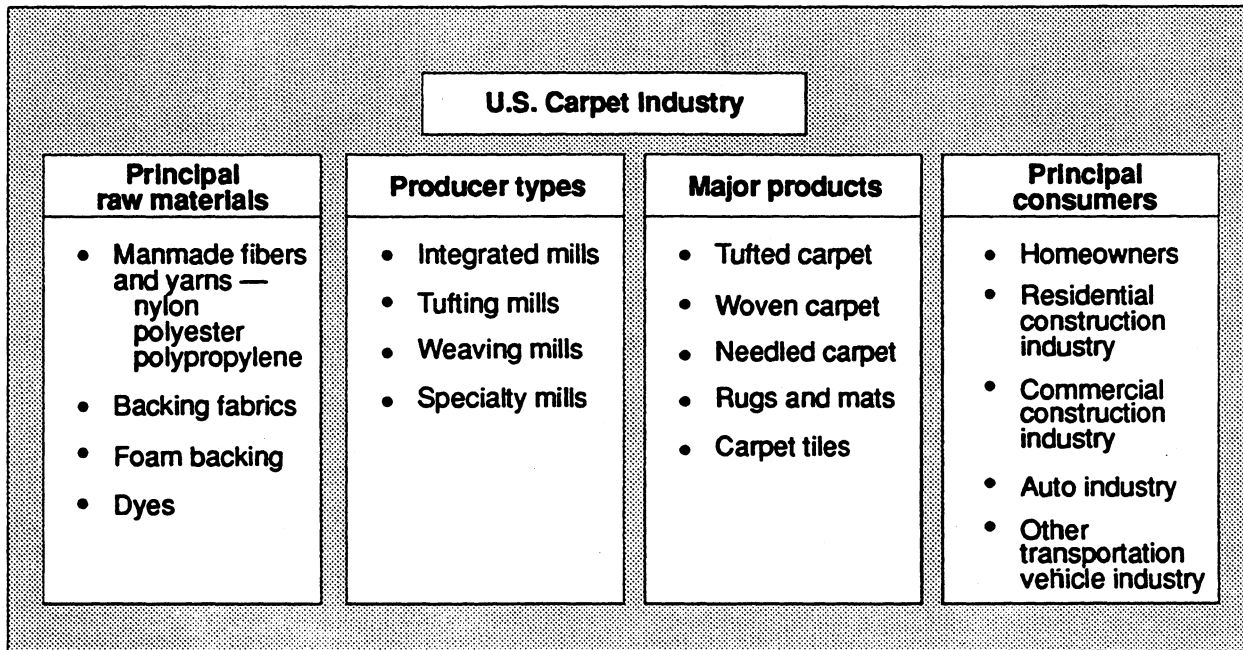
Structure of the Industry

The U.S. carpet industry has experienced significant restructuring in recent years, largely through mergers and acquisitions. The number of firms in the industry with carpet-manufacturing equipment declined by two-thirds during 1983-92, from 300 to 105.² The workforce also has shrunk, at least since 1988, as shown in table 1. The industry also comprises many small firms that primarily process roll goods purchased from carpet mills into roomsize or area rugs or perform other processing, such as dyeing, binding, or piecing. Most, if not almost all, of these small firms are among the 195 establishments in the industry that employed fewer than 20 workers in 1990; 94 of these factories had fewer than 5 employees.³

² Frank O'Neill, "The U.S. Top 25," *Floor Focus*, June 1992, p. 47.

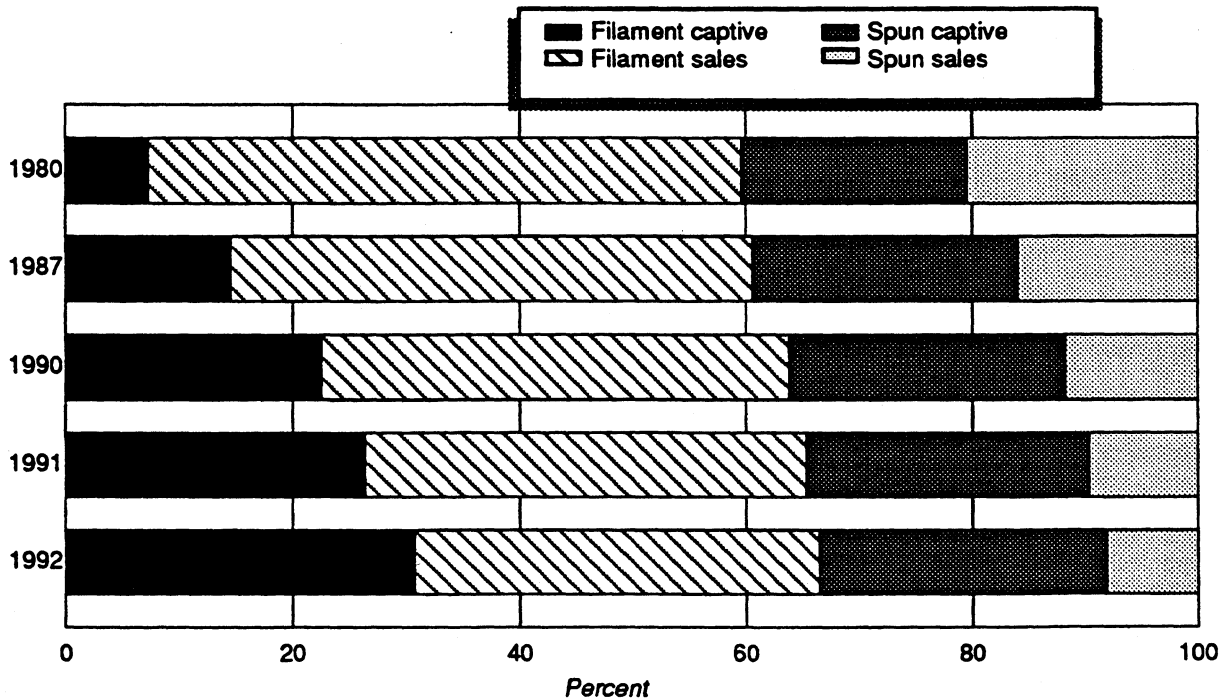
³ Data in U.S. Bureau of the Census, *County Business Patterns, 1990*, (Washington, DC: GPO, 1992), also show that these 195 establishments accounted for only 2 percent of industry employment.

Figure 2
U.S. carpet industry: Principal raw materials, producer types, major products, and principal consumers



Source: Compiled from various industry and government sources.

Figure 3
Carpet yarn: Production shares by type, 1980, 1987, and 1990-92



Source: U.S. Bureau of the Census, "Spun Yarn Production" and "Textured Yarn Production," *Current Industrial Reports*, various issues.

Table 1
The structure of the U.S. carpet industry, SIC 2273, 1987-92

Item	1987	1988	1989	1990	1991	1992
Number of establishments ¹	501	515	434	428	432	(²)
Number of employees (1,000)	53.3	54.6	54.5	51.8	48.5	48.3
Number of production workers (1,000)	40.6	42.6	43.4	41.0	37.8	38.7
Value of product shipments:						
Nominal value (million dollars)	9,291	9,759	9,826	9,610	9,160	9,397
Constant 1987 value (million dollars)	9,291	9,456	9,358	9,049	8,579	8,845

¹ Partially estimated by the staff of the U.S. International Trade Commission, based on data from the U.S. Bureau of the Census, *County Business Patterns*.

² Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

The consolidation of the U.S. carpet industry has led to growing concentration of industry output among fewer but larger firms. The top 10 firms generated 65 percent of 1992 industry sales, up from 62 percent in 1991 and 57 percent in 1990. The top 25 firms accounted for 89 percent of industry sales, unchanged from their 1991 share but up from 86 percent in 1990.⁴ The 10 leading U.S. producers of carpets and their sales in 1992 are given in the following tabulation (in millions of dollars):⁵

Firm	Sales	Market share
		(Percent)
Shaw	\$2,036	24.0
Beaulieu Group	665	7.8
Mohawk/Horizon	611	7.2
Aladdin	385	4.5
Queen	375	4.4
Collins & Aikman	360	4.2
Burlington	338	4.0
Fieldcrest	266	3.1
Diamond	265	3.1
World Carpets	260	3.1
Total above firms	5,661	66.7
Industry total	8,493	100.0

A major sign of the industry consolidation occurred in 1991 when Shaw, the largest producer by itself in 1990, with a 19-percent market share, bought Salem, the third-largest firm in 1990, with a 5-percent share. Shaw further expanded its operations in 1992, by purchasing Amoco Fabrics, the largest producer of polypropylene carpet yarn in the world. Shaw markets carpet under the Philadelphia, Cabin Crafts, Evans Black, Networx, ShawMark, Salem, Sutton, Stratton,

⁴ *Floor Focus*, May 1993, p. 46.

⁵ *Ibid.* The total sales figure shown in this tabulation does not match the shipment data in table 1 because it includes sales only for firms that manufacture carpeting; it does not include sales by firms classified in the carpet industry that only further fabricate purchased carpeting.

and Shaw Commercial brands. Shaw has also expanded its foreign operations. It opened a distribution center in Preston, England, in 1992 to serve the United Kingdom and European markets. Later, in March 1993, it acquired Kosset Carpets Ltd., of Bradford, England, and, in September 1993, Shaw announced that it had acquired Abingdon Carpets of Gwent, England. Further, in July 1993, Shaw agreed to form a joint venture with Capital Carpet Industries of Melbourne, Australia. Shaw is one of the few carpet producers that also weaves the backing fabric used in carpet production.

Another major producer involved in industry buy-outs has been Mohawk, now the second largest producer after its recent acquisitions, with slightly more than 10 percent of the market. In mid-1992, Mohawk, ranked eighth by 1991 sales, acquired sixth-ranked Horizon. Mohawk expanded further in 1993 by acquiring American Rug Craftsmen, a producer of area rugs and decorative mats, and Fieldcrest Cannon's carpet division, best known for its Karastan and Bigelow carpet brands. Also, in 1993, Interface, the largest producer of modular carpet tiles in the world and the 16th-ranked U.S. carpet producer, announced that it planned to purchase 18th-ranked Bentley, a producer of commercial and institutional broadloom carpet. Vertical expansion affected the U.S. carpet industry when Dixie Yarns, the largest U.S. producer of spun sales yarn, acquired Carriage Industries, the 17th-ranked U.S. carpet producer in 1992, and then in July 1993 acquired 20th-ranked Masland Industries.

