United States
Department of
Agriculture

Forest Service

**Northeastern Forest
Experiment Station**

Research Paper NE-619

Hardwood Import Trends

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Abstract

Although imports of most hardwood products have varied since 1970 with no absolute trend, imports of hardwood plywood have decreased while imports of wood furniture have increased dramatically. The decrease in plywood imports stems from the substitution of sheetrock for plywood in mobile home construction, and the substitution of domestically produced composite products for imported hardwood in the production of prefinished paneling. Increased imports of wood furniture, primarily from Taiwan, resulted from the lower cost work force augmented by the rigid exchange rate between U.S. and Taiwanese dollars. Imports of hardwood lumber, logs, and veneer have fluctuated in both volume and country of origin. These fluctuations are related to the relative strength of the domestic furniture industry and policy developments in exporting countries.

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Manuscript received for publication 17 June 1988

Northeastern Forest Experiment Station
370 Reed Road, Broomall, PA 19008
October 1988

Since 1970, imports of hardwood plywood have declined markedly while imports of hardwood lumber, veneer, and logs have fluctuated. However, even with the large surge in hardwood product exports, total imports of primary hardwood products have stubbornly remained greater than exports of these products (Fig. 1). In addition to the high but decreasing level of primary hardwood products imports, wood furniture imports have increased by nearly 100 percent in real terms since 1980.

Of the primary hardwood products, hardwood plywood is the most significant import on a dollar-volume and cubic-volume basis (Ulrich 1950-85). In 1986, hardwood plywood accounted for 63 percent of the dollar volume of primary hardwood product imports (Appendix Table 2). Hardwood lumber and veneer imports accounted for 22 and 15 percent of the dollar volume, respectively. Hardwood log imports account for less than 1 percent of the dollar volume.

Figure 1.—Imports and exports of hardwood products (excluding pulp products), 1970-86 (in millions of cubic feet). Source: U.S. Department of Commerce, Bureau of the Census.

The varying levels of primary and secondary hardwood products imports affect and are affected by the domestic hardwood products industry. In this paper I examine hardwood plywood, furniture, lumber, veneer, and log imports, and discuss the factors that will affect future import levels.

Hardwood Plywood Imports

The term hardwood plywood is used to describe numerous products that have a face of hardwood veneer bonded to a wood ply, solid wood, or wood composite panel. Major products included under this definition are:

1. Doorskins: Thin panels cut to standard door sizes.
2. Stock panels: Normally 4 x 8 sheets of multi-ply plywood, usually less than one-quarter inch in thickness.
3. Cabinet plywood: Normally 4 x 8 sheet of multi-ply plywood, usually one-half inch or greater in thickness.
4. Cut-to-size plywood: Plywood that has been cut or manufactured to a specified size other than 4 x 8 sheets or doorskins.

Even though hardwood plywood imports are not classified into these groups, industry sources indicate that the majority of the imports are either doorskins or stock panels.[1] The United States also imports relatively small quantities of cut-to-size and cabinet plywood from Canada, Europe, and Asia.

Since 1970, shipments from Asia have ranged from 93 to 97 percent of total plywood imports. Figure 2 shows the breakdown of Asian imports for birch and sen plywood, lauan and birch doorskins, lauan panels, and other panels. The other panel categories include primarily shorea species such as meranti that are similar to lauan.

During the 1970-86 period, Asian sources for imported doorskins changed substantially. In 1970, 49 percent of the Asian doorskins originated from Taiwan and 40 percent originated from Japan. By 1976, Taiwan's share of the market increased to more than 75 percent while Japan's market share dropped to 18 percent. In the 1980's, Indonesia entered the market and Japan all but ceased exporting doorskins. By 1986, the proportion of Asian doorskins imported from Taiwan and Indonesia was 49 and 43 percent, respectively. This change probably resulted from the log embargo by Indonesia (Walker and Hoesada 1986) and the subsidized development of the Indonesian plywood industry (Repetto 1987).

[1] Doorskins usually can be identified as birch or Philippine mahogany plywood "not exc 5/32 inch by 47 in by 85 in." Stock panels can be usually identified as Philippine mahogany or NEC (not elsewhere classified) plywood classified as "excdg 5/32 inch thick by 47 in by 85 in."

The origins of Asian stock panels also have changed. In 1970, approximately 55 percent of the stock panels were imported from Korea while shipments from Taiwan and the Philippines were approximately 20 and 18 percent, respectively. Korea dominated the stock panel market through the 1970's; however, in the 1980's, Indonesia entered the market and Korea exited. By 1985, Indonesia dominated the market with an 80-percent share while Taiwan was second with only a 10-percent market share. These changes also appear to be the result of the Indonesian log embargo and the development of the Indonesian plywood industry.

Another trend has been the gradual decrease in stock panel imports. Some of this decrease can be attributed to the fact that primary markets for hardwood plywood (home construction, remodeling, and furniture production) have not been as strong in the 1980's as in the early 1970's.

