
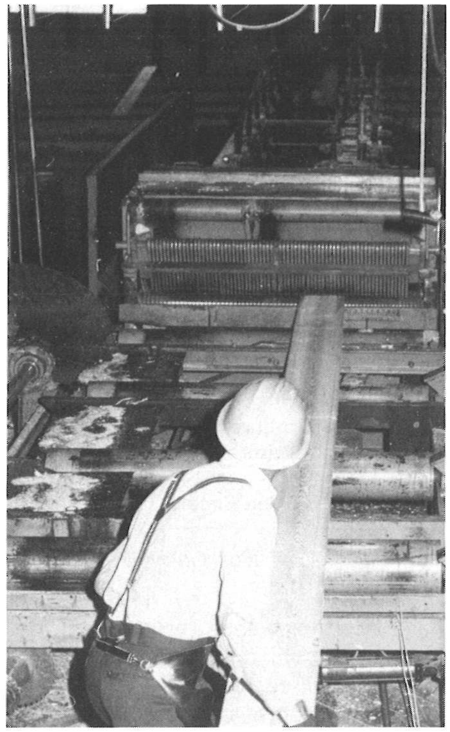
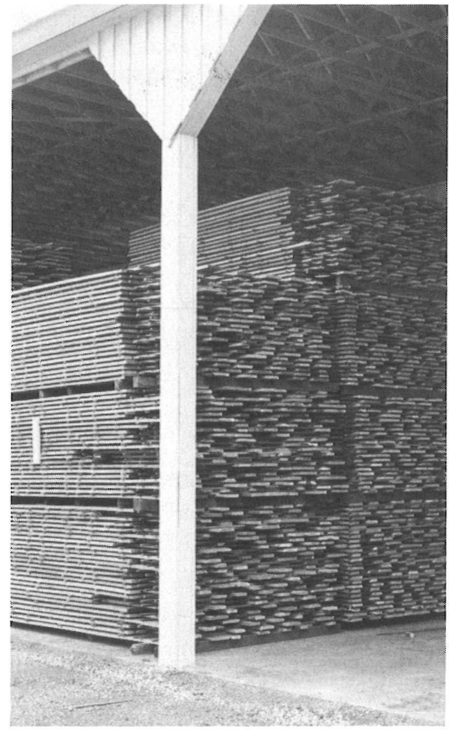

The State of Hardwood Lumber Markets

by **Gilbert P. Dempsey** *and* **William G. Luppold***

Although the 1990-91 recession has temporarily dampened the demand for hardwood lumber, the decade of the 1980s was a period of strong growth in the hardwood market. After experiencing a flat market in 1980 and a decline in 1982, the demand for hardwood lumber by both the domestic industry and the export market increased strongly—from 8 billion board feet in 1982 to 11.2 billion in 1989. Only in 1990 did this growth moderate and then fall slightly to 11.1 billion board feet. Indications are that the slower market for hardwood lumber continued through the third quarter of 1991.

Lumber Use, 1977 to 1987

The major domestic uses of hardwood lumber between 1977 and 1987 were for pallets and containers, hardwood dimension, wood household furniture, and millwork. Combined, these industries consumed almost 7.6 billion board feet of hardwood lumber products in 1987 (Table 1). Lumber use was up 42 percent from 1977. The balance of domestically used lumber, or almost 2.4 billion board feet, went into the production of railroad ties and timbers, hardwood flooring, wood kitchen cabinets, upholstered household furniture and commercial furniture. This last group includes wood office furniture, wood partitions & fixtures, and TV & radio cabinetry. Lumber use by these industries was up by more than ten percent.

Dramatic changes took place in both the domestic and export markets' use of hardwood lumber between 1977 and 1987. Most were positive, but some were undesirable. Overall, total lumber use increased almost three billion board feet, or 38 percent, during the ten-year period. Most industrial and shipping segments of the domestic market grew strongly and accounted for 94 percent of the total consumption. The balance was exported.

On the downside, the very important rail tie and timber industry seriously reduced its use of hardwood lumber during this period, wood use in the wood household furniture slackened, and the use of hardwood lumber in the manufacture of uphol-

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Table 1. Hardwood Lumber Use In Selected Industries and The Export Market, 1977-1987

Industry/Market	1977	1987	% Change 1977-1987
	—in million board feet—		
Wooden pallets & containers	2,627	4,425	68
Wood household furniture	1,250	1,058	-15
Hardwood dimension	1,080	1,359	26
Railroad ties & timbers	1,000	535	-46
Hardwood flooring	304	476	57
Millwork	372	713	92
Wood kitchen cabinets	358	612	71
Upholstered household furniture	254	309	22
Export market	240	688	287
Commercial furniture	221	427	93
SUM: Industrial Use & Change	7,706	10,602	+38

stered household furniture did not appear to keep pace with the industry's strong growth in value of shipments between 1977 and 1987.

