

## The PNW Hardwood Lumber Industry Assesses Its Competitiveness

Hardwood lumber production in the Pacific Northwest (PNW) increased over 200% between 1983 and 1997, with exports of red alder, the region's most prevalent hardwood species, surpassing \$160 million. The increase in sales is of interest because commercial hardwood species in the PNW have traditionally been considered a low-valued byproduct of softwood timber stands, with less than 1% of private and industrial timberlands in the PNW being managed for hardwood production. While PNW hardwoods are gaining market acceptance, little research has been done to identify the factors that have contributed to the industry's success. Researchers at the University of Washington's Center for International Trade in Forest Products (CINTRAFOR), interviewed managers of PNW hardwood firms to gather information ranging from factors affecting firm competitiveness to challenges and threats specific to the industry.

### Objectives

Research objectives were to: explore the competitive conditions of the hardwood industry; identify the range of products manufactured from hardwoods; analyze current hardwood markets (domestic and international); identify factors that are perceived to restrict the growth of the hardwood industry in the PNW; and assess future market and product opportunities for PNW hardwood products. For study purposes, the PNW consisted of western Washington, western Oregon, and northern California. Of the 13 hardwood lumber producers that existed in the PNW at the time of the study, 10 completed and returned the survey, a 76.9% response rate.

### Background

The manufacturers surveyed produced approximately 450 MMBF of lumber, with exports totaling approximately 126 MMBF (28% of total production). Products included kiln-dried and green lumber, pallets, veneer, plywood, chips, and agricultural boxes and crates. Hardwood chips, the primary byproduct, are sold to pulp and paper manufacturers. About half of the slabs and sawdust generated are sold as chips and mulch, respectively, and about one-third of the planer shavings and bark are sold for livestock bedding and landscaping bark, respectively. Remaining waste is used as hog fuel. Both large and small lumber manufacturers sell a substantial percent of their production directly to the end-user, but large manufacturers tend to rely on wholesalers while small manufacturers favor brokers over wholesalers.

### Results

Challenges confronting manufacturers in the hardwood industry were grouped into three categories: domestic regulatory factors, domestic resource factors, and international regulatory factors. Survey respondents were asked to rate the impact of each factor on the competi-

tiveness of their firm using a seven point Likert scale ranging from 1 (Strong Negative Impact) to 7 (Strong Positive Impact).

**Domestic Regulatory Factors:** Respondents indicated that all three domestic regulatory factors had a negative impact on their firm's competitiveness. The mean score for each factor was: state taxes (2.6), federal regulations (2.8), and state forest practice regulations (2.9).

**Domestic Resource Factors:** Increasing raw material price (2.8) and price volatility (3.1) were perceived to have the greatest negative impact on competitiveness. Quality of labor (4.1) and resource quality (4.3) were each generally perceived to have relatively little impact on competitiveness while resource availability (4.6) had a slightly positive impact on competitiveness.

**International Regulatory Factors:** Survey results suggest that environmental certification of wood products (3.4) and tariff barriers (3.4) were perceived to have a more negative impact on hardwood manufacturers' competitiveness than non-tariff barriers (3.6) and regional trade agreements (3.7), although the difference in score was small. Further analysis of the data suggests that firms exporting primarily to Europe perceive environmental certification has a more adverse effect on competitiveness than do firms exporting primarily to Asia and North America.

Respondents were asked to evaluate the importance of different marketing variables on the competitiveness of their firms using a seven point Likert-like scale ranging from 1 (Not Important) to 7 (Very Important) (Figure 1). The importance ratings for the individual marketing variables clearly show that company reputation is perceived to be extremely important in the industry. Communicating regularly with customers, maintaining high quality control standards, and timely delivery of products also received relatively high mean scores. Efficient