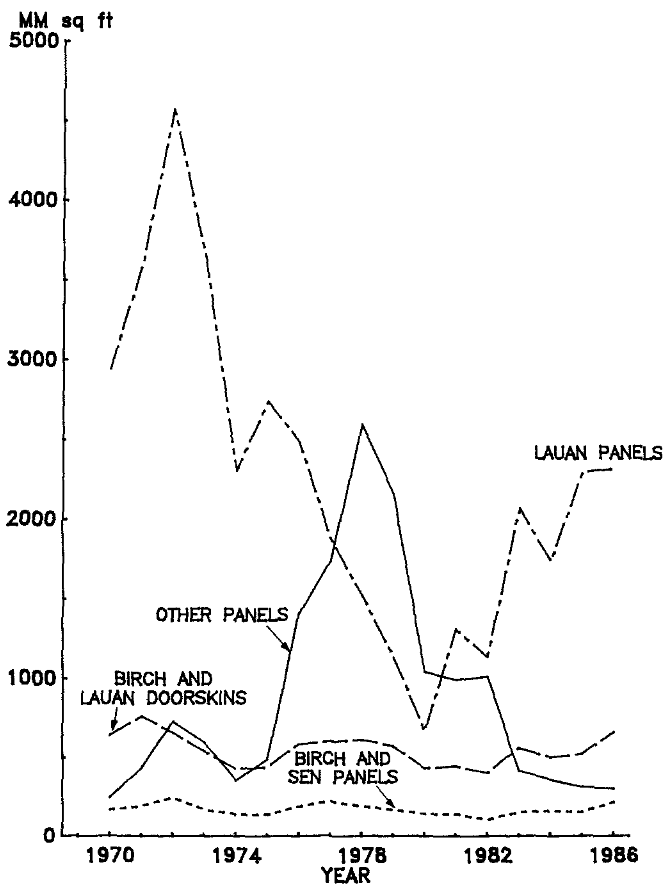

Figure 2.—Imports of hardwood plywood produced in Asia, by major product group, 1970-86 (in millions of square feet). Source: U.S. Department of Commerce, Bureau of the Census.

Another factor that has influenced plywood demand has been changes in the mobile home industry. In 1974, the mobile home industry produced 329,000 units (Ulrich 1950-85) and used approximately 700 million square feet of hardwood plywood (Dickerhoof 1978). In 1985, mobile home production was only 284,000 units with sheetrock used as a substitute for plywood (Pearce 1988). Sheetrock has been substituted for paneling because it is less expensive to install and the formaldehyde problems encountered with hardwood plywood are eliminated (Pearce 1988).

Hardwood plywood use by the furniture industry also has decreased since the 1970's (Luppold 1988). Although much of this decrease affects the domestic plywood industry, the substitution of hardboard and other composite panel products for thin plywoods has contributed to the reduction of plywood imports.

A third factor that has reduced domestic demand for imported plywood is the development of particleboard wall paneling. This product became available in the early 1980's and is normally sold at a much lower price than wall paneling produced from imported plywood.

Hardwood Furniture Imports

Furniture imports can significantly affect long-term domestic demand for timber resources if they displace domestic production and reduce domestic use of hardwood lumber and veneer. In the early 1970's, imports of wood furniture were relatively insignificant; by 1986, imports accounted for 23 percent of apparent sales (Araman 1988). During this same period, domestic shipments decreased by 10 percent while imports increased by nearly 350 percent. An examination of the history of furniture imports may help to determine whether these imports will continue to increase at the expense of domestic furniture production.

Furniture imports come from around the world: Canada, South and Central America, Scandinavia, Western and Eastern Europe, and Asia. In Europe, Scandinavia, Western Europe, and Eastern Europe can be viewed as three separate regions for furniture imports because of style and product differences.

Since 1970, imports have increased by 700 percent in real terms as indicated by the deflated import values shown in Appendix Table 4. From 1970 to 1986, relative shipments from Canada, Scandinavia, and Eastern Europe decreased for the most part while relative shipments from South America remained nearly constant (Fig. 3). The Western Europe market share dropped in the early 1980's but rebounded in the mid-1980's. Imports from Asia have shown consistent growth since 1975 and have dominated the market in the 1980's. The growth in Asian market shares seems to have been first at the expense of Canada and later at the expense of Eastern Europe and Scandinavia.

Although the United States imports all types of wood furniture, imports of wood chairs, tables, and wall systems dominate over desks, bedroom furniture, and furniture parts. Also, different countries tend to concentrate on certain types of product exports (Table 1). For instance in 1986, shipments from Taiwan, Yugoslavia, and Italy made up 60 percent of the chair imports while shipments from Taiwan, Denmark, and Italy made up 70 percent of the table shipments. Canada was the number one supplier of desks while Denmark and Italy dominated bedroom furniture imports. Most noticeable, however, is the absolute dominance of Taiwan in all other product categories.

