

C I N T R A F O R

Working Paper

16

**THE ITALIAN WOOD PRODUCTS MARKET:
A SURVEY**

1988

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EXECUTIVE SUMMARY

The Italian market is a high-value market for U.S. softwood lumber. One of the primary Italian uses of U. S. Softwood is for the manufacturing of wood windows and doors. The preferred species for such manufacturing is Douglas-fir. The imported U. S. wood is resawn and shaped to produce Italian window and door components. Blemishes on the wood--checks, cracks, knots, and, in particular, blue stain (an Italian anathema)--reduce the quality of the final product in the eyes of the demanding Italian customer. Fine-grained, knot-free wood from the Pacific Northwest region of North America is particularly well suited for this market.

Other areas of wood use in Italy include construction, packaging and furniture. Very little wood is used as structural members in construction except as scaffolding, temporary bracing and concrete forms. Wood used in these applications is of low quality and is supplied by Austria, Czechoslovakia and Russia. Packaging also consumes considerable amounts of low quality wood for crates, boxes and pallets. The furniture industry is large and requires a substantial amount of wood; most of which is tropical hardwoods and temperate hardwoods from Europe.

It appears that a "market orientation" approach to selling lumber in Italy is worthy of consideration. End-user needs should be understood and satisfied. Financial arrangements should be developed to insure long range partnerships. At present a "commodity product orientation" exists. North American firms produce sizes and adhere to standards which have some relevance to the market but do not entirely satisfy customer needs. These practices are traditional and are probably resistant to change.

The opportunities for more wood exports to Italy are good. The country lacks an indigenous source of wood and will rely on exports to satisfy its raw material demand. The manufacturing capability of the country is very strong and over the past few decades the economy has been growing steadily despite periodic setbacks. This trend should continue into the future.

Wood export opportunities in Italy may not necessarily be similar to opportunities in North America. Many Italian products employ sophisticated design concepts. Utilization of design to add value is a national characteristic and may be crucial to finding new market niches for exported wood to Italy.

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INTRODUCTION

Rapid modernization and technological change occurring over the past four decades have resulted in an explosive demand for both consumer and industrial goods on a worldwide basis. To capitalize on international opportunities, a firm seeking to penetrate an export market can ill afford to be unaware of the many differences between domestic and international markets. The latter may differ substantially from the former in language, tradition, social values and business practices. If misunderstood, these differences can result in a failure to capture market share in these markets. BAGOZZI (1986). With this point of view as a premise, an overview of the Italian wood market will be presented. This report should provide insight to those who might be interested Italy as an export opportunity for solid wood products.

A number of topics will be addressed: The Italian forest resources, the trade pattern and distribution channels for forest products, the main segments of the manufacturing industry and the ways these elements interact to affect wood consumption patterns in Italy. Opportunities for Italian sales by U.S. wood producers, particularly producers in the Pacific Northwest region, will be addressed and strategies will be proposed for maintaining and incrementing existing market share.

The bulk of the report is a summary of information obtained during a two year project funded by CINTRAFOR. It was motivated by the fact that Italy is one of the major countries importing wood from the U.S. The information was gathered from various sources, particularly within Italy itself. In addition, a three-week survey was conducted during the summer of 1986 involving daily interviews with various individuals associated with the Italian wood industry. This provided the authors with excellent "grassroots" observations.

A map of Italy showing the itinerary of the survey and a partial list of interviewees is given in the Appendix. The authors hereby acknowledge those individuals who granted interviews and thank them for their time and valuable contributions.

Since this report is intended to be characterizational rather than analytical, no attempt was made to speculate on the reasons for the trends in the data presented. We draw the readers attention to the following passage found in Thomas Mann's work, The Magic Mountain, in which the Italian, Settembrini, points out to the hero, Hans Castrop, two contrasting views of "analysis":

Analysis as an instrument of enlightenment and civilization is good, in so far as it shatters

absurd convictions, acts as a solvent upon natural prejudices, and undermines authority; good, in other words, in that it sets free, refines, humanizes, makes slaves ripe for freedom. But it is bad, very bad, in so far as it stands in the way of action, cannot shape the vital forces, and maims life at its roots.

In other words, an analytical treatment to explain what overall economic forces are at work and why, is very important in order to comprehend the system as a whole but will not, of itself, sell more wood products.

Before discussing the Italian forest products industry, a brief profile of Italy will be presented as well as a brief discussion of the overall Italian trade pattern.

PROFILE OF ITALY

Geography

Italy is a peninsula of Southern Europe, 700 miles long, extending into the Mediterranean Sea. The country also includes the islands of Sardinia and Sicily, Fig. 1. Two mountain ranges dominate the geography so that about 75% of the country is mountainous or hilly. The Po Valley in the north, the heel of "the boot" and some small coastal areas are relatively flat. The climate of Northern Italy is similar to continental Europe with the Alps and northern Dolomites having climate similar to, but more humid than, Colorado. The central and southern parts of Italy have a Mediterranean climate similar to, but generally warmer than, Southern California.

Population

As of the last census in 1985, the Italian population was 56.55 million people. The populace is primarily concentrated in medium-sized cities (less than 50,000 inhabitants). The population density is 478 people per square mile, ISTAT (1968), which is the fifth highest in Europe. About 45% of the population lives in the northern regions, while the remaining 55% is distributed throughout peninsula Italy. The annual growth rate in population is 2.3%, life expectancy is 73 years and the literacy rate is 98%, USDOS (1987).

Culture

During the Renaissance, in the 14th and 15th century, the Italian culture flowered. Italian achievements in literature, philosophy, painting, sculpture and other fine arts (Dante, Petrarch, St. Thomas Aquinas, Galileo, Leonardo da Vinci, Raphael, Botticelli, Michelangelo, Rossini, Verdi, Puccini, etc.)



Figure 1. Map of Italy

are legendary. The influence exerted on Western civilization was tremendous and still exists. Contemporary Italian artists, writers, film makers, architects and composers are very active and still contribute to current Western culture.

Unfortunately space does not permit an adequate historical portrait of this rich and unique country, but the interested reader may find a popular work entitled, The Italians, (BARZINI, 1985) to be a useful introduction to the cultural background of the Italian people.

It is mentioned in passing that there appears to be a substantial difference between the cultural behavior of Southern and Northern Italy. In some respects the two regions appear to be different countries. For decades the Italian government has attempted to stimulate the economy of the south but past experiments with industrialization were not successful. A significant shift in population to the industrialized north continued. Recently, however, the population has been moving back to the south. The government is encouraging growth in the service sector which may lead to more economic growth in the southern region.

Economy

Italy's 1986 Gross Domestic Production (GDP) was \$511 billion. Economic growth was projected at 3.0 to 3.5 percent through 1987. The large state sector budget deficit, which has been declining over the past few years (from 16% of GDP in 1985 to 12% in 1987), remains a serious problem and a source of inflation, USDOC (1987).

Italy's natural resources are few: fish and natural gas. Primary agricultural products are wheat, rice, grapes, olives, and citrus fruits. Industrial products consist of automobiles, machinery, chemicals, textiles and footwear.

Northern Italy is the industrial center. A strong work ethic of the northern populace has undoubtedly contributed to this situation. In an article on Milan in the European Edition of Time magazine (Aug. 24, 1987), a British historian of modern Italy was quoted as saying:

In Milan, people have a tradition of working hard and making money. In Rome, they tend to stop people from making money.

This is perhaps an overstatement but it does reflect the tension that exists between the north and south over economic matters.

The strength of the Italian manufacturing segment may be due to the flexibility of a networked system of small producers,

COHEN and ZYSMAN (1988). Although in the past the system was viewed as inefficient, in the future the Italian system may be a prototype of modern industrialism, perhaps in the same league as the powerful Japanese system. Clearly, Italy must be considered as one of the leading countries in manufacturing capabilities and this should be kept in mind when considering the Italian forest products industrial sector.

Italian Foreign Trade Pattern

Italy's lack of raw materials makes it highly dependent on imports to satisfy its export oriented economy. Understanding of the overall Italian foreign trade pattern is thus important to obtain a clear picture of the forces driving the general import/export pattern and how these, in turn, affect the flow of wood products.

The depreciation of the dollar and the sharp fall in oil prices are two key factors affecting the size and pattern of Italian foreign trade in 1986, BNL (APRIL 1987). Other factors, such as inflation and growth differential with trading partners, have had a minor influence on the trade pattern. The inflation differential, generally in favor of European trading partners, was roughly counterbalanced by a 2% depreciation of the lira against the other EEC currencies, while the rates of growth for most industrial economies fluctuated within a narrow range.

As a result of changes in the relative value of the dollar and the fall of oil prices, Italy has experienced a substantial improvement in foreign trade. Imports have expanded in volume more quickly than exports. In addition, the flow of exports shifted from the U.S., OPEC (Organization of Petroleum Exporting Countries) and LDC (Less Developed Countries) areas to the European Economic Community (EEC). The effect of these changes in the foreign trade pattern has been to sharply contract the Italian trade deficit from \$12 billion in 1985 to \$2 billion in 1986, Table 1 (BLN, 1987).

Raw materials and fuel, most of which are priced in U.S. dollars, represent a greater share of Italian imports than of exports (74% versus 47% over 1980 to 1984, second column, Table 2). This is the chief reason why dollar depreciation and the consequent fall in commodity prices (quoted in dollars), such as occurred in 1986, have had a larger impact on the unit prices of imports than on exports. Consumer and investment goods, on the other hand, represent a greater share of exports than imports (35% versus 16% over 1980 to 1984, third column, Table 2), and the prices of these products are more likely to be determined competitively in the European markets. It follows that exports are more sensitive to exchange rates as well as events in European countries than to changes occurring in the U.S.

Table 1 -- ITALY'S BALANCE OF TRADE
(Billions of Dollars*)

Year	Imports	Exports	Balance
1980	99.5	77.6	-21.9
1981	91.0	75.2	-15.8
1982	86.3	73.6	-12.7
1983	79.0	72.7	- 6.3
1984	84.2	73.3	-10.9
1985	91.0	79.0	-12.0
1986	100.0	98.0	- 2.0

(*) Converted at average monthly rates.

Source: BNL (1987)

Table 2 -- IMPORTS/EXPORTS PER CATEGORY OF GOODS
(Billions of lira)

	Investment Goods	Raw Materials	Consumer Goods	Total
1980 Imports	8,939	63,009	13,616	85,564
1980 Exports	12,523	31,089	23,107	66,719
1980 Balance	+ 3,584	-31,920	+ 9,491	-18,845
% Imp.	10.4	73.6	16.0	
% Exp.	18.7	46.6	34.7	
1981 Imports	11,170	76,909	15,595	103,674
1981 Exports	16,394	40,496	29,150	86,040
1981 Balance	+ 5,224	-36,413	+13,555	-17,634
% Imp.	10.8	74.2	15.0	
% Exp.	19.1	47.1	33.8	
1982 Imports	11,535	85,644	19,037	116,216
1982 Exports	18,052	46,022	35,157	99,231
1982 Balance	+ 6,517	-39,622	+16,120	-16,925
% Imp.	9.9	73.7	16.4	
% Exp.	18.2	46.4	35.4	
1983 Imports	11,539	90,042	20,397	121,978
1983 Exports	20,471	50,990	39,069	110,530
1983 Balance	+ 8,932	-39,052	+18,672	-11,448
% Imp.	9.5	73.8	16.7	
% Exp.	18.5	46.2	35.3	
1984 Imports	15,884	109,214	23,080	148,178
1984 Exports	23,025	60,341	45,649	129,015
1984 Balance	+ 7,141	-48,873	+22,569	-19,163
% Imp.	10.7	73.7	15.6	
% Exp.	17.8	46.8	35.4	

Source: ISTAT (1986).

