

MANAGEMENT

PRODUCT AND SUPPLIER FACTORS AFFECTING THE PURCHASING OF U.S. WOOD PRODUCTS IN THE UNITED KINGDOM

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ABSTRACT

The United Kingdom represents one of the largest markets for U.S. forest products outside of North America. Markets within the United Kingdom are competitive and diverse, with many global sources competing for the same customers. The goal of this research was to gain an insight into various factors that affect the purchase of selected U.S. forest products in the United Kingdom. This was achieved by using both qualitative and quantitative techniques. A structured mail survey was completed by resellers in the United Kingdom and the survey findings were combined with the results of a series of in-depth personal interviews. This study focused on species purchased, supplier and product attributes, sources of conflict between U.S. suppliers and U.K. resellers, and other selected relationship factors. Product and supplier attributes affecting purchasing varied considerably among the product categories surveyed. Similarly, product and supplier conflict issues were different among product categories. The attribute analysis highlighted the non-commodity nature of the hardwood and softwood markets. In all markets, relationship elements such as *trustworthiness* and *keeps promises* received high rankings, emphasizing the need for close relationships with purchasers.

The United Kingdom is the second largest market in the European Union after Germany and the sixth largest market in the world for U.S. forest products (5). The United Kingdom has a large dependency on imported timber dating back to the industrial revolution of the 19th century (2). Most forest products sold to customers in the United Kingdom move through foreign intermediaries (resellers). Although many U.S. companies have successfully penetrated the U.K. market and formed long-term relationships with intermediaries, many potential entrants are impeded by a lack of information.

The product categories chosen for this study were hardwood lumber, softwood lumber, and softwood plywood as these represent important and potentially larger markets for U.S. suppliers. Figure 1 illustrates the volumes of these U.S.

forest products imported by the United Kingdom from 1985 to 1995. Overall imports peaked in 1989 and have been trending downwards since. In 1995, the United Kingdom imported 307,000 m³ (64.6%) of its temperate hardwood lumber requirements with 109,000 m³ (35.5% of hardwood lumber imports) from U.S. sources (4). The main competitors for U.S. hardwood lumber include Canada, the European Union, and Eastern Europe.

The United Kingdom imported 6.4 million m³ (77%) of its softwood lumber requirements in 1995. The United States has a negligible share, with less than 1 percent (62,000 m³) of that market. U.K. importers purchase the bulk of their softwood lumber requirements from Scandinavia and the Baltic States. The United States has traditionally been non-competitive in the large undifferentiated sector of this market (4).

In 1995, the UK imported 100 percent (412,000 m³) of its softwood plywood requirements with 56 percent of imports (232,000 m³) coming from the United States. There is no production of softwood plywood in the United Kingdom (4). The main competition for U.S. softwood plywood comes from Canada, Finland, Brazil, and to a lesser degree, Russia.

It is clear that, given the nature of the U.K. market, U.S. suppliers must compete with other suppliers from multiple geographic regions and they must also compete for a reseller's patronage and selling resources. Suppliers who provide the best set of purchasing and relationship conditions, based on resellers' requirements, can expect to gain the confidence and patronage of effective resellers.

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LITERATURE REVIEW

Studies concentrating on attributes affecting purchasing are limited and few. Shipley et al. argued that there is a need to prioritize the attributes that influence purchasing and found that purchasing decisions were strongly influenced by factors associated with buyer-seller relationships (13). Bush et al. analyzed the attributes affecting choice of suppliers in domestic markets for hardwood lumber (3). *Grading accuracy* and *supplier's reputation* were the most important attributes when choosing a supplier. The least influential attribute was the *presence of a supplier's trademark or logo*. In a later study using similar methodology, Forbes et al. (7) analyzed the influence of product and supplier attributes on hardwood lumber purchase decisions in the U.S. furniture industry. *Load to load consistency*, *accurate grading*, *no warp*, *crook and bow*, *accurate moisture content*, and *competitive price* were the attributes that most influenced the purchase decisions of respondents. Price was ranked fifth in a list of most desirable attributes. One conclusion was that concentrating on a low price (sometimes at the detriment of product quality) may be a poor strategy for the exporter of forest products.

This view was not supported by Nagy (10), who claimed that classical supply and demand curves reasonably described the market behavior of broad segments within international forest products trade and that price was the main factor affecting purchasing. He further stated that sellers and buyers responded to price signals, generally dealt at arms length, and in the aggregate, interacted with their foreign counterparts to establish market clearing prices and qualities. Although Nagy argued that price leadership was the dominant marketing tool when servicing foreign markets, he did not support this contention with empirical research.

In an international forest products trade study, Armstrong et al. (1) isolated the attributes affecting the purchase of U.S. hardwood lumber by Canadian importers. A variety of product attributes were isolated as well as the amount of satisfaction buyers have had with U.S. lumber suppliers to meet these criteria. *Accuracy of grading* was rated as the most important product feature when choosing a hardwood supplier. Other product features found to be important to Canadian lumber buyers when choosing

a supplier were *lumber straightness*, *general cleanliness of the lumber purchased*, and *accuracy of moisture content*. Respondents were also asked to determine the importance of various features related to the selection of a supplier. The ability of a seller to *provide a reliable supply* and *product quality* were seen to be vitally important. Armstrong et al. also measured buyer satisfaction and concluded that Canadian buyers were most satisfied with the *accuracy of moisture content*, *general cleanliness*, and the *lumber straightness*.