The U.S. carpet industry will likely consolidate further during the rest of the decade. Producers are expanding their operations to achieve broader product mixes and large-scale operations believed necessary to survive in this highly price-competitive industry. The ongoing consolidation is attributable to the efficiency that larger scale operations are able to achieve, not just in direct manufacturing but also in purchasing materials, and the inability of the smaller firms to

secure capital to modernize their production lines. One industry consultant stated that medium-size mills, with annual sales of \$25- 50 million each, probably could not achieve the economies of scale necessary to continue to operate competitively in the market.⁶

The economic pressures spurring the carpet industry to restructure appear to have had an impact on wages in the industry, which traditionally have been higher than those for the textile mill industry as a whole. The gap has narrowed considerably in recent years, also stemming from declining competition for workers in the regions in which the carpet industry is located.⁷ Hourly wages for production workers in the carpet industry in 1992 averaged \$8.58, up from \$7.51 in 1987, compared with \$8.56 for the textile mill sector, up from \$7.17.

The consolidation taking place in the industry also could have an impact on secondary employment in other industries, including supplier industries and those sectors in which workers spend their pay. A recent study found that an average of 570 secondary jobs are associated with every 100 jobs in the carpet industry.⁸ This job-multiplier effect is more than double the average of 270 secondary jobs associated with every 100 jobs in the textile mill sector.

Many of the jobs in the U.S. carpet industry are in Georgia, especially in Dalton, where the local government offers incentives to encourage firms in the industry to locate.⁹ In 1990, Georgia accounted for 51 percent of the establishments in the industry and employed 61 percent of its workforce.¹⁰ California, the second-ranked State, accounted for 7 percent of employment and 11 percent of establishments. Other states of less but notable importance in the industry are North Carolina, South Carolina, and Pennsylvania.

⁶ USITC staff conversation with RBI Consultants, Dalton, GA, Dec. 1990. To give perspective to the ranking of smaller firms in the carpet industry, the 25th-ranked firm in 1992 had reported sales of \$82 million and a 1.0-percent market share. *Floor Focus*, p. 46.

⁷ Telephone conversation with Arthur Gundersheim, Amalgamated Clothing and Textile Workers Union, Aug. 3, 1993. Mr Gundersheim stated that in both Georgia and California, the leading States producing carpet, the defense and aerospace industries are downsizing, reducing employment opportunities.

⁸ Dean Baker and Thea Lee, *Employment Multipliers in the U.S. Economy, Working Paper No. 107* (Washington, DC: Economic Policy Institute, Mar. 1993), p. 9. In comparison to other industries, 437 secondary jobs are associated with every 100 jobs in the steel industry and 147 jobs per 100 in the personal and business services industry.

⁹ A representative of the CRI said that one of the strongest incentives is Dalton's water treatment system, which handles treatment of much of the waste water from carpet mills that in other communities might have to be done by individual mills themselves.

¹⁰ U.S. Bureau of the Census, *County Business Patterns, 1990*.

Productivity

Gains in labor productivity achieved by the U.S. carpet industry during 1977-87 were reversed in the next few years, as shown in figure 4. The drop in labor productivity suggests that paybacks on capital investments, shown in table 2, were not absorbed throughout the industry. This observation tends to support the contention that many of the smaller mills cannot afford the capital investment needed to achieve production efficiencies to compete in the industry. The consolidation of the industry in recent years and the expectation that this consolidation will continue are believed to be evidence of this situation. Success in the price-competitive carpet industry relies to a large extent on increasingly efficient production.

Research and Development

Most of the technological developments that have taken place in the carpet industry have been generated by manmade-fiber producers and also the machinery manufacturers. Manmade-fiber producers have been very important in promoting the growth of the carpet industry, the largest single outlet for their fiber production. The carpet market accounted for 32 percent of total manmade-fiber consumption in 1991.¹¹

Fiber producers have developed many new fibers with special properties designed specifically for carpets in an ongoing effort to maximize use of their fibers. The more significant recent developments include stain-resistant and crush-resistant carpet yarns. These attributes are so integral to promotion of carpet at retail that the most dominant advertisement feature for carpets frequently is "Stainmaster," "Crush Resister," or "WearDated." As such, the carpet industry benefits significantly from promotional efforts of the manmade-fiber producers, especially when launching a new product. Advertisements rarely emphasize the name of the mill that produced the carpet.

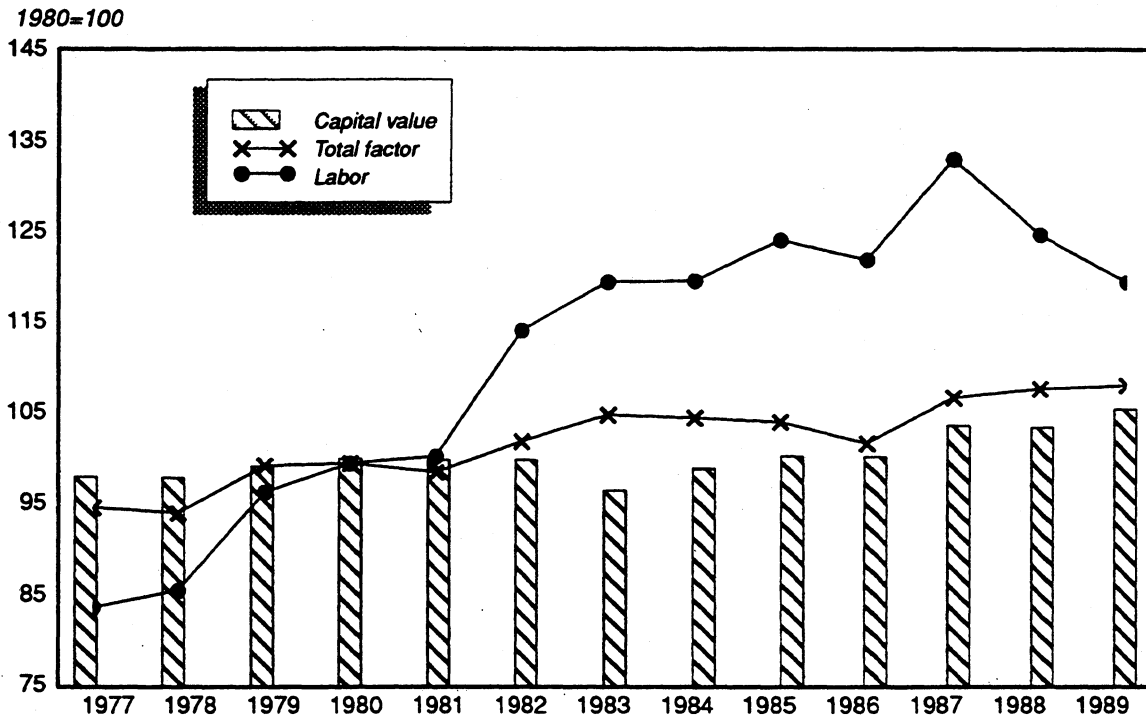
In the machinery industry, recent developments have been related to incorporation of computer controls at strategic points to improve the efficiency and versatility of the equipment. The use of computer controls has also allowed tufting machines easily to produce textured patterns of high and low tufts and to allow changes in these patterns to be made almost instantaneously. Previously, tufting machines could produce economically only level-surfaced carpeting.

Channels of Distribution

Deregulation of trucking, primarily through the Motor Carrier Act of 1980, resulted in significant changes in distribution of carpet in the United States. Prior to enactment of this legislation, about 80 percent of carpet shipments by volume were shipped by the mills to distributors who served a metropolitan area or other region. The distributors then shipped the carpet to retailers or commercial users. By eliminating many regulations limiting interstate shipments, facilitating the establishment of shipping prices for small shipments, and generally lowering trucking costs to

¹¹ Fiber Economics Bureau, Inc., *Fiber Organon* (Roseland, NJ: Sept. 1992), p. 173.

Figure 4
Carpets: Total factor productivity, labor productivity, and capital value indexes, 1977-89



Note.—In this figure, the real capital stock is the sum of plant capital stock and equipment capital stock, each of which is calculated using deflators for new investment and depreciation of existing stock. The figures represent capital stock at the beginning of each year. Total factor productivity measures the growth in output (shipments) minus the cost-share-weighted average growth of each five inputs. These inputs are production workers, non-production workers, nonenergy materials, energy, and capital. Labor productivity is measured using production worker hours and the number of nonproduction workers.

Source: U.S. Bureau of Labor Statistics, *Multifactor Productivity in U.S. Manufacturing and in 20 Manufacturing Industries, 1949-88*, Nov. 1991. Data for 1989 are estimated based on data from the U.S. Bureau of the Census.

shippers, the act enables carpet mills to economically ship comparatively smaller volumes at one time. Thus, the need for the regional distributors was partly eliminated as shipments could be made to meet the needs of individual retailers. Consequently, during 1993, an estimated 73 percent of carpet shipments are expected to have been shipped directly from mills to retailers and 13 percent to distributors. The remaining 14 percent of shipments would be shipped from mills to contract dealers or directly to users.¹²

¹² AlliedSignal Fibers Market Research, *Carpet Flow Sheet 93 Forecast*, Petersburg, VA.

At the retail level, floor covering specialty stores are, by far, the most important outlet, as shown in the following tabulation presenting estimated distribution of sales by outlet for 1993:¹³

Store type	Percent of sales
Floor covering specialty stores	70
Department stores	8
Furniture stores	9
All other	13

¹³ Ibid.

Table 2
U.S. carpet industry: New capital expenditures, 1986-91

(Million dollars)

	1986		1987		1988	
	Current value	Real ¹ value	Current value	Real ¹ value	Current value	Real ¹ value
New capital expenditures	143.3	134.4	222.8	203.8	151.1	133.8
Buildings	25.2	23.6	39.2	35.9	22.3	19.8
Machinery and equipment	118.1	110.8	183.6	167.9	128.8	114.0
	1989		1990		1991	
	Current value	Real ¹ value	Current value	Real ¹ value	Current value	Real ¹ value
New capital expenditures	210.1	183.0	201.7	172.5	179.6	148.2
Buildings	30.5	26.6	27.6	23.6	24.6	20.3
Machinery and equipment	179.6	156.4	174.1	148.9	155.0	128.1

¹ Calculated by the staff of the U.S. International Trade Commission based on 1982 dollar value.

Source: Compiled from official statistics of the U.S. Bureau of the Census, *Annual Survey of Manufactures*, 1991 and earlier issues.

Floor covering stores generally carry carpets from several manufacturers and of a broad range of qualities and, hence, prices. Many of these stores also sell nontextile floor coverings such as resilient and ceramic tiles, sheet vinyl flooring, and hardwood flooring. The other categories of retailers more commonly only sell textile floor coverings and may have a narrower range than the exclusive floor covering stores. Price competition for all types of retail outlets is intense, particularly for the solid color, flat surface wall-to-wall carpeting that dominates the retail market. Mills compete against each other at the retail level because the size of selling areas and costs of samples limit retailers in the number of lines from different mills they are able to carry. Generally, the retailers display for their customers primarily samples of the styles and colors of carpeting the mills offer, and order the carpeting from the mills only after receiving an order from a customer. They do carry roll goods for some popular colors and price points to meet the needs of customers wanting goods for immediate use.

Distribution to the contract market, both for residential and commercial uses, is about half through retail stores, 45 percent direct from mills, and the remainder through distributors. Smaller commercial establishments, such as small offices, restaurants, or shops, typically buy carpet from retail stores or distributors, although larger establishments with more specialized needs tend to deal directly with producers.

