

USDA United States
Department of
Agriculture

Forest Service

**Northeastern Forest
Experiment Station**

General Technical
Report NE-235



JIL: Japanese Imports of Lumber

User's Guide and Brief Analysis of Japanese Hardwood Lumber Import Trends

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Abstract

The Japanese Imports of Lumber (**JIL**) is a data base that provides information on Japanese lumber imports for the period 1976 through 1995. The data base includes information on Japanese hardwood lumber imports from 12 principal supplier countries (these countries have accounted for 94 percent or more of all Japanese lumber imports throughout the period), including the United States, along with all "other". **JIL** permits the user to assess the Japanese hardwood lumber market by reviewing years of import data quickly and easily.

Besides quantity and value tables obtained directly from the statistics, **JIL** includes yen/cubic meter and dollars/Mbf unit price data. Graphics depicting trends may be generated for total volume and value, and for average prices for up to five suppliers at a time. Also, histograms may be generated for any year comparing imports for all suppliers on the basis of quantity, value, and unit price.

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Acknowledgments

The authors wish to acknowledge the assistance of Ms. Reiko Ramsay and Ms. Chika Chan of the Japanese External Trade Office (JETRO), New York, NY, in supplying data on Japanese imports.

Manuscript received for publication 20 September 1996

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Published by:
USDA FOREST SERVICE
5 RADNOR CORP CTR SUITE 200
RADNOR PA 19087-4585

For additional copies:
USDA Forest Service
Publications Distribution
359 Main Road
Delaware, OH 43015

March 1997

Introduction

U.S. exporters have been able to monitor U.S. exports of hardwood lumber to Japan from data available from the U.S. Department of Commerce and from independently derived statistics provided by Luppold and Thomas (1991) (Fig. 1). However, equally important to U.S. exporters and those involved in export promotion are market statistics on overall Japanese imports and the U.S. position relative to other suppliers. Such information is of growing importance as many tropical-producing nations are seeking to limit the export of logs and lumber because of concern for the environment and/or from a desire to add more value to products at home. The result is that the Japanese may look to the United States for substitutes for hardwood material no longer available from traditional sources.

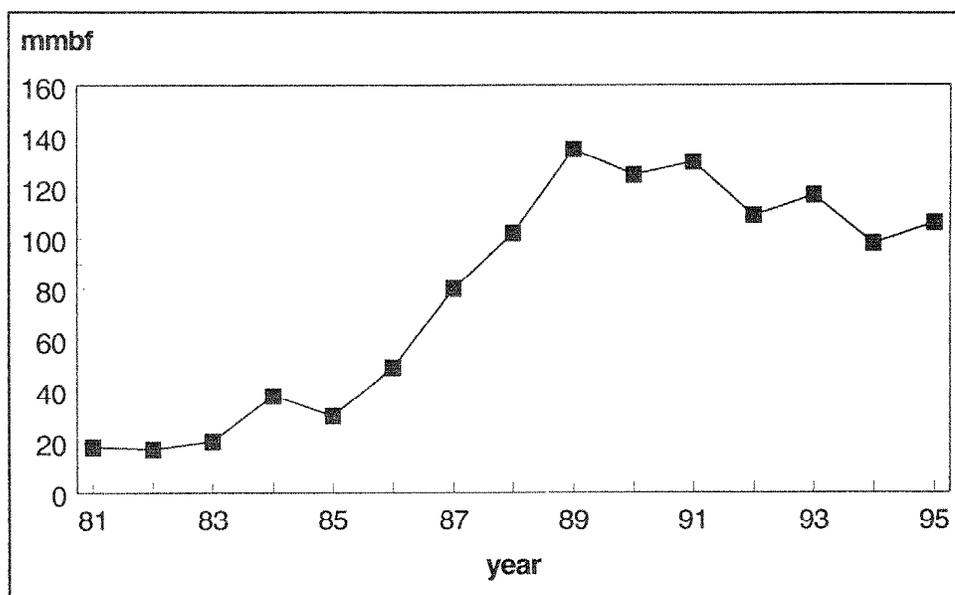


Figure 1.—U.S. hardwood lumber exports to Japan.

For several years we have been collecting information on Japanese hardwood product imports. This information is compiled by the Japan Tariff Association and supplied to us by the staff of the Japanese External Trade Organization (JETRO) located in New York. Because of the increasing demand for these data, we have decided to make the information available on diskette in a user-friendly format. Data were taken from cumulative year-to-date summaries included in December reports. These figures are sometimes adjusted later to correct errors. However, these corrections are quite minor. For instance, in 1995, corrections resulted in a net reduction of 159 cubic meters and a net increase of 13,142 yen to total Japanese hardwood lumber imports.

Data Base

The Japanese Imports of Lumber (JIL) data base provides information on Japanese lumber imports for the period 1976 through 1995. The data base includes information on Japanese hardwood lumber imports from 12 principal supplier countries (these countries have accounted for 94 percent or more of all Japanese lumber imports throughout the period), including the United States, along with a category for "other". JIL permits the user to assess Japanese hardwood lumber imports by reviewing years of import data quickly and easily. Data may be reviewed from several perspectives either in summary form or it may be "scoped" to obtain a complete, detailed look at the data by country and species category. This data set can be used in spreadsheet applications by pulling in DB4 files: D771, which contains data from 1976 through 1987, and D772, which contains data from 1988 through 1995. Scope tables also include the yen/dollar rate of exchange in effect for the period under examination.

Besides the quantity and value tables obtained directly from the statistics, we have developed yen/cubic meter and dollars/Mbf unit price data. Thus, summary information includes the total volume of imports in cubic meters and the total value of imports in yen plus average prices by supplier in yen and dollar equivalents.

Graphics depicting trends may be generated for total volume and value, and for average prices for up to five suppliers at a time. Also, histograms may be generated for any year comparing imports for all suppliers on the basis of quantity, value, and unit price.

An Overview of Program Options

The main menu drives the program and provides the user with five basic options. The first option allows the user to get a brief look at summary statistics for a single year's activity. The summary contains information on the country supplying the largest individual quantity, the country supplying the smallest individual quantity, the total quantity and value from all suppliers, the overall average price in yen/cubic meter and dollars/Mbf, and the market shares (in percent) of all suppliers.

The second option, allows the user to look at total imports for any particular year from all suppliers. Thus, the user may compare all suppliers on the basis of total quantity supplied, total value, and average price in both yen/cubic meter and dollars/Mbf. In addition to the tabular data, the user may ask for a graphic display in the form of histograms for each data set. Graphics may be printed by using the <print screen> command.

The third option displays trend data for a specified supplier country for the entire period. Among other things, this allows the user to evaluate competitors to determine which have been gaining or losing market share. Data again are displayed for total quantity, total value, and for average prices in yen/cubic meter and dollars/Mbf. Histograms may be requested and printed using the <print screen> command. This option allows the user to look at imports from a specific country and compare import quantities, values, and unit prices for that country from one year to the next.

The fourth option provides graphic-only comparisons of trends for up to five suppliers at a time. This request results in line graphs comparing the selected countries on the basis of total volume, value, and unit price as described earlier. Essentially, it facilitates combining graphics obtained for individual countries in option 3.

The final option provides the user with a detailed look at imported species. After requesting this option, the user must specify one of two blocks of time—1976 to 1987 or 1988 to 1995. The reason for this is that in 1988 significant changes were made in data collection and coding as Japan, along with the rest of the world's major trading countries, conformed to the international Harmonized System (HS) for keeping track of merchandise trade.

The data are displayed in the following order: year, the unit of measure (quantity, value, and unit price), and country of export. Unlike previous options, this option does not facilitate graphic displays.

Hardware Requirements

JIL requires the following hardware:

- ◆ IBM or IBM-compatible PC with at least 2 megabytes of memory
- ◆ 286 or above processor
- ◆ Floppy disk drive (3.5 or 5.25 inch)
- ◆ Hard disk drive with at least 2 megabytes of free space
- ◆ Color monitor.

The computer program described in this publication is available on request with the understanding that the U.S. Department of Agriculture cannot assure its accuracy,

completeness, reliability, or suitability for any other purpose than that reported. The recipient may not assert any proprietary rights thereto nor represent it to anyone as other than a Government-produced computer program. For a copy of this program, please write to:

USDA FOREST SERVICE
FORESTRY SCIENCES LABORATORY
ATTN: BRUCE HANSEN
241 MERCER SPRINGS ROAD
PRINCETON WV 24740

Installing JIL

To use JIL, install a copy on your hard drive. To begin installation, insert the JIL disk in the floppy drive (drive a or b), change to that drive (e.g., type a: and press <return>), type in the word "install," and press <return>.

After selecting a drive, install will ask you to create a directory name. A valid directory name may contain from 1 to 8 characters.

After installation, the user is instructed to go into the designated directory and type in the letters "JIL." This will initiate the program and bring up an introductory title screen. At this point, the main menu depicted below is obtained by pressing any character on the keyboard.

