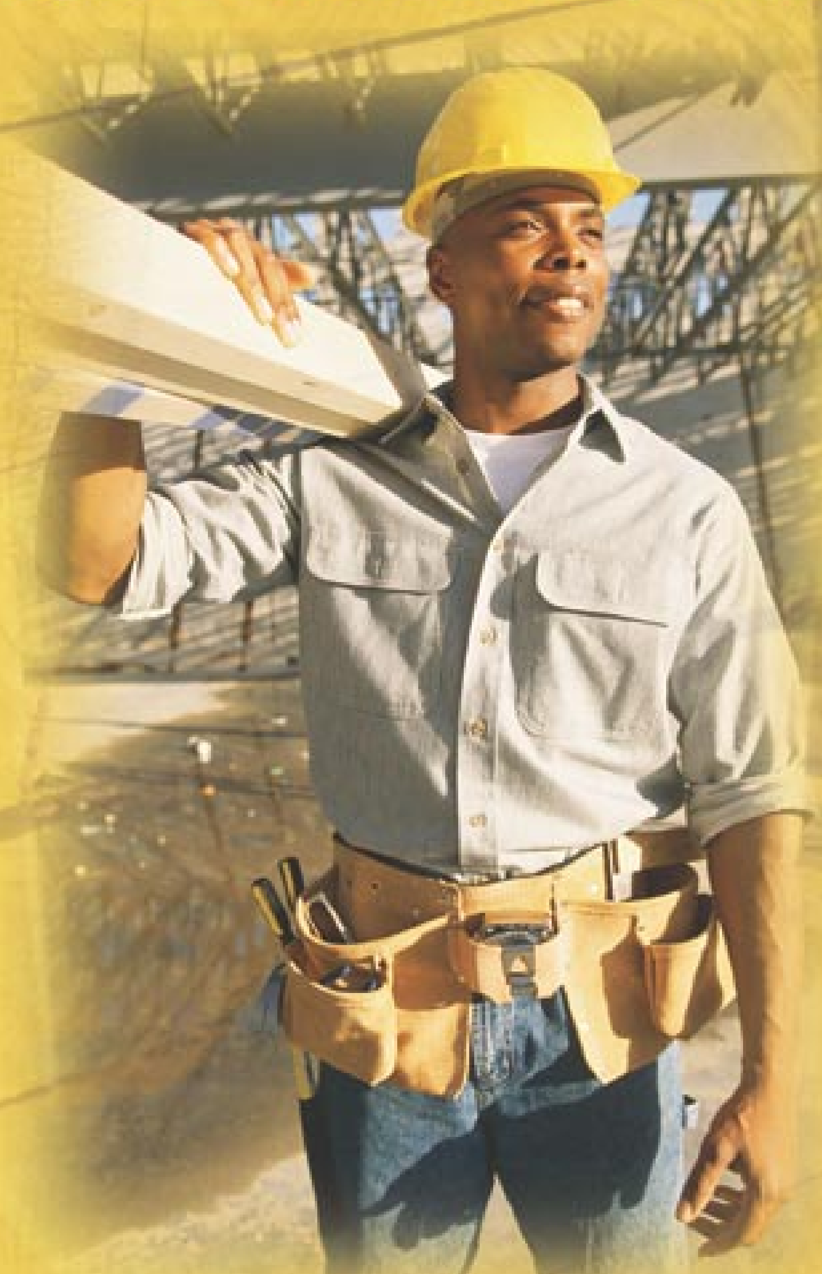
Characterizing Mills and Distribution Systems: Strategies for Small Lumber Mills

Research Bulletin



Forest and Wildlife Research Center

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by

R.D. Seale
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Jason Leng

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Acknowledgements

This research was funded by the U.S. Department of Agriculture, Cooperative State Resarch, Education and Extension Service, Wood Utilization Research Program.

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Citation

Seale, R.D., A.W. Garrard, J. Leng. 2004. Characterizing mills and distribution systems: Strategies for small lumber mills. Forest and Wildlife Research Center, Bulletin FP299, Mississippi State University. 33 pp.

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Abstract

This study was conducted to determine current distribution channels utilized by producers of lumber in the United States and to determine what changes have occurred in the distribution channels that might create opportunities for smaller producers. Separate surveys were conducted and data were gathered from lumber producers and lumber retailers. Price, although an important factor, was not the predominate factor of retailers for selecting raw material sources. Key factors associated with product attributes, service, delivery, and environmental concerns were identified and contrasted from the producer and retailer perspective. Changes in perception of importance of each product attribute was followed throughout the distribution system and opportunities for small producers were identified that might improve their overall position in the marketplace. In order to be competitive, small lumber mills must maintain consistent quality of product and all associated variables that make up “product quality,” take advantage of reputation and long term relationships built over time with customers, maintain quick responsiveness to customer needs and market conditions, retain high quality sales staff and stress individual customer service. It was also found that the pricing volume advantages enjoyed by larger sawmills may not be as important as previously believed and can be overcome by smaller mills through aggressive sales, quick response and individualized customer service.

Introduction and Background

The home improvement and do-it-yourself retail business has experienced significant and steady growth in the past decade throughout the United States (U.S.). Sales estimates for the industry vary depending upon the type of retail outlets included in the estimates. The U.S. Department of Commerce reported annual retail sales of $297 billion in 2001 for building materials, garden equipment and supplies dealers. However, this sales estimate includes paint stores, garden centers, power equipment stores, nurseries, plumbing and electrical merchants. When sales from hardware stores are removed from the estimate, it falls to $281 billion for 2001.[1] The National Retail Hardware Association (NRHA) limits its estimates to reporting sales by hardware stores, home centers and retail lumber yards. According to the National Retail Hardware Association, total retail sales by home improvement retailers have grown from $92.6 billion in 1991 to $186.9 billion in 2001.[2] This increase represents a compound annual growth rate of 6.7 percent from 1996–2001.

The main customers for the building materials industry are small scale building contractors and Do-It-Yourself (D-I-Y) consumers. The market for building materials is highly cyclical and somewhat seasonal in nature because of its dependence on home building, new-home sales and remodeling, and small scale business construction. Factors affecting this market include weather conditions, natural disasters, interest rates, new home starts, house sales, housing affordability, consumer confidence, and general health of the economy.[3] Sales forecasts for the D-I-Y industry continue to be strong despite recent downturns in the U.S. economy. Recent positive projections for this industry include a strong housing market for new-home sales and increases in dollars spent on home remodeling, and an increase in the demand for lumber for new home construction, repair and remodeling.[4] The NRHA estimates sales to be up more than 6 percent next year and more than 5 percent in subsequent years.[5] The compound annual growth rate for years 2001–2006 for the D-I-Y industry is expected to average 5.7 percent in spite of the recent downturns in the U.S. economy.[6] The Home Improvement Research Institute (HIRI) forecasted the D-I-Y industry sales to increase 4 percent in 2003 and to increase to 5.5 percent from 2002 through 2006.[7] First Research Industry Profiles expects building material store sales to increase 7 percent and home center sales to increase 6 percent.[8] The expectation of continued strong growth in this industry is a reflection of the recent slow downs in the economy and emotional turmoil following September 11 as more people replace travel with staying home and investing money into improving their homes as opposed to investing in volatile financial markets.

Another characteristic of the home improvement industry is that it is highly fragmented consisting of two huge mass merchandisers—Home Depot and Lowes, several medium sized competitors with sales between $500 million and $5 billion, and hundreds of smaller independently owned companies.[9] The top 25 hardware, home center and lumberyard chains make up 4400 stores out of the industry's 50,000 total number of stores. These top 25 chains accounted for 51 percent of industry sales in 2001.[10]

As large mass merchandisers continue to gain market share nationally, there is concern that the distribution system for traditional lumber and wood products will be impacted negatively because smaller producers may not be able to compete for order quantities, product mix, and fixed priced structures that the large chains are able to negotiate. Building materials are sold mainly through retail outlets or home centers, hardware stores and lumberyards and also through wholesale supply outlets. In 2001, Home Centers accounted for $112.7 billion in sales, lumberyards accounted for $50.6 billion and hardware stores accounted for $23.6 billion in sales.[11] Chain retailers often seek a limited number of vendors that can supply the largest number of products at competitive prices. Thus, the traditional small companies with one or two

[1]Annual Benchmark Report for Retail Trade and Food Services: January 1992 through March 2002, U.S. Dept. of Commerce, Economics and Statistics Administration, U.S. Census Bureau, Issued May 2002.
[2]Retail D-I-Y Market Profile, 2003 Market Measure: The Industry's Annual Report. Do-It-Yourself Retailing, November 2002, 30.
[3]Home Improvement Retail-Trends and opportunities. Ashish Jandial, Consultant. DCG—Retail & Distribution.
[4]Industry Overview, First Research Industry Profiles: Building Material Supply, 1. www.1stresearch.com/Customers/reports/buildingmatsupply.asp.
[5]Dan M. Tratensek, Market Outlook, 2003 Market Measure: The Industry's Annual Report. Do-It-Yourself Retailing, November 2002, 28.
[6]Retail D-I-Y Market Profile, 30.
[7]Retail D-I-Y Market Profile, 30.
[8]Industry Overview, First Research Industry Profiles: Building Material Supply, 1. www.1stresearch.com/Customers/reports/buildingmatsupply.asp.
[9]Industry Overview, First Research Industry Profiles: Building Material Supply, 2. www.1stresearch.com/Customers/reports/buildingmatsupply.asp.
[10]Retail D-I-Y Market Profile, 33.
[11]Retail D-I-Y Market Profile, 32.

mills are placed at a competitive disadvantage due to limited product mix, a lack of electronic data sharing resources, employee training, capital requirements necessary to enter into long-term warehouse agreements, and a lack of expertise in applying barcode technology. As large chains narrow their vendor list, there will be a shift in supplying chain store market areas with products from large corporations, and smaller mills may lose markets. This trend will cause the smaller mills to search for new marketing strategies in order to compete competitively in the distribution network.

This study was undertaken to examine the current distribution channels utilized by producers of building products in the Southeast and the changes that have occurred in these channels over the past five years as well as the changes expected in the coming five years. A survey of the top 500 home improvement centers in the U.S. was undertaken to determine the desirable attributes that the retailer looks for in choosing vendors and what attributes are most important when marketing products to the consumer. This study will allow the matching of desirable product, service, delivery and relationship attributes of vendors and retailers to improve flow in the distribution channels. Alternative marketing mechanisms and strategies can be determined that will allow smaller mills to compete in a changing retail distribution system.

Study Objectives

This study was national in scope and consisted of surveys of two different groups—lumber producers or sawmills and home improvement retailers. With two surveys, the study was able to match desirable attributes of lumber producers to the most pressing needs of lumber retailers and to determine the best strategies for smaller lumber mills to stay competitive in today's marketplace.

Specific objectives of this study include:

1. Survey the current lumber producers in the United States to characterize products and primary marketing channels employed today and five years ago.

2. Survey chain retailers of lumber in the United States, to determine the specific characteristics they look for in vendors, e.g., volumes, numbers of products, delivery, electronic data capabilities, and cost competitiveness.

3. Compare the results of the surveys of Objective 1 and Objective 2 to develop strategies for smaller lumber producers to use in developing marketing objectives and plans.

Research Methodology

Sample design

The first step in the study was to develop or obtain the population list for both survey groups. A database of lumber producers or sawmills was obtained from the 1998 Directory of the Wood Products Industry[12] and was sorted by U.S. Standard Industrial Classification System (SIC) code 2421. The list consisted of 638 firms from across the United States. The mailing list for the Home Improvement Survey was obtained from the National Home Center News web site in January, 2001.[13] The list consisted of the top 500 home center retailers by sales and was national in scope.

Survey design

Both survey instruments were designed to be very clear, concise, and easy to complete. The Lumber Market Survey (LMS) or the survey of Home Improvement Centers, consisted of a one-page (front and back) form that asked specific questions regarding lumber that the producers sell and lumber that the producers purchase. The survey asked respondents to rate product quality, service, and delivery attributes in order of importance for the lumber sold and lumber purchased (Appendix A). The Lumber Supplier Survey (LSS), or the survey of sawmills, consisted of a one-page (front and back) survey that asked for specific information on the sawmill to obtain data on the age of the facility, the size of facility in terms of volume and species produced, methods, as well as a ranking of quality, service, inventory kept on hand, customer base,

[12] 1998 Directory of the Wood Products Industry Diskette Package, Miller Freeman, Inc.
[13] National Home Center News Web site. www.homecenternews.com/top_500/index.htm. January, 2001

and shipping delivery attributes to customers (Appendix B).

Data collection

The survey packets for both the LMS (Home Improvement Centers) and the LSS (Sawmills) surveys consisted of the one-page front and back survey, a cover letter explaining the purposes of the study, and a self-addressed return envelope with postage paid permit designation. The cover letter in each packet sent to home improvement centers (LMS) was addressed to the manager of the store (Appendix C) and the cover letter in each packet sent to sawmills (LSS) was personally addressed to the president or manager of the facility (Appendix D). The letter explained the purposes for conducting the survey and how the resulting information from the study could benefit the recipient. The cover letters were all hand signed. Care was taken to follow suggestions by Dillman for business organization survey cover letters including limiting the letter to one page, taking care to convey all of the necessary information in a clear concise manner, personalizing the salutation to a specific contact person when possible, assuring the confidentiality of all replies, assuring that participation is voluntary and signing each cover letter by hand in a contrasting ink color.[14] In addition, the cover letters were designed in accordance with suggestions from Dillman to ensure the trust of the respondent by showing sponsorship by a legitimate authority (Mississippi State University) and attaching importance to the response of the individual surveyed.[15] An effort was made to increase the reward potential by outlining benefits that respondents could expect to gain by completing the survey. These included matching retailer needs with supplier services to create a more advantageous business environment and to provide suggestions for changes in marketing strategies for sawmills in a rapidly changing competitive environment.[16] Other suggestions by Dillman which were incorporated into the survey include avoiding inconvenience and making the questionnaire short, easy, and emphasizing similarity to other requests.[17] Information on how to obtain a summary report of the survey study was included, as well as a commitment to publish results in appropriate journal and trade magazines. Several faculty members at Mississippi State University reviewed the survey instruments for accuracy, clearness and ease of completion.

Both the Lumber Market Surveys (LMS) and the Lumber Supplier Surveys (LSS) were mailed in April 2001. Responses were received from lumber suppliers in 27 different states and from home improvement centers in 21 different states. The following table shows the number of surveys mailed, returned and the associated response rate for both surveys.