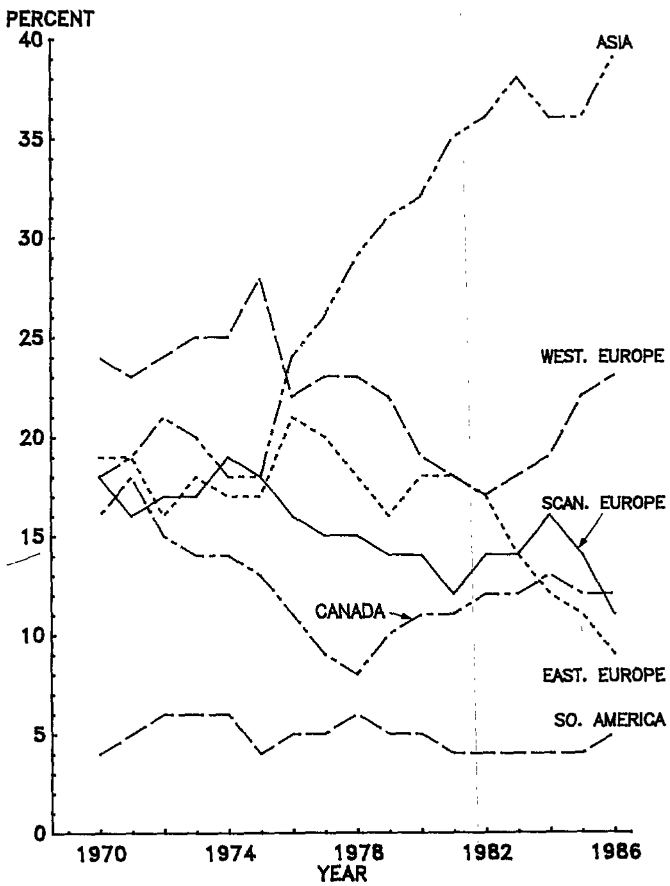

Figure 3.—Percent of furniture imports originating from Canada, South America, Western Europe, Eastern Europe, and Asia, 1970-86. Source: U.S. Department of Commerce, Bureau of the Census.

The strength of Taiwan and other Asian countries in the wood furniture market stems from their ability to supply products of acceptable quality at low prices. Further, furniture produced in Asia is being marketed through nontraditional markets such as discount stores as well as through traditional channels of domestic furniture manufacturers.

Table 1. — Top countries of origin for furniture imports by type, volume (in thousands of dollars), and market share, 1986

Product	Rank	Country	Volume	Market share
Chairs	1	Taiwan	90,769	26
	2	Yugoslavia	66,960	19
	3	Italy	54,170	15
Desks	1	Canada	28,225	30
	2	Taiwan	24,490	26
	3	Denmark	13,052	14
Tables	1	Taiwan	193,728	55
	2	Denmark	26,393	8
	3	Italy	24,871	7
Bedrooms	1	Denmark	35,274	19
	2	Italy	33,071	18
	3	Canada	26,786	14
	4	Germany	15,891	8
Wall systems	1	Taiwan	101,073	22
	2	Canada	62,991	14
	3	Denmark	55,441	12
	4	Germany	50,177	11
Parts	1	Taiwan	70,074	43
	2	Yugoslavia	21,980	13
	3	Canada	17,652	11
Other Furniture	1	Taiwan	61,875	22
	2	Canada	56,808	20
	3	Italy	24,631	9
	4	Japan	22,430	8

The relatively low price of Asian furniture may originate partially from the low-cost, work-oriented Asian labor force, but it is augmented by a rigid exchange rate between the U.S. dollar and the currencies of Taiwan, Hong Kong, Korea, and Singapore. Much of this rigidity can be attributed to the U.S. Government's unique relationship with these developing, capitalistic economies.

Hardwood Lumber Imports

Hardwood lumber imported into the United States is used primarily in furniture production, millwork, or other appearance applications. The information in Appendix Tables 2 and 3 indicates that quantity and real value of hardwood lumber imports have shown variation but no discernable long-term trends. However, there have been significant changes in origins and the species mix of lumber imports.

The majority of hardwood lumber imported into the United States is either temperate species originating from Canada or tropical species originating from South or Central America, Asia, or Africa. Only a small percentage of lumber imports originates from Western or Eastern Europe or the Middle East.

In 1970, imports from Canada dominated with a market share of 43 percent while imports from South America, Asia, and Africa had market shares of 26, 23, and 7 percent, respectively (Fig. 4). During the early 1970's, hardwood lumber imports swelled as imports of unspecified species from Brazil and Columbia increased sharply. By 1974, imports of unspecified species from South America accounted for nearly 25 percent of all lumber imports. Some of this increase resulted from the U.S. furniture industry's search for alternative species because of the dramatic increase in prices of domestic hardwood lumber between 1972 and 1973. These increases were especially dramatic in the No. 1 Common lumber of lower valued species such as soft maple (123 percent), yellow-poplar (71 percent), and sap gum (54 percent) (Lemsky 1972-73).