Consequently, lira prices of Italian exports to the U.S. are likely to increase over time, depressing exports while stimulating imports. An increase of Italian exports to Europe can also be expected assuming the lira continues to depreciate slowly against the major European currencies.

These economic changes in the world markets have affected the Italian trade pattern, Table 3. Italian exports, once shipped to a broad world market, are now focused more in the European markets, which absorb more than 40% of Italian products. The value of exports to all other areas has sharply declined and is likely to continue to do so, if the depreciation of the dollar continues and the oil prices remain at the current low levels. Due to the stronger lira, Italian imported volumes in 1987 are expected to outstrip those of exports by an even wider margin than in 1986. As a consequence of this generalized trend towards an increase of the imported volumes versus those exported, it is reasonable to expect a significant increase in the imported volumes of wood products, in particular from the U.S. in view of the sharp appreciation of the lira against the dollar.

CHARACTERIZATION OF THE ITALIAN FOREST PRODUCTS SECTOR

The Italian Forest Resource

Topography, climate and population pressures have shaped the Italian forest resource. The present predominance of hardwood species over softwoods, together with the extensive presence of coppice stands, are a result of these influences. The Italian forest resource, with 6.4 million hectares, represents 21% of the total land area, ISTAT (1984). Three principal factors can be identified as characterizing the resource and conditioning its productivity: species and forest structure, spatial distribution, and ownership pattern.

A brief look at species composition (under heading "structure", Table 4) shows a predominance of hardwoods (79% = 22% high stand + 57% coppice) over softwoods (21%). The prevalence of coppice stands over high stands is significant.

Of the vast number of hardwood species, only three are in such abundance as to be commercially valuable. Chestnut (*Castanea Sativa*) and Beech (*Fagus sylvatica*) stands account for nearly 30% of hardwood forest land and are responsible for over 40% of the Italian wood production. Oaks (*Quercus Sp.*), with 22% of the hardwood forest, are responsible for only 6.4% of the total production.

The main factor limiting forest productivity is the extensive presence of coppice stands, caused by intense harvesting in past years. These stands, originally harvested for firewood, have been virtually abandoned with the advent of

Table 3 -- ITALY: EXPORT PATTERN

Countries	Trillions of lire		in % of total		Change in %
	1985	1986	1985	1986	
OECD	88.0	94.7	73.3	78.2	7.6
U.S.A.	14.9	13.1	12.4	10.8	-12.2
Germany	19.5	22.0	16.2	18.2	13.1
France	16.7	19.0	13.9	15.7	13.5
U.K.	8.3	8.7	6.9	7.2	4.4
OPEC	11.4	8.0	9.5	6.6	-29.8
Saudi Arabia	3.0	1.0	2.5	1.5	-38.2
Lybia	2.0	1.2	1.7	1.0	-40.2
PLANNED ECON.	6.8	6.1	5.7	5.0	-10.4
LDCs	13.9	12.4	11.5	10.2	-10.7
TOTAL	120.1	121.2	100.0	100.0	0.9

Source: BNL (1987)

Table 4 -- ITALIAN FOREST STRUCTURE
AND SPECIES COMPOSITION: 1983
(1000 ha)

Softwood Stands			Hardwood High Stands		
Species	ha	%	Species	ha	%
Spruce	136	10	Oaks	279	19
Fir	23	2	Beech	240	17
Pine	322	24	Chestnut	317	22
Larch	96	7	Mixed	602	42
Mixed	763	57			

Hardwood Coppice Stands			Total		
Species	ha	%	Structure	ha	%
Oaks	832	23	Softwood	1340	21
Beech	404	11	Hardw. HS	1438	22
Chestnut	366	10	Hardw. CS	3615	57
Mixed	2013	56	Total	6393	

Source: ISTAT (1984).

cheaper forms of energy. The reconversion to high stands and more rational management techniques is prerequisite to increasing productivity.

Spatial distribution of forest resources is another factor that affects productivity. With 95% of the resource located in either the mountainous or hilly region (Table 5), the high cost of harvesting in adverse conditions, coupled with environmental concerns, limit the volumes and quality of the wood harvested.

The main factor influencing Italy's wood resource is the ownership pattern. The average forest land tract sizes per owner are: 850 ha for the state and regions, 150 ha for public organizations and only 3 ha for private owners, **MARINELLI** and **CASINI (1985)**. Private ownership, however, accounts for 60% of the land areas, while state ownership is only 6%, Table 6. This ownership pattern makes managing the resource, in a productive manner, very difficult. Small owners (the majority) do not find economic justification in managing their forest land. This has led to the abandonment and progressive deterioration of great part of the Italian forest resource.

Broad diversity in species composition, ownership patterns, topographic constraints, and conflicts in resource management strategy all have contributed to limiting productivity of the Italian forest resource. Recognizing the need to improve the present situation, the Italian government and the European Economic Community (EEC) has proposed legislation to help increase productivity.

Three laws have been approved to help restore a healthy forest base. The objectives of the first law are to develop a more rational use of marginal and abandoned lands, to reduce the trade deficit in the wood product sector (with particular attention paid to pulp wood), and to create a stable base of quality jobs in order to stem the tide of migration from rural areas to cities. The law has a financial backing of 885.7 billion lira (c.a. \$640 million, U.S., 1986) which is to be spread over a period of 25 years.

The objective of the second law are threefold and are based essentially on short, medium and long term projects. The short term projects are aimed at increasing output through increased thinning activities in the high stands and reconversion or harvesting of coppice stands in areas of negative stumpage. The wood harvested is mainly for the production of pulp and particle board. The medium-term projects involve reforestation projects with particular emphasis on poplar plantations. These plantations have gained a high degree of specialization from more than 50 years of research and experimentation in the field. The use of non-native species such as Douglas Fir and radiata Pine, capable of being productive in 30 to 40 year rotation periods is

Table 5 --ITALIAN FOREST RESOURCE SPATIAL DISTRIBUTION: 1983
(1000 ha)

Structure	Mountain		Hill		Plain		Total ha
	ha	%	ha	%	ha	%	
Softwood	1122	84	174	13	44	3	1340
Hardwood HS	816	57	465	32	157	11	1438
Hardwood CS	1889	52	1595	44	131	4	3615
TOTAL	3827	60	2234	35	332	5	6393

Source: ISTAT (1984).

Table 6 -- ITALIAN FOREST RESOURCE OWNERSHIP PATTERN: 1983
(1000 ha)

Structure	State & Regions		Public Organizations		Private		Total ha
	ha	%	ha	%	ha	%	
Softwood	82	6	722	54	536	40	1340
Hardwood HS	116	8	484	34	838	58	1438
Hardwood CS	178	5	957	26	2480	69	3615
TOTAL	376	6	2163	34	3854	60	6393

Source: ISTAT (1984).

also being stressed. The long-term projects are concerned with reforestation of marginal and barren lands with emphasis on soil protection and environmental problems. In 1977 the Italian government funded this project at a level 665 billion lira (c.a. \$511 million U.S., 1986). The funds are to be spent by 1988.

The third legislative effort has taken place at the European Community level where a plan for the Mediterranean Area has been drawn. This plan, which is part of the "Mediterranean package", is concerned primarily with Italy and southern France. Its principal objective is to improve the standards of the mountain and rural population. Projects are aimed at the protection of the watersheds and the preservation of soil. The fulfillment of the law's objectives is contingent upon the effectiveness of the public administration of funds and the ability to meet project deadlines.

The future impact of these legislative actions on Italy's wood production is difficult to assess. There is an expectation, however, that in the long run productivity should increase from the current 9 million m³/year to a maximum of 15 million m³/year, PREVOSTO (1985).

Italian Production and Consumption of Forest Products

In 1984 the forest products industry contributed between \$5 and \$7 billion of added value to the national economy while employing a labor force of 550,000 distributed among 8000 industries and 120,000 artisan firms, MARINELLI and CASINI (1985). The country's forest resource is unable to fulfill the industry's need for the raw material, supplying only 1/4 of Italy's total consumption.

The Italian manufacturing industry utilized 32.1 million m³ of wood in 1984, Table 7. Of this quantity, only 9.2 million m³ were domestically supplied. Thus, slightly more than 70% of Italian consumption is dependent on imports of wood products. This heavy dependency is correlated with the performance of the country's wood-using industries, whose competitive advantage depends on the availability of an adequate and continuous supply of raw material among other things.

National output of forest products has decreased 50% since 1960, Fig. 2. While the volumes of merchantable timber (sawlogs, pulpwood etc.) have remained essentially stable, the volume of firewood harvested has declined steadily from 13.9 million m³. The shift to more convenient forms of energy is the main reason for the decline. In 1984, 52% of the domestically harvested wood was used for firewood, 25% for sawlogs and veneer logs, 12% for other industrial roundwood such as poles, wood for extractives, staves, etc. and 11% for pulpwood. Of the present production,

Table 7 -- ITALIAN WOOD PRODUCTS CONSUMPTION : (1984)
(1000 m³ of roundwood)

TOTAL PRODUCTION

9259

Sawlogs & Veneer Logs 2333	Pulpwood 980	Other 1102	Fuelwood 4844
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IMPORTS

24312

Sawlogs & Veneer Logs 3269	Pulpwood 1652	Other 107	Fuelwood 754
Lumber 8662	Veneer & Plywood 550	Composite Boards 1089	Pulp 8229

EXPORTS

1559

Sawlogs & Veneer Logs 5	Pulp wood 2	Fuel wood 493	Lumber 190	Veneer & Plywood 317	Composite Boards 270
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APPARENT CONSUMPTION

32102

Lumber*	Veneer & Plywood 233	Composite Boards 819	Other 1209	Pulpwood 2630	Pulp 7947
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Sawlogs &
Veneer Logs
5597

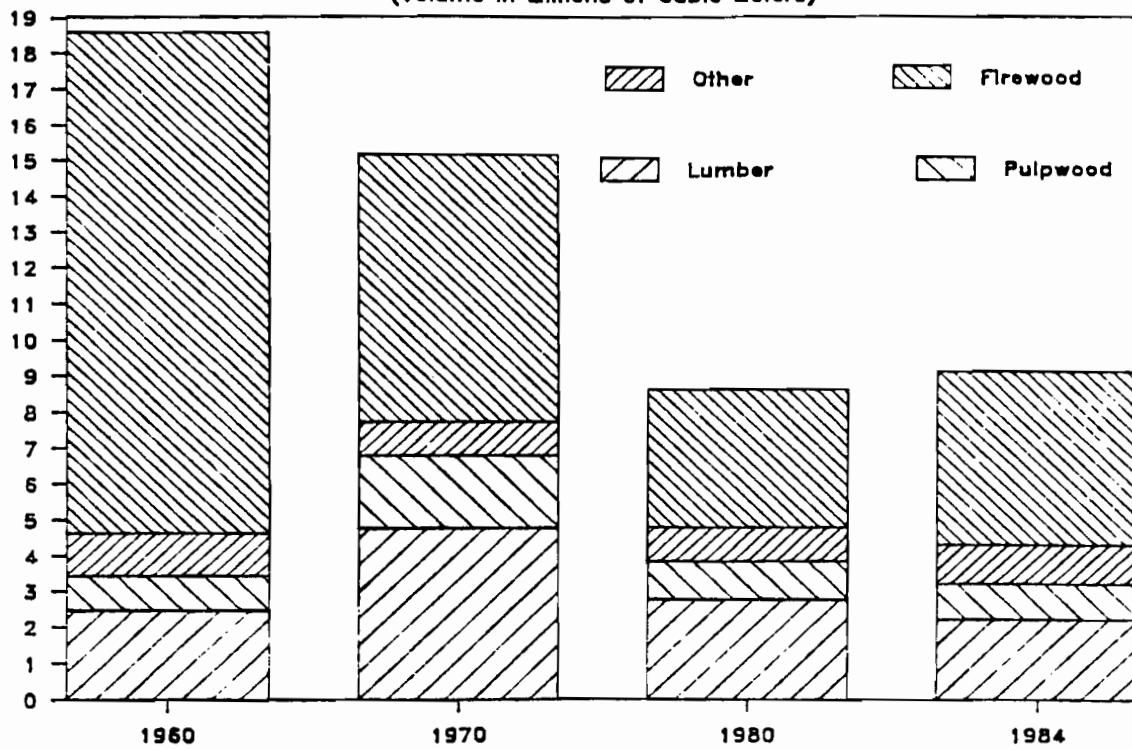
Fuelwood
5105

Lumber*	Veneer & Plywood*	Composite Boards*	Fuelwood*
3731	2096	3876	1229

*Produced in the country from domestic and imported roundwood.