Foreign Industry

Foreign production of carpets by volume slightly exceeds total U.S. output.¹⁴ Of the top 50 carpet mills in the world, the 29 foreign mills had sales of \$7,012

million in 1991, compared with sales of \$6,617 million for the 21 U.S. mills in the group. These data do not include handmade oriental or flat woven carpets, the production of which mainly occurs in cottage industries or individual households. For most of the leading producers of machine-made carpet, production is largely for the home market, whereas for handmade carpets, most production is for export markets.

Canada, Western Europe, and Japan are the major foreign producers of carpets. Their industries, which are reviewed below, also primarily produce tufted carpet, though woven carpet accounts for a relatively greater share of their carpet output than in the United States. Production of tufted carpets in other Far Eastern countries, particularly Indonesia, Taiwan, Hong Kong, and Thailand, has reportedly been increasing in recent years.¹⁵

Machine-made Carpet

The leading foreign producers of machine-made carpet and their production for 1989 are shown in the following tabulation (in million square meters):¹⁶

Country	Production
Belgium	478.6
United Kingdom	158.2
West Germany	159.2
Japan	101.3
Canada	84.5
Netherlands	80.4
France	76.4

¹⁵ "Carpet Trends at Domotex," *Textiles*, issue 1, 1993, p. 2.

¹⁶ Compiled from data of the United Nations, the Canadian International Trade Tribunal, and Japan Ministry of International Trade and Industry.

¹⁴ "World's Top 50 Mills," *Floor Covering Weekly*, July 20, 1992, p. 22.

As in the United States, manmade fibers account for the preponderance of fibers consumed in their carpet production. However, wool accounts for a larger share of the fibers in these countries than in the United States. Its share ranges from 18 percent in Belgium to 5 percent in Germany, compared with 2 percent in the United States.

The Canadian carpet industry has declined considerably in size in recent years. The number of firms in the industry decreased from 30 in 1985 to 16 in 1988, and to 12 in 1991. From 1988 to 1991, the Canadian market contracted by about 20 percent while the domestic shipments of the Canadian industry dropped by a much greater 47 percent. The greater decline in industry shipments was offset almost entirely by an increase in imports from the United States, which rose by almost fourfold and accounted for 39 percent of Canadian consumption in 1991. The inception of the FTA on January 1, 1989, and changes in exchange rates helped enhance the competitive position of U.S. carpets—mostly tufted—in the Canadian market. Under the FTA, Canada is phasing out its tariff on tufted carpets of 20 percent ad valorem over 10 years, in annual increments of two percentage points. In addition, the Canadian dollar declined by 11 percent relative to the U.S. dollar during 1987-91.

In August 1991 the Canadian carpet industry filed a complaint with the Canadian Government, alleging that U.S. firms were dumping tufted carpet in the Canadian market, and that these imports were causing the decline in its sales and market share. In April 1992 the Canadian Government found that dumping had occurred, and that it was a cause of material injury to the Canadian industry. Consequently, Canada is assessing antidumping duties of 12 percent ad valorem on most imports of tufted carpet from the United States for a 5-year period, unless changed as a result of review proceedings that have been requested by U.S. producers.¹⁷

Belgium's carpet industry, unlike other leading producers of machine-made carpet, is highly export oriented. Belgium exports slightly more than 90 percent of its carpet production, largely owing to its small domestic market and the competitiveness of Belgium-based Beaulieu, the second-largest producer in the world after U.S.-based Shaw. Belgium exports tufted carpets mostly to nearby European countries, although the Middle Eastern Arab nations are becoming increasingly important markets. Saudi Arabia is the largest export market for Belgian carpet squares, a trade term used for room-sized or smaller carpets or rugs; France, Germany, and the United States are also important markets. Belgium's carpet

¹⁷ On April 9, 1993, a binational panel, composed of members from the United States and Canada and acting on the complaint of the U.S. producers, concluded a review of the findings of the Canadian International Trade Tribunal (CITT). The panel remanded certain findings of the CITT for its reconsideration. On May 25, 1993, the CITT returned its findings to the panel with no change in its conclusion. As of mid-October 1993, the panel had not acted further on the matter.

production is mostly tufted (72 percent of total output volume), followed by woven carpets (15 percent) and needled carpets (13 percent). Domestic sales account for just under 10 percent of the Belgian industry output and consist mostly of woven wool carpet squares.

Germany exports about 30 percent of its carpet production, mainly to nearby European countries, with the Netherlands being the most important. Tufted carpet dominates German production, accounting for about two-thirds of total carpet output. About 88 percent of this carpet is of nylon, with polypropylene and wool about equally accounting for the remainder. Needled carpet accounts for an unusually large share of German carpet production, about 22 percent. This carpet, principally of polypropylene, is believed to be primarily for use in the German automobile industry. Most of the woven carpet made in Germany is carpet squares and contract carpet.

The most distinct product of the British carpet industry is wall-to-wall woven carpeting, a large share of which is of a blend typically of 80 percent wool and 20 percent nylon. Tightly twisted, cut-pile carpet of this blend is regarded as a British specialty. However, woven carpet accounts for only about 12 percent of total British carpet production, with production of tufted carpeting accounting for 75 percent of the total.¹⁸ As in many other countries, most British tufted carpeting is of nylon. Polypropylene is the next most used fiber, with wool, polyester, and other fibers accounting for the remainder. A notable product of the British tufted carpet industry is printed carpet, which accounts for about 40 percent of total tufted carpet output in the United Kingdom, versus only 4 percent in the United States. Production of needled carpet reportedly accounted for about 7 percent of British production in 1985, and its share is believed to have expanded since, primarily to the detriment of production of woven carpet. Exports currently are of less importance to the British industry than they had been during the 1970s, and they accounted for about 17 percent of production in 1992.¹⁹ Major export markets are other European Community (EC) countries, Middle Eastern countries, and the United States, for which woven carpets for the hospitality market reportedly constitute a substantial share.

In Japan, traditional tatami mats still dominate Japanese production of floor coverings. Western-style carpets did not become significant until the 1960s. Production of tufted carpet in Japan was initially for international hotels and other public buildings there, though now residential use of such carpet is growing. As in Western countries, tufted carpet is the principal type of carpet made in Japan, accounting for 90 percent of Japanese carpet production. Unlike the U.S. carpet industry, which sells only about 5 percent of its output to the motor vehicle market, the Japanese carpet industry sells some 20 percent of its output to the motor vehicle market. Japan's carpet industry consists of three segments: (1) firms producing carpet for sale

¹⁸ Central Statistical Office, *Monthly Digest of Statistics*, London, May 1992, p. 70.

¹⁹ "Recession Continues to Cast a Shadow," *Wool Record*, Mar. 1993, p. 33.

under their own brand and also producing for the automobile market, (2) those producing exclusively for the automobile market, and (3) subcontractors producing for wholesalers to sell under their brand names and for automobile manufacturers.

Unlike the other major producing countries, Japan uses large quantities of acrylic fiber in carpet production. In 1991, acrylic carpets accounted for 25 percent of the total. Nylon carpet remains the most important, with a 31-percent share, and polyester carpet has a relatively high 25-percent share. The high use of acrylic largely can be attributed to the fact that shoes are not generally worn in Japanese homes. Consequently, a soft texture in carpets, which is best achieved with acrylic yarns, is preferred. The high use of acrylic in Japanese carpeting has also led to the extensive use of dyed yarns in the production process. In the other major foreign producing countries, most carpets are printed or piece dyed after tufting, and nylon and polyester yarns have characteristics suited to these processes. Japanese production of woven carpeting is quite small, with a 3-percent share in 1991. Exports take up about 8 percent of production and chiefly go to other Pacific-area countries, where Japan is able to take advantage of its proximity to the growing Asian market, and the Middle East.

Hand-woven Carpets

Production of oriental and other hand-woven carpets began as much as 4,000 years ago; the method of construction and their design has changed little throughout this time. Hand-knotted carpets have been an article of international trade for centuries. They are made principally in a small number of countries in a band stretching east from Morocco and Egypt in North Africa, through Romania in East Europe and Turkey, Iraq, and Iran in the Near East, then continuing across Asia through Afghanistan, Pakistan, and India, and ending in China. Some production of hand-woven carpets takes place in South American countries.

Hand-woven carpets produced in the different regions are of unique designs and colors and are made of wool and, to a lesser extent, of silk. They also vary by the quality and thickness of the yarn used to form the knotted pile and in the density of the knots. Costs of the carpets vary widely depending primarily on the quality of the yarn, the density of the knots, and the complexity of the design. In virtually all countries, except China, production is done in homes or small cottage-industry factories. Production in China takes place almost entirely in large factories that employ as many as 1,000 to 2,000 workers each. The Chinese industry is wholly export oriented and the government controls all aspects of the industry, including the quality and volume of production. The distinctive designs of most Chinese carpets are readily recognized, and in many the pile is sculptured or carved, to accentuate the design, a process unique to Chinese carpets.

Virtually all hand-knotted carpets are made for export with domestic consumption in most producing countries accounting for less than 10 percent of production. Because the preponderance of production is exported, trade data give a reliable approximation of the relative importance of the main producing

countries. Exports for these countries during 1990 are shown in the following tabulation (in millions of dollars):²⁰

Source	Exports
Iran	453
India	334
China	324
Pakistan	190
Turkey	153
Morocco	51
Afghanistan	38
All other	384
World total	1,927

The major markets for these hand-knotted carpets are Germany, the United States, Switzerland, the United Kingdom, France, Italy, Saudi Arabia, Belgium, Luxembourg, United Arab Emirates, Austria, the Netherlands, and Japan. Together these countries account for 90 percent of world imports of hand-knotted carpets.

U.S. TARIFF AND NONTARIFF MEASURES

U.S. rates of duty on imports of carpets for 1993 are given in table 3. U.S. tariffs for these products are among the lowest of any made-up textile product, with none exceeding 10 percent ad valorem. The average trade-weighted duty is 6.1 percent ad valorem, based on U.S. imports in 1992. Under the North American Free Trade Agreement (NAFTA), U.S. rates of duty for most carpet imports from Mexico would be phased out over 10 years. For most certified hand-loomed and folklore products and carpets of vegetable fibers other than cotton, the tariffs will be eliminated immediately.

The principal nontariff measure relating to textile products, including carpets, is the Multifiber Arrangement (MFA).²¹ The MFA governs world trade in textile products of cotton, other vegetable fibers, wool, manmade fibers, and silk blends. The MFA does not cover carpets or other textile products of silk, nor does it cover historically traded textiles that were internationally traded in commercially significant quantities before 1982. Such goods include carpets of vegetable fibers such as coir, sisal, abaca, maguey, and henequen.