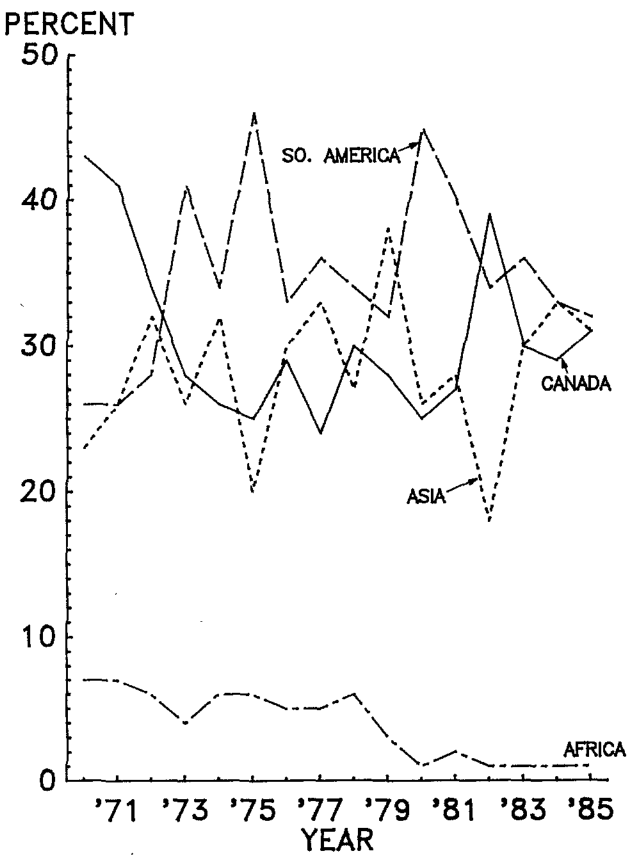

Figure 4.—Percent of lumber imports originating from Canada, South America, Asia, and Africa, 1970-86. Source: U.S. Department of Commerce, Bureau of the Census.

The large increases in lumber imports in the early 1970's stopped abruptly with the onset of the 1974-75 recession. Between 1974 and 1975, total imports decreased by more than 44 percent while imports of unspecified species from South America dropped by more than 55 percent. Shipments of these unspecified species failed to pick up significantly after 1975. Imports of these species probably did not rebound due to the market acceptance and growing use of oak and pine by the domestic furniture manufacturers during the latter part of the 1970's.

During the latter part of the 1970's and through the 1980's, there was variation in market shares among Canada, South America, and Asia but no clear trend. The only significant change was a drop in African imports that may have been more the result of political and economic conditions in Africa than a deliberate shift from African species.

A look at the species imported offers some insight on the dynamics of the lumber import market. In 1970, maple, beech, and birch dominated imports of identified species with a 39-percent market share while genuine mahogany and Philippine mahogany had markets shares of 7 and 11 percent, respectively (Fig. 5). During the early 1970's,

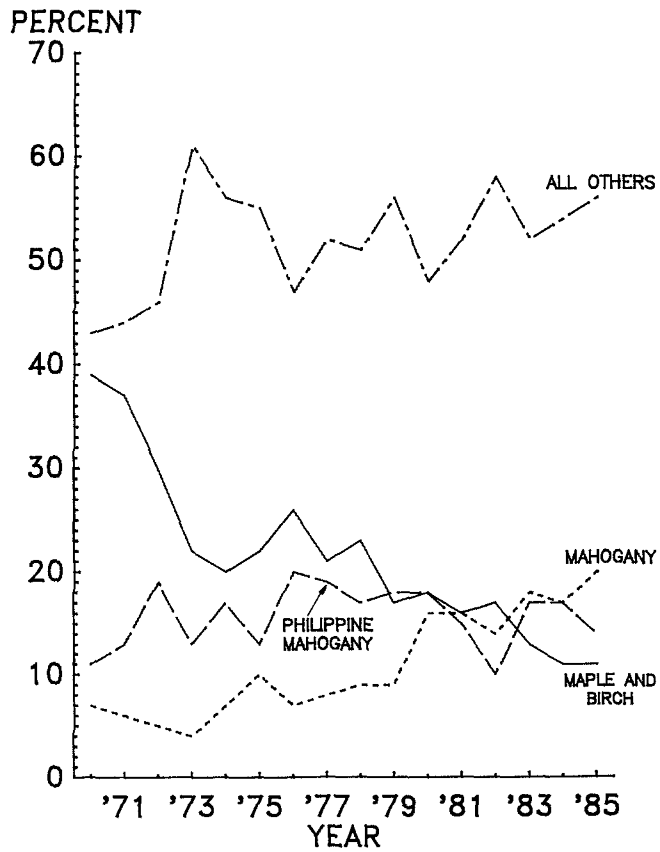

Figure 5.—Percent of lumber imports by species group, 1970-86. Source: U.S. Department of Commerce, Bureau of the Census.

market shares of identified species dropped as the imports of unidentified species from South America increased. The proportion of unidentified species has been high since the early 1970's and probably reflects an increase in imports of temperate species such as alder, ash, and oak from Canada, and an increase of imports of tropical species such as ramin and shorea, other than lauan, from Malaysia.