Source: FAO

Fig. 2 ITALIAN WOOD PRODUCTS PRODUCTION
 (Volume in Millions of Cubic Meters)



more than 80% consists of hardwood species while the remaining 20% is composed of softwood species.

The present situation is not likely to change in the short term due to the structure of the resource, the costs involved in harvesting in the mountainous regions (where most of the commercially valuable timber is located), and environmental concerns limiting allowable cut. Thus, Italy will be dependent on a high proportion of imported wood to satisfy its manufacturing needs in the near, and perhaps even the long term, future.

Imports of Forest Products

The value of forest products imports has grown 10 times since 1960, moving from \$300 million in that year to \$3 billion in 1984. This has contributed to a net trade deficit for forest products of \$2 billion in 1984, Fig. 3. Lumber comprised 28% of the total and 64% of the solid wood products imported into the country. Paper and paperboard amounted to 32% of the total, pulp 24%, logs 9%, and the remaining 7% was plywood and composite boards. In 1985, the imported volume reportedly declined slightly, while the value of imported solid wood products remained constant because of the high inflation rate of the time, PREVOSTO (1986). A more detailed breakdown of volumes and values for Italian wood imports in 1985 is shown in Table 8.

Softwood Imports

In 1985, Italy imported approximately 5.6 million m³ of softwoods. Over 80% of this volume was sawlogs or lumber and the remaining 20% pulpwood. In terms of value, lumber represented more than 80% of the total expenditure of this import category. Of sawlogs and lumber, 75% of the import volume was lumber. These proportions have been essentially stable in the past decade, with limited fluctuations from year to year.

Main suppliers for this aggregate are shown in Figures 4 & 5. Austria was the leading exporter, supplying 62% of Italy's softwood lumber imports in 1985, down 3% from the previous year, FEDERCOMLEGNO (1986).

Austria supplies Italy with low-grade fir and spruce. This material is used by the construction industry for planking and concrete forms and, to a lesser extent, by the laminated beam industry. Austria's geographic proximity to Italy and the advantages Italian importers have gained through long-term relationships insure that Austria will continue to be a major supplier of low-grade softwood to the Italian market. On the other hand, Italian importers are diversifying their suppliers. Total Italian import volumes from Austria have declined over the last 30 years from 80% in volume in 1950 to less than 60% in

Fig. 3 ITALIAN WOOD PRODUCTS TRADE BALANCE
 (Value in Billions of \$ U.S.)

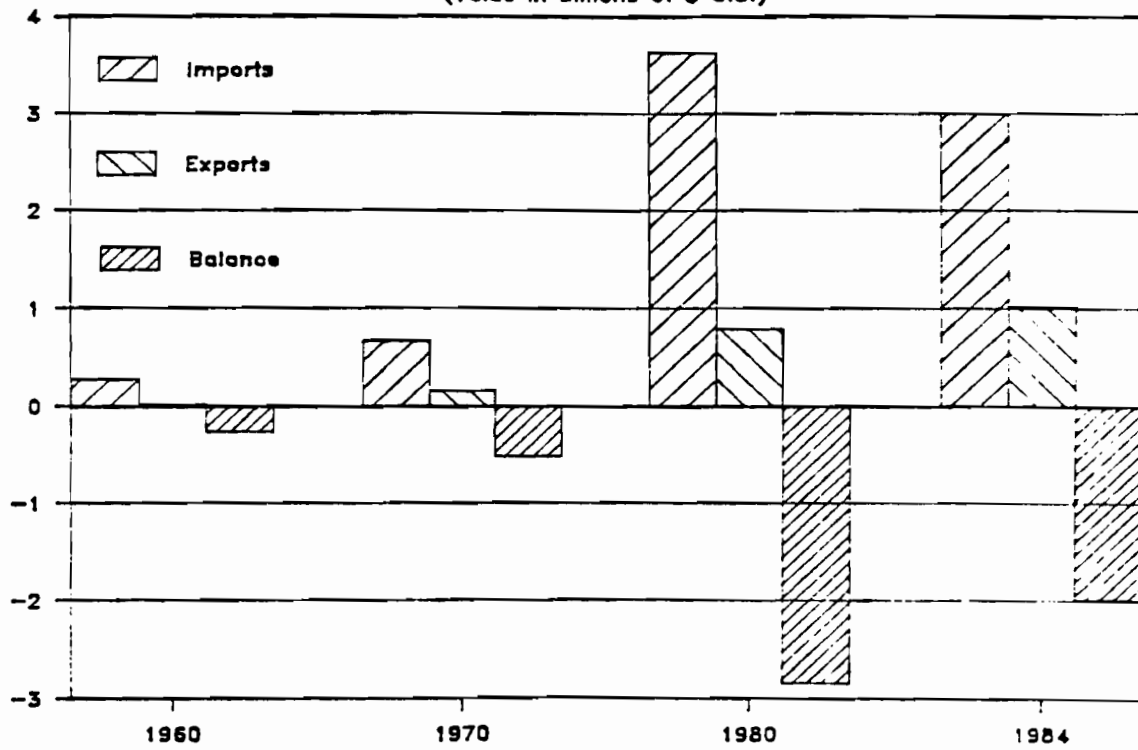


Table 8 -- VOLUMES AND VALUES OF ITALIAN IMPORTS OF SOLID
WOOD PRODUCTS: 1985

Product	Volume (1000 m ³)	Value (Millions of \$ U.S.)
Softwood Logs	1117	64.6
Softwood Lumber	3571	442.5
Temperate Hardwood Logs	1216	101.7
Temperate Hardwood Lumber	716	142.2
Tropical Hardwood Logs	644	101.5
Tropical Hardwood Lumber	369	98.0
Plywood	99	31.9
Veneer	101	48.4
Softwood Pulpwood	915	38.1
Hardwood Pulpwood	554	16.7
Particle Board	359	43.2
Fibre Board	193	16.9
Mine Props	5	0.4
Railroad Ties	24	3.1
Poles and Piles	95	12.3
Fuelwood	710	16.0
Chips	218	6.4
Charcoal	148	4.5
TOTAL	11054 (m ³)	1188.4

Source: FEDERCOMLEGNO (1986).

Figure 4 **SOFTWOOD LOGS:1985**
(Percentage imports by Country)

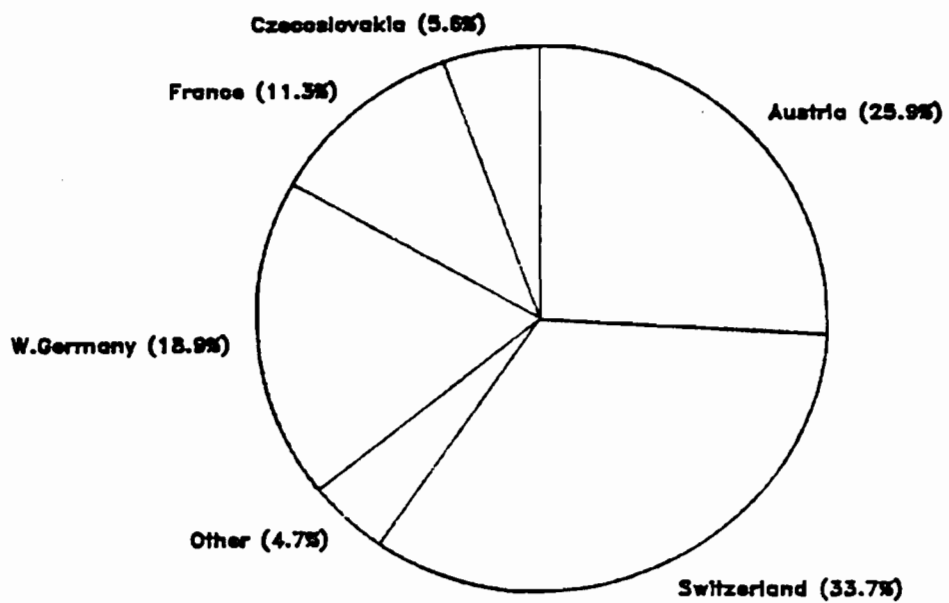
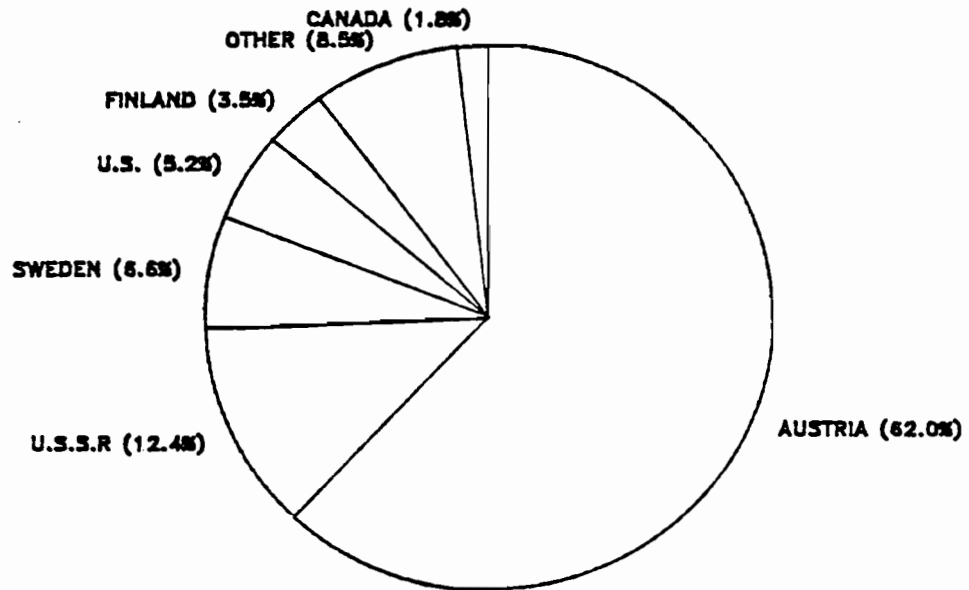


Figure 5 : **SOFTWOOD LUMBER IMPORTS: 1985**
(Percentage by Country)



1985. It is thought that diversification and oscillations in supply are due to the current cost of the raw material rather than to complex long-term strategies, VALIANI (1981). Unstable exchange and interest rates and increasing production cost factors which have caused Italian buyers to decrease dependency on a single producer. However, the importance of the Austrian supply cannot be overlooked and is, to a certain extent, a guarantee of continued supply. The reasons for this are the advantages of established distribution channels, longstanding relationships and more favorable as well as stable price levels.

