

**AN ANALYSIS OF BRAND NAMING PRACTICES IMPLEMENTED BY ORIENTED
STRANDBOARD/WAFERBOARD MANUFACTURERS**

by

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(ABSTRACT)

North American oriented strandboard/waferboard producers were surveyed to assess the corporate rationale and product policy decisions employed in formulating branding strategies. The effectiveness of their branding policies was examined from a retail perspective by surveying 1,350 building material suppliers operating in each of the 50 states. This investigation also provides a detailed analysis of retailer and manufacturer perceptions concerning target market emphasis and the impact product/distributor attributes have on the oriented strandboard/waferboard purchasing decision.

A majority of the oriented strandboard/waferboard producers have introduced a unique branding strategy. While the rationale behind this strategy varied considerably, over half of the respondents asserted that the brand served to differentiate their product from that of competitors.

Price was perceived by producers and retailers to be the most important attribute from a marketing standpoint. Analysis of market segmentation strategies revealed that roofdeck sheathing applications commanded the highest degree of importance among both manufacturers and retailers. Retailers' perceptions of ideal product attributes centered on maximizing strength/stiffness, while areas of retailer

dissatisfaction focused on the lack of promotional support and dimensional instability.

A number of retailers contended that branding assisted in promoting the sale of their products and also improved the consistency of panel quality. However, both retailers and producers suggested that the variety of different brand names confused the consumer as to the products appropriate end use. Only 35% of the retailers surveyed asserted that branding encouraged buyer preference.

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PREFACE

The thesis is organized into three separate manuscripts, each designed to emphasize a different aspect of the research effort. While each article, formatted for publication purposes, is intended to be unique (inclusive), a certain amount of duplication was unavoidable due to the need to reference data derived from both manufacturer and retail research instruments. Therefore, the organizational style may prove to be somewhat redundant, and the author hopes this causes no inconvenience.

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EXECUTIVE SUMMARY

A research investigation was undertaken to assess the corporate rationale and product positioning/segmentation strategies used by OSB/waferboard manufacturers in formulating their branding policies. The effectiveness of producers' branding efforts was examined at the retail level by surveying 1,350 U.S. building material suppliers. This aspect of the study also incorporated a detailed analysis of retailers' perceptions regarding the importance assigned to structural panel attributes and target market segments.

Nineteen North American wood products concerns were identified as producers of OSB/waferboard panel products. These manufacturers contributed to a combined 1985 productive capacity of 5,440 million ft². Usable data were retrieved from each of the manufacturers using a telephone/mail survey combination. Approximately 95% of these reconstituted structural panel producers introduced a branding strategy. The rationale behind introducing a brand name varied considerably, with 58% of the respondents contending that the brand served to differentiate their product from competing lines.

Analysis of manufacturers' market segmentation strategies revealed that from a promotional standpoint, the retailer was perceived as being the most important market segment. A majority of the producers cited that their product positioning strategies were targeted toward specific panel applications. Further analysis suggested that the roofdeck sheathing end use commanded the highest degree of importance among manufacturers.

Usable mail surveys were received from 386 retail building material suppliers. Approximately 79% of the responding retailers that stocked a structural panel product line sold OSB/waferboard. Market penetration rates for reconstituted structural panel products appeared to be highest in the North Central region, both in terms of stocking frequency and retailer sales volume.

Analysis of strategic target market segments revealed that roofdeck sheathing (end use) and the residential contractor (end user) commanded the highest degree of importance among retailers. Retailers' perceptions regarding ideal structural panel attributes centered on maximizing strength/stiffness, reducing the price, and improving surface uniformity.

While the effectiveness of manufacturers' branding practices at the retail level can be questioned, a few potential benefits of this policy were uncovered. Forty-four percent of the responding retailers agreed that branding assisted in promoting the sales of structural panel products. Almost half of the retailers also suggested that panel quality was more consistent when a brand name was associated with the product.

