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# United States Trade in Wood Products, 1978–2005

Jean M. Daniels



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## **Abstract**

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Tables summarize volume and values of United States trade in wood products from 1978 to 2005. Import and export data are shown for 21 commodities aggregated from over 1,700 wood products. Data were obtained from an earlier report by Chmelik and others and the U.S. Department of Commerce, Bureau of the Census. Trade in each commodity is delineated by trading partner and shipments through each of four regional aggregations of U.S. customs districts. Data show that the United States is a net importer of wood products and Canada is the dominant supplier.

Keywords: Wood products, imports, exports, customs districts, trading partners, wood products trade, wood products trade statistics.

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## Introduction

The United States has been a global leader in both production and consumption of wood products and an active participant in wood products trade. With few exceptions, the value of wood products imported between 1978 and 1994 narrowly exceeded exports. After 1995, imports expanded rapidly, resulting in a deficit that mirrored trends observed in other manufacturing sectors. The deficit continued to widen into the next decade, reaching a record \$16 billion by 2005. Although the era of globalism increased the diversity of suppliers and purchasers of wood products internationally, the United States has maintained prominence as both a supplier and a target market. Canada has evolved into both the dominant source of U.S. imports and market for U.S. exports.

The purpose of this publication is to summarize U.S. wood products trade from 1978 to 2005. Data were obtained from three sources covering the periods 1978–87, 1988, and 1989–2005. For 1978–87, data were taken from Chmelik et al. (1989), who reported import and export volume and unit value for 18 wood product commodities. The 1988 trade data were purchased directly from the U.S. Department of Commerce, Bureau of the Census, and were delivered electronically. Trade data from 1989 to 2005 were extracted from CD-ROMs and DVDs available from the Census Bureau. Combining these three data sources into a continuous time series proved to be a challenge, as discussed later.

This analysis of wood products trade is organized in the following fashion. First, the current account balance for the entire U.S. economy from 1978 to 2005 is discussed. A discussion of the trade balance for wood products follows. The next section describes the data used for compiling this report. Last, trends for wood products trade by trading partner, customs district, and product are highlighted. Appendix 1 contains the U.S. current account balance in tabular form. The total value of 20 wood product exports and imports are presented in appendix 2 decomposed into all wood products, solid wood products, and fiber products. Appendix 3 contains factors used to convert the 1978–88 trade data from English to metric units. Appendixes 4 through 7 list the countries, customs districts, and harmonized product codes used to aggregate trading partners, customs regions, and wood product commodities. Last, the included CD-ROM contains appendix 8, where tables summarize the volume and unit value of 20 wood products entering and leaving the United States from 1978 to 2005 in a series of Microsoft Excel<sup>®</sup> spreadsheets.<sup>1</sup>

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<sup>1</sup>The use of trade or firm names in this report is for reader information and does not imply endorsement of any product or service by the U.S. Department of Agriculture.

Figure 1 shows the current account balance for all U.S. trade from 1978 to 2005 (Bureau of Economic Analysis 2006). A tabular representation appears in appendix 1. From 1978 to 1983, the total value of U.S. imports and exports was almost equal, with imports leading by a small margin. Imports expanded after 1983 while exports remained flat; the widening trade deficit reached \$137 billion in 1987. The deficit narrowed to \$7 billion by 1991 when increasing export values were met with declining imports. This was the last time the United States approached a favorable balance of trade; the current account balance shows the trade deficit ballooned from \$45 billion in 1993 to a record high \$666 billion in 2005. The skyrocketing difference between import and export values has implications for many sectors in the U.S. economy, including wood products manufacturing.

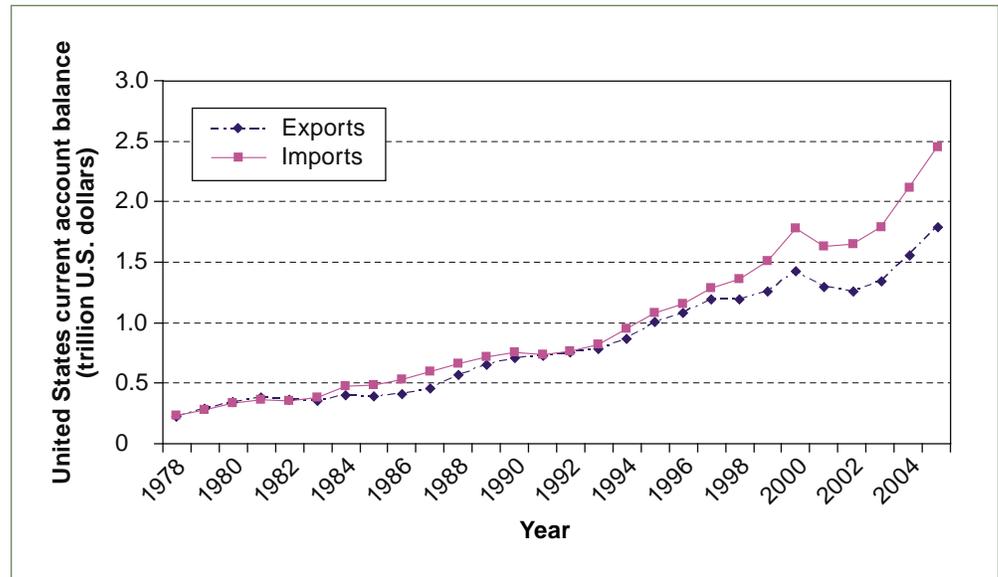


Figure 1—United States current account balance.

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**The wood product deficit grew to reach a record \$16.8 billion in 2005.**

United States trade in wood products (combining solid and fiber values) has followed a similar trend (fig. 2). Import values were modestly greater than exports between 1978 and 1982, although both were relatively flat. After 1982, import values expanded rapidly as exports declined. Import values fell below exports briefly in 1990, recovered and surpassed exports by 1992. Imports and exports increased at about the same rate until the deficit began to widen in 1995. Despite a drop in both import and export values after 2000, the wood product deficit grew to reach a record \$16.8 billion in 2005.

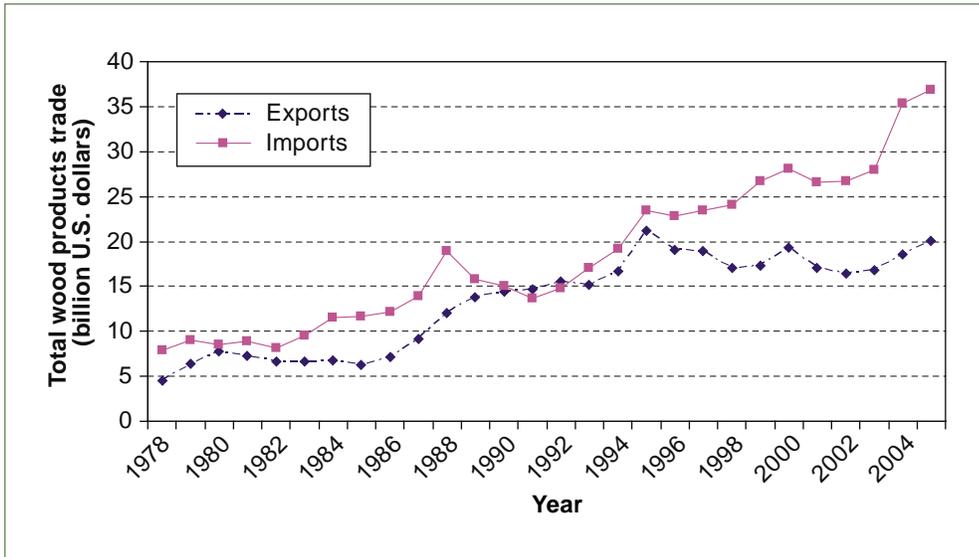


Figure 2—Total wood products trade.

Trade in solid wood products remained relatively flat with a modest trade deficit until 1988 (fig. 3). Rising export values resulted in a trade surplus by 1989 that lasted until 1993. Imports began increasing sharply in 1991 and rapidly outstripped export values, resulting in an unprecedented solid wood trade deficit of \$12.8 billion by 2005.

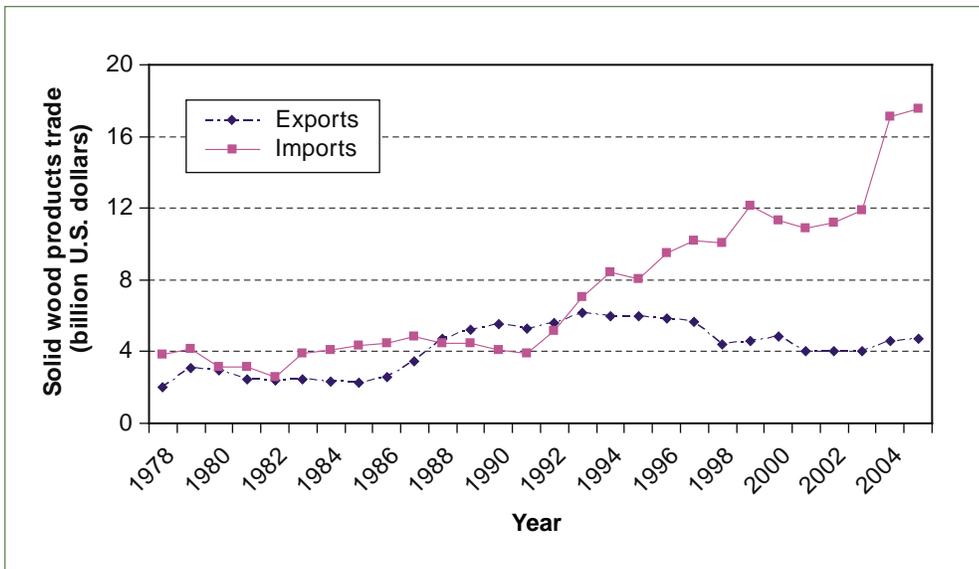


Figure 3—Solid wood products trade.

Values of fiber products followed a similar pattern but did not diverge as dramatically. Fiber import values were slightly greater than exports through the mid-1980s (fig. 4). After peaking in 1988, imports sank with a fiber trade surplus recorded twice between 1992 and 1997. Although imports surpassed exports after 1997, the two displayed a similar trend of peaking in 2000, falling off, and increasing again in 2003. The trade deficit in fiber products reached \$3.8 billion in 2005.

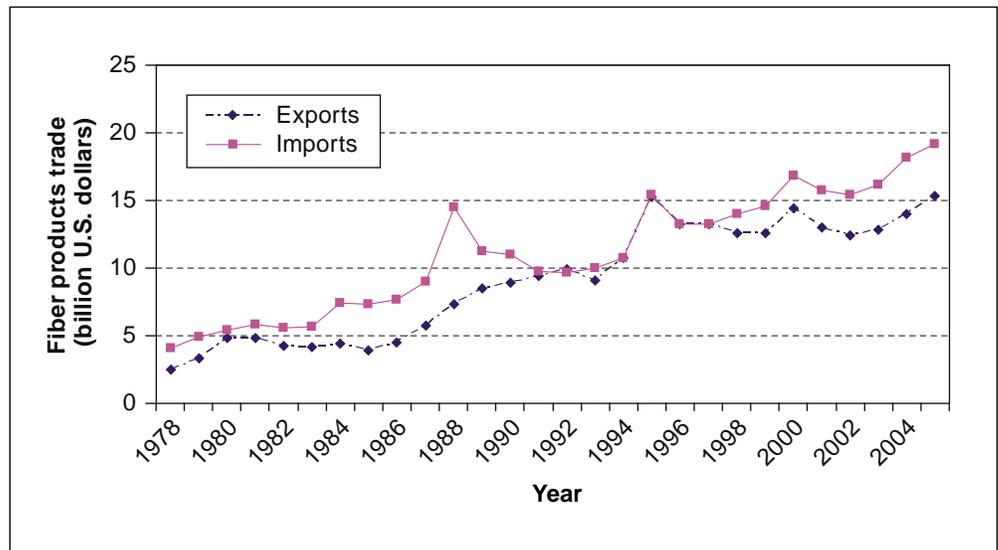


Figure 4—Fiber products trade.

## Data

Data for this report were compiled from three sources. For the period 1978 to 1987, data were derived from Chmelik et al. (1989). These data were originally obtained from the U.S. Department of Commerce, Bureau of the Census using the CENSUS computer program and the old seven-digit commodity code system. Under this system, wood products trade volume was reported in English units, such as board feet, square feet, and short tons. Wood product values were reported as value per unit quantity, such as dollars per thousand board feet. The seven-digit commodity codes were the most detailed data available at that time. Lists of import and export commodity codes were compiled inconsistently and included nearly 500 import codes and over 300 export codes. Only trade in raw and primary processed materials was reported.

Data for the year 1988 were not included in the Chmelik et al. publication and were purchased directly from the Bureau of the Census, Foreign Trade Division (USDC Bureau of the Census 2002). Wood product volumes were reported in

English units and values in total U.S. dollars. Commodity codes for the 1988 data were aggregated into groups using the same seven-digit codes used by Chmelik et al. Values per unit quantity were calculated for each commodity group by dividing total dollar value by total quantity. This series was combined with the first series to create metric quantity and unit value series from 1978 through 1988.

Codes for all commodities changed in 1989 as a new system using up to 10-digit detail was instituted throughout the United States. The Harmonized Tariff Schedule of the United States (HTS) was enacted by Congress and made effective on January 1, 1989, replacing the former Tariff Schedules of the United States. The HTS comprises a hierarchical structure based upon the international Harmonized Commodity Description and Coding System, administered by the World Customs Organization in Brussels (U.S. International Trade Commission 2004). Solid and fiber wood products trade statistics from 1989 to 2005 were downloaded from CD-ROMs and DVDs available for purchase from the Census Bureau or for use at government document repository libraries (USDC Bureau of the Census 2005a, 2005b).

Adoption of the new code system created some difficulty matching commodity codes for wood products between the old system and the new system. Under the new system, the list of codes was greatly expanded and products were reported at finer detail than before. Additional difficulty arose from changes in measurement units; the HTS uses metric rather than English units. Multiple calculations were required to convert the 1978–88 data into metric units, introducing the potential for error when combining data series from the old system with the new system. Conversion factors for wood products were obtained from Briggs (1994) and are provided in appendix 3.

Under the HTS system, import and export values are reported in total dollars. Unit values were calculated for each commodity group by dividing total dollar value by total quantity. Unit values from 1989 to 2005 were combined with those from 1978 to 1988 to form a continuous time series.

Appendix 4 lists the nations making up the seven trade regions for 1978–87 from the Chmelik et al. (1989) report. From 1988 to 2005, the number of regions was expanded to 11 members listed in appendix 5. The category “Other” was eliminated in 1988, and member nations were reclassified according to geographic location. The category “Africa” was added in 1988 to record trade with African nations. With the dissolution of the Soviet Union, former Soviet satellite nations in Eastern Europe and Russia have opened markets to trade. These countries have been reclassified as “Other Europe” and “Russia,” respectively. Western European

nations also underwent reclassification. Because membership in the European Union changes often, membership in the European Economic Area (EEA) was used to aggregate Western European countries.

Wood product shipments are also recorded by U.S. customs district. Districts of the U.S. Customs Service are grouped into four regions: North, Other West, Pacific Northwest, and South (app. 6). Individual districts composing the regional aggregations changed little over time, except Milwaukee, Wisconsin, was added to the list of northern districts and San Juan, Puerto Rico, and the U.S. Virgin Islands were added to southern districts. Because U.S. Department of Commerce data report only external trade, district of departure or entry does not always indicate the true U.S. origin of exports or the final destination of imports within the United States. However, regional trends in U.S. trade data can illuminate production and consumption patterns.

Groups of similar commodities were aggregated by commodity code to produce 20 wood product classifications. This commodity code list is presented in appendix 7. Because all commodity names and codes changed in 1989, maintaining continuity between the old and new reporting systems was challenging. New categories were added for oriented strandboard (OSB), fiberboard, and hardboard imports. Data for these categories were previously reported in an “other solid wood” category by Chmelik et al., introducing some inconsistencies over time. Additional inconsistencies are present in hardwood lumber and wood chip data. From 1978 to 1987, the category “hardwood lumber” contained both hardwood lumber and flooring; hardwood flooring was removed from the hardwood lumber category in 1988. Between 1978 and 1988, wood chips were reported as the sum of hardwood and softwood chips. The Commerce Department separated wood chips into softwood and hardwood chips in 1989. The data presented here contain three measures of wood chip trade; hardwood and softwood chips are listed separately from 1989 to 2005, then summed to generate a total wood chip series from 1978 to 2005.

A series of tables containing imports and exports of wood products by quantity and by unit value are presented in appendix 8 on the supplemental CD-ROM. Imports and exports are contained in two files. Each file contains the quantity and unit value of each wood product by customs region and trade partner. Most tables contain data from 1978 to 2005, with a few exceptions for newer categories like OSB. Data are provided in Microsoft Excel to facilitate transfer of information to interested parties.

## Highlights: Trade by Trading Partner

This section highlights trends in the value of wood products trade by trading partner. Trends by quantity appear in a later section. Export values for all wood products are presented first, followed by values for solid wood and fiber exports. This analysis is repeated for wood product imports. Data for 1978–87 were combined with data for 1988–2005. Trading partners include Africa, Asia, Canada, China, the European Economic Area (EEA), Japan, Latin America, the Middle East, Oceania, Other, Other Europe, and Russia. Again, nations composing aggregated groups are listed in appendixes 4 and 5.

### Exports

United States wood product export values are discussed for total, solid wood, and fiber exports.

#### All wood products—

Wood product exports increased both in value and diversity of export destinations. Exports remained relatively flat between 1978 and 1987 and were predominantly sent to Asia, Canada, the EEA, Japan, and Latin America (fig. 5). Increased shipments to these destinations caused an upswing in export values that leveled off by

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**By 2005, Canada had become the dominant purchaser of U.S. wood product exports.**

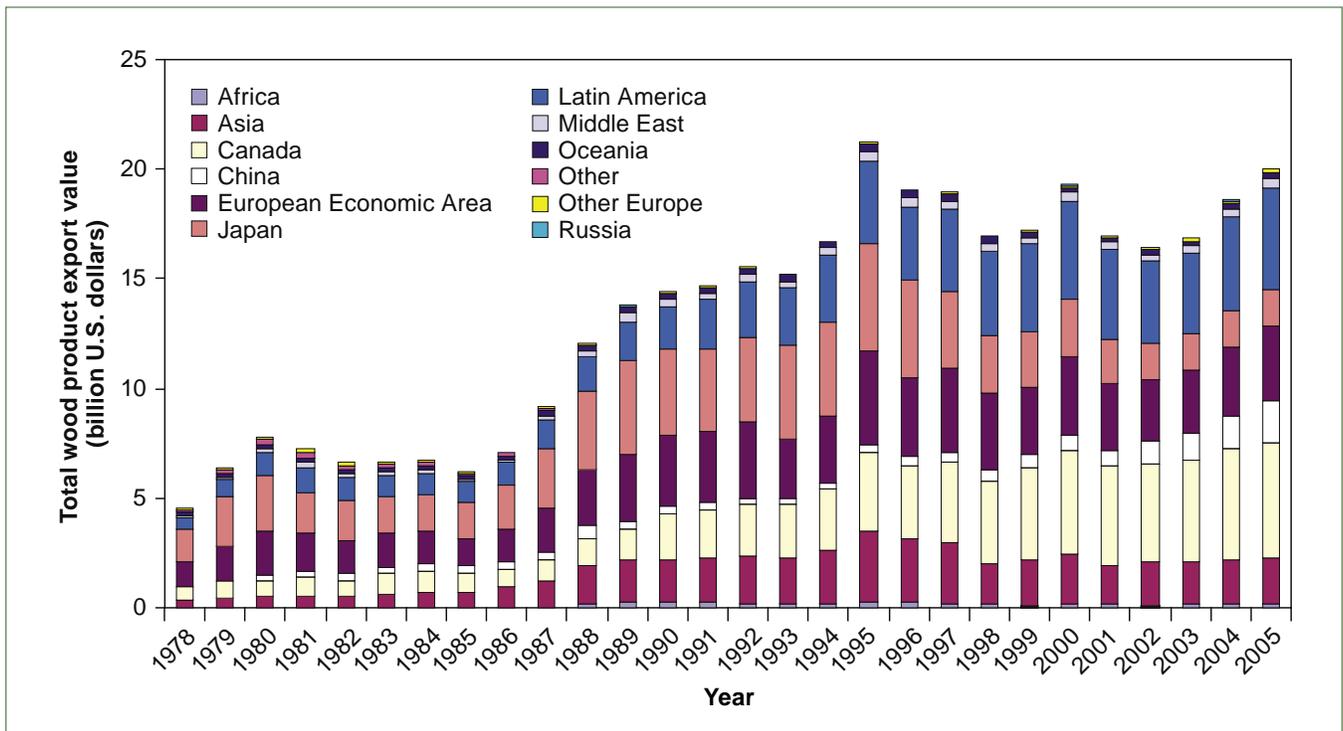


Figure 5—Total wood product export value.

**In the 1990s, U.S. solid wood exports were heavily affected by Japanese demand.**

1991. Values jumped again in 1995 then retreated owing to reduced shipments to Asia and Japan. Expanding markets in Canada, China, and Latin America helped offset these losses. By 2005, 28 percent of the total value of U.S. wood product exports was sent to Canada, making Canada the dominant purchaser.

**Solid wood—**

Figure 6 shows that U.S. solid wood exports were heavily affected by Japanese demand. After remaining flat through the mid-1980s, values surged in 1987 owing to increased shipments to Japan. Exports to the EEA and Canada also strengthened during this period while exports to China waned. Exports to Japan remained strong then dropped by \$800 million between 1997 and 1998 as effects from the Asian financial crisis reverberated throughout the Japanese economy. By 2005, the proportion of solid wood exports destined for Japan reached an all-time low. Although increased shipments to Canada and China offset some of this loss, after 2001, the value of solid wood exports receded to late 1980s levels of about \$4 billion per year.

**Fiber—**

The value of U.S. fiber product exports grew dramatically over the data period. In 1978, export values for fiber and solid wood products each equaled around \$2 billion per year (figs. 6 and 7). After doubling between 1978 and 1980, exports

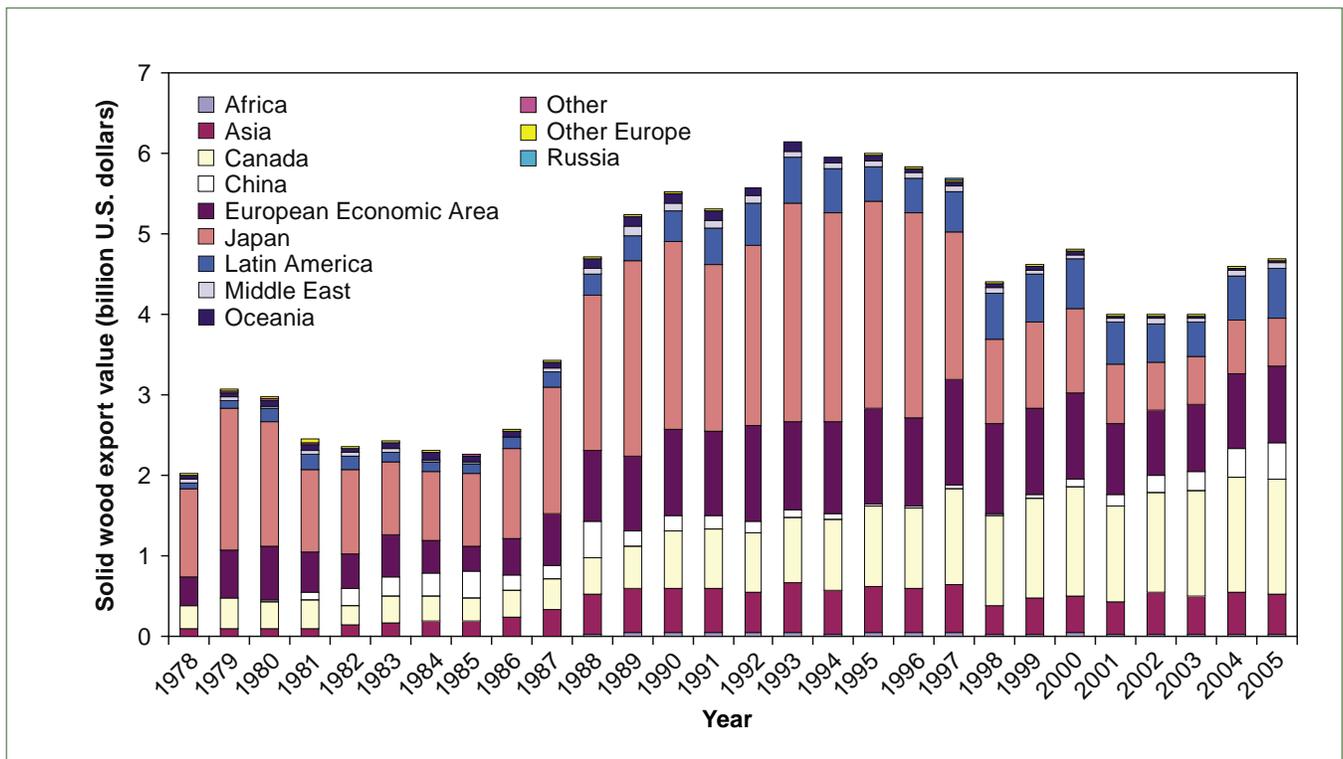


Figure 6—Solid wood export value.

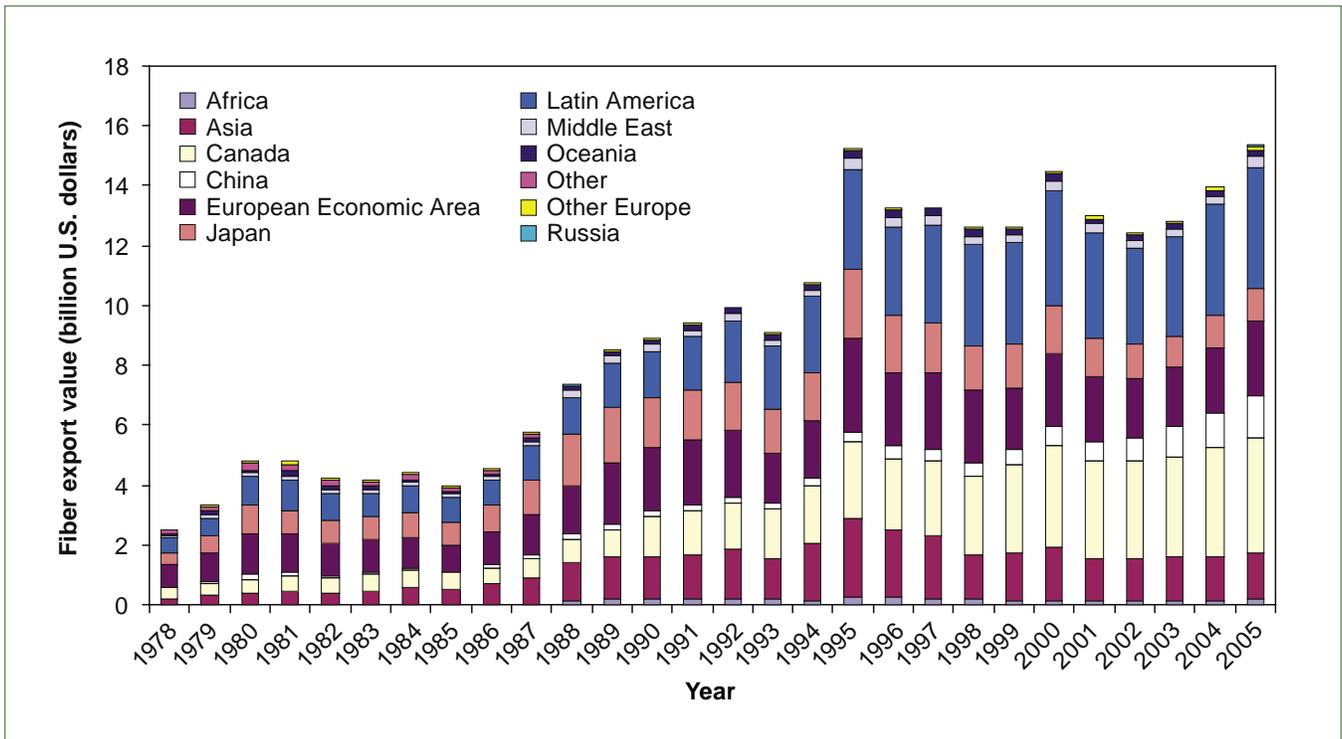


Figure 7—Fiber export value.

remained flat at \$4 billion per year with Canada, the EEA, Japan, and Latin America the dominant purchasers. In 1987, fiber export values to all destinations began rising, culminating in a \$15.2 billion spike in 1995. Values subsequently retreated then rose again to an all-period high of \$15.3 billion in 2005. Canada, the EEA, and Latin America remained dominant purchasers, but increasing export values to China beginning in 1996 merit attention. Overall, the value of fiber exports grew sixfold between 1978 and 2005, outpacing solid wood product values by as much as \$10.6 billion.

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**The value of fiber exports grew sixfold between 1978 and 2005, outpacing solid wood product value.**

## Imports

United States wood product imports are discussed for total, solid wood, and fiber imports.

### All wood products—

Total wood product import value increased by nearly \$29 billion between 1978 and 2005. The greatest proportion of imports arrived from a single supplier; Canada has consistently shipped more wood products to U.S. markets than all other regions combined (fig. 8). Although Canada remained the dominant supplier, inroads gained by competing suppliers in Asia, China, the EEA, and Latin America drove the overall increase in import values by 2005.

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**Total wood product import value increased by nearly \$29 billion between 1978 and 2005.**

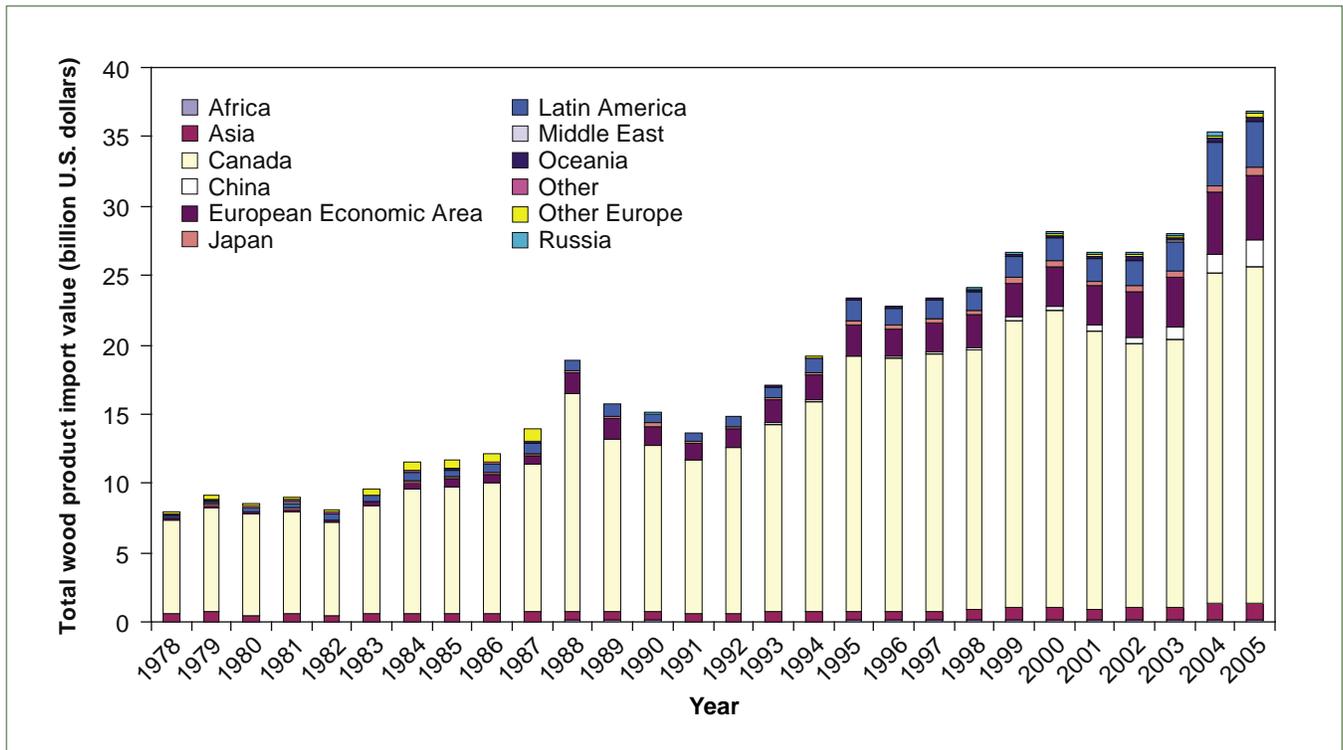


Figure 8—Total wood product import value.

**Solid wood imports were dominated by Canadian suppliers. The majority of fiber imports also originated in Canada.**

**Solid wood—**

Figure 9 illustrates that solid wood import values remained flat at about \$4 billion per year until 1992. That year, import values increased by almost \$2 billion, primarily from Canada with smaller gains from Latin America. Sharply increasing value of imports from Canada was sustained throughout the 1990s, with exceptions in 1995 and 1998. Canadian import values jumped in 1999 and again in 2004; expanded solid wood imports from Asia, China, the EEA, and Latin America became evident by 2005. Note that Canada was also the dominant market for U.S. solid wood exports.

**Fiber—**

The majority of fiber imports also originated in Canada (fig. 10). Fiber imports display an overall increasing trend in value beginning in 1978. Import values spiked at 1988, 1995, and 2000 and reached an all-period high of \$18.2 billion in 2005. The EEA, Latin America, Japan, and China expanded their share of the U.S. fiber market in the mid-1990s. The small share of import values from Other Europe is likely a data inconsistency arising from recategorizing nations in Other Europe and the EEA.