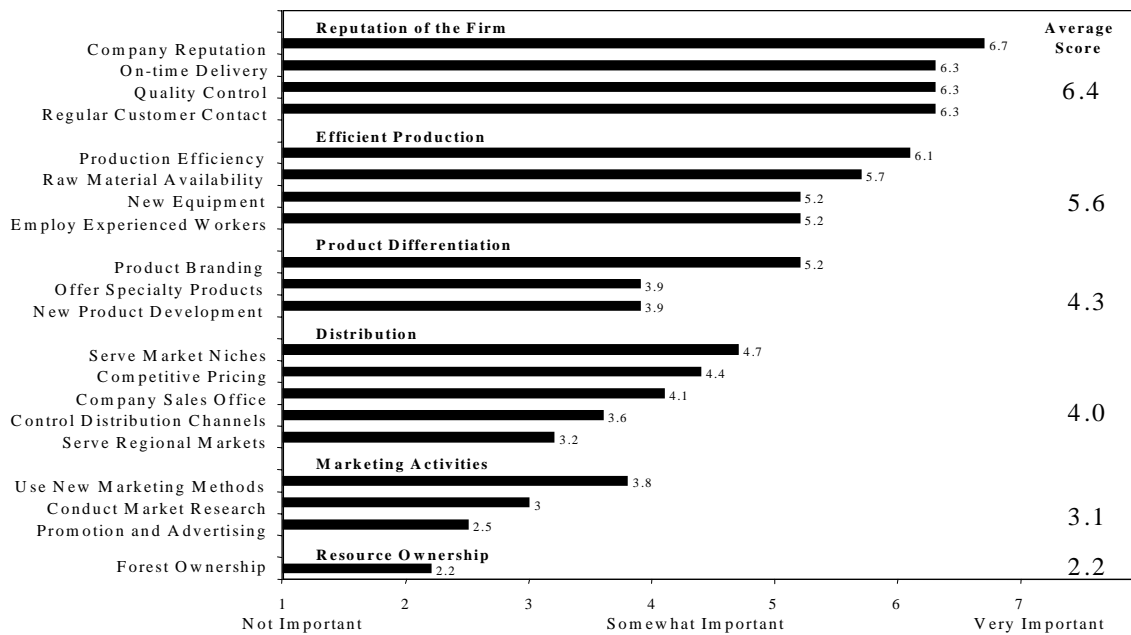


Figure 1. Perceived importance of functional groupings of marketing variables.

manufacturing and raw material procurement were also perceived to have an important impact on competitiveness.

Qualitative examination of the data suggested that the marketing variables could be combined into six groups based on the functionality of each variable with respect to the marketing mix. Average importance ratings for each of the six groups were: Group I: *Reputation of the Firm* (6.4), Group II: *Efficient Production* (5.6), Group III: *Product Differentiation* (4.3), Group IV: *Distribution* (4.0), Group V: *Marketing Activities* (3.1), and Group VI: *Resource Ownership* (2.2). In general, survey respondents perceived that Group I variables have a very important impact on firm competitiveness. Group II variables, while still considered to be important, were perceived to be less so than those of Group I. Groups III and IV were perceived to be somewhat important to firm competitiveness, while Groups V and VI were not considered to have an important impact on competitiveness.

While respondents reported that product and service attributes affected firm competitiveness, virtually all of the marketing variables associated with innovation received relatively low importance ratings: developing new products (3.9), manufacturing specialty products (3.9), utilizing new marketing techniques (3.8), conducting market research (3.0), and performing promotional and

advertising activities (2.5). Only a single marketing variable associated with innovation, product branding (5.2), was viewed as being relatively important.

### Summary

The hardwood industry has experienced substantial growth over the past 10 years despite harvest restrictions in federal and state forests. This growth has occurred in the domestic market as well as in foreign markets, which account for almost 28% of red alder lumber production. No regulatory factors evaluated in the survey were viewed positively, although few were perceived to have a strongly negative impact. While timber harvest restrictions were perceived to have a moderately negative impact on the industry, resource availability has not yet had an adverse impact on the industry. Respondents indicated that the marketing variables influencing a firm's reputation and production efficiency were most important. In contrast, virtually all of the marketing variables associated with acquiring market information and promoting innovation were perceived to be much less important, suggesting that the industry places a low value on product innovation and differentiation.

### Contact:

CINTRAFOR, College of Forest Resources  
University of Washington, Seattle, WA 98195-2100  
(206) 543-8684; <http://www.cintrafor.org>