However, there are a number of factors that limit the effectiveness of producers' branding policies. Both building supply retailers and manufacturers asserted that the variety of different OSB/waferboard brand names confused the consumer as to the appropriate end use of the product. Less than one-third of the producers agreed that an individual branding strategy assisted their firm in controlling a more stable consumer base. Only 35% of the retailers surveyed contended that

branding increased buyer preference, while less than one-third agreed that the respective brands their firm stocked actually attracted a loyal customer base. Also, a majority of the manufacturers and retailers asserted that the end users' purchase decision was primarily a function of price.

LITERATURE REVIEW

The Brand Naming Concept

Branding is the procedure a firm follows in developing, researching, and implementing its brand(s). A brand name identifies the products and services of a seller and serves to differentiate them from those of their competitors (Evans et. al. 1982). A brand should infer something about a product's worth, facilitating trade and promoting efficiency in the market. R. J. Markin (1979) contends that the essence of a brand strategy is to produce and market a brand so that it subsequently ends up in the consumer's awareness set, eventually being categorized in their evoked set as detailed below:

A Conceptualization of Consumer Preference for Brands

I. Brand Awareness Set (*% of buyers aware of the brand*)

A. Evoked Set (*buyer has positive image of specified brand*)

1. Brand Insistence (*buyer searches extensively for brand, reluctant to accept a substitute*)

2. Brand Preference (*buyer favors specific brand but will accept substitute; may purchase out of habit*)

3. Brand Recognition (*buyer remembers having seen or heard of brand; not just brand awareness but a favorable disposition toward brand*)

B. Inert Set (*buyer exhibits neither a positive or negative evaluation of brand*)

C. Inept Set (*buyer rejects brand from purchase decision*)

II. Brand Comprehension (*a measure of the buyer's understanding of the difference between brands*)

A critical variable in the purchasing situation is brand awareness which is defined as the percentage of consumers aware of a brand (Wind 1982). Brand awareness provides one strong measure of the effectiveness of an advertising or promotional campaign. Tied to brand awareness, brand comprehension denotes a buyer's knowledge of the existence of various brands and the specific attributes associated with each. Saunders et al. (1979) suggested that buyers collapse a number of dimensions into one aggregate dimension on which brands are compared, resulting in a predisposition towards a brand by eliminating lower ranked considerations. When the positively ranked dimensions are consistently reinforced by a specific product, brand commitment results. Brand commitment is an attitudinal construct resulting in a pledging or binding of an individual to his/her brand choice.

The importance of brand naming was documented by Y. J. Wind (1982). He stressed that the branding decision is a key variable in new product planning, and is directly tied to the desired product positioning (a brand's objective attributes in relation to other brands) and overall market potential for a given product. For example, in 1979, there were 300,000 brand names in circulation in the United States, with the top 100 advertisers spending in excess of \$12 billion for nation-wide product advertisements to promote their brands (Evans 1982).

Requirements That Favor Implementing a Branding Strategy

Effective use of consumer and industrial branding techniques depends upon a number of factors including the extent to which the product is distinctive (differentiation in product features, benefits or selective appeals) when compared to competing brands (Rewoldt et al. 1981). A key

condition for profitable product branding is that the demand for the product class be substantial enough to support a marketing program and stable enough to ensure that the selling price will provide a profit margin that satisfies the additional costs of promotion (McCarthy 1978). Other considerations influencing brand naming opportunities are the presence of hidden product qualities, ability to use strong emotional motives, access to efficient distribution channels, and the ability to mark the product in a conspicuous manner and produce the goods on a mass production basis (Schwartz 1977).

Branding Rationale

A review of secondary information provided considerable insight into the brand naming of consumer goods, but little published work is available concerning branding techniques at the industrial level. Numerous companies manufacture products that are intrinsically identical to those goods produced by competitors and an increasing number of these firms are attempting to use individual product branding techniques at the consumer level (Saunders et al. 1979). Keon (1984) contended that, for many product classes, physical differences between brands are minimal, usually well below the threshold of many consumers to discriminate among them utilizing purely physical dimensions. This resulted in brands for many of the product classes being distinguished or positioned more on perceived psychological dimensions than on physical ones. Recently, managers have relied heavily on brand promotional campaigns to create this desired perception (Keon 1984).