In its textile trade agreements program under the MFA, the United States currently does not have specific limits, or quantitative quotas, on carpets from any suppliers. Of the countries with whom the United States has bilateral textile agreements, India and China are the only major suppliers of carpets to have their shipments subject to group or aggregate limits. China filled its 1992 group limit that included wool and manmade-fiber floor coverings among other products.

²⁰ The data shown are actually world imports from the countries indicated as reported to the United Nations by importing countries.

²¹ See appendix for more information regarding the MFA.

Table 3
Carpets: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; and U.S. Imports, 1992

HTS subheading	Description	Col. 1 rate of duty as of Jan. 1, 1993		U.S. exports, 1992	U.S. Imports, 1992
		General	Special ¹		
<i>— Million dollars —</i>					
	Carpets and other floor coverings, knotted, of wool or fine animal hair:				
	With pile hand-inserted or hand-knotted during weaving or knitting, with over 50 percent by weight of the pile being hair of the alpaca, guanaco, huarizo, llama, misti, suri, or any combination thereof:				
5701.10.13	Certified hand-loomed and folklore products	3.9%	Free (A,E,J) 0.4% (IL) 1.9% (CA)	(²)	0.4
5701.10.16	Other than certified hand-loomed and folklore products	3.9%	0.4% (IL) 1.9% (CA)	(²)	1.8
5701.10.20	Other floor coverings, of wool or fine animal hair, n.e.s.i	5.1%	Free (IL) 2.5% (CA)	12.8	266.3
	Carpets and other floor coverings, knotted, except of wool or fine animal hair:				
5701.90.10	With pile inserted and knotted during weaving or knitting	4.8%	Free (E*,J*) 0.5% (IL) 2.4% (CA)	(³)	24.3
5701.90.20	Other	6.6%	Free (E*,J*) 0.7% (IL) 3.3% (CA)	15.0	1.4
	Woven carpets and other floor coverings, not tufted or flocked, whether or not made up:				
	"Kalem", "Schumacks", "Karamanie" and similar hand-woven rugs:				
5702.10.10	Certified hand-loomed and folklore products	4.9%	Free (A,E,J) 0.5% (IL) 2.4% (CA)	(⁴)	.2
5702.10.90	Other than certified hand-loomed and folklore products	4.9%	Free (E*,J*) 0.5% (IL) 2.4% (CA)	1.5	19.8

See footnotes at end of table.

Table 3—Continued

Carpets: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Description	Col. 1 rate of duty as of Jan. 1, 1993		U.S. exports, 1992	U.S. imports, 1992
		General	Special ¹		
<i>Million dollars</i>					
5702.20.10	Woven floor coverings of coconut fibers (coir): With pile	21.5¢/m ²	Free (A*,E,J) 0.7¢/m ² (IL) 10.7¢/m ² (CA)	(⁵)	1.0
5702.20.20	Other	Free		0.9	4.5
Woven floor coverings, of pile construction, not made up, of wool or fine animal hair:					
5702.31.10	Wilton, velvet and similar floor coverings	10%	Free (IL) 5% (CA)	(⁶)	14.0
5702.31.20	Other	8%	Free (IL) 4% (CA)	2.1	19.1
Woven floor coverings, of pile construction, not made up, of manmade textile materials:					
5702.32.10	Wilton, velvet and similar floor coverings	10%	Free (IL) 5% (CA)	(⁷)	1.0
5702.32.20	Other	8%	Free (IL) 4% (CA)	5.9	3.5
Woven floor coverings, of pile construction, not made up, except of wool and manmade textile materials:					
5702.39.10	Of jute	3.5%	Free (A,E,J) 0.4% (IL) 1.7% (CA)	(⁸)	.3
5702.39.20	Of other fibers	7.1%	Free (E*,J*) 0.6% (IL) 3.5% (CA)	7.0	.1
Woven floor coverings, of pile construction, made up, of wool or fine animal hair:					
5702.41.10	Wilton, velvet, and similar floor coverings	10%	Free (B,IL) 5% (CA)	(⁹)	35.9
5702.41.20	Other	8%	Free (B,IL) 4% (CA)	2.1	23.0

See footnotes at end of table.

Table 3—Continued
Carpets: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Description	Col. 1 rate of duty as of Jan. 1, 1993		U.S. exports, 1992	U.S. imports, 1992
		General	Special ¹		
<i>— Million dollars —</i>					
	Woven floor coverings, of pile construction, made up, of manmade textile materials:				
5702.42.10	Wilton, velvet, and similar floor coverings . . . . .	.10%	Free (B,IL) 5% (CA)	(¹⁰)	26.4
5702.42.20	Other.	8%	Free (B,IL) 4% (CA)	3.0	26.3
	Woven floor coverings, of pile construction, made up, except of wool and manmade textile materials:				
5702.49.10	Of cotton	4.2%	Free (B) 0.4% (IL) 2.1% (CA)	(¹¹)	7.5
5702.49.15	Of jute.	3.5%	Free (A,E,J) 0.4% (IL) 1.7% (CA)	(¹¹)	.7
5702.49.20	Of other fibers	8%	Free (B,E*,IL,J*) 4% (CA)	4.9	.5
	Woven floor coverings, not of pile construction, not made up, of wool or fine animal hair:				
5702.51.20	Woven but not made on a power-driven loom	4.9%	0.5% (IL) 2.4% (CA)	(¹²)	1.9
5702.51.40	Other.	7.2%	0.7% (IL) 3.6% (CA)	1.7	1.1
5702.52.00	Woven floor coverings, not of pile construction, not made up, of manmade textile materials	5.3%	Free (IL) 2.6% (CA)	1.7	.1
	Woven floor coverings, not of pile construction, not made up, except of wool or manmade textile materials:				
5702.59.10	Of cotton	7.7%	0.8% (IL) 3.8% (CA)	(¹³)	.1
5702.59.20	Of other fibers	5.3%	Free (E*,J*) 0.5% (IL) 2.6% (CA)	3.5	1.4

See footnotes at end of table.

Table 3—Continued
 Carpets: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Description	Col. 1 rate of duty as of Jan. 1, 1993		U.S. exports, 1992	U.S. imports, 1992
		General	Special ¹		
5702.91.20	Woven floor coverings, not of pile construction, made up of wool or fine animal hair: Certified hand-loomed and folklore floor coverings, not made on a power-driven loom	4.9%	Free (A,E,J) 0.5% (IL) 2.4% (CA)	(¹⁴)	(¹⁵)
5702.91.30	Other floor coverings, not made on a power-driven loom	4.9%	0.5% (IL) 2.4% (CA)	(¹⁴)	12.0
5702.91.40	Floor coverings made on a power-driven loom	7.2%	0.7% (IL) 3.6% (CA)	1.5	4.2
5702.92.00	Woven floor coverings, not of pile construction, made up of manmade textile materials	5.3%	Free (IL) 2.6% (CA)	5.6	1.2
5702.99.10	Woven floor coverings, not of pile construction, made up, except of wool or manmade textile materials: Of cotton	7.7%	0.8% (IL) 3.8% (CA)	(¹⁶)	44.7
5702.99.20	Of other fibers	5.3%	Free (A,E,J) 0.5% (IL) 2.6% (CA)	2.7	1.9
5703.10.00	Tufted floor coverings of wool or fine animal hair	7%	Free (B) 0.7% (IL) 3.5% (CA)	3.6	57.0
5703.20.10	Tufted floor coverings of nylon or other polyamides: With tufts hand-knotted or knotted by means of a hand tool	6.6%	0.7% (IL) 3.3% (CA)	(¹⁷)	1.9
5703.20.20	Other	7.6%	Free (B,IL) 3.8% (CA)	355.4	46.8
5703.30.00	Tufted floor coverings of manmade textile materials other than nylon or other polyamides	7.6%	Free (B,IL) 3.8% (CA)	157.3	30.5

See footnotes at end of table.

Table 3—Continued
 Carpets: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Description	Col. 1 rate of duty as of Jan. 1, 1993		U.S. exports, 1992	U.S. imports, 1992
		General	Special ¹		
5703.90.00	Tufted floor coverings of other textile materials	7.6%	Free (A,B,E,J) 0.5% (IL) 3.8% (CA)	47.9	3.4
5704.10.00	Carpet tiles of felt, not tufted or flocced	5.3%	0.5% (IL) 2.6% (CA)	6.1	3.4
5704.90.00	Other carpets and floor coverings of felt	5.3%	Free (IL) 2.6% (CA)	13.9	5.8
5705.00.10	Other carpets and other textile floor coverings:				
5705.00.20	Of coir	Free		(¹⁸)	1.3
	Of other fibers	6.5%	Free (B,E*,J*) 0.7% (IL) 3.2% (CA)	68.5	12.9

¹ Programs under which special tariff treatment may be provided, and the corresponding symbols for such programs as they are indicated in the "Special" subcolumn, are as follows: Generalized System of Preferences (A); Automotive Products Trade Act (B); United States-Canada Free-Trade Agreement (CA); Caribbean Basin Economic Recovery Act (E); United States-Israel Free-Trade Area Implementation Act (IL); and Andean Trade Preference Act (J).

- 2 Not reported separately, included with 5701.10.20.
- 3 Not reported separately, included with 5701.90.20.
- 4 Not reported separately, included with 5702.10.90.
- 5 Not reported separately, included with 5702.20.20.
- 6 Not reported separately, included with 5702.31.20.
- 7 Not reported separately, included with 5702.32.20.
- 8 Not reported separately, included with 5702.39.20.
- 9 Not reported separately, included with 5702.41.20.
- 10 Not reported separately, included with 5702.42.20.
- 11 Not reported separately, included with 5702.49.20.
- 12 Not reported separately, included with 5702.51.40.
- 13 Not reported separately, included with 5702.59.20.
- 14 Not reported separately, included with 5702.91.40.
- 15 Less than \$50,000.
- 16 Not reported separately, included with 5702.99.20.
- 17 Not reported separately, included with 5703.20.20.
- 18 Not reported separately, included with 5705.00.20.

Source: U.S. exports and imports compiled from official statistics of the U.S. Department of Commerce.

India also filled its group limits that included wool and manmade-fiber floor coverings. However, the hand-made carpets that constitute most U.S. imports from India are not subject to MFA restraints.

FOREIGN TARIFF AND NONTARIFF MEASURES

Tariffs are the only significant trade barrier affecting U.S. exports of carpets in major world markets. Canada is the largest export market for U.S. carpet by far, having become so only since the inception of the FTA on January 1, 1989. Under the FTA, Canada is phasing out its tariffs on carpets from the United States over a 10-year period. Its 20-percent general rate of duty for most carpets, including tufted carpets that make up most of the U.S. shipments, is being reduced by 2 percentage points annually. In 1993 the rate had already been cut in half, to 10 percent ad valorem. In addition to the tariffs, Canada currently imposes antidumping duties of 12 percent ad valorem on most tufted carpets from the United States, as noted in the preceding section on the foreign industry.