In a mail survey of German hardwood purchasers by Ponzurick et al. (11), the most important product attributes affecting purchasing were *absence of surface checks*, *meeting of grade specifications*, and *accuracy of grading*. The least important product attributes were *uniformity of moisture content* and *absence of chipped grain*. Purchasers were most satisfied with *overall product quality* and *moisture content accuracy*, and least satisfied with *absence of surface checks* and *uniformity of color*. The most important supplier attributes in Germany were *ability to fill mixed species orders* and *ability to provide protective packaging*. The most important service attributes were *competitive pricing* and *quick response to inquiries*. This study compared the results in Germany to a similar study in the United Kingdom. *Ability to fill small orders* and *ability to provide a variety of species* were the most important supplier-related attributes and *quick response to inquiries* and *competitive pricing* were the most important service attributes (11).

Seward and Sinclair (12), in an examination of the North American structural panel market, found that *price* and *strength/stiffness* were the most important product attributes with *service support* and *company reputation* being the most important supplier attributes affecting purchasing.

METHODS

SURVEY INSTRUMENT AND SAMPLING

A survey instrument was developed to ascertain information about products, product attributes, supplier attributes, product- and supplier-related sources of conflict, channels of distribution, and relationship characteristics. In total, 168 questions were asked of the survey participants. In conjunction with the mail

survey, a series of personal interviews took place on-site in the United Kingdom during May and June 1995. The various lists of attributes in the survey were formulated from analysis of previous studies, combined with the results of discussions with academic and industry specialists, the results of a pretest, and personal interviews. The reseller (intermediary) was required to evaluate each attribute by marking an appropriate response. Generally, a 5-point ordinal level scale was used to measure the response.

A judgment sample consisting of all the major resellers in the United Kingdom that act as intermediaries for U.S. forest products (solid wood products or wood composites) was chosen. Resellers were initially selected from all available lists of importers, distributors, manufacturers, agents, traders, and other organizations that acted as resellers for U.S. forest products. These resellers transacted either directly from the United States or indirectly (through intermediaries). The final mailing list was produced by cross-referencing with membership lists from the American Hardwood Export Council (AHEC), APA-The Engineered Wood Association, the Southern Forest Products Association, and the Western Wood Products Association (WWPA). Representatives from these associations in the United Kingdom examined the final lists to ensure that no important companies were absent. It was believed that the majority of resellers involved in the purchasing of U.S. wood products would be members of these associations.

The sampling unit was the individual in his or her organizational capacity; thus, the "key informant" method (6,9) was used whereby views expressed by the respondent were assumed to represent organizational strategy. The structured questionnaire was mailed to the individual in each firm who held the responsibility for purchasing decisions. Therefore, the response data represented the perceptions of one reseller (distributor, agent, etc.), obtained from one key informant in each firm.

DATA COLLECTION AND RESPONSE RATES

Postage-paid return envelopes were provided to facilitate an increased response rate (postage stamps were collected from the U.K. prior to mailing). Each questionnaire was numbered to re-

cord the responses. The survey instrument was sent with a cover letter that included a clear statement of the research purpose, an offer to share findings, a promise of confidentiality, an opportunity for anonymity, and a plea to altruism. A second mailing of the questionnaire to non-respondents took place approximately 4 weeks after the initial mailing. A final mailing of a reminder was mailed approximately 7 weeks after the initial mailing.

The pilot survey instrument was pre-tested among a selected group of plywood purchasers in the United Kingdom. Several experts in the field of international sales and marketing in the United States and Europe were asked to review the questionnaire for its content and usefulness. Face and content validity were achieved by analysis of the pretest results. Also, agreement of academic experts and individuals familiar with the markets substantiated the claim that the survey instrument appeared to be accurately reflecting what it was supposed to be measuring. The content and clarity of the questionnaire was also examined by members of top U.S. trade associations in Europe. All comments were reviewed and the questionnaire was amended as appropriate.

The final survey was mailed to 216 resellers in the United Kingdom in October 1995. A response rate of 63 percent was achieved. All respondents were Managing Directors/Chief Operating Officers (CEOs), Purchasing Managers, or other senior management and were deemed "key respondents." These individuals had responsibility over the decisions affecting purchasing of U.S. forest products.

The potential for non-response bias was evaluated using well established methods (8). Responses returned after the first mailing were compared to responses returned after subsequent mailings on several key demographics using a Mann-Whitney U test at the 0.05 level (15). No significant differences were found in the distributions of early and late respondents. This result, combined with the relatively large response rate, deemed the possibility of non-response bias unlikely.

ANALYSIS OF ATTRIBUTE DATA

All returned surveys were checked for incomplete data or response inconsistencies. Mean importance scores were cal-

culated and ranked in order of magnitude. A score of 3 was the midpoint on all scales. Therefore, a score above 3 for the attributes influencing purchasing indicated that the attribute was not important, and a score of less than 3 indicated that the attribute was important. For sources of conflict, a score greater than 3 (the midpoint) indicated relatively high levels of conflict associated with that attribute. For the purposes of this study, scores above 3 were classified as manifest (evident) and scores less than 3 were classified as either latent (underlying) or absent. Attributes that scored very high or very low are given attention in the analysis.