The decrease in demand for Austrian wood in the 70's has been countered by a strong increase in imports from Canada, Finland and Sweden. This increase is due, in part, to a positive response by Italians to successful promotion campaigns and to the professional business approach of these countries, in particular Canada and Finland, (VALIANI, 1981). The devaluation of the Swedish kroner in 1982 allowed the Swedes to become more competitive. As a consequence, significant losses of market share were felt by North American suppliers, who were also hindered by an increasingly strong dollar.

North American suppliers and U.S. suppliers in particular have been active on the Italian softwood lumber market for a number of years. Italy is very attractive to Pacific Northwest producers because of the strong consistent demand for high quality Douglas Fir wood (referred to as "clears"). Italy is the largest market in Europe for U.S. producers, purchasing more than 40% of all U.S. softwood lumber exports to Europe, Table 9. Italian imports consist almost exclusively of Douglas Fir clears and Southern Pine flitches in a proportion of roughly 80% of the former and 20% of the latter, RANDOM LENGTHS (1985). Both species are used extensively in the joinery industry in which they are highly appreciated for both appearance and structural properties. While relatively low in volume, U.S. exports are fairly high in value, averaging over \$70 million since 1978, Table 10. A comparison with Japan shows that the ratio of value to volume of softwood lumber exports is substantially higher for the material shipped to Italy and, although a relative measure, it is indicative of the high value associated with Italian imports from the U.S., Fig. 6.

Temperate hardwood imports

Hardwood imports to Italy from the temperate regions of the globe grew considerably in the 1970's due to the great expansion of the Italian furniture industry. Italy's share of European hardwood imports grew from 36% in 1970 to 54% of the total in 1980. In the decade of 1970 to 1980, the biggest growth was in logs and squares which increased by 230% in volume, while lumber imports rose only 40%, VALIANI (1981).

Table 9 -- U.S. Softwood Lumber Exports to Europe
(In Million Board Feet)

	78	79	80	81	82	83	84	85
Belgium	11	17	26	15	21	13	7	5
France	7	8	15	6	5	6	5	3
Italy	105	161	186	88	83	120	89	77
Netherlands	12	11	10	5	4	4	2	4
U.K.	23	37	53	32	36	52	34	27
Spain	16	32	46	16	30	29	29	27
W. Germany	65	58	71	49	44	45	28	19
Other	17	20	22	23	25	21	18	18
TOTAL	256	344	429	234	248	290	212	180

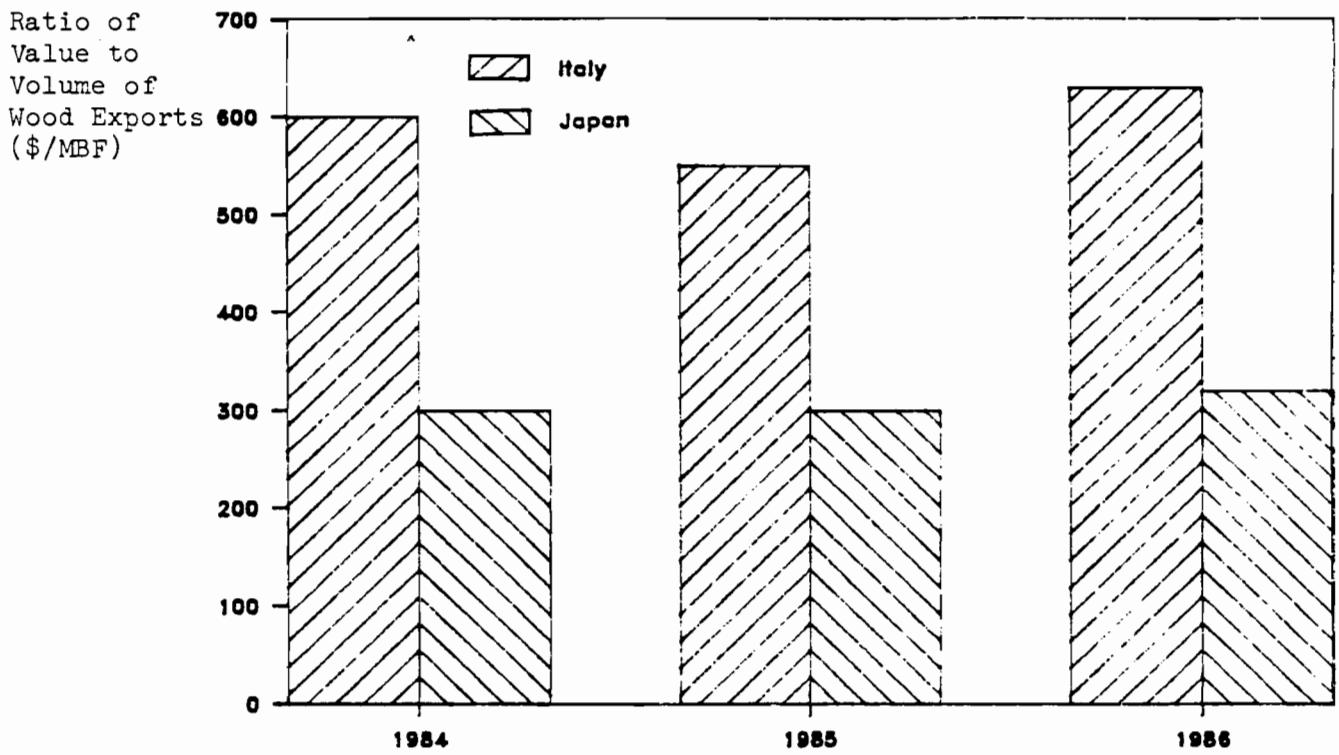
Source: WWPA (1986).

Table 10 -- U.S. Softwood Lumber Exports to Italy
(Value in Millions of Dollars)

Year:	1978	1979	1980	1981	1982	1983	1984	1985
Value :	53.3	127.0	138.6	55.4	51.3	71.1	53.2	42.6

Source: NFPA (1984)

Fig. 6. A COMPARISON BETWEEN THE VALUE TO VOLUME RATIO OF WOOD EXPORTS TO ITALY AND JAPAN



Italian imports of temperate hardwoods in 1985 were approximately of 2.8 million m³ with 50% of this volume logs and squares, 29% lumber and 21% pulpwood. The total value for the three assortments was \$361 million, FEDERCOMLEGNO (1986).

Italy's main log suppliers are the bordering European countries, (Fig. 7): Switzerland, Yugoslavia, Austria, and France with the latter supplying approximately 1/4 of Italian temperate log imports. Yugoslavia is predominant in exports of lumber to Italy with 54% of the total. While Austria is Italy's primary supplier of softwoods, Yugoslavia is the chief trading partner with respect to hardwoods, Fig 8.

France and Yugoslavia are leaders in exporting temperate hardwood logs and lumber to Italy. A great number of other countries, European and Noneuropean, also supply the Italian market. The U.S., in particular, has seen its share rise steadily in the past few years. In 1984 U.S. exports of hardwood logs, lumber and veneers totaled 12% of the exported value to Western Europe as shown in Table 11, ARAMAN & HANSEN (1987). The recent changes in Indonesian policy concerning lumber exports (SOETARSO, 1987), could have a very positive effect on U.S. hardwood exports to Italy. Assuming a steady growth in the furniture industry (the principal consumer of hardwoods), the long-term view of supply for this category is a function not of the materials availability, but of the rising costs associated with stumpage, logging operations and transportation. For softwoods and temperate hardwoods, the accent is on competitiveness of the Italian forest products industry and in particular the furniture segment. If the Italian furniture manufacturers are able to maintain and increase their presence in international markets, they should have no financial difficulty in acquiring a supply of raw material, even at rising prices.

Tropical hardwood imports

Tropical hardwoods have gained steadily in importance in the past 30 years as the furniture industry's requirements grew. In 1950, Italy imported less than 50,000 m³ of tropical hardwoods. By 1985, this figure had risen to about 1.0 million m³, with 63% of the volume represented by logs and 37% by lumber. Tropical hardwood imports in 1985 were valued at \$276 million, FEDERCOMLEGNO (1986).

In the past, the main Italian supplier for logs was the far east, particularly Indonesia. With the well known Indonesian log ban of 1980, Italian importer have switched to African sources of logs. The main African supplier of logs and squares is the Ivory Coast, comprising 62% of total Italian imports. Cameroon satisfies 17% of Italian demand and is of growing importance, FRONCILLO (1986). The remaining volume is supplied by a score of

Figure 7 TEMPERATE HARDWOOD LOGS: 1985
(Percentage Imports by Country)

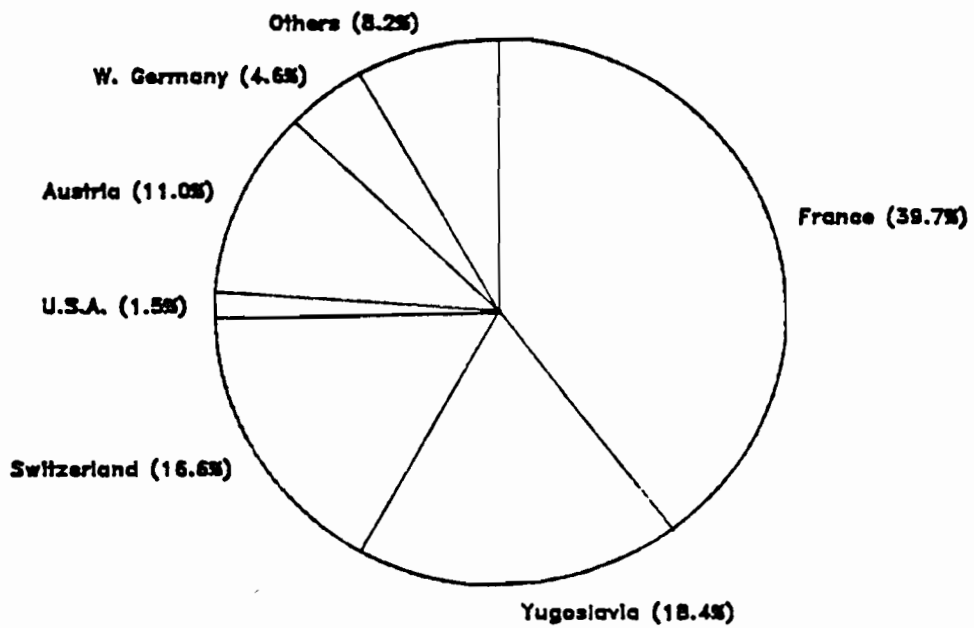


Figure 8 TEMPERATE HARDWOOD LUMBER: 1985
(Percentage Imports by Country)

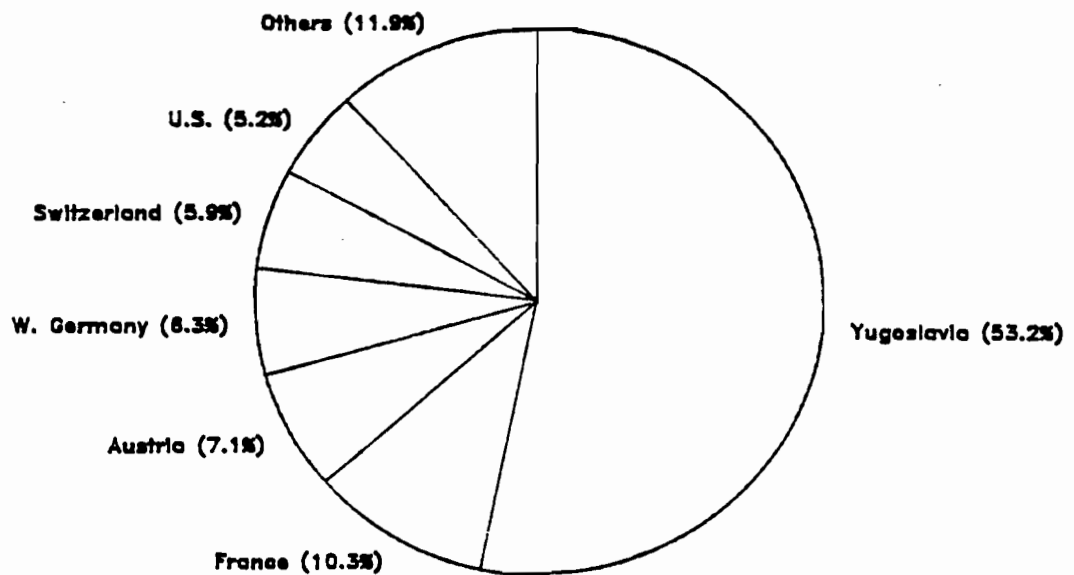


Table 11 -- U.S. Hardwood Exports To Italy: 1984
 (Percent of Total European Exports)

Logs		Lumber		Veneer	
Volume	Value	Volume	Value	Volume	Value
10	11	14	15	7	8

Source: Araman and Hansen (1987)

countries, notably Gabon, the Congo and Ghana, as shown in Fig. 9. As a consequence of the Indonesian log ban, lumber imports to Italy have increased. Until recently, Indonesia has been the principal supplier with 65% of total tropical hardwood lumber volume imported. Malaysia and the Ivory Coast account for 10 and 20% respectively. The remaining 5% is divided between a score of African and Asian countries, Fig. 10.