As is common in survey studies, a determination had to be made as to the value of zero (the amount or percentage used by respondent was zero) or a non-response (the question was left unanswered) when the respondent left a blank in the spaces provided for responses. In tabulating data for both surveys, when respondents provided percentages or answers to a given question, that is, when they answered the question with percentage values, those parts of the question that were left blank were assumed to be zero and entered into the database as zero values. When respondents failed to answer any part of a question, the survey was viewed as a non-response and therefore left blank in the database.

	Number of Surveys Mailed	Adjusted Number of Surveys Mailed	Usable Respondent Surveys	Response Rate (percent)
Lumber Supplier Survey (to sawmills)	638	596	56	9.04 percent
Lumber Market Survey (to home improvement centers)	500	497	30	6.04 percent

The response rate above was determined by the following formula:

$$\text{Response Rate} = \frac{\text{Number of Usable Responses Received}}{\text{Adjusted Number of Surveys Mailed}}$$

Where: Usable Respondent Surveys = responses corrected filled out and returned

Adjusted Number of Surveys Mailed = (all surveys mailed) - (undeliverable surveys) - (surveys returned incomplete)

[14]Don A. Dillman, Mail and Internet Surveys: The Tailored Design Method, Second Edition, (John Wiley & Sons, Inc., 2000), 158-166.
[15]Dillman, 27.
[16]Dillman, 27.
[17]Dillman, 27

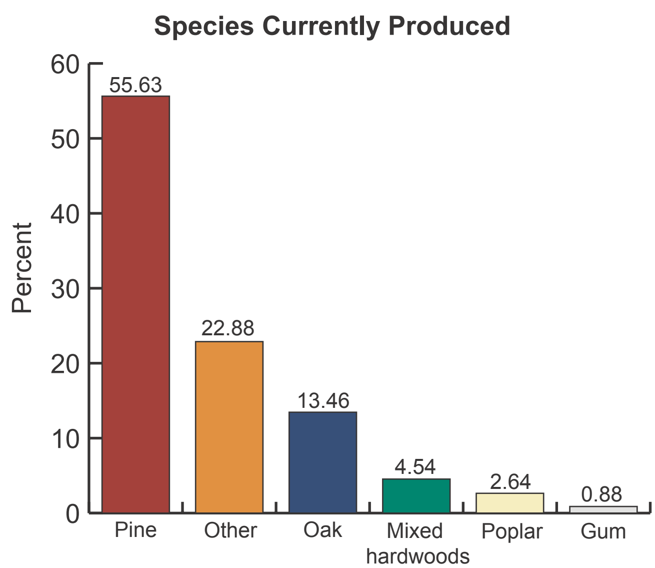

Figure 1. Volume of species currently being produced by responding companies.

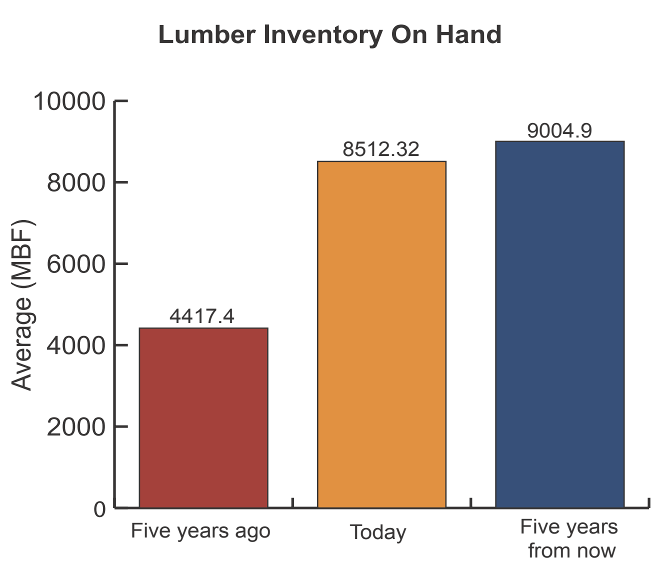

Figure 2. Average volume of lumber inventory kept on hand by respondents.

Plant age

The years in which the respondents' facilities were built ranged from 1848 to 1999 with the average plant age at 33.52 years.

Volume produced last year

The average volume per plant for survey respondents in the year 2000 was 73,604 thousand board feet (MBF). The total volume for reporting mills for the year 2000 was 4,048,197 MBF. Total softwood production for the U.S. in 2000 was approximately 35,952,000 MBF[18]. Based on this estimate, survey respondents produced about 11 percent of the total U.S. softwood production in 2000.

Species respondents produced (2001)

Respondents were asked to provide the percentage of current lumber production that was comprised of pine, oak, poplar, gum, mixed hardwoods, and/or other species. As shown in Figure 1, more than 50 percent of the volume of lumber being cut in 2001 by respondent companies was pine. Other species had the next highest percentage with almost 23 percent of the volume reported, followed by oak at 13.5 percent. Fir or fir combinations such as a hem fir made up the bulk of the responses in the other category.

Lumber inventory kept on hand

The average volume of lumber kept on hand at responding mills has increased about 50 percent from five years ago to today and is expected to increase slightly five years from now (Figure 2).

Source of current raw material supply

Respondents were asked to provide percentage of raw materials supply sources today and five years ago. Figure 3 shows percentages of gate wood, purchased tracts, company owned lands and other responses. Figure 4 shows that the percentage of raw materials coming from company owned lands, purchased tracts and other sources decreased slightly from five years ago while the portion of raw materials coming from gate wood increased almost 6 percent from five years ago.

Type of lumber shipment customers

According to the survey response data, the majority of lumber customers for sawmills are industrial customers (33 percent) and lumber brokers (31 percent). Chain stores, local building supply stores, and independent lumber contractors accounted for a smaller percentage of shipments as is shown in Figure 5. Five years ago, the percentage of lumber sold to industrial customers and lumber brokers

[18]U.S. Softwood Lumber Consumption by Region Industry Statistics, Southern Forest Products Association web site. www.sfpa.org/IndState.htm.

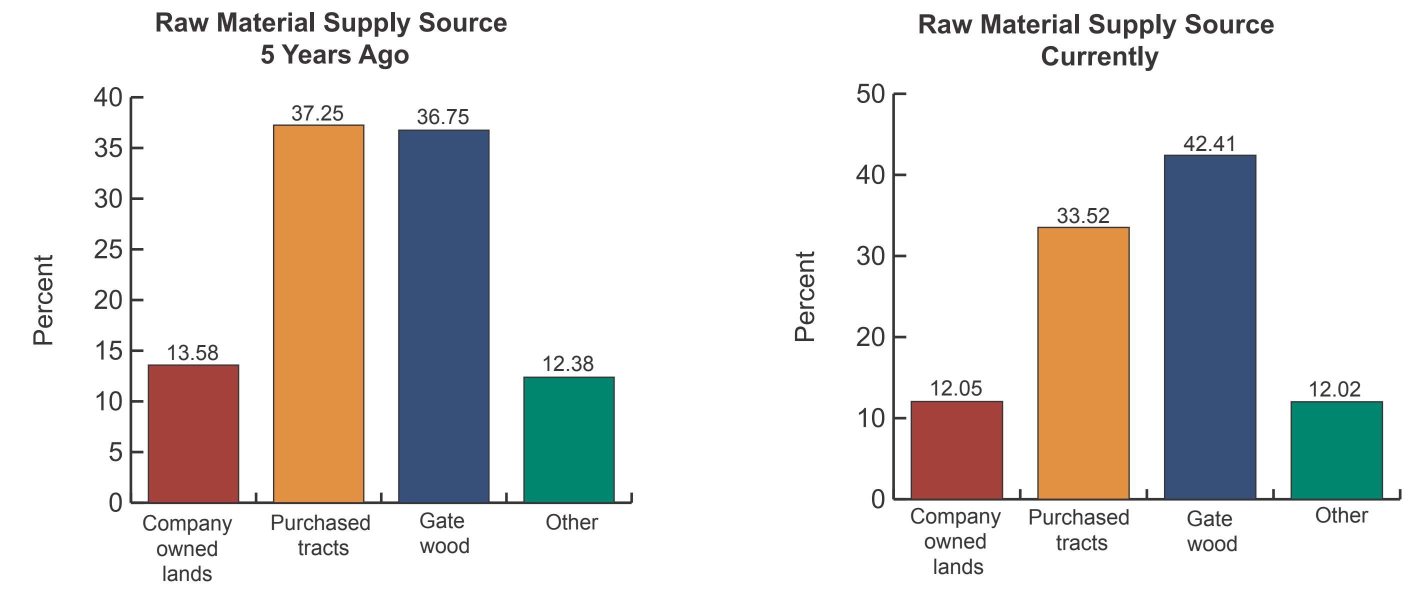

Figure 3. Raw materials source five years ago and currently.

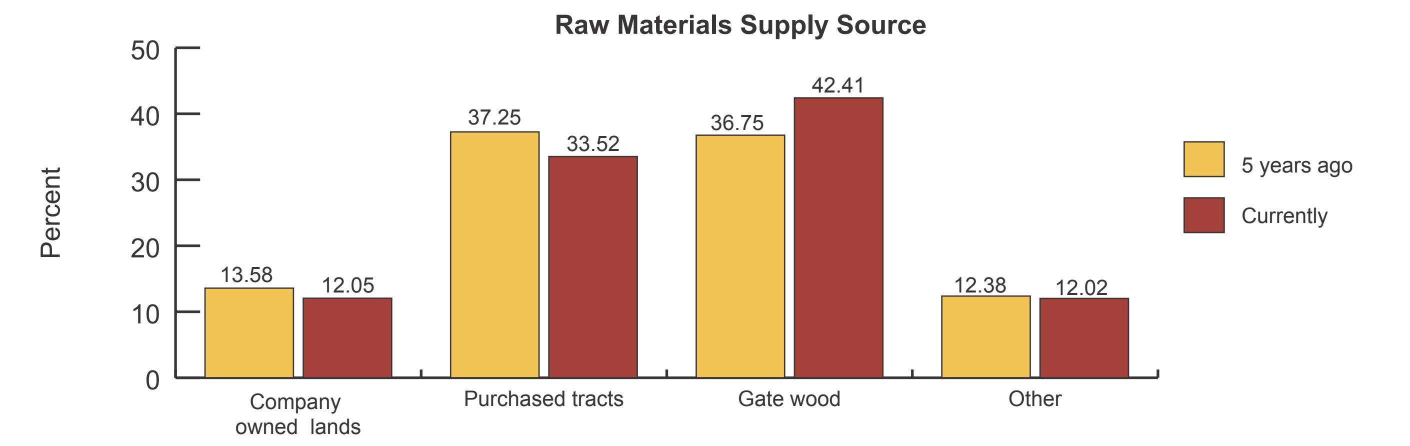

Figure 4. Comparison of raw materials source five years ago and currently.

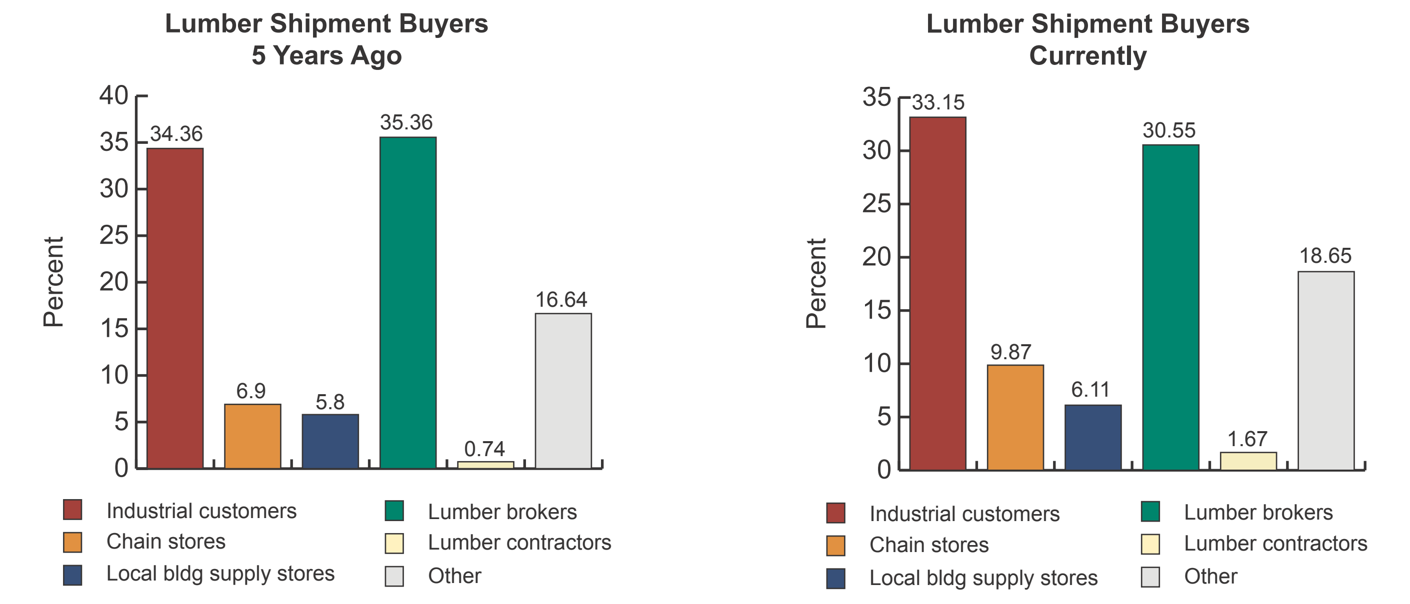

Figure 5. Percentage of lumber shipment buyers by type, five years ago and currently.