D. W. Cranins et al. (1980) asserted that a strong brand image would assist manufacturers in drawing their products through the channels of

distribution by establishing preference's among industrial consumers. Lazer and Culley (1983) contended that distributors sold branded products due to better market acceptance, assurance of quality levels, higher profit margins, and the benefits associated with the manufacturer's marketing efforts. If a favorable brand image is consistently maintained, the establishment of a powerful bargaining position with retail buyers and distributors can result, especially when it is difficult for buyers to evaluate the product because of its complexity (Cranins et al. 1980). Potlatch contends in its 1984 annual report that Oxboard established itself with builders as a cost competitive high performance structural panel. If these relevant attributes are indeed tied to the Oxboard brand, then Potlatch may be in the position to capitalize on the benefits associated with a favorable brand image.

Rewoldt, Scott, and Warshaw (1981) asserted that by associating the distinctive product features with a brand name, a strong sharp brand image could be created in a consumer's mind, protecting the unique product qualities that differentiate their product from those of their competitors. This aids manufacturers in segmenting the market, enabling them to create a distinctive image in order to carve out a market niche to provide a foundation for price differentiation (Lazer and Culley 1983). Evans and Berman (1982) contended that price comparisons are reduced as customers perceive brand distinctiveness. Louisiana-Pacific recognized these differentials, indicating in their 1984 annual report that selling their Waferwood brand strictly as a commodity building material would limit potential profit margins, so the corporation

differentiated its product offering by increasing stress ratings by wafer orientation and developed new engineered products.

Consumers have learned to rely on reputable brand name products and will consistently pass up lower priced, off brand products for higher priced brand name goods (Nickels 1984). The brand name serves as a symbol of quality for buyers and assures them that the value of the products and services they purchase are consistent. Roselus (1971) concluded that major brand image evoked a favorable response and was ranked high as a risk reliever. McCarthy (1978) asserted that branding promoted repeat purchasing, which can substantially reduce advertising expenses if consumers can be persuaded to base their purchases on the brand name alone. If repeat purchasing can be promoted, consumer vulnerability to competitor promotional activity can be reduced. Branding gives manufacturers an opportunity to attract and retain a set of consumers whose repeat purchases give the firm more sales stability and long run profit. Hill et al. (1975) contended that branding facilitates entry into new markets by bolstering the corporate image and strengthening a corporation's reputation.

Branding Limitations

Substantial amounts of promotional resources are required to build a brand image. Rewoldt, Scott and Warshaw (1981) asserted that a new product that is not distinctive and has no superior qualities over competing brands, will offer only a mediocre opportunity for an individual brand name. Jones (1964) also indicated product differentiation was favorable when promoting individual brands, asserting that name branding is most effective when the product the

brand represents possess actual qualities that distinguish it from competing goods. Markin (1979) contended that if consumers do not perceive or appreciate any actual performance benefits, then no amount of ingenious promotion will save the brand. It is critical that a new product be individualized in ways that are perceived as important by the consumer (Parasuraman 1983).

Saunders and Watt (1979) conducted a study focusing on the effects of brand name differentiations of identical industrial products and found a high degree of consumer confusion existed because products exhibiting similar characteristics were sold under a variety of brand names. Saunders and Watt (1979) supported the classical product life cycle theory and suggested that new product lines be advertised generically in their introductory stage, enabling consumers to gain a conceptual understanding of the real benefits offered by the product. Parasuraman (1983) examined the popularity of generic brands and reported that an expanding segment of buyers are quite conscious of the product value they are receiving for their money when purchasing unbranded goods. Saunders and Watt (1979) indicated that promotion of the company image would be more profitable than introducing a large number of brand names, where little product differentiation exists. Hill et al. (1975) stressed the importance of the corporate image and insisted that a corporation's reputation as a reliable supplier of quality products reduces the need to develop and promote individual brand images.