Future Italian log imports are subject to government policies in developing countries. The progressive liquidation of standing inventories and the movement towards in-country production of sawn material in order to realize value added are the main factors affecting forest policy in developing countries. Indonesia, which is successfully developing a forest products industry, has been the leading third world nation in implementing restrictive trade policies for forest products. The natural tendency for most other countries will be to do likewise. An example of this orientation is the 1986 Indonesian export ban on Ramin, Agathis and White Meranti lumber, so that these species could be used in the development of a domestic furniture industry, SOETARSO (1987). This ban affects Italy significantly, since more than 60% of its tropical lumber imports (mainly Ramin) were supplied by Indonesia, Fig. 10. The loss of this important supply source is sure to place more emphasis on African countries for the production of quality tropical lumber for the Italian markets. At the same time, however, it will be necessary to find new suppliers to satisfy the furniture industry's demand for raw material.

Distribution Channels for Wood Products

Wood products entering the Italian market typically flow through a five-level distribution system, Fig. 11. The levels of the distribution system are:

1. Primary manufacturer;
2. Exporter (Shipper);
3. Importer;
4. Retailer;
5. End User.

At each level of the basic distribution system a number of firms are present, carrying out the same function in slightly different ways, some taking title to the goods and others providing only a mediation function. Normally, only the largest producers can afford an in-house international department and/or an overseas representative, while a relatively small production facility interested in the export market generally relies on the second level members of the system to deliver his goods to the final consumer.

Figure 9 TROPICAL HARDWOOD LOGS: 1985
(Percentage Imports by Country)

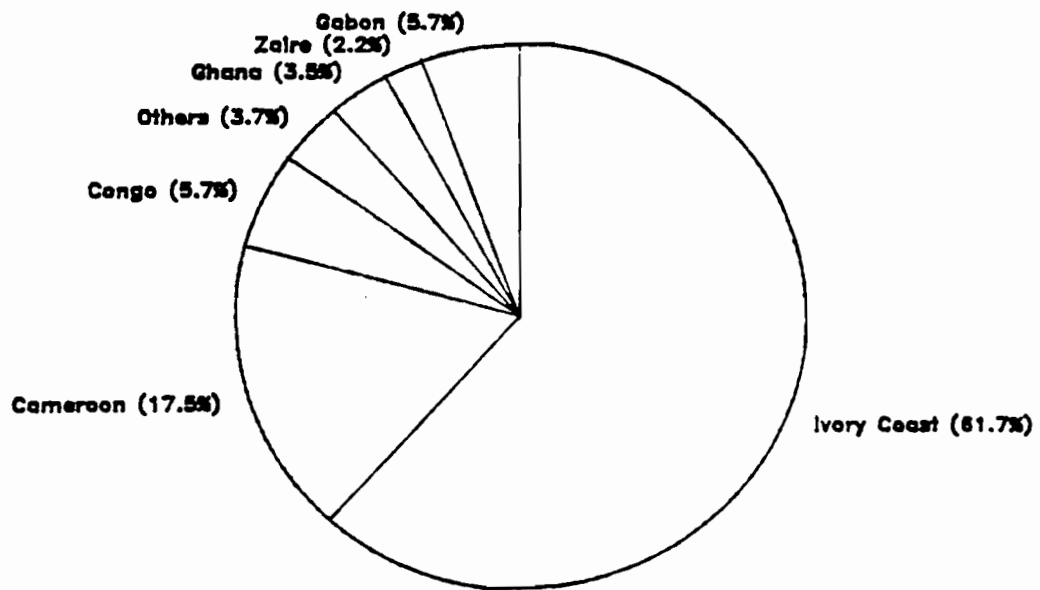


Figure 10 | TROPICAL HARDWOOD LUMBER: 1985
(Percentage Imports by Country)

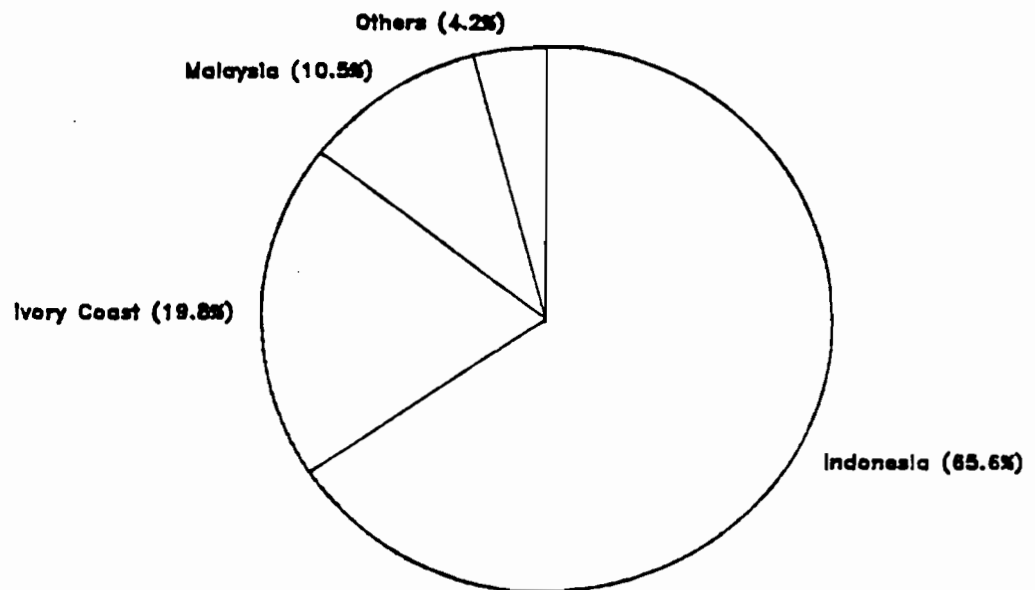
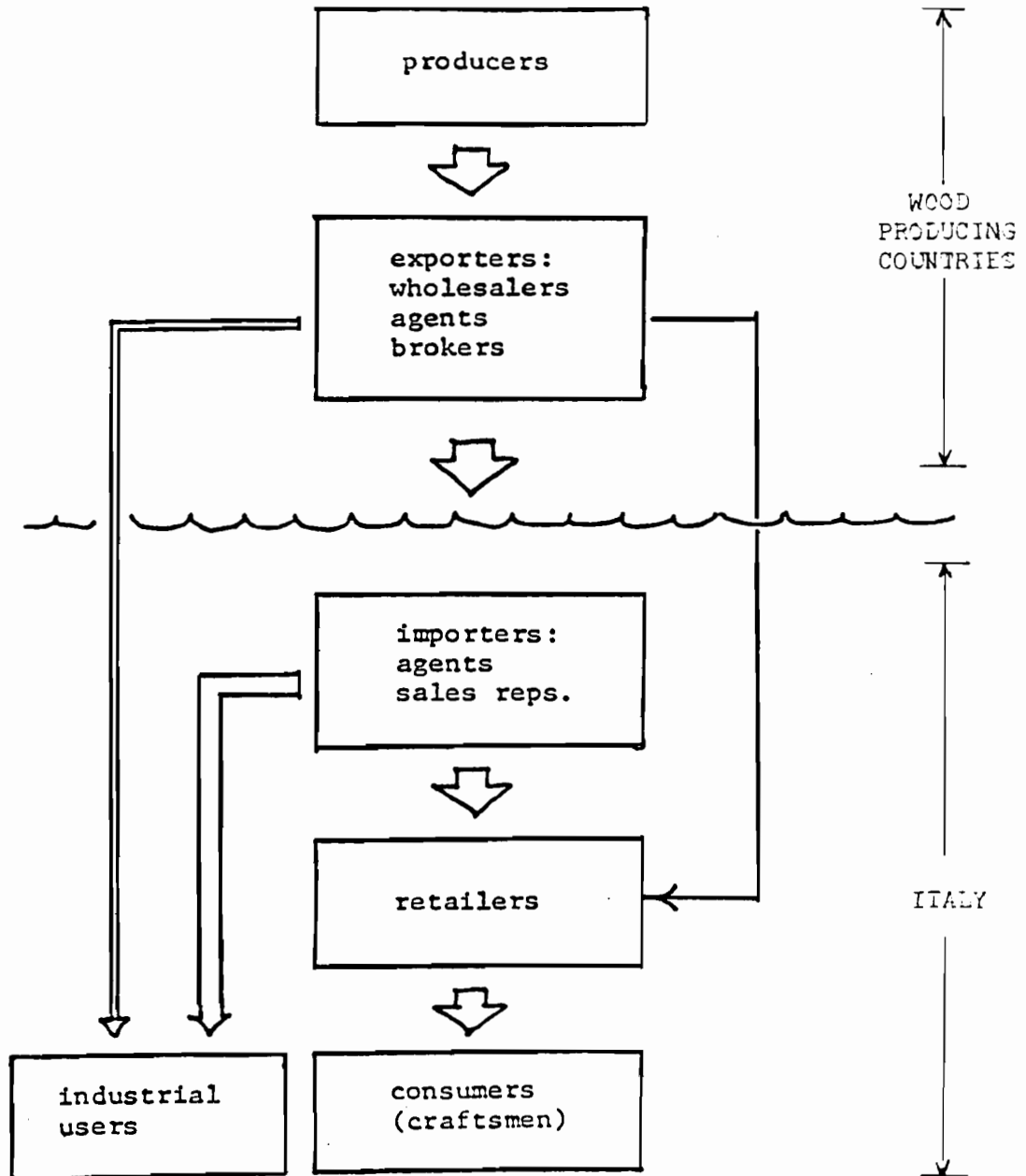


Fig.11 ITALIAN DISTRIBUTION CHANNEL FOR IMPORTED WOOD



Typically the process of organizing an overseas sale involves the constant knowledge of current and future mill production schedules, as well as prices. The exporting company provides the structure for gathering this information. The exporter sends an offer for a given assortment of wood to his overseas contact (company agent, importer/distributor or another third-level member of the system) who matches needs of the fourth or fifth level domestic buyers.