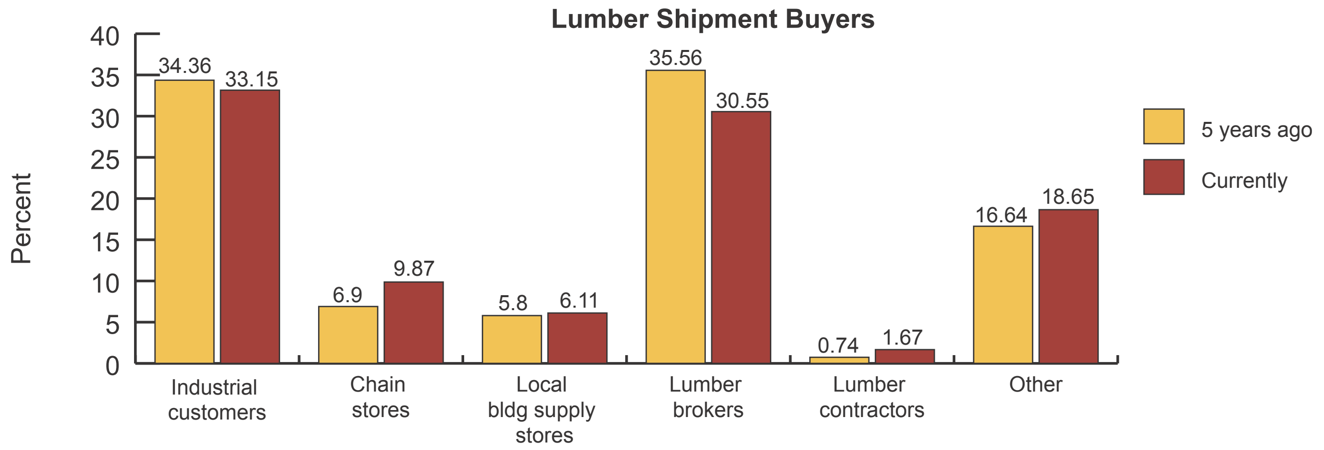

Figure 6. Comparison of percentage of lumber shipment buyers by type, five years ago and currently.

was slightly higher than currently, at 34 percent and 36 percent respectively. Figure 6 shows the percent changes in type of lumber shipment customers from five years ago to currently.

Shipping methods

Contract trucking was the shipment method used by respondent companies for nearly 40 percent of lumber shipments. This percentage is up slightly from five years ago as shown in Figures 7 and 8. Response percentages for use of customer trucks to transport lumber stayed virtually the same over the past five years. The percentage of company owned trucking declined by about 2 percent from five years ago as did the use of rails for transporting lumber. Percentage use of multi-modal methods and other methods of transportation were very small.

Average lumber order quantity

Average lumber order quantities were reported in pieces, units, truck loads, and car loads (Table 1). Some respondents chose to report average lumber order quantities by a combination of pieces, units, truck loads, and/or car loads. Some respondents only reported by one unit of measurement. Average lumber order quantities as reported by pieces today was down to 4,914 from 5,806 five years ago but was expected to be up five years from now to 6,021 (Figure 9). The same trend is true for the average lumber order quantity reported by carloads. When reporting by units and truckloads however, the average lumber order quantities

	Pieces	Units	Truck Loads	Car Loads
Five years ago	5806.29	145.56	43.00	17.75
Today	4914.22	317.30	43.89	13.70
Five years from now	6020.57	534.63	48.70	16.86

Table 1. Average lumber order quantity

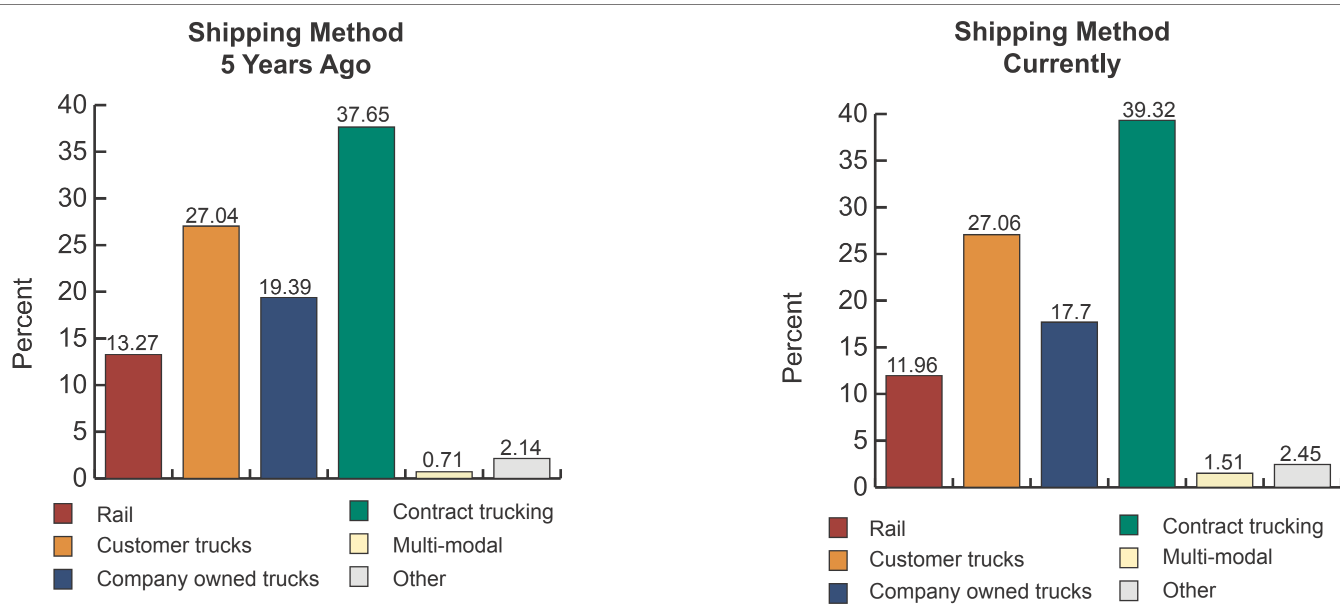

Figure 7. Percentage of lumber shipments by shipping method five years ago and currently.

Figure 8. Comparison of percentage of lumber shipments by shipping method five years ago and currently.

were up today from five years ago and expected to show an increase five years from now (Figure 9).

Lead time requirements for largest customers

From the survey data it appears that the lead times required for the sawmills' largest customers are decreasing. According to the survey responses, about 5 percent of respondent companies were reporting just-in-time (JIT) lead times five years ago (Figure 10). Twenty percent reported using JIT currently and a slightly higher percentage (21.8 percent) expect greater JIT lead times five years from now (Figure 10). A similar pattern is seen in 1 week minimum lead times. The percentage of companies requiring a 1 week minimum lead time five years ago was 29 percent and rises to 43 percent currently and is up slightly at about 44 percent for responding companies expecting to use a 1 week minimum lead time five years from now (Figure 10). For 2-4 week lead times and other lead times, the trend is reversed. Five years ago 58 percent of companies

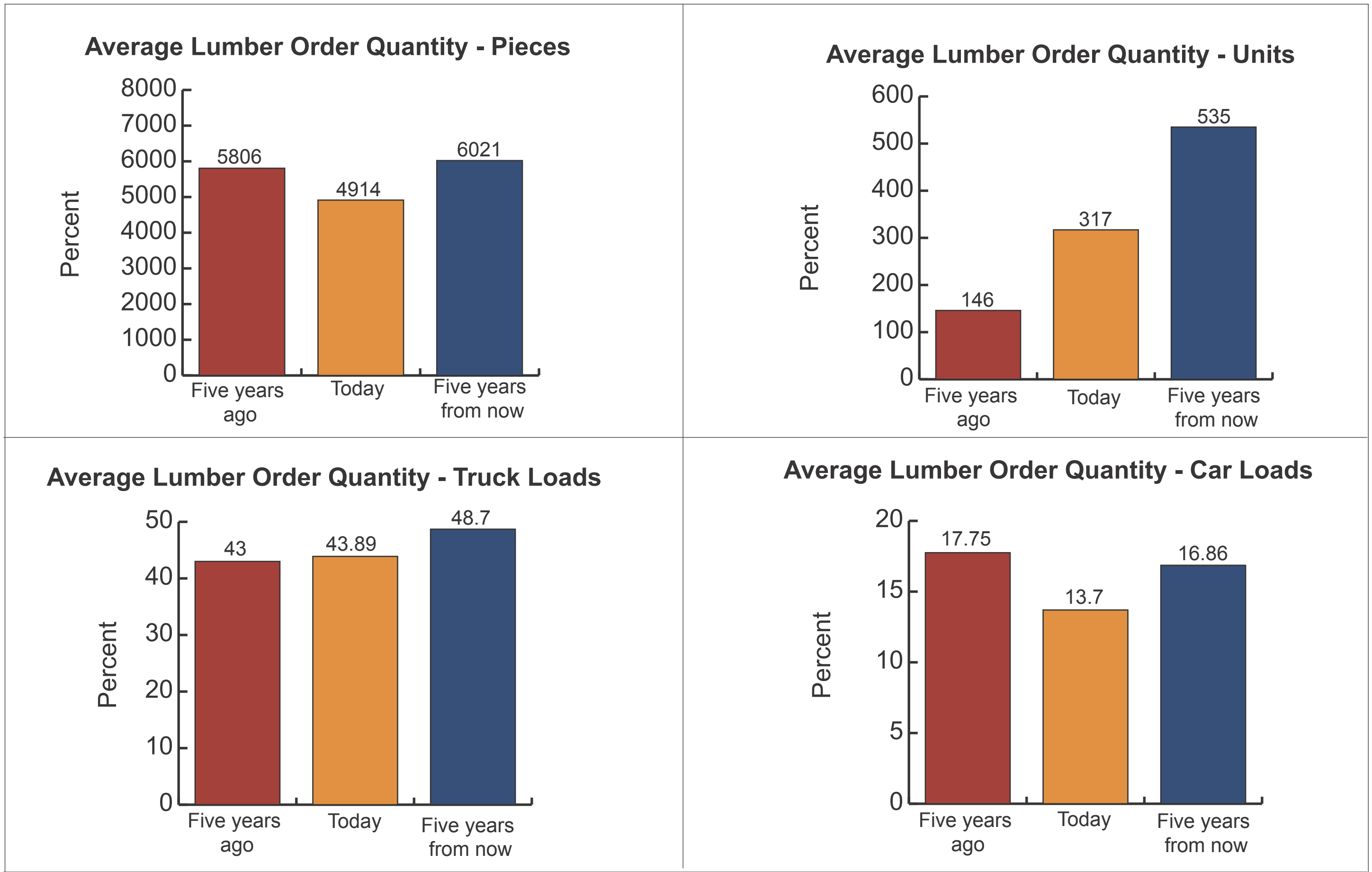

Figure 9. Average lumber order quantity in pieces, units, truck loads, and car loads, five years ago, today and five years from now.

required 2-4 weeks lead time, 38 percent currently require 2-4 weeks, and 27 percent of companies expect to require 2-4 weeks in the future (Figure 10). Only about 11 percent of responding companies reported requiring other lead times five years ago and only 9 percent reported current and expected lead times of "other".

Product quality, service, and delivery

The second page of the Lumber Supplier Survey (sawmills) asked respondents to rate product quality, attributes & value, service characteristics, and delivery options by importance to their customers. Respondents rated the items on a scale from 1 to 10, where 1 was least important and 10 was most important. Figures 11-13 show the average ratings of respondents for each survey item.

The figures demonstrate that consistent quality, consistency of grading, and overall appearance are the characteristics of product quality, attributes, & value deemed most important by respondents to the lumber producers survey. The most influential service characteristics were responsiveness of sales staff, quality guarantees, and product knowledge by sales staff. The delivery options rated the highest were condition of product upon arrival, completeness of orders, on-time arrival, and availability in tight times.

General characteristics that influence customers to purchase lumber

Respondents were asked to provide the appropriate percentage of general characteristics that influence their customers to purchase lumber from their company. The most influential factor was by a large margin product quality, attributes and value (Figure 14). Next in importance was a long term relationship with the customer, followed by service and delivery.

Exports

Respondents were asked if they currently export lumber and only 25 percent responded yes. Twenty-nine percent reported that they expect to export lumber within the next two to five years. The final question of the survey was an open ended question that asked the respondent to tell how they expected the market for the company's lumber to change in the next five years (Table 2).

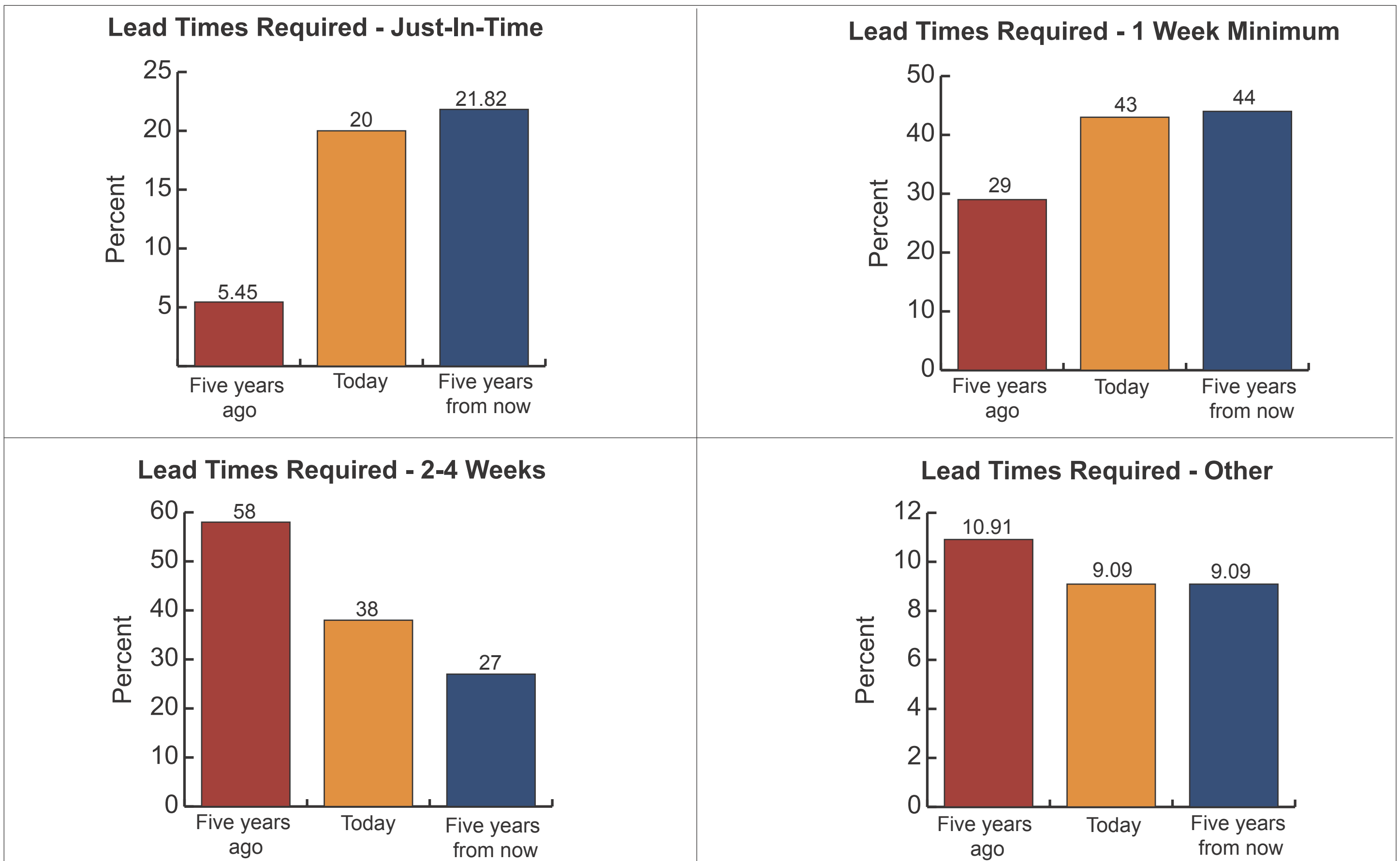

Figure 10. Lead times required, just-in-time, 1 week minimum, 2-4 weeks, and other lead times for largest customers five years ago, today, and five years from now.