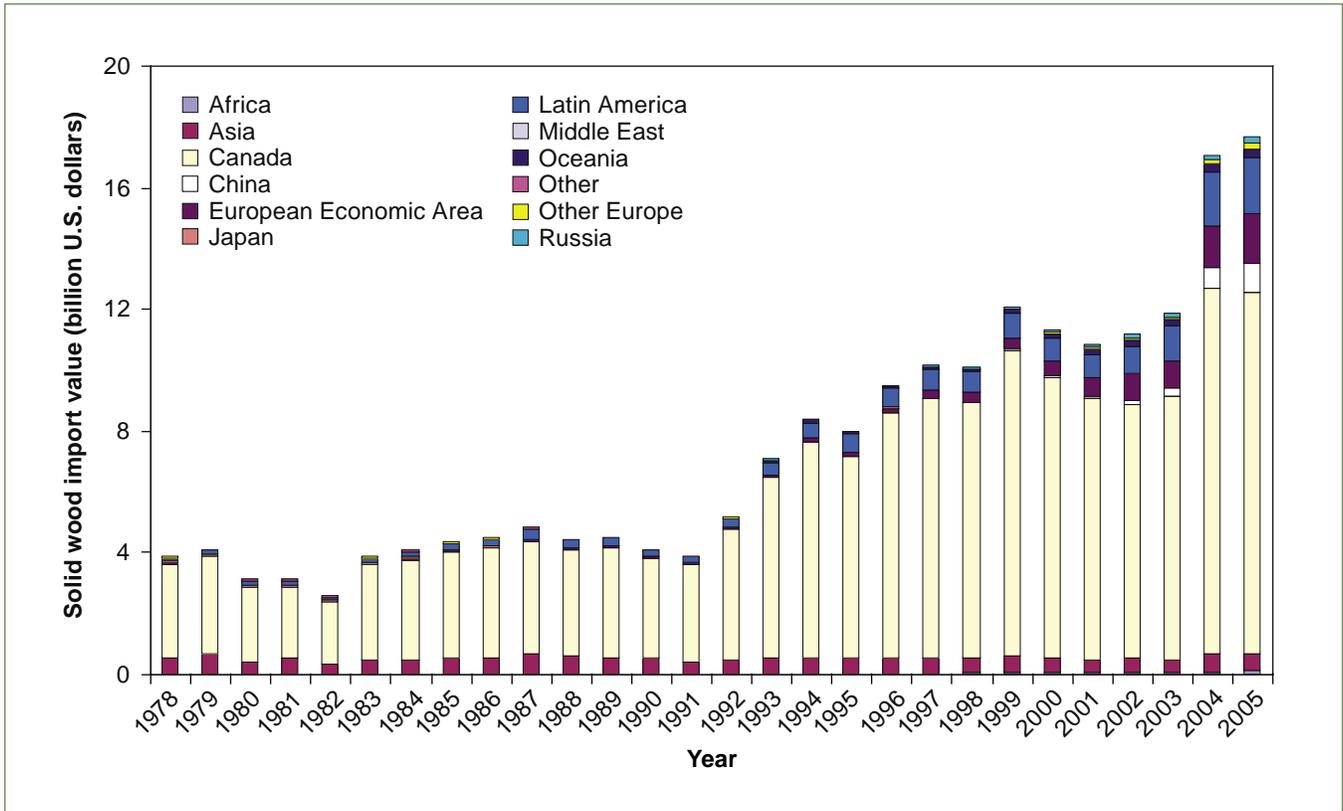


Figure 9—Solid wood import value.

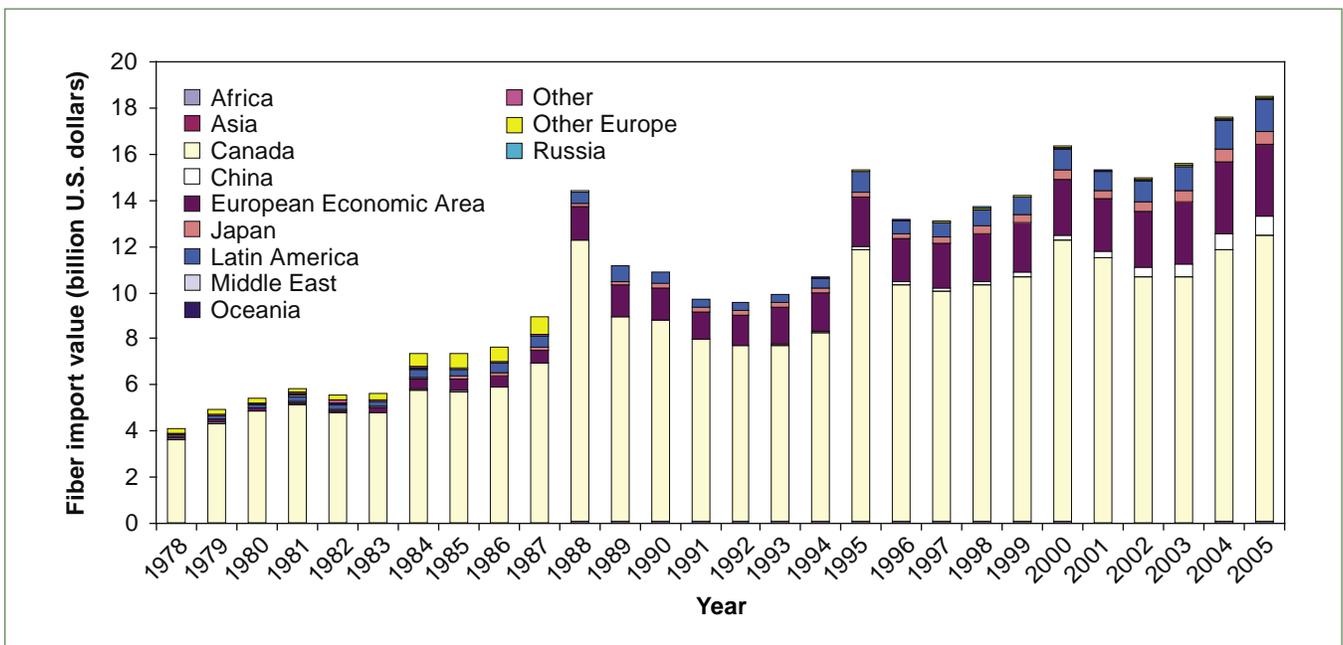


Figure 10—Fiber import value.

## Highlights: Trade by Customs District

There are a total of 45 customs districts tracking international trade in the United States. These 45 districts were aggregated into four regions: North, South, Other West, and Pacific Northwest. Appendix 6 provides a list of the customs districts composing each region. Exploring trade by U.S. customs district provides insight into changing regional trends in trade flows among international markets. Export and import value trends for all wood products, solid wood products, and fiber products are described in the same fashion as in the previous section.

### Exports

Value of U.S. wood product exports by customs region is broken down by total exports, solid wood exports, and fiber exports.

#### All wood products—

At the beginning of the data period, wood product exports originating in the Pacific Northwest had the greatest value (app. 2, table 2). Rising values in 1987 reflect expanding shipments from the Pacific Northwest and South (fig. 11). The dominance of the Pacific Northwest ended in the mid-1990s; declining Pacific Northwest export values ultimately flattened to around \$1 billion. By 2000, the bulk of exports originated in northern and southern districts; the two regions each exported about \$1.6 billion annually.

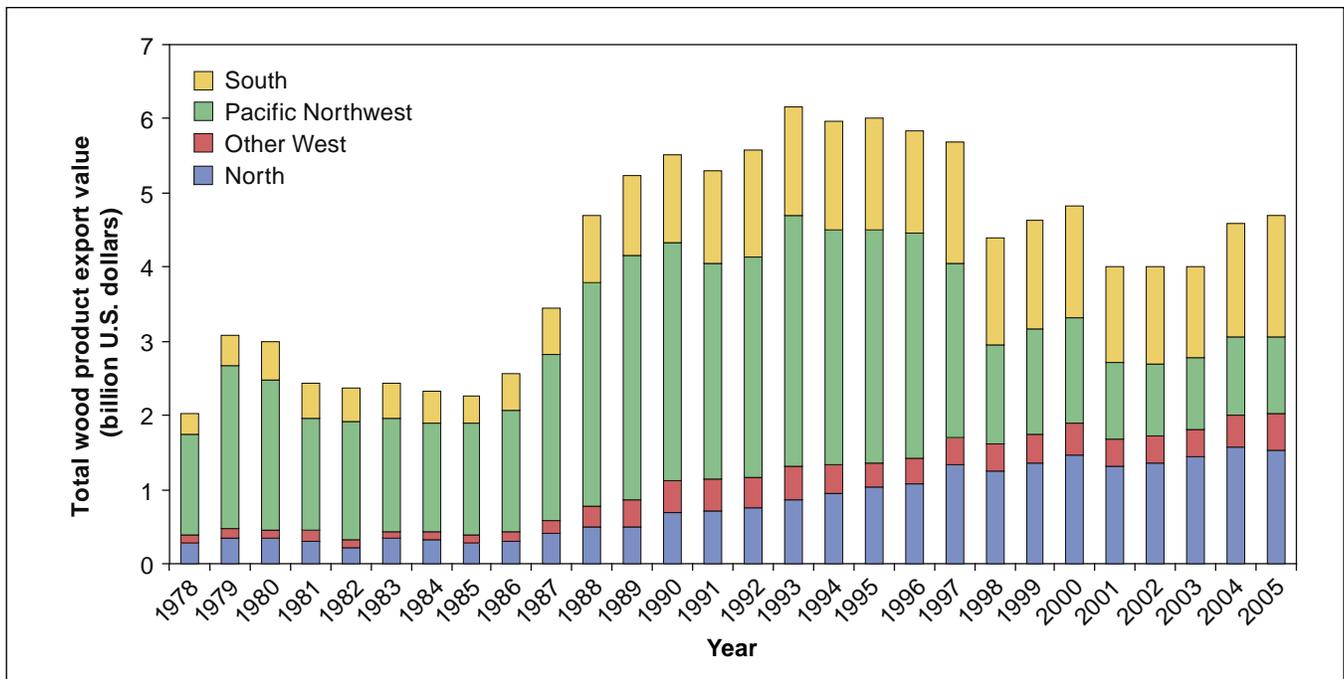


Figure 11—Total wood product export value.

**Solid wood—**

Trends in solid wood export value illustrate the diminished role of Pacific Northwest districts in U.S. wood products trade (app. 2, table 3). As evident in fig. 12, the value of Pacific Northwest solid wood exports remained greater than the three other regions combined from 1978 to 1996. After that year, exports from the Pacific Northwest fell while exports from northern and southern districts rose, reflecting a regional shift in trade flows.

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**Exports from the Pacific Northwest declined sharply after 1996.**

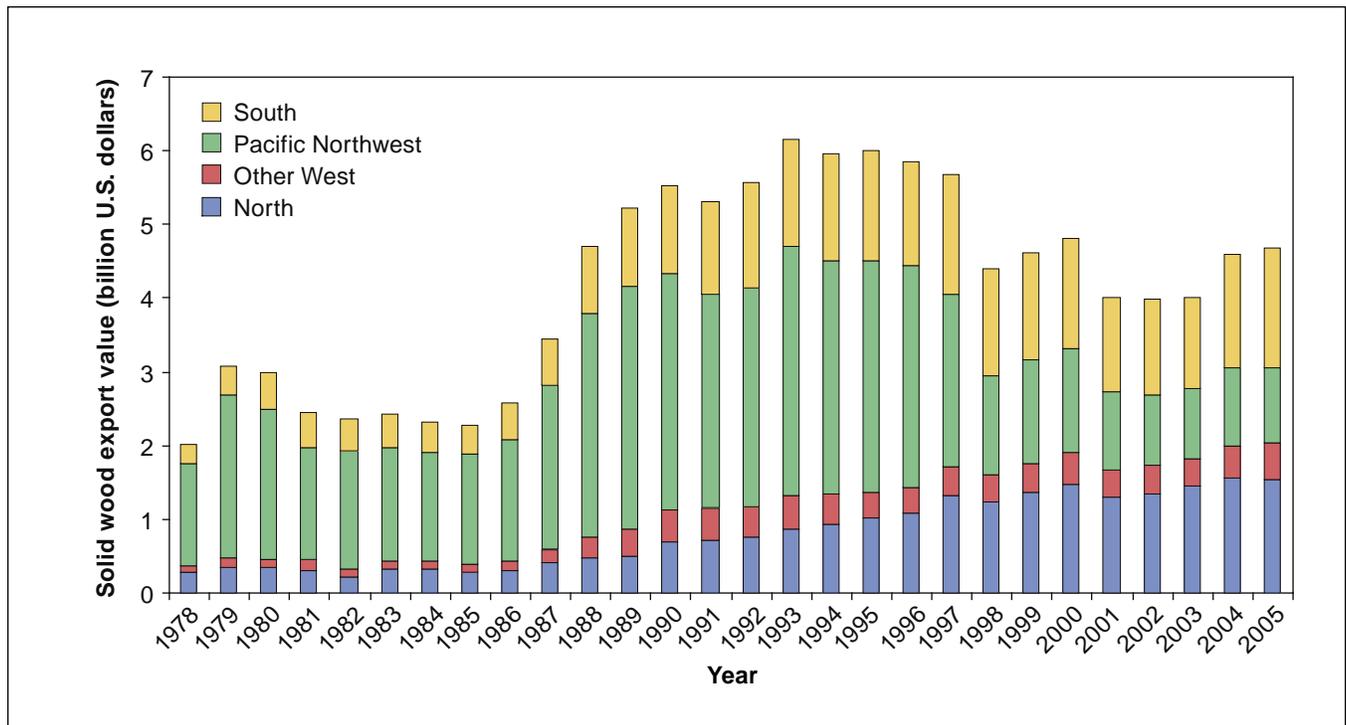


Figure 12—Solid wood export value.

**Fiber—**

Table 4 in appendix 2 contains fiber export values by customs region. Southern districts were the leading U.S. fiber exporting region. Although fiber export values from northern districts rose from \$2 billion to \$4.7 billion between 1992 and 2005, southern districts maintained the majority share of export fiber value (fig. 13). Overall, fiber exports rose to about \$15.7 billion in 2005 owing to increased value of shipments from southern and northern districts.

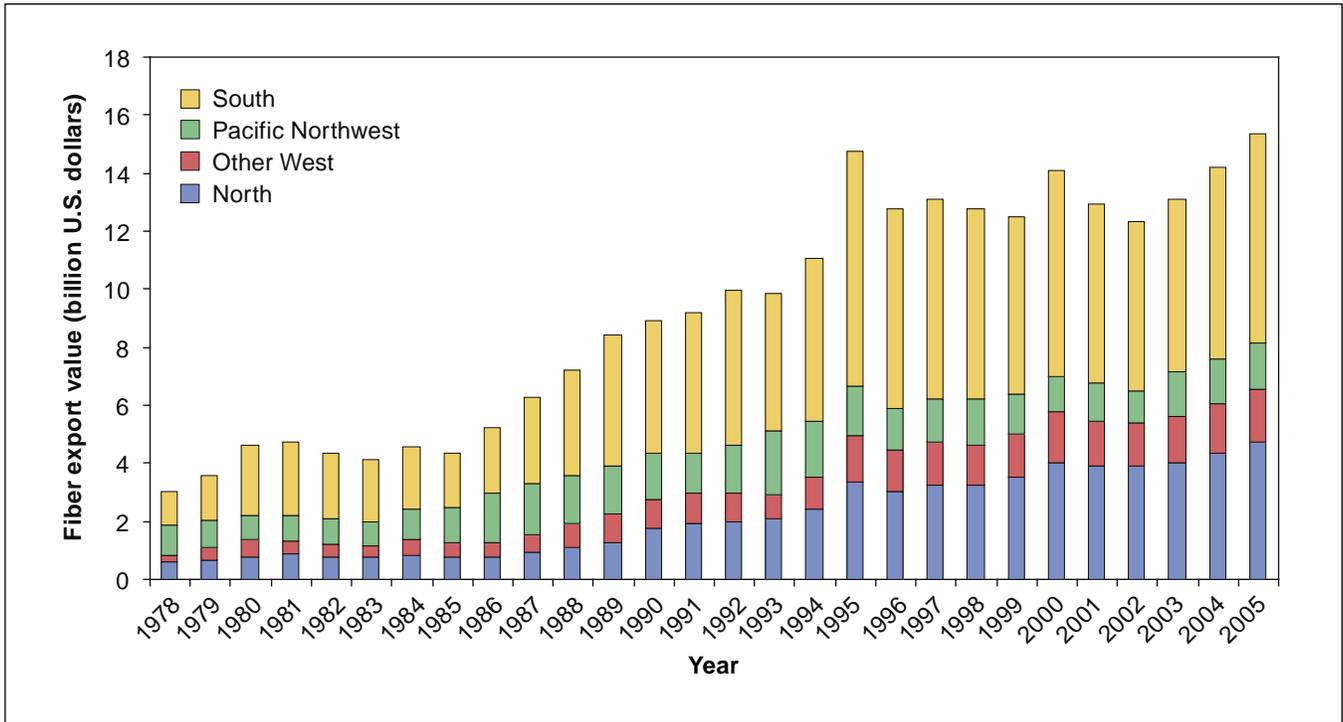


Figure 13—Fiber export value.

**The North remained the dominant import destination for wood products.**

### Imports

Value of U.S. wood product imports by customs region is also shown as total imports, solid wood imports, and fiber imports.

#### All wood products—

Total value of U.S. wood product imports by region appears in appendix 2, table 5. The North remained the dominant import destination for wood products (fig. 14). Although shipments to districts in the South, Other West, and Pacific Northwest began rising in the late 1990s, the greatest value of wood product imports consistently arrived at northern districts.

#### Solid wood—

Table 6 in appendix 2 indicates that solid wood import values remained constant until the mid-1990s. Rising import values in 1994 were reflected in increased value of shipments to northern districts (fig. 15). Import values to the North decreased and flattened after 1999 then rebounded again in 2004 and 2005, largely owing to changing shipments from Canada. Import values to the Other West, Pacific Northwest, and South continued to rise as well, reflecting a diversification of solid wood suppliers.

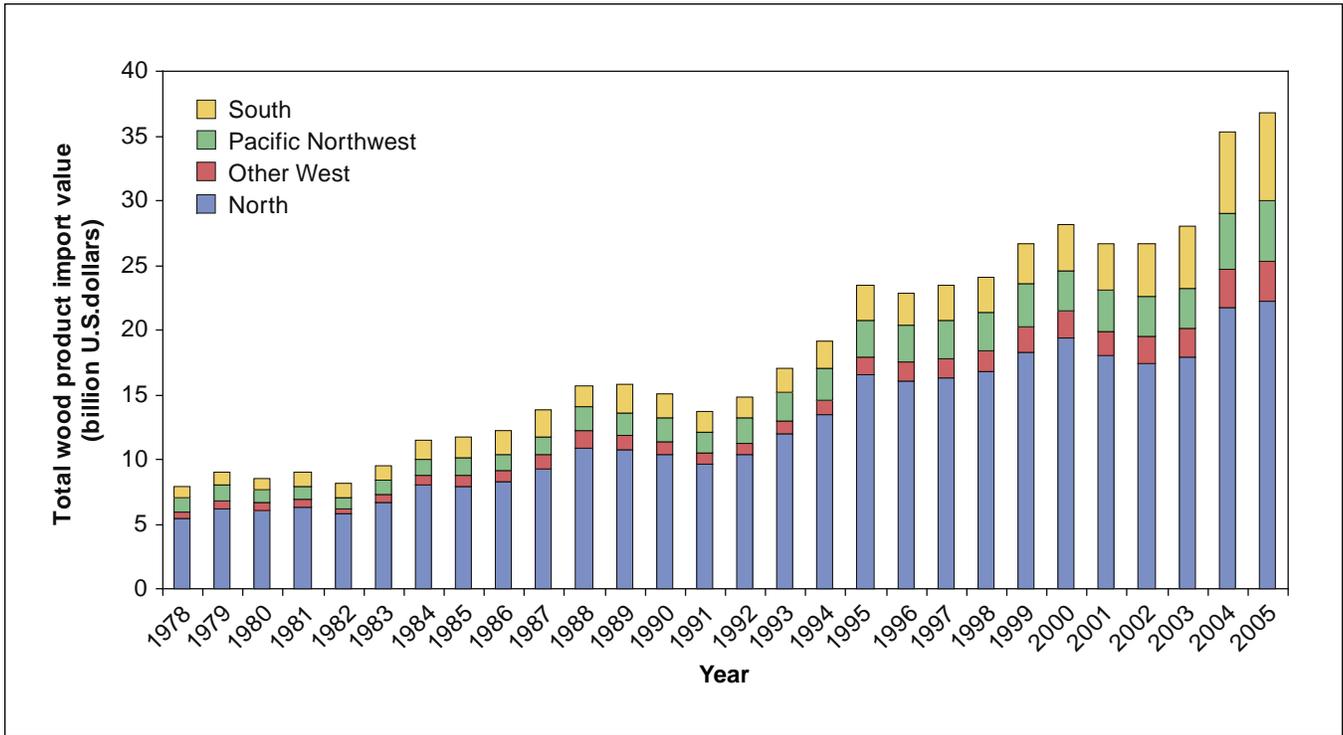


Figure 14—Total wood product import value.

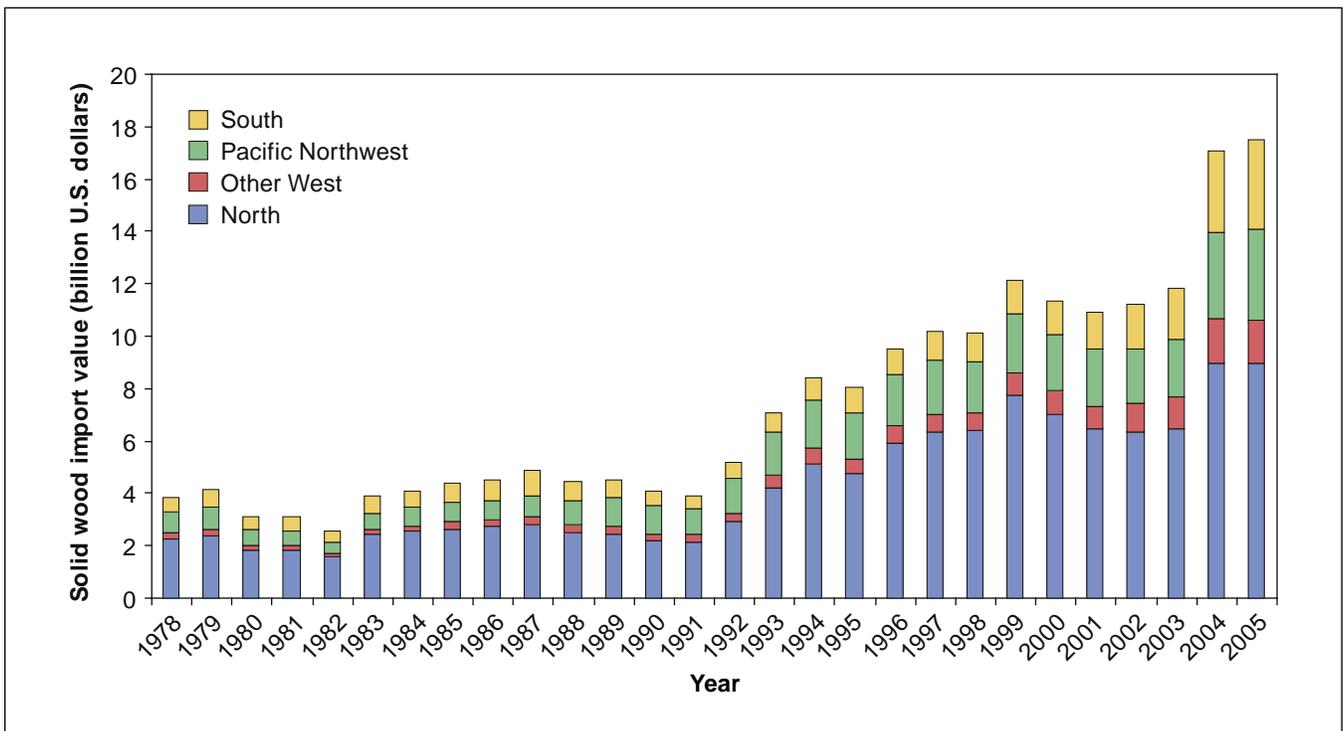


Figure 15—Solid wood import value.

**Fiber—**

Figure 16 shows that northern districts were the dominant destination for fiber imports as well. Fiber import values to northern districts drove trends in total import values, with peaks in 1988, 1995, and 2000. Although southern districts made modest gains, more fiber was received into the North than the other regions combined. By 2005, 70 percent of the total value of fiber imported into the United States arrived at northern districts. Table 7 in appendix 2 contains fiber import values over time.

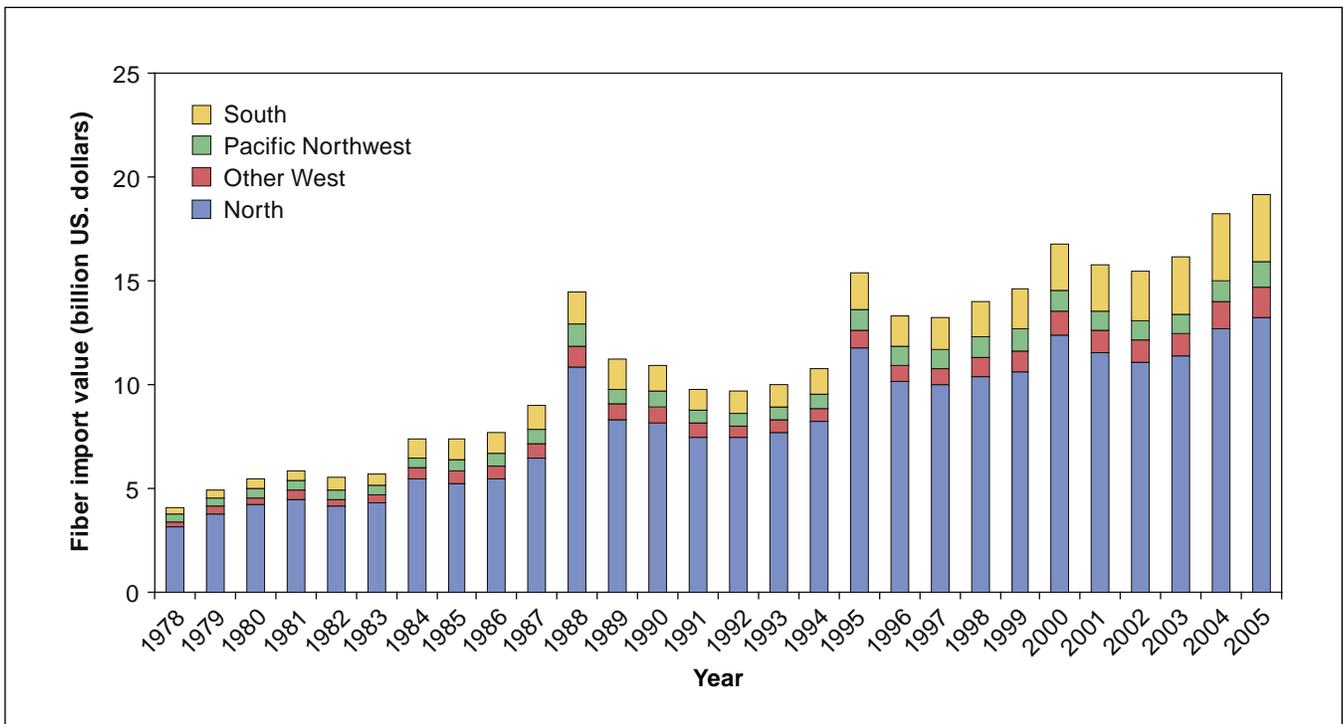


Figure 16—Fiber import value.

**Highlights: Trade by Product**

This section focuses on quantity measures of trade for 20 wood product commodity groups. Trends for each product are discussed, and graphs display the trade balance and imports and exports by trading partner and by region. Conversion factors used to combine data from 1978–88 with data from 1989–2005 are listed in appendix 3. Codes for each wood product included in commodity groups are provided in appendix 7. Microsoft Excel spreadsheets in appendix 8 on the supplemental CD-ROM contain summary tables 8 through 87 used to generate these graphs. Export and import quantity and unit value for each commodity over time are provided in these tables.

## Fiberboard

Fiberboard exports and imports were not reported in Chmelik et al. (1989). The fiberboard commodity series is composed of medium density fiberboard (MDF) and insulating board with observations from 1988 to 2005. For 1988, export data were originally reported in thousand square feet and import data were reported in pounds. Both were converted to cubic meters; pounds were converted by assuming an average product weight of 0.28 short tons per thousand square feet and panels measuring 8 feet long, 4 feet wide, and 3/8-inch thick. Data after 1988 were available directly in cubic meters for both exports and imports.

Between 1988 and 1995, the volume of fiberboard exported from the United States was modestly greater than imports, although both were generally flat (fig. 17a). After hovering between 250 000 and 500 000 cubic meters for nearly a decade, imports shot up to reach a record 2.8 million cubic meters in 2000. Imports retreated after 2000, but rose and leveled off at 2.5 million cubic meters by 2005. Exports remained flat throughout the reporting period but reached an all-period high of 590 000 cubic meters in 2005.

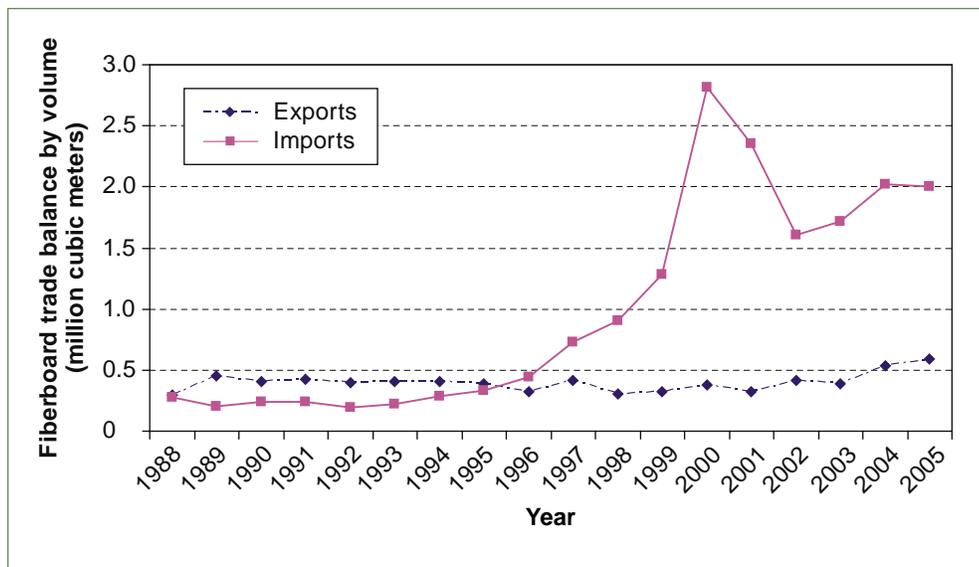


Figure 17a—Fiberboard trade balance by volume.

The majority of U.S. fiberboard exports were sent to Asian destinations from 1988 until the mid-1990s (fig. 17b). Fiberboard exports to Canada remained stable until 1994 when they almost doubled. In 2004, exports to Canada jumped again; by 2005, Canada imported more fiberboard from the United States than all other destinations combined. Latin American imports of U.S. fiberboard rose by 150 percent between 1998 and 2005 as well.

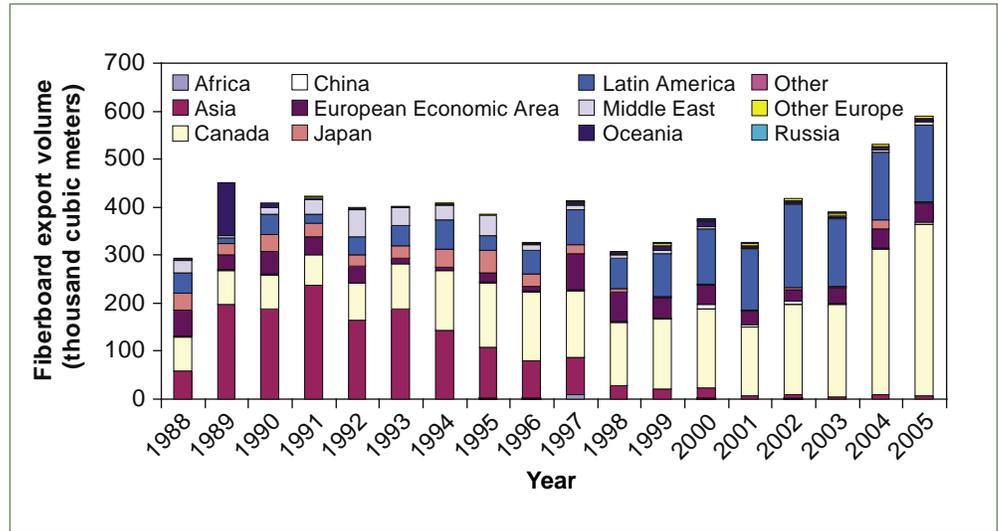


Figure 17b—Fiberboard export volume to selected destinations.

**Rising fiberboard exports from northern districts in 2004 and 2005 reflected rising shipments to Canada.**

Figure 17c shows that most fiberboard exports were shipped from Pacific Northwest and Other West Regions between 1988 and 1997. In 1997, both northern and southern customs districts made substantial inroads and maintained a similar share of fiberboard export shipments between 1998 and 2003. Rising fiberboard exports from northern districts in 2004 and 2005 reflected rising shipments to Canada.

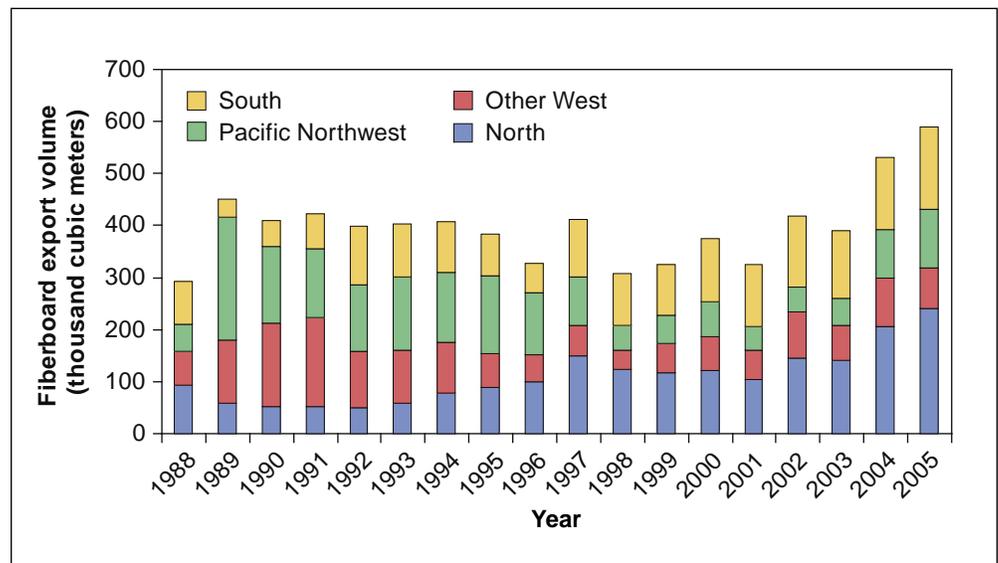


Figure 17c—Fiberboard export volume by customs region.

Fiberboard imports remained small and relatively flat until shipments from Canada began rising in 1996 (fig. 17d). Canada suppliers made steady inroads into U.S. markets until imports flattened in 2001. The EEA fiberboard shipments shot up by 1.5 million cubic meters in 2000 then retreated back to historical levels by 2002. Although Canada remained the leading supplier, fiberboard imports from China, the EEA, Latin America, and Oceania strengthened by 2005.