Distribution of wood products to the Italian market follows this basic pattern, frequently bypassing the retail level and, at times, the importer/distributor when the end user is large enough to have an in-house importing department. Some large furniture industries of Northern Italy and a few big window and door manufacturers are structured in this manner.

Most wood coming into Italy flows through more than 2500 importers, retailers and agents associated with the FEDERCOMLEGNO, an Italian trade association which provides legal service, lobbying activities, economic counsel, and promotion for its members.

The main points of entry for wood products are through the major ports of the west and east coasts and the Brennero pass for wood coming from Austria and the remainder of northern Europe. More than 80% of all wood products shipped into Italy are unloaded in 8 ports: Savona, Genoa, La Spezia, Livorno, Naples, Salerno, Ravenna and Monfalcone (see Fig. 1 for location). Typical volumes of wood products flowing through the major ports in Italy are shown in Table 12. The Naples area, with the ports of Naples and Salerno, is responsible for 29% of the volume, while the Genoa area, with the ports of Genoa, Savona and La Spezia, is responsible for 13%. Arbatax, Monfalcone and Ravenna are responsible for 41% of the movement of solid wood products entering Italy via ocean freight. Of all pulp and waste paper shipped to Italy 90% is unloaded at 6 ports: Savona, Genoa, La Spezia, Livorno, Naples and Monfalcone. According to FRANCESE (1986), the Genoa and Naples areas are responsible for 56% of the volume, Livorno for 26% and Monfalcone for 8%.

Once unloaded on the docks, the wood is transported to its destination by truck. It is possible to reach any part of the country in less than 24 hours by road, making this transportation mode the most convenient for distributors. Highway transportation is also the predominant means by which forest products enter the country from northern Europe.

WOOD USE

Lumber and wood based panels generally are used as raw materials in both industrial and consumer goods, chiefly construction and furniture. This material is also utilized in a

Table 12 -- ITALIAN WOOD PRODUCTS IMPORTS
BY PORTS
(1986)

Port	Lumber & Logs (Tons)	Pulp & Paper (Tons)
Savona	23287	182788
Genoa	70696	194402
La Spezia	97375	116584
Livorno	60702	361229
Naples	193569	274435
Salerno	240589	----
Arbatax	166913	21972
Ravenna	167828	444
Monfalcone	289052	106982
Ancona	50581	14357
Trieste	62425	7502
Others	91439	97074
TOTAL	1515456	1377769

Source: Francese (1986).

number of temporary uses such as concrete forming, scaffolding, packaging, and in pallets for the distribution of many other goods.

Demand for these wood products is essentially a function of the pattern and level of activity in the sectors that utilize these materials. The level of consumption is affected by changes occurring in both the level of activity of the end use sectors and the use patterns. Changes in the latter are dictated by a number of technical, economic and social factors such as changes in tastes, performance requirements, and building codes governing the use of wood as a basic structural member. Lumber and wood based panels have traditionally had a variety of uses among which four are the most important from the standpoint of consumption:

1. Construction (excluding joinery)
2. Furniture
3. Packaging
4. Joinery (windows, doors, molding, etc.)

Estimated consumption levels for selected products in the construction and furniture markets are shown in Table 13. Because of an unsatisfactory data base, the aggregate "other" comprises packaging as well as other uses for which reliable data are not available (i. e. boat building, household utensils, toys, musical instruments etc.). It has been estimated, however, that the packaging sector absorbs between 10% and 30% of lumber and wood based panels in most nations, depending on the country's forest resource, trade pattern and tradition, UNITED NATIONS (1986).

Construction

The estimated 1983 revenues deriving from the use of wood products in each segment of the construction sector is shown in Fig. 12. Unlike North America and Northern Europe, Italians use little wood for structural components in residential construction. Main construction materials are bricks and masonry. For the most part, wood use for structural components is negligible in non-residential construction as well. An exception to this is the increasing use of glue laminated beams. Glulam beams are manufactured using mainly Austrian spruce and are manufactured according to German specifications. Some work has been done by the Civil Engineering and Wood Technology departments of the University of Florence on the utilization of poplar (hybrid I-214) for laminated beams, UZIELLI, SPINELLI and CECCOTTI (1983) and LIGASACCHI (1983). Implementation of this work, however, is not imminent.

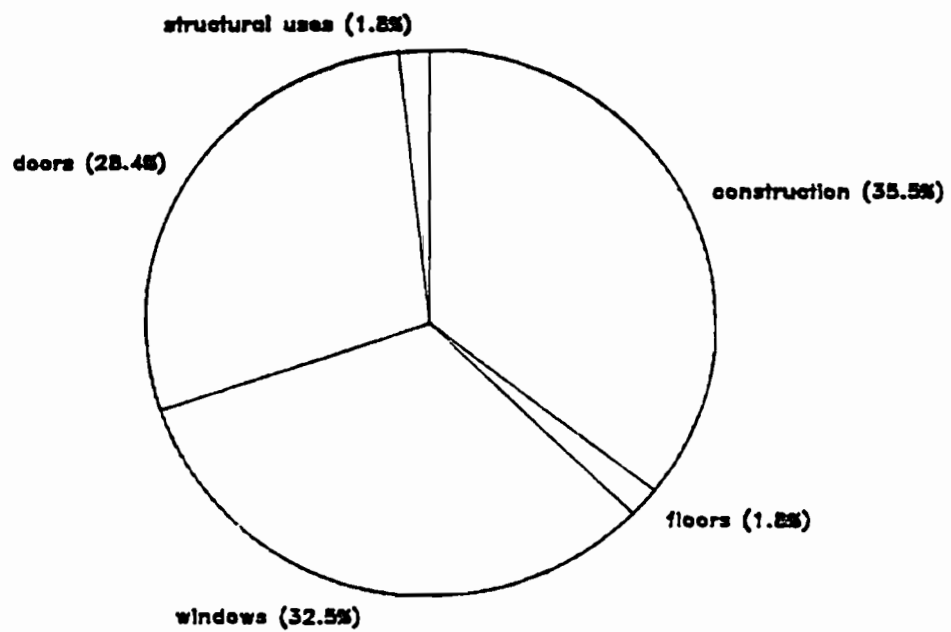
Two laminated beam production facilities are located in Italy: one is found in Ascoli Piceno, in the south eastern part of the peninsula, and the other is in Braone in northern Italy.

Table 13 -- PERCENTAGE OF CONSUMPTION FOR
PRODUCT AND END USE IN ITALY

Product	Sector	%
Softwood Lumber	Construction	65.3
	Furniture	6.9
	Other	27.8
Hardwood Lumber	Construction	30.0
	Furniture	23.0
	Other	47.0
Plywood	Construction	39.9
	Furniture	34.3
	Other	25.8
Particle Board	Construction	5.0
	Furniture	90.0
	Other	5.0
Fiberboard	Construction	64.0
	Furniture	17.0
	Other	19.0

Source: United Nations (1986).

Figure 12 WOODS USE IN THE CONSTRUCTION SECTOR
(Estimated Revenues 1983: 1700 bn lire)



Both are owned by the same company which controls all stages of building construction from design to erection. Main projects are warehouses, sports arenas, and bridges. At the time of this writing, the company has a number of projects under way in southern Italy and is working with a two year order file, VANNUCCI (1986). Southern Italy has, at the moment, the highest construction rate in the country, with an average growth rate of 105%, ANON (1986).

The main issues limiting more extensive use of wood for structural components in construction are chiefly related to fire resistance and the lack of specific building codes for wood structures. FEDERLEGNO, a trade association of forest products industries, has begun a promotion program for using wood as a construction material among architects, engineers and contractors to overcome the traditional obstacles to wood use. A proposal for financing a study concerning timber frame housing has been advanced at the government level, and a committee composed of national and international experts in the field has been formed to head the study group, MAGNI (1986). The proposal envisions the construction of a number of wood frame houses which would be inhabited and monitored in order to better understand how this construction system can be adapted to the Mediterranean tradition and how it is perceived by the consumer. Some of the problems to be overcome are the negative public image of wood as a material suitable only for emergency housing and the misconception that wood is unsafe because of fire.

While wood is not used for structural members in traditional construction, it is used extensively as scaffolding and concrete forming during the remodeling or erection of buildings.

In a country dependent on its cultural heritage for tourist trade and containing an abundance of historically important buildings, it is not surprising that many renovation projects are underway at any point in time. The wood used in these instances is generally low grade, rough sawn softwood lumber, mainly pine and spruce, imported from Austria and the U.S.S.R..

A large part of the wood entering the Italian construction sector is utilized for joinery purposes, mainly doors and windows. Exterior joinery is generally made from imported softwood lumber, primarily Douglas Fir, Southern Pine and Swedish Pine, while interior joinery, such as doors and interior moldings, are mainly made from tropical hardwoods and wood based panels, UNITED NATIONS (1986).

Furniture

The Italian furniture industry is characterized by a high level of fragmentation relative to the size of firms involved in the production process. In the past 30 years the industry has

undergone a slow but significant evolution of its structure with a substantial decrease in the artisan component and an increase in small industries (those with 10-49 employees), Table 14. As a percentage of the total number of firms, the artisan component has decreased 11% since 1951, while small industries have grown 9%. In absolute terms, however, there has been a decrease of almost 20% in the number of artisan firms and a four-fold increase in small industries. This increase in small industrial enterprise is one of the most evident and interesting changes which has occurred in the industry.

The early 1980's have seen internal demand for furniture fall substantially. Three factors have contributed to this decline: 1. A major change in the structure of Italian society with consequent changes in consumer taste and buying behavior; 2. High inflation and recession at the turn of the decade; and 3. A prolonged stall in the construction sector.

Manufacturers have faced these changes by adopting new strategies such as diversification of their product lines and by lowering the real price of manufactured goods, ASSOARREDO/FEDERLEGNOARREDO (1986). Industrial output declined with corresponding decreases in the profit level of the firms. The decline in profits was felt primarily by larger industries in which R & D costs and restrictions on production and labor were higher than those of smaller firms. The recession was weathered, primarily due to the fragmentation of the industry, but smaller profits resulted in lower levels of capital investment. This, in turn, led to the present situation in which small, dynamic industries with high flexibility dominate the production process.

The slump in the domestic market has been adequately balanced by the vitality of export markets. Italian firms have seen their exports increase by 50% both in terms of volume and value since the beginning of the decade. The major export activity is in Europe, where Italy holds a 39% share of the furniture market, ASSOARREDO/FEDERLEGNOARREDO (1986). As a percent of total exports, the Middle East follows Europe with 21.7%, while North America imports 8.1%. Italian furniture shipments into the latter two markets have grown significantly by 175% and 900% respectively since 1979. However, recent developments in the international financial markets have affected this pattern, and exports to the Middle East and North American markets will probably be affected. Exporters will tend to lower prices in order to defend their hard-won market shares but, in the long term, a decrease can be expected. However, the furniture exported to North America is generally positioned at the high end of the market where purchasers are less price sensitive and motivated more by the status associated with the product. As a consequence, considerable time could pass before a decrease in market share is observed.

Table 14 -- STRUCTURE OF THE ITALIAN FURNITURE INDUSTRY

Number Employed	1951		1961	
	Number of Firms	%	Number of Firms	%
1-9	35884	97.4	26080	92.6
10-49	879	2.4	1789	6.4
50-99	56	0.1	203	0.7
100-499	33	0.1	70	0.3
>500	0	0	2	0
TOTAL	36852	100.0	28144	100.0

Number Employed	1971		1981	
	Number of Firms	%	Number of Firms	%
1-9	26846	88.6	29207	86.7
10-49	2965	9.7	3954	11.7
50-99	391	1.3	364	1.1
100-499	138	0.4	113	0.5
>500	4	0	2	0
TOTAL	30344	100.0	33640	100.0

Source: Assoarredo/Federlegnoarredo (1986).