RESULTS

The response profile clearly showed that the timber industry in the United Kingdom is traditional in nature. Sixty-five percent of resellers with hardwood lumber as their primary product had been in business for 50 years or more, with only 12 percent commencing business within the last 10 years. Similarly, resellers that indicated that softwood plywood was their primary product tended to be well established, with 51 percent in business for 50 years or more and only 9 percent had begun business within the past 10 years. Softwood lumber resellers are not as well established, as only 25 percent were in business 50 years or more, and 37 percent established within the last 10 years.

WOOD SPECIES AND TYPE OF PRODUCTS PURCHASED

In general, U.S. hardwoods are used for furniture, flooring, and millwork applications. U.S. softwoods are used in non-structural, higher-value applications such as mouldings and window components and U.S. softwood plywood is used for construction fencing, forms, and low-grade structural applications.

General information provided by the respondents showed that light-colored hardwoods dominated the market for temperate hardwoods. White oak was the most commonly reported hardwood (29.2% of total), followed by white ash (23.2% of total), hard maple (10.9% of total), cherry (9.2% of total), red oak (8.8% of total), walnut (1.7% of total), birch (1.4% of total), and others (15.6% of total). Lighter-colored U.S. hardwoods are used for furniture, flooring, mouldings, and cabinets. Interviewees stated that red oak has good market po-

tential, but that it is unlikely to become more popular as long as white oak is less expensive. The popularity of red alder in Germany over the past few years was not replicated in the United Kingdom, where this species had a reported small share (0.8% of total) of the market.

Eastern spruce (26.3% of total) had the largest reported volume for softwood lumber purchased in the United Kingdom, followed by Douglas-fir (21.8% of total), eastern white pine (15.9% of total), southern yellow pine (13.6% of total), cedar (5.1% of total), western hemlock (3.6% of total), and others (13.6% of total). It is possible that the large volume of eastern spruce reported may consist partially of Canadian eastern spruce that is being re-exported through the United States to the United Kingdom. Common uses for U.S. softwoods are in specialty products such as mouldings, window components, and joinery. The market for western red cedar has been increasing in recent years. Interviewees indicated that the majority of cedar was purchased green and was used for external purposes such as garage doors.

Value-added products purchased were also listed. Flooring (53.2% of total), dimension lumber (21.2% of total), furniture parts (15.0% of total), and panels (10.3% of total) were the most common value-added products reported. Some interviewees indicated a desire to purchase more value-added products, particularly hardwood flooring, sales of which were expected to increase in the United Kingdom over the next few years. They considered light-colored species such as hard maple to be excellent for flooring.

Softwood plywood comprised 95 percent of the panel products market. A small volume of oriented strandboard (OSB) is now beginning to enter the market. Interviewees indicated that the volume of softwood plywood entering the United Kingdom will decrease over the coming years and is likely to be replaced by oriented strandboard (OSB).

PRODUCT ATTRIBUTES

Of the five lumber attributes covered by the survey, *accuracy of grading*, *visual defects*, and *accuracy of moisture content* were ranked highest in importance among resellers of U.S. hardwood lumber and softwood lumber (**Table 1**). Interviewees indicated that grading to U.S. specifications was not sufficient for the requirements of the U.K. market and

that in many cases special grades or product modifications were required. Southern hardwoods were perceived as being lower quality products and were generally less expensive. A commonly reported problem was the unwillingness of many hardwood suppliers to provide consistent lengths and widths. In addition, many interviewees claimed that U.S. suppliers saw green lumber to required dimensions before kiln-drying. This practice ensures that lumber is undersize, as dimensions reduce during the drying process.

One interviewee indicated that sometimes the moisture content of the lumber when shipped was too low, and that a moisture content in the range of 8 to 12 percent would be more appropriate. Two firms claimed that their U.S. suppliers double-count growth rings, with earlywood and latewood each being considered a year's growth. A common visual defect reported were stains associated with sticker marks, particularly with beech, and occasionally with oak. Respondents claimed that these stains can sometimes appear after sanding and varnishing. The presence of a supplier's trademark was the least important product attribute for both hardwood and softwood as most products were either remanufactured or repacked for other customers. Although color was considered a very important attribute for hardwood, it was not considered very important for softwood.

Of the six panel attributes covered by the survey *absence of delamination*, *thickness consistency*, and *surface quality* were the most important affecting purchases (Table 2). These attributes severely affect board quality when deficient and generally result from poor quality control at the mill before shipping. Density consistency was the lowest ranked attribute and is a more critical requirement for products such as oriented strandboard (OSB) and medium density fiberboard (MDF) (not assessed in this study).

PRODUCT-RELATED SOURCES OF CONFLICT

Of the four product-related sources of conflict for solid wood measured by the survey, *visual defects* and *color* were the highest ranked among hardwood lumber resellers (Table 3). However, scores on average were low (< 3.0), indicating that conflicts regarding these attributes were

either absent or infrequent. To avoid conflicts, U.S. suppliers are sometimes required to provide matching grain and matching color because these hardwoods are often destined for high quality end products in the furniture and joinery sectors. *Moisture content* was ranked as a very important purchasing requirement but received a very low score with regard

to conflict. This seems to indicate that U.S. suppliers were consistent in general with drying and were delivering products at the required moisture content.