One discernable trend in Figure 5 is the increase in shipments of genuine mahogany and the sharp decrease in shipments of maple, beech, and birch. This change reflects style changes in the domestic furniture industry. During the late 1970's and through the 1980's, 18th-century reproductions containing mahogany have been popular in more expensive furniture lines.

Shipments of Philippine mahogany or lauan from Asia have been erratic but have trended upward since 1980. Lauan, a relatively inexpensive and versatile species, is used widely in the furniture industry in the manufacture of exposed solids, drawer sides, and other products. Lauan also is a popular millwork species for fancy moldings and can be used in conjunction with genuine mahogany solids and veneers.

Hardwood Veneer Imports

Hardwood veneer is used in the production of architectural plywood, furniture, stock panels, cabinet plywood, and doorskins. Similar to hardwood lumber imports, hardwood veneer imports have shown no discernable long-term trends (Appendix Tables 2 and 3).

During 1970 to 1986, imports from Canada, Asia, and South America normally accounted for 75 to 90 percent of all imports (Fig. 6). However, imports from Canada have dominated the veneer market since 1975 while imports from Asian countries have decreased in relative terms. South American and European imports also have increased whereas African imports have shown a relative decrease.

Birch has been the most important species of veneer imported from Canada and traditionally has accounted for over one-half of all Canadian imports and one-third of all imports (Fig. 7). Lauan is the most important species imported from the Philippines and Asia.

Unidentified species account for a significant proportion of the veneers imported from Canada and Asia, and nearly all of the veneer imported from South America, Europe, and Africa. Canadian shipments of these unidentified species probably include oak and other temperate hardwoods that may or may not originate from Canada, and tropical hardwoods that are shipped to Canada from Asia, South America, and Africa. Asian shipments of unidentified species probably include shorea species other than lauan and other species such as teak and ramin. Unidentified species originating from South America would most likely include genuine mahogany, banack, primavera, and andiroba.

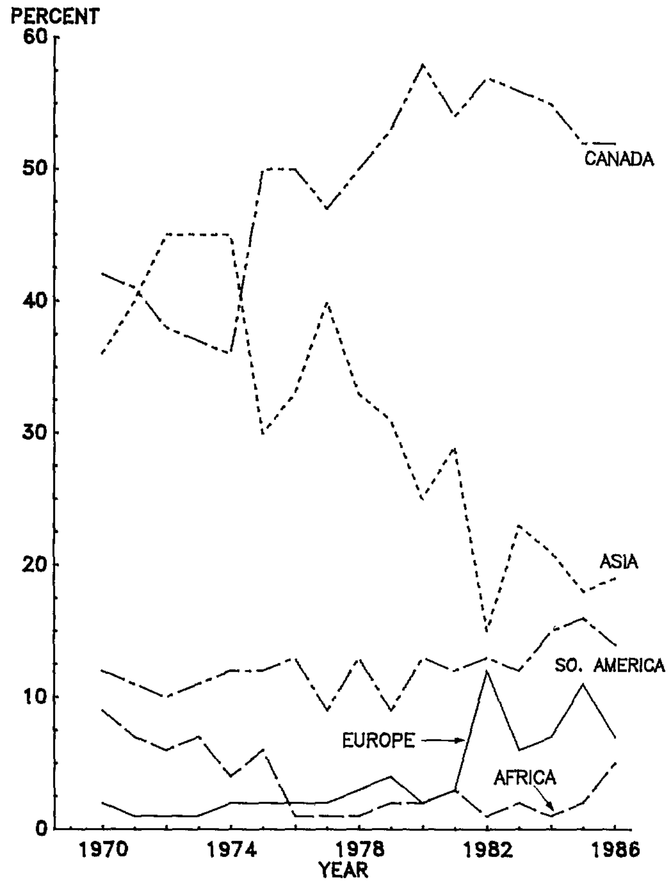

Figure 6.—Percent of veneer imports originating from Canada, South America, Europe, Asia, and Africa, 1970-86. Source: U.S. Department of Commerce, Bureau of the Census.

Hardwood Log Imports

Imports of hardwood logs have been low relative to imports of other hardwood products and very erratic (Apendix Tables 2 and 3). Still, there are significant trends in log imports that interrelate to trends in hardwood plywood, lumber, and veneer imports.

In 1970, over half of the logs imported into the United States originated from South America; shipments originating from Brazil accounted for 20 percent of total imports (Fig. 8). In 1972, shipments from Brazil accounted for more than 42 percent of total exports, then dropped so low in 1973 that the level was not reported. The dramatic drop in log shipments of around 11 million board feet occurred simultaneously with a 114-percent increase of lumber shipments (more than 65 million board feet). Although the increase in lumber shipments was 6 times greater than the decrease in log shipments, it is apparent that restrictions on log exports by Brazil augmented the surge in demand for Brazilian lumber.

The decline of Brazilian log exports also corresponded to a large but short-term increase in log imports from Africa and Asia (Fig. 8). After the 1975 recession, imports of tropical logs dropped continually while imports of Canadian logs remained nearly constant so that by 1982, 92 percent of all logs shipped into the United States originated from Canada.