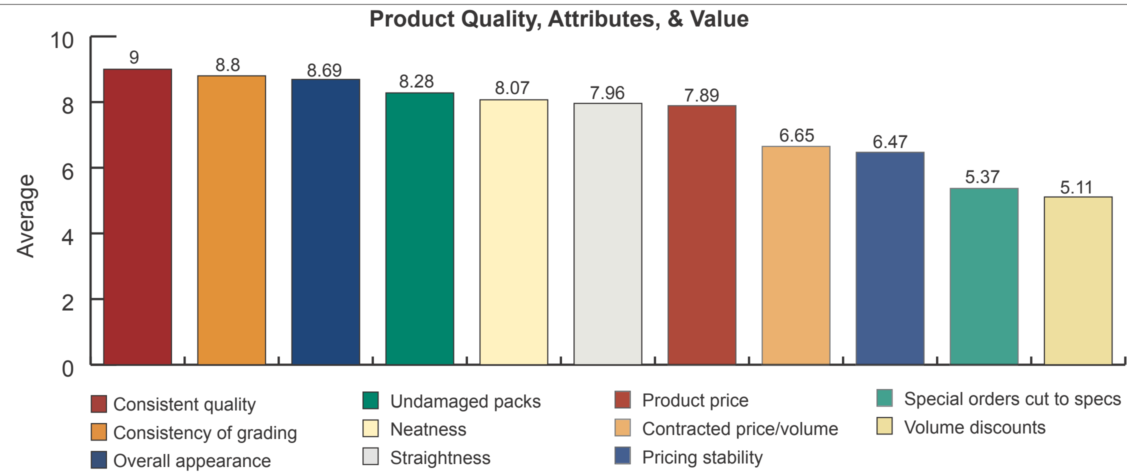

Figure 11. Average rating for product quality, attributes and value.

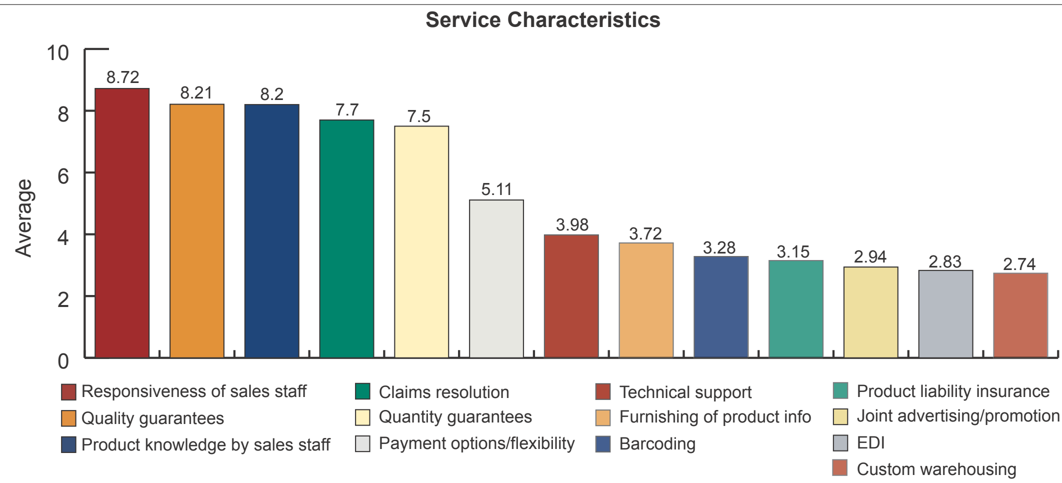

Figure 12. Average rating for service characteristics.

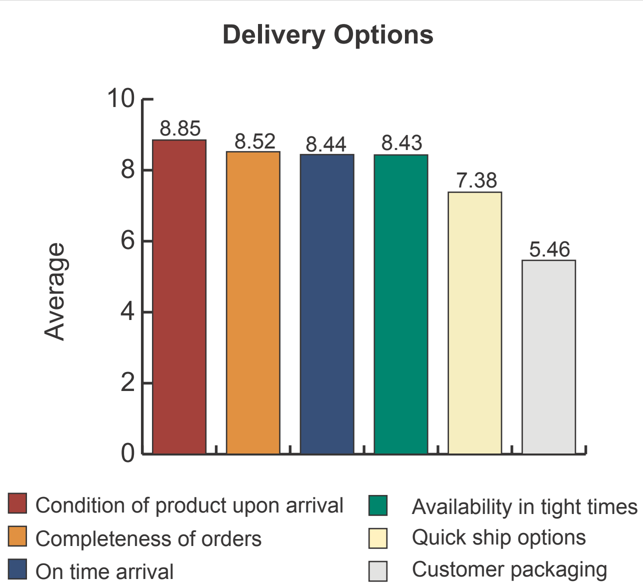

Figure 13. Average rating of delivery options.

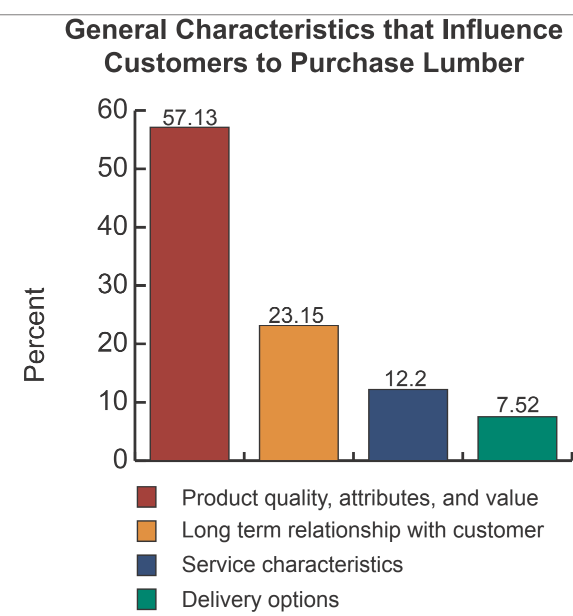

Figure 14. Percentage response for general characteristics that influence customers to purchase lumber from sawmills.

Expected Changes in Lumber Market
More spot market business. Mills inventorying more lumber. Prices falling due to imports.
For export it will be certified wood—domestic will see some big players drop out.
Increased barcoding, smaller units.
Forest certification will put a real burden on our supplier. The more added value that we put into our products the less return we get back on margin.
Possible need to be a certified producer, produce top quality products—continue.
We anticipate the Caribbean Rim to move away from rough to J4S. Western Europe and the Pacific Rim will experience little to no change in their buying habits.
More demanding, just in time shipments.
Increase retail and some treater segments. Competition for customers will increase.
Fewer, more efficient mills.
Common grade lumber will face tremendous competition from imports and alternative products. High grade markets will become more specialized and demand a much higher quality product.
Will become more competitive with other species worldwide.
More specialized grade variations.
It has been a small portion but very consistent over the years. We expect that it will stay the same.
World market.
European, Southern American exports to U.S. are hurting us. Alternative products (plastics, steel, particleboard, etc.)
As of this date 4/13/01, lumber market are way down and also pricing is way down.
We will be exporting more lumber—will be selling more stock widths and lengths.
No opinion.
Tighter specifications, width separations, greater dimension cuts.
We sell mainly wood components now and value added generally. I see that becoming more prevalent.
More volume to distribution centers and Home Depot types.
Increased pressure for warehousing to fill orders for JIT mfg/shipping.
No change - 2003, modest price improvement in 2005.
Don't see much change.
More specific request lengths, widths, added value enhancements.
Increased production from Canada and other importers will continue to drive prices down causing cutbacks and shutdowns. This will particularly hurt independents with limited capital resources.
Being dependent on Forest Service timber, I don't anticipate being in business in 5 years.
Restricted by adequate timber supply due to federal land policies.
Maintain or increase, unless economy goes down.
Increased competition from foreign markets of lumber products.
More competition from overseas producers.
More competition from outside the U.S.
Issues concerning consignment requests from the customer, phytosanitary regulations will dramatically affect the low grade lumber markets, attributes and stability of plantation-grown timber.
More consolidation of our customers. I think it is important to try to add value to our product.
There will be every increasing demand in wane free products. There will be 10 percent fewer mills making SYP.
Should remain status quo.
Demand will decrease. Competition will increase. Need to focus more specifically on final customer needs.
Influenced by import lumber, substitute products, retail system change, raw material availability.
More demand for ICD and appearance grade square (4x4, 4x6).
Expect more LVL/engineered lumber to encroach on 2x10/2x8/2x12. "Quality", visual grades will be larger percentage. Imported wood will continue to "steel" from SYP.

Table 2. Expected changes in the lumber market.

Expected Changes in Lumber Market
Fewer suppliers consolidated into larger companies or facilities. Fewer buyers - the small family owned businesses will be squeezed hard by "big box" centers. Less species differentiation or preference, smaller raw material available, more EWP in engineered wood products.
More emphasis on quality, customer service; customer controlled market; more international competition.
Stable, but not the booming markets we seen in the early to mid-90's.

Table 2 continued. Expected changes in the lumber market.

Results

Lumber Market Survey (Home Improvement Centers)

Lumber You Purchase

Figure 15. Sources of lumber purchased by home improvement centers.

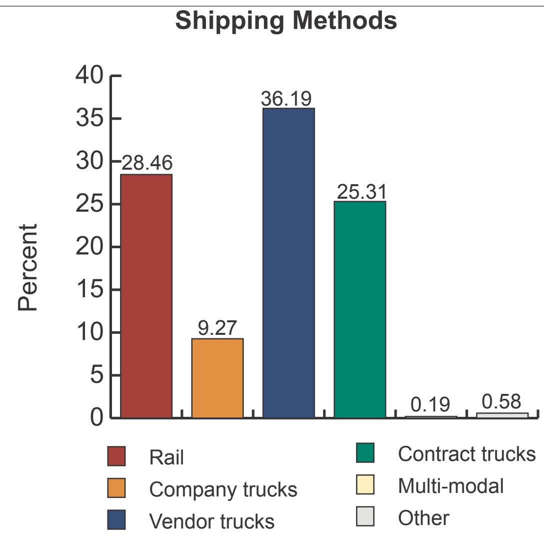

Figure 16. Shipping methods used by home improvement centers to receive lumber.

Lumber source

According to the survey results, most lumber (40 percent) was purchased through lumber brokers followed by direct purchase from mills (34 percent) (Figure 15). Corporate sales accounted for about 15 percent of the lumber purchased by home improvement centers. Respondents reported other sources for nine percent of lumber purchases and less than one percent of lumber purchases were made through electronic markets (Figure 15).

Shipping methods

Respondents were asked to provide a percentage of lumber received through various shipping methods. About 36 percent of the lumber received by respondents came to them by vendor trucks, followed by rail (28 percent) and contract trucks (25 percent) (Figure 16). About 9 percent of the lumber was shipped to the home improvement centers by company trucks (Figure 16).

Imports

Survey respondents were asked if their company currently imports lumber and if the company expects to import lumber within the next two to five years. About 70 percent do not import lumber and 30 percent do import, with a slight increase in imports anticipated in the future (Figure 17).

Quantity of lumber purchases

Respondents were asked to specify the quantity of lumber that they currently purchase on a daily, weekly, or monthly basis. All responses were converted to an annual basis and totaled 756,387 MBF per year. Industry estimates for total U.S. softwood consumption in 2000 was 54,903,000 MBF per year.[19] Respondents to this survey made up only about 1.4 percent of the total U.S. consumption. The respondents group consisted of mainly smaller retailers with only 2 of the top 25 home center retailers replying to the survey.

[19]U.S. Softwood Lumber Production and Imports: 1994 to 2000. Wood Markets Monthly, News Release, March 15, 2001. www.woodmarkets.com

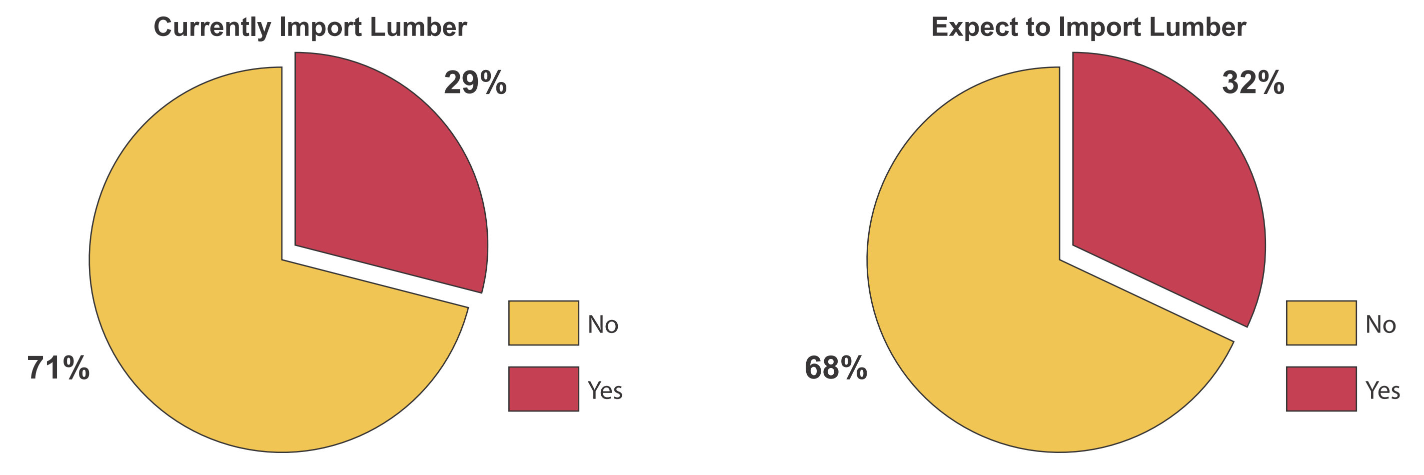

Figure 17. Import of lumber currently and within two to five years.