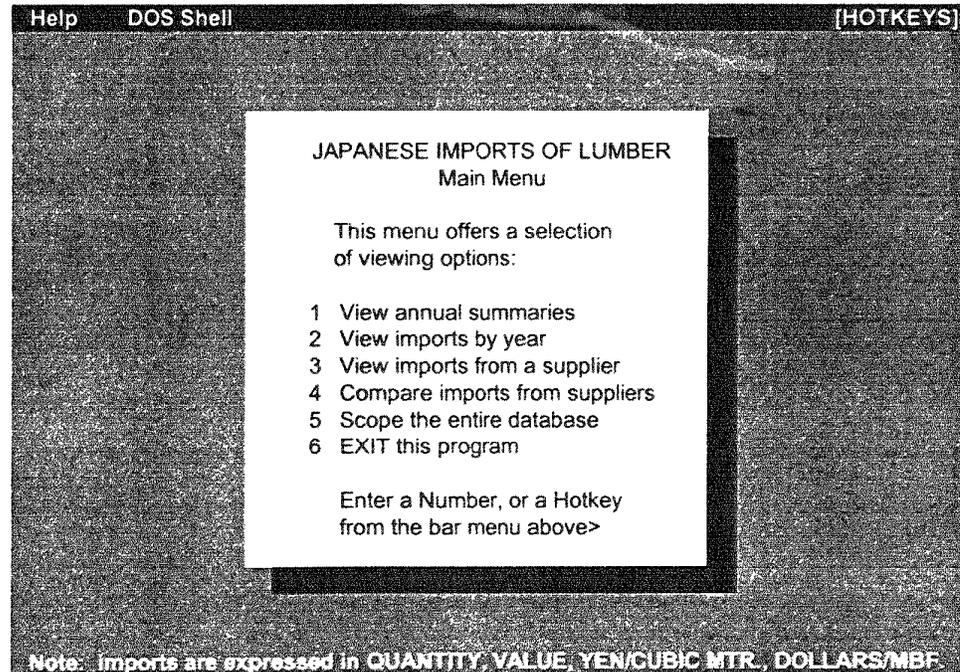


Figure 2.—The JIL main menu.

Besides all the options, there are two "Hotkeys" available in a bar menu at the top of the screen. One provides additional information on general use of the program and on how conversions were made from yen/cubic meter to dollars/Mbf. The other allows you to exit to the DOS Shell if necessary.

The JIL program was written and tested on an IBM-compatible system that uses MS DOS. Because systems differ, it is important to make valid entries in the program when prompted to do so. For example, if an area of JIL asks for a year to view, entering an invalid character such as a question mark could cause the program to lock-up because the program was designed to accept numeric and alphanumeric data only. Should the program lock-up, you will need to reboot the computer.

Using JIL to Analyze Import Trends

From the main menu, you can select an option by entering the appropriate number. However, most likely you will want to print the graphics. Thus, before selecting an option, exit to DOS (by pressing D or d) and type in

```
graphics graphics/r
```

at the DOS prompt if you are using a matrix printer. If you are using a laser printer, you will need to specify the printer's name in the command line. For example, if you plan to print to a Hewlett Packard Laserjet II, enter

```
graphics laserjetii/r
```

at the DOS prompt and press <return>. DOS functions and configurations vary from computer to computer, thus you may need to refer to your system's manual for more information should you encounter any trouble at this point. After you have entered the appropriate command and pressed enter, type in <exit> to get back to the main menu. You are now ready to select JIL options.

Option 1

Option 1 generates a table that provides a brief summary of activities for any year specified by the user along with a listing of all supplier countries and their share of all imports. After specifying the year 1995, the following was displayed (Table 1).

Table 1.—Import summary.

JAPANESE IMPORTS OF LUMBER:					
Annual import summaries.					
Reporting year = 1995.					
ANALYSIS OF IMPORTS (quantity = cubic meters)					
Largest quantity imported:		578352 from MALAYSIA			
Smallest quantity imported:		260 from PNG			
Total quantity imported:		1753290 cubic meters			
Total import value:		121735933 Yen			
Average price (Yen):		69432 Yen/cu.mtr.			
Average price (Dollars):		1742 \$/MBF			
SUPPLIER MARKET SHARE BASED ON QUANTITY (cubic meters)					
USA	14.07%	Malaysia	32.99%	Taiwan	0.54%
Canada	1.09%	PNG	0.01%	Thailand	1.76%
Brazil	0.93%	Philippines	1.73%	Other	5.78%
China	14.96%	Singapore	0.45%		
Indonesia	25.59%	S.Korea	0.10%		
F1=View another year ESC=Exit					

The table includes information on the largest and smallest quantities imported along with their respective country of origin, the total quantity imported in cubic meters and value, and the average price of imports from all suppliers in yen/cubic meter and in dollars/Mbf. This table shows that in 1995 the United States was the fourth largest supplier of lumber (14.07% market share) to Japan behind Malaysia, Indonesia, and China.

Option 2

Option 2 facilitates an in-depth look at Japanese imports for a specific year. After pressing 2 in the main menu, a dialog box appears asking that you specify a year between 1976 and 1995. After specifying a year and pressing <return>, a table of import information will appear with quantity, value, and unit prices specified for each major supplier.

After pressing any key, a small menu box will be displayed containing four choices. The first lets you view imports for another year. The second prints the table being displayed. The third will allow you to view quantity, value, and price information in graphical form. These graphs may be printed using the <print screen> key. Press <return> to move from graph to graph. The last choice takes the user back to the main menu.

Table 2 and Appendix A, Figures 7-10 result from specifying 1995 in Option 2. In this example, Malaysia's place as top supplier, as revealed in Option 1, is reaffirmed. Malaysia supplied more than 578,000 cubic meters of lumber to Japan in 1995. Indonesia was second, China was third, the United States was fourth, and so on.

Table 2. Yearly data.

JAPANESE IMPORTS OF LUMBER: Hardwood lumber imports from suppliers in 1995.					
SUPPLIER	YEAR	CUBIC METERS	VALUE (IN YEN)	YEN PER CU.MTR.	DOLLARS PER MBF
USA	1995	246676	17369386	70414	1767
Canada	1995	19040	1075823	56503	1418
Brazil	1995	16237	1116061	68736	1725
China	1995	262267	16622729	63381	1590
Indonesia	1995	448722	31516732	70237	1762
Malaysia	1995	578352	36955594	63898	1603
PNG	1995	260	12303	47319	1187
Philippines	1995	30287	1878941	62038	1557
Singapore	1995	7974	557736	69944	1755
S. Korea	1995	1812	92079	50816	1275
Taiwan	1995	9519	1355868	142438	3574
Thailand	1995	30863	4358665	141226	3543
Other	1995	101281	8824016	87124	2186

Press any key to continue...

The ranking of suppliers by value essentially mirrors their ranking by quantity. Malaysia was again tops in 1995 with exports to Japan valued at nearly 37 billion yen. Indonesia was second at about 31.5 billion yen. The United States was third at about 17.4 billion yen surpassing China's 16.6 billion yen.

The rankings of suppliers on the basis of average price differed from their rankings on the basis of quantity and value. Interestingly, Taiwan and Thailand supplied the highest cost material doubling that of most other suppliers. The reason for this is that imports from these countries include value-added products such as cut dimension specifically manufactured to customer specifications. Although the units change between yen/cubic meter and dollars/Mbf, the relationship among import values remains unchanged.

Option 3

Option 3 allows the user to select a particular supplier country, and then displays quantity, value, and price trend information of Japanese imports from this country for the entire period 1976 to 1995. Entering 3 at the main menu produces a screen listing supplier countries on the left, three paragraphs of written instructions on the right, and a prompt near the bottom asking for a specific supplier country name to be entered. After selecting a country, a menu box will appear with four choices as in Option 2. These again are: (1) view another supplier, (2) print a report, (3) display graphs, and (4) return to the main menu. Table 3 and Appendix A, Figures 11-14, resulted from specifying USA.

Table 3. Supplier data.

JAPANESE IMPORTS OF LUMBER: Hardwood lumber imports from supplier (USA).					
SUPPLIER	YEAR	CUBIC METERS	VALUE (IN YEN)	YEN PER CU.MTR.	DOLLARS PER MBF
USA	1976	8175	1240413	151732	1208
USA	1977	8616	1168692	135642	1192
USA	1978	12437	1674262	134619	1510
USA	1979	14393	2482713	172494	1858
USA	1980	27871	4641309	166528	1733
USA	1981	30474	5143072	168769	1806
USA	1982	33304	5417139	162657	1541
USA	1983	62205	6518013	104783	1041
USA	1984	95439	10779951	112951	1122
USA	1985	79250	8696399	109734	1086
USA	1986	127514	9187018	72047	1009
USA	1987	223981	15393044	68725	1121
USA	1988	295271	20864505	70662	1301
USA	1989	323691	25176421	77779	1330
USA	1990	315848	26536122	84015	1369
USA	1991	274574	22350996	81402	1426
USA	1992	265134	20532275	77441	1443
USA	1993	278721	20654381	74104	1573
USA	1994	242665	17335949	71440	1650
USA	1995	246676	17369386	70414	1767

Press any key to continue...