In 1985, the log import market appeared to change with a surge in shipments from India and Malaysia. This surge was short lived, but in 1986 there was a surge in shipments from the Netherlands and Germany. Since the surges in European shipments were reported in the unidentified species category, the species is unknown. Given that a large quantity of mahogany logs were shipped from Europe the same year, the increase could be a report of tropical logs through Europe. Whatever the species, the value of these logs was $0.10 per board foot, indicating that these imports were likely sawlogs and not better quality veneer logs.

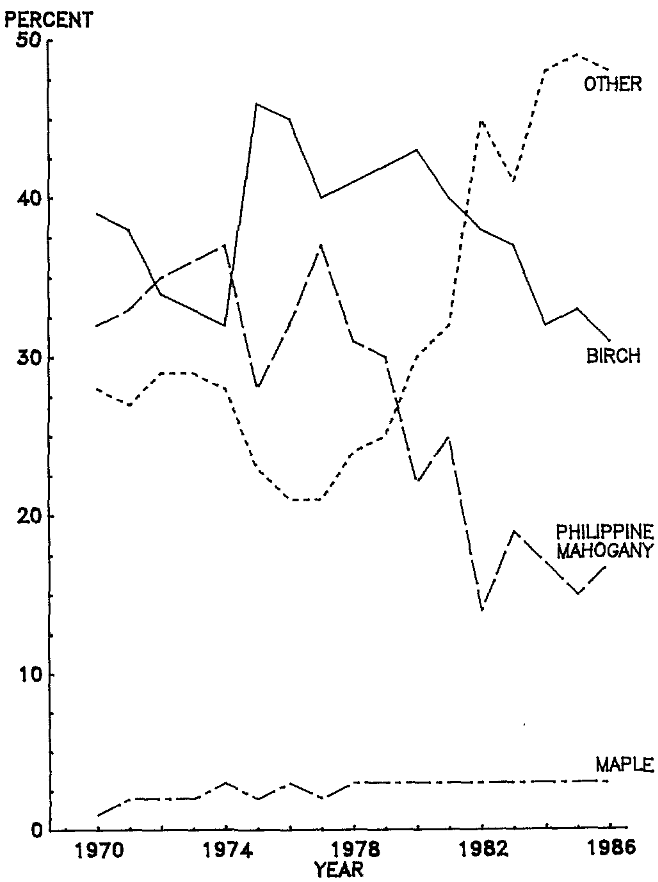

Figure 7.—Percent of veneer imports by species group, 1970-86. Source: U.S. Department of Commerce, Bureau of the Census.

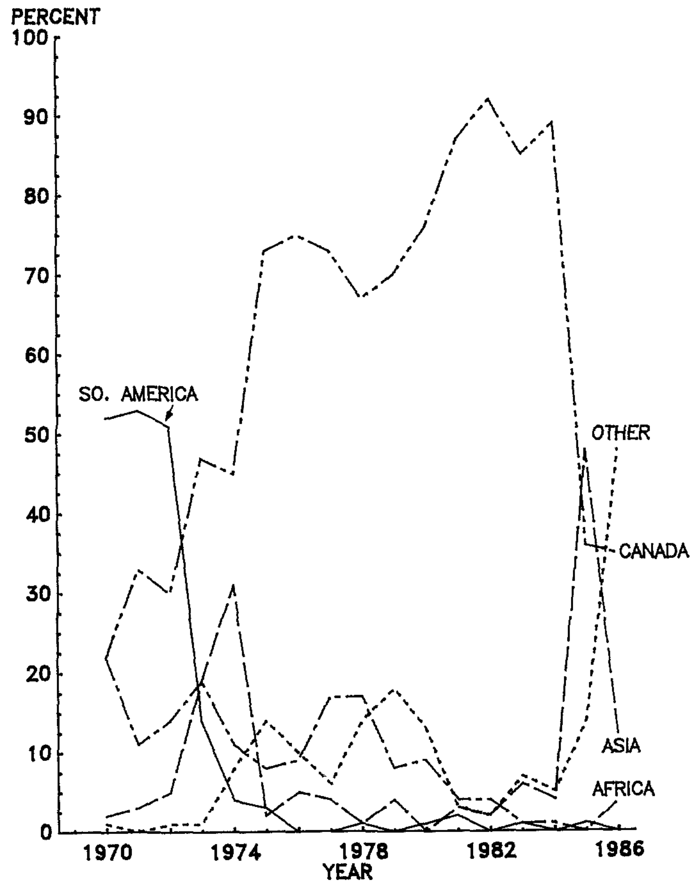

Figure 8.—Percent of log imports originating from Canada, South America, Africa, Asia, and other areas, 1970-86. Source: U.S. Department of Commerce, Bureau of the Census.

Factors Influencing Future Import Trends

The importation of hardwood products and wood furniture is the result of an interaction of economic, political, technical, and resource-related factors. When considering short-term changes in imports (under 5 years), the dominant factors are economic and political even though resource-related factors such as diminished log supplies may be used as the justification for a political action. Intermediate changes are a function of established trends in economic and political policy and changes in resource availability and technology.