Table 2. Estimated Hardwood Lumber Use In Selected Industries & The Export Market, 1987-1990, and Annual Rate, 1991.

Industry/Market	1987	1988	1989	1990	1991
	—in million board feet—				Annual rate*
Wooden pallets & containers	4,425	4,649	4,724	4,749	4,624
Hardwood dimension	1,359	1,371	1,369	1,355	1,294
Wood household furniture	1,058	1,062	1,034	971	912
Millwork	713	725	710	681	627
Railroad ties & timbers	535	710	652	629	636
Wood kitchen cabinets	612	625	631	626	573
Export market	688	688	748	801	850
Hardwood flooring	476	532	559	554	529
Commercial furniture	427	444	440	424	399
Upholstered furniture	309	315	312	303	286
SUM: Industrial Use/Export	10,602	11,121	11,179	11,093	10,730

** An annual rate of hardwood lumber use extrapolated from data for the first nine months of 1991.*

Lumber Use Since 1987

Table 2 presents estimates of hardwood lumber use by industrial and export markets for the production years 1987 through 1990 and an annual rate for 1991. Lumber use increased by more than five percent between 1987 and 1989, or from 10.6 to almost 11.2 billion board feet. In 1990, however, use is estimated to have eased to 11.1 billion, then to 10.7 billion board feet in 1991.

Lumber use within individual markets varied considerably during the 1977 through 1990 production years:

Export Market

The export market almost tripled its consumption of hardwood lumber between 1977 and 1987 and continued a positive growth rate through 1990, reaching a volume of 801 million board feet. The export market has grown rapidly since 1983-84 in both volume and value per board foot. The 1991 market got off to a strong start and it is expected that once the statistics are in, this trend will have continued through the balance of the year. Most of this volume was comprised of higher quality materials.

As an outlet for hardwood lumber products, the export market is expected to continue to grow as the economies of major overseas markets expand and if the disposable income in individual markets is not adversely affected by unusual national or regional events. This is especially true for most of the European markets. However, lumber demand could slacken in the Asian market, especially by those firms producing finished furniture and other ready-to-assemble goods for the American market.

Commercial Furniture

Lumber use by the commercial furniture industries (wood office furniture, partitions & fixtures, and TV & radio cabinets) expanded strongly between 1977 and 1987, almost doubling their volume used. Growth in lumber use by the commercial furniture industry continued through 1989, then slacked off in 1990 to nearly the 1987 level. The wood office component of this industry is the major user of hardwood lumber, with wood partitions & fixtures second. Relatively small quantities of hardwood lumber are used in the wooden TV & radio cabinet industry.

On a brighter note, neither sales nor lumber use in the commercial furniture industry has been as seriously affected by the downturn in the economy as might have been expected. The constant (deflated) dollar value of shipments of commercial furniture rose during 1988 and 1989, and then held very steady during 1990. Indications are that this steadiness continued through the first quarter of 1991. (However, the TV & radio cabinet market for hardwood lumber showed a weakening during 1989, and declined further during 1990.) Overall, the commercial furniture market for hardwood lumber has held fairly steady in the face of the recession and in the decline of building and remodeling in the commercial office sector.

Millwork

The millwork industry is one of the top four domestic consumers of hardwood lumber. Lumber use by this industry expanded strongly between 1977 and 1987, almost doubling its volume used. New housing and commercial building markets were the prime consumers of millwork products during this period.

Lumber use for millwork is estimated to have grown during 1988 but dropped off to pre-1987 levels during 1989. Our estimates indicate that the 1990 levels of lumber use dropped further and remained below the 1987 levels. The market shows signs of a slight additional decline during the first three quarters of 1991. Still, this pattern could quickly stabilize as the U.S. economy begins to recover, and then reverse to its previous status as a growth industry as the economy expands and as commercial construction, the high-end housing market, and remodeling picks up.

Wooden Pallets & Containers

The pallet industry is the largest user of hardwood lumber on a volume basis. Its growth as a lumber market has been relatively continuous since records were first kept on the industry. Expansion in volume used has occurred in spite of a slow, but steady, reduction in the amount of lumber used per pallet made and an increase in the use of softwoods in the construction of pallets, skids, and containers.