**Although Canada remained the leading supplier, fiberboard imports from China, the EEA, Latin America, and Oceania strengthened by 2005.**

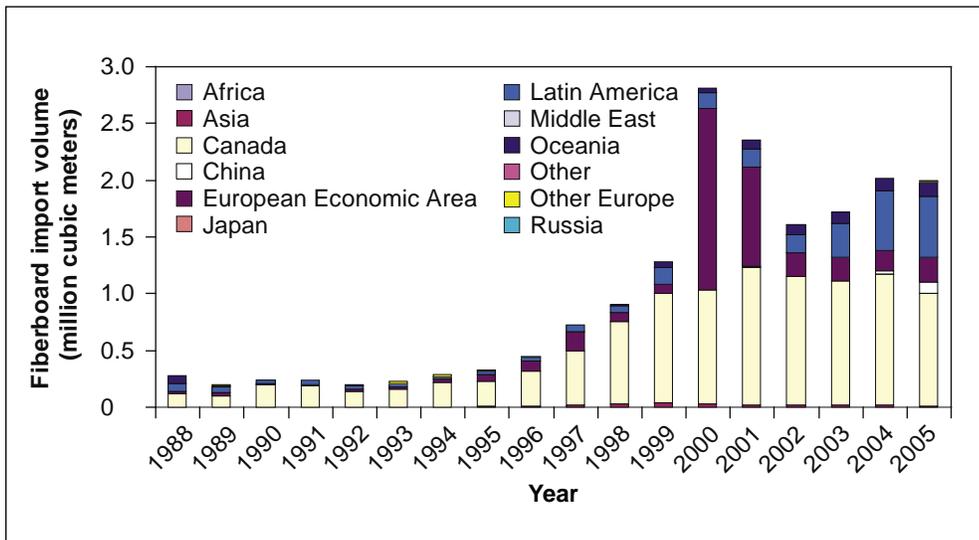


Figure 17d—Fiberboard import volume from selected destinations.

Imports primarily arrived at northern customs districts and reflect shipments from Canada (fig. 17e). The 2-year surge in fiberboard importing activity in southern districts in 2000 and 2001 corresponds to the jump in shipments from the EEA discussed above; southern imports subsided by 2002. By 2005, fiberboard imports into the South, Other West, and Pacific Northwest Regions had grown modestly while shipments to the North fell.

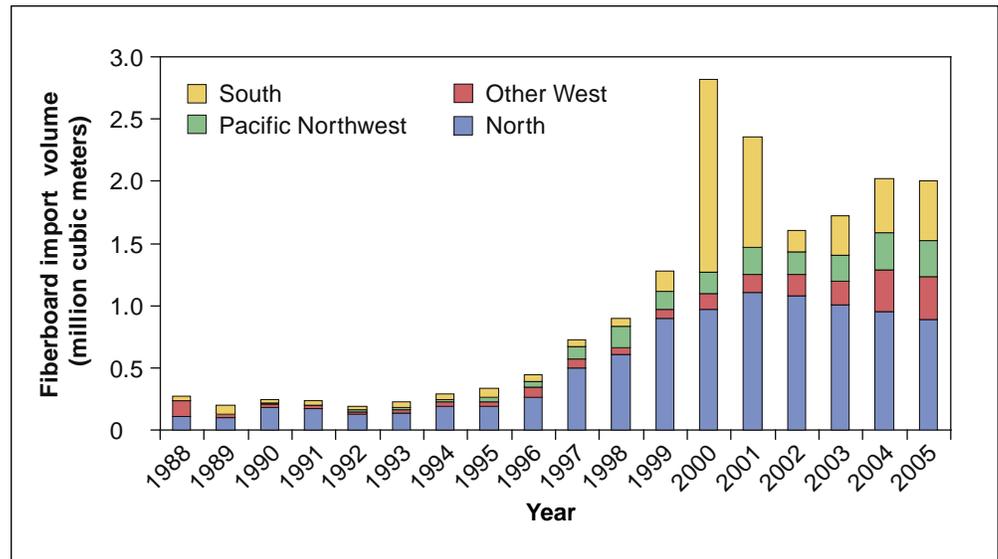


Figure 17e—Fiberboard import volume by customs region.

## Hardboard

Hardboard export volume was reported in thousand short tons for the period 1978–84 and in thousand square feet, 1/8-inch basis, for the period 1985–87 in Chmelik et al. (1989). Data for the year 1988 were reported in thousand square feet. To convert weight to volume for the 1978 to 1984 period, an average product weight of 1.140 short tons per thousand square feet of hardboard was assumed. Between 1985 and 1988, export volume was converted to cubic meters. Hardboard imports were aggregated within an “Other solid wood” category in the Chmelik et al. publication and therefore unavailable, limiting the reporting period for imports to 1988–2005. Import data for 1988 were converted from thousand square feet to cubic meters. Exports and imports after 1988 were originally reported in metric units.

Figure 18a shows the balance of trade in hardboard. After a relatively flat decade in the 1980s, hardboard export volume rose modestly to peak near 350 000 cubic meters in 1995. Subsequent hardboard exports fell back to 1980s levels by 2005. Import data were not available before 1988. Hardboard imports remained relatively modest with gradual expansion until imports jumped after 2000, reaching an all-period high of 1.4 million cubic meters by 2005.

The modest growth of hardboard exports in 1990 was led by expanding demand in Canada (fig. 18b). Hardboard exports to Asia, the EEA, and the Middle East stepped up in 1992. Exports to the EEA rose dramatically to exceed exports to Canada in 1995 and 1996 before retreating to almost nothing in 1998. By 2005, hardboard exports had fallen to 1980s levels, although Canada remained the dominant purchaser.

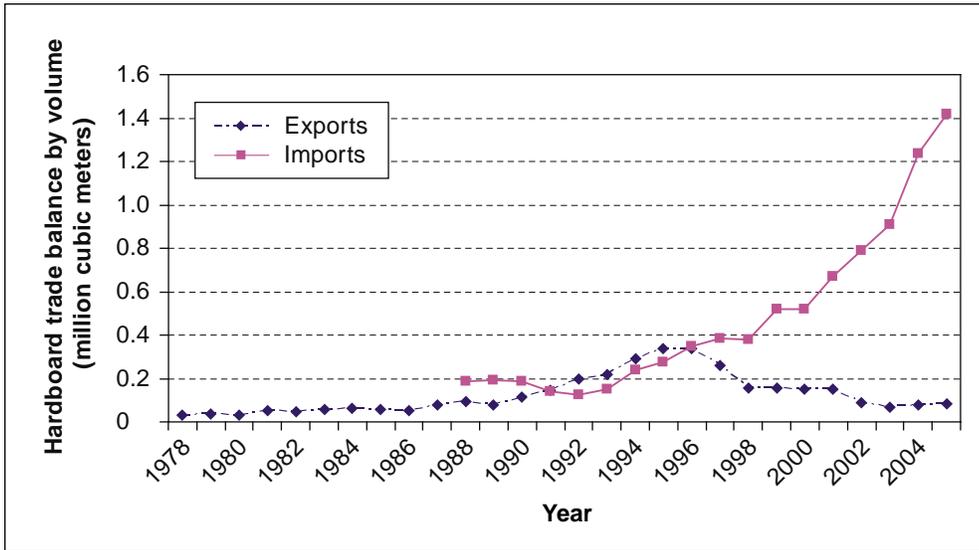


Figure 18a—Hardboard trade balance by volume.

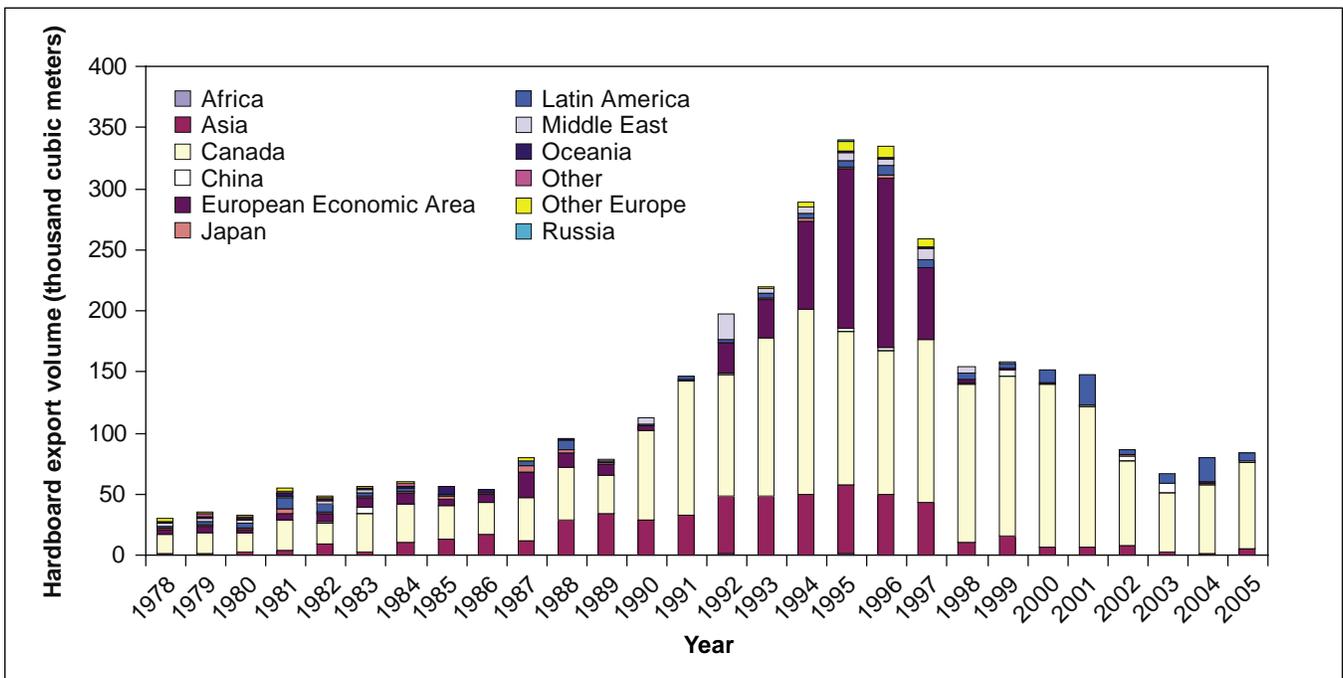


Figure 18b—Hardboard export volume to selected destinations.

Hardboard exports primarily originated from northern customs districts throughout the reporting period (fig. 18c). Increased Pacific Northwest and southern hardboard exports observed in 1992 mirror increased shipments to Asia and the EEA. Exports from Pacific Northwest and southern districts tailed off after peaking in 1994 and 1995, respectively. Exports from the North peaked in 1996 and steadily declined subsequently.

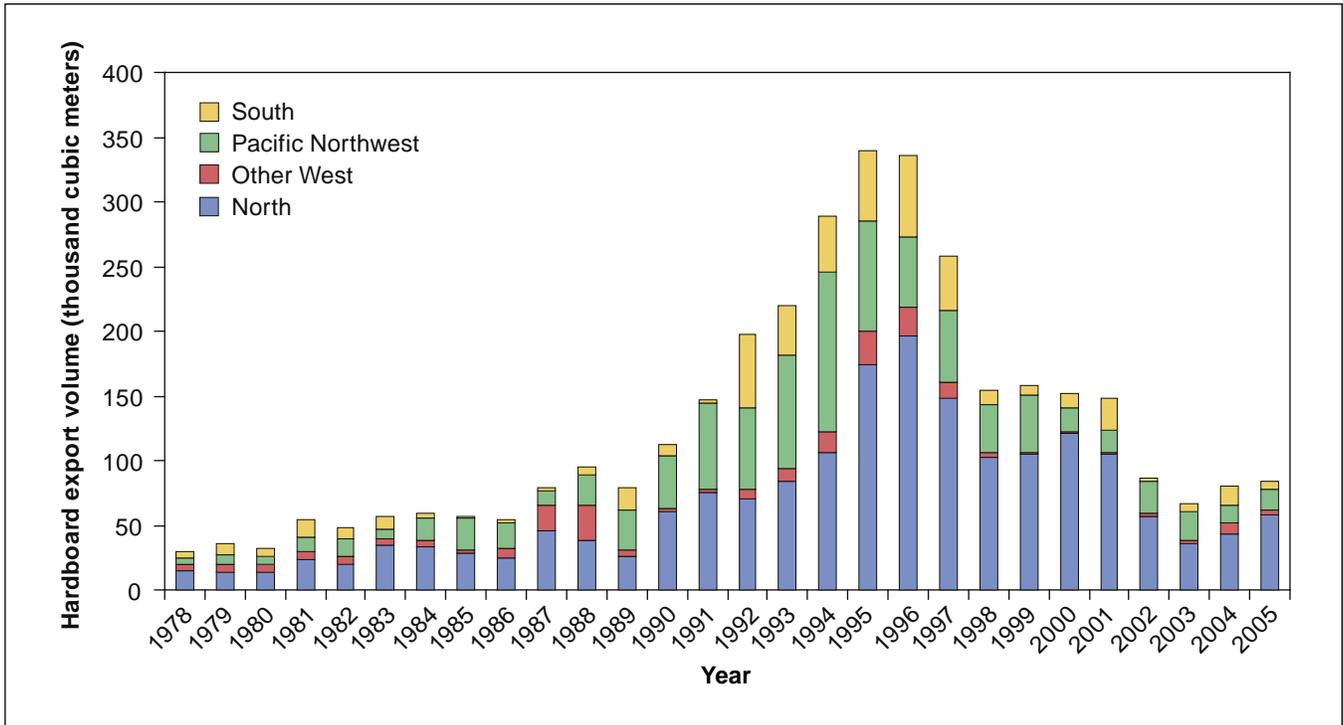


Figure 18c—Hardboard export volume by customs region.

**A surge of imports from EEA suppliers after 1998 widely expanded European market share, and the EEA remained as the dominant supply region through 2005.**

Figure 18d shows that almost all hardboard imports originated in Latin America and Canada from 1988 to the late 1990s. A surge of imports from EEA suppliers after 1998 widely expanded European market share, and the EEA remained as the dominant supply region through 2005. Inroads by producers in Asia, China, and Other Europe and expanding market share of Canadian and Latin American producers highlights the diversification of supply regions over time.

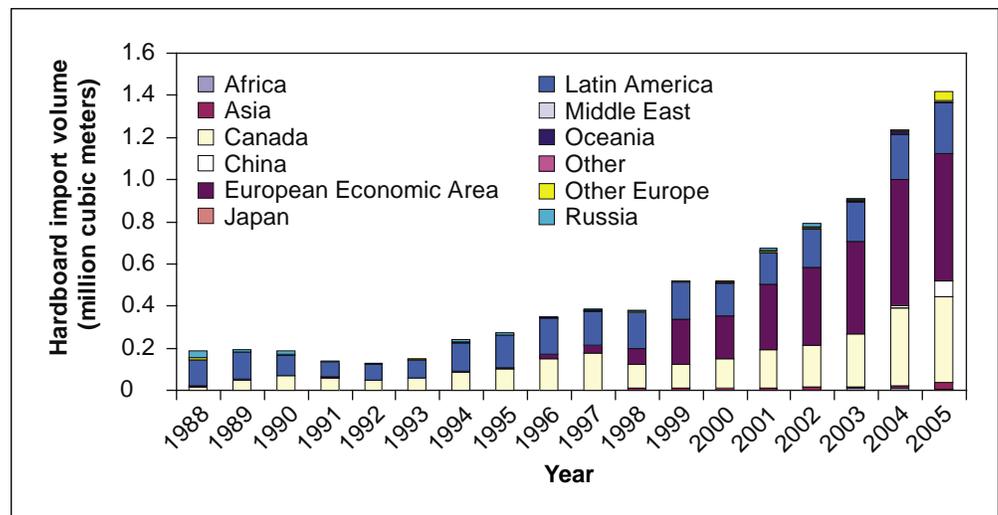


Figure 18d—Hardboard import volume from selected destinations.

Northern and southern customs districts received almost equal shares of hardboard import volume throughout the reporting period (fig. 18e). Although the Other West and Pacific Northwest Regions made modest gains, the North and South remained the leading destinations for hardboard imports by 2005.

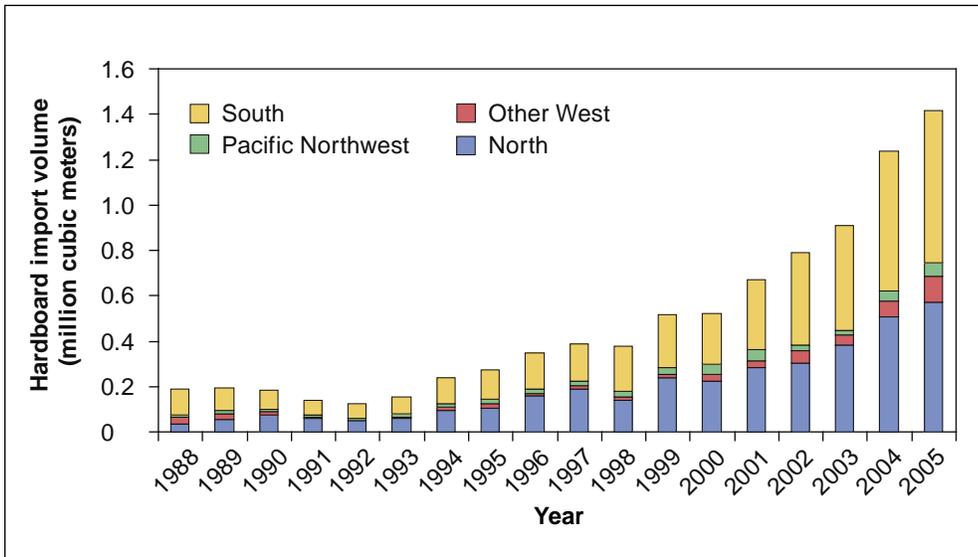


Figure 18e—Hardboard import volume by customs region.

## Hardwood Logs

Hardwood log exports and imports were reported in thousand board feet for the period from 1978 to 1988; both were converted to cubic meters. Data after 1988 were originally reported in metric units.

Figure 19a shows that hardwood logs are among the few commodities where exports consistently exceeded imports. Between 1978 and 2005, hardwood log imports remained under 300 000 cubic meters while exports rose by over 1 million cubic meters. The most rapid expansion occurred between 1996 and 2002; although hardwood logs exports declined after 2002, they remained strong through 2005.

Figure 19b shows that until 1990, hardwood log exports were primarily destined for the EEA. Declining exports to the EEA were met with rising exports to Canada, and Canada became the dominant market for hardwood log exports by 1991. The proportion of hardwood logs going to Canadian destinations peaked at 65 percent in 2002. Slowing exports to Canada after 2002 were nearly offset by growing exports to Asia and China.

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**Hardwood logs are among the few commodities where exports consistently exceeded imports.**

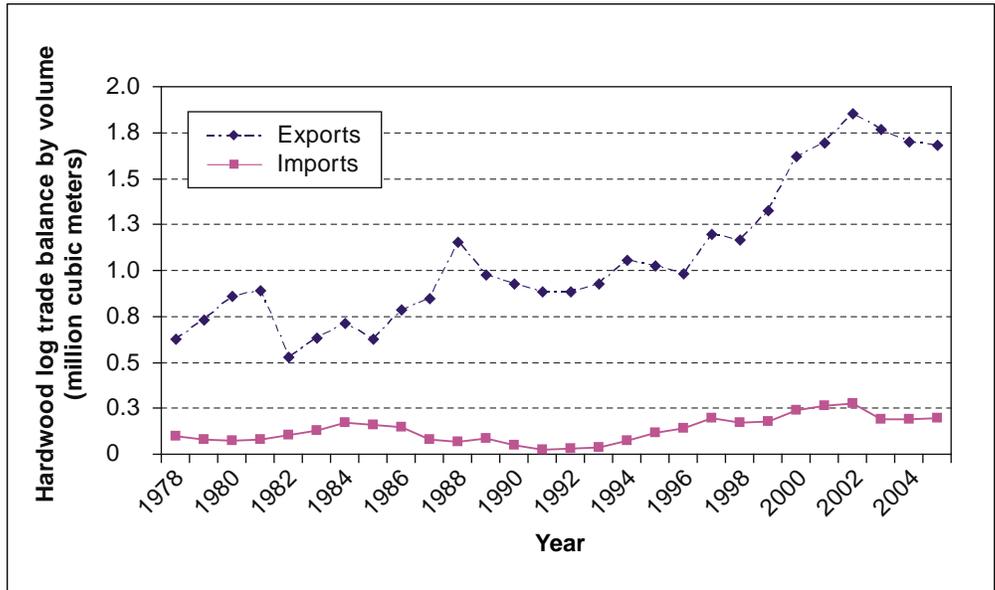


Figure 19a—Hardwood log trade balance by volume.

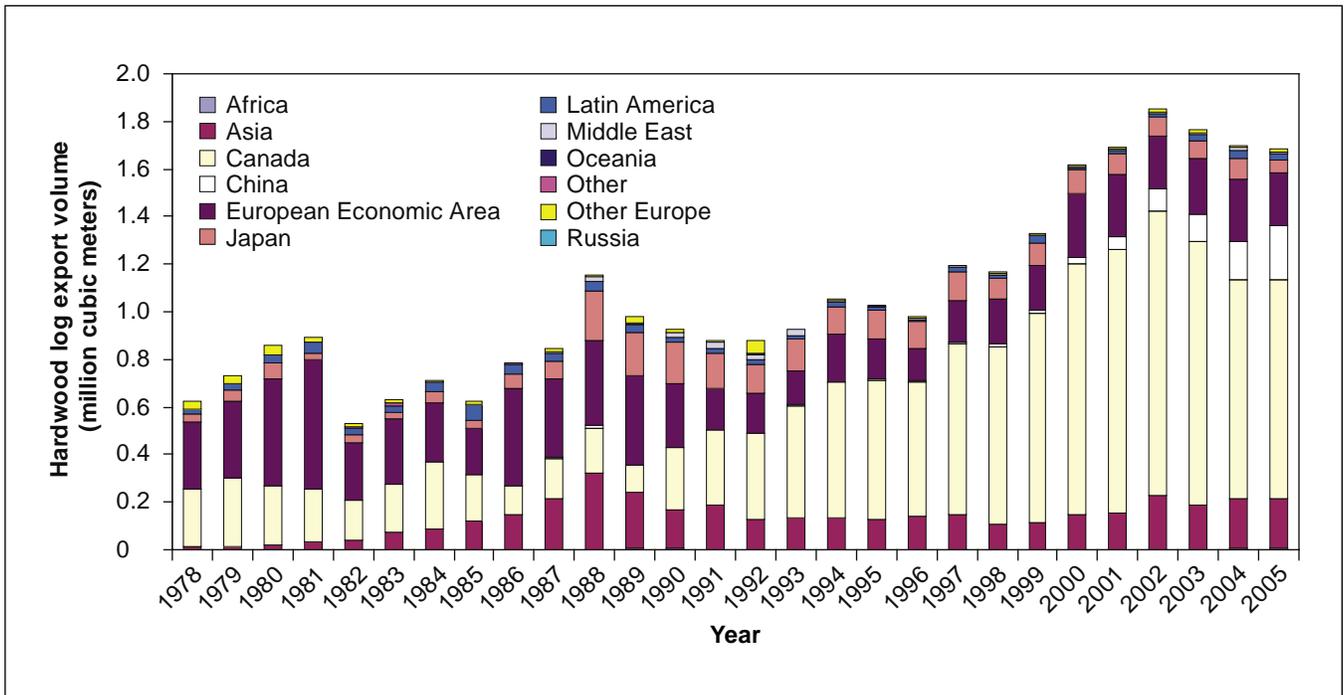


Figure 19b—Hardwood log export volume to selected destinations.

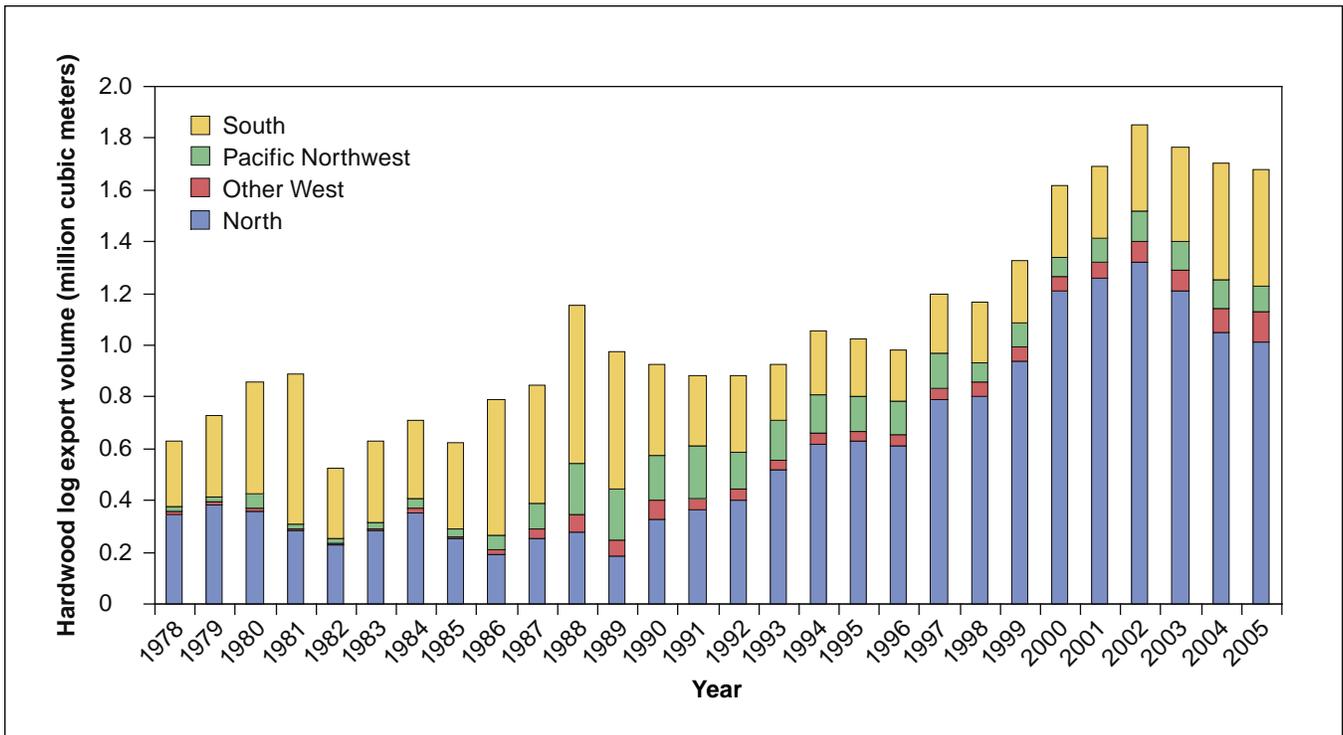


Figure 19c—Hardwood log export volume by customs region.

Hardwood logs were mostly exported from the South during the 1980s (fig. 19c). Exports from northern districts outpaced the South after 1991, reflecting the growing demand for U.S. hardwood logs in Canada. Conversely, after 2002, declining shipments to Canada meant declining exports from the North, whereas shipments from other regions remained relatively constant.

Hardwood log imports were dominated by shipments from Canada with no close competitor among trading partners (fig. 19d). With the exception of Asia in 1985 and the EEA in 1986, Canada consistently sent the majority of hardwood logs imported by the United States. Although hardwood log imports fell by 85 000 cubic meters between 2002 and 2003, the proportion of Canadian imports remained nearly the same.

Import shipments primarily arrived at northern customs districts (fig. 19e). The spike in imports to the Other West Region reflected the unusual shipment of logs from Asia that year, as discussed above. Northern districts received more hardwood log imports than all other districts combined, a trend that was maintained despite declining shipments in 2003. Overall, Canada was both the dominant supplier and destination for hardwood logs, and trade was primarily conducted in northern districts.

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**Overall, Canada was both the dominant supplier and destination for hardwood logs, and trade was primarily conducted in northern districts.**

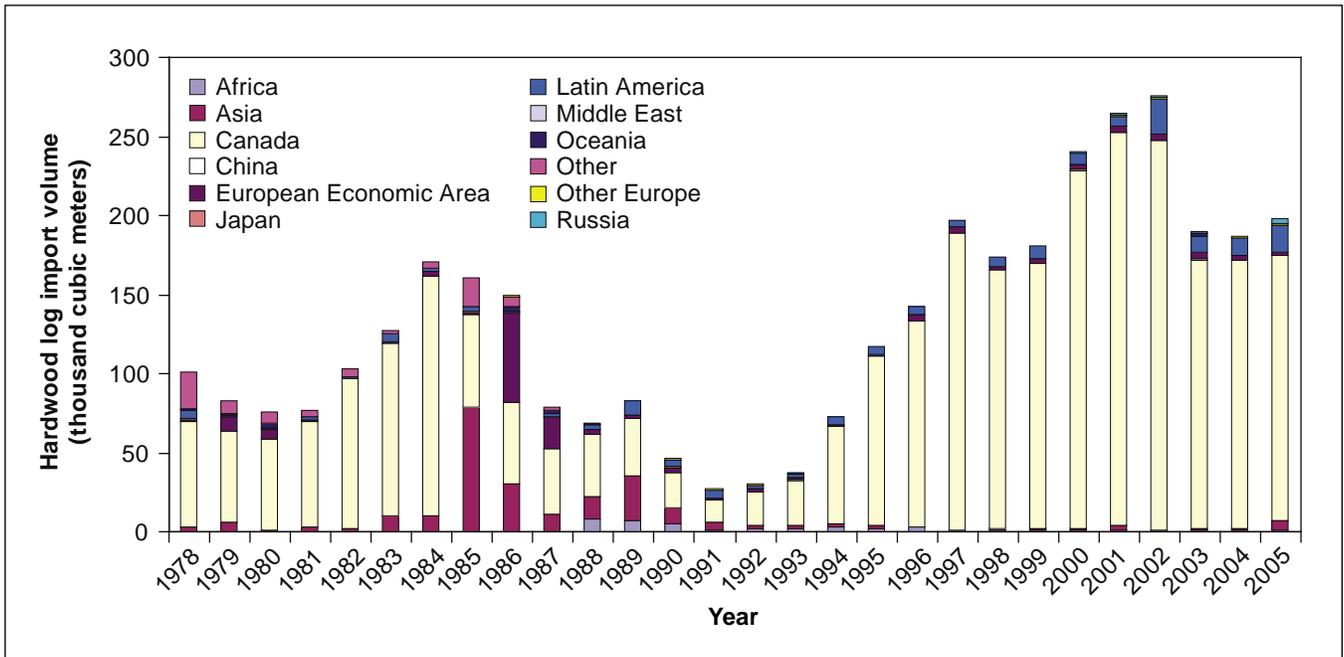


Figure 19d—Hardwood log import volume from selected destinations.

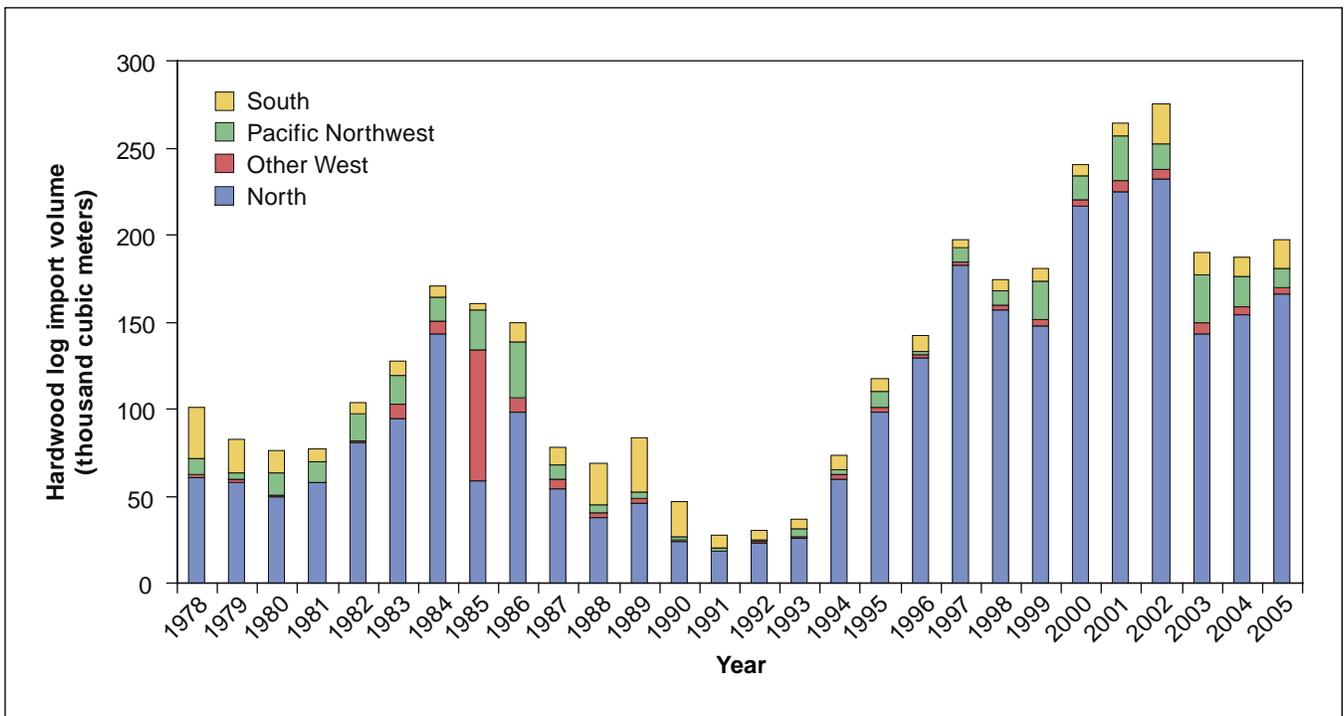


Figure 19e—Hardwood log import volume by customs region.

## Hardwood Lumber

Hardwood lumber exports were converted from thousand board feet to cubic meters for the period 1978–88. Hardwood lumber imports reported in Chmelik et al. for 1978–87 included both hardwood lumber and hardwood flooring. For the period 1988–2005, hardwood flooring was removed to more accurately represent hardwood lumber trade. Although the proportion of flooring in the earlier data is unknown, imports from 1978–87 were directly converted from thousand board feet to cubic meters. Exports and imports after 1988 were originally reported in cubic meters.

Hardwood lumber was another unusual commodity where exports were consistently greater than imports (fig. 20a). After 1979, exports and imports trended upward together until 1988 when exports spiked at over 2.5 million cubic meters. Exports declined in 1989, but increased overall throughout the 1990s. Hardwood lumber imports rose after an all-period low in 1991 to peak in 2000 and 2005. In 2005, exports led imports by a margin of about 1 million cubic meters.