In the long run, changes in utilization technology and changes in resource availability have the greatest impact.

Three interrelated economic factors that will affect U.S. imports of hardwood products are domestic economic growth, economic growth of other developed economies, and exchange rates. When the U.S. economy grows, demand for all products, including imports, grows. However, if the U.S. economy grows slower than the economies of Western Europe and Japan, the other developed economies can pay a relatively higher price for hardwood products available in international markets. A factor related to relative economic growth is exchange rates. If the U.S. dollar appreciates against European and Asian currencies, then U.S. customers will pay less for wood imports. If, on the other hand, the U.S. dollar depreciates against other currencies because of lower relative economic growth, U.S. consumers will pay higher prices for imports.

Another economic factor that could affect future imports of hardwood products is changes in consumption patterns due to changes in age and lifestyle. As the population of the United States moves into the prime consuming ages of 25 to 45, the demand for domestic and imported lumber should increase. Since the number of individuals in this age group is expected to peak in the late 1980's, remain steady in the 1990's, then decrease early in the next century, an increase in imported material followed by a decrease early in the next century can be expected. The extent and the duration of the decrease is contingent on changes in domestic fertility and immigration.

Two political-economic factors have influenced imports from less developed Asian, South American, and African economies. They are the desire to increase domestic revenues and employment by manufacturing logs and lumber into finished or semi-finished products and the reduction or complete cessation of exports of selected species. Some examples of these actions are: (1) the desire of Indonesia to manufacture plywood rather than export logs to other nations, (2) the halting of log exports by Brazil combined with an increase in lumber exports, and (3) greater control over the exports of particular species as evident by apparent short-term efforts to reduce mahogany exports by Ghana in the 1970's and Brazil in 1987.

Future level of furniture imports may be dependent on trade policies made in Taiwan and the United States. Taiwan currently has a growing trade imbalance with the United States. Although Taiwan has allowed the new Taiwanese dollar to appreciate against the U.S. dollar, this appreciation has been less than that of the Japanese yen and European currencies. A dramatic reduction in the U.S. dollar against the new Taiwanese dollar would make Taiwan furniture less competitive in the domestic market. Recent legislation will cause Taiwan to lose duty-free status. Such changes also would decrease the level of lumber and veneer exports to Taiwan since much of the furniture produced in Taiwan is made in part from U.S. oak. This current change also could cause plywood imports from Taiwan to decrease, allowing the greatest share of the imports to originate from Indonesia.

Another political-economic factor that could increase imports is the recently proposed free-trade treaty between the United States and Canada. In 1986, approximately 50 percent of the hardwood logs and veneer, 20 percent of the hardwood lumber, and 15 percent of the wood furniture imported into the United States were from Canada. These percentages could increase once the treaty is ratified. However, the bilateral nature of the treaty could result in little net change in trade between the United States and Canada since exports to Canada probably will increase as well.

One factor that may have a great impact on future tropical log and lumber imports is the worldwide concern by environmentalists about the destruction of rain forests for both agricultural and forestry uses. There are no accurate means of predicting how these concerns will manifest themselves given that the environmental concerns emanate primarily from people in developed countries while the tropical forests are in less developed countries. An added complication is that many of these less-developed countries have high levels of international debt and little way to pay these debts other than through the use of their resources. If anything, environmental concerns will reduce the supply of tropical timber and increase the price of tropical hardwood products relative to domestically produced hardwood products. These price increases will have a negative impact on hardwood products imports.

A technical factor that could affect future imports of hardwood products is current and planned production capacity. While the United States is a major producer of hardwood lumber, veneer, and wood furniture, it currently lacks capacity to produce large volumes of stock panels and doorskins. A major capital outlay would be necessary if the United States were to become self-sufficient in hardwood plywood.

Summary and Conclusion

In 1986, 72 percent of the primary hardwood products imported originated from four countries: Indonesia (33 percent), Taiwan (15 percent), Canada (15 percent), and Brazil (9 percent). Hardwood plywood is the major imported primary product, accounting for 63 percent on a value basis and a similar percentage on a cubic-volume basis. Hardwood plywood and log imports decreased markedly through the early 1970's and early 1980's, but rebounded partially with the expanding economy of the mid-1980's. Imports of hardwood lumber and veneer have fluctuated over the past 20 years but with no apparent trend.

Furniture imports in 1986 were 1.5 times greater on a dollar-volume basis than the combined imports of all primary hardwood products. Imports from Taiwan, Denmark, Canada, Italy, and Yugoslavia made up the bulk of the furniture imports. Shipments from Taiwan dominated furniture imports, and shipments from Asia made up nearly 40 percent of total imports. Since 1970, imports of furniture have grown nearly every year with large surges occurring during the early and mid-1980's. Currently, imports account for approximately 20 percent of domestic furniture sales.