Lumber use by the wooden pallet industry almost doubled between 1977 and 1987, increased another five percent in 1988 and two percent in 1989, then remained strong during 1990. However, a weakening of lumber use by the market was evident during the first nine months of 1991.

Wooden pallet and container production is closely tied to the manufacturing, storage, and movement of industrial and consumer goods, which are tied primarily to the domestic economy and secondarily to the export market. Within the industry, an increase in pallet repair activity could have a dampening effect on the volume of new pallets produced and, thus, the volume of hardwood lumber consumed. The short-term impact of such an increase on lumber use would not be very significant. However, if there is sustained growth in the use of repaired pallets and pallet leasing becomes more prevalent, the impact on hardwood lumber use could become quite significant.

Hardwood Flooring

A renewed interest in the use of wood as a flooring material has occurred, as is evidenced by its 57-percent growth between 1977 and 1987. Growth in this market continued through 1989 and held steady during 1990. Demand, however, appears to have been slightly off during most of 1991.

The demand for hardwood flooring is closely tied to the commercial and residential construction markets and to remodeling. Therefore, a significant change from today's demand for flooring is not expected until the general economy improves and confidence returns to these basic markets.

Kitchen Cabinets

Between 1977 and 1987, lumber use in the kitchen cabinet industry grew with vigor. This growth continued through 1989 and remained stable during 1990. Predictably, a significant decrease occurred in the volumes of lumber used for kitchen cabinetry during 1991.

Production activity in the kitchen cabinet industry is also closely tied to the new housing market and home remodeling. Consequently, as these markets rebound from the current recession, so should the cabinet industry's use of hardwood lumber—if not affected by an increased use of composites in an effort to reduce material and construction costs.

Dimension & Upholstered Furniture

Hardwood lumber use in the dimension and upholstered furniture markets grew steadily between 1977 and 1987, with an increase of 26 and 22 percent, respectively, during the period. According to the best information available, the volume of materials used essentially remained stable at those levels during the 1988 through 1990 production years. Indications are, though, that the volume of lumber used in both of these industries dropped slightly during the first part of 1991, but has since held very steady. As the general economy picks up and these markets return to normal production, one can expect an increase of lumber use to normal levels for the short-run in both the dimension and upholstered furniture markets.

Wood Household Furniture

The wood household furniture industry is the third largest domestic market for hardwood lumber. While showing strong real-growth in sales between 1977 and 1987, it decreased its use of hardwood lumber by 15 percent to slightly over one billion board feet. Our estimates indicate, however, that lumber use by this industry remained fairly stable during 1988, but declined going into 1991.

In the near-term, we expect no significant growth in hardwood lumber use by this industry—until the economy pulls out of the current recession and the demand for wood household furniture increases. This would require a revival in the new housing and replacement furniture markets. However, if manufacturing costs must be further reduced to compete in a tighter marketplace, it may stimulate an increased use of composites. Without growth in the market, such an occurrence would be detrimental to hardwood lumber use in the wood household furniture industry.

Railroad Ties & Timbers

A severe reduction in lumber use by the railroad tie and timber industry has taken place since 1977. Usage dropped from one billion board feet in 1977 to about 535 million board feet in 1987, a decline of 46 percent. This decline is thought to have been stimulated primarily by corporate mergers within the railroad industry and the resulting consolidation of rail lines and track abandonment. Track reduction has occurred both on main line tracks and on the smaller, less profitable passenger and cargo spur tracks all across the country, and this has cut into the demand for ties.

Since 1987, and in contrast with other domestic markets, the railroad industry has increased its usage of hardwood lumber in the form of ties and timbers. This is true of both the Class I and short line railroads. In recent years the railroads have tended to stick with their tie replacement programs rather than delay them during economic downturns. Such a practice helps promote a degree of production stability in the tie producing and treating industries.

Still, as the economy rebounds, we expect a further strengthening of new tie and timber use for maintenance and track upgrade. On an even brighter note, if new markets open due to current trade negotiations, there is a possibility of new tracks being laid and older lines resurrected to service these areas.

In Sum

The export market and most domestic markets for hardwood lumber products grew strongly between 1977 and 1989, and, overall, appeared to hold fairly steady during much of 1990. However, 1991 appears to have been a slack market for hardwood lumber sold domestically, while the export market has grown in both volume and value. The prospect for a strengthening domestic market relies primarily upon a general economic recovery in the United States and a continued steadiness in the export market.

Additional information about these markets may be obtained from the U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station by contacting:

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