Product quality, service, and delivery

Just as respondents to the sawmill survey were asked to rate product quality, attributes and value based on importance to their customers (lumber buyers), respondents to the lumber market survey (home improvement centers) were asked to rate product quality, attributes and value (Figure 18), service characteristics (Figure 19), and delivery options (Figure 20) when deciding on a lumber vendor (sawmills).

For lumber purchased by home improvement centers, the product quality, attributes, and value variables considered most important were consistent quality, consistency of grading, straightness, and overall appearance (Figure 18). The most important service characteristics were responsiveness of sales staff, quality guarantees, claims resolution, and product knowledge by sales staff (Figure 19). Condition of product upon arrival, completeness of orders, availability in tight times, and on-time arrival were the most important delivery characteristics (Figure 20).

General characteristics that influence lumber purchase decision

Respondents were asked to provide the appropriate percentage of general characteristics that influence their decision to purchase lumber from a certain vendor. The responses were then averaged to provide a percentage of influence for these general characteristics. Product quality, attributes, and value were judged to be the most important general characteristics for choosing a lumber vendor (nearly 50 percent) (Figure 21). A long term relationship with the vendor was the next highest percentage at almost 30 percent followed by service characteristics (13 percent) and delivery options (9

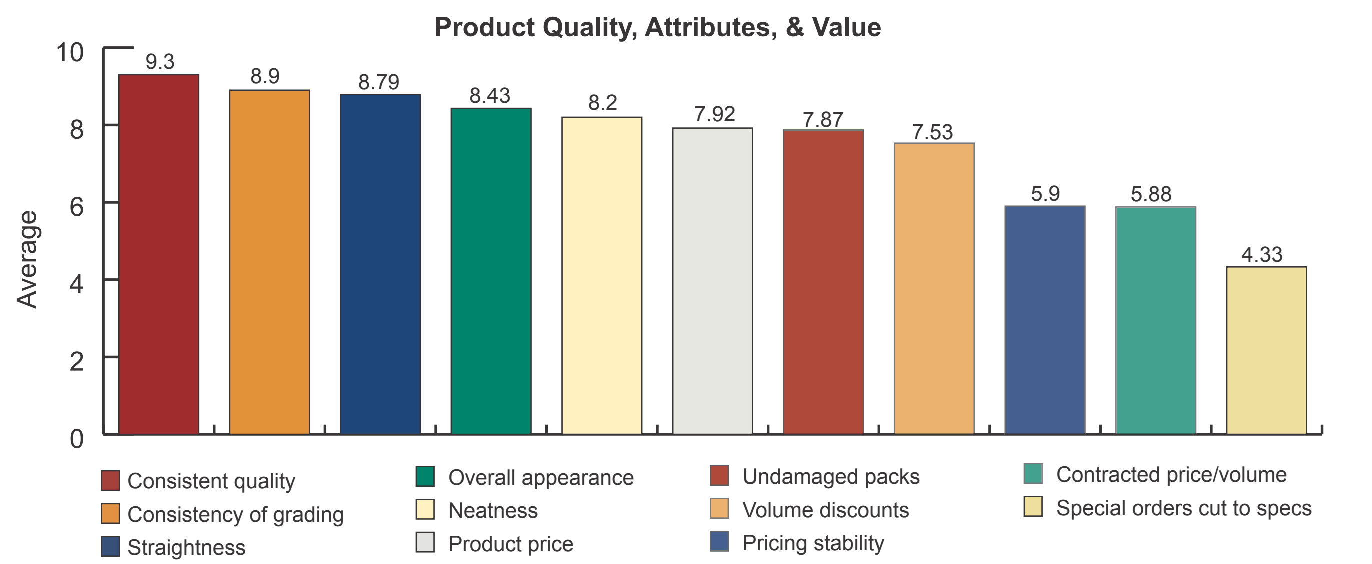

Figure 18. Average rating of product quality, attributes, and value considered by home improvement centers when choosing a lumber vendor.

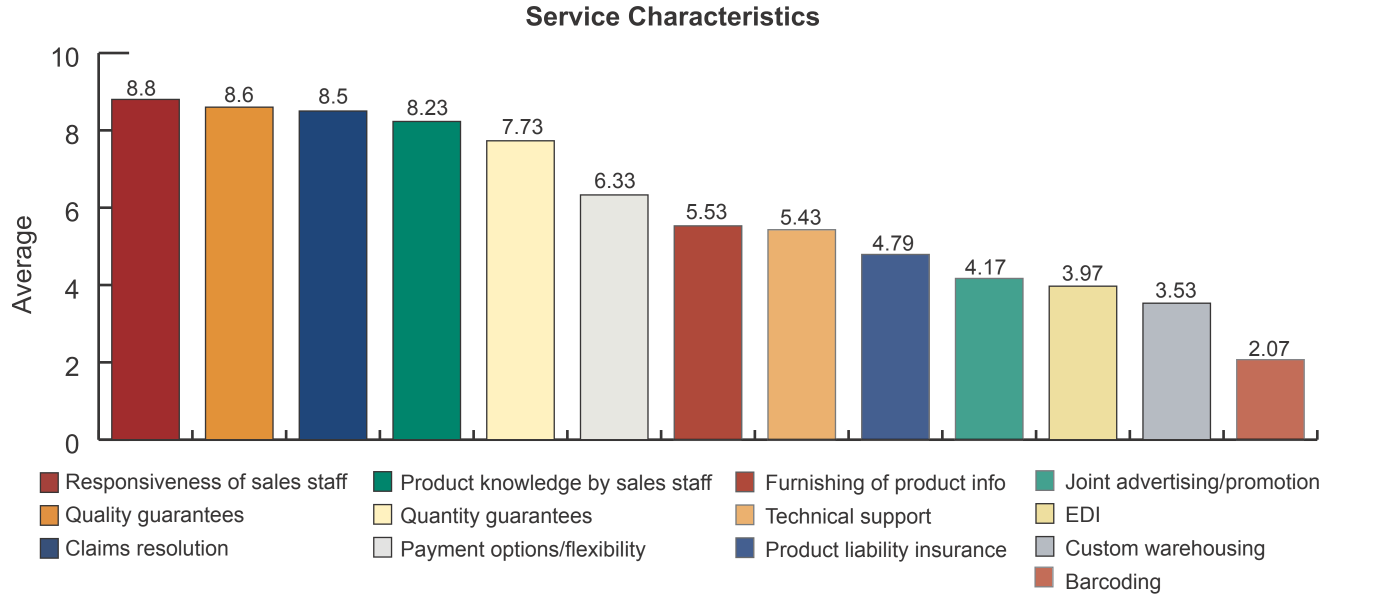

Figure 19. Average rating of service characteristics considered by home improvement centers when choosing a lumber vendor.

percent) (Figure 21). Although delivery and service are thought to be extremely important vendor characteristics, buyers still look first for a good, consistent product at a good value from a trusted source.

Mill size

On a percentage basis, home improvement centers purchase about 43 percent of lumber from large companies, or those with more than twenty mills (Figure 23). About 34 percent of this lumber is purchased from medium sized companies, or companies with 6-20 mills, and about 23 percent of lumber purchased is from small companies consisting of 1 to 5 mills (Figure 23).

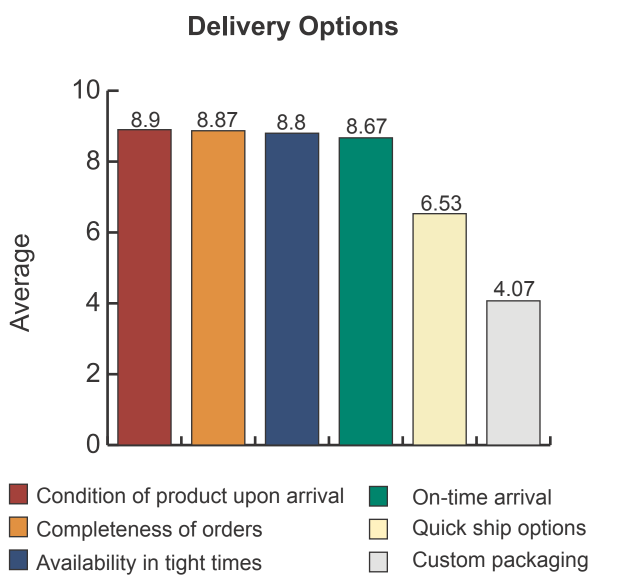

Figure 20. Average rating of delivery options considered by home improvement centers when choosing a lumber vendor.

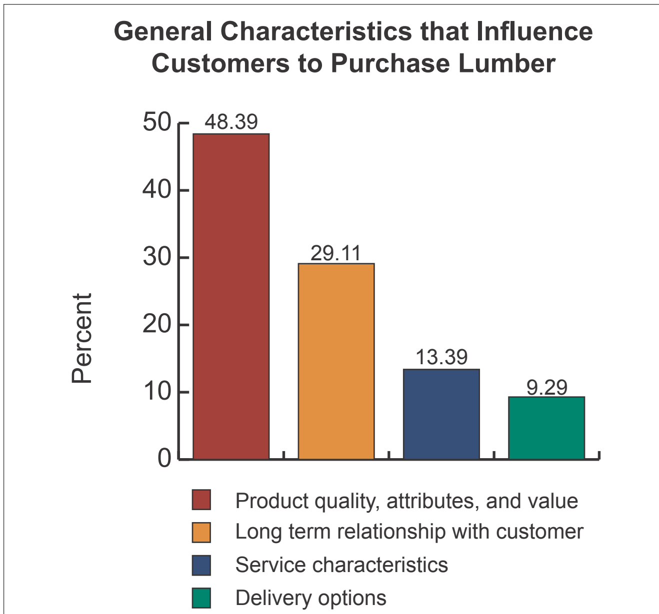

Figure 21. Average percent response for general characteristics that influence lumber purchase decisions.

Results

Lumber Market Survey (Home Improvement Centers)

Lumber You Sell

Customer base

Local contractors comprise nearly 70 percent of the home improvement center respondents' lumber purchases (Figure 22). Commercial contractors comprise about 13 percent of the respondents' customer base followed by D-I-Y customers at about 10 percent (Figure 22). A very small percentage of industrial manufacturers such as furniture manufacturers buy directly from home improvement centers (about 4 percent) (Figure 22).

Number of retail stores and lumber market

Almost 69 percent of respondents reported that their company operates 1-5 stores followed by about

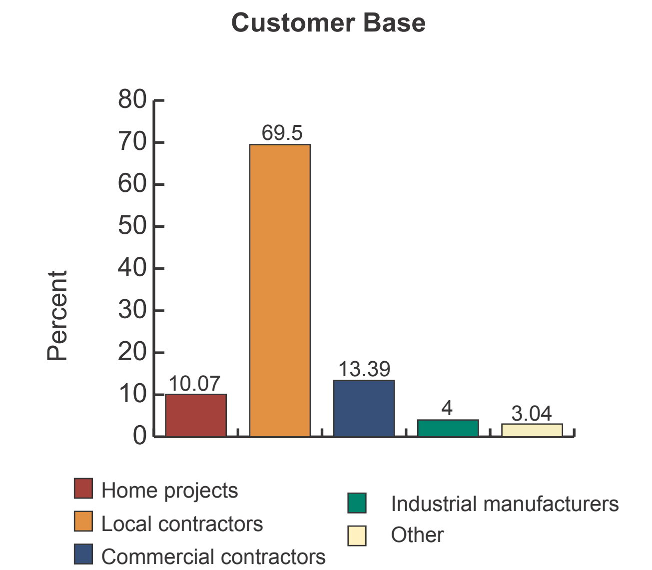

Figure 22. Percent of customer base for home improvement centers.

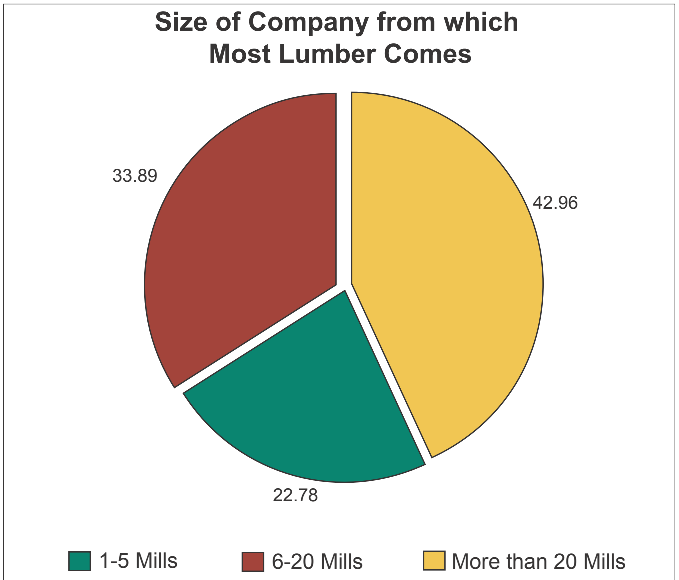

Figure 23. Average percent response for company size from which most lumber is purchased.

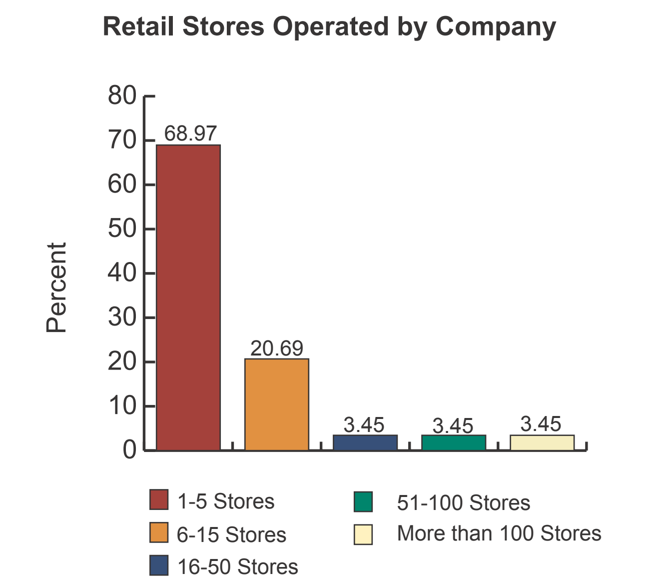

Figure 24. Number of retail stores operated by company.