Two main factors determine the utilization pattern for lumber and wood-based panels in the furniture industry:

1. technological factors which influence the choice of raw materials as well as decisions regarding manufacturing techniques; and
2. social factors which take into account the functional aspects of furniture (ergonomics) as well as its aesthetic content (design).

With regard to the former, the 1970s were years in which operational capacity was increased by rationalization of the manufacturing process rather than by expansion of production capacity. This trend was exemplified by the following changes which occurred in the industry, ASSOARREDO/FEDERLEGNOARREDO (1986):

1. investments were made to streamline the manufacturing process,
2. measures were taken to reduce the amount of waste generated during the preparation, cutting, and finishing of individual components,
3. a shift occurred in operations such as cutting to dimension and pre-finishing from in-house control to outside contractors, and
4. the introduction of computer numerical control lines and other computer based manufacturing techniques allowed for a degree of flexibility in the manufacturing process previously not attainable.

Together with these changes, affecting primarily the manufacturing process, there were substantial changes in the quality and flexibility of materials used by the industry. Developments in the adhesive field, new surface finishing materials such as plastic laminates, improved connectors and assembly techniques, and the introduction of thin particle board, laminated boards, pre-finished panels, and medium density fiberboard have all had an impact on the demand for both lumber and panels in the industry. Particleboard has become the most widely used wood-based panel in the field, substituting for plywood, whose application has shifted to more specialized end uses such as molded plywood. MDF (medium density fiberboard) has become increasingly popular where cost effectiveness is more important than performance, as in the backs of cupboards, drawer bottoms, low price furniture, etc. As a consequence, there has been a decline in the demand for lumber, even though its use is still predominant in the manufacture of hidden frames furniture.

Among the social factors that have contributed to change in the public image of the furniture industry and the consumption pattern for furniture, the most relevant are:

1. changes in lifestyles resulting in the formation of non-traditional households (single, young, divorced or separated adults) leading to a change in the demand structure for furniture, and
2. greater mobility with more frequent changes in dwelling, resulting in a higher furniture turnover.

These trends are reflected in design, dimension and form, as furniture assumes a greater pertinence in the social life of the user. An example of this notion is the change that occurred in the conception of both the bedroom and the kitchen relative to the living space. Traditionally viewed as the most intimate part of the house, the bedroom has shown a tendency to become more integrated with the rest of the living quarters. The same can be said for the kitchen which, once exclusive domain of the woman, is now viewed as a social center of the household. These changes have increased the sophistication of the consumer as furniture becomes more of a status symbol. It follows that the materials used to enhance the appearance of the product have undergone some changes. Where dark woods such as walnut and teak were once preferred, now light colored woods such as ash, beech and birch are common.

The transition from traditional craftsmanship techniques to an industrial approach has also been a major factor in the shifting demand for wood products. The widespread use of particleboard has substituted for the traditional construction of hardwood lumber edges and plywood centers, while the traditional coupling of desired species with specific end uses has given way to economic rather than aesthetic considerations.

Packaging

The volumes of wood used in this sector are difficult to estimate due to lack of consistent information. There are, however, two principal segments of interest in the Italian market:

1. crates and boxes for agriculture products, and
2. pallets for transportation of finished goods.

In 1985 Italy produced 2.3 billion wooden crates, **MAGNI** (1986). These were mostly used in transporting fruit and vegetables from fields to market. Crate producing firms are generally local operations in the proximity of farm areas, and demand for crates

is dependent on crop production in a given season. The wood involved in the production of these crates is generally low quality, and in the case of lightweight crates, sliced poplar veneer is often used as siding while beech is used for corners and thin particle board as bottom. Apparently the use of particleboard will be forbidden starting in 1999 because of concerns over its formaldehyde content, GARDINI (1986).

The pallet industry employed 10,000 people and generated revenues of \$285 million in 1984, ANON (1985). As with the crate industry, the volumes of wood used in the pallet industry are difficult to estimate. However, the wood used in Italian pallets is reportedly of higher quality than that used in other European countries, ANON (1985). This fact, together with characteristically small size of operation that manufactures low quality pallets and consumers that tend to be extremely price sensitive, has contributed to a lack of profitability in the industry as a whole. Following the example set by other European countries, notably Switzerland, the Italian industry has reacted to the situation by creating a consortium with the objective of increasing consumer awareness of the necessity for quality pallets, ANON (1985). Specifications and standards for raw materials and manufacturing processes are being defined in order to ensure the quality of the product. The objective is to remove the marginal manufacturers from the market, thus creating a higher profit margin together with a better quality product and higher consumer satisfaction.

Joinery

Demand for Italian joinery is dependent on the level of activity in the construction market. The slump in this sector over the last few years has contributed to depress the joinery segment. Nonetheless, this segment generated revenues of \$588 million in 1984, more than 60% of the total revenues deriving from the use of wood in the sector as a whole, RIBERA (1985). Slightly over 50% of the joinery segment's revenues were generated by the window industry while the door industry was responsible for the remaining percentage.

According to estimates made by Italian importers, there are between 8000 and 9000 window plants in the country. As with the furniture industry, the window industry has a high level of fragmentation, with large industries accounting for only 5-10% of the market, RANDOM LENGTHS (1987). The window industry is the biggest end user of high quality softwood lumber in Italy. However, three factors have recently contributed to endanger this position:

1. competition from alternative materials,
2. entrance into the market of laminated window stock, and

3. renewed use of chestnut wood in window production.

Aluminum and plastic apparently have gained almost 20% of the window business, mainly because of a good marketing effort on behalf of aluminum producers, which has heavily promoted its use among consumers. The lack of waste in the manufacturing process, the ability to produce more precise size tolerances, and lower inventory costs are other reasons for the success of these materials.

Wood window manufacturers, realizing the threat from non-wood window manufacturers, have started to fight back on the grounds of the superior quality of wood windows over aluminum. A consortium of 12 firms has established a trademark called "Superlegno" which certifies that a member's production adheres to standards aimed at maintaining superior technological quality of the product. All testing is carried out by an independent third party to guarantee objectivity, RIBERA (1984).

The challenge of laminated window stock is probably more threatening to the all-wood window manufacturers in the long term than that of the alternative materials. In fact, this component, which has two clear faces, has the advantages of aluminum window stock plus all of wood's advantages. The major problem facing this product is its cost compared with softwood lumber.

The return of chestnut as a material for window manufacturing marks a return to an old tradition and for this reason can be viewed as a potential threat to softwood producers. This species was effectively eliminated at the end of World War II, when the raw material supply was severely reduced by the spread of a cortical cancer. The use of chestnut could become more popular in the future, even though it appears unlikely that the quantities available will be sufficient to fulfill industry demand.

At the present time producers are using imported softwood lumber and have concentrated essentially on three species: Douglas-fir, Swedish pine and, to a lesser extent, southern pine. Of the average 600,000m³ imported annually for this use, approximately 1/3 is composed of U.S. softwoods, mainly Douglas-fir. The remaining 2/3 originate in the Sweden and Finland.

The Italian preference for these species is based on the appearance of the material and its technological characteristics. Douglas-fir, among the three, is considered the best in terms of its overall characteristics. The most important characteristics required by manufacturers are:

1. machinability,
2. high dimensional stability,
3. straight grain,

4. high number of rings per inch, and
5. low percentage of sapwood.

Good machinability and high dimensional stability are highly valued by the manufacturers because of the sophisticated technology involved in the industrial process. Observance of tolerances on the order of 1/10 of a millimeter and assembly technologies with no adhesive use dictate the desirability of these characteristics.

As in the furniture industry, the joinery industry is going through a transition in which the carpenter is being displaced by small industry. In this case, however, the carpenter is becoming an assembler-erector of components supplied to him by the industry. Some of the major industries of the sector are planning to increase their production of knockdown windows in order to accelerate this shift, ARNOSTI (1986), LUCIANI (1986) and PEPI (1986). This process is convenient for the final purchaser of the window, since he can take advantage of the lower costs per unit guaranteed by an industrial output.

WOOD EXPORTS FROM U.S. TO ITALY

The Market

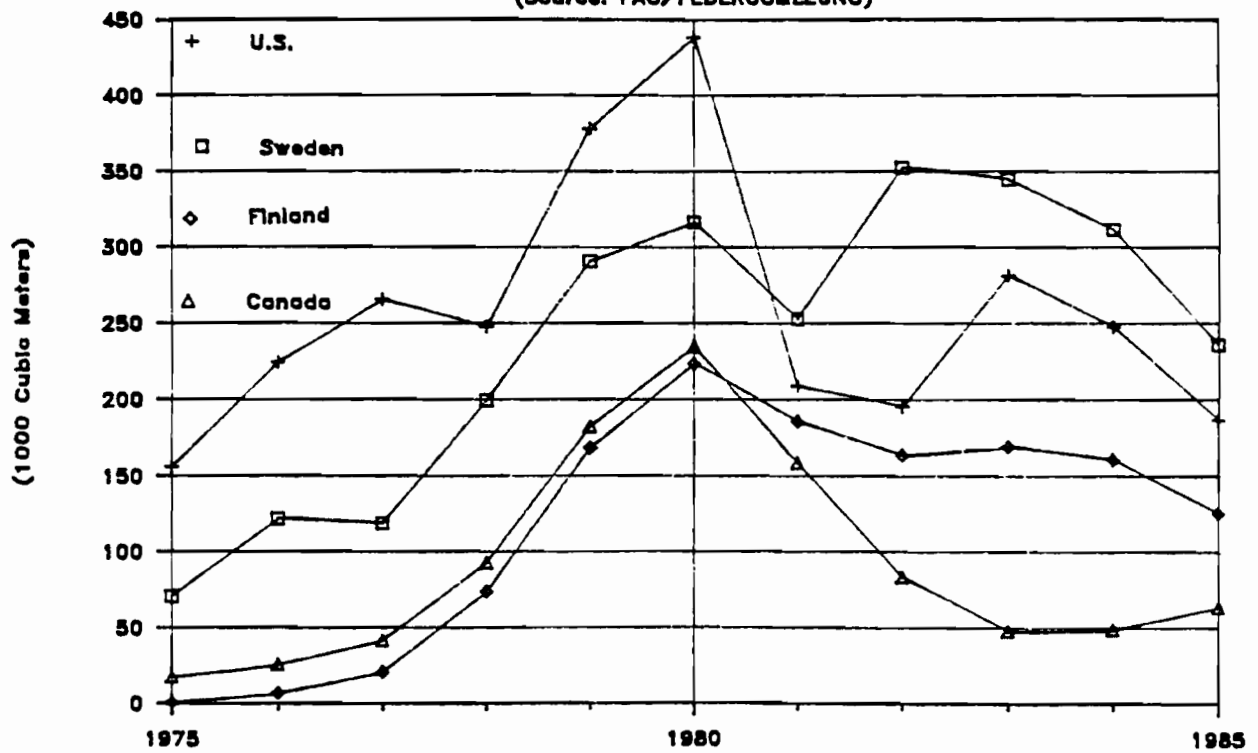
Two Italian markets appear to hold the highest potential for U.S. exporters of wood products:

1. high-quality softwood lumber for the joinery industry, and
2. hardwood lumber and veneer for the furniture industry.