They show that imports from the United States began to accelerate after 1985 and peaked in 1989 at more than 323,000 cubic meters. From 1989 to 1995, imports dropped by about 25 percent.

The overall pattern for value is about the same as that for quantity; the total value of imports peaked in 1990. Interestingly, the average price of imports in yen/cubic meter from the United States declined significantly after the mid 80's going from more than 162,000 yen in 1982 to roughly 70,400 yen in 1995.

Much of this decline is attributable to the weakening value of the dollar versus the yen. (For example, the exchange rate went from approximately 296 yen to the dollar in 1976, to approximately 94 yen to the dollar in 1994). Appendix A, Figure 13 vividly depicts the price situation faced by Japanese importers. It should be obvious that Japanese importers have benefited tremendously in lower material costs because of the declining value of the dollar.

Based on dollars/Mbf (Table 3 and Appendix A, Figure 14), we see a different situation, especially after 1986. Whereas prices in yen increased slightly from 1987 to 1990 and then declined from 1990 to 1995, prices in dollars/Mbf have increased steadily ever since 1986. Too, prices (in dollars) received by U.S. exporters in 1995 were the highest they had been since 1981 whereas, in yen, prices being paid by Japanese importers were near the all time low for the period 1976 to 1995, recorded in 1987. Consequently, the weakening dollar has helped U.S. exporters by making their prices increasingly competitive in the Japanese market while nearing record highs at home.

This example has looked at quantity, value, and unit price trends in Japanese imports from the United States only. Equally important, is for the user to repeat this exercise for the other major suppliers. Several exhibit quite different trends. This additional information will allow U.S. exporters to gain a better understanding of their foreign competition and to help assess their position and overall potential in the Japanese market.

Option 4

This option allows you to compare trends in quantity, value, and price of Japanese imports for up to five suppliers at one time. The program prompts you for the names of the countries you wish to compare. Results are presented graphically only.

Figure 3 shows the trend in imports, in cubic meters, from the United States, Taiwan, and Malaysia. Before 1983, imports from the United States were at the bottom. However, in 1983, imports from the United States exceeded those from Taiwan for the first time. By the mid 80's, imports from both the United States and Malaysia took off. Imports from the United States rose fourfold from about 80,000 cubic meters in 1985 to 320,000 cubic meters in 1989. Japanese imports from Malaysia also increased fourfold going from under 160,000 cubic meters in 1984 to nearly 640,000 cubic meters in 1990 where they held steady through 1993. They declined in 1994 but rebounded in 1995. By contrast, imports from Taiwan declined rather steadily since 1988.

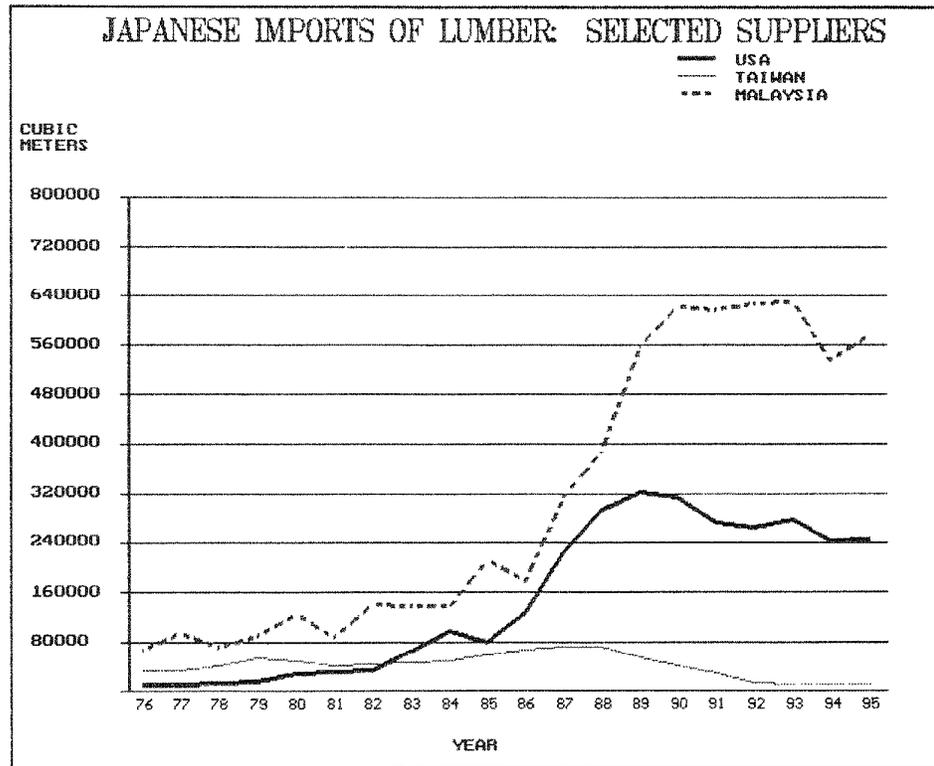


Figure 3.—Japanese imports from the United States, Taiwan, and Malaysia, in cubic meters, 1976 to 1995.

In terms of total value, imports from the United States kept pace with those from Malaysia until 1988 at which time the value of imports from the United States began to slow, while the value of those from Malaysia continued to climb steeply (Fig. 4). And, although imports from both Malaysia and the United States declined from 1990 to 1991, imports from Malaysia increased from 1991 to 1993, while those from the United States generally continued their downward trend. The value of imports from Taiwan followed the pattern exhibited for quantity in that they declined from 1988 to 1992 and have since remained steady. Figure 5 provides a look at unit price trends in yen for imports from the three countries. Interestingly, imports from the United States commanded the highest unit price until 1986 when the U.S. price fell below that of Taiwan. Also, since 1986, the price for imports from the United States has remained relatively constant while prices for imports from Taiwan have taken off, and those from Malaysia have begun to approach the U.S. average. The user is advised to make similar comparisons with the other major suppliers—especially Thailand and China.

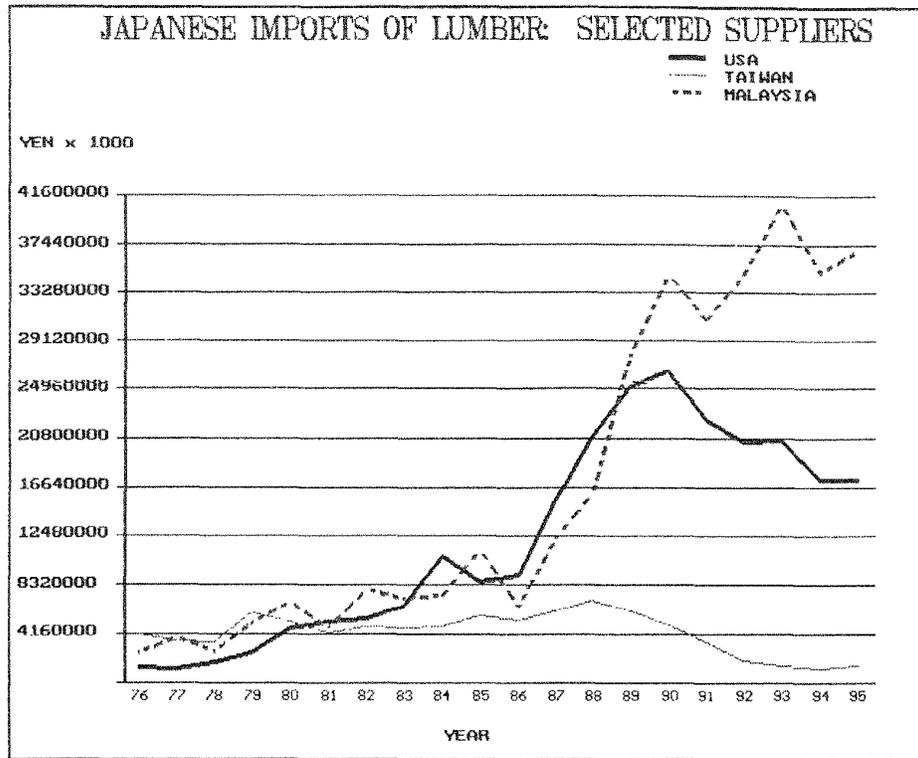


Figure 4.—Japanese imports from the United States, Taiwan, and Malaysia, in yen, 1976 to 1995.