Other major export markets for U.S. carpets are Saudi Arabia, which historically had been the largest export market for U.S. producers, Japan, Mexico, and the EC. Saudi Arabia assesses a duty of 12 percent ad valorem on all carpets. Japan levies a duty of 13.4 percent on cotton carpets and 9.6 percent on all other carpets. Mexico currently applies a duty of 20 percent to carpets; under NAFTA this duty would be phased out in 10 equal annual stages. The EC levies duties of 14 percent on tufted carpets, 8.9 percent on woven pile carpets, and 6.3 to 9.6 percent on flat woven and hand-knotted carpets.

U.S. INDUSTRY PERFORMANCE IN DOMESTIC AND FOREIGN MARKETS

Carpet is the largest segment of the U.S. floor covering market, which also includes tile and hardwood flooring. Carpet accounted for 70 percent of the \$12.1 billion in total sales of floor coverings during 1992, as shown in figure 5. The attributes of carpet that distinguish it from other floor coverings are its resilience and wide variety of patterns and colors. Carpet is also a good value, priced just above the median for all floor coverings, as shown in figure 6. Nevertheless, carpet's share of the total value of floor covering sales has declined by about 2 percentage points in the past 5 years, largely reflecting the increased residential use of hard floor coverings, particularly those of lower priced vinyl. However, some of the decline in carpet's share of the overall market is attributable to increased prices for most types of hardwood flooring, compared with slight declines in the average retail selling price of carpet.²²

²² "Road to Recovery," *Floor Covering Weekly*, June 21, 1993, p. 12.

U.S. Market

The U.S. carpet market comprises three major segments: (1) residential consumers, or individuals purchasing carpet for use in their home; (2) residential contractors, or builders of homes, apartments, and house trailers and owners of apartments or other rental property; and (3) commercial contractors, or builders and owners of office buildings, stores, hotels, restaurants, health care facilities, schools, and other public establishments. These three segments account for a combined 85 percent of total carpet sales, as shown in figure 7. Other, smaller segments of the carpet market include carpet for transportation equipment, such as autos, trucks, buses, planes, and trains; scatter and bath rugs; and artificial turf.

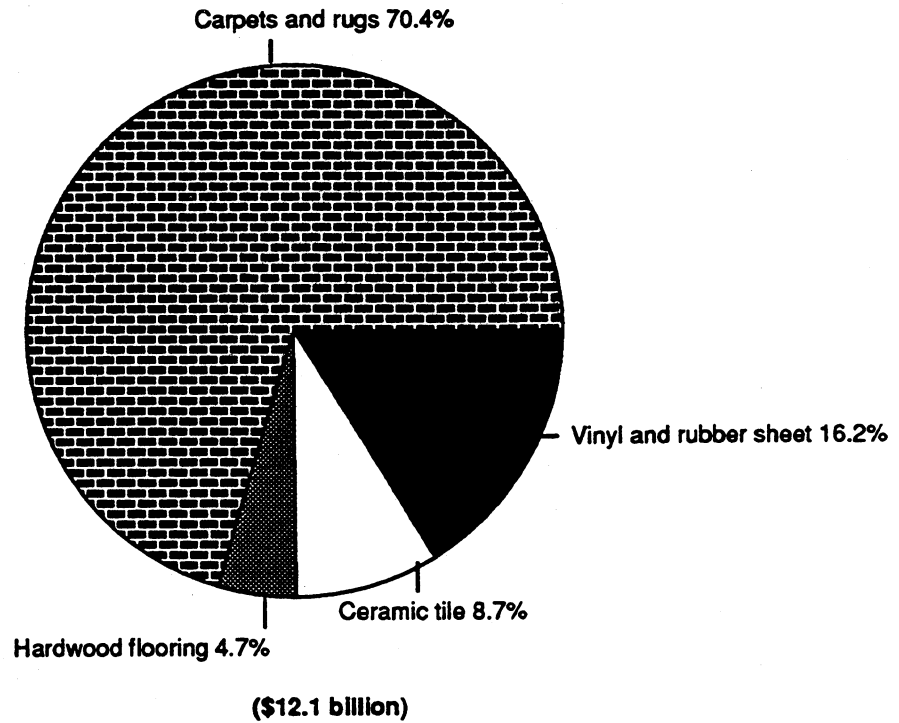
The residential market, including both households and contractors, is the largest of the carpet-market segments. Demand in the residential market follows changes in general economic activity. Consumer spending on durable goods like carpet is a major investment for most households and usually postponable during periods of economic uncertainty and low consumer confidence. Households typically replace their carpet about every 10 to 15 years. About 82 percent of carpet purchases by households are for replacement of existing carpet and 18 percent by consumers moving into newly purchased homes. Price, color, and surface texture of the carpet are the main factors influencing the consumer purchasing decision. Residential consumers often look for brand names that indicate stain-resistant or crush-resistant qualities, but they seldom are aware of the names of the mills actually producing the carpet. These factors also affect the contract segment of the residential market. Additionally, for this segment, market demand closely tracks changes in new housing starts, as illustrated by figure 8.

The commercial contract market (e.g., offices, stores, and hotels) is largely a replacement market. Replacement of existing carpet accounts for about 80 percent of this market, and new construction for the remainder. Factors influencing purchasing decisions in the commercial contract market differ somewhat from those for residential uses. Although price is an important determinant, durability and ease of cleaning are also important considerations. Additionally, in some uses such as upscale stores, hotels, and restaurants, the appearance of the carpet is very important. Often when carpet is being purchased for a large office, hotel, or store, the owner or designer of the establishment works directly with a carpet manufacturer to design carpet for that specific installation. Because of the different needs of the commercial market, a number of carpet mills specialize in producing carpets for this market, and some of the large mills have separate divisions to service these consumers.

U.S. Consumption

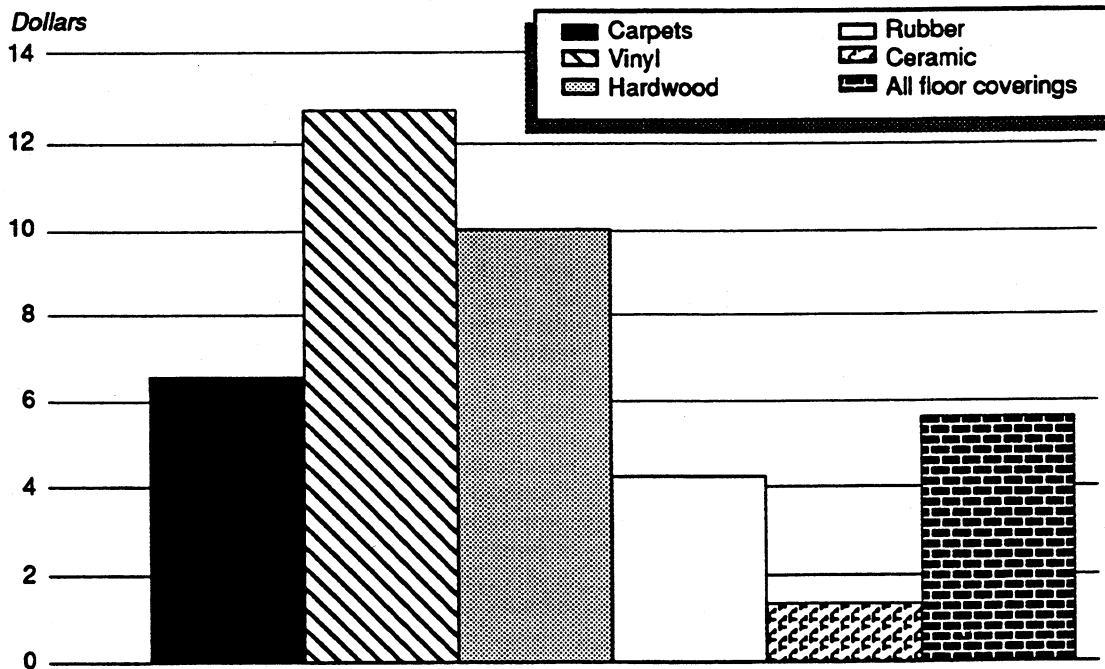
The U.S. market for carpets has remained fairly sluggish in recent years, as shown in table 4. The introduction of new products, particularly stain-resistant carpets, by U.S. producers in 1986

Figure 5
Floor coverings: U.S. sales, by type, 1992



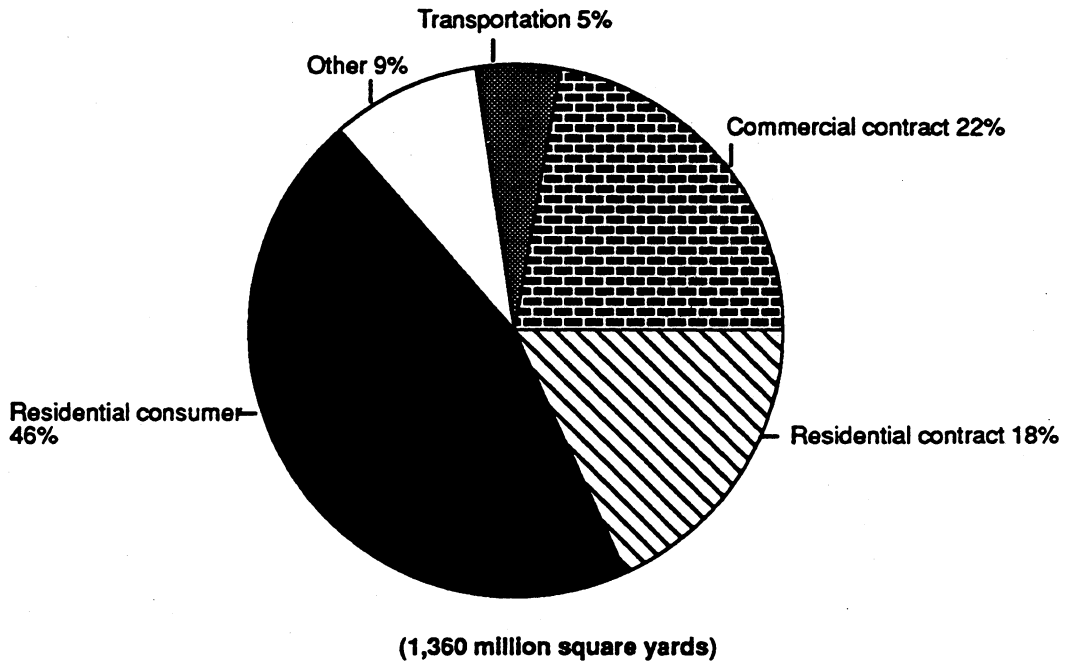
Source: "Road to Recovery," *Floor Covering Weekly*, June 21, 1993, p. 12.