Accurate grading and *visual defects* were the top-ranked sources of conflict among softwood lumber resellers (Table 3). Again, since the scores for these attributes were low (< 3.0), these conflict

TABLE 1. — Product attributes influencing hardwood and softwood lumber purchasing in the United Kingdom.

Solid wood attributes	Hardwood lumber score (rank) ^a	Softwood lumber score (rank)
Accuracy of grading	1.18 (1)	1.25 (1)
Visual defects	1.53 (2)	1.88 (2)
Accuracy of moisture content	1.61 (3)	2.31 (3)
Color consistency	1.66 (4)	3.06 (4)
Presence of supplier's trademark	3.97 (5)	4.07 (5)

^a 1 = very important; 5 = not important; hardwood lumber (n = 34); softwood lumber (n = 16).

TABLE 2. — Product attributes influencing softwood plywood purchasing in the United Kingdom.

Panel attributes	Softwood plywood score (rank) ^a
Absence of delamination	1.13 (1)
Thickness consistency	1.56 (2)
Surface quality	1.78 (3)
Absence of warp	2.00 (4)
Presence of supplier's trademark	2.00 (4)
Density consistency	2.53 (6)

^a 1 = very important; 5 = not important; softwood plywood (n = 36).

TABLE 3. — Product-related sources of conflict for hardwood and softwood lumber in the United Kingdom.

Sources of conflict (solid wood)	Hardwood lumber score (rank) ^a	Softwood lumber score (rank)
Visual defects	2.46 (1)	2.25 (2)
Color	2.46 (1)	1.63 (4)
Accurate grading	2.09 (3)	2.38 (1)
Moisture content	1.49 (4)	2.00 (3)

^a 1 = seldom disagree; 5 = often disagree; hardwood lumber (n = 34); softwood lumber (n = 16).

TABLE 4. — Product-related sources of conflict for softwood plywood in the United Kingdom.

Sources of conflict (panels)	Softwood plywood score (rank) ^a
Damaged panels	2.48 (1)
Poor surface quality	2.19 (2)
Delamination	2.18 (3)
Warp	2.04 (4)
Environmental concerns	2.00 (5)
Thickness	1.64 (6)
Density variation	1.57 (7)

^a 1 = seldom disagree; 5 = often disagree; softwood plywood (n = 36).

TABLE 5. — Supplier attributes influencing hardwood lumber, softwood lumber, and softwood plywood purchasing in the United Kingdom.

Supplier service attribute	Hardwood lumber score (rank) ^a	Softwood lumber score (rank)	Softwood plywood score (rank)
Load-to-load consistency	1.29 (1)	1.50 (6)	2.06 (10)
Keeps promises	1.38 (2)	1.31 (2)	1.29 (2)
Trustworthy	1.41 (3)	1.06 (1)	1.49 (3)
Response to complaints	1.41 (3)	1.38 (4)	1.80 (6)
Delivery service	1.61 (5)	1.63 (8)	1.66 (5)
Price competitiveness	1.62 (6)	1.31 (2)	1.06 (1)
Presentation	1.65 (7)	1.56 (7)	2.03 (8)
Previous performance	1.79 (8)	1.69 (10)	1.94 (7)
Long-term commitment	1.85 (9)	1.44 (5)	2.11 (12)
Product availability	1.85 (9)	1.75 (11)	1.60 (4)
Packaging	1.88 (11)	1.63 (8)	2.03 (8)
Adapt to your specifications	1.91 (12)	2.19 (17)	3.15 (23)
Helpful in shortages	1.94 (13)	1.88 (13)	2.29 (15)
Reputation	2.06 (14)	1.94 (15)	2.09 (11)
Sales quotation service	2.18 (15)	1.81 (12)	2.34 (16)
After sales service	2.24 (16)	1.88 (13)	2.34 (16)
Willingness to fill small orders	2.30 (17)	2.73 (22)	3.00 (22)
Product range	2.35 (18)	2.50 (20)	2.57 (19)
Helpful sales force	2.41 (19)	2.00 (16)	2.18 (13)
Favorable exchange rate	2.41 (19)	2.27 (19)	2.69 (20)
Technical knowledge	2.58 (21)	2.19 (17)	2.23 (14)
Credit terms	2.82 (22)	3.27 (23)	2.83 (21)
Product information service	2.91 (23)	2.69 (21)	2.46 (18)
Informative advertisements	3.67 (24)	3.75 (24)	3.37 (24)
Product demonstrations	3.79 (25)	4.19 (25)	3.77 (25)

^a 1 = very important; 5 = not important; hardwood lumber ($n = 34$); softwood lumber ($n = 16$); softwood plywood ($n = 36$).

issues do not seem to have reached the manifest stage. Results of the personal interviews indicated that a high percentage of U.S. softwood lumber is used for value-added markets such as joinery, compared with softwood lumber imported from other sources.