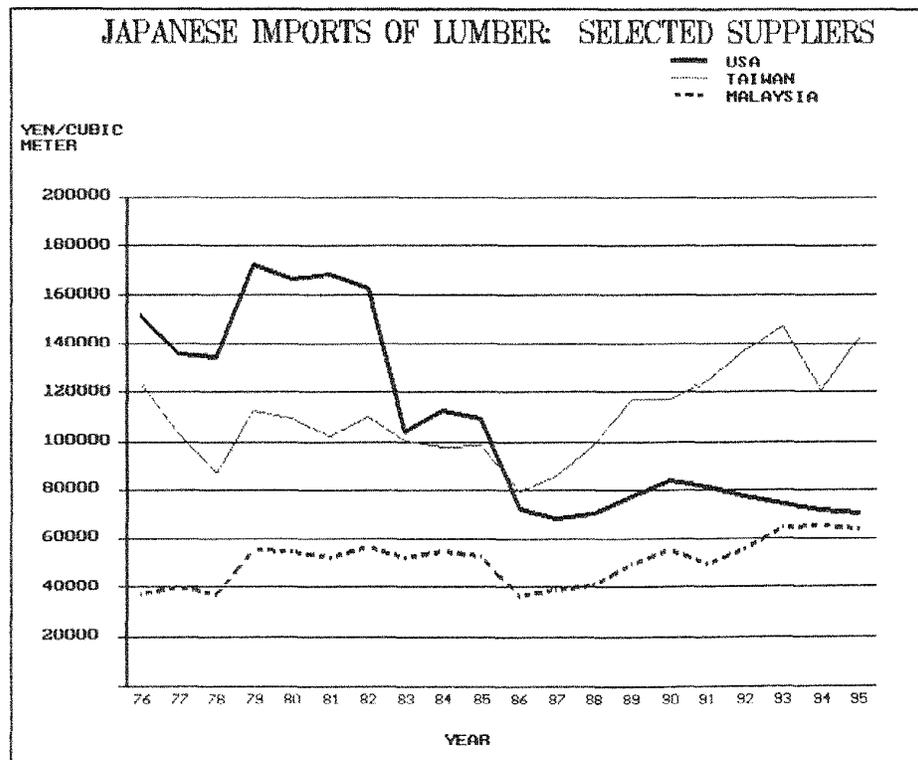


Figure 5.—The average price of Japanese imports from the United States, Taiwan, and Malaysia, in yen/cubic meter, 1976 to 1995.

Finally, Figure 6 provides a look at average prices in dollars/Mbf, a unit of measure more familiar to most U.S. lumber manufacturers. Since all supplier prices have been adjusted similarly, the relationships among prices and the relative movement in prices remain unchanged from the situation depicted in Figure 5. It is interesting to see that the average price in 1995 for all lumber imported from the United States was about \$1,800. Taiwanese prices are highest because they are exporting cut dimension and finished and semifinished material. By contrast, material from the United States remains dominated by grade lumber. One other factor that is likely affecting the average price of imports from the United States is the mix of species. Japanese imports from the United States now include a larger percentage of lower valued species such as alder, soft maple, and yellow-poplar than they did a decade ago.

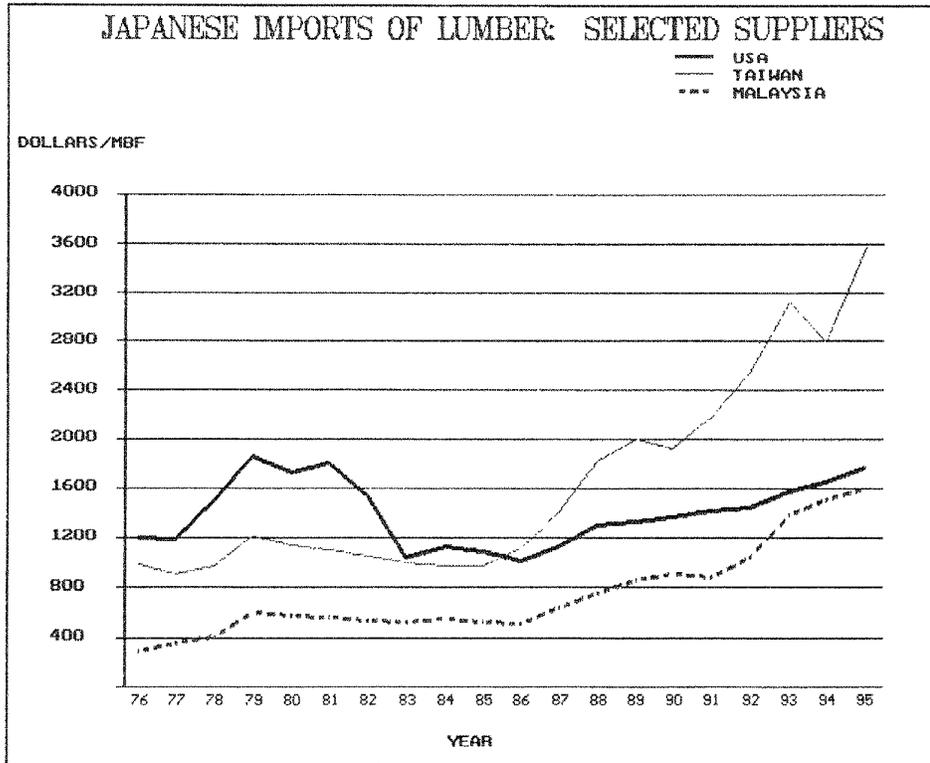


Figure 6.—The average price of Japanese imports from the United States, Taiwan, and Malaysia, in \$/Mbf, 1976 to 1995.

Option 5

Option 5 permits the user to look at Japanese imports in detail. Unique to this option is the ability to look at individual species and species groups. The dataset is divided into two parts. The first part is for the pre-Harmonized System years of 1976 to 1987. The second part is for the Harmonized System years of 1988 to 1995. Before 1988, data were divided into just 10 categories including eight specific species categories and two "not elsewhere specified" categories (n.e.s.). After adopting the Harmonized System in 1988, the Japanese increased species classifications to 22 separate categories—20 for specific species and two n.e.s. Species codes are shown as column headers and supplier country names are shown as row headers. Verbal definitions of species are found in Appendix B. The arrow keys, the tab key, or <return> key may be used to move the cursor along the tables.

Appendix C provides a glimpse at raw data tables for the pre-Harmonized and Harmonized System code classifications. In both tables, rows are ordered first by year, then by content (i.e., quantity, value, unit price), and finally by country. Columns contain the individual species

data. The last column contains the total for all species. The tables also contain the rate of exchange in effect in each year.

Selecting 3 in the submenu will allow the user to print the tables. If a printer is installed, a message will appear advising the user to set the printer in a compressed mode since the table widths are relatively large. A dialog box will ask for the printer size (wide or narrow), what group to select, and what specific years to print. Selection 4 closes the data base files and exits back to the main menu. The menu bar contains a Help option, a Codes option that displays all species codes and definitions, and a DOS Shell option. Data also may be brought into a spreadsheet for further manipulation as DB4 files. For years 1976 through 1987, the file name is D771. For the years 1988 through 1995, the file name is D772.

Option 5 is the least user friendly of all options in terms of summaries and data displays. This is a read-only application. As such, the program will not accept any other input from the user. There are no provisions for graphical presentations.

Literature Cited

Luppold, William G.; Thomas, R. Edward. 1991. **New estimates of hardwood lumber exports to Europe and Asia.** Res. Pap. NE-652. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 22p.

Appendix A—Graphs of Japanese Hardwood Lumber Imports by Year and Supplier.

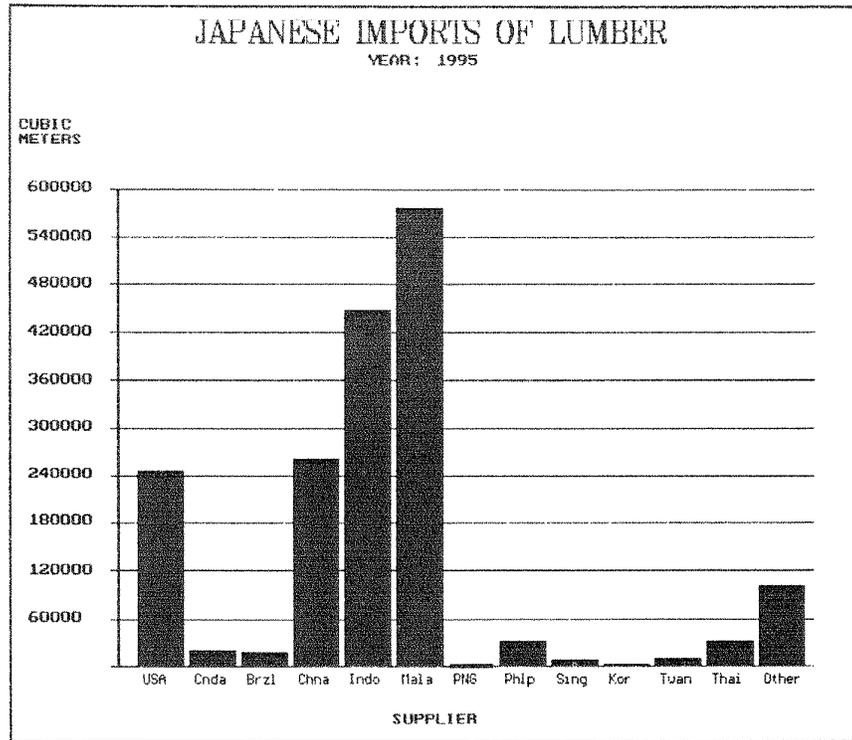


Figure 7.—Japanese hardwood lumber imports in cubic meters, by supplier, 1995.