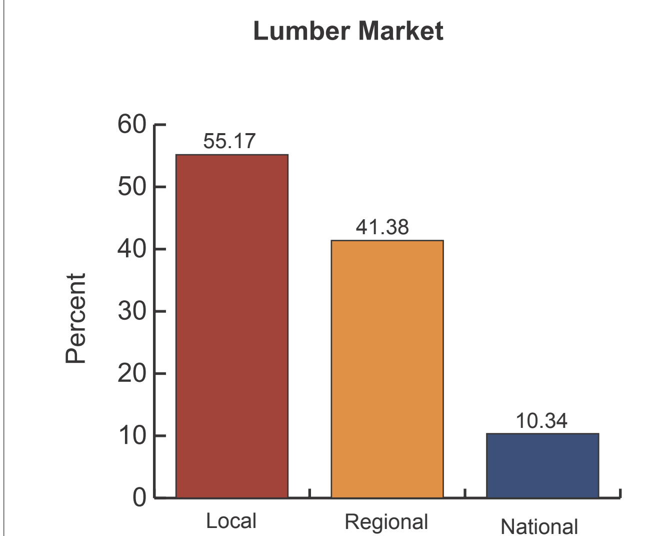

Figure 25. Description of lumber market.

21 percent reporting that their company operates 6-15 stores (Figure 24). Only 3.5 percent of respondents were part of a company with more than 15 stores. Over half of the respondents described their lumber market as local and 41 percent described their market as regional. Only about 10 percent stated that their market for lumber is national (Figure 25).

Product quality, service, delivery, and environmental considerations

Respondents to the home improvement survey were asked to rate attributes for product quality and value (Figure 26), service characteristics (Figure 27), delivery options (Figure 28), and environmental considerations (Figure 29) according to their importance to lumber purchasing customers.

According to the survey results, consistent quality, straightness, product price, overall appearance, neatness, and consistency of grading were the most important characteristics to lumber purchasing customers (Figure 26). Responsiveness of sales staff, warranty resolution, product knowledge by sales staff, friendliness of store employees, and quantity guarantees were the most important service characteristics to the

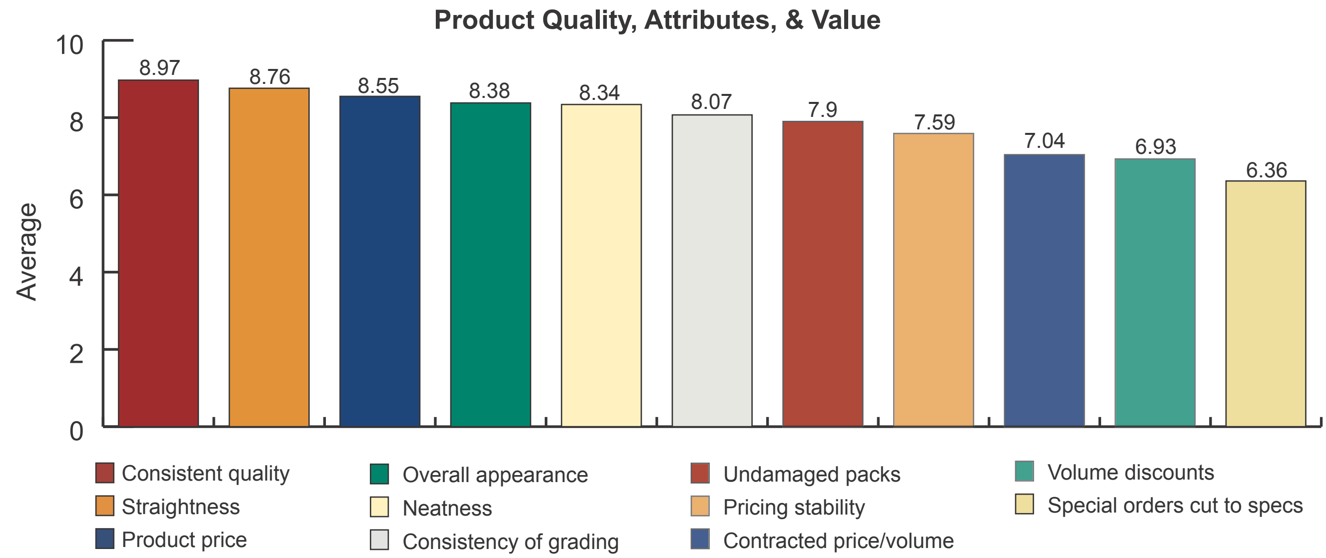

Figure 26. Average rating of product quality, attributes, and value considered most important to lumber purchasing customers.

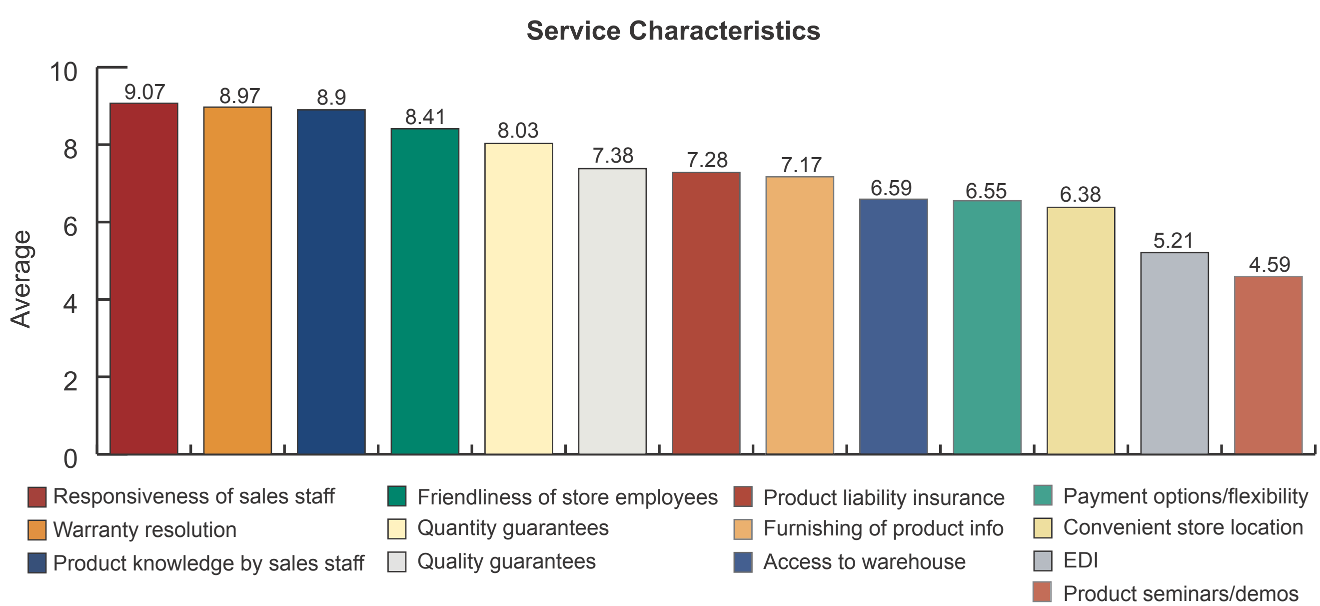

Figure 27. Average rating of service characteristics considered most important to lumber purchasing customers.

lumber buying public (Figure 27). All five delivery characteristics had an average rating of above 8 and three characteristics—fast delivery, completeness of orders, and condition of product upon arrival—had a rating above 9 (Figure 28). Environmental considerations were rated much lower with the highest ratings of 5.21 for certified wood and SFI certified vendors (Figure 29).

General characteristics that influence customers' decision to purchase lumber

Respondents were asked to provide the appropriate percentage of general characteristics that influences their customers to purchase lumber from their company. The responses were then averaged to provide a percentage of influence for these general characteristics. Product quality, attributes, and value were judged to be the most important general characteristics to lumber customers (Figure 29). Service characteristics were thought to be the next most important issue for customers followed by delivery options (Figure 29). Respondents did not believe that environmental considerations had much affect on customers' decisions to purchase lumber with only a 2.48 percent response average (Figure 29).

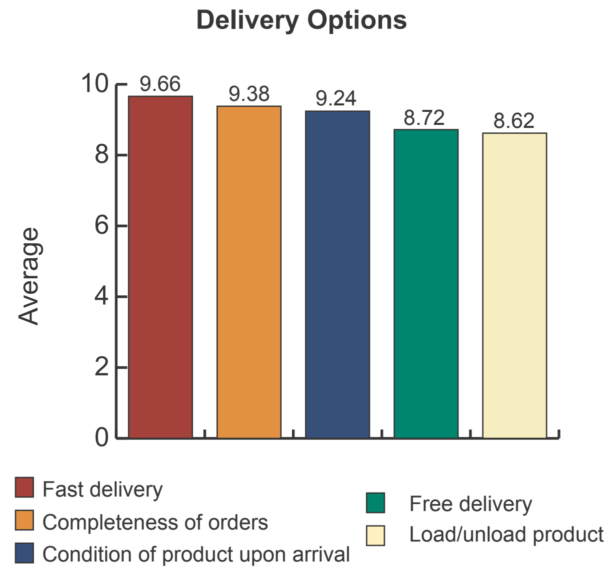

Figure 28. Average rating of delivery options considered most important to lumber purchasing customers.

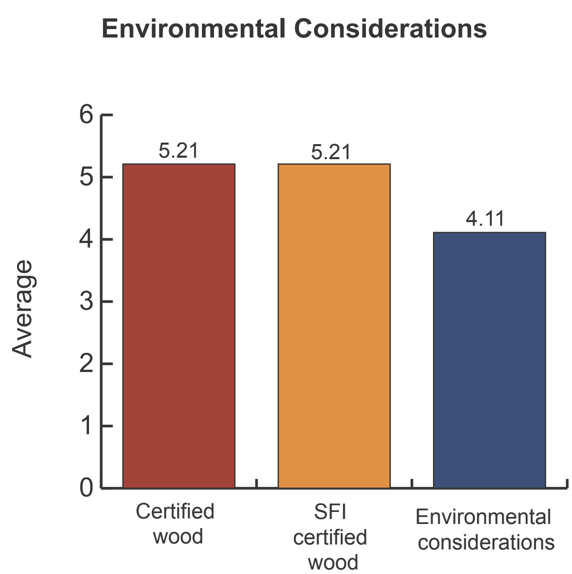

Figure 29. Average rating of environmental considerations considered most important to lumber purchasing customers.

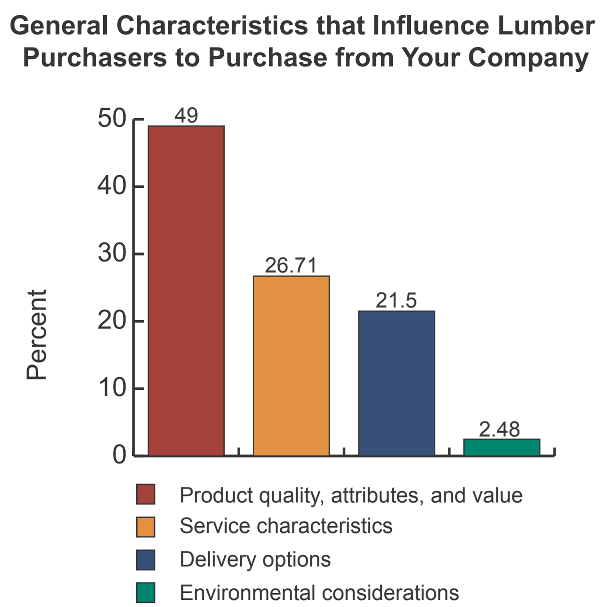

Figure 30. General characteristics considered most important to lumber purchasing customers.

Specific Study Objectives

Objective 1 of this study was to characterize products and primary marketing channels employed today, and five years ago from survey data taken from current producers in the United States.

Results indicate:

- The primary species cut by respondent mills is pine (over 50 percent) followed by the general other category, oak, mixed hardwoods, poplar, and gum.

- Five years ago, the majority of raw materials were evenly split between purchased tracts (37 percent) and gatewood (37 percent). Together these two categories made up almost 75 percent of the raw materials supply source followed by company owned lands, and the other category. Today, gatewood (42 percent) moves slightly ahead of purchased tracts (33 percent) as the primary supply source but together the two categories still make up 75 percent of the raw material supply sources.

- Lumber customers five years ago were almost evenly split between industrial customers (34 percent) and lumber brokers (36 percent). Currently, industrial customers make up about 33 percent of lumber purchases from respondents followed by lumber brokers with 31 percent. Local building supply stores moved from 5.8 percent of lumber purchases to 6.1 percent of lumber purchases. Chain store purchases moved from 6.9 percent to 9.9 percent from five years ago to currently.

- The primary shipping method for lumber five years ago was contract trucking followed by customer trucks, company owned trucks, and rail. This trend continues currently.

- Lead time requirements generally increased for Just-In-Time and 1 week minimums and decreased for 2-4 weeks and other lead times from five years ago, today, and five years from now.

- Responding sawmills believe that the general characteristics that influence customers to purchase lumber are overwhelmingly based on product quality, attributes, and value followed by long term relationship with the customer, service characteristics and delivery options.

Objective 2 consisted of determining the specific characteristics that chain retailers look for in vendors when purchasing lumber (lumber you purchase) and what characteristics the respondents feel their customers look for when purchasing lumber from their store (lumber you sell).

- About 40 percent of the lumber purchased by home improvement centers was from brokers, followed closely by purchases direct from the mills (34 percent).

- Shipping methods used were mainly vendor trucks (36 percent), rail (28 percent), and contract trucks (25 percent).

- Only about 29 percent of survey respondents currently import lumber and about 32 percent expect to import lumber in the future.

- General characteristics that are thought to influence lumber purchase decisions from the home improvement retailers point of view are product quality, attributes & value (48 percent), followed by long term relationship with vendor, service characteristics, and delivery options.

- The customer base for home improvement centers is predominantly made up of local contractors (almost 70 percent) followed by commercial contractors, do-it-yourself home customers, and industrial manufacturers.

- The majority of respondents were from companies with 1-5 stores (69 percent) whose markets were mostly local (55 percent) and regional (41 percent).

- Respondents felt that customers based their lumber purchase decisions primarily on product quality, attributes & value (49 percent), followed by service characteristics, delivery options, and environmental considerations (2 percent).

Objective 3 was to compare the results of the two surveys to develop strategies for smaller producers to use in developing marketing objectives and plans. Table 3 presents raw data from the surveys for product quality, attributes & value, service characteristics, delivery options, and environmental considerations. Table 4 offers a comparison of general characteristics from the surveys.