Since the United States has a large hardwood resource and sufficient production capacity, future imports of furniture will be affected by levels of domestic furniture production and prices of domestic species versus foreign species. Prices of domestic species will be affected by domestic economic activity and exchange rates between the United States and other developed economies that demand U.S. species. Prices of foreign species will be affected by timber policies of Asian and South American nations, demand by the United States and other developed economies for hardwood lumber, and exchange rates.

Hardwood plywood imports also will be affected by price of imported hardwood plywood versus price of domestically produced substitute materials. Since the United States lacks the capacity to produce large volumes of stock panels and doorskins, composite panel products with wood grain films and gypsum products are possible substitutes.

Current economic conditions indicate that the U.S. dollar will be of lower value against other currencies for an indefinite time. Other things being equal, this means that imports will remain relatively expensive and that other developed economies can bid tropical lumber away from the United States. Thus, U.S. manufactureres will likely rely more heavily on domestic timber supplies so long as the dollar remains weak.

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Appendix

Table 2. — Value of log, lumber, veneer, and plywood imported into the United States, 1970-86 (in millions of 1967 dollars)

Year	Logs	Lumber	Veneer	Plywood
1970	4.1	56.9	32.5	188.4
1971	3.1	57.6	38.5	229.1
1972	3.3	74.9	53.5	282.8
1973	2.7	91.3	56.9	288.9
1974	2.9	83.9	45.6	179.3
1975	2.0	40.0	25.3	148.3
1976	1.5	53.7	34.4	207.0
1977	1.4	65.0	38.9	229.2
1978	1.6	67.5	40.3	245.3
1979	1.1	79.5	42.1	248.2
1980	1.0	56.6	29.3	149.2
1981	.9	52.5	31.9	156.2
1982	1.2	34.3	25.7	108.9
1983	1.1	44.2	37.2	145.3
1984	1.5	55.7	39.7	136.0
1985	1.2	58.4	33.0	142.8
1986	1.4	56.1	38.1	161.6

Table 3 — Volume of log, lumber, veneer, and plywood imported into the United States, 1970-86

Year	Logs	Lumber	Veneer	Plywood
	Million board feet		--- *Million ft.*^{2} ---	
1970	37.9	336.7	1605.8	4168.2
1971	28.3	357.7	2035.2	5176.7
1972	28.0	448.8	2786.0	6427.3
1973	25.0	548.7	2583.0	5146.7
1974	31.0	449.7	1965.9	3349.0
1975	17.0	252.0	1145.5	3906.2
1976	14.2	288.3	1595.5	4797.9
1977	15.0	343.7	1718.5	4590.8
1978	17.8	361.4	1632.5	5075.9
1979	14.6	376.2	1560.1	4216.3
1980	13.4	293.2	1213.2	2440.4
1981	13.5	291.1	1406.3	3017.5
1982	18.3	211.0	1231.8	2249.3
1983	22.5	260.5	1607.2	3346.5
1984	30.1	327.7	1503.0	2982.4
1985	28.4	363.6	1398.0	3522.0
1986	26.4	346.9	1603.9	3805.5

Table 4 — Dollar volume of furniture imports, by region of origin, 1970-86 (in millions of constant 1967 dollars)

Year	Canada	South and Central America	Scandinavia	Western Europe	Eastern Europe	Asia	Other	Total
1970	13.5	3.7	14.5	20.0	15.2	14.7	.9	82.4
1971	14.7	4.4	12.7	18.5	15.7	15.7	.8	82.2
1972	16.5	6.5	18.4	26.5	17.7	23.5	.9	110.0
1973	21.2	8.9	25.2	37.3	26.9	31.0	1.1	151.5
1974	17.8	7.5	25.1	32.8	22.0	23.5	1.5	130.2
1975	13.1	4.4	18.0	27.7	17.3	18.1	1.2	99.8
1976	14.2	6.6	21.2	30.2	27.9	32.6	2.1	134.8
1977	14.1	8.6	24.5	36.9	32.2	42.5	2.1	160.8
1978	17.1	12.0	31.3	48.0	37.4	61.1	3.5	210.4
1979	23.4	12.2	33.9	52.7	36.6	73.0	3.3	235.0
1980	26.3	11.3	32.4	45.6	41.7	74.9	3.9	236.0
1981	28.8	9.8	30.8	44.9	45.1	88.9	3.6	251.8
1982	31.4	9.0	35.1	45.2	44.2	93.0	2.9	260.8
1983	40.0	11.9	46.8	57.3	45.4	123.4	3.5	328.2
1984	55.0	16.6	68.2	82.2	53.6	155.3	5.4	436.3
1985	67.9	24.2	76.3	125.7	60.5	200.2	7.8	562.5
1986	80.8	30.3	74.7	151.5	57.2	259.6	5.4	659.5

Luppold, William G. 1988. **Hardwood import trends.** Res. Pap. NE-619. Broomall. PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station 9 p.

Although imports of most hardwood products have varied since 1970 with no absolute trend, imports of hardwood plywood have decreased while imports of wood furniture have increased dramatically.

ODC 722.4

Keywords: demand; logs; lumber; veneer

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