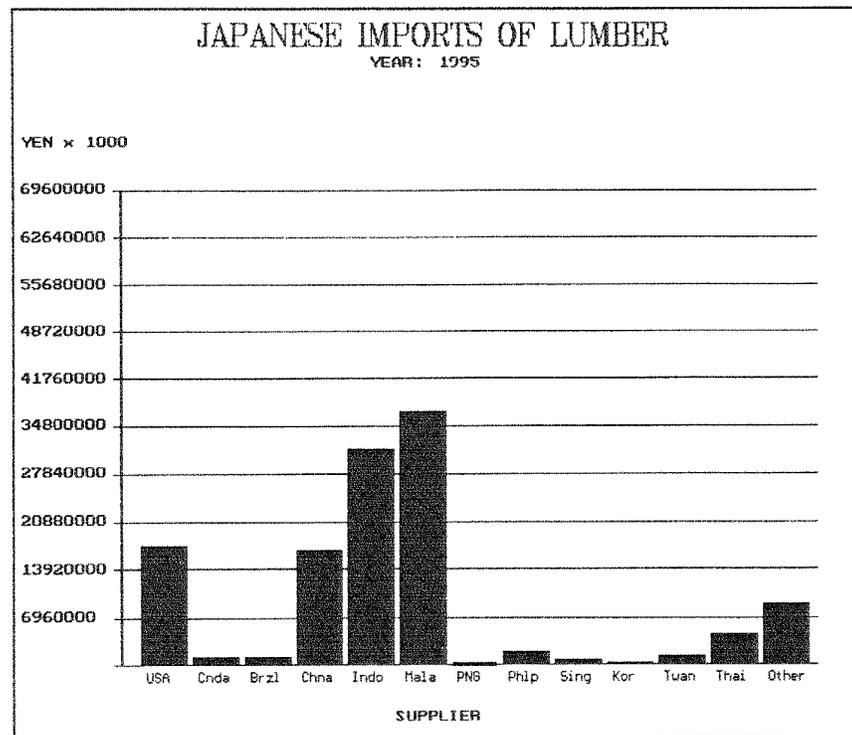


Figure 8.—Japanese hardwood lumber imports in yen, by supplier, 1995.

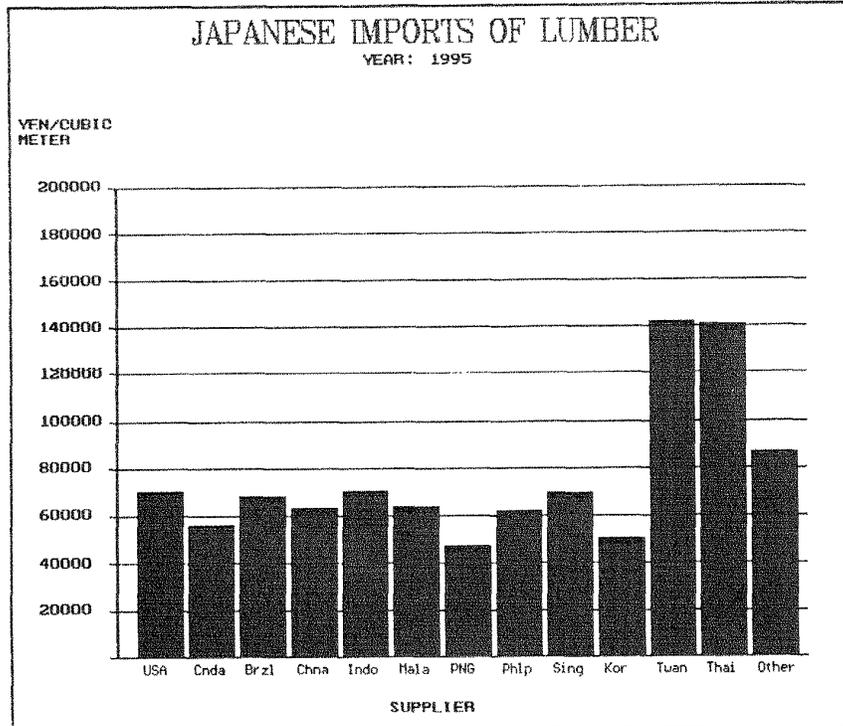


Figure 9.—Average price of Japanese hardwood lumber imports in yen/cubic meter, by supplier, 1995.

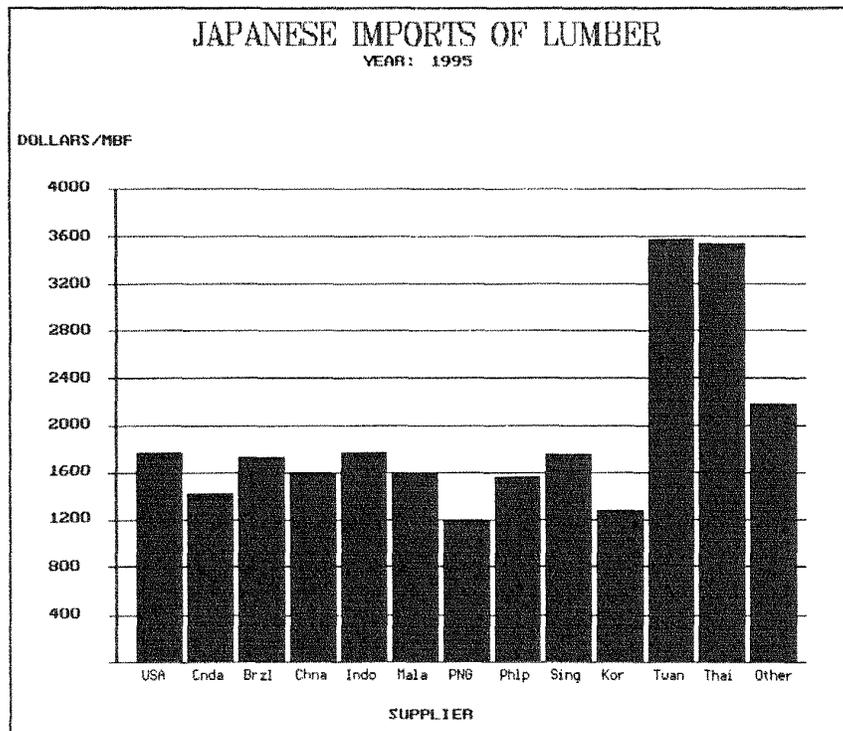


Figure 10.—Average price of Japanese hardwood lumber imports in \$/Mbf, by supplier, 1995.

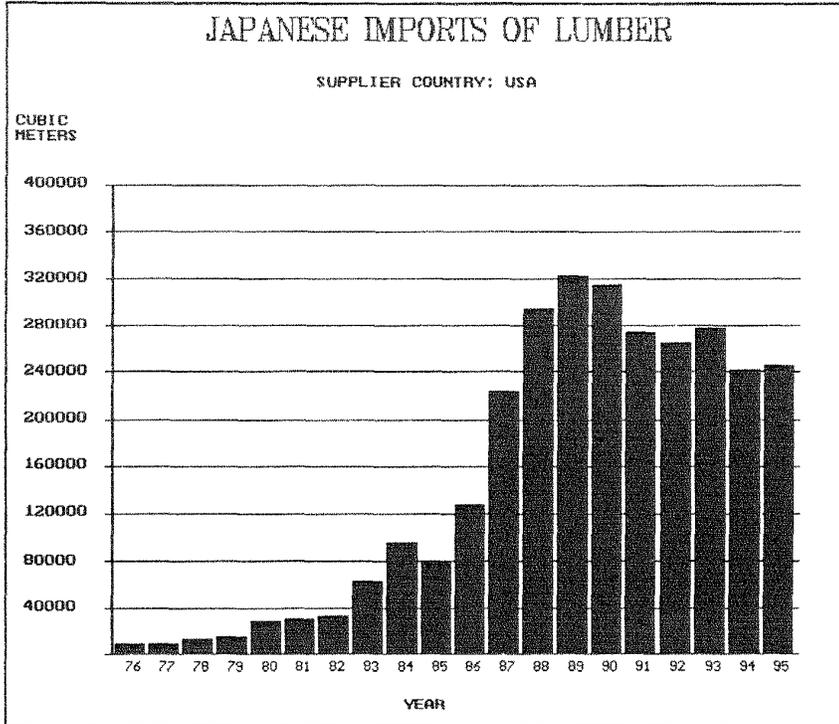


Figure 11.—Japanese hardwood lumber imports from the United States in cubic meters, 1976 to 1995.