Figure 6
Floor coverings: Sales value per square yard, by type, 1992



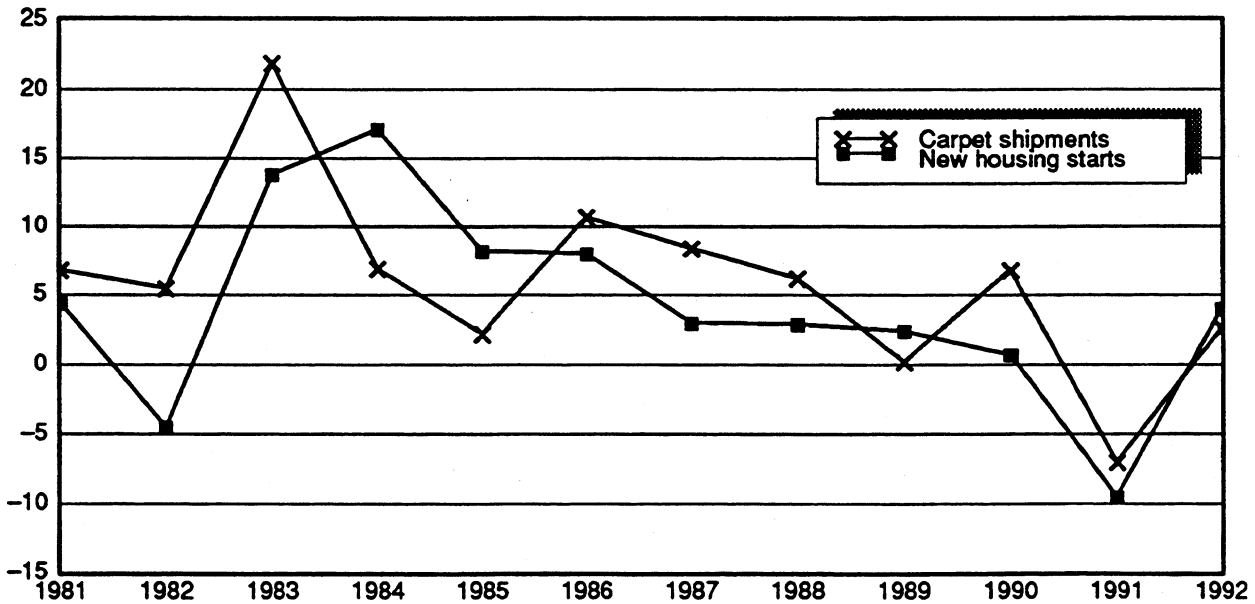
Source: "Road to Recovery," *Floor Covering Weekly*, June 21, 1993, p. 12.

Figure 7
U.S. carpet market: Sales by consumer end use, 1993



Note.—Other also includes scatter and bath rugs.
 Source: AlliedSignal Fibers Market Research, *Carpet Flow Sheet 93 Forecast*.

Figure 8
Carpet shipments and new housing starts: Percent change from prior year, 1981–92
 Percent



Source: Compiled from statistics of the U.S. Department of Commerce, Bureau of the Census and Bureau of Economic Analysis.

Table 4
Carpets: U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1987-92

Year	U.S. shipments	U.S. exports	U.S. imports	Apparent U.S. consumption	Ratio of imports to consumption	Ratio of exports to shipments
1987	9,291	217	689	9,763	7.1	2.3
1988	9,759	332	609	10,036	6.1	3.4
1989	9,826	383	613	10,056	6.1	3.9
1990	9,610	551	598	9,657	6.2	5.7
1991	9,160	704	591	9,047	6.5	7.7
1992	19,397	725	709	9,381	7.6	7.7

¹ Estimated by the staff of the U.S. International Trade Commission on the basis of U.S. Bureau of the Census, "Carpets and Rugs, 1992," *Current Industrial Reports*.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

helped carry the market to successive new highs through at least 1989. Intense price pressure in 1990 enabled the market to reach a new record high by volume, of 1.17 billion square meters, but pushed the market down in terms of value. The economic recession, coupled with a loss of consumer confidence during the Persian Gulf crisis, led to a further decline in carpet sales during 1991 of 13 percent by volume and 6 percent by value. The market partially recovered in 1992, when consumption rose by almost 12 percent by volume, to 1.13 billion square meters, and by 4 percent by value, to \$9.4 billion. Sales projections for 1993 call for gains of only 1 percent in the large residential consumer market and 6 percent and 2 percent in the smaller residential contract and commercial markets, respectively.²³

Although carpet sales in recent years have reflected trends in overall U.S. economic activity, industry analysts attribute the sluggish carpet sales more directly to the decline in construction of both housing and commercial buildings, which have been significant consumers of carpets. Between 1987 and 1991, the value of new construction activity for housing units and commercial buildings fell by 7 percent in real terms and the number of private housing starts dropped by 37 percent.²⁴ However, in 1992, the adjusted annual rate for construction activity was 5.7 percent above the 1991 level, and private housing starts were up by 22 percent.²⁵

²³ *Carpet Flow Sheet 93 Forecast*.

²⁴ U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Dec. 1988 and June 1993.

²⁵ *Ibid.*

U.S. producers dominate the domestic market, supplying all but a small part of consumer demand for carpets. The import share of the domestic market has increased over the years, rising from 1.0 percent by volume in 1980 to a high of 8.7 percent in 1990, before declining to 4.8 percent in 1991 and to 5.6 percent in 1992. In terms of value, import market share tends to be somewhat greater, reflecting the importance of high-valued oriental carpets in the import product mix.

U.S. Production

U.S. producers' shipments by volume increased almost continually since the economic recession in 1981-82, reaching their highest level of 1.14 billion square meters in 1990. They fell by 6 percent in 1991, to just under 1.07 billion square meters, their lowest level since 1986. U.S. shipments rebounded by 10 percent in 1992, to a new record high of 1.18 billion square meters. In terms of nominal value, shipments during 1987-89 rose irregularly to a high of \$9.8 billion in 1989 and then declined to just under \$9.2 billion in 1991. As demand slightly increased, shipments rose to an estimated \$9.4 billion in 1992.

U.S. Imports

Products Imported

Hand-knotted carpets, generally referred to as "oriental rugs," are the major type of carpet imported into the United States. They accounted for at least 40 percent of the total value of carpet imports during 1987-92, as shown in the following tabulation (in millions of dollars):

Type	1987	1988	1989	1990	1991	1992
Hand-knotted	321.7	250.2	266.1	247.5	260.9	294.3
Woven pile	150.0	141.2	135.2	143.0	122.4	158.3
Tufted	105.2	108.7	104.2	110.2	109.1	139.1
All other	112.1	108.9	107.4	97.7	98.1	117.6
Total	689.0	609.0	612.9	598.4	590.5	709.3

U.S. imports of hand-knotted carpet imports declined sharply in 1988, largely because of the imposition of the U.S. embargo on all goods originating in Iran effective October 29, 1987. Iran had been the largest supplier of hand-knotted carpets to the United States, and its carpets were among the highest priced in the marketplace.²⁶

Hand-knotted carpets are bought for their unique appearance and for their value as an investment, and do not compete directly with the tufted carpets that make up most of domestic production. They are the most expensive of all the imported carpet. In 1992, hand-knotted carpet averaged \$60 a square meter (customs value) versus \$13 for imported woven pile carpet and \$11 for the tufted carpet.

Imports of woven pile carpets primarily compete in the high end of the U.S. market with high-quality tufted carpet as well as with the small amount of woven carpet produced domestically. In addition, woven pile carpets that are made in patterns similar to those found in oriental hand-knotted carpets serve as a lower cost alternative to these often very expensive carpets.

Tufted carpet imports are of two types. Those from most sources are comparable with the tufted carpet made in the United States. However, most imports of tufted carpet from China are hand-tufted, often elaborately patterned area rugs that fill a special market niche. In many ways these Chinese tufted carpets compete with the generally more expensive hand-knotted carpets and patterned woven pile area rugs which they more closely resemble, than with machine-made tufted carpet.

Import Levels and Trends and Principal Suppliers

The volume and value of U.S. carpet imports showed widely divergent trends during 1987-92, as shown in table 5. The disparity largely reflected the sharp drop in imports from Iran following the embargo in October 1987 and the significant change in the import product mix of several major suppliers, especially China. Imports of Chinese tufted carpet accelerated from 320,878 square meters, valued at \$10.8 million, in 1987 to 2.0 million square meters, valued at \$49.3 million, in 1992. As a result, tufted carpet as a share of the total import volume from China rose from 21 percent in 1987 to 45 percent in 1992 whereas the more expensive hand-knotted carpet fell from 65 percent to 42 percent. Also affecting the disparity was the switch to a higher proportion of lower

valued hand-knotted carpets in the product mix from some of the major sources, particularly Pakistan but also Turkey and India beginning in 1989. Oriental carpets in the moderate price ranges were a popular decorating item and thus in relatively high demand.

Imports of carpet from India, the largest volume supplier by far, tripled in quantity during 1987-92, but the value of these imports rose by only 37 percent because of falling unit values. India supplies mostly flat woven dhurries and druggets, for which the average unit value declined by almost half during 1987-92 to \$2.34 per square meter. These nonpile carpets are woven in the same manner as textile fabrics or tapestries but distinguishable in that they are heavy and strong and thus clearly intended for use as floor coverings.

Hand-knotted carpets come mostly from China, India, Pakistan, and Turkey, which together supplied 97 percent of the imports by value in 1992. Turkey supplied the most expensive hand-knotted carpets that year, averaging \$93 a square meter.

Imports of woven pile carpet come almost entirely from EC nations, with Belgium and the United Kingdom supplying 76 percent of the total in 1992. The woven pile carpet from the United Kingdom ranked among the most expensive that year at \$30 a square meter, and those from Belgium averaged a much lower \$10.

Canada has been the dominant supplier of imported tufted carpets that compete directly with those produced domestically, supplying 39 percent of the total in 1992. Unlike U.S. exports of tufted carpet to Canada that rose sharply following the inception of the FTA in 1989, U.S. imports from Canada grew by only 11 percent from 1988 to 1992. These shipments from Canada are largely marketed in States near the international border and are primarily imported by firms with production in both the United States and Canada.

China emerged as the second largest supplier of tufted carpet after Canada with a 35-percent share in 1992. Imports of such carpet from China rose steadily from \$11 million in 1987 to \$22 million in 1991, and then more than doubled to \$49 million in 1992. The tufted carpets from China differ from those imported from Canada. The Chinese tufted carpets are almost all of wool and are mostly hand-tufted area rugs with multicolored designs, sold for use as fashionable decorative items. The Chinese carpets also are much more expensive, averaging \$25 a square meter versus \$9 for the Canadian carpets in 1992.

U.S. imports of tufted carpets from Belgium, the third-ranked source in 1992, fluctuated widely during 1987-92, ranging from \$17 million in 1987 to \$9 million in 1992. Some of the decline in the total value reflected a change in the composition of these imports, from more expensive wool carpet to less expensive manmade-fiber carpet. Tufted carpet imports from Belgium primarily compete with moderately priced carpets from other import sources as well as those produced domestically.