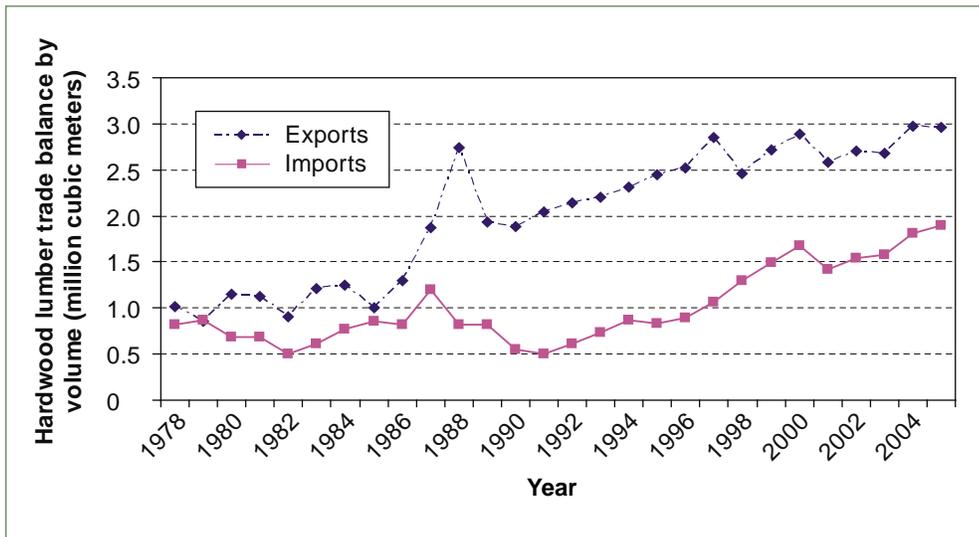


Figure 20a—Hardwood lumber trade balance by volume.

International purchasers of U.S. hardwood lumber exports remained relatively consistent throughout the reporting period (fig. 20b). The expansion of exports in the early 1990s was driven by increased shipments to Canadian destinations while shipments to Asia and the EEA leveled off and shipments to Japan fell off. Hardwood lumber exports to China began expanding in 1999; by 2005 China was the third leading destination.

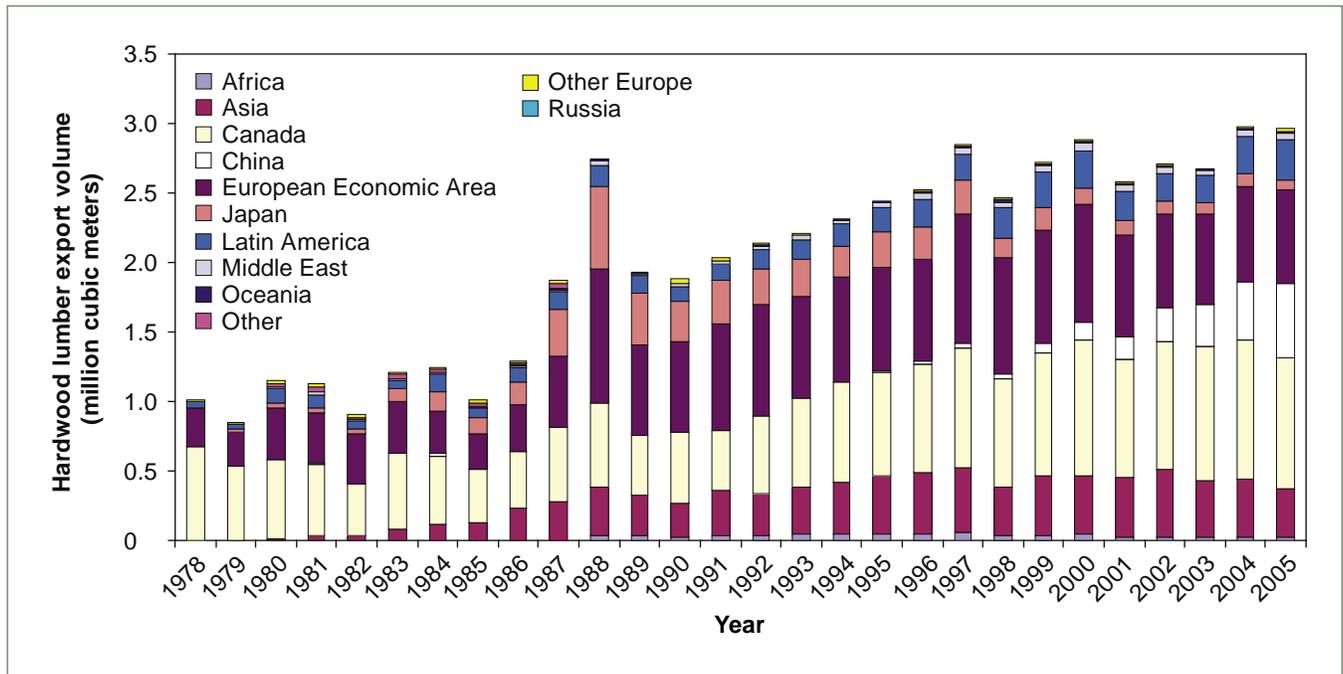


Figure 20b—Hardwood lumber export volume to selected destinations.

**Hardwood lumber imports were supplied from Latin America, Canada, and Asia in fairly equal proportions until Canada assumed the dominant position in 1990.**

Figure 20c shows that the majority of hardwood lumber exports were shipped from northern districts until the mid-1980s. Subsequent gains in the South reflect rising exports to the EEA; by 1986 northern and southern districts were exporting a similar share of the hardwood lumber leaving the United States. Hardwood lumber exports from the Pacific Northwest and Other West Regions were consistently overshadowed by exports originating in the North and South.

Hardwood lumber imports were supplied from Latin America, Canada, and Asia in fairly equal proportions until Canada assumed the dominant position in 1990 (fig. 20d). Hardwood lumber imports from Canada expanded rapidly to reach 1.1 million cubic meters in 2005, a 67-percent share of the total. Small gains were observed in imports from African nations after 1995 and the EEA in 2000. Hardwood lumber imports from Latin America remained near 240 000 cubic meters throughout the reporting period.

Before 1990, the majority of imports arrived at southern districts (fig. 20e). Expanding shipments into northern districts reflect rising hardwood lumber imports from Canada. From 1992 on, more hardwood lumber arrived at northern districts than the other three regions combined. The proportion of imports arriving at districts in the South, Other West, and the Pacific Northwest remained relatively unchanged over the same period.

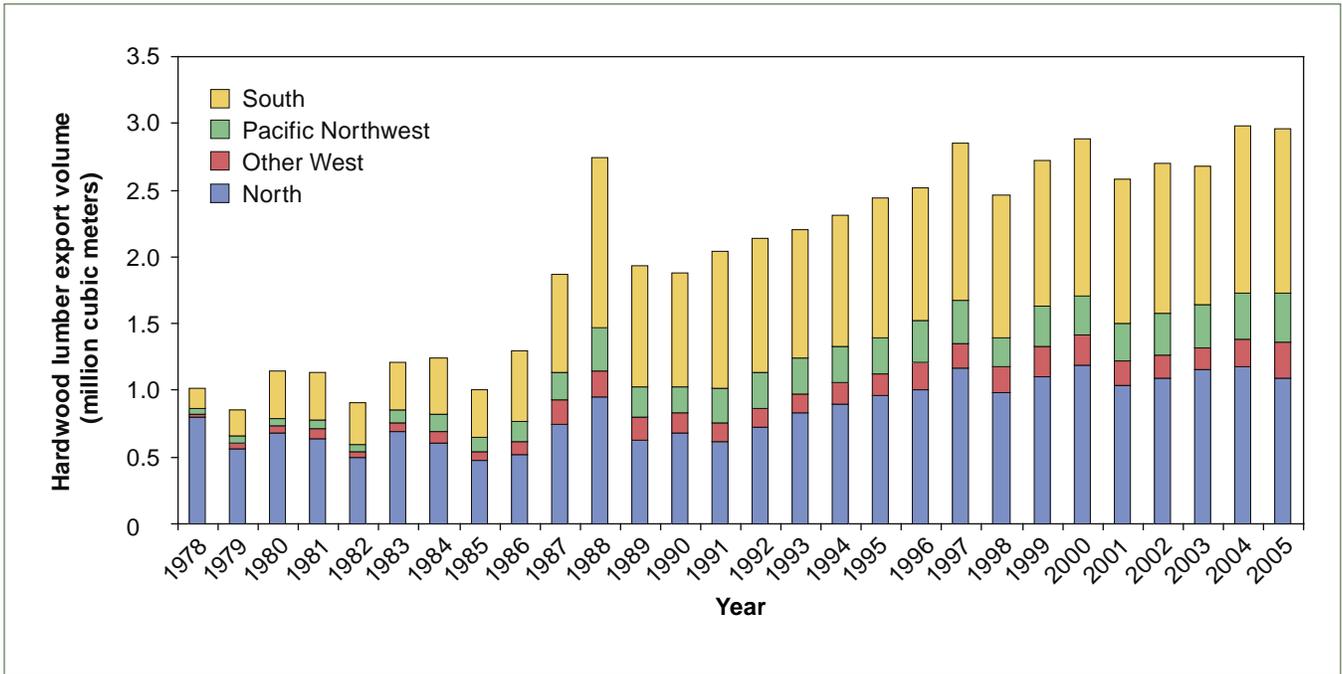


Figure 20c—Hardwood lumber export volume by customs region.

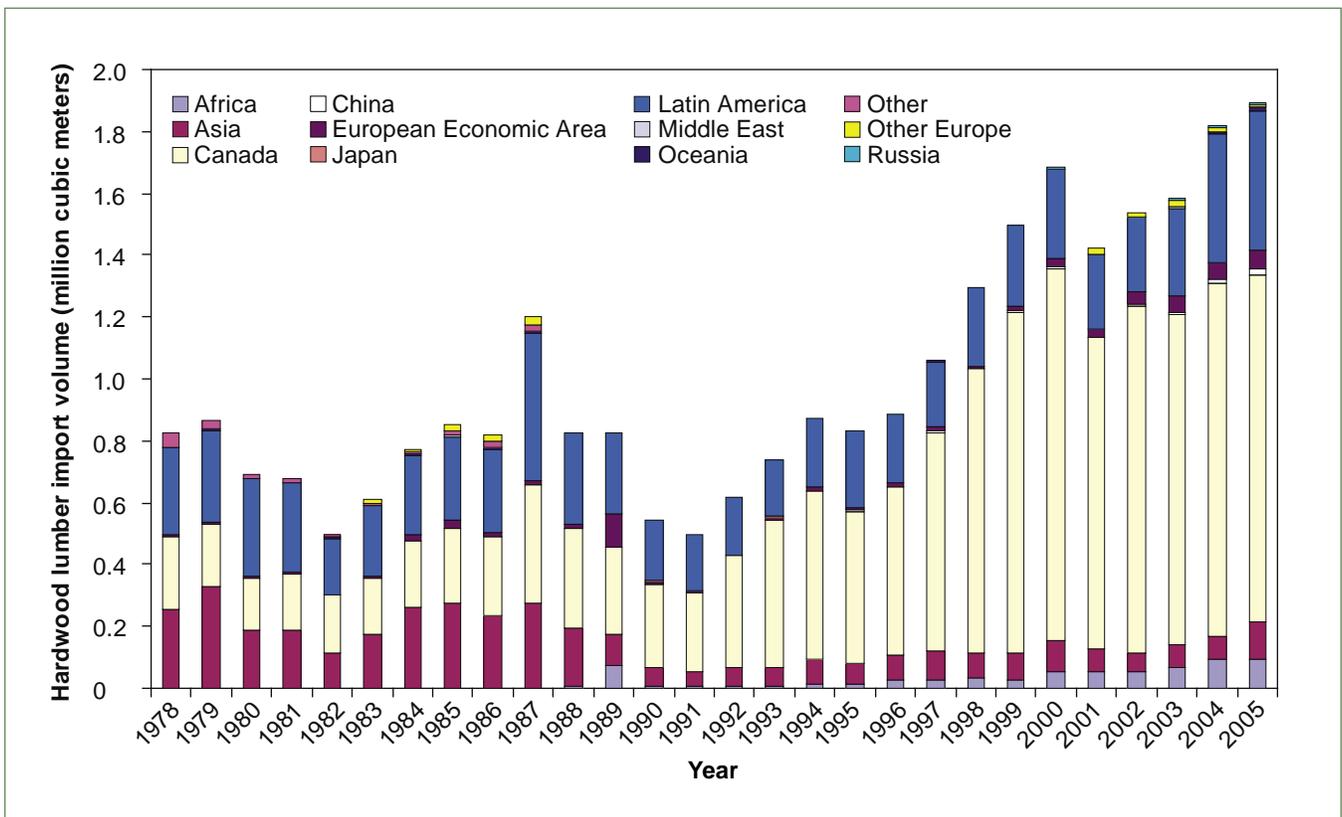


Figure 20d—Hardwood lumber import volume from selected destinations.

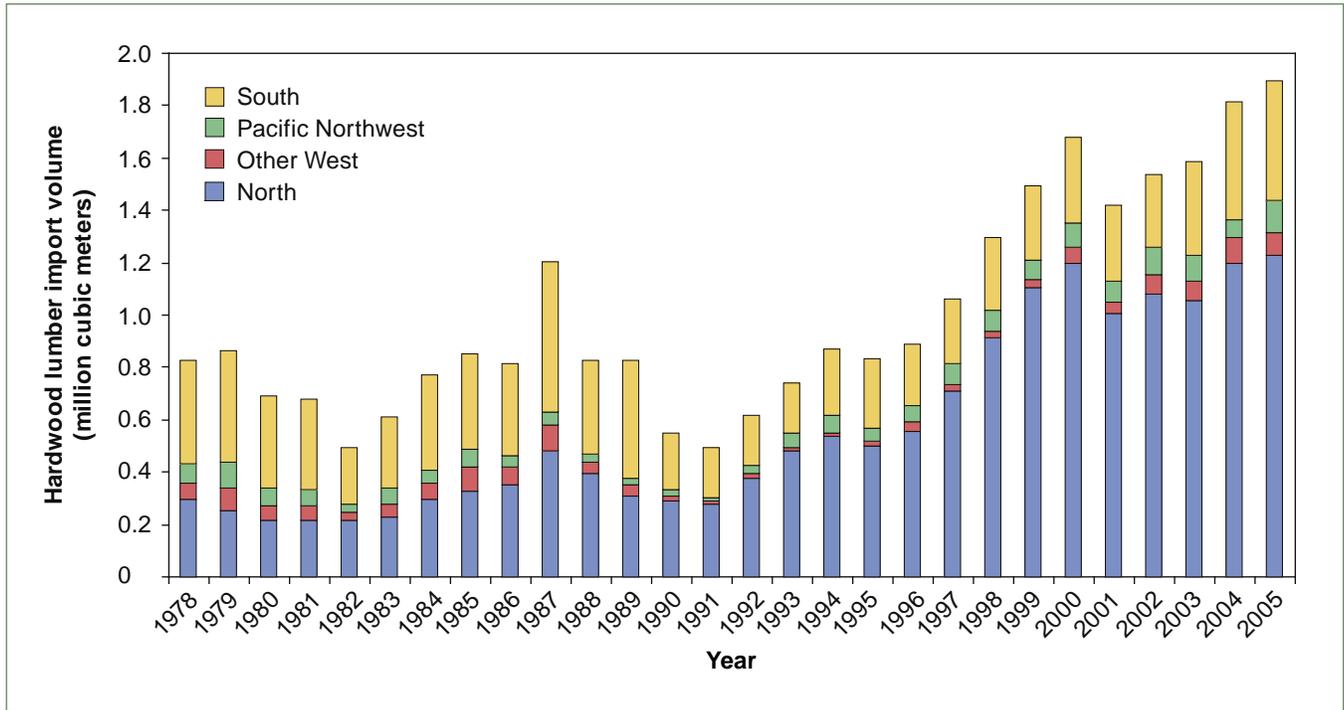


Figure 20e—Hardwood lumber import volume by customs region.

**Hardwood plywood exports from the United States were dwarfed by imports.**

**Hardwood Plywood**

For the years 1978–88, hardwood plywood export and import volumes were reported in thousand square feet, surface measure, and converted to cubic meters assuming panels were 3/8-inch thick. Data after 1988 were reported in cubic meters.

Figure 21a demonstrates that hardwood plywood exports from the United States were dwarfed by imports. The volume of exports never exceeded 500 000 cubic meters; imports outstripped exports by 1 to 4.5 million cubic meters. After falling from their peak value in 1978, imports experienced some volatility in the early 1980s, peaked again in 1987, and dropped to 1.2 million cubic meters by 1991. Hardwood plywood imports rose slowly then jumped in 2004 to reach 4.1 million cubic meters by 2005.

Figure 21b shows that modest levels of hardwood plywood exports were shipped to Canada and Latin America until both expanded purchases in 1988. Exports to Japan and the EEA stepped up in 1991 and 1992 but subsided quickly. By 2005, exports were primarily destined for Canada and Latin America, although new markets were emerging in Asia and China.

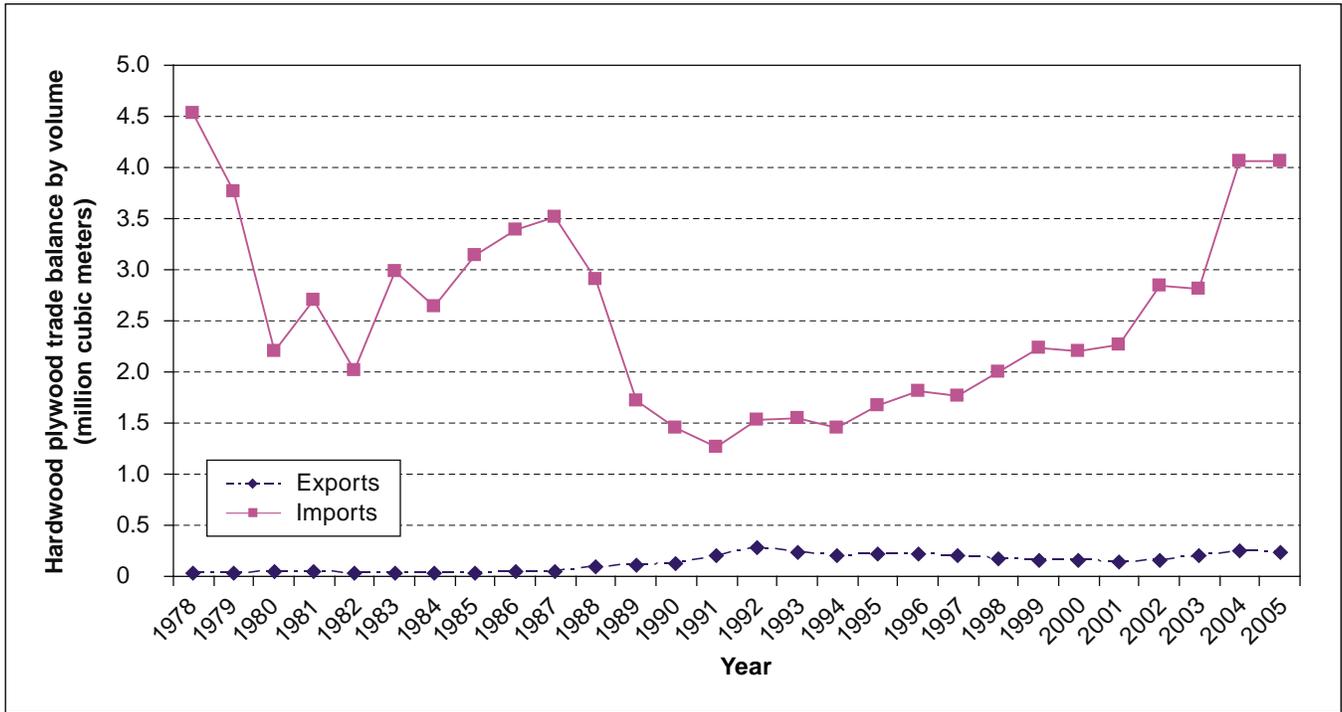


Figure 21a—Hardwood plywood trade balance by volume.

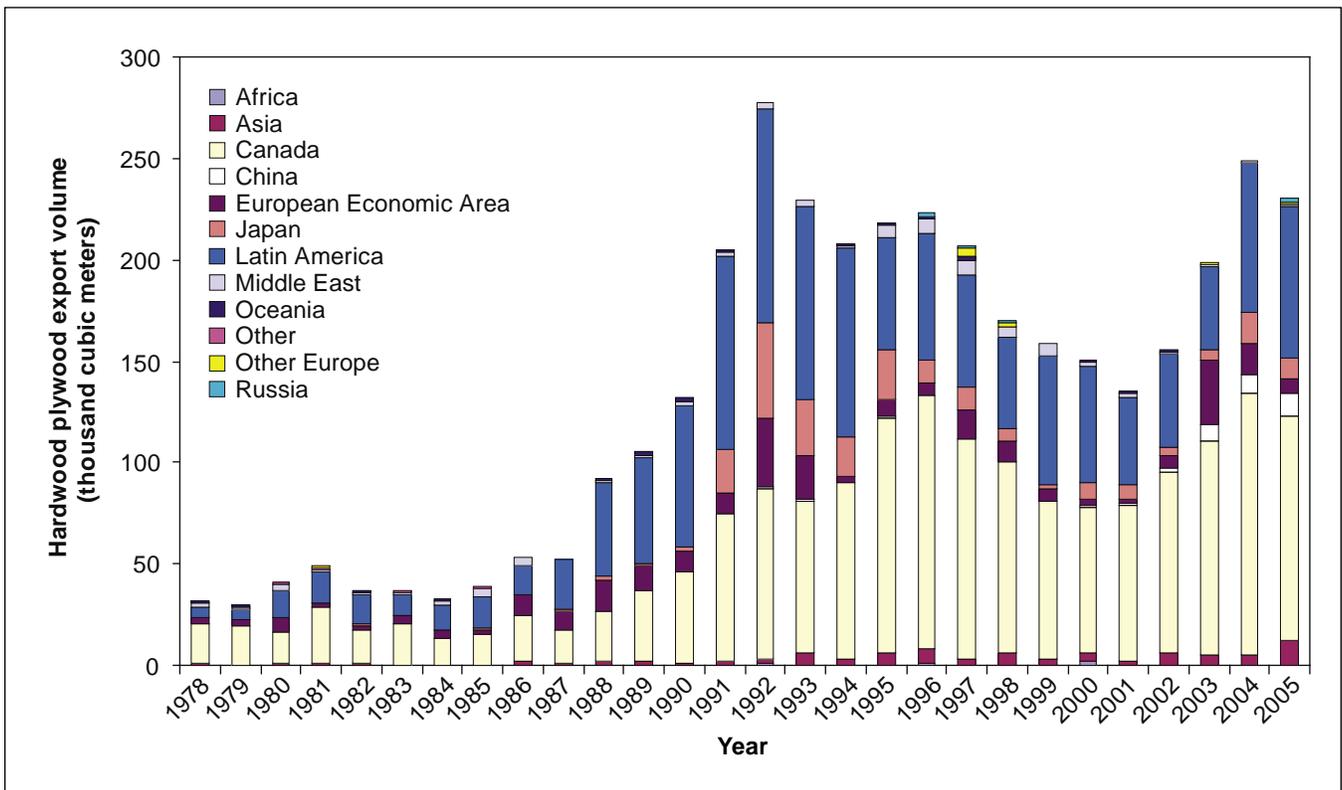


Figure 21b—Hardwood plywood export volume to selected destinations.

The early 1990s were marked by increasing hardwood plywood exports from all customs districts, especially the South (fig. 21c). Exports from the South peaked at 140 000 cubic meters in 1992 and then declined to 20 000 cubic meters by 2001. Northern districts began expanding shipments in 1990 and overtook southern districts as the dominant exporting region in 1996.

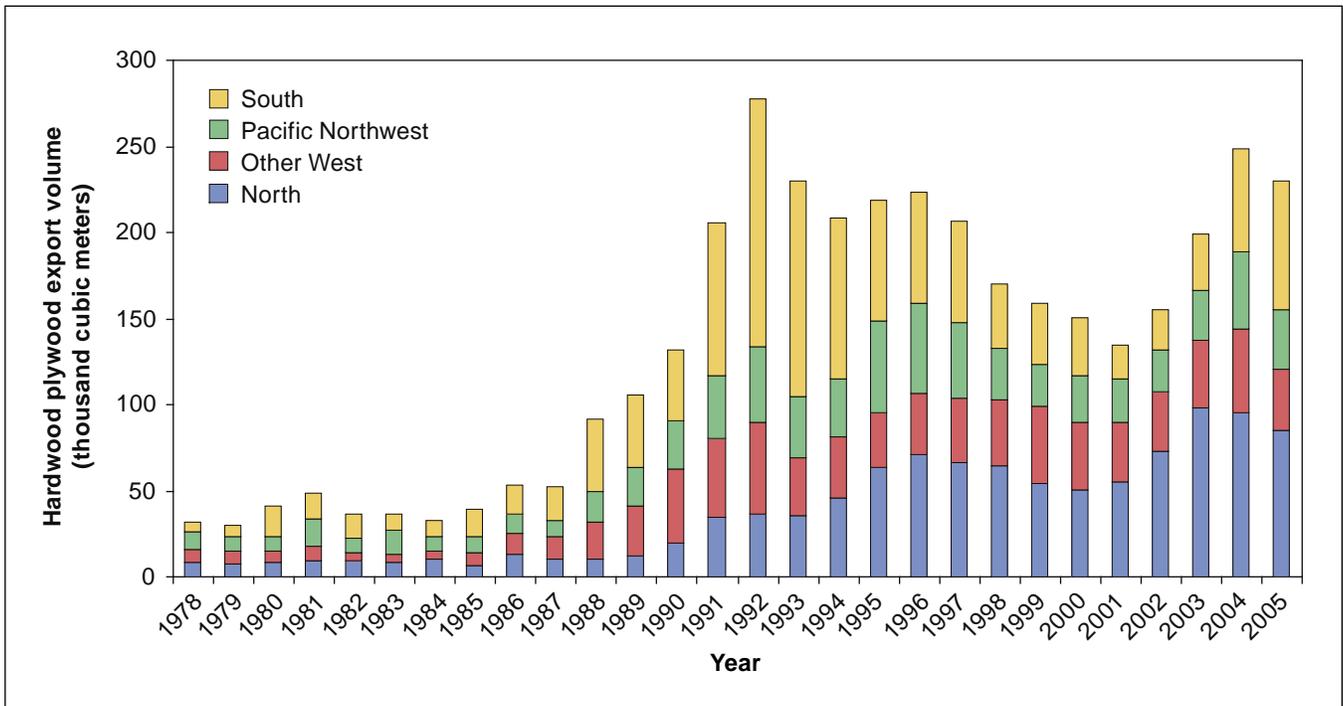


Figure 21c—Hardwood plywood export volume by customs region.

**The diversification of hardwood plywood import sources reflects globalization of production.**

Hardwood plywood was one of the few commodities not dominated by imports from Canada. Figure 21d confirms that this market was initially served by imports from Asia. After 1987, imports from Asian suppliers fell and were later supplanted by Canada, Latin America, China, and Russia. The diversification of hardwood plywood import sources reflects globalization of production; by 2005, China became the leading supplier.

Hardwood plywood arrived predominantly at southern districts until shipments from Asia began declining in 1988 (fig. 21e). Subsequent imports to all regions remained modest and relatively flat until 2004. Then imports to all districts grew, reflecting expanded shipments from an increasingly diverse group of suppliers; the South rose again as the dominant importing region.

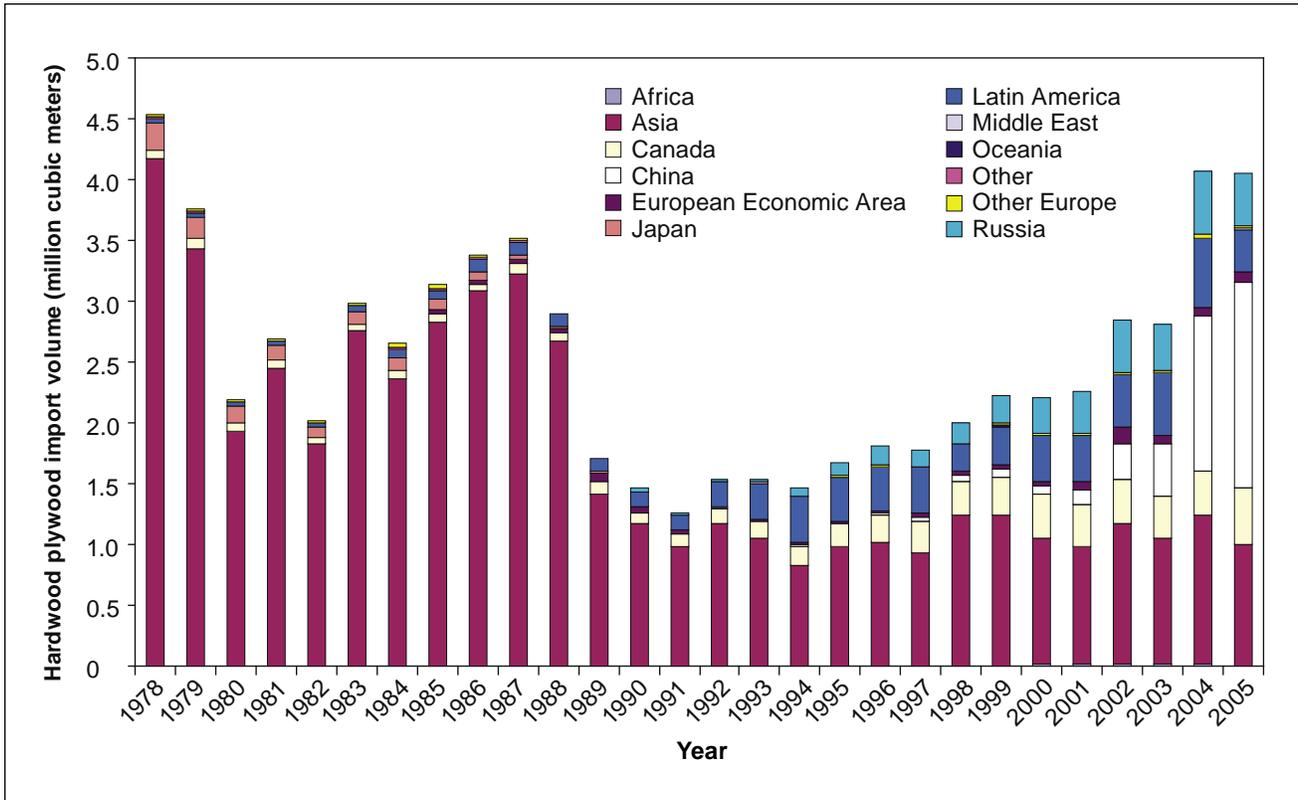


Figure 21d—Hardwood plywood import volume from selected destinations.

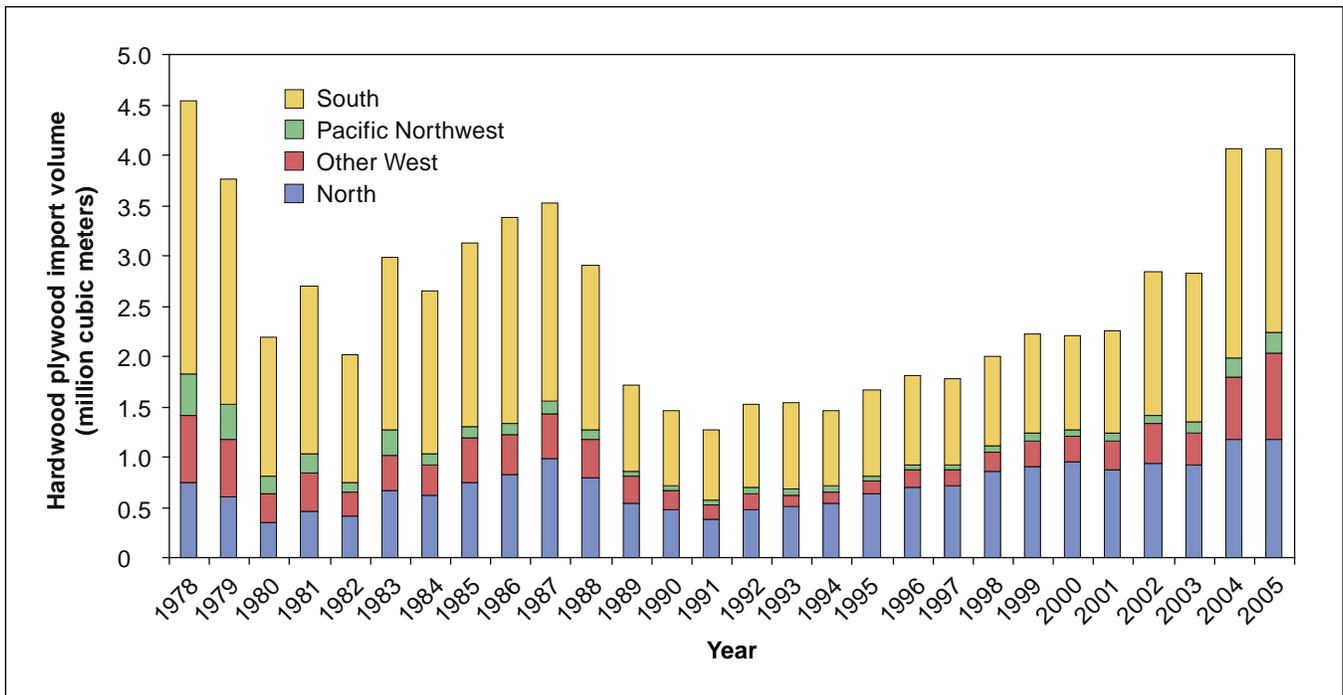


Figure 21e—Hardwood plywood import volume by customs region.

**The European Economic Area was consistently the leading purchaser of U.S. hardwood veneer exports until 2004.**

### Hardwood Veneer

Hardwood veneer exports and imports were both reported in thousand square feet, surface measure, for the period 1978–88 and converted into square meters. Data after 1988 were originally reported in metric units and required no conversions.

Figure 22a shows that exports trailed imports until 1990 when exports expanded while imports remained relatively flat. The dip in 1989 may indicate some data inconsistency resulting from converting to the new HTS system that year. After 1990, exports maintained an upward trend to peak at 341 million square meters in 2005. Imports peaked at 230 million square meters in 2000 then gradually declined to 207 million square meters by 2005.