Seven product-related sources of conflict for panels were measured by the survey. *Damaged panels*, the number one softwood plywood source of conflict (Table 4), probably results from poor shipping practices. *Poor surface quality*, which was ranked next, may result from inadequate quality control at the production mill. Low scores (< 3.0) indicated that these sources of conflict were either nonexistent or infrequent (Non-manifest).

SUPPLIER ATTRIBUTES

Of the 25 supplier service-related attributes measured by the survey, *load-to-load consistency* and *keeps promises* were ranked as the most important affecting hardwood lumber purchases (Table 5). Customers within this market require close adherence to color and species, and

will often specify a location or even the mill when placing an order. For example, northern "Appalachian" hardwoods were considered to be of superior quality compared to other regions. Southern hardwoods were perceived to have more sapwood and to be of lower quality. The relationship attributes, *keeps promises* and *trustworthy*, also received high rankings by these hardwood lumber purchasers. *Quick response to complaints* and *delivery service* were also important when servicing this market and this highlights the need for close communication between supplier and reseller. Price was only ranked sixth on the list of attributes affecting purchasing of hardwood lumber. This reinforces the concept that U.S. hardwood is a differentiated product and other factors may be more important in influencing purchasing.

The least important supplier attributes affecting purchases of hardwood lumber were related to product promotion, and may indicate that purchasers are more interested in acquiring information about potential products and suppliers first-

hand, rather than through media and exhibition sources.

The most important supplier attributes affecting softwood lumber purchases were *trustworthy*, *keeps promises*, and *price competitiveness* (Table 5). In this highly competitive market, purchasers insist that suppliers be dependable and deliver products on time. The intensity of competition and the low U.S. market share were the most probable reasons that price was ranked highly. *Response to complaints* and *long-term commitment* were also ranked highly as important supplier attributes. Interviewees indicated that some U.S. suppliers have neither the commitment nor the loyalty to resellers in the United Kingdom because the U.S. domestic market is strong. However, some interviewees praised the efforts of other U.S. suppliers who continue to supply and service their U.K. customers even when conditions in the United States are good. These suppliers were generally export oriented, with a large percentage (up to 90%) of their production specifically targeted for the overseas market.

The least important supplier attributes influencing softwood lumber purchasing were related to credit terms and promotion (Table 5). Credit terms were not important, since the usual method of payment was cash-against-documents. Interviewees indicated that they prefer to find out about products from first-hand experience with suppliers.

Price competitiveness was the highest ranked supplier attribute influencing softwood plywood purchases (Table 5). This tends to further illustrate that softwood plywood is a commodity product and that price tends to dominate when choosing a supplier. *Keeps promises* and *trustworthy* were also ranked highly. During interviews, some resellers stated that U.S. suppliers did not have any loyalty, and tended to let U.S. domestic prices dictate pricing in the European market. *Product availability* and *delivery service* were ranked highly and some interviewees indicated that competitive pricing in this market was influenced strongly by both these attributes. *Response to complaints*, especially the resolving of claims, was an important aspect of servicing the U.K. market. Interviewees perceived that many U.S. suppliers do not see the European Union as a major part of their business, and are

slow to respond to resellers when products are deficient. Credit terms were not important as cash-against-documents was the method of payment used. Promotional activities were ranked lowest, which suggests that advertising and participation in trade shows may reap few benefits in this primarily price-driven market.

SUPPLIER-RELATED SOURCES OF CONFLICT

Twelve potential supplier-related sources of conflict were measured by the survey. *Delays in delivery*, *price level*, and *delivery schedule* were among the highest-ranked supplier-related sources of conflict by hardwood lumber resellers, but were not considered manifest (< 3.0) (Table 6). Interviewees indicated that shipments were occasionally late, which sometimes resulted in loss of business.

Price was not a highly ranked attribute influencing purchasing by hardwood lumber resellers, but it was ranked jointly first as a supplier-related source of conflict. Although various factors may be used to differentiate one supplier's product from another, price competitiveness was also a critical factor and was fundamental to maintaining trade. *Minimum order size* was highly ranked and interviewees indicated that some suppliers were only able to provide full containers of the products ordered. The attributes with the lowest rankings were *invoice payment terms*, *cultural differences*, and *language differences*, which illustrate that resellers were very experienced in international trade practices.

Delays in delivery and *price level* were ranked highest as supplier-related sources of conflict for softwood lumber purchasing and had relatively high scores (> 3.0) that can be considered manifest (Table 6). In the largely commodity sector of this market, U.S. softwood lumber faces very tough competition from a variety of sources and, with a very small share of this market, struggles in many instances to compete. The largest suppliers of softwood lumber to this market were the Scandinavians, who have market proximity, European Union membership, and lower prices as competitive advantages. U.S. suppliers should make efforts to further develop specialty markets where these factors are not as critical. Examples of specialty products are non-structural joinery lumber, western hemlock blanks for newel posts, mould-

TABLE 6. — Supplier-related sources of conflict for hardwood lumber, softwood lumber, and softwood plywood purchasing in the United Kingdom.