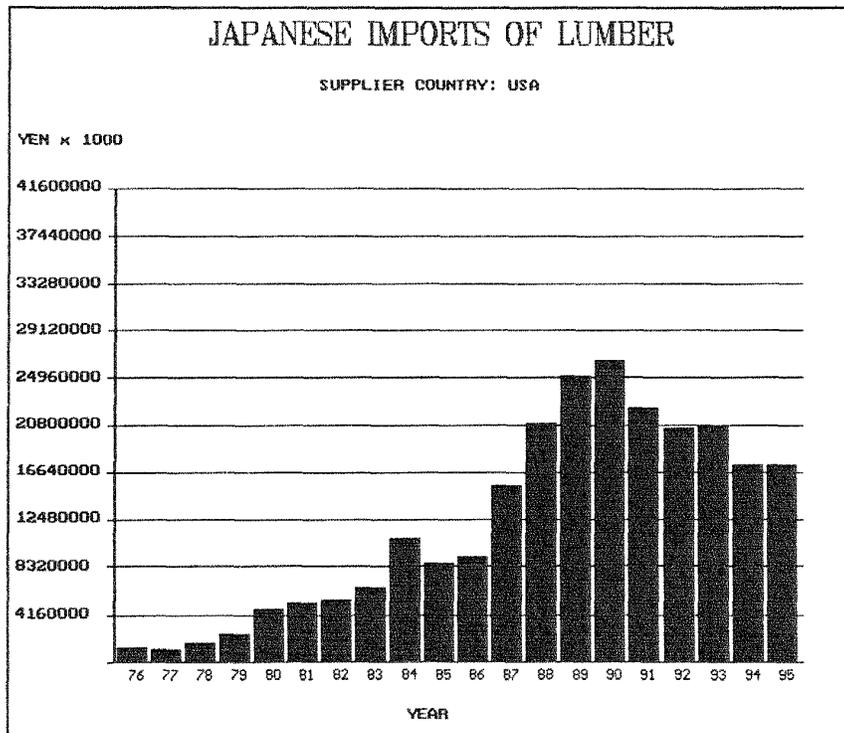


Figure 12.—Japanese hardwood lumber imports from the United States in yen, 1976 to 1995.

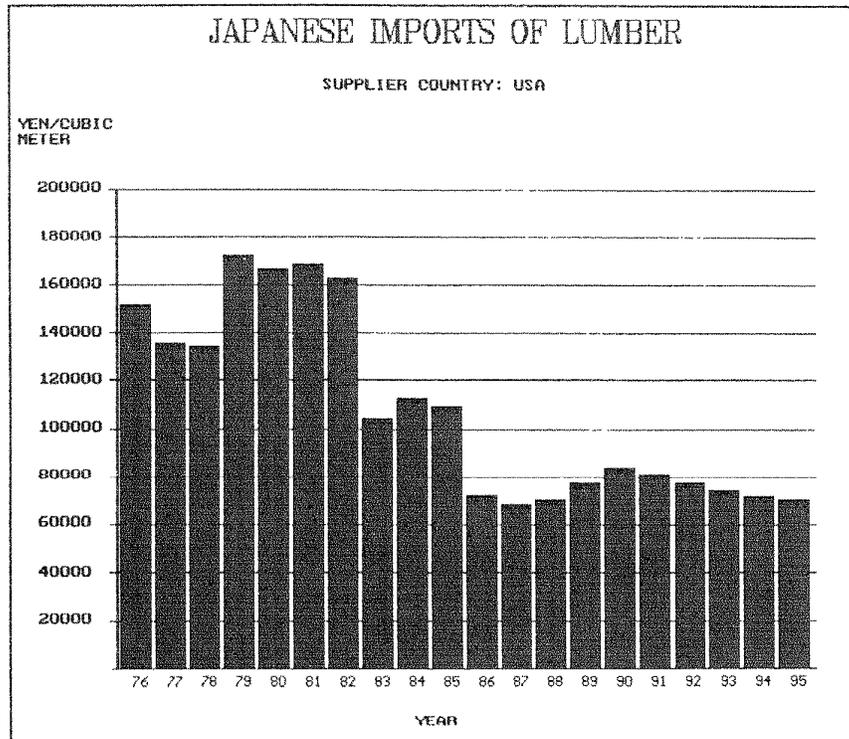


Figure 13.—Average price of Japanese imports of hardwood lumber from the United States, in yen/cubic meter, 1976 to 1995.

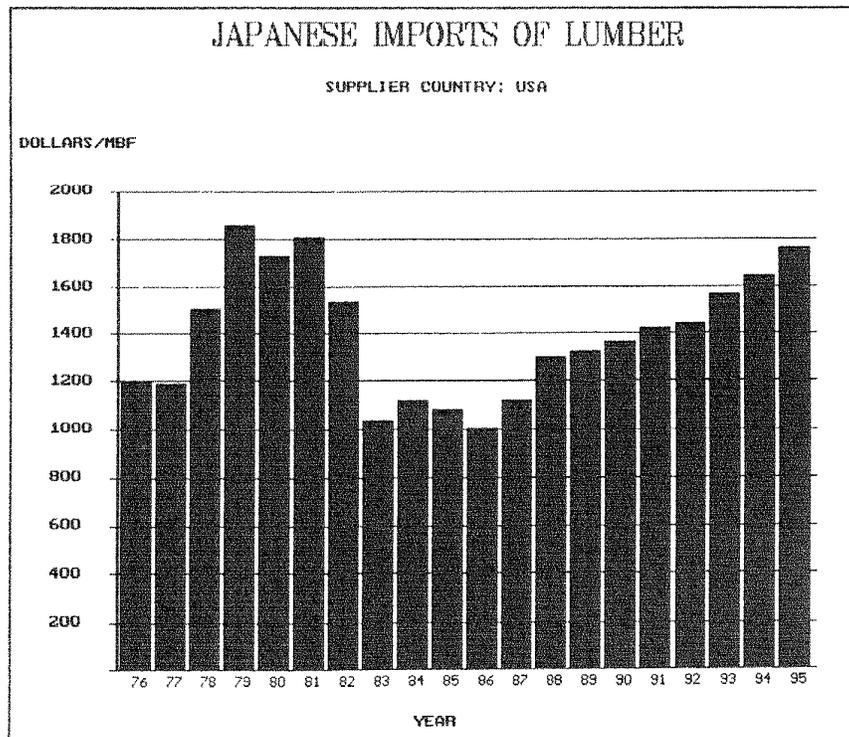


Figure 14.—Average price of Japanese hardwood lumber imports from the United States, in \$/Mbf, 1976 to 1995.

Appendix B—Species Definitions.

1976-1987 CODES AND DESCRIPTIONS:		1988-1995 CODES AND DESCRIPTIONS:	
Lumber:		Lumber:	
S4405100	Kwarin, etc.	S0721110	Teak
S4405200	Kiri	S0721190	Teak, N.E.S.
S4405400	Lauan, etc.	S0721210	Dipterocarpaceae
S4405593	Teak	S0721290	Dipterocarpaceae, N.E.S.
S4405594	Lignum Vitae	S0721300	Meranti, etc.
S4405599	N.E.S.	S0722000	Okoume, etc.
Dimension:		S0723000	Mahogany, etc.
S4413100	Kwarin, etc.	S0791000	Oak
S4413200	Kiri	S0792000	Beech
S4413400	Lauan, etc.	S0799110	Kwarin, etc.
S4413590	Wood, N.E.S.	S0799190	Kwarin, N.E.S.
		S0799210	Kiri
		S0799290	Kiri, N.E.S.
		S0799310	Dipterocarpaceae
		S0799390	Dipterocarpaceae, N.E.S.
		S0799410	Lignum Vitae
		S0799490	Lignum Vitae, N.E.S.
		S0799500	Wood, N.E.S.
		Dimension:	
		S0920310	Kwarin, etc.
		S0920320	Kiri
		S0920330	Dipterocarpaceae
		S0920340	Wood, N.E.S.

(Press any key to EXIT...)

Appendix C—Pre-Harmonized (1976-1987) and Harmonized (1988-1995) System Data Tables.

Table 4.—Illustration of raw data table for 1976.