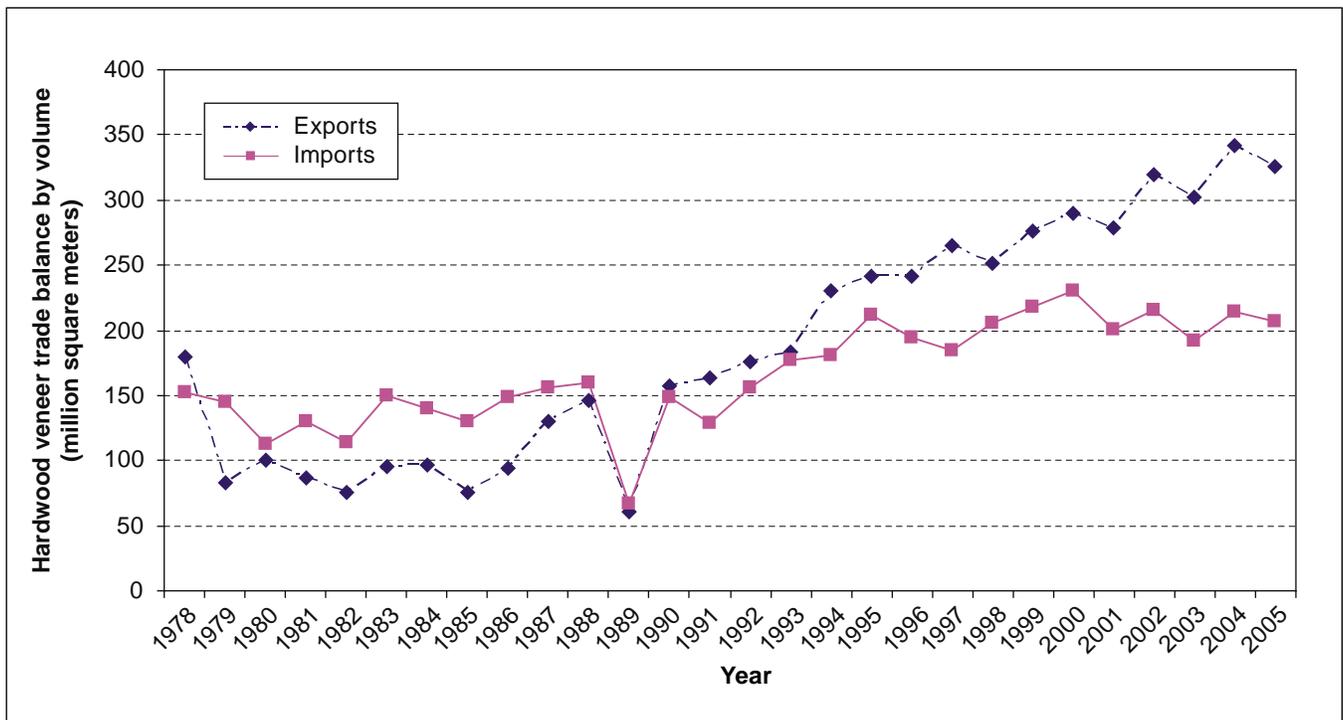


Figure 22a—Hardwood veneer trade balance by volume.

The European Economic Area was consistently the leading purchaser of U.S. hardwood veneer exports until 2004 (fig. 22b). Canada became the dominant market in that year following the expansion of shipments after 1996. Asia, Africa, China, and Latin America emerged as export destinations as U.S. hardwood veneer markets diversified over time.

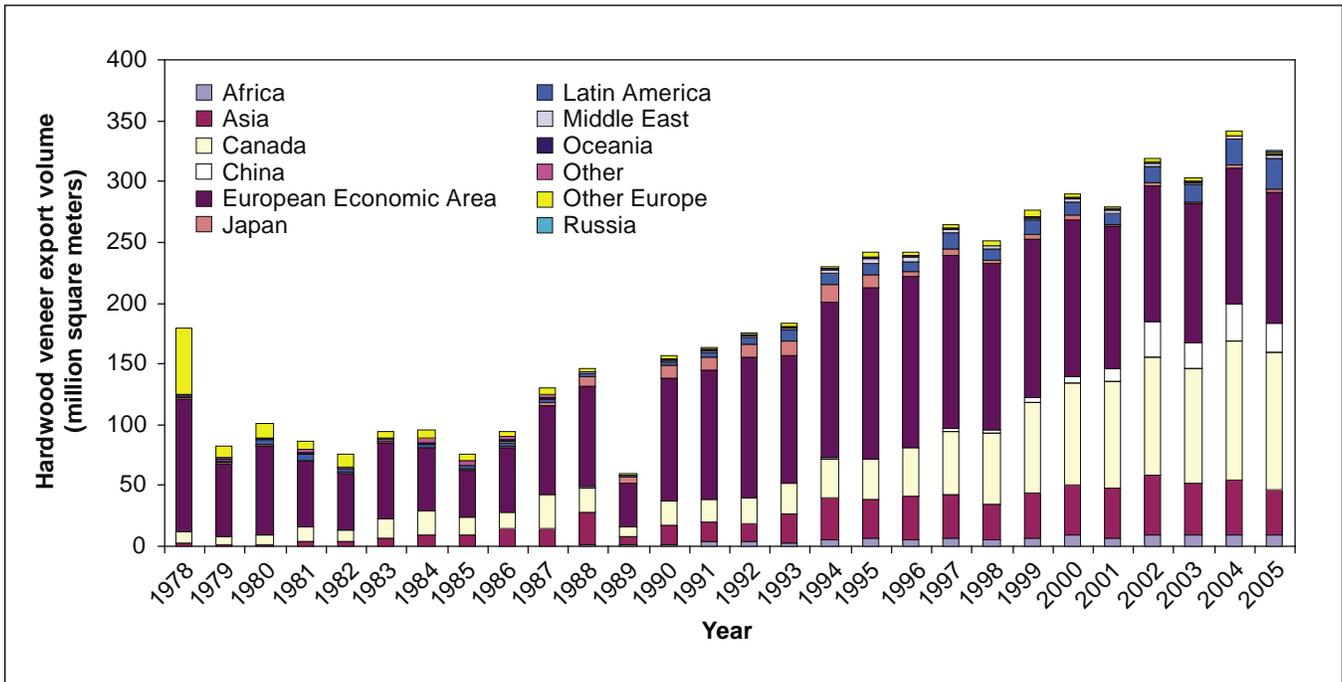


Figure 22b—Hardwood veneer export volume to selected destinations.

Figure 22c shows that the majority of hardwood veneer shipments originated in southern districts until the mid-1990s. As the volume of exports began rising, the majority were shipped from northern districts. By 2002, the North was the primary source for hardwood veneer, likely owing to increased shipments to Canada. Exports from the South, Other West, and the Pacific Northwest changed little after the early 1990s.

Figure 22d shows that hardwood veneer imports were dominated by Canadian suppliers throughout the data period. After providing about one-third of U.S. hardwood veneer imports in 1978, imports from Asia steadily declined to almost no market presence by 2003. Latin American and the EEA maintained a presence, while imports from Chinese and African locations made inroads in the 1990s. Canada remained the dominant supplier in 2005, with Latin America and Africa second and third.

Figure 22e illustrates that imports of hardwood veneer were received predominantly by northern customs districts. Volume imported into the South, Other West, and Pacific Northwest remained fairly consistent over time. Northern districts received more hardwood veneer than the other regions combined in most periods.

**Hardwood veneer imports were dominated by Canadian suppliers throughout the data period.**

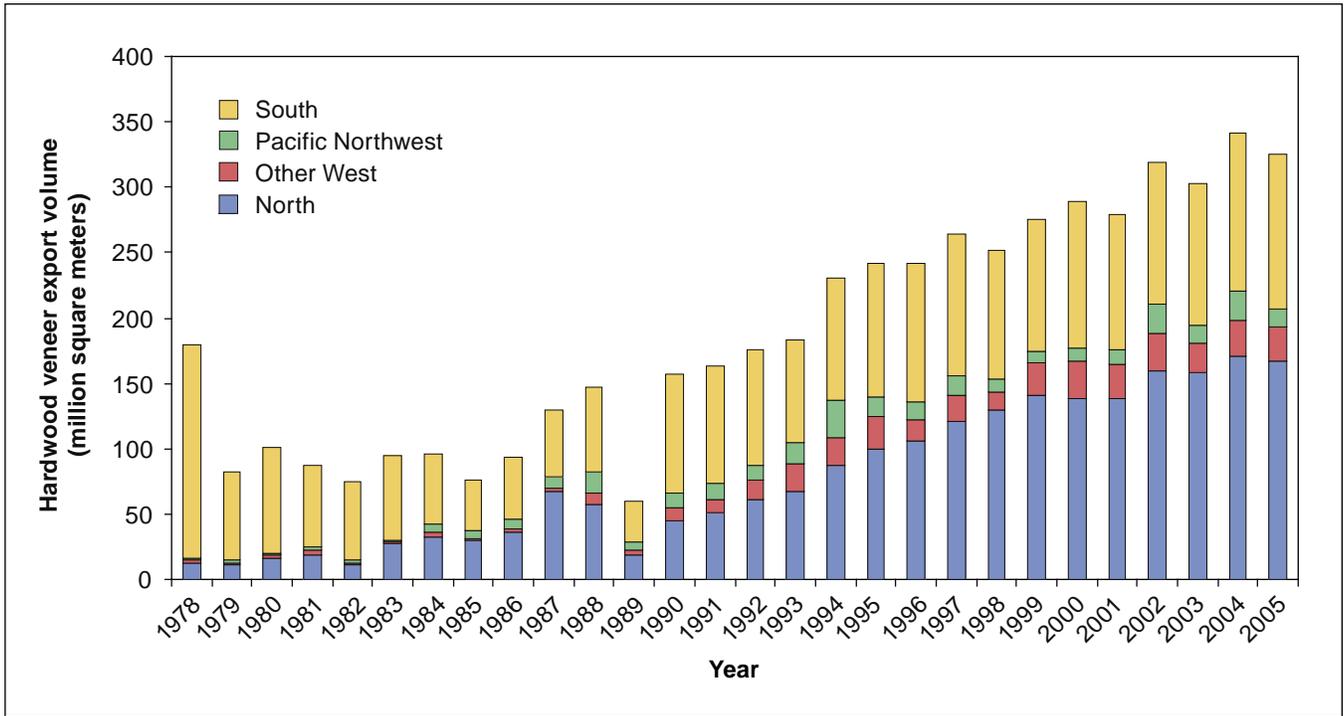


Figure 22c—Hardwood veneer export volume by customs region.

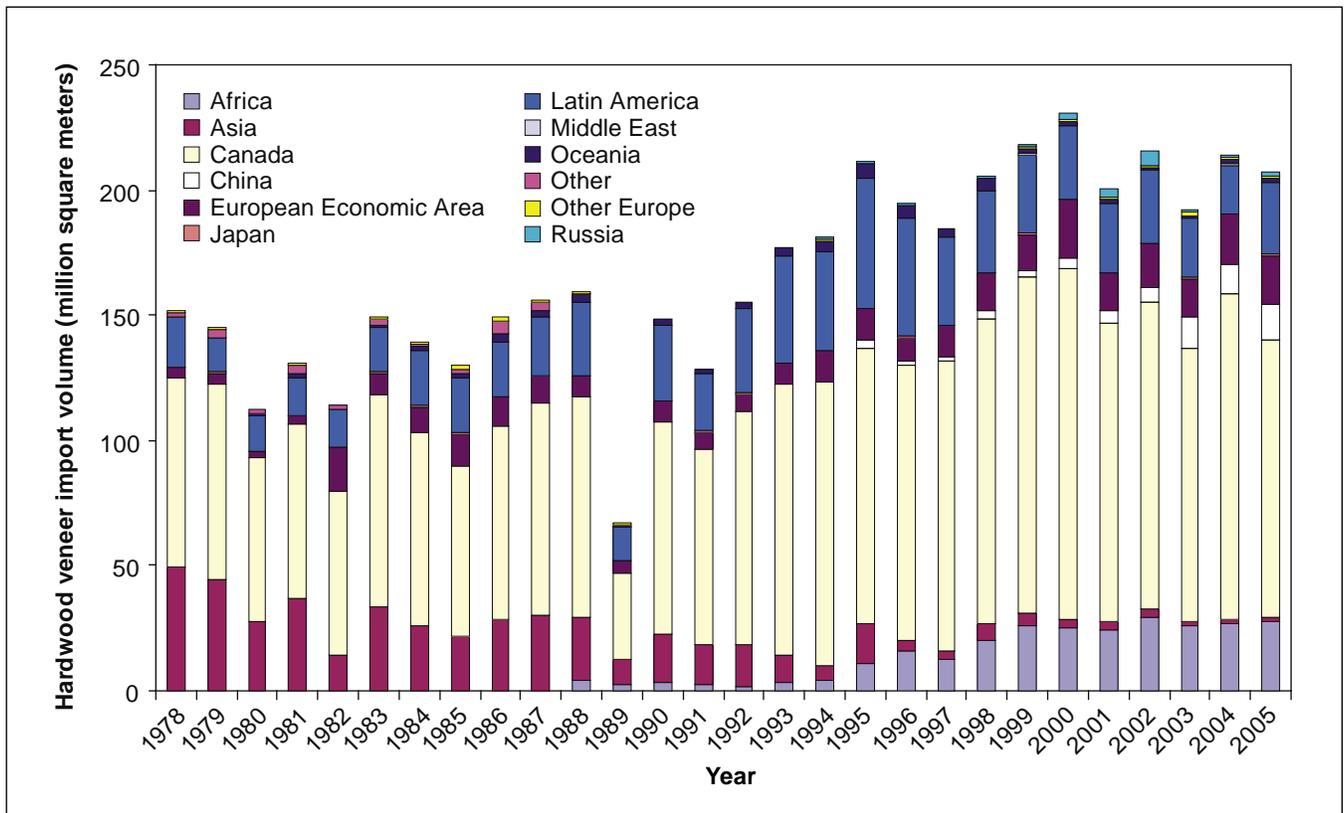


Figure 22d—Hardwood veneer import volume from selected destinations.

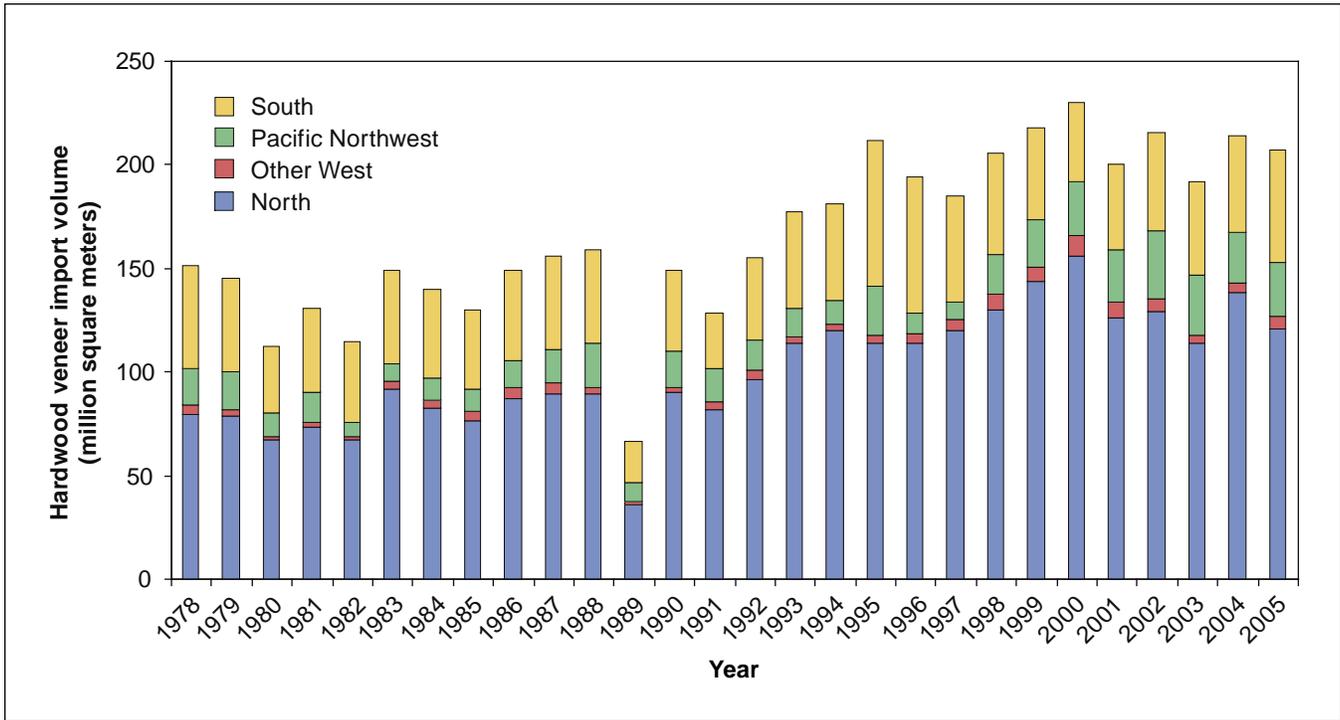


Figure 22e—Hardwood veneer import volume by customs region.

## Oriented Strand Board

Trade statistics for OSB were not included by Chmelik et al. (1989). Trade in OSB has only been tracked since 1991 for exports and 1989 for imports. The OSB trade data are reported here in the original metric units.

The OSB exports were dwarfed by imports (fig. 23a). When graphed together, exports are barely discernable from the x-axis while imports increased by over 8 million cubic meters over the reporting period. Although flat from 1989 to 1991, OSB imports shot up in 1992 and increased every year subsequently to reach 9.3 million cubic meters by 2005.

In figure 23b, Canada is shown as the leading destination for OSB exports. Although large shipments were sent to Japan in 1996 and 1997, this market quickly diminished. Exports to Latin American destinations began rising in 1999 and composed about 28 percent of shipments by 2005; Canada was still the leader with a 65-percent export share that year.

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**OSB exports were dwarfed by imports.**

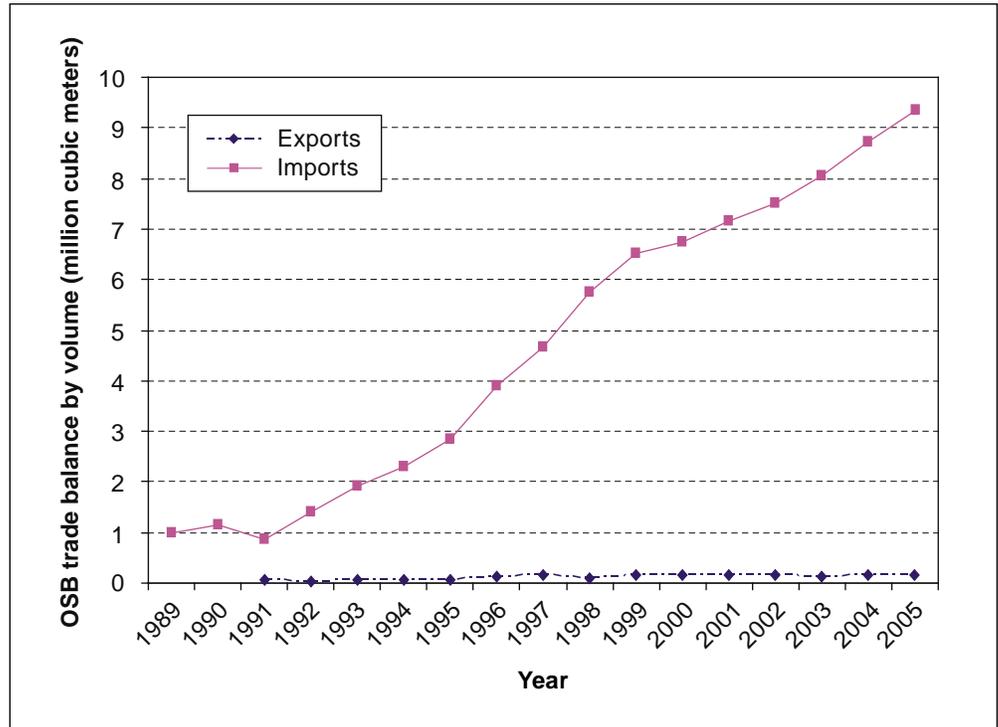


Figure 23a—Oriented strand board (OSB) trade balance by volume.

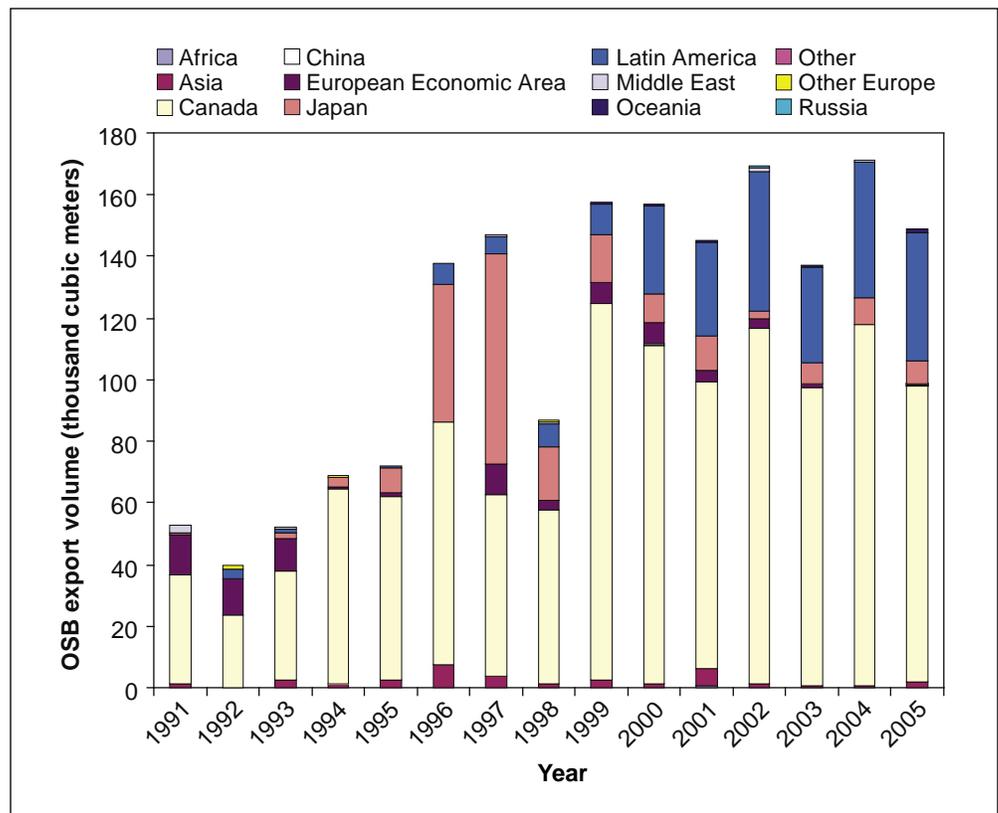


Figure 23b—Oriented strand board (OSB) export volume to selected destinations.

Oriented strand board was predominantly exported from northern customs districts in shipments to Canada (fig. 23c). The OSB exports from the Pacific Northwest jumped in 1996 and 1997 with expanded shipments to Japan and then declined rapidly. Exporters in the Other West Region emerged to compete with northern suppliers in 2002 and gained a substantial market share by 2005. Northern districts continued to dominate this market, and OSB exports from the South remained lackluster.

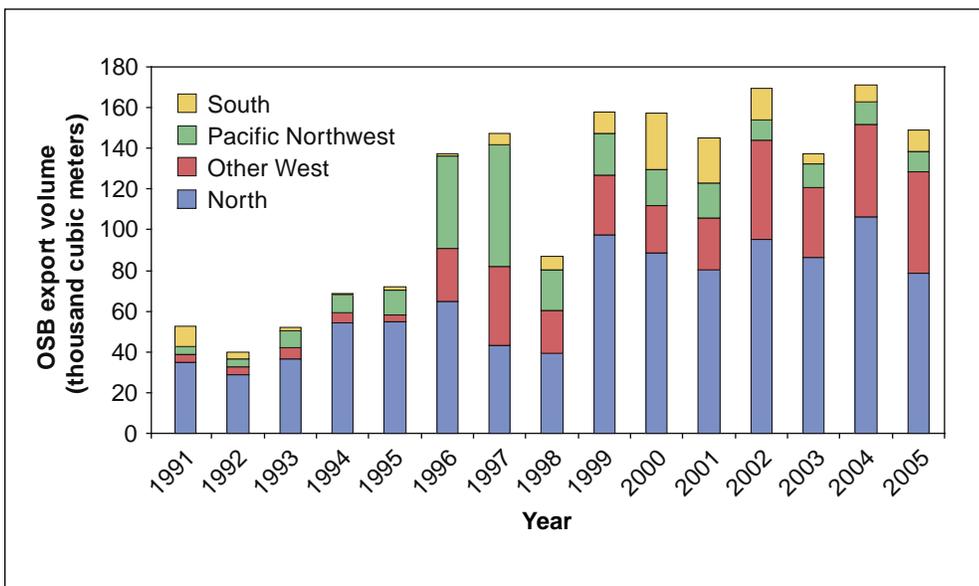


Figure 23c—Oriented strand board (OSB) export volume by customs region.

Figure 23d shows that only three supply regions contributed to the expansion of OSB into U.S. markets; Canada, the EEA, and Latin America. Imports from Canada dwarfed all other suppliers with modest inroads made by EEA producers after 2001.

Expanding OSB imports primarily arrived at northern customs districts until they flattened in 1999 (fig. 23e). After 1999, shipments began diversifying into the Other West and Pacific Northwest Regions. Small gains to southern districts mirror increased import activity from the EEA in 2002.

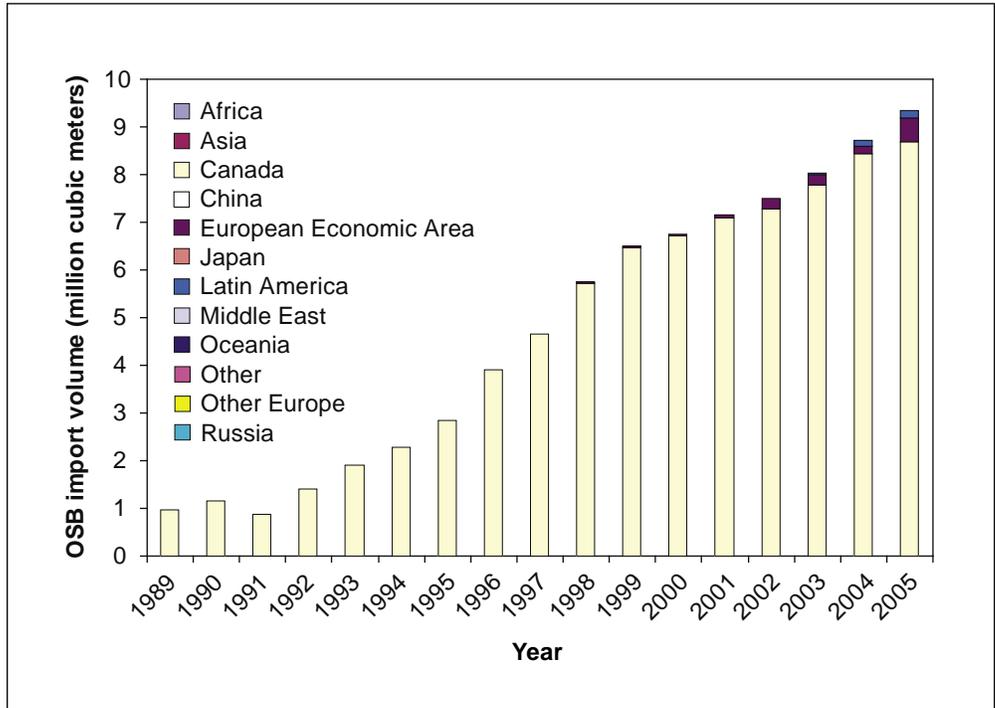


Figure 23d—Oriented strand board (OSB) import volume from selected destinations.

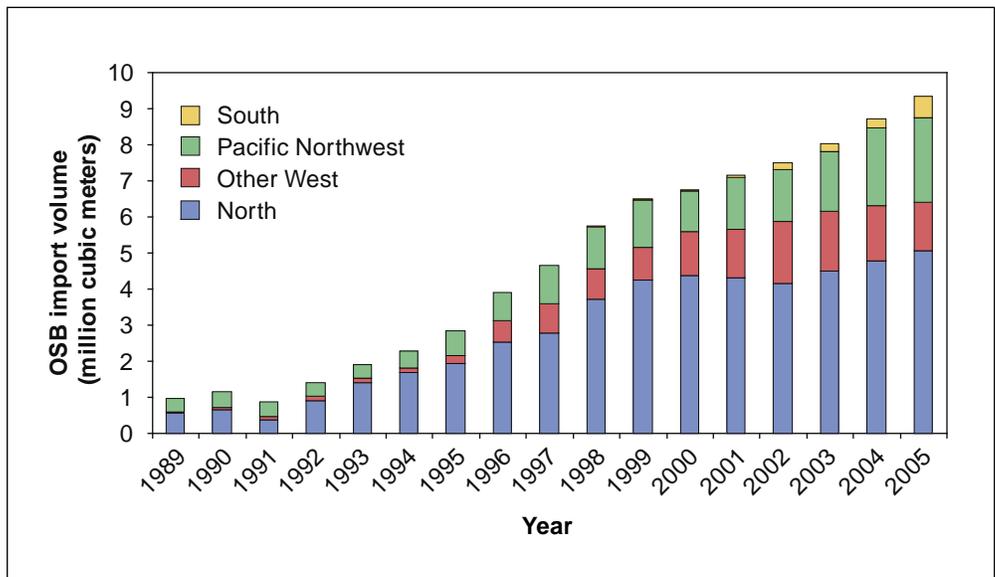


Figure 23e—Oriented strand board (OSB) import volume by customs region.

## Particleboard

Particleboard exports were reported in thousand square feet, 3/4-inch basis, from 1979 to 1988 and converted to cubic meters. Particleboard export data for 1978 were not reported by Chmelik et al. (1989) and so are omitted here. Imports from 1978 to 1988, measured originally in thousand short tons, were converted to cubic meters by assuming particleboard weighed 0.289 short tons per thousand square feet and was 3/4-inch thick. Data after 1988 were reported in cubic meters.

Figure 24a shows signs of data incompatibility between the old and new trade reporting systems for particleboard imports. The big drop in import values between 1988 and 1989 strongly indicates that converting from English weight measures to metric volume measures introduced some error. Nonetheless, particleboard imports show a rising trend, with a peak of 2.5 million cubic meters in 2001 that settled back to 1.5 million cubic meters by 2005. Particleboard exports were flat, hovering around 500 000 cubic meters after the late 1980s. In 2005, particleboard imports outpaced exports by over 1 million cubic meters.

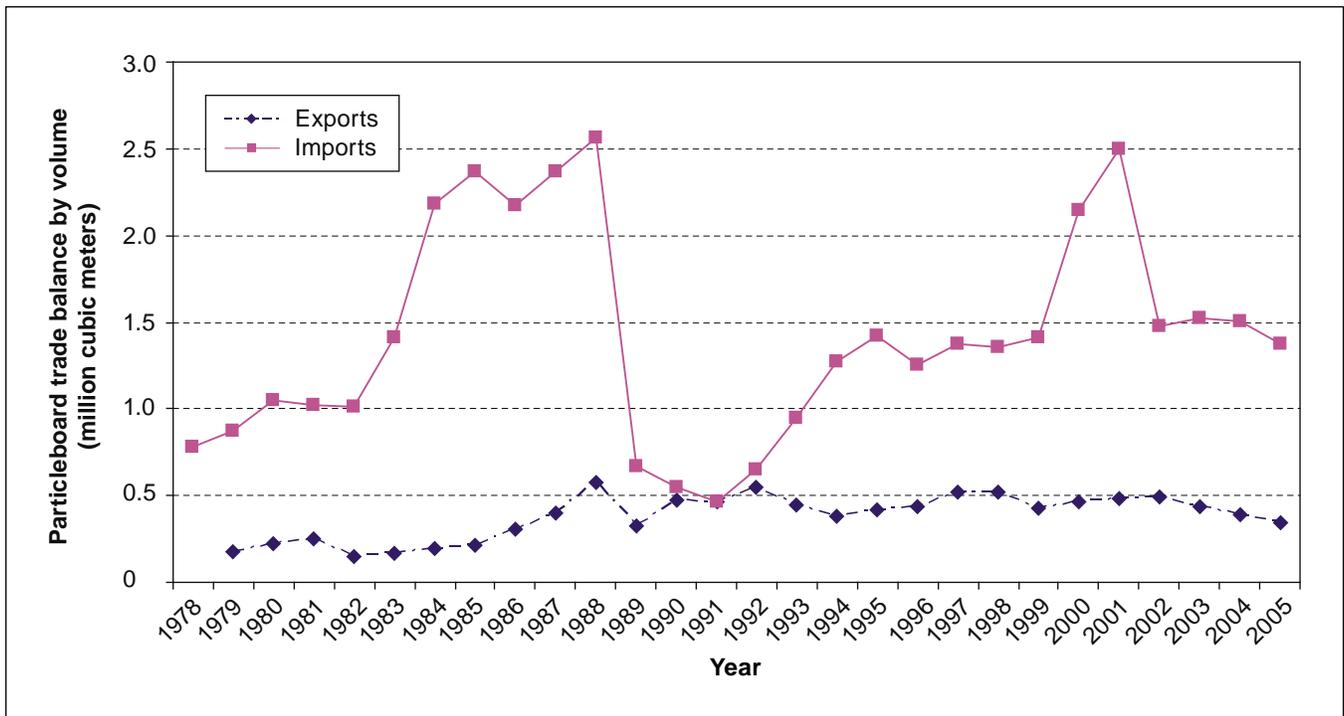


Figure 24a—Particleboard trade balance by volume.

Figure 24b illustrates that particleboard was sent to a variety of destinations. Although initially led by exports to Canada, particleboard exports to Asia began rising in 1983 to overtake Canada as the number one export destination by 1984. Asia maintained the greatest share of this market until 1994 when Canada resurfaced as the dominant market. Leaders changed in 2001, when the greatest share of particleboard exports was sent to Latin America, and again in 2004, when shipments to Canada surpassed other destinations.