The former is the single most important market for high quality softwood lumber, with a consumption of roughly 600,000 m³ (1986). Currently the U.S. holds approximately 30% of the share in this market (180,000 m³ of exported softwood lumber in 1986). Of this quantity, more than 80% is Douglas-fir from the Pacific Northwest region, with the remaining primarily southern pine. In recent years the slump in the Italian construction market has contributed to a general decrease in the demand for high quality softwood lumber. Pacific Northwest producers have suffered losses in exported volumes mainly due to the high value of the dollar, while the Scandinavian countries have limited their losses because of a more favorable position in the market, Fig. 13.

In the long run, however, potential of this market remains high for Pacific Northwest exporters for the following reasons:

Fig. 13 **SOFT. LUM. IMPORTS: SELECTED COUNTRIES**
 (Source: FAO/FEDERCOMLEGNO)



1. the Pacific Northwest exporters have an established reputation in this market,
2. Douglas-fir is a preferred species in the joinery industry,
3. building activity is expected to increase in Italy's southern regions,
4. window manufacturers continue to modify their product lines, particularly in the area of knock-down windows, with the net effect of increased production and higher consumption of wood as more windows are produced industrially, and
5. favorable exchange rates are enhancing U.S. exports.

While the U.S. is a recognized player in the softwood lumber market, its position is less established in the market for hardwood lumber and veneer. In the past few years, however, there has been a growing awareness of the potential represented by U.S. hardwood forest products. Among the reasons that have contributed to enhance the potential for hardwood lumber and veneer exports are:

1. the recent vacuum created by the Indonesian ban on exports of Ramin, White Meranti and Agathislumber,
2. the increasing need for reliable sources of high quality lumber and veneers,
3. an increasing interest in the use of new species for aesthetic purposes such as panel upgrading, and
4. the current exchange rate contributing to enhanced U.S. competitiveness.

Italy's lumber imports from Indonesia totaled 250,000 m³ in 1986. This volume is represented almost exclusively by Ramin lumber used extensively in the door industry and as framing in the furniture industry. Much of the slack created by the ban will be picked up by the African producers. However species exported from Africa are used more for veneers than for lumber. In addition the African countries' ability to mill the volumes required may not be adequate. This could translate into an opportunity for the importation of species such as Red Alder from the Pacific Northwest. Red Alder is similar to Ramin in color and might be used successfully as a substitute in the same uses. Marketing of other less well known species with aesthetic values similar to those already in use is also possible.

Strategies for U.S. Producers

The Italian manufacturing industry has undergone a substantial transformation, leading to a more competitive and flexible system. Efforts have been made to maintain an equilibrium between the craftsmanship of the artisan and the output of the industrial process. Among the factors contributing

to this evolution have been:

1. production technology,
2. quality control and,
3. good management, and
4. superior design

The fourth factor, superior design, is an Italian trademark which has given Italian furniture and, increasingly joinery products, a reputation for quality. The first three factors are firm specific advantages, while design is a country specific advantage.

The Italian marriage of design and production is unique among European countries competing with the industrial design of traditionally respected countries as Germany and Sweden. Italian design is very pragmatic; it searches for optimal solutions in which form and functionality are maximized. This quest is an ongoing effort which retains strong ties to the artisan tradition, CASTELLI, (1981).

The success of design in the Italian manufacturing environment is due to management's perception of the marketing advantages available to a product in which production is in partnership with design and marketing. This perception has translated into extensive investment in both research and technology and aggressive movement toward greater sophistication.

In a sophisticated and complex market environment, where design and aesthetics play such an important role, the quality of the raw material is paramount. A material is not chosen primarily for its structural performance, though this too is important, but for its appearance. Quality, associated with appearance as well as high levels of performance, is the common element dictating the demand for raw material in both hardwood and softwood market segments. It is from this perspective that the exporter must formulate a marketing strategy.

To take advantage of the possibilities offered in the Italian market, American firms must reassess current domestic business. Existing differences between needs of the customers and the expectations of the suppliers must be resolved in order to fully exploit the market's potential. For example, GUS (1985) suggests that price stability, commitment to markets, high quality and customized products are the principal goals of overseas customers. U.S. producers who generally are locked into a commodity approach (with an emphasis on obtaining the highest spot market price and giving preference to the domestic market) do not place enough emphasis on sorting for quality or to customizing production.

The current U.S. approach to the Italian wood products market can be classified as "a product orientation" strategy. However, a "market orientation" strategy may be required. The two orientations differ essentially in the way decisions, concerning the customer, are made. A product orientation is characterized by:

1. decisions based on "product out" (the seller acquires or manufactures a product and attempts to sell it to any buyer),
2. decisions are cost oriented (the seller stresses the maximization of profit by reducing costs), and
3. business practices allow for little flexibility in response to changes in the customers' needs.

A number of implications stem from adopting a "product orientation" approach. There is a reluctance on the part of the exporters to identify new and more profitable opportunities in established markets. Maintenance of status quo is desired once a certain level of business activity has been attained. Constructive communication between producer and end user decreases. The net effect is increased vulnerability to swings in the market and decreased customer loyalty. This can lead in the long run, to an erosion of market share.

It is generally recognized, however, that a successfully implemented market orientation can yield, in the long run, higher levels of profit to the firms. The main aspects of such an orientation and its implications are:

1. decisions are "market back" (the seller begins with an understanding of the needs of the buyer, he learns and adopts changes in product form and price optimally satisfy the customer),
2. price and product decisions are demand oriented (the seller maximizes profit by maximizing product line contribution to profit),
3. an increased awareness of new niches in current markets and of opportunities in new markets is maintained, and
4. an increase in the ability to effectively respond to competitors strategies in the market is developed.

The prerequisite for successfully implementing a market

orientation is that high investments in time, human resources and capital are necessary. This, of course, implies a high level of commitment to the chosen market. A successful implementation of this strategy results in greater customer satisfaction which can generate an increase in loyalty and less vulnerability to a customer's switch from one supplier to another. The result can be an effective barrier to competitor entry into a specific market. Benefits are achieved by tailoring resources to specific buyer and seller needs, BLOIS (1980).

The barriers preventing adoption of a market approach appear to be two fold. First, there is commonly a misunderstanding of the marketing function. Too often marketing is considered to be a different form of selling. It is, however, an integration of intelligence gathering, production modification, distribution handling and promotion, as well as selling. Another barrier is simply the difficulty in adopting a long-term perspective.

What are the necessary steps be undertaken in order to implement a "market orientation" relative to the Italian wood products market? A number of issues should be considered in order to effectively evaluate the risks involved and the potential returns that derive from adopting such an approach, FORD (1980):

1. What is the likely potential of establishing such an approach to a market?
2. What resources are required in order to fulfill this potential?
3. Where do the threats to this kind of orientation come from?
4. Where and how does this approach to a specific market fit within the context of the company's overall operations and resource allocation in that market?
5. Are current efforts devoted to the market appropriate to the overall strategy?
6. Is the company over-or under-committed to the customer?
7. Are the company's methods of dealing with the customer appropriate both to its needs and its strategy, or are dealings based on habit or history?

Evaluation of the above issues relative to the Italian market for high quality softwood lumber requires gathering, and

fully understanding, information about both the material's end use and the Italian manufacturing industry.

Consider for example the window industry--the principal user of high-quality softwood lumber. In the Italian window market the opportunity for increasing sales of customized products is conditioned by two factors. First, Italian manufacturers have invested extensively in remanufacturing equipment in order to process random width and length clears into window components. Second, there are many window sizes in Italy because most windows are custom manufactured in carpenter workshops. The key to expanding the market in Italy for customzied wood products (namely components for the window industry) will be the analysis of costs incurred by the end user. If buyers decide that: (1) the cost of random widths and lengths of unseasoned clears, (2) the interest cost and degrade resulting from air drying, and (3) the waste in on-site remanufacturing exceed the cost of buying customized sizes from U.S. producers, then sales of the latter will increase if marketed sucessfully. Currently, standard American sizes--2x3, 2x6, or multiples--are shipped green to various Italian importers. Apparently, these sizes work well for the traditional Mediterranean style window so popular in Italy. Although R-list grading rules are used by the importers as the basis for specifications, in fact the window manufacturers prefer other attributes than those found in the grading rules. Specifically, fine grained old growth wood is desired with no blue stain and no splits or cracks. Knot size, the basis of U. S. grade rules, is not the central concern; yield of clear wood during remanufacturing is. Even though the final product may be painted, any blemish that detracts from the appearance is a defect.

Even if the needs of Italian wood manufacturers are fully understood, however, implementation of businesss plans to these needs may not be easy. The distribution system depicted in Fig. 11 is composed of numerous firms who have vested interests that may be opposed to market driven actions that might be contemplated by a U.S. producer. On the other hand, the presence of laminated "clear" lumber from Scandanavia and the willingness of these competitors to be more flexible relative to financial transactions indicates that the high quality wood market is not static.

Although sales of customized U.S. products may be the ultimate goal for U.S. producers, change from the current practice of random width and length clears will be slow and progressive. To achieve such progress, U.S. producers must show commitment to the market. By paying attention to details such as packaging, branding to establish name recognition, drying and anti-staining treatments, U.S. producers should be able to maintain a steady presence in the Italian market.

Increased promotion and advertising activities are also called for in order to create Italian awareness of U. S. suppliers commitment to the market. By establishing a reputation as a reliable and concerned source of supply, the producing firm should be in a position to readily take advantage of market place changes. In fact the producer might be able to promote favorable change by virtue of its close cooperation with the end-users.

It is interesting to note that in 1986, a particular Italian window manufacturer, who uses Douglas-fir lumber exclusively, advertised his product on the back of national soccer lottery tickets. Approximately 100,000 people per day were exposed to the message: "Finestra in Douglas" (Windows in Douglas-fir). Creative joint promotional ventures, similar to this example, are wanting.

SUMMARY AND RECOMMENDATIONS

The main elements, characterizing the Italian forest products industry, are the following:

1. Productivity of the Italian forest resource is insufficient to satisfy the country's demand for wood products in the short, mid and perhaps long term even though steps have been taken to improve tree production in the long run.
2. Economic conditions in Italy have improved considerably over the past several decades. On the domestic front there are encouraging signs of an increase in building activities, especially in the southern regions. The decline in oil prices, along with the improved exchange rate against the dollar, should favor imports from the U.S.
3. Italy is the largest European market for U.S. softwood lumber, since high quality Douglas-fir is the preferred species in the joinery industry.
4. In light of the recent Indonesian export ban on Ramin, Agathis and White Meranti lumber, a vacuum in the Italian supply of hardwood lumber has occurred and there should be opportunities for suppliers who are able to guarantee the quality of an alternative raw material.
5. Two markets appear to hold the most potential for U.S. exports of wood products: softwood lumber and hardwood lumber and veneer.

To fully exploit the potential of the Italian wood market, it is the authors recommendation that U.S. producers adopt a "market orientation" strategy. Although high investments and long term commitment are required to implement such an approach, the advantages in terms of new opportunities, increased customer loyalty, maintenance or growth of market share and in profit level will be greater than realized by maintaining the current "product orientation" that characterizes U.S. export activity. Firms must carefully evaluate the relative importance of the Italian market to their overall business strategies and determine whether the returns expected from the implementation of this strategy are justified. The Italian presence in the Mediterranean region is strong. If demand for Italian finished wood products grows, the raw material suppliers should experience a corresponding growth.

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APPENDIX

● Italian wood use survey contacts

An attempt was made to interview a representative cross section of Italian individuals associated with the wood products industry. Due to time limitations and scheduling conflicts, many of the individuals who were suggested to us for interviewing could not be seen. Below is a partial list of some of the individuals and companies interviewed:

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