SUPPLIER	YEAR	EXCHANGE	UNIT	S4405100	S4405200	S4405400
USA	1976	296.45	cubic meters	0	19	0
Canada	1976	296.45	cubic meters	0	0	0
Brazil	1976	296.45	cubic meters	0	32	0
China	1976	296.45	cubic meters	2	4849	0
Indonesia	1976	296.45	cubic meters	12	0	7443
Malaysia	1976	296.45	cubic meters	0	0	48062
PNG	1976	296.45	cubic meters	0	0	1157
Philippines	1976	296.45	cubic meters	3	0	43649
Singapore	1976	296.45	cubic meters	0	0	603
S.Korea	1976	296.45	cubic meters	0	24	51222
Taiwan	1976	296.45	cubic meters	0	18356	256
Thailand	1976	296.45	cubic meters	2557	0	0
Other	1976	296.45	cubic meters	587	105	0
USA	1976	296.45	Yen x 1000	0	4991	0
Canada	1976	296.45	Yen x 1000	0	0	0
Brazil	1976	296.45	Yen x 1000	0	4481	0
China	1976	296.45	Yen x 1000	362	540950	0
Indonesia	1976	296.45	Yen x 1000	6542	0	241814
Malaysia	1976	296.45	Yen x 1000	0	0	1869398
PNG	1976	296.45	Yen x 1000	0	0	37605
Philippines	1976	296.45	Yen x 1000	2663	0	1765806
Singapore	1976	296.45	Yen x 1000	0	0	23261
S.Korea	1976	296.45	Yen x 1000	0	4660	2635433
Taiwan	1976	296.45	Yen x 1000	0	2283259	10724
Thailand	1976	296.45	Yen x 1000	325251	0	0
Other	1976	296.45	Yen x 1000	59058	10054	0
USA	1976	296.45	Yen/cubic meter	0	262684	0
Canada	1976	296.45	Yen/cubic meter	0	0	0
Brazil	1976	296.45	Yen/cubic meter	0	140031	0
China	1976	296.45	Yen/cubic meter	181000	111559	0
Indonesia	1976	296.45	Yen/cubic meter	545167	0	32489
Malaysia	1976	296.45	Yen/cubic meter	0	0	38896
PNG	1976	296.45	Yen/cubic meter	0	0	32502
Philippines	1976	296.45	Yen/cubic meter	887667	0	40455
Singapore	1976	296.45	Yen/cubic meter	0	0	38575
S.Korea	1976	296.45	Yen/cubic meter	0	194167	51451
Taiwan	1976	296.45	Yen/cubic meter	0	124388	41891
Thailand	1976	296.45	Yen/cubic meter	127200	0	0
Other	1976	296.45	Yen/cubic meter	100610	95752	0
USA	1976	296.45	Dollars/MBF	0	2091	0
Canada	1976	296.45	Dollars/MBF	0	0	0
Brazil	1976	296.45	Dollars/MBF	0	1115	0
China	1976	296.45	Dollars/MBF	1441	888	0
Indonesia	1976	296.45	Dollars/MBF	4340	0	259
Malaysia	1976	296.45	Dollars/MBF	0	0	310
PNG	1976	296.45	Dollars/MBF	0	0	259
Philippines	1976	296.45	Dollars/MBF	7067	0	322
Singapore	1976	296.45	Dollars/MBF	0	0	307
S.Korea	1976	296.45	Dollars/MBF	0	1546	410
Taiwan	1976	296.45	Dollars/MBF	0	990	333
Thailand	1976	296.45	Dollars/MBF	1013	0	0
Other	1976	296.45	Dollars/MBF	801	762	0

S4405593	S4405594	S4405599	S4413100	S4413200	S4413400	S4413590	SUMMARY
0	0	7740	0	0	0	416	8175
0	0	1755	2748	0	0	144	4647
0	0	23	0	0	0	45	100
0	0	0	1	2811	0	0	7663
1171	0	9637	0	0	0	0	18263
0	0	16780	0	0	214	31	65087
0	0	3499	0	0	0	6	4662
0	0	4674	0	0	1013	278	49617
0	0	1628	0	0	541	9	2781
14	0	125	15	174	989	23	52586
0	0	6287	49	3464	1009	3397	32818
2559	0	402	536	0	0	79	6133
564	310	4053	145	0	0	3234	8998
0	0	1170546	0	0	0	64876	1240413
0	0	184581	65519	0	0	11080	261180
0	0	7540	0	0	0	13747	25768
0	0	0	880	371685	0	0	913877
149856	0	264230	0	0	0	0	662442
0	0	538232	0	0	18825	1772	2428227
0	0	99881	0	0	0	342	137828
0	0	108708	104	0	41819	9719	1928819
0	0	51993	0	0	50395	579	126228
2667	0	6803	1668	34942	67714	3107	2756994
0	0	694981	32537	531064	74300	427424	4054289
515934	0	64946	226579	0	0	49397	1182107
112672	293729	696201	19189	0	0	283413	1474316
0	0	151233	0	0	0	155952	151732
0	0	105174	23842	0	0	76944	56204
0	0	327826	0	0	0	305489	257680
0	0	0	880000	132225	0	0	119258
127973	0	27418	0	0	0	0	36272
0	0	32076	0	0	87967	57161	37307
0	0	28546	0	0	0	57000	29564
0	0	23258	0	0	41282	34960	38874
0	0	31937	0	0	93152	64333	45389
190500	0	54424	111200	200816	68467	135087	52428
0	0	110543	664020	153309	73637	125824	123539
201615	0	161557	422722	0	0	625278	192745
199773	947513	171774	132338	0	0	87635	163849
0	0	1204	0	0	0	1242	1208
0	0	837	190	0	0	613	447
0	0	2610	0	0	0	2432	2051
0	0	0	7006	1053	0	0	949
1019	0	218	0	0	0	0	289
0	0	255	0	0	700	455	297
0	0	227	0	0	0	454	235
0	0	185	0	0	329	278	309
0	0	254	0	0	742	512	361
1517	0	433	885	1599	545	1075	417
0	0	880	5286	1220	586	1002	983
1605	0	1286	3365	0	0	4978	1534
1590	7543	1367	1054	0	0	698	1304

Table 5.—Illustration of raw data table for 1995.

SUPPLIER	YEAR	EXCHANGE	UNIT	S0721110	S0721190	S0721210	S0721290
USA	1995	94.06	cubic meters	2	0	0	0
Canada	1995	94.06	cubic meters	0	0	0	0
Brazil	1995	94.06	cubic meters	0	0	0	0
China	1995	94.06	cubic meters	8	38	0	14
Indonesia	1995	94.06	cubic meters	383	1	22930	939
Malaysia	1995	94.06	cubic meters	1	0	215222	37288
PNG	1995	94.06	cubic meters	0	0	0	0
Philippines	1995	94.06	cubic meters	0	0	11699	1062
Singapore	1995	94.06	cubic meters	5	126	146	165
S.Korea	1995	94.06	cubic meters	0	0	89	16
Taiwan	1995	94.06	cubic meters	573	232	1366	216
Thailand	1995	94.06	cubic meters	7	36	27	0
Other	1995	94.06	cubic meters	932	216	1370	1064
USA	1995	94.06	Yen x 1000	4170	0	0	0
Canada	1995	94.06	Yen x 1000	0	0	0	0
Brazil	1995	94.06	Yen x 1000	0	0	0	0
China	1995	94.06	Yen x 1000	1359	5812	0	628
Indonesia	1995	94.06	Yen x 1000	68084	367	1631303	80029
Malaysia	1995	94.06	Yen x 1000	227	0	15082060	2534157
PNG	1995	94.06	Yen x 1000	0	0	0	0
Philippines	1995	94.06	Yen x 1000	0	0	1100303	107039
Singapore	1995	94.06	Yen x 1000	2325	34454	8106	4062
S.Korea	1995	94.06	Yen x 1000	0	0	4787	1813
Taiwan	1995	94.06	Yen x 1000	236014	82679	69396	18761
Thailand	1995	94.06	Yen x 1000	2490	13947	2535	0
Other	1995	94.06	Yen x 1000	142366	38507	54076	45159
USA	1995	94.06	Yen/cubic meter	2085000	0	0	0
Canada	1995	94.06	Yen/cubic meter	0	0	0	0
Brazil	1995	94.06	Yen/cubic meter	0	0	0	0
China	1995	94.06	Yen/cubic meter	169875	152947	0	44857
Indonesia	1995	94.06	Yen/cubic meter	177765	367000	71143	85228
Malaysia	1995	94.06	Yen/cubic meter	227000	0	70077	67962
PNG	1995	94.06	Yen/cubic meter	0	0	0	0
Philippines	1995	94.06	Yen/cubic meter	0	0	94051	100790
Singapore	1995	94.06	Yen/cubic meter	465000	273444	55521	24618
S.Korea	1995	94.06	Yen/cubic meter	0	0	53787	113313
Taiwan	1995	94.06	Yen/cubic meter	411892	356375	50802	86856
Thailand	1995	94.06	Yen/cubic meter	355714	387417	93889	0
Other	1995	94.06	Yen/cubic meter	152753	178273	39472	42443
USA	1995	94.06	Dollars/MBF	52313	0	0	0
Canada	1995	94.06	Dollars/MBF	0	0	0	0
Brazil	1995	94.06	Dollars/MBF	0	0	0	0
China	1995	94.06	Dollars/MBF	4262	3838	0	1125
Indonesia	1995	94.06	Dollars/MBF	4460	9208	1785	2138
Malaysia	1995	94.06	Dollars/MBF	5696	0	1758	1705
PNG	1995	94.06	Dollars/MBF	0	0	0	0
Philippines	1995	94.06	Dollars/MBF	0	0	2360	2529
Singapore	1995	94.06	Dollars/MBF	11667	6861	1393	618
S.Korea	1995	94.06	Dollars/MBF	0	0	1350	2843
Taiwan	1995	94.06	Dollars/MBF	10335	8942	1275	2179
Thailand	1995	94.06	Dollars/MBF	8925	9720	2356	0
Other	1995	94.06	Dollars/MBF	3833	4473	990	1065