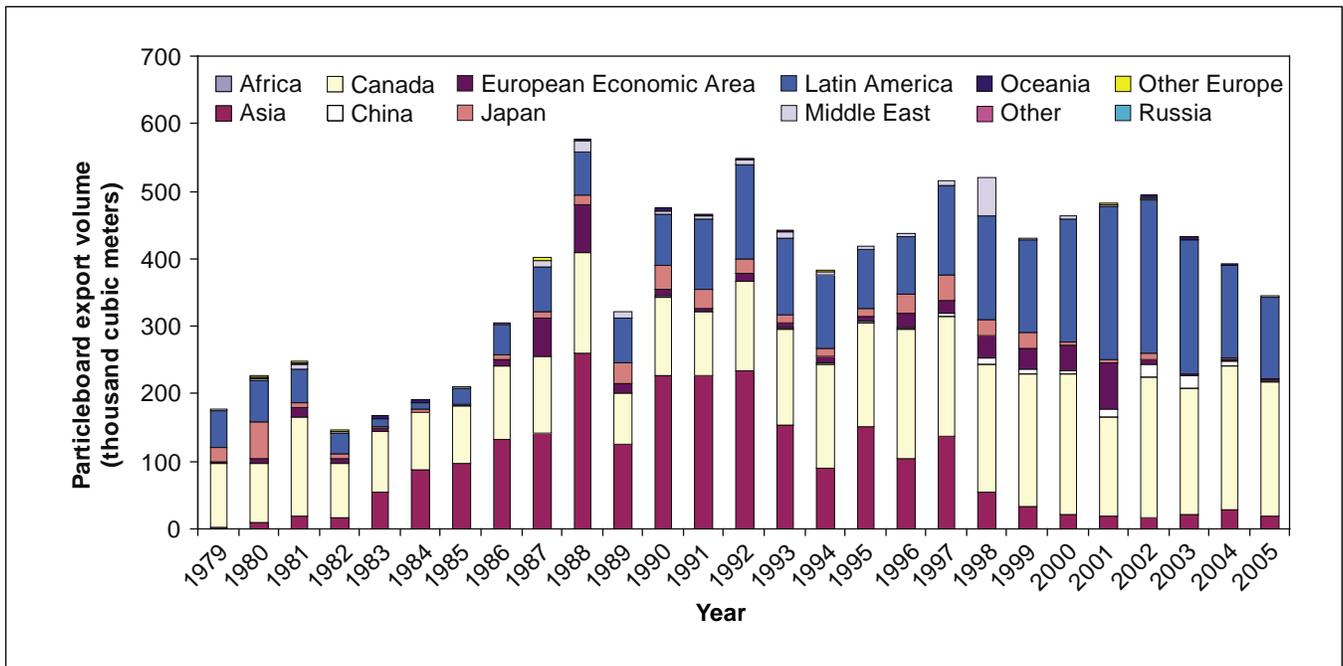


Figure 24b—Particleboard export volume to selected destinations.

From the early 1980s until 1997, the majority of particleboard exports originated in the Pacific Northwest Region (fig. 24c). As shipments from the Pacific Northwest fell in 1997, the Other West became the dominant supply region, reflecting rising exports to Latin America. By 2005, the Other West Region remained the primary source for particleboard, but shipments from the Pacific Northwest had grown.

**Like many other commodities, particleboard imports primarily arrived from Canada.**

Like many other commodities, particleboard imports primarily arrived from Canada (fig. 24d). More particleboard was provided by Canadian suppliers than all other trading partners combined, although modest shipments were received from Latin America and the EEA.

The majority of particleboard imports arrived at northern customs districts (fig. 24e). Imports into the Pacific Northwest increased in the mid-1980s then declined again by 1989. The large proportion of particleboard imported into the North predominantly reflects shipments from Canada.

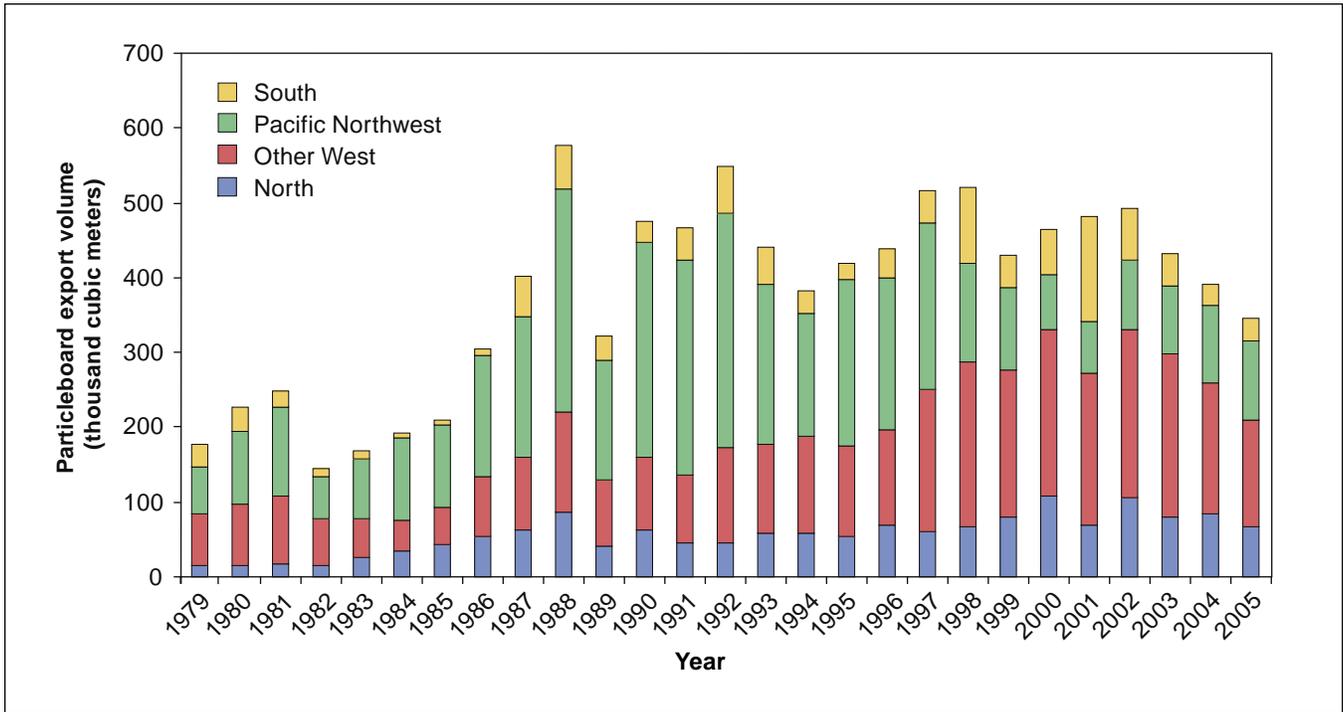


Figure 24c—Particleboard export volume by customs region.

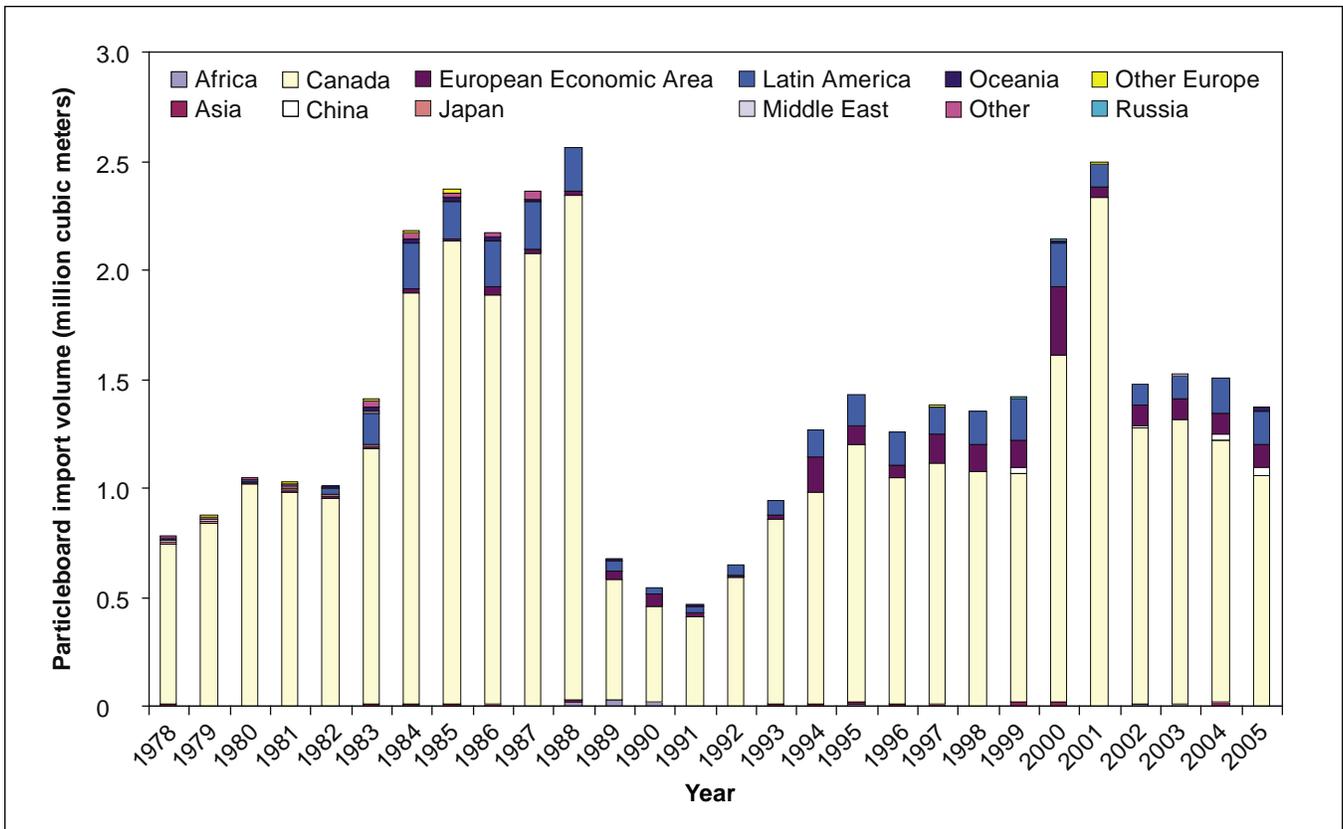


Figure 24d—Particleboard import volume from selected destinations.

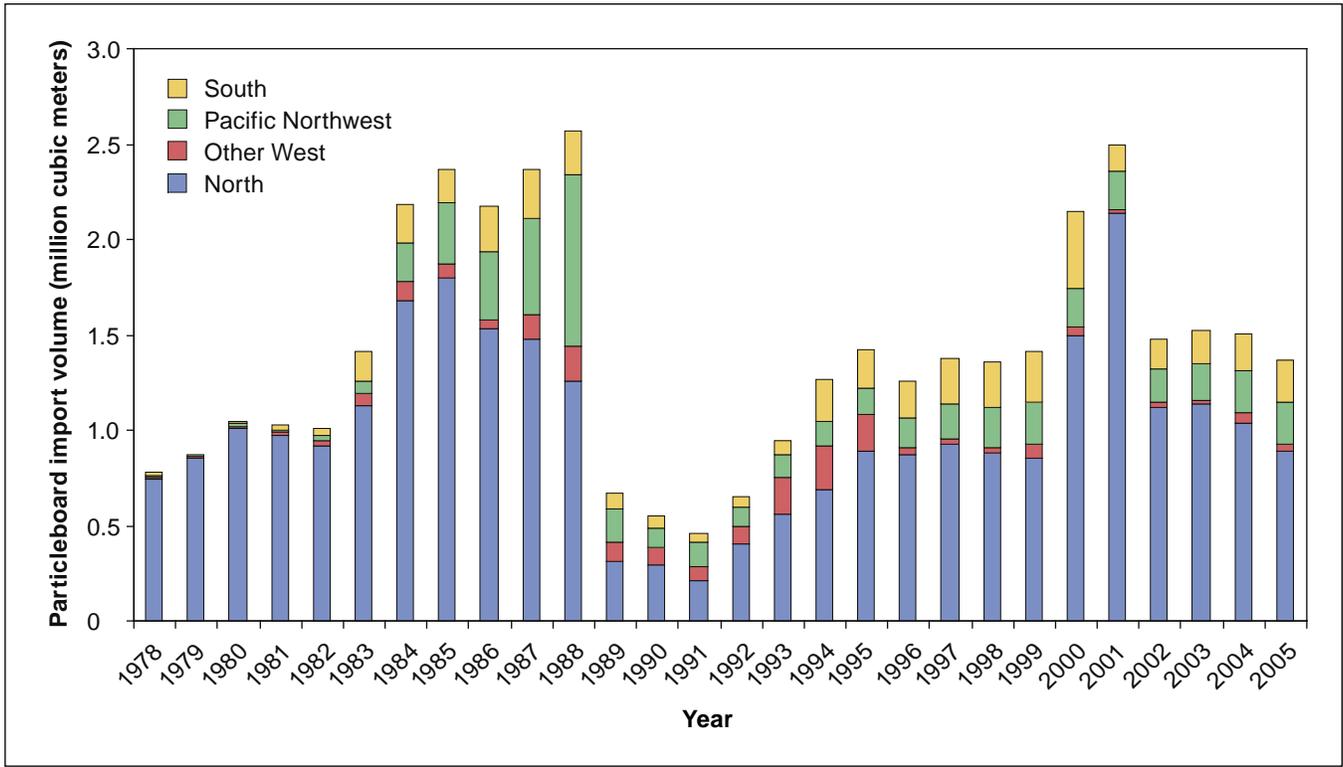


Figure 24e—Particleboard import volume by customs region.

**Softwood logs from the United States were primarily imported by Japan.**

### Softwood Logs

Both exports and imports of softwood logs were reported in thousand board feet for 1978–88 and converted into cubic meters. Data after 1988 were reported in metric units that required no conversion.

Softwood log exports consistently outpaced imports, although the lead began to shrink in the late 1980s. Figure 25a shows that softwood log exports peaked at 26 million cubic meters in 1988 and subsequently dropped to a low of 5.8 million cubic meters by 2005. Imports remained flat and relatively inconsequential until modest gains were made after 1998. Softwood log exports led imports by about 3.1 million cubic meters in 2005, the lowest margin recorded.

Figure 25b demonstrates that softwood logs from the United States were primarily imported by Japan. Shipments to Asia and China made a big impact between 1982 and 1988, and then dropped to negligible levels by 1994. Overall, exports began to decline in 1990, yet Japan continued to lead the market until 1997 when demand fell largely as a result of the Asian financial crisis (Daniels 2005). By 2001, softwood log exports to Japan stabilized around 3.2 million cubic meters, down from a peak of 17.7 million cubic meters in 1979. By 2005, softwood log exports reached an all-period low.

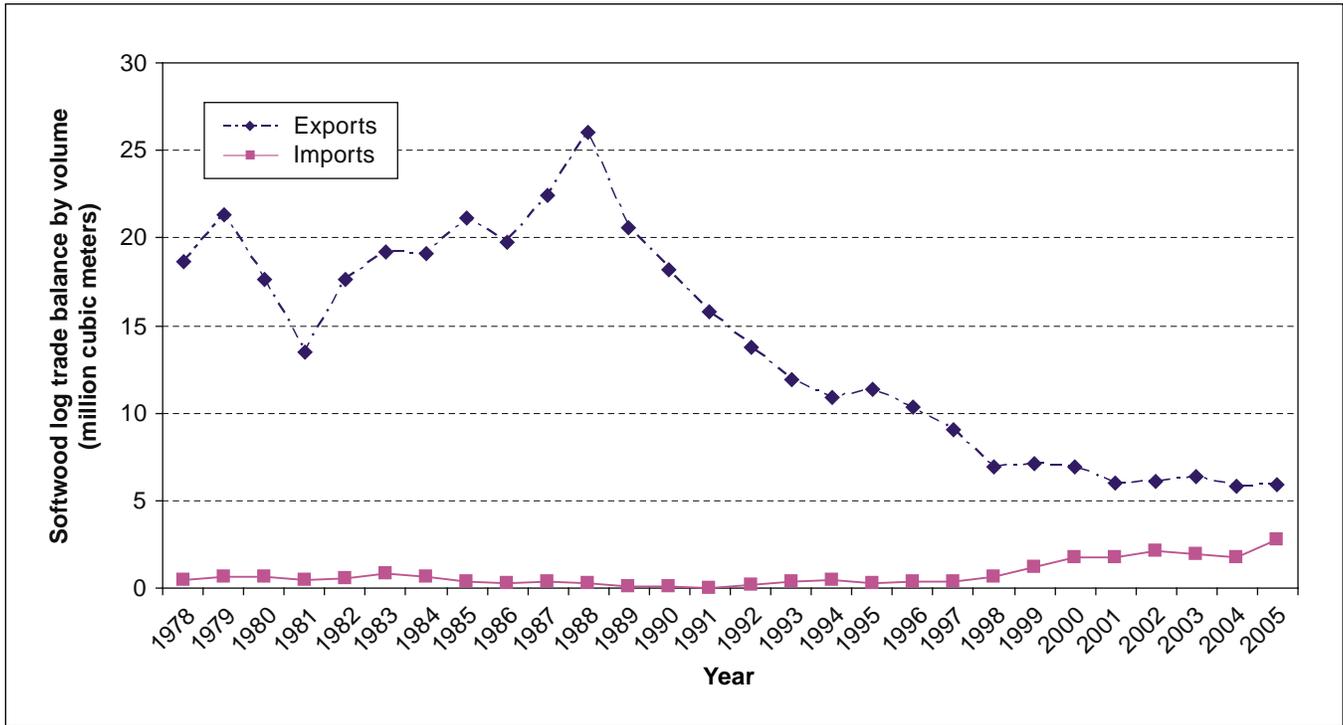


Figure 25a—Softwood log trade balance by volume.

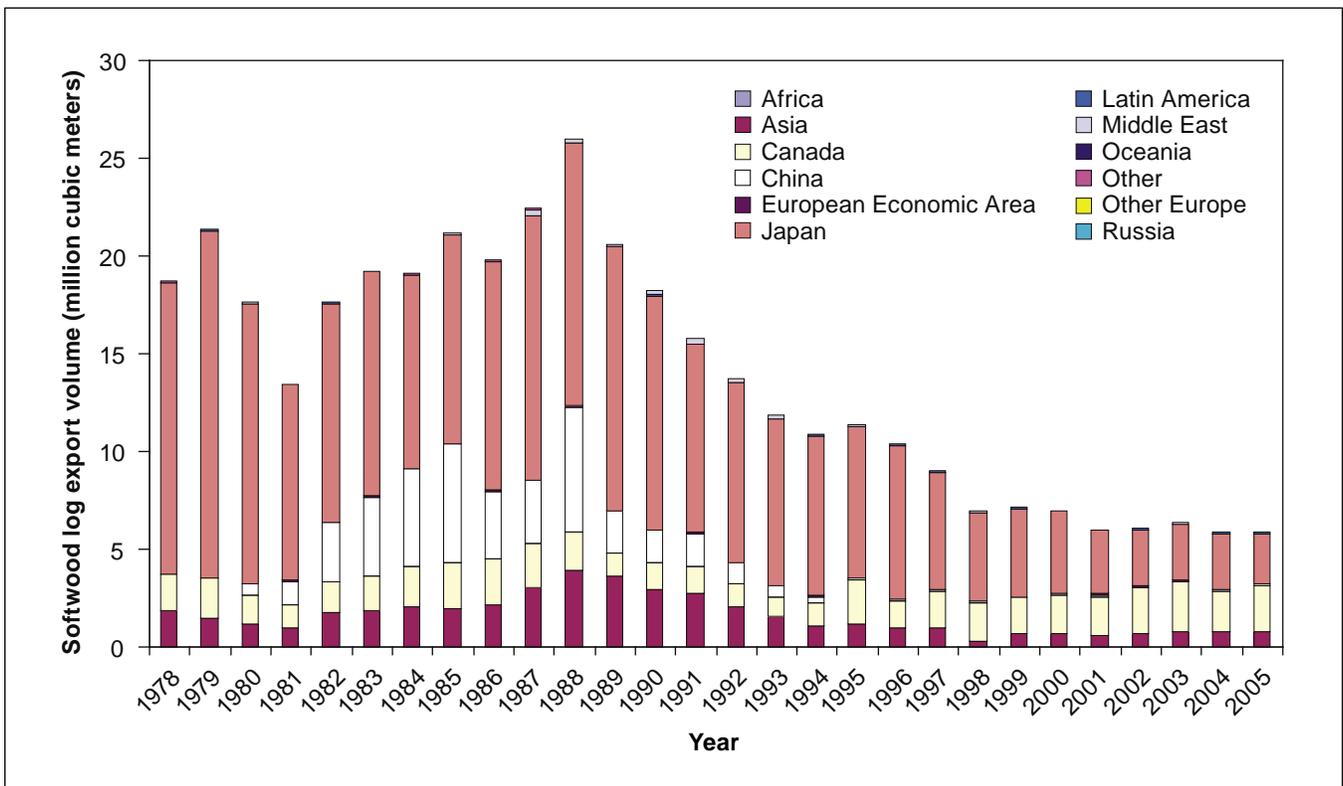


Figure 25b—Softwood log export volume to selected destinations.

Softwood logs were primarily exported from the Pacific Northwest (fig. 25c). Exports from Pacific Northwest districts mirrored demand trends in Pacific Rim destinations Asia, China, and Japan. Exports from northern districts hovered around 2.5 million cubic meters throughout the data period.

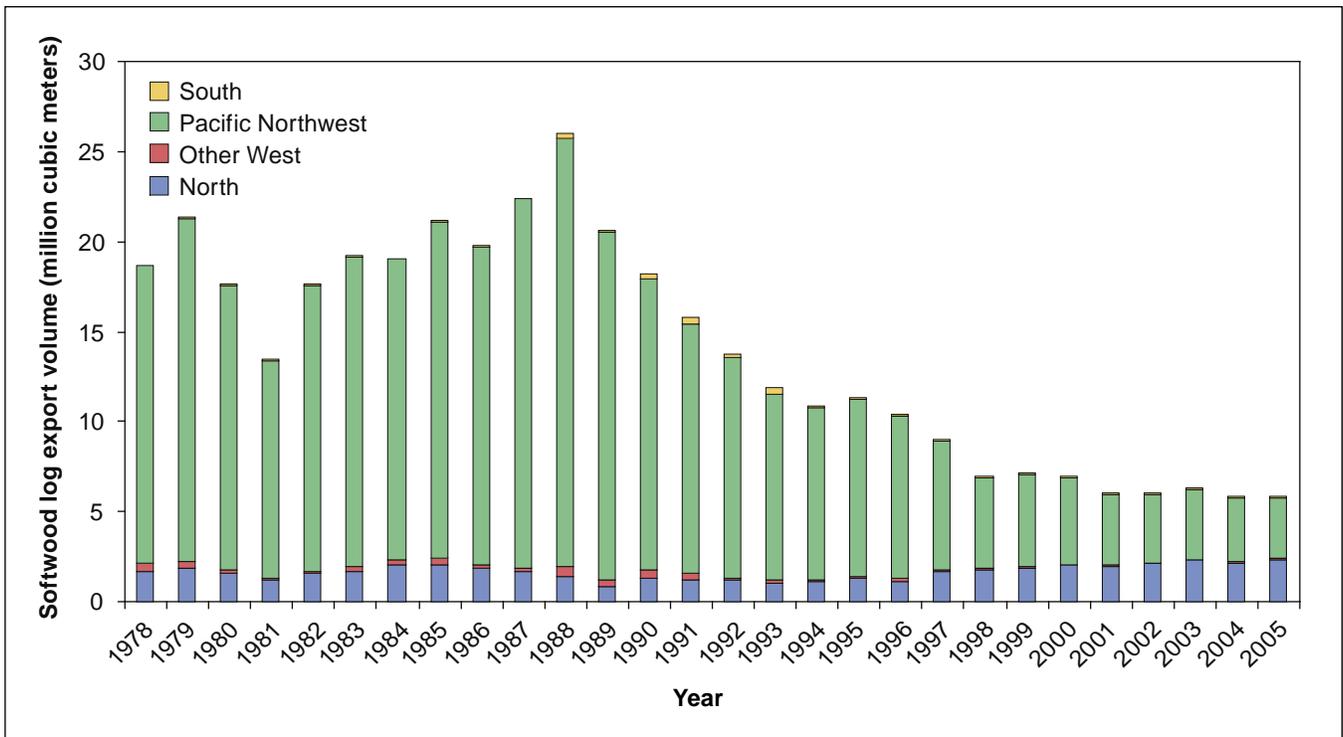


Figure 25c—Softwood log export volume by customs region.

**In 27 years, Pacific Northwest districts evolved from dominant exporters of softwood logs to Japan to dominant importers of softwood logs from Canada.**

Softwood log imports originated almost exclusively from Canada (fig. 25d). The rapid expansion of softwood log imports into the United States after 1997 was overwhelmingly fueled by Canadian suppliers. Although Oceania and Latin America sent softwood logs to the United States, neither could increase market share against the Canadians. In 2005, 99 percent of this market consisted of logs sourced from Canada.

The surge of softwood log imports after 1997 primarily arrived at Pacific Northwest customs districts, although shipments to the Other West Region increased modestly as well. Figure 25e shows that shipments to Pacific Northwest districts increased by 2.1 million cubic meters between 1998 and 2003. The jump in 2005 may signal accelerated timber harvesting to capture value following western pine beetle outbreaks in British Columbia. In 27 years, Pacific Northwest districts evolved from dominant exporters of softwood logs to Japan to dominant importers of softwood logs from Canada.

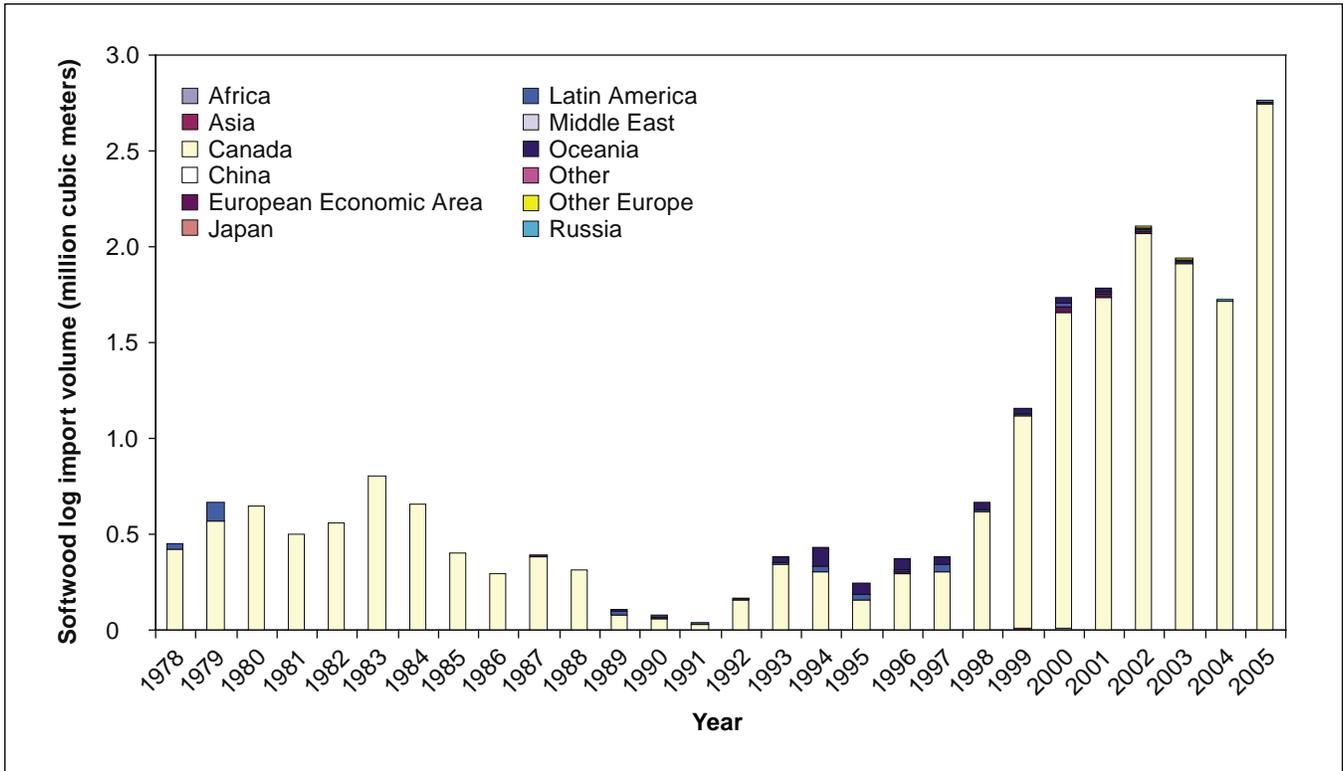


Figure 25d—Softwood log import volume from selected destinations.

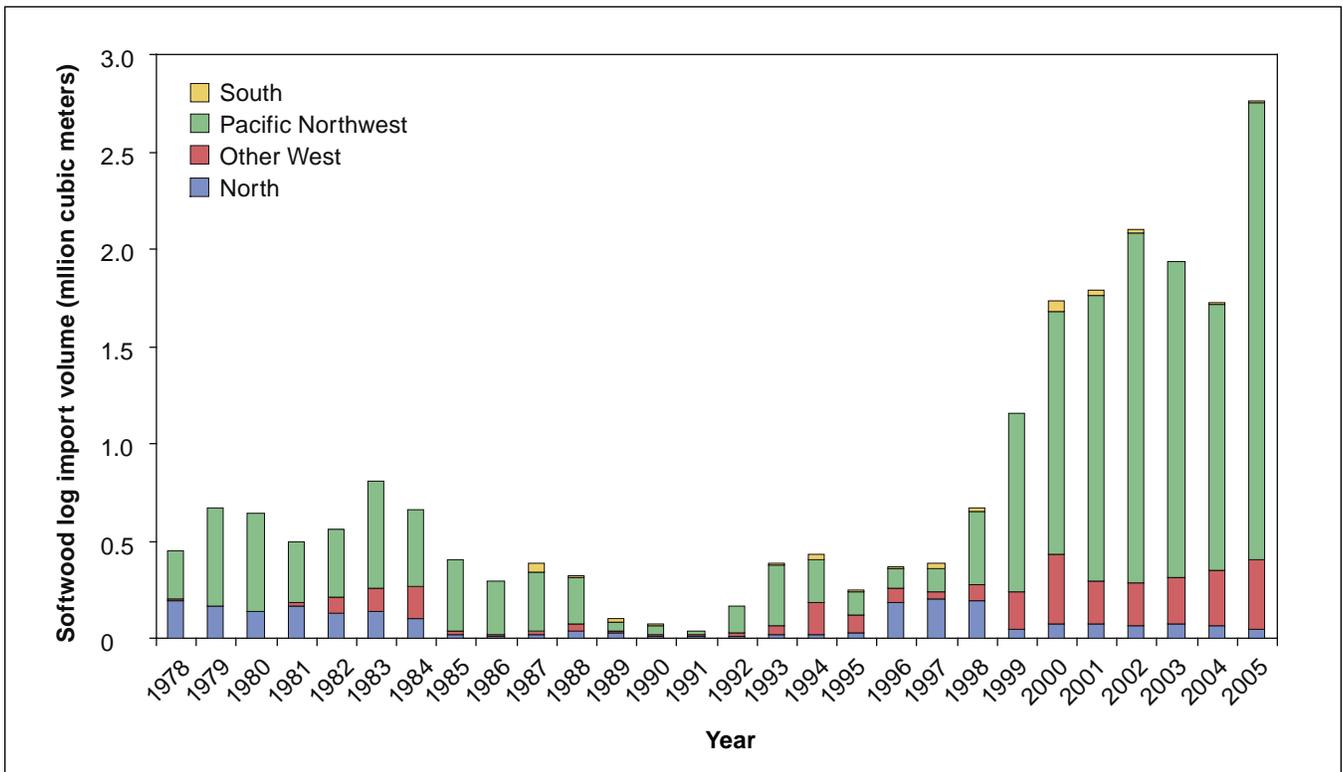


Figure 25e—Softwood log import volume by customs region.

## Softwood Lumber

**By 2005, softwood lumber imports outpaced exports by about 55 million cubic meters.**

Softwood lumber exports and imports were both reported in thousand board feet for 1978–88 and converted into cubic meters. Data after 1988 were originally reported in cubic meters.

Softwood lumber imports consistently outstripped exports (fig. 26a). After peaking at 7.9 million cubic meters in 1989, exports retreated to reach 1.9 million cubic meters by 2005. After a trough in 1991, imports expanded rapidly to reach a high of 57.3 million cubic meters in 2005, exceeding exports by about 55 million cubic meters.

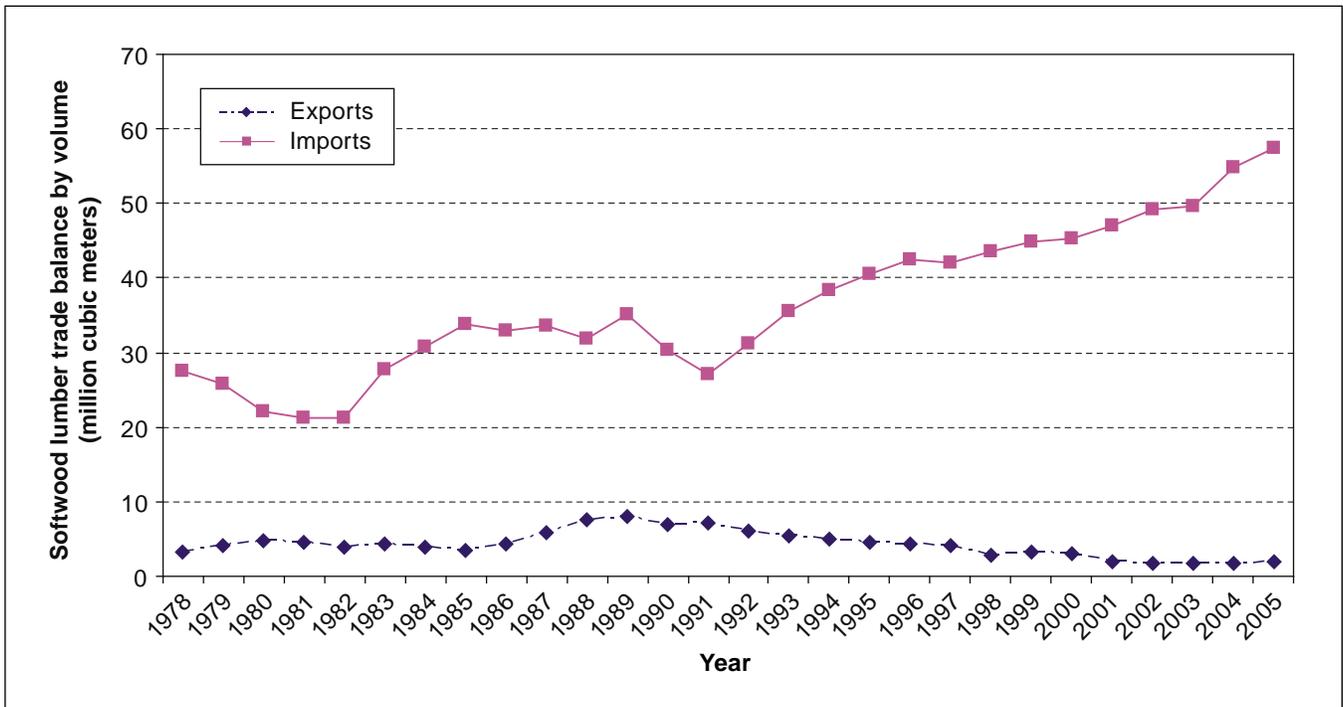


Figure 26a—Softwood lumber trade balance by volume.