²⁶ Imports from Iran in 1987 totaled \$88 million, or 27 percent of total hand-knotted carpet imports. Following the embargo, imports from Iran in 1988 of \$7 million were 3 percent of the total, and by 1992 these imports had fallen to \$209,000 or less than 1 percent of the total. Imports from Iran are reported despite the ongoing embargo as articles of personal property that are the product of Iran, purchased overseas and owned for at least 1 year, are permitted to enter the United States.

Table 5
Carpets: U.S. Imports for consumption, by principal sources, 1987-92

Source	1987	1988	1989	1990	1991	1992
<i>Quantity (million square meters)</i>						
China	1.5	1.8	2.0	2.2	2.4	4.2
India	10.7	11.7	20.5	19.8	22.9	31.3
Belgium ¹	8.0	7.6	10.5	9.3	8.3	9.7
Pakistan .....	.6	.5	1.6	.8	1.2	1.8
Canada	6.6	6.4	12.4	7.4	6.0	6.5
Turkey .....	.3	.4	.7	.7	.5	.8
United Kingdom	1.5	1.3	1.6	1.6	1.1	1.2
Netherlands .....	.7	.7	1.1	1.2	.9	1.1
Spain .....	.7	.7	.9	.6	.6	.5
Switzerland .....	.1	.1	.1	.1	.1	.1
All other	6.9	5.8	11.1	7.1	5.9	6.4
Total	37.6	37.0	62.5	50.8	49.9	63.6
<i>Value (million dollars)</i>						
China	87.7	98.3	108.3	104.7	113.8	167.9
India	122.5	128.0	137.8	128.1	136.6	167.4
Belgium ¹	86.7	79.9	75.5	78.1	70.7	79.1
Pakistan	53.3	54.5	59.4	55.1	63.5	63.0
Canada	48.6	52.9	50.3	49.6	51.4	59.2
Turkey	13.9	16.6	20.8	24.0	28.4	37.5
United Kingdom	39.6	37.3	38.7	43.7	30.1	31.5
Netherlands	13.9	11.7	11.0	12.2	10.4	11.4
Spain	15.7	13.8	12.6	10.6	10.2	10.1
Switzerland	4.5	3.4	4.7	4.4	2.8	9.6
All other	202.6	112.6	93.8	87.9	72.6	72.6
Total	689.0	609.0	612.9	598.4	590.5	709.3
<i>Unit value (dollars per square meter)</i>						
China	58.01	55.52	53.88	47.63	46.69	40.43
India	11.47	10.91	6.73	6.48	5.98	5.35
Belgium ¹	10.82	10.46	7.17	8.40	8.50	8.15
Pakistan	96.79	102.87	37.26	67.20	53.58	34.63
Canada	7.37	8.20	4.05	7.10	8.54	9.06
Turkey	49.57	49.68	30.12	38.76	56.67	45.46
United Kingdom	26.99	29.74	24.12	26.54	27.25	26.36
Netherlands	19.94	16.18	9.86	10.40	11.27	10.42
Spain	21.13	20.88	13.33	18.78	18.24	19.77
Switzerland	39.13	42.47	37.49	38.96	48.14	85.73
All other	29.36	19.41	8.45	12.38	12.31	11.34
Average	18.33	16.44	9.81	11.78	11.84	11.15

¹ Includes Luxembourg.

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

Foreign Markets

The foreign market for carpets is about equal in size to that in the United States. The EC, Japan, and Canada are the largest foreign carpet markets. As in the United States, most carpet consumed in these countries is produced locally. However, these nations are also important markets for U.S. exports. Smaller carpet markets, but of importance in terms of U.S. exports, are those in the oil-rich Middle East nations of Saudi Arabia, Kuwait, and the United Arab Emirates and in the newly industrialized countries of Asia.

Foreign Market Profiles

The Canadian carpet market declined by about 20 percent during 1988-91, to 72 million square meters. Most of this decline was in the residential sector that, as in the United States, accounts for the largest share of carpet consumption. As noted in the earlier section on the foreign industry, during this period, not only was the Canadian market contracting, but Canadian producers' volume of sales dropped precipitously from 84 million to 44 million square meters. As a result, their share of the Canadian market dropped by

one-third, from 94 percent in 1988 to 61 percent in 1991. At the same time, the U.S. industry expanded its share of the Canadian market from 6 percent to 39 percent.

The largest consumers of carpet in the EC are Germany and the United Kingdom. In these and most other EC countries, internal production largely supplies the domestic market, with imports filling niche markets. However, an estimated 50 percent of carpet produced in the EC crosses an international border²⁷ before it is purchased. A large share of these shipments are likely from Belgian-based Beaulieu. Belgium has a relatively small domestic market and thus serves a significant share of the demand in other EC country markets as well as exporting throughout the rest of the world.

Styles of carpet preferences are distinctly marked in the EC. Customers in the United Kingdom show a preference for wall-to-wall carpet while the Germans prefer smaller room-sized carpets. In Belgium and the Netherlands, consumers prefer modern area rugs. In contrast, in Italy, Spain, and parts of France, hard flooring is more popular than carpet of any style.²⁸

The carpet market in Japan is relatively small but growing. It grew by about 50 percent during 1986-91 to 115 million square meters, equivalent to about 10 percent of the U.S. market. Japanese producers supplied about 82 percent of the local market in 1991, down from 91 percent in 1986.²⁹

Japan's residential, commercial, and industrial carpet markets are distinctly different from those of most other countries. In the residential market, only about 64 percent of households own carpet.³⁰ Most carpet in Japan is area rugs rather than carpet. Also, Japan is unique in its use of heated carpet in its homes. Reportedly 54 percent of households own at least one such carpet, which is folded up and stored during warmer months. In the commercial market, carpet tiles are popular. Sales of these tiles grew at an average annual rate of 33 percent during 1989-91 to 23 million square meters, or 20 percent of the total Japanese

carpet market, in 1991.³¹ Automotive carpet dominates the industrial market. Auto carpet sales in Japan during 1990 amounted to about 40.5 million square meters, or 35 percent of the total carpet market.³² Japanese producers supplied just over half the auto carpet sales, with imports, a major share of which are from the United States, supplying the balance.

U.S. Exports

Exports accounted for a growing share of U.S. carpet production during 1987-92, rising from a 2-percent share to almost 8 percent in 1991 and 1992. Exports more than tripled during the period to \$725 million in 1992, as shown in table 6. Most of this increase was of tufted carpets, for which exports rose from \$131 million in 1987 to \$564 million, or 78 percent of total exports in 1992, as shown in the tabulation at the bottom of the page (in millions of dollars).

The most notable export development for tufted carpets in recent years has been the rapid growth in U.S. shipments to Canada. Industry sources attributed the growth primarily to the tariff reductions under the FTA and favorable exchange rates. U.S. producers also benefited more from lower labor and transportation costs than their Canadian counterparts. The growth in U.S. exports of tufted carpet to Canada came to a halt in 1992, largely because of the finding of dumping by the Canadian International Trade Tribunal in April 1992 (discussed earlier in this report), the effects of punitive duties subsequently assessed, and Canada's weak economy.

Saudi Arabia's role as the largest export market for U.S. carpets during the 1980s ended in 1989, when exports to that nation fell 37 percent from the previous year's level. Although these exports recovered, they remained below levels of just over \$100 million reached in the early 1980s. The weakness in export sales to Saudi Arabia reportedly reflected a slowdown in its building boom of earlier years and the opening of several carpet mills there.

²⁷ Either intra-EC shipments or shipments to markets outside the EC. "The Single European Market," *Carpet and Rug Industry*, May 1991, p. 15.

²⁸ Janet Kirby, "Trends at the Domotex Winter Market," *Carpet and Rug Industry*, Mar. 1991, p. 15.

²⁹ *Tradescope*, "The Japanese Carpet Market," (Japan External Trade Organization: July 1992), p. 8.

³⁰ Virtually all households in the United States own carpet.

³¹ This demand is attributed to advantages of carpet tile such as that (1) it is well-suited for use in "intelligent" offices, (2) installation and maintenance are easy, (3) it is not necessary to move all furniture for replacement of worn carpet, (4) it is easily delivered to high-rise buildings, and (5) it can be stored efficiently.

³² In comparison, automotive carpet accounts for about 5 percent of the U.S. carpet market.

Market	1987	1988	1989	1990	1991	1992
Canada	32.5	38.6	45.4	185.4	247.5	203.0
Saudi Arabia	31.9	39.5	36.5	50.2	80.6	80.4
Japan	11.4	15.0	26.7	28.2	28.3	31.5
Mexico	1.7	2.0	11.8	16.1	19.5	31.5
Kuwait	6.6	9.6	5.3	5.8	20.2	27.6
Singapore	2.4	4.6	10.8	21.6	21.7	26.1
United Arab Emirates	8.0	16.6	14.5	14.3	23.9	23.2
Hong Kong	3.3	5.3	10.8	14.9	22.2	22.9
United Kingdom	8.2	17.7	23.2	21.8	23.4	22.1
All other	25.2	38.9	46.3	52.9	71.4	115.9
Total	131.2	187.8	231.2	411.1	558.7	564.2

Table 6
Carpets: U.S. exports of domestic merchandise, by principal markets, 1987-92

Market	1987	1988	1989	1990	1991	1992
<i>Quantity (million square meters)</i>						
Canada	7.1	8.7	9.8	26.2	36.8	31.0
Saudi Arabia	10.5	14.6	8.6	10.7	17.7	14.8
Mexico .....	.2	.6	4.3	5.6	6.7	10.5
Japan	2.7	6.5	6.3	5.6	5.6	5.7
Singapore .....	.9	1.2	2.2	2.6	3.8	3.7
Hong Kong .....	.9	2.2	2.5	2.9	3.9	4.2
Kuwait	1.3	2.1	1.2	1.5	3.3	4.3
United Kingdom	2.1	4.6	5.2	4.3	4.6	4.1
United Arab Emirates	2.1	3.4	3.1	2.8	4.2	4.2
Germany .....	.6	1.0	1.2	1.3	1.3	1.6
All other	7.7	12.1	13.4	12.7	17.0	22.2
Total	34.8	55.0	56.6	74.7	104.9	106.3
<i>Value (million dollars)</i>						
Canada	44.2	54.0	67.3	203.6	264.8	228.0
Saudi Arabia	48.7	74.0	46.9	55.2	88.3	86.4
Mexico	2.4	5.0	27.1	40.8	44.3	59.8
Japan	20.4	36.6	55.1	47.9	43.4	43.7
Singapore	6.9	8.2	15.4	27.4	33.9	34.5
Hong Kong	6.9	14.2	16.9	19.6	26.4	30.4
Kuwait	8.3	13.2	7.4	9.3	20.4	29.9
United Kingdom	16.3	30.5	32.8	30.3	31.3	29.9
United Arab Emirates	11.5	20.8	19.1	17.4	24.4	25.4
Germany	6.3	9.2	12.7	13.3	14.4	14.0
All other	53.0	79.1	89.8	95.9	112.0	142.5
Total	216.6	331.6	383.2	551.5	703.6	724.5
<i>Unit value (dollars per square meter)</i>						
Canada	6.27	6.18	6.89	7.76	7.20	7.35
Saudi Arabia	4.63	5.06	5.45	5.18	5.00	5.84
Mexico	11.15	7.90	6.24	7.32	6.63	5.70
Japan	7.54	5.64	8.74	8.50	7.70	7.67
Singapore	7.92	6.83	7.05	10.45	9.01	9.32
Hong Kong	7.29	6.38	6.67	6.86	6.85	7.24
Kuwait	6.38	6.29	6.17	6.20	6.15	6.95
United Kingdom	7.88	6.62	6.29	6.98	6.82	7.29
United Arab Emirates	5.54	6.10	6.24	6.33	5.87	6.05
Germany	10.34	9.36	10.35	10.58	11.19	8.75
All other	6.89	6.52	6.72	7.54	6.59	6.42
Average	6.23	6.03	6.77	7.39	6.71	6.82

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

The U.S. carpet industry also has been expanding exports to smaller but potentially profitable markets. In Asia, U.S. exports to Singapore rose fourfold during 1987-92 to almost \$35 million, and those to Hong Kong more than threefold to \$30 million. U.S. exports to Japan, after more than doubling during 1987-89, fell by 21 percent during 1990-92 to \$44 million. Exports to Kuwait grew sharply in 1991 and 1992 as the country began to repair damage incurred during the occupation by Iraq during 1990 and early 1991.