S0721300	S0722000	S0723000	S0791000	S0792000	S0799110	S0799190	S0799210
23	0	40846762	774	59	21	42	
0	0	0	4240	146	70	0	0
0	0	604	0	0	0	0	419
20	10	0	46578	347	217	180	98319
54288	0	6	263	0	423	236	162
51025	0	0	337	0	22	66	23
0	0	0	0	0	0	0	0
52	0	46	0	0	0	113	0
1350	1898	0	1	0	0	7	0
34	0	0	75	0	3	0	168
102	1	0	143	0	15	54	84
0	0	0	32	0	195	196	0
215	22930	1556	487	5858	193	925	82
1324	0	39469	4321944	39874	5947	4709	2304
0	0	0	0	8770	2711	0	0
511	0	36730	0	0	0	0	24884
1913	578	0	3903124	13965	9750	9627	4391011
3875430	0	753	74144	0	144709	55114	8500
2540550	0	0	22564	0	1861	22494	2393
0	0	0	0	0	0	0	0
3803	0	6138	0	0	0	4402	0
114899	112286	0	216	0	0	4019	0
1773	0	0	4733	0	531	0	9994
9426	463	0	14650	0	4063	33491	5347
0	0	0	7565	0	61208	40511	0
21329	1973670	1689138	451555	339053	41818	90546	2852
57565	0	96738	92424	51517	100797	224238	54857
0	0	0	0	60068	38729	0	0
0	0	60811	0	0	0	0	59389
95650	57800	0	83798	40245	44931	53483	44661
71386	0	125500	281916	0	342102	233534	52469
49790	0	0	66955	0	84591	340818	104043
0	0	0	0	0	0	0	0
73135	0	133435	0	0	0	38956	0
85110	59160	0	216000	0	0	574143	0
52147	0	0	63107	0	177000	0	59488
92412	463000	0	102448	0	270867	620204	63655
0	0	0	236406	0	313887	206689	0
99205	86074	1085564	927218	57879	216674	97888	34780
1444	0	2427	2319	1293	2529	5626	1376
0	0	0	0	1507	972	0	0
0	0	1526	0	0	0	0	1490
2400	1450	0	2103	1010	1127	1342	1121
1791	0	3149	7073	0	8583	5859	1316
1249	0	0	1680	0	2122	8551	2610
0	0	0	0	0	0	0	0
1835	0	3348	0	0	0	977	0
2135	1484	0	5420	0	0	14405	0
1308	0	0	1583	0	4441	0	1493
2319	11617	0	2570	0	6796	15561	1597
0	0	0	5932	0	7876	5186	0
2489	2160	27237	23264	1452	5436	2456	873

Table 5.—continued.

SUPPLIER	YEAR	EXCHANGE	UNIT	S0799290	S0799310	S0799390
USA	1995	94.06	cubic meters	327	0	0
Canada	1995	94.06	cubic meters	0	0	0
Brazil	1995	94.06	cubic meters	95	0	0
China	1995	94.06	cubic meters	28357	0	0
Indonesia	1995	94.06	cubic meters	0	2374	1449
Malaysia	1995	94.06	cubic meters	0	18581	5087
PNG	1995	94.06	cubic meters	0	0	248
Philippines	1995	94.06	cubic meters	0	403	0
Singapore	1995	94.06	cubic meters	0	102	84
S.Korea	1995	94.06	cubic meters	0	61	0
Taiwan	1995	94.06	cubic meters	29	46	33
Thailand	1995	94.06	cubic meters	0	56	0
Other	1995	94.06	cubic meters	29	2448	5485
USA	1995	94.06	Yen x 1000	27110	0	0
Canada	1995	94.06	Yen x 1000	0	0	0
Brazil	1995	94.06	Yen x 1000	5352	0	0
China	1995	94.06	Yen x 1000	1275431	0	0
Indonesia	1995	94.06	Yen x 1000	0	209082	117254
Malaysia	1995	94.06	Yen x 1000	0	1585711	482315
PNG	1995	94.06	Yen x 1000	0	0	11504
Philippines	1995	94.06	Yen x 1000	0	36956	0
Singapore	1995	94.06	Yen x 1000	0	17473	5223
S.Korea	1995	94.06	Yen x 1000	0	4506	0
Taiwan	1995	94.06	Yen x 1000	1912	5335	0
Thailand	1995	94.06	Yen x 1000	0	5835	3216
Other	1995	94.06	Yen x 1000	4284	136302	316227
USA	1995	94.06	Yen/cubic meter	82905	0	0
Canada	1995	94.06	Yen/cubic meter	0	0	0
Brazil	1995	94.06	Yen/cubic meter	56337	0	0
China	1995	94.06	Yen/cubic meter	44978	0	0
Indonesia	1995	94.06	Yen/cubic meter	0	88072	80921
Malaysia	1995	94.06	Yen/cubic meter	0	85340	94813
PNG	1995	94.06	Yen/cubic meter	0	0	46387
Philippines	1995	94.06	Yen/cubic meter	0	91702	0
Singapore	1995	94.06	Yen/cubic meter	0	171304	62179
S.Korea	1995	94.06	Yen/cubic meter	0	73869	0
Taiwan	1995	94.06	Yen/cubic meter	65931	115978	0
Thailand	1995	94.06	Yen/cubic meter	0	104196	0
Other	1995	94.06	Yen/cubic meter	147724	55679	57653
USA	1995	94.06	Dollars/MBF	2080	0	0
Canada	1995	94.06	Dollars/MBF	0	0	0
Brazil	1995	94.06	Dollars/MBF	1414	0	0
China	1995	94.06	Dollars/MBF	1129	0	0
Indonesia	1995	94.06	Dollars/MBF	0	2210	2030
Malaysia	1995	94.06	Dollars/MBF	0	2141	2379
PNG	1995	94.06	Dollars/MBF	0	0	1164
Philippines	1995	94.06	Dollars/MBF	0	2301	0
Singapore	1995	94.06	Dollars/MBF	0	4298	1560
S.Korea	1995	94.06	Dollars/MBF	0	1853	0
Taiwan	1995	94.06	Dollars/MBF	1654	2910	0
Thailand	1995	94.06	Dollars/MBF	0	2614	0
Other	1995	94.06	Dollars/MBF	3706	1397	1447

S0799410	S0799490	S0799500	S0920310	S0920320	S0920330	S0920340	SUMMARY
0	0	183249	4	8	0	14997	246676
0	0	12318	0	0	0	2266	19040
0	0	15028	0	0	0	91	16237
0	0	78005	57	715	0	9402	262267
0	0	264620	896	0	39416	60336	448722
0	0	212843	0	0	27279	10578	578352
0	0	12	0	0	0	0	260
0	0	16197	0	0	162	553	30287
0	0	2832	0	0	138	1120	7974
0	0	1366	0	0	0	0	1812
0	0	3019	348	0	133	3125	9519
0	0	13168	4072	0	9	13065	30863
0	6	33289	2177	0	62	21957	101281
0	0	11514129	1979	1658	0	1404769	17369386
0	0	864067	0	0	0	200275	1075823
0	0	1039310	0	0	0	9274	1116061
0	0	6014059	11761	42216	0	941495	16622729
0	0	15892093	120536	0	2821826	6417508	31516732
0	0	12492230	0	0	1581415	607617	36955594
0	0	799	0	0	0	0	12303
0	0	580233	0	0	13099	26968	1878941
0	0	165036	0	0	9059	80578	557736
0	0	63942	0	0	0	0	92079
0	0	394164	71345	0	13131	395691	1355868
0	0	1165498	1051147	0	1125	2003588	4358665
0	5129	2385346	500387	0	4894	581378	8824016
0	0	62833	494750	207250	0	93670	70414
0	0	70147	0	0	0	88383	56503
0	0	69158	0	0	0	101912	68736
0	0	77098	206333	59043	0	100138	63381
0	0	60056	134527	0	71591	106363	70237
0	0	58692	0	0	57972	57442	63898
0	0	66583	0	0	0	0	47319
0	0	35823	0	0	80858	48767	62038
0	0	58275	0	0	65645	71945	69944
0	0	46810	0	0	0	0	50816
0	0	130561	205014	0	98729	126621	142438
0	0	88510	258140	0	125000	153355	141226
0	854833	71656	229852	0	78935	26478	87124
0	0	1577	12413	5200	0	2350	1767
0	0	1760	0	0	0	2218	1418
0	0	1735	0	0	0	2557	1725
0	0	1934	5177	1481	0	2512	1590
0	0	1507	3375	0	1796	2669	1762
0	0	1473	0	0	1455	1441	1603
0	0	1671	0	0	0	0	1187
0	0	899	0	0	2029	1224	1557
0	0	1462	0	0	1647	1805	1755
0	0	1174	0	0	0	0	1275
0	0	3276	5144	0	2477	3177	3574
0	0	2221	6477	0	3136	3848	3543
0	21448	1798	5767	0	1981	664	2186