Trends in softwood lumber exports were primarily driven by trends in exports to Japan (fig. 26b). Japanese imports of U.S. softwood lumber began rising in 1987, peaked in 1989, and slowly declined to their lowest level by 2005. Exports to Canada, China, the EEA, and Latin America were fairly consistent throughout the data period until they slowed in 2001. In 2005, Latin America and Canada were the primary destinations for record low U.S. softwood lumber shipments.

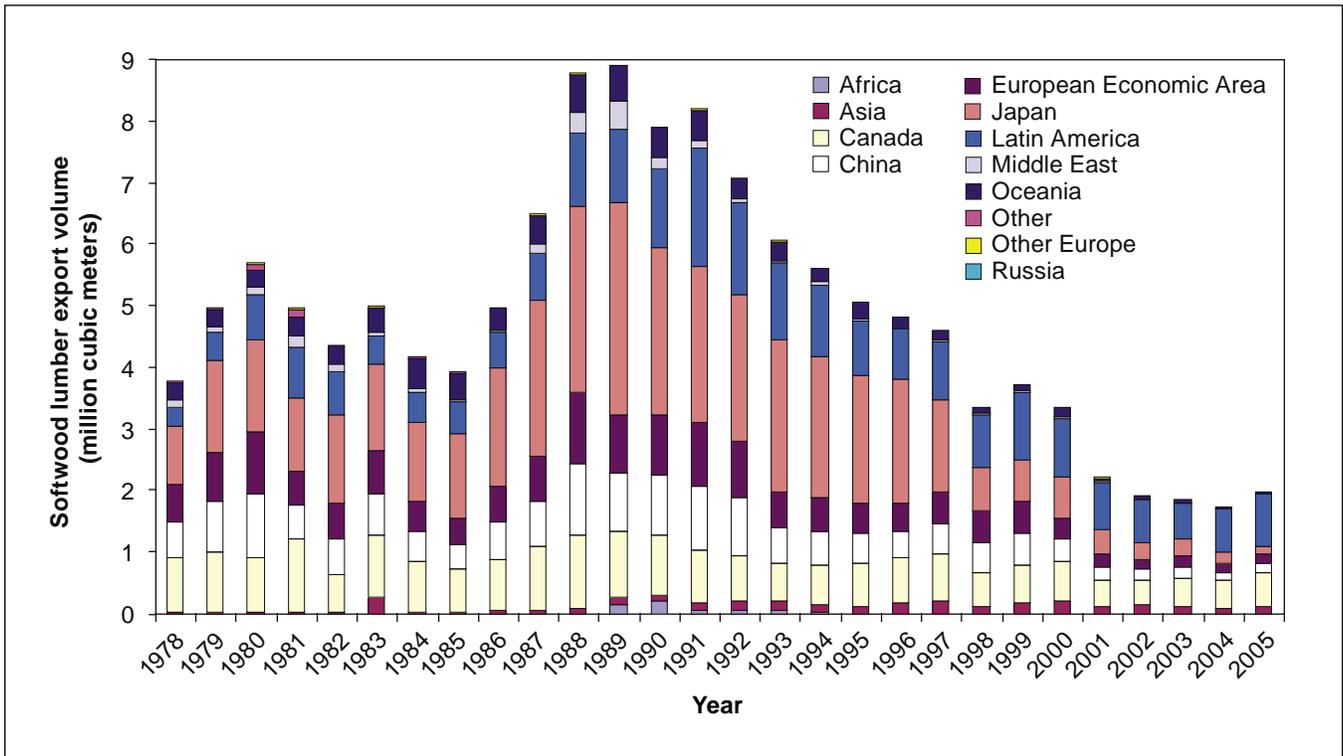


Figure 26b—Softwood lumber export volume to selected destinations.

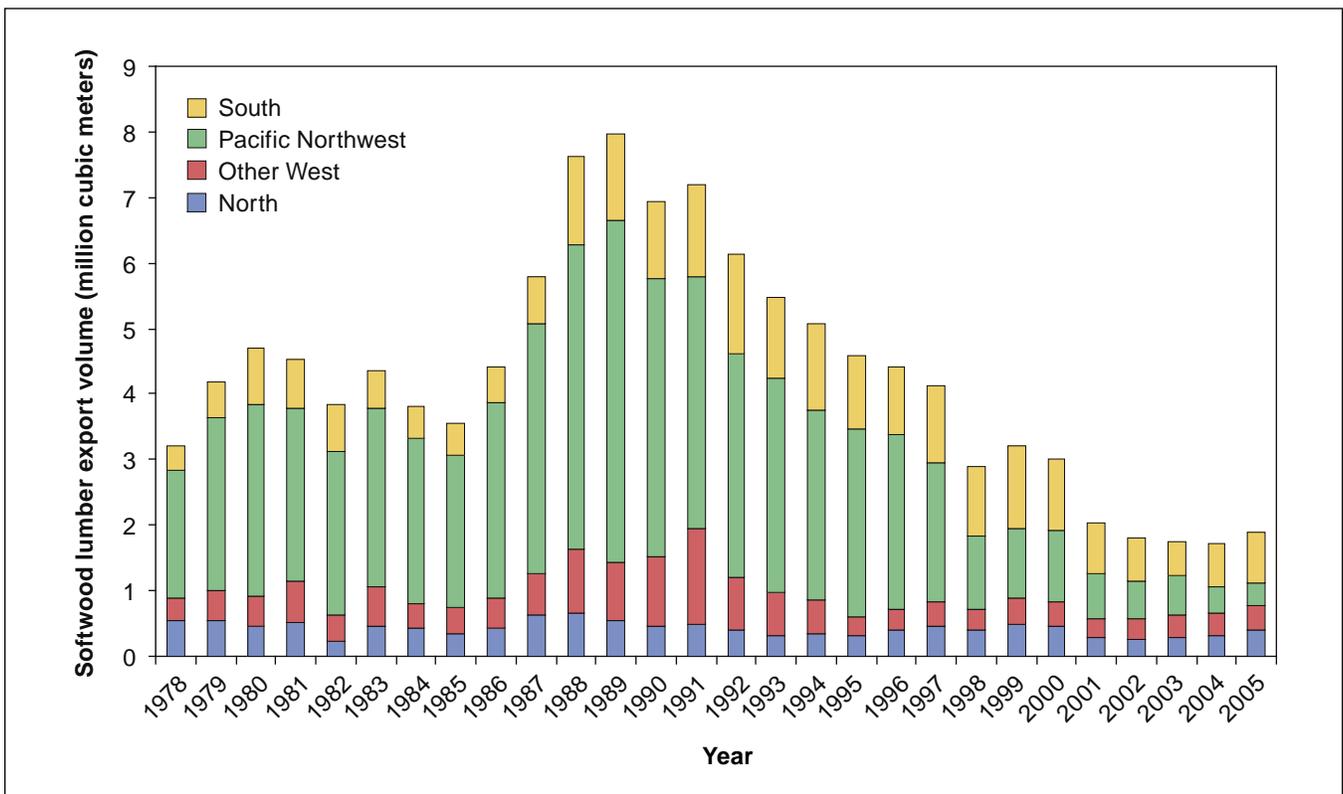


Figure 26c—Softwood lumber export volume by customs region.

The Pacific Northwest was the major softwood lumber export region from 1978 to 1998 (fig. 26c). Exports from Pacific Northwest districts dropped when markets in Japan disappeared in the late 1990s. Districts in the North, Other West, and South maintained their share of softwood lumber exports over time; modest gains established the South as leading supply region by 2005.

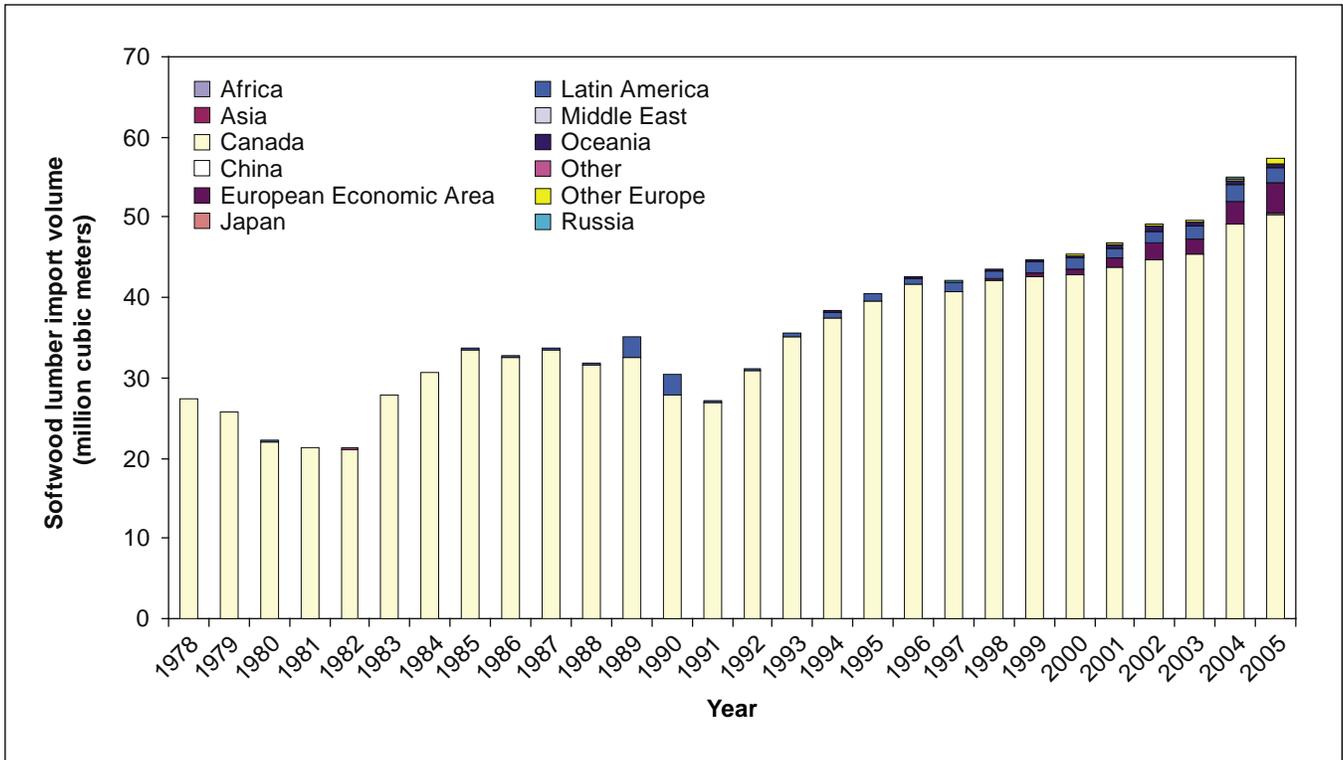


Figure 26d—Softwood lumber import volume from selected destinations.

Softwood lumber was almost exclusively imported from Canada (fig. 26d). Canadian imports flattened in 1996, and then rose again in 2004 and 2005. Suppliers in the EEA and Latin America began to penetrate U.S. markets as well. By 2005, the EEA and Latin America represented 6 and 3 percent of softwood lumber imports, respectively, whereas Canada controlled 88 percent of this market.

Softwood lumber predominantly entered the United States through northern customs districts (fig. 26e). The Pacific Northwest was the second leading importing region, while the South and Other West imported the least. As softwood lumber imports expanded over time, gains were observed in the Pacific Northwest and the North; the bulk of imports was still received in northern districts by 2005.

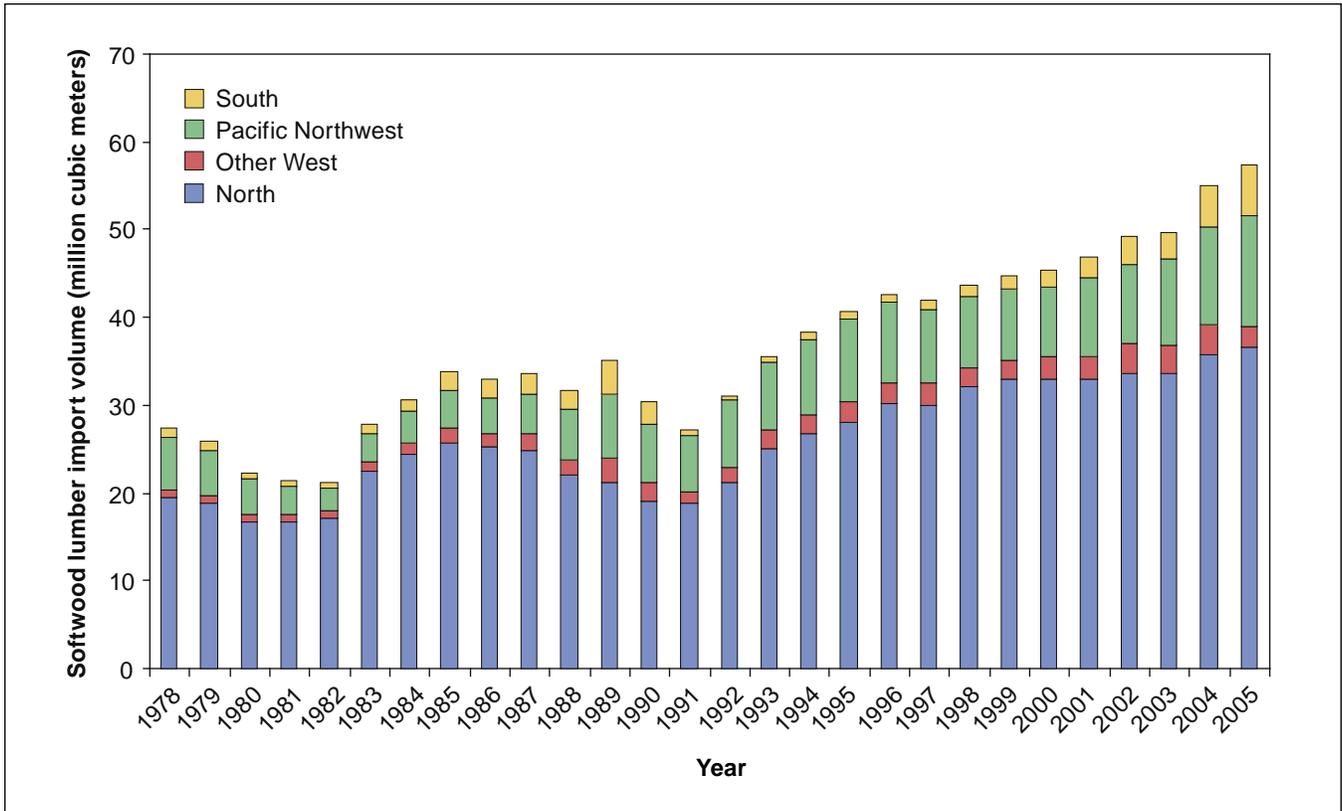


Figure 26e—Softwood lumber import volume by customs region.

## Softwood Plywood

Softwood plywood exports and imports were both originally reported in thousand square feet, 3/8-inch basis, and converted to cubic meters. Data after 1988 were reported in metric units.

Figure 27a displays trade in softwood plywood from 1978 to 2005. Exports were flat until 1985, and shipments rose by 1.3 million cubic meters to peak in 1990. Shipments remained robust and then began falling in 1998. By 2005, exports had dropped to early 1980s levels. Softwood plywood imports were negligible and flat until the late 1990s. Between 1998 and 2005, imports increased by over 2.2 million cubic meters, surpassing exports in 2001.

Softwood plywood exports were dominated by shipments to the EEA until the late 1990s. Figure 27b shows that export destinations remained fairly consistent from 1978 to 1985; after 1986, shipments to the EEA rose sharply and peaked near 1 million cubic meters in 1990. Exports to Latin America were on the rise as well. In 1998, softwood plywood shipments to the EEA dropped dramatically and were almost nonexistent by 2005. Latin America became the leading export destination with Canada a close second.

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**Softwood plywood exports were dominated by shipments to the EEA until the late 1990s.**

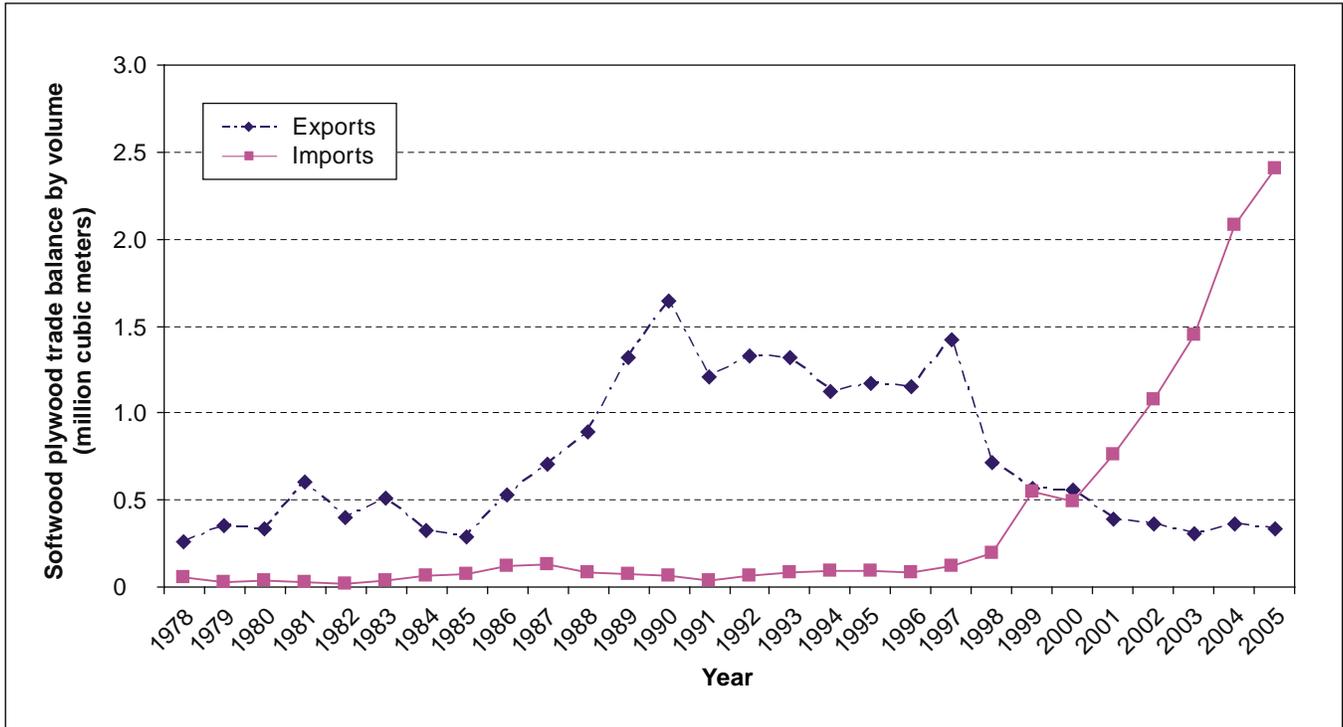


Figure 27a—Softwood plywood trade balance by volume.

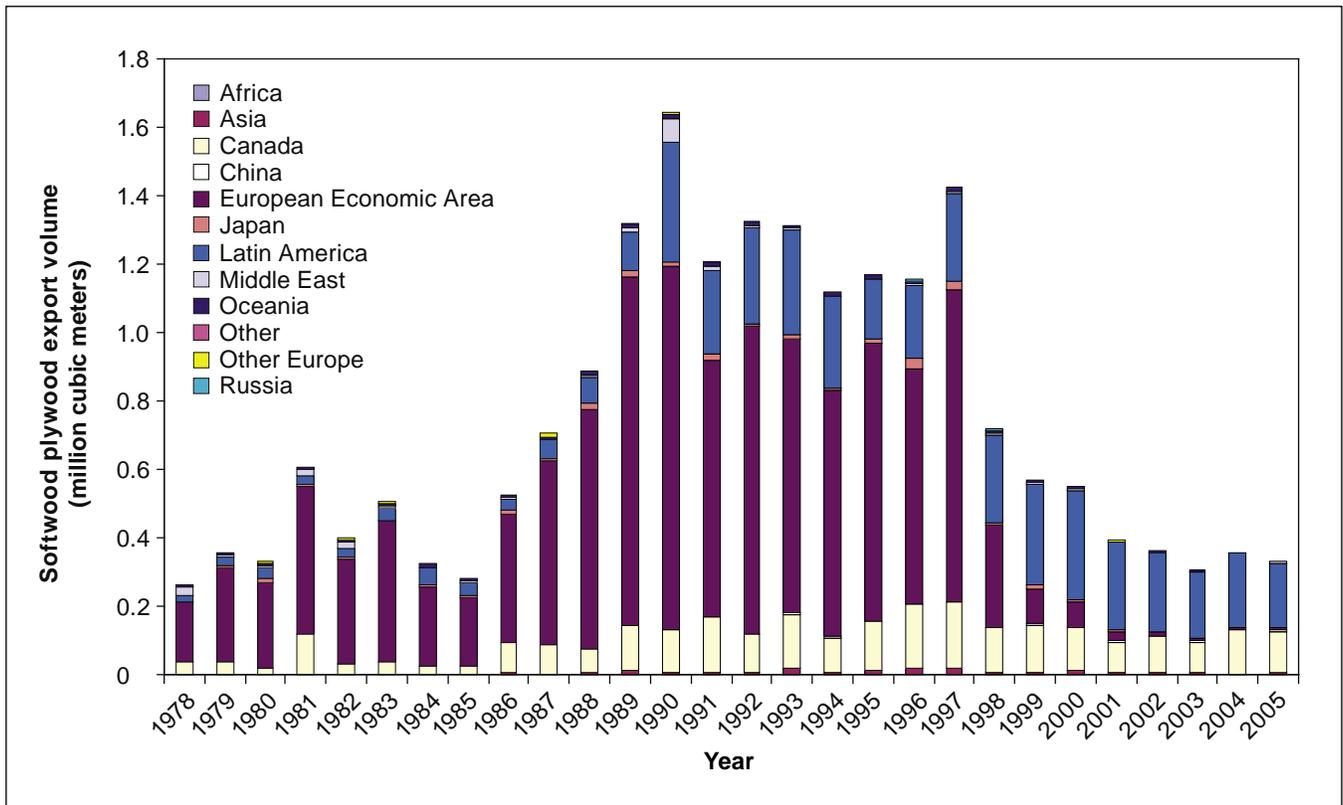


Figure 27b—Softwood plywood export volume to selected destinations.

The bulk of softwood plywood exports were shipped from the South to markets in Western Europe (fig. 27c). Southern exports began rising rapidly in 1986 and peaked twice before falling back to 1980s levels by 2001. Four years later, the greatest share of exports continued to originate in the South, but only by a narrow margin.

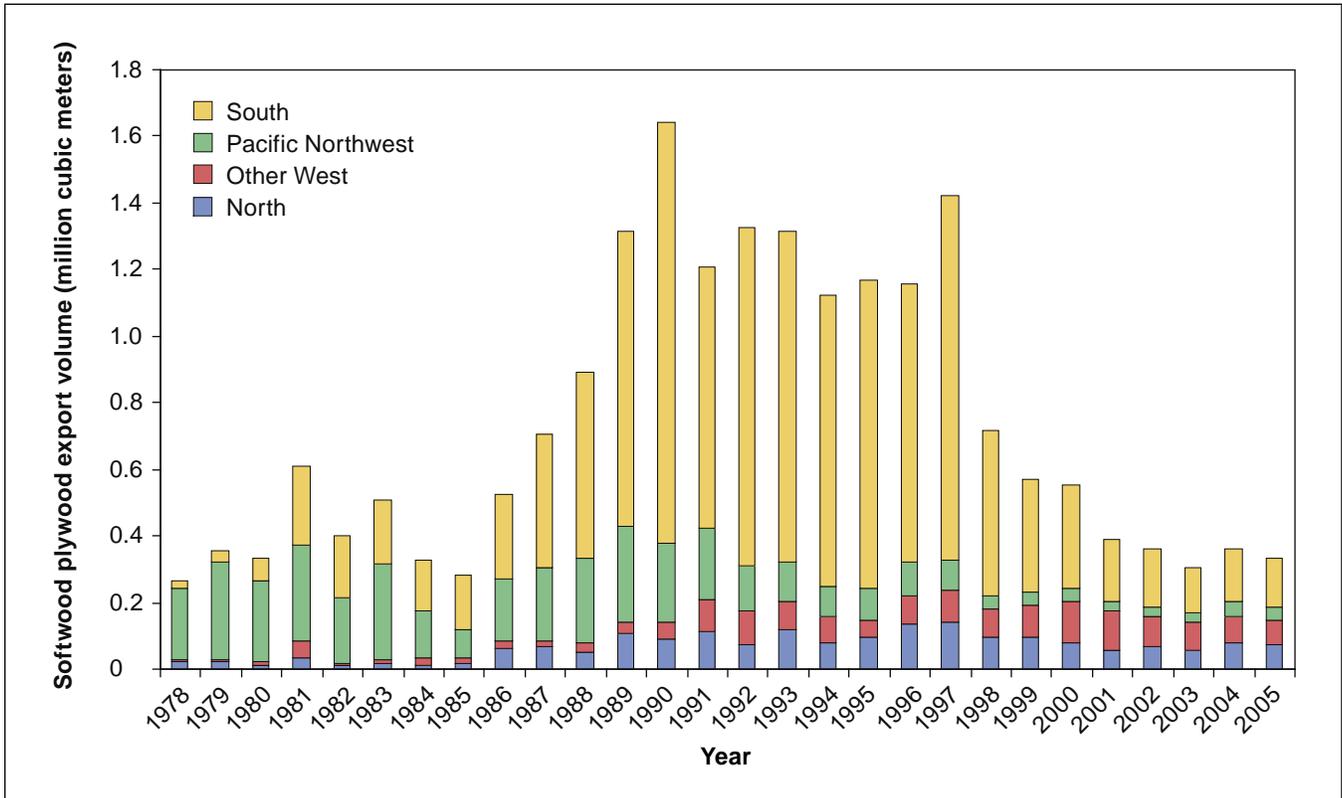


Figure 27c—Softwood plywood export volume by customs region.

Figure 27d shows that softwood plywood imports expanded rapidly. After 1998, plywood imports shot up, led by a surge of shipments from Latin America. With imports growing by over 800 percent between 1998 and 2005, Latin America became the dominant supplier to U.S. markets. Canadian imports rose as well, but consistently remained around 575 000 cubic meters.

Figure 27e demonstrates that northern and southern customs districts received the majority of softwood plywood shipments into the United States. Growing imports from Canada and Latin America arrived at districts in the North and the South. In 2004 and 2005, the volume of softwood plywood imported into southern districts surpassed imports to the North for the first time.

**By 2005, Latin America became the dominant supplier of softwood plywood to U.S. markets.**

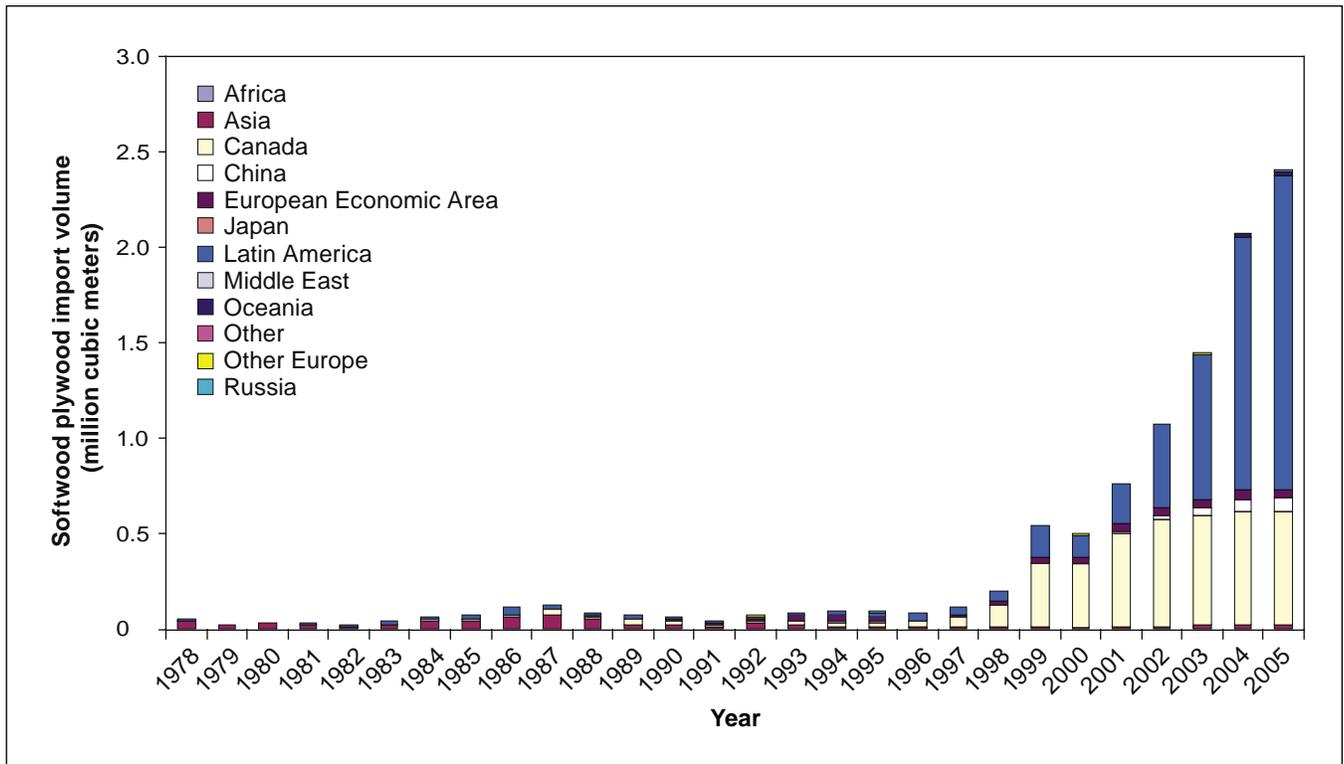


Figure 27d—Softwood plywood import volume from selected destinations.

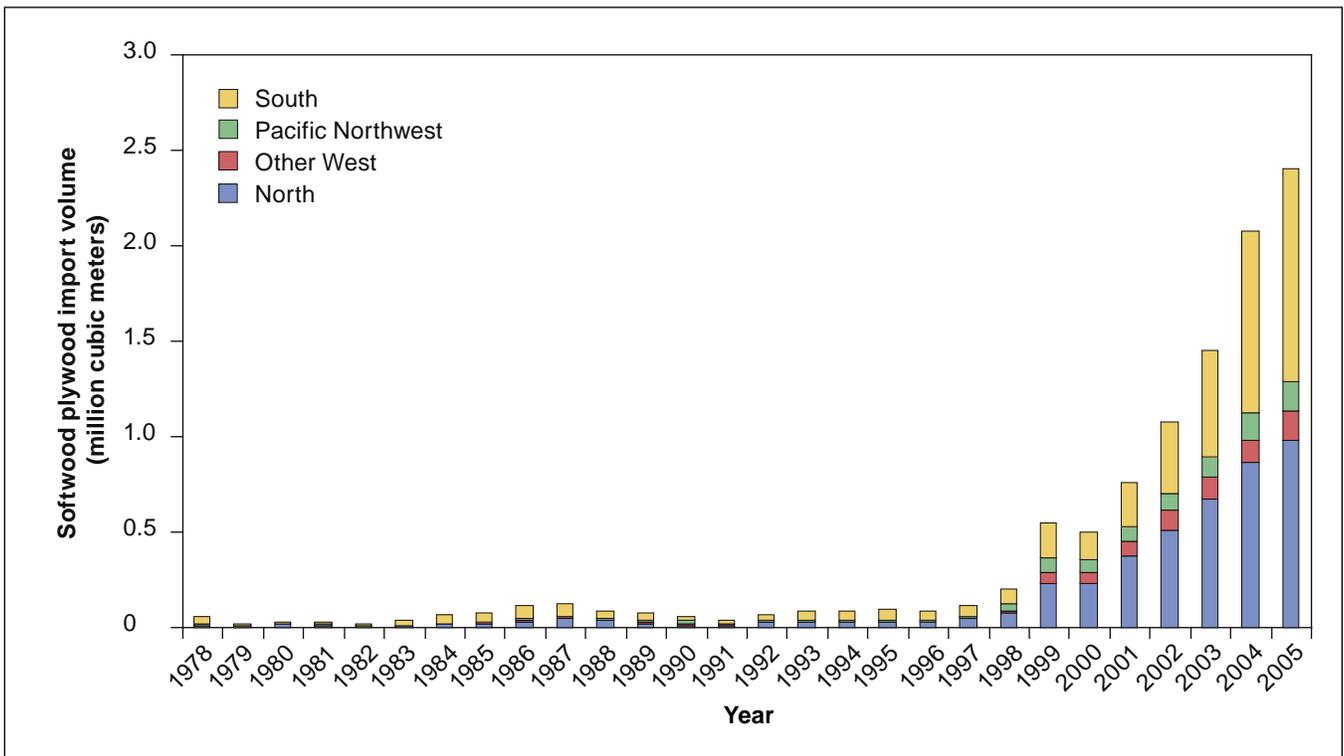


Figure 27e—Softwood plywood import volume by customs region.

## Softwood Veneer

Softwood veneer exports and imports were both reported in thousand square feet, surface measure, for the period 1978–88 and converted to square meters. Data after 1988 were originally reported in metric units.

The volume of softwood veneer imports was relatively equal to exports until imports began rising in 1990 (fig. 28a). After expanding at a modest pace, softwood veneer imports shot up in 1998 to reach record levels around 326 000 square meters by 2005. Exports remained relatively flat throughout the reporting period, although gains were observed after 2002.