Sources of conflict	Hardwood lumber score (rank) ^a	Softwood lumber score (rank)	Softwood plywood score (rank)
Delays in delivery	2.68 (1)	3.25 (1)	2.38 (2)
Price level	2.68 (1)	3.13 (2)	3.00 (1)
Delivery schedule	2.50 (3)	2.44 (3)	2.27 (3)
Minimum order size	1.88 (4)	1.94 (6)	1.70 (8)
Promotional issues	1.72 (5)	1.88 (7)	1.58 (10)
Damage in delivery	1.68 (6)	2.07 (5)	2.06 (4)
Lack of technical service	1.59 (7)	2.13 (4)	1.64 (9)
Credit extension	1.58 (8)	1.88 (7)	1.91 (5)
Sales efforts	1.53 (9)	1.73 (10)	1.73 (7)
Invoice payment terms	1.53 (10)	1.81 (9)	1.91 (5)
Cultural differences	1.18 (11)	1.33 (11)	1.41 (11)
Language differences	1.03 (12)	1.27 (12)	1.22 (12)

^a 1 = seldom disagree; 5 = often disagree; hardwood lumber (n = 34); softwood lumber (n = 16); softwood plywood (n = 36).

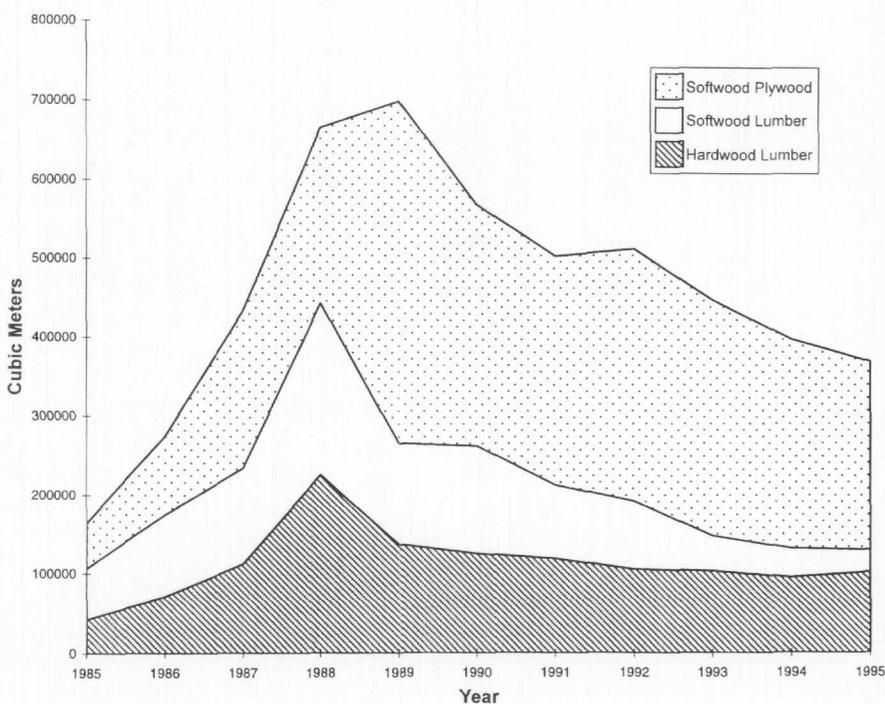


Figure 1. — Volume of U.S. hardwood lumber, softwood lumber, and softwood plywood imported by the United Kingdom, 1985-1995 (14).

ings, and laminated window stock. Since the United States and the United Kingdom share a common language and have many cultural similarities, cultural and language differences did not contribute to conflict.

As expected for a commodity market, *price level* was the top-ranked supplier-related source of conflict by softwood plywood resellers (Table 6). *Delays in delivery*, *delivery schedule*, and *damage*

in delivery were the attributes ranked next. Interviewees indicated that not shipping to schedule can lead to a 2- to 3-week delay, which may have significant repercussions in a market where the price changes on a weekly basis. Shipping lines were under a lot of pressure during times of high demand and the shipping companies may be more to blame than the exporters. This can be both frustrating and expensive for U.K. purchasers.

The remaining attributes had low scores and did not significantly contribute to conflict.

OTHER RELATIONSHIP FACTORS

The majority of resellers had relatively few suppliers from the United States

(Fig. 2). Sixty-five percent of hardwood lumber resellers, 82 percent of softwood lumber resellers, and 83 percent of softwood plywood resellers had 10 or fewer suppliers from the United States. This finding indicates that U.K. resellers tend

to form fewer, more intimate relationships with U.S. suppliers. Only 19 percent of softwood lumber purchasers and 14 percent of softwood plywood purchasers have more than 10 suppliers, which indicates fewer suppliers to these markets than for hardwood. Almost half (47%) of plywood purchasers have two to four suppliers only. The advantage of forming close relationships with resellers is clear. The majority of resellers in all product categories had greater than 100 customers, indicating a very wide distribution of U.S. products beyond the reseller level in the channel (Fig. 3). U.S. suppliers will find it difficult to penetrate markets beyond the reseller level. There may be niches for specialty products such as semi-finished furniture components, but these types of markets generally require large investments of time and patience.

The survey results clearly indicate that relationships can be formed faster than previous studies have suggested. Seventy-six percent of hardwood lumber resellers, 74 percent of softwood lumber resellers, and 71 percent of softwood plywood resellers stated that they purchased within 1 year after their first contact with their most important supplier of U.S. wood products (Fig. 4). If the objective is to form relationships with customers closer to the final market, then it may be likely that a larger investment in time will be required.