Substantial growth also occurred in U.S. carpet exports to Mexico during 1987-92, when shipments increased from about \$2 million to almost \$60 million. The growth can largely be attributed to Mexico's trade liberalization and to increased Mexican demand for automotive carpet. The exports are believed to have

consisted primarily of carpet for automobiles assembled in Mexico for sale in the United States and also carpet for use in hotels and resorts.

U.S. TRADE BALANCE

The U.S. trade balance for carpets improved markedly during 1987-92, as exports expanded and imports showed little growth. Following trade deficits for carpets since the mid-1980s, the United States recorded a surplus in 1991 and again in 1992, although it dropped sharply in the latter year. Strong gains occurred in trade surpluses with Canada and the nations of the Organization of Petroleum Exporting Countries (OPEC), as is shown in table 7. Much of the improvement in the overall trade balance is the result

Table 7
Carpets: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1987-92¹

(Million dollars)						
Item	1987	1988	1989	1990	1991	1992
U.S. exports of domestic merchandise:						
Canada	44	54	67	204	265	228
China	(²)	1	2	1	1	(²)
India	(²)	(²)	1	(²)	1	(²)
Saudi Arabia	49	74	47	55	88	86
Belgium	1	2	1	2	1	2
Mexico	2	5	27	41	44	60
Pakistan	1	(²)	(²)	(²)	(²)	(²)
United Kingdom	16	31	33	30	31	30
Japan	20	37	55	48	43	44
Turkey	(²)	(²)	(²)	(²)	1	(²)
All other	82	128	150	170	228	273
Total	217	332	383	551	704	725
EC-12	27	51	58	61	71	72
OPEC	72	113	79	88	141	155
ASEAN	7	10	19	31	38	41
CBERA	9	10	12	11	11	12
Eastern Europe	(²)	(²)	(²)	(²)	2	4
U.S. imports for consumption:						
Canada	49	53	50	50	51	59
China	88	98	108	105	114	168
India	123	128	138	128	137	167
Saudi Arabia	(²)	(²)	(²)	(²)	(²)	(²)
Belgium	87	80	76	78	71	79
Mexico	6	13	13	13	9	9
Pakistan	53	54	59	55	63	63
United Kingdom	40	37	39	44	30	32
Japan	20	13	13	8	6	5
Turkey	14	17	21	24	28	38
All other	210	114	96	95	81	90
Total	689	609	613	598	591	709
EC-12	199	178	170	176	148	159
OPEC	91	8	4	5	2	(²)
ASEAN	5	6	8	6	6	5
CBERA	(²)	(²)	(²)	(²)	(²)	(²)
Eastern Europe	9	10	4	3	2	1
U.S. merchandise trade balance:						
Canada	-5	1	17	154	214	169
China	-88	-97	-106	-104	-113	-168
India	-123	-128	-137	-128	-136	-167
Saudi Arabia	49	74	47	55	88	86
Belgium	-86	-78	-75	-76	-70	-77
Mexico	-4	-8	14	28	35	51
Pakistan	-52	-54	-59	-55	-63	-63
United Kingdom	-24	-6	-6	-14	1	-2
Japan	0	24	42	40	37	39
Turkey	-14	-17	-21	-24	-27	-38
All other	-128	14	54	75	147	183
Total	-427	-227	-230	-47	113	16
EC-12	-172	-127	-112	-115	-77	-87
OPEC	-19	105	75	83	139	155
ASEAN	2	4	11	25	32	36
CBERA	9	10	12	11	11	12
Eastern Europe	-9	-10	-4	-3	(²)	3

¹ Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. U.S. trade with East Germany is included in "Germany" but not "Eastern Europe."

² Less than \$500,000.

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

of increased exports to Canada, particularly in 1990-91, and the resulting shift in the trade balance with Canada from a small deficit in 1987 to a surplus of \$214 million in 1991 and \$169 million in 1992. The smaller surpluses in trade at the end of the period with Saudi Arabia, Mexico, and Japan all were improvements over the figures for 1987.

The United States incurred trade deficits in carpet with India, China, and the EC. India and China are important suppliers of mostly handmade carpet that are available only from a limited number of sources, but they are very small export markets for U.S. carpet, partly because few consumers in either country can afford U.S. carpet. The deficit with the EC narrowed considerably during 1987-92, as U.S. exports grew and U.S. imports declined.

APPENDIX A
EXPLANATION OF TARIFF AND TRADE AGREEMENT TERMS

TARIFF AND TRADE AGREEMENT TERMS

The *Harmonized Tariff Schedule of the United States* (HTS) replaced the *Tariff Schedules of the United States* (TSUS) effective January 1, 1989. Chapters 1 through 97 are based upon the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description, with additional U.S. product subdivisions at the 8-digit level. Chapters 98 and 99 contain special U.S. classification provisions and temporary rate provisions, respectively.

Rates of duty in the *general* subcolumn of HTS column 1 are most-favored-nation (MFN) rates; for the most part, they represent the final concession rate from the Tokyo Round of Multilateral Trade Negotiations. Column 1-general duty rates are applicable to imported goods from all countries except (1) those enumerated in general note 3(b) to the HTS plus Serbia and Montenegro, whose products are dutied at the rates set forth in *column 2*, and (2) countries whose goods are subject to embargo. Goods from Albania, Armenia, Belarus, Bulgaria, the People's Republic of China, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Poland, Romania, Russia, Slovakia, Turkmenistan, and the Ukraine are currently eligible for MFN treatment, as are the other republics of the former Socialist Federal Republic of Yugoslavia. Among articles dutiable at column 1-general rates, particular products of enumerated countries may be eligible for reduced rates of duty or for duty-free entry under one or more preferential tariff programs. Such tariff treatment is set forth in the *special* subcolumn of HTS column 1. Where eligibility for special tariff treatment is not claimed or established, goods are dutiable at column 1-general rates.

The *Generalized System of Preferences* (GSP) affords nonreciprocal tariff preferences to developing countries to aid their economic development and to diversify and expand their production and exports. The U.S. GSP, enacted in title V of the Trade Act of 1974 and renewed in the Trade and Tariff Act of 1984, applies to merchandise imported on or after January 1, 1976 and before September 30, 1994. Indicated by the symbol "A" or "A*" in the special subcolumn of column 1, the GSP provides duty-free entry to eligible articles the product of and imported directly from designated beneficiary developing

countries, as set forth in general note 3(c)(ii) to the HTS.

The *Caribbean Basin Economic Recovery Act* (CBERA) affords nonreciprocal tariff preferences to developing countries in the Caribbean Basin area to aid their economic development and to diversify and expand their production and exports. The CBERA, enacted in title II of Public Law 98-67, implemented by Presidential Proclamation 5133 of November 30, 1983, and amended by the Customs and Trade Act of 1990, applies to merchandise entered, or withdrawn from warehouse for consumption, on or after January 1, 1984; this tariff preference program has no expiration date. Indicated by the symbol "E" or "E*" in the special subcolumn of column 1, the CBERA provides duty-free entry to eligible articles, and reduced-duty treatment to certain other articles, which are the product of and imported directly from designated countries, as set forth in general note 3(c)(v) to the HTS.

Preferential rates of duty in the special subcolumn of column 1 followed by the symbol "IL" are applicable to products of Israel under the *United States-Israel Free Trade Area Implementation Act* of 1985 (IFTA), as provided in general note 3(c)(vi) of the HTS. Where no rate of duty is provided for products of Israel in the special subcolumn for a particular provision, the rate of duty in the general subcolumn of column 1 applies.

Preferential rates of duty in the special subcolumn of column 1 followed by the symbol "CA" are applicable to eligible goods originating in the territory of Canada under the *United States-Canada Free-Trade Agreement* (CFTA), as provided in general note 3(c)(vii) to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn of column 1 followed by the symbol "J" or "J*" in parentheses is afforded to eligible articles the product of designated beneficiary countries under the *Andean Trade Preference Act* (ATPA), enacted in title II of Public Law 102-182 and implemented by Presidential Proclamation 6455 of July 2, 1992 (effective July 22, 1992), as set forth in general note 3(c)(ix) to the HTS.

Other special tariff treatment applies to particular *products of insular possessions* (general note 3(a)(iv)), goods covered by the *Automotive Products Trade Act* (APTA) (general note

3(c)(iii)) and the *Agreement on Trade in Civil Aircraft* (ATCA) (general note 3(c)(iv)), and *articles imported from freely associated states* (general note 3(c)(viii)).

The *General Agreement on Tariffs and Trade* (GATT) (61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786) is the multilateral agreement setting forth basic principles governing international trade among its 111 signatories. The GATT's main obligations relate to most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national (nondiscriminatory) treatment for imported products; the GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, antidumping and countervailing duties, and other measures. Results of GATT-sponsored multilateral tariff negotiations are set forth by way of separate schedules of concessions for each

participating contracting party, with the U.S. schedule designated as Schedule XX.

Officially known as "The Arrangement Regarding International Trade in Textiles," the *Multifiber Arrangement* (MFA) provides a framework for the negotiation of bilateral agreements between importing and producing countries, or for unilateral action by importing countries in the absence of an agreement. These bilateral agreements establish quantitative limits on imports of textiles and apparel, of cotton and other vegetable fibers, wool, man-made fibers and silk blends, in order to prevent market disruption in the importing countries—restrictions that would otherwise be a departure from GATT provisions. The United States has bilateral agreements with many supplying countries, including the four largest suppliers: China, Hong Kong, the Republic of Korea, and Taiwan.