Product Quality, Attributes & Value	Lumber Supplier Survey	Lumber You Purchase Lumber Market Survey	Lumber You Sell Lumber Market Survey
Overall appearance	8.69	8.43	7.38
Product price	7.89	7.93	8.55
Contracted price/volume	6.65	5.88	7.04
Special orders cut to specs	5.37	4.33	6.36
Pricing stability	6.47	5.9	7.59
Consistent quality	9	9.3	8.97
Consistency of grading	8.8	8.9	8.07
Undamaged packs	8.28	7.87	7.9
Volume discounts	5.11	7.53	6.93
Straightness	7.96	8.79	8.76
Neatness	8.07	8.2	8.34
Service Characteristics	**Lumber Supplier Survey**	**Lumber You Purchase Lumber Market Survey**	**Lumber You Sell Lumber Market Survey**
Product knowledge by sales staff	8.2	8.23	8.9
Responsiveness of sales staff	8.72	8.8	9.07
Claims resolution	7.7	8.5	
Quality guarantees	8.21	8.6	8.03
Quantity guarantees	7.5	7.73	7.38
Payment options/flexibility	5.11	6.33	6.55
Joint advertising/promotion	2.94	4.17	
Furnishing of product information	3.72	5.53	7.17
Technical support	3.98	5.43	
Barcoding	3.28	2.07	
Custom warehousing	2.74	3.53	
Product liability insurance	3.15	4.79	5.21
Online order/delivery tracking/EDI	2.83	3.97	3.48
Friendliness of store employees			8.41
Offer product seminars, demos			4.59
Convenient store location			6.38
Cleanliness/organization of store			6.59
Easy access to warehouse			8.97
Help with warranty resolution			7.28
Delivery Options	**Lumber Supplier Survey**	**Lumber You Purchase Lumber Market Survey**	**Lumber You Sell Lumber Market Survey**
Availability in tight times	8.43	8.8	
On-time arrival	8.44	8.67	
Completeness of orders	8.52	8.87	9.38
Condition of production upon arrival	8.85	8.9	9.24
Quick ship options	7.38	6.53	
Custom packaging	5.46	4.07	
Free delivery			8.72
Fast delivery			9.66
Load/Unload product			8.62
Environmental Considerations	**Lumber Supplier Survey**	**Lumber You Purchase Lumber Market Survey**	**Lumber You Sell Lumber Market Survey**
Green products			4.11
Certified wood			5.21
SFI certified vendors			3.71

Table 3. Data from the lumber supplier survey and the lumber market survey for product quality, attributes, and value, service characteristics, delivery options, and environmental considerations.

Environmental Considerations	Lumber Supplier Survey	Lumber You Purchase Lumber Market Survey	Lumber You Sell Lumber Market Survey
Product quality, attributes, and value	57.13	48.39	49
Service characteristics	12.2	13.39	26.71
Delivery options	7.52	9.29	21.5
Long term relationship with customer	23.15	29.11	
Environmental considerations			2.48

Table 4. Data from the lumber supplier survey and the lumber market survey—lumber you purchase and lumber you sell—for general characteristics thought to influence purchase decisions.

As can be seen from the data in Tables 3 and 4, every characteristic did not match across the questions for the lumber supplier survey and the lumber market survey for lumber purchased and lumber sold. Figures 31-36 compare data where possible for all three information sources and for only two of the sources where appropriate.

In Figure 32 the average ratings for each attribute that respondents rated (1-10 with 1 equaling least important and 10 equaling most important) are ranked by order of importance. The attributes from both the Lumber Supplier Survey and the Lumber Market Survey —lumber you purchase and lumber you sell are shown. A rank of 1 equals highest average rating and 10 equals lowest average rating.

Consistent quality was rated the highest among product quality, attributes and value in both the lumber supplier survey and the home improvement survey—lumber you purchase and lumber you supply designations (Figure 32). Consistency of grading was very important by the lumber suppliers and home improvement center respondents for lumber you purchase but ranked only fifth in importance by home improvement respondents—lumber you sell (Figure 32). Likewise, overall appearance ranked third and fourth with sawmill respondents and for home improvement center respondents for lumber purchased but dropped to eighth for lumber you sell (Figure 32). Product price ranked seventh and sixth, respectively, for Lumber Supplier Survey respondents and home improvement center respondents—lumber your purchase—but moved to second for lumber you sell (Figure 32). This means that home improvement center buyers believe that product price is second only to consistent quality in the final consumers reasons for purchase. Product price considerations may be reduced in importance to lumber suppliers and lumber purchasers because both parties commonly have access to *Random Lengths.*[20] In essence, the survey measures the importance of non-price competition factors.

Figure 33 compares average respondent ratings for the lumber supplier survey and the lumber you purchase

Figure 31. Product quality, attributes, and value for lumber supplier survey and lumber market survey—lumber you purchase and lumber you sell.

[20]Random Lengths. Jon P. Anderson, Publisher, Shawn Church, Editor, Random Lengths Publications, Eugene, Oregon.

Product Quality, Attributes & Value					
Rank	**Lumber Supplier Survey**	**Rank**	**Lumber You Purchase**	**Rank**	**Lumber You Sell**
1	Consistent quality	1	Consistent quality	1	Consistent quality
2	Consistency of grading	2	Consistency of grading	2	Product price
3	Overall appearance	3	Straightness	3	Straightness
4	Undamaged packs	4	Overall appearance	4	Neatness
5	Neatness	5	Neatness	5	Consistency of grading
6	Straightness	6	Product price	6	Undamaged packs
7	Product price	7	Undamaged packs	7	Pricing stability
8	Contracted price/volume	8	Volume discounts	8	Overall appearance
9	Pricing stability	9	Pricing stability	9	Contracted price/volume
10	Special orders cut to specs	10	Contracted price/volume	10	Volume discounts
11	Volume discounts	11	Special orders cut to specs	11	Special orders cut to specs

Figure 32. Ranking of average ratings for product quality, attributes, and value for lumber supplier survey and lumber market survey—lumber you purchase and lumber you sell.

portion of the lumber market survey. The lumber you sell portion of the lumber market survey data is not shown here because the characteristics did not match with the other survey characteristics – that is, respondents rated different characteristics for the lumber you sell portion of the lumber market survey.

Responsiveness of sales staff was ranked as the most important service characteristic for both surveys across all categories (Figure 34). Quality guarantees were thought to be very important from the lumber suppliers' perspective as well as the home improvement center respondents for lumber purchased but dropped to a ranking of five behind easy access to warehouse, product knowledge by sales staff, and friendliness of store employees for the home improvement center—lumber you sell category (Figure 34). Product knowledge by sales staff was also ranked high (3 and 4) by sawmill respondents and for home improvement center respondents—lumber you purchase category (Figure 34). Interestingly, online order/delivery tracking/EDI ranked near the bottom (13, 11, and 14) across all three categories of the surveys (Figure 34).

Figures 35 and 36 show comparisons and rankings of delivery options.

Condition of product upon arrival had the highest average ratings from the Lumber Supplier Survey and the Lumber You Purchase category of the Lumber Market Survey. Condition of product upon arrival ranked

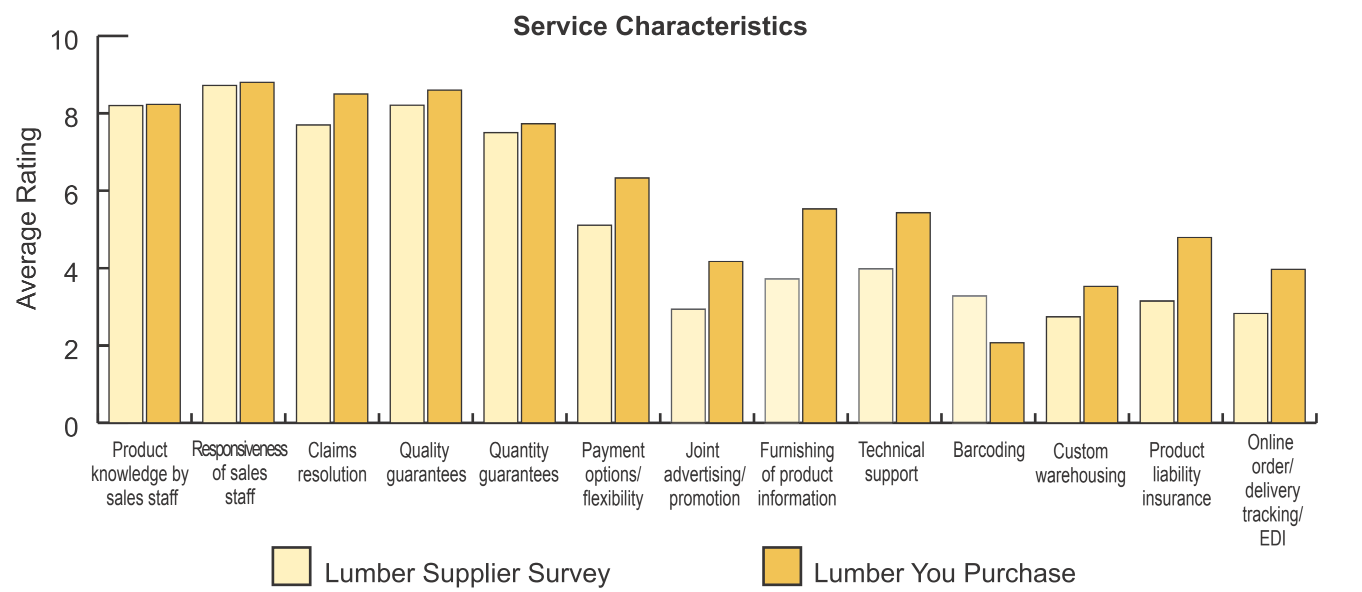

Figure 33. Service characteristics for lumber supplier survey and lumber market survey—lumber you purchase.

Service Characteristics					
Rank	Lumber Supplier Survey	Rank	Lumber You Purchase	Rank	Lumber You Sell
1	Responsiveness of sales staff	1	Responsiveness of sales staff	1	Responsiveness of sales staff
2	Quality guarantees	2	Quality guarantees	2	Easy access to warehouse
3	Product knowledge by sales staff	3	Claims resolution	3	Product knowledge by sales staff
4	Claims resolution	4	Product knowledge by sales staff	4	Friendliness of store employees
5	Quantity guarantees	5	Quantity guarantees	5	Quality guarantees
6	Payment options/flexibility	6	Payment options/flexibility	6	Help with warranty resolution
7	Technical support	7	Furnishing of product information	7	Quantity guarantees
8	Furnishing of product information	8	Technical support	8	Furnishing of product information
9	Barcoding	9	Product liability insurance	9	Cleanliness/organization of store
10	Product liability insurance	10	Joint advertising/promotion	10	Payment options/flexibility
11	Volume discounts	11	Online order/delivery tracking/EDI	11	Convenient store location
12	Custom warehousing	12	Custom warehousing	12	Product liability insurance
13	Online order/delivery tracking/EDI	13	Barcoding	13	Offer product seminars, demos
				14	Online order/delivery tracking/EDI

Figure 34. Ranking of average ratings of service characteristics for lumber supplier survey and lumber market survey—lumber you purchase and lumber you sell.

third in the Lumber Market Survey—Lumber You Sell category behind fast delivery and completeness of orders (Figure 36). Completeness of orders was ranked second in importance across all categories (Figure 36). Custom packaging was deemed the least important delivery option (Figure 36).

Figure 37 and 38 show comparisons for general characteristics that respondents thought to be important. Respondents were consistent across all survey categories in rating product quality, attributes and value as most important when supplying, purchasing, or selling lumber (Figure 38). Long term relationships with the customer or vendor was next in importance followed by service characteristics (Figure 38). Delivery options were last in importance for sawmill respondents and home improvement centers lumber you purchase (Figure 38). Environmental considerations scored lowest in importance for Lumber Market Survey—Lumber You Purchase respondents (Figure 38).

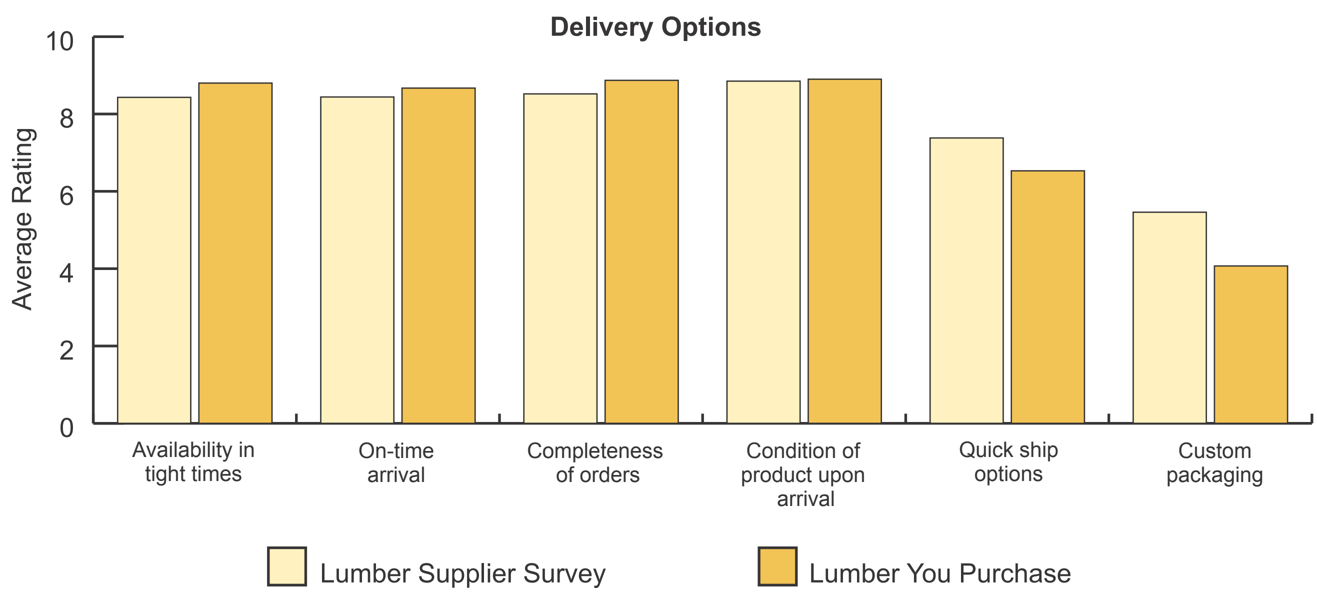

Figure 35. Delivery options for lumber supplier survey and lumber market survey—lumber you purchase.