Cash-against-documents was the most common method of payment used; 79 percent of hardwood lumber resellers, 80 percent of softwood lumber resellers, and 91 percent of softwood plywood resellers used cash-against-documents as their favored method of payment. The second most common method of payment was an open-account, used by 24 percent of hardwood lumber resellers, 27 percent of softwood lumber resellers, and 6 percent of softwood plywood resellers. This method of payment gave some larger suppliers the opportunity to finance their customers, generally for a period of 30 days. Other methods of payment used by resellers, to a much lesser degree (< 10% of resellers), were consignment sales, cash-in-advance, and letter of credit.

The resellers' predictions for future purchasing from U.S. sources 5 years from the date of the survey were collected. Ninety-seven percent of hardwood lumber resellers and 79 percent of

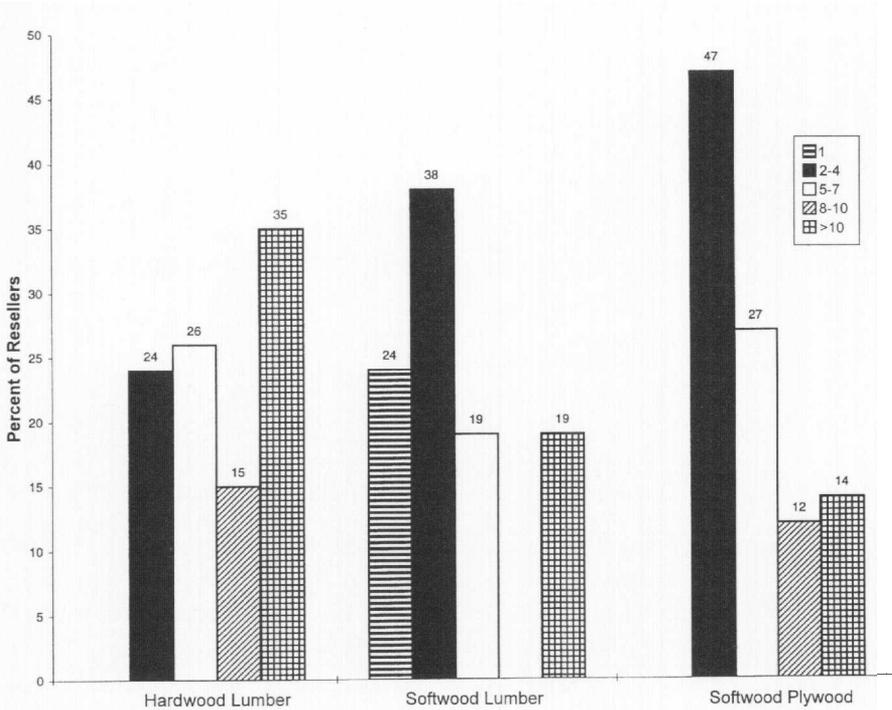


Figure 2. — Percentage of resellers by number of suppliers of U.S. wood products.

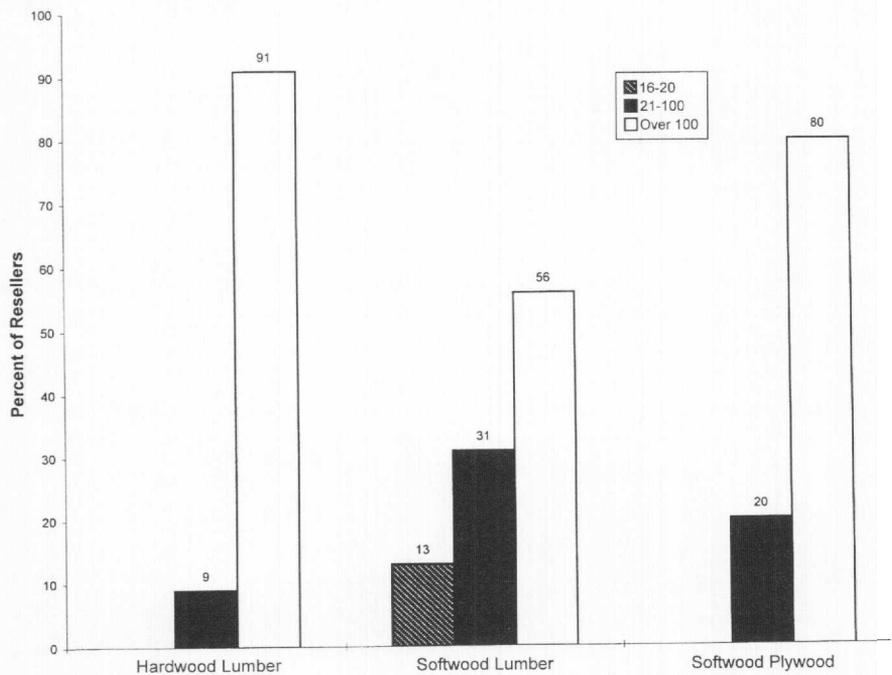


Figure 3. — Percentage of resellers by number of customers.

softwood lumber resellers predicted that their purchases will stay the same or increase over those following 5 years. Softwood plywood resellers were pessimistic about future purchases with 64 percent predicting that their purchasing will decrease or be discontinued over those following 5 years.