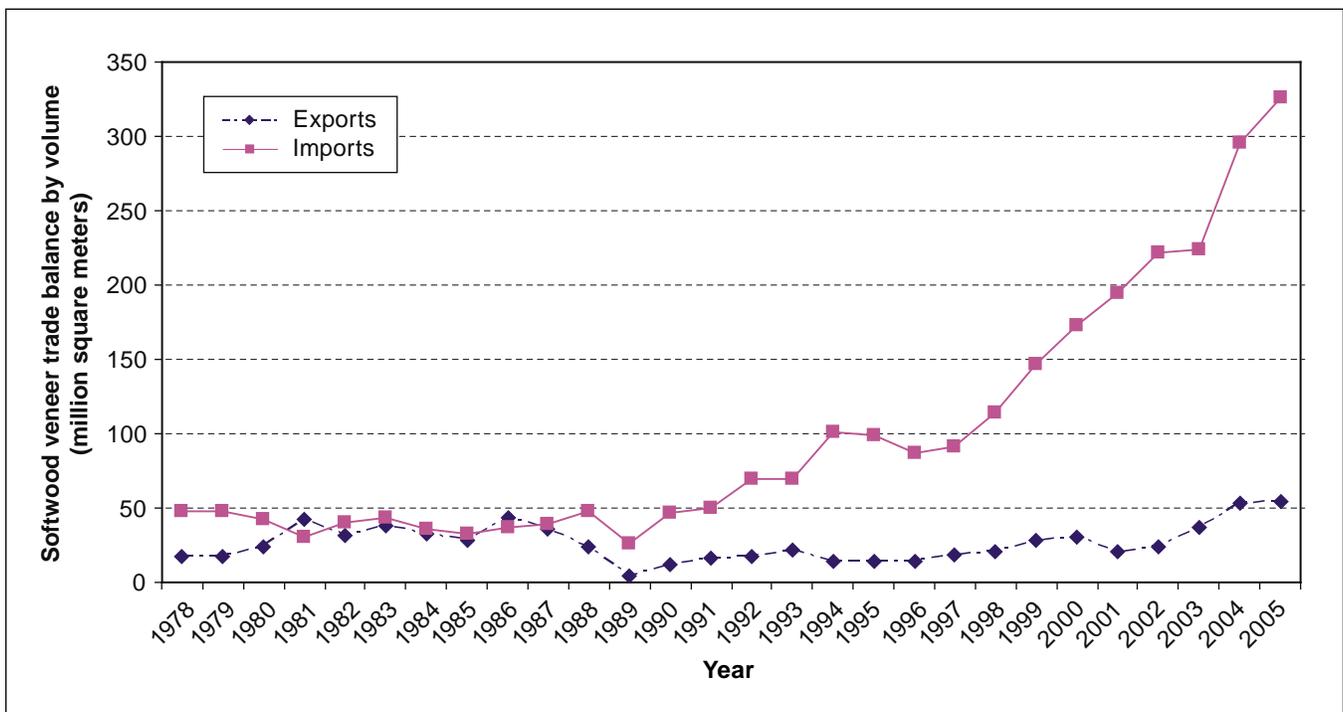


Figure 28a—Softwood veneer trade balance by volume.

Softwood veneer export destinations have changed several times (fig. 28b). Initially, Canada was the dominant export market, although Latin America, the EEA, and Japan were also major purchasers. Expanding shipments in the early 1990s made Japan the dominant export destination until 1997. Exports to Japan fell while exports to Canada expanded; Canada again became the number one export destination. Export destinations diversified between 1999 and 2005 with expanding markets in Africa, Asia, China, the EEA, and the Middle East. In 2002, the EEA became the primary destination for U.S. softwood veneer exports and remained in that position through 2005.

**In 2002, the EEA became the primary destination for U.S. softwood veneer exports and remained in that position through 2005.**

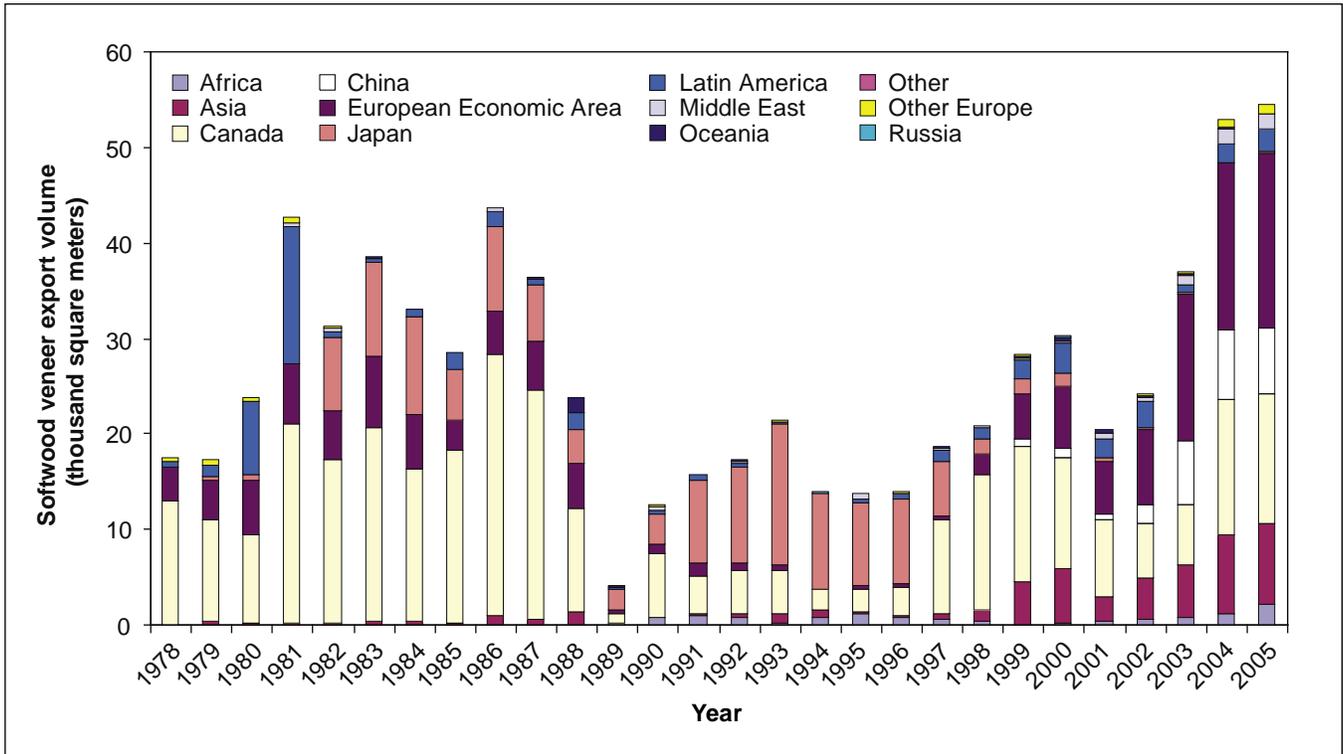


Figure 28b—Softwood veneer export volume to selected destinations.

**The majority of softwood veneer was imported into the Pacific Northwest, reflecting shipments from Canada.**

Historically, the Pacific Northwest was the primary exporting region for softwood veneer (fig. 28c). This trend changed when big gains were made by southern districts. By 2002, the majority of softwood veneer exports originated in the South, reflecting the expansion of markets in the EEA. The South continued as the leading exporter of softwood veneer although exports from the Pacific Northwest and the North had risen by 2005 as well.

Figure 28d shows that an overwhelming majority of softwood veneer import demand was met by Canadian suppliers. Although Latin America suppliers made inroads after 2002, Canada continued to supply 90 percent of U.S. softwood veneer by 2005.

Figure 28e shows that the majority of softwood veneer was imported into the Pacific Northwest, reflecting shipments from Canada. This trend was somewhat unusual; in most other commodities, imports from Canada arrived at districts in the North. Small increases to southern districts from Latin American suppliers appeared after 2002.

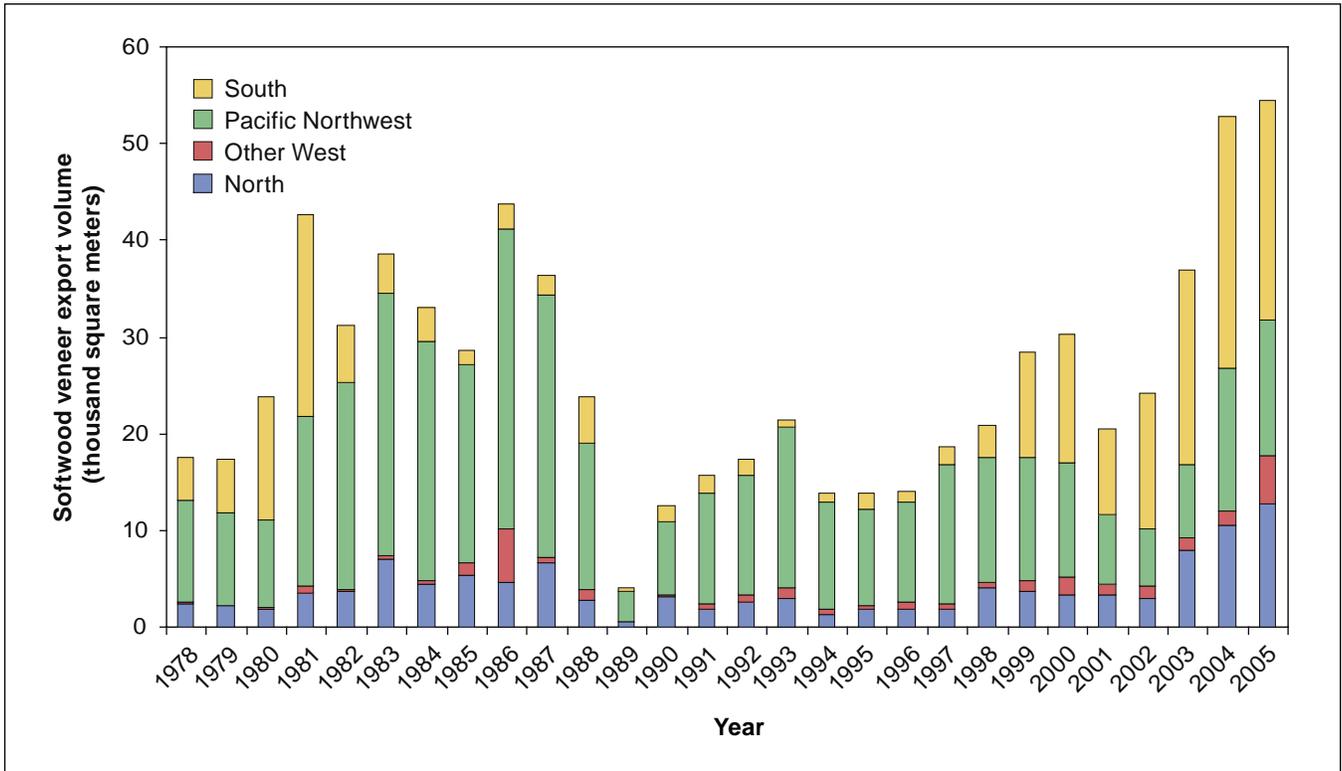


Figure 28c—Softwood veneer export volume by customs region.

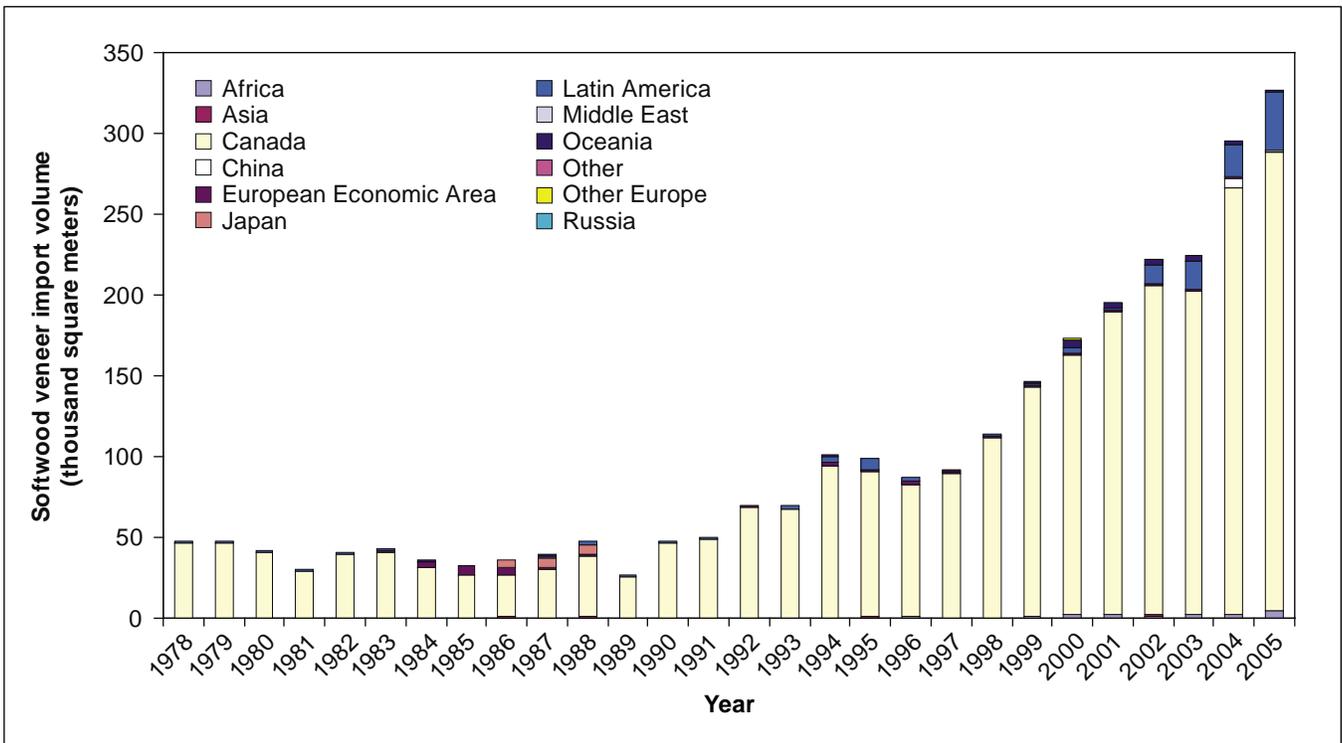


Figure 28d—Softwood veneer import volume from selected destinations.

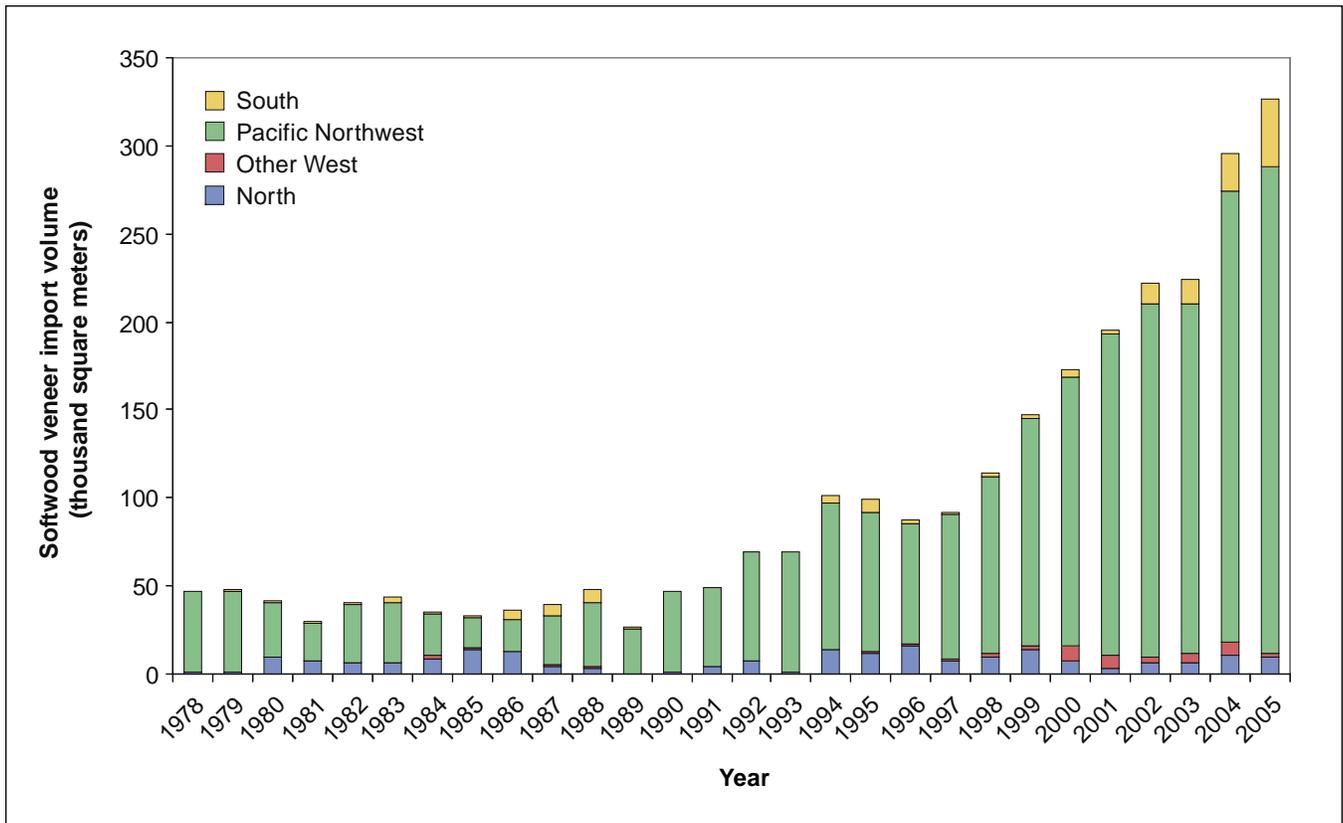


Figure 28e—Softwood veneer import volume by customs region.

**Newsprint was primarily exported to the Pacific Rim and Latin America. Japan was the most consistent purchaser.**

## Newsprint

Exports of newsprint were reported in thousand short tons from 1978 to 1987 and in pounds in 1988. Newsprint imports were reported in thousand short tons for the period 1978–87 and in short tons for 1988. Both imports and exports were reported in metric units after 1988.

Newsprint imports dwarfed exports throughout the reporting period (fig. 29a). The United States never exported more than 1 million metric tons of newsprint. Imports peaked just over 8 million tons in 1987 then declined over time to reach a low of 5.3 million metric tons by 2005.

Newsprint was primarily exported to the Pacific Rim and Latin America (fig. 29b). Japan was the most consistent purchaser, receiving roughly one-third of newsprint shipments from the United States in most periods. Shipments to Asia and China rose in 1988 and subsided again by 1998. In the mid-1990s, exports to Latin America strengthened; small gains were also observed in African and Middle Eastern shipments. By 2005, the majority of U.S. newsprint was imported by Latin America with Japan a close second.

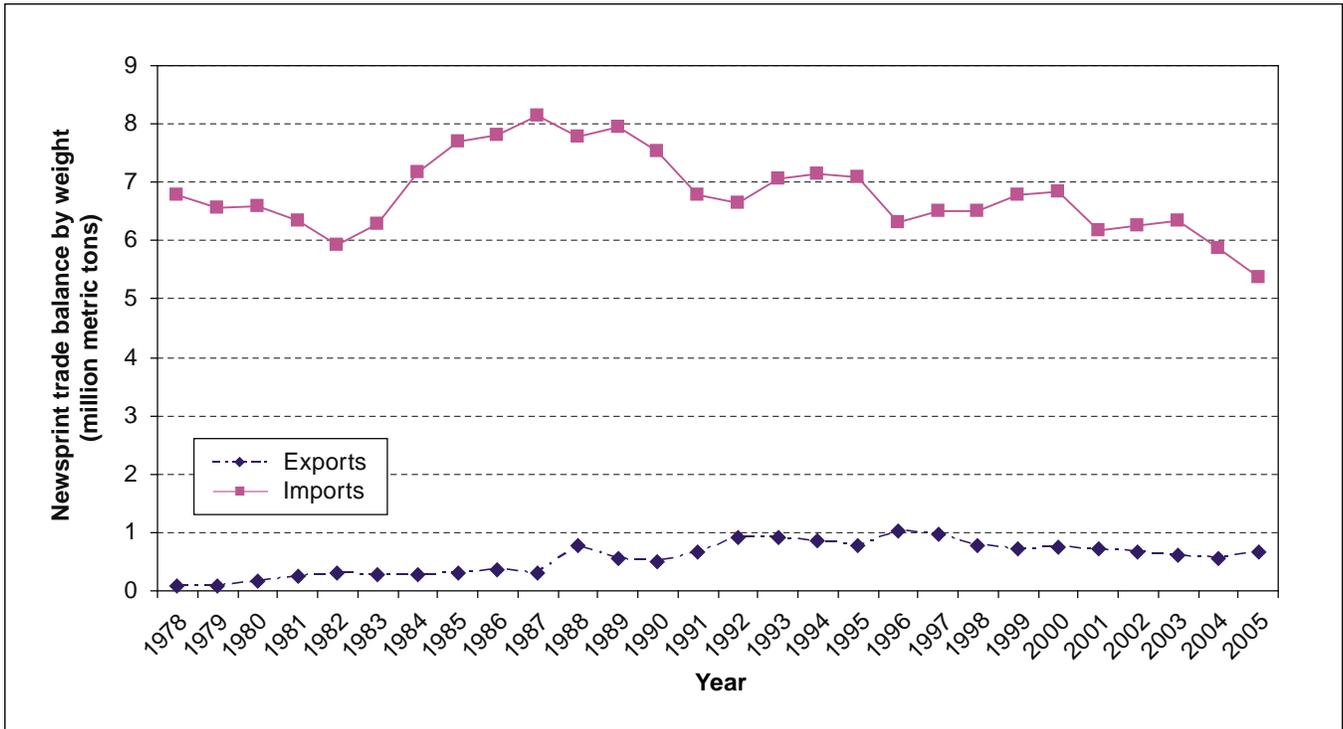


Figure 29a—Newsprint trade balance by weight.

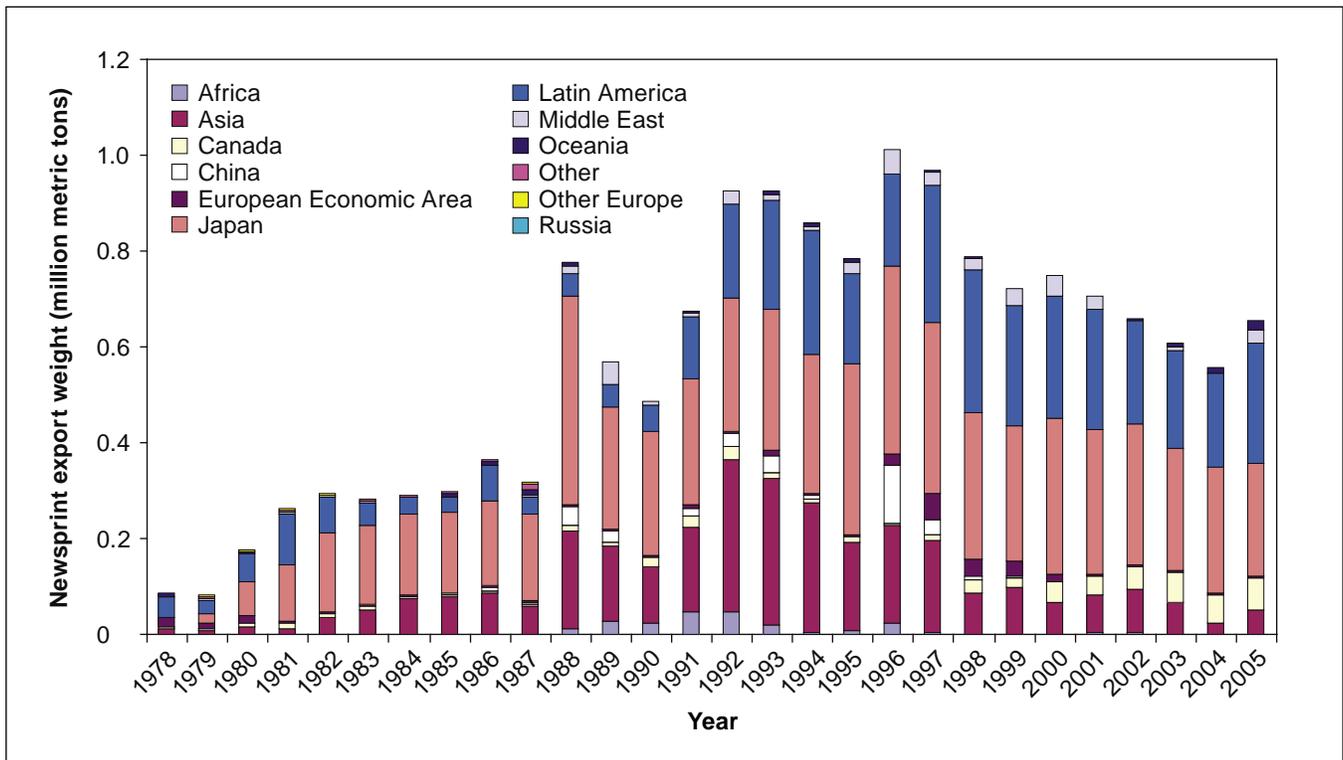


Figure 29b—Newsprint export weight to selected destinations.

The Pacific Northwest was the dominant export region for newsprint (fig. 29c). Expanding shipments from the South destined for Latin America surpassed Pacific Northwest shipments headed to the Pacific Rim in 1993. One year later, southern exports subsided and the majority share regained by the Pacific Northwest lasted through 2005.

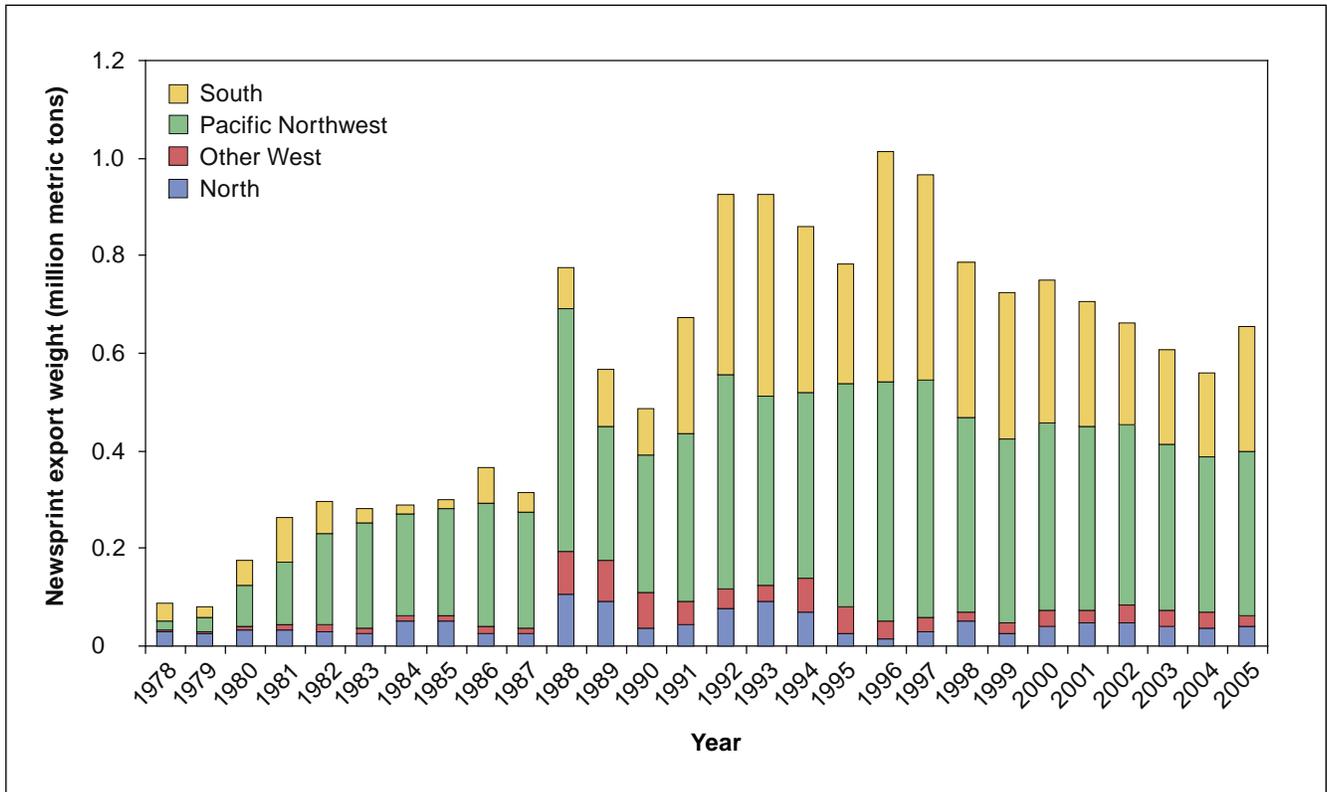


Figure 29c—Newsprint export weight by customs region.

**Demand for newsprint was overwhelmingly met by imports from Canada.**

Figure 29d shows that demand for newsprint was overwhelmingly met by imports from Canada. Although Asia and Latin America had a modest presence, no other supplier could touch Canada in this market. In 2005, 97 percent of U.S. newsprint imports originated in Canada.

Newsprint was primarily imported into northern customs districts (fig. 29e). The proportion of imports to the three other regions was consistently flat over the reporting period.

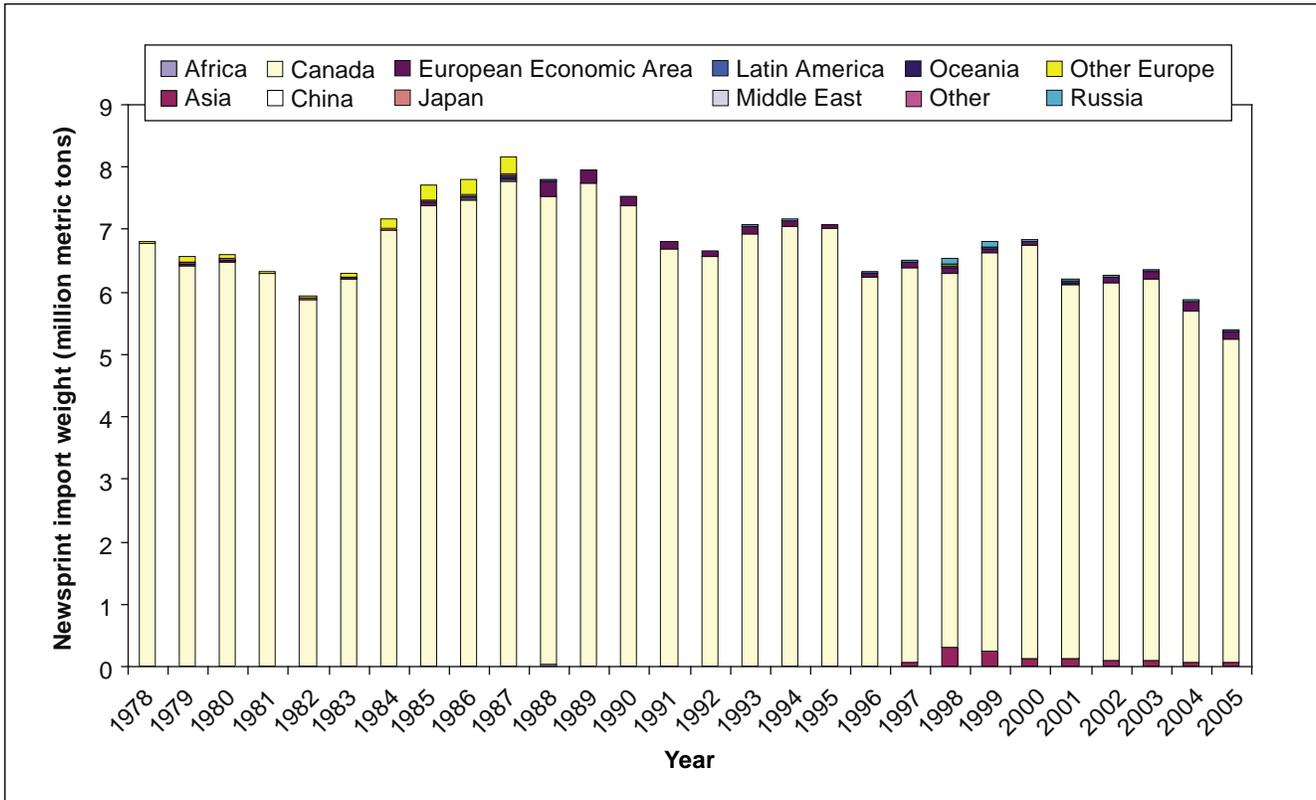


Figure 29d—Newsprint import weight from selected destinations.

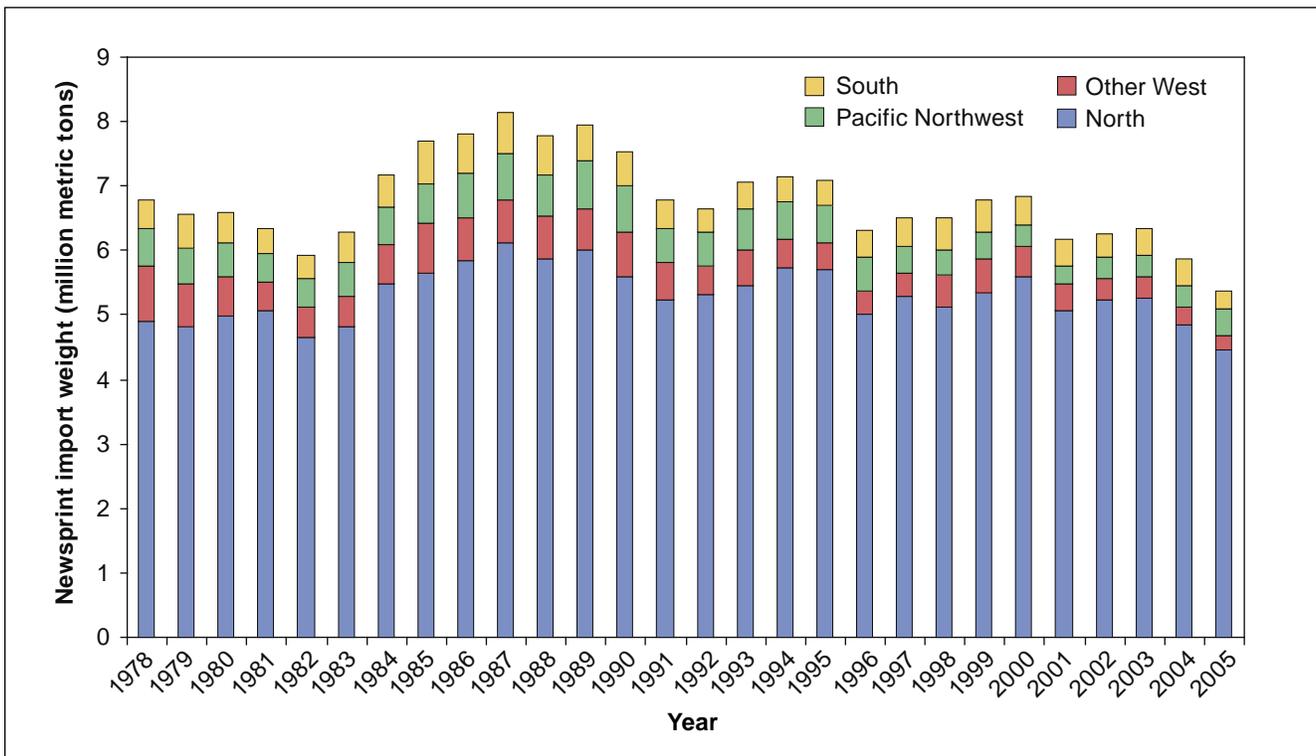


Figure 29e—Newsprint import weight by customs region.