Delivery Options

Rank	Lumber Supplier Survey	Rank	Lumber You Purchase	Rank	Lumber You Sell
1	Condition of product upon arrival	1	Condition of product upon arrival	1	Fast delivery
2	Completeness of orders	2	Completeness of orders	2	Completeness of orders
3	On-time arrival	3	Availability in tight times	3	Condition of product upon arrival
4	Availability in tight times	4	On-time arrival	4	Free delivery
5	Quick-ship options	5	Quick-ship options	5	Load/unload product
6	Custom packaging	6	Custom packaging		

Figure 36. Ranking of average ratings for delivery options for lumber supplier survey and lumber market survey—lumber you purchase and lumber you sell.

Figure 37. General characteristics for lumber supplier survey and lumber market survey—lumber you purchase and lumber you sell.

General Characteristics

Rank	Lumber Supplier Survey	Rank	Lumber You Purchase	Rank	Lumber You Sell
1	Product quality, attributes and value	1	Product quality, attributes and value	1	Product quality, attributes and value
2	Long term relationship with customer	2	Long term relationship with customer	2	Service characteristics
3	Service characteristics	3	Service characteristics	3	Delivery options
4	Delivery options	4	Delivery options	4	Environmental considerations

Figure 38. Ranking of average ratings of general characteristics for lumber supplier survey and lumber market survey—lumber you purchase and lumber you sell.

Strategies

Because the overwhelming majority of respondents from both sawmills and home improvement centers ranked the general characteristics of product quality, attributes and value as most important, it is essential that small mills maintain consistent quality of product and all associated variables that are incorporated into "product quality". Because many of the smaller mills have been in operation for many years and markets are often local and/or regional, smaller mills may take advantage of the importance placed on long term relationships with the customer which was ranked second in order of importance for the Lumber Supplier Survey and the Lumber You Purchase respondents. Responsiveness of sales staff is a key attribute across the entire lumber distribution system. Smaller companies may have advantages over larger companies in terms of being responsive to customer needs and market conditions, although larger companies may have more resources to provide adequate responses to individual situations. Quality guarantees and product knowledge by sales staff are also key items. Smaller companies can effectively compete by retaining high quality sales staff and providing incentives to improve responsiveness to customers. Product price was ranked a surprising seventh in order of importance by Lumber Supplier Survey respondents and sixth by Home Improvement Center respondents for Lumber You Purchase but was of very high (second) importance by final consumers. Further, pricing stability was ranked ninth for the Lumber Supplier Survey and the Lumber You Purchase Home Improvement Center Survey. This ranking is seen as positive for smaller mills because pricing volume advantages of the larger mills may not be as important as previously believed.

APPENDIX A

Lumber Market Survey (LMS)

LUMBER MARKET SURVEY - LUMBER YOU PURCHASE

How do you purchase lumber? (percentage basis)

	Brokers
	Direct from mill
	Corporate sales
	Electronic markets
	Don't know
	Other ___________________________
100%	

By what shipping methods do you receive lumber? (percentage basis)

	Rail
	Company trucks
	Vendor trucks
	Contract trucks
	Multi-Modal
	Other
100%	

Do you currently import lumber?

	Yes		No

Do you expect to import lumber in the next two to five years?

	Yes		No

What quantity of lumber do you currently purchase? ____________ MBF per Day, Week, Month. (Please circle one).

What attributes do you consider when deciding on a lumber vendor? Please rate the following characteristics on a scale of 1 to 10 according to their importance to you when making lumber purchase decisions.

	Please check the appropriate box: 1 = least important; 10 = most important.									
Product Quality, Attributes & Value	1	2	3	4	5	6	7	8	9	10
Overall appearance										
Product price										
Contracted price/volume										
Special orders cut to specs										
Pricing stability										
Consistent quality										
Consistency of grading										
Undamaged Packs										
Volume discounts										
Straightness										
Neatness										

	Please check the appropriate box: 1 = least important; 10 = most important.									
Service Characteristics	1	2	3	4	5	6	7	8	9	10
Product knowledge by sales staff										
Responsiveness of sales staff										
Claims resolution										
Quality guarantees										
Quantity guarantees										
Payment options/flexibility										
Joint advertising/promotion										
Furnishing of product information										
Technical support										
Barcoding										
Custom warehousing										
Product liability insurance										
Online order/delivery tracking/EDI										

	Please check the appropriate box: 1 = least important; 10 = most important.									
Delivery Options	1	2	3	4	5	6	7	8	9	10
Availability in tight times										
On-time arrival										
Completeness of orders										
Condition of product upon arrival										
Quick ship options										
Custom packaging										

Please provide the appropriate percentage of the following general characteristics that influences your lumber purchase decisions.

	Product quality, attributes and value
	Service characteristics
	Delivery options
	Long term relationship with vendor
100%	

Does the majority of your lumber come from? (percentage basis)

	Small companies: 1-5 mills
	Medium companies: 6-20 mills
	Large companies: more than 20 mills
100%	

LUMBER MARKET SURVEY - LUMBER YOU SELL

What percent of your customer base consists of?

	Do-It-Yourself customers for home projects
	Local contractors
	Commercial contractors
	Industrial manufacturers (ex: furniture mfg)
	Other ______________________________
100%	

How many retail stores does your company operate?

	1-5 Stores
	6-15 Stores
	16-50 Stores
	51-100 Stores
	More than 100 Stores

Do you consider your lumber market to be local, regional, or national?

	Local
	Regional
	National

What attributes do you consider as being most important to your lumber purchasing customers? Please rate the following characteristics on a scale of 1 to 10 according to their importance to your customers when they make lumber purchase decisions.

	Please check the appropriate box: 1 = least important; 10 = most important.									
Product Quality, Attributes & Value	1	2	3	4	5	6	7	8	9	10
Overall appearance										
Product price										
Contracted price/volume										
Special orders cut to specs										
Pricing stability										
Consistent quality										
Consistency of grading										
Undamaged Packs										
Volume discounts										
Straightness										
Neatness										

	Please check the appropriate box: 1 = least important; 10 = most important.									
Service Characteristics	1	2	3	4	5	6	7	8	9	10
Product knowledge by sales staff										
Responsiveness/helpfulness of sales staff										
Friendliness of store employees										
Furnishing of product information										
Quality guarantees										
Quantity guarantees										
Payment options/flexibility										
Offer product seminars, demonstrations										
Convenient store location										
Cleanliness/Organization of store										
Easy access to warehouse										
Help with warranty resolution										
Product liability insurance										
Online order/delivery tracking/EDI										

	Please check the appropriate box: 1 = least important; 10 = most important.									
Delivery Options	1	2	3	4	5	6	7	8	9	10
Free delivery										
Fast delivery										
Load/Unload product										
Completeness of orders										
Condition of product upon arrival										

	Please check the appropriate box: 1 = least important; 10 = most important.									
Environmental Considerations	1	2	3	4	5	6	7	8	9	10
Green products										
Certified wood										
SFI Certified vendors										

Please provide the appropriate percentage of the following general vendor characteristics that influences your customers' decision to purchase lumber from your company.

	Product quality, attributes and value
	Delivery options
	Service characteristics
	Environmental considerations
100%	

10001

APPENDIX B

Lumber Supplier Survey (LSS)

20001

LUMBER SUPPLIER SURVEY

When was this plant built? ___________________

How many MBF did this mill produce last year? _______________

What percent of the following species do you currently cut?

	Pine
	Oak
	Poplar
	Gum
	Mixed hardwoods
	Other ______________________
100%	

How much lumber inventory do you routinely keep on hand?

	MBF
Today	
Five Years Ago	
Five Years from Now	

What percentage of your raw material supply today comes from:

	Company owned lands
	Purchased tracts
	Gate wood
	Other __________________________
100%	

What percentage of your raw material supply five years ago came from:

	Company owned lands
	Purchased tracts
	Gate wood
	Other __________________________
100%	

Percentage of lumber shipments your company currently makes to:

	Industrial customers (ex: furniture mfg.)
	Chain stores
	Local building supply stores
	Lumber brokers
	Lumber contractors
	Other __________________________
100%	

Percentage of lumber shipments your company made five years ago to:

	Industrial customers (ex: furniture mfg.)
	Chain stores
	Local building supply stores
	Lumber brokers
	Lumber contractors
	Other __________________________
100%	

Percentage of your lumber today that is shipped by:

	Rail
	Customer trucks
	Company owned trucks
	Contact trucking
	Multi-modal
	Other __________________________
100%	

Percentage of your lumber five years ago that was shipped by:

	Rail
	Customer trucks
	Company owned trucks
	Contact trucking
	Multi-modal
	Other __________________________
100%	

What is your average lumber order quantity?

	Pieces	Units	Truck Loads	Car Loads
Today				
Five Years Ago				
Five Years From Now				

What lead times do you require for you largest customers? (Please check the box that applies).

	Just-in-Time	1 Week Minimum	2-4 Weeks	Other
Today				
Five Years Ago				
Five Years From Now				

Please rate the following characteristics on a scale of 1 to 10 according to their importance to your customers.
Please check the box that applies - 1 = least important; 10 = most important.

	Importance to your customers: 1 = least important; 10 = most important.									
Product Quality, Attributes & Value	1	2	3	4	5	6	7	8	9	10
Overall appearance										
Product price										
Contracted price/volume										
Special orders cut to specs										
Pricing stability										
Consistent quality										
Consistency of grading										
Undamaged Packs										
Volume discounts										
Straightness										
Neatness										

	Importance to your customers: 1 = least important; 10 = most important.									
Service Characteristics	1	2	3	4	5	6	7	8	9	10
Product knowledge by sales staff										
Responsiveness of sales staff										
Claims resolution										
Quality guarantees										
Quantity guarantees										
Payment options/flexibility										
Joint advertising/promotion										
Furnishing of product information										
Technical support										
Barcoding										
Custom warehousing										
Product liability insurance										
Online order/delivery tracking/EDI										

	Importance to your customers: 1 = least important; 10 = most important.									
Delivery Options	1	2	3	4	5	6	7	8	9	10
Availability in tight times										
On-time arrival										
Completeness of orders										
Condition of product upon arrival										
Quick ship options										
Custom packaging										

Please provide the appropriate percentage of the following general characteristics that influences your customers to purchase lumber from your company.

	Product quality, attributes and value
	Service characteristics
	Delivery options
	Long Term relationship with customer
100%	

Do you currently export lumber? ☐ Yes ☐ No

Do you expect to export lumber in the next two to five years? ☐ Yes ☐ No
Please explain.

How do you see the market for your lumber changing in the next five years?

APPENDIX C

Cover letter for
Lumber Market Survey (LMS)

April 12, 2001

Home Improvement Center Manager
«Company»
«Address»
«City», «State» «Zip»

Dear Manager:

Enclosed is a short survey designed to determine the specific characteristics that lumber retailers look for in a vendor in terms of product quality and value, service characteristics, and delivery options. The back of the survey is designed to assess the current product quality attributes and value, service characteristics delivery options, and environmental considerations that your customers look for in a lumber retailer. The goals of this survey are to assess current softwood lumber marketing strategies; to characterize product quality, service, and delivery factors of lumber retailers; and to develop appropriate marketing and distribution strategies to match the changes in an increasingly complex, competitive business environment.

This survey is national in scope and is being mailed to the top five hundred (according to sales) home improvement/lumber retailers throughout the country. A similar survey is also being mailed to hundreds of softwood lumber mills in the U.S. to characterize the specific product attributes, services and delivery options that mills are offering to vendors. The data from these two surveys will be analyzed to characterize the current softwood lumber market by such variables as volumes, numbers of products, delivery expectations, use of electronic data capabilities, and marketing strategy factors. Results from these surveys will make it possible to match retailer needs with supplier services to create a more advantageous business environment.

Your participation is needed in order to help characterize changes in lumber distribution. Please help us by completing the enclosed survey and returning it to the Forest Products Marketing Group at Mississippi State University, in the enclosed self-addressed envelope. If you are not the appropriate person at this facility to complete the survey, please forward it to that person.

The survey should take about fifteen minutes to complete and your participation is voluntary. The study is being conducted at The Forest Products Laboratory - Forest and Wildlife Research Center, Mississippi State University. All survey information will remain completely confidential. The code on the back of the survey is used only to account for non-response error. Once the data are entered, the coding will be removed from all responses. Composite survey results in the form of a summary report will be made available to you after the project is completed. In addition, results will be published in appropriate journal and trade magazines.

Thank you for your participation.

Sincerely,

Dr. R. Dan Seale
Professor
Department of Forest Products
662.325.3072
«Code»

APPENDIX D

Cover letter for
Lumber Supplier Survey (LSS)

April 10, 2001

«PREFIX1» «FNAME1» «MI1» «LNAME1» «SUFFIX1»
«TITL1»
«COMPANY»
«ADDR»
«CITY», «ST» «ZIP»

Dear «PREFIX1» «LNAME1»:

Enclosed is a short survey designed to characterize the current lumber market in terms of volume produced, market environment, competition, and distribution. The goals of this survey are to summarize current softwood lumber marketing strategies; to characterize product, service, and delivery factors; and to develop appropriate marketing and distribution strategies to match the changes in an increasingly complex, competitive business environment.

This survey is national in scope and is being mailed to softwood lumber suppliers throughout the country. A similar survey is also being mailed to the top five hundred building supply companies to characterize the specific characteristics these companies look for in vendors, i.e. product attributes and values, service characteristics, and delivery options. The data from these two surveys will be analyzed to characterize the current softwood lumber market by such variables as volumes, numbers of products, delivery expectations, use of electronic data capabilities, and market strategy factors. Results from these surveys will make it possible to match supplier needs with appropriate marketing strategies for a changing competitive environment.

Your participation is needed in order to help characterize the changes in the lumber market. Please help us by completing the enclosed survey and returning it to the Forest Products Marketing Group at Mississippi State University, in the enclosed self-addressed envelope. If you are not the appropriate person at this facility to complete the survey, please forward it to that person.

The survey should take about fifteen minutes to complete and your participation is voluntary. This study is being conducted by The Forest Products Laboratory - Forest and Wildlife Research Center, Mississippi State University. All survey information will remain completely confidential. The code on the front of the survey is used only to account for non-response error. Once the data are entered, the coding will be removed from all responses. Composite survey results in the form of a summary report will be made available to you after the project is completed. In addition, results will be published in appropriate journal and trade magazines. If you have concerns or questions about the survey, please give me a call.

Thank you for your participation.

Sincerely,

Dr. R. Dan Seale
Professor
Department of Forest Products
662.325.3072
«Code»

FWRC

Forest and Wildlife Research Center
Mississippi State University

Mississippi State University