SUMMARY AND RECOMMENDATIONS

In the United Kingdom, U.S. hardwoods and softwoods are generally used for high value applications such as furniture, mouldings, and window components. Softwood plywood is a commodity product and is used for low-grade applications such as construction fencing and forms. U.K. resellers have many options when choosing a supplier and much effort is required to gain their confidence and patronage. U.K. resellers of U.S. forest products have a highly dispersed customer base but have relatively few suppliers of U.S. products.

Relationship factors such as *trustworthiness* and *keeps promises* have been shown to be very important when working in the U.K. market. In many cases, U.K. resellers will require U.S. suppliers to provide products to their individual specifications. U.S. suppliers also need to be price competitive. A realistic approach is to base pricing on market conditions in the European Union as opposed to domestic U.S. conditions. The more a product is differentiated from competitor products, the less important price becomes. Specialty markets provide the best opportunity for market share gains for U.S. softwood products, since the Scandinavians dominate this primarily commodity market. Developing close links with a small number of resellers will facilitate the development of specialty markets. Softwood plywood faces the greatest challenge in a market that has been predominantly commodity in nature. The advent of strong competition from OSB and other plywood from Scandinavia, Southeast Asia, and South America will make this a difficult market in which to compete in the years ahead. Plywood suppliers should begin to focus some of their volume on specialty markets such as tongue-and-groove flooring.

Delivery services were a major supplier-related source of conflict across all product categories. Although an extra premium may not necessarily be gained from providing an efficient delivery serv-

ice, poor delivery service will probably result in U.S. suppliers being at a severe competitive disadvantage in relation to competitors. This may result in the loss of existing markets or may close off potential new markets.

In all product categories, the ability to respond to complaints was indicated as important. A systematic approach should be implemented so that when a complaint is received from an overseas customer, it is dealt with in a timely and efficient manner. This may require travel to see the problem, or the use of an intermediary to examine the claim and mediate on behalf of the supplier. The fundamental issue is that a complaint should not become a cause for a breakdown in the relationship.

Commitment to export activity is fundamental for success. Many of the economic considerations in the marketplace are beyond the control of suppliers. However, purchasers who receive quality products in the specified condition and time are likely to continue trading with that supplier. The U.S. supplier should fully integrate an export strategy into the day-to-day activities of its company. An informal partnership approach should be adopted by suppliers of U.S. wood prod-

ucts. Customers ultimately buy satisfaction of needs. This satisfaction is provided for in the form of the distribution channel, supplier and product characteristics, and the existence of a good working relationship. Customer patronage can be expected to shift toward firms that implement the best set of conditions that meet the economic and relationship goals of purchasers. The development of a strong working relationship based on trust will ensure long-term success in the United Kingdom. Finally, the supplier of U.S. forest products should ensure the existence of frequent, effective communication with resellers. The aim is to foster a harmonious working climate with a constant exchange of information about each other's needs, plans, and responsibilities.

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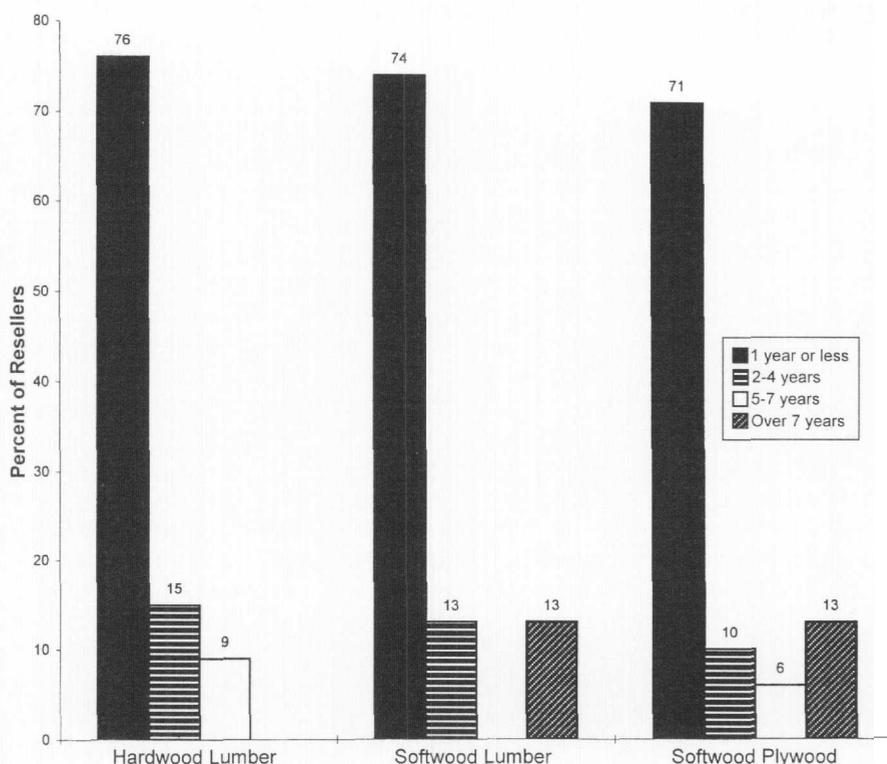


Figure 4. — Length of time between first contact and first purchase.

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