The Product: Oriented Strandboard vs. Waferboard

This study is concerned primarily with branding practices and their effect on the marketing of waferboard and oriented strandboard. These two distinct structural panel products are frequently combined into one product class when being discussed in the literature. It is necessary for the purpose of this study to identify the specific product attributes that distinguish these two products from one another.

Waferboard:

Waferboard, defined by the American Plywood Association as a "panel of compressed wafer-like particles or flakes randomly or directionally oriented", was developed by Dr. James Clark in 1957. Although commercially available for over 20 years, only recently has waferboard become a significant factor in the structural panel market with only three mills operating in North America prior to 1979 (Pennington 1984). The initial intention behind commercially developing waferboard was that it enabled producers to capitalize on the abundant resources of low grade aspen (*Populus spp.*) while simultaneously reducing manufacturing costs over conventional plywood. In 1982, the market sectors for waferboard were essentially those that were satisfied by sheathing grade plywood (Woodbridge et. al. 1982). Waferboard continues to penetrate the plywood sheathing markets, selling at a discount to plywood.

Oriented Strandboard:

Oriented strandboard was patented (U.S.) in 1965 by Armin Elemendorf, but the process did not gain acceptance in the 60's and 70's because of a minimal cost advantage over plywood and technical

difficulties, especially in strand orientation (Pennington 1984). The American Plywood Association defined oriented strandboard as a "panel of compressed strand-like particles arranged in layers (usually three to five) oriented at right angles to one another." Oriented strandboard's structural limitations closely parallel those of plywood, possessing a modulus of elasticity and modulus of rupture exceeding those of waferboard (Anon 1983). The oriented strand/waferized panels subsequently carries a greater span rating index than the nonoriented panel. Currently, buyers are discriminating between span rated and nonspan rated waferized panels, with the oriented panels (greater span ratings) selling at a premium to standard waferboard (Anon 1984). But, oriented strandboard's long term dominance in the market will depend to a large extent upon the price differential between OSB and waferboard (Fuller 1984).

North American Reconstituted Structural Panel Industry

OSB/waferboard output was projected to account for 14% of the U.S. structural panel production capacity by the end of 1985 (Fuller 1985). Indicative of the recent corporate interest in OSB/waferboard are the significant capital investments in new production facilities. Louisiana-Pacific leads the way for capital investments in this product category. Ten manufacturing facilities were scheduled to be in operation by the end of 1985, resulting in 1,150 million sq. ft. of production capacity. Louisiana-Pacific indicated in their 1984 annual report that the construction of "Waferwood" facilities represented the largest share of the corporation's capital investments over the past several years. Other major U.S. wood products firms (Georgia Pacific,

Weyerhaeuser, Potlatch, Temple Inland, etc.) are also investing heavily in this product area.

The shift toward OSB/waferboard structural panel production is even more pronounced in Canada where 1984 output exceeded 1,345 million sq. ft. (3/8 inch basis), a gain of 37.8% over 1983 levels, while softwood plywood production declined 10.5% to 2,086 million sq. ft. (Anon 1985).

Fuller (1985) indicated that the net growth in the structural panel market plus an increasing proportion of plywood's market share will be captured by OSB/waferboard panels. The projected market share for OSB/waferboard panels was estimated to be 51.2% by the year 2000, with the largest market penetration occurring in the Northeast and North Central regions (Fuller 1984). OSB/waferboard panels are projected to capture 74% of the total structural panel demand by the year 2000 in these census regions. The South is projected to consume the largest volumes of OSB/waferboard panels, even though the market share is estimated at just 47% for this period (Fuller 1984).

Summary

A review of secondary information provided considerable insight into branding strategies and techniques at the consumer level. In contrast, a limited amount of published work was available concerning branding practices of industrial products and no useful information was available in the public domain pertaining specifically to the name branding of structural panel products.

A number of research studies have been conducted analyzing the North American reconstituted structural panel industry. These studies covered a variety of topics, including an evaluation of recent developments in

the structural panel industry, forecasts of the structural panel demand/supply situation, forecasts of panel prices, estimated profit margins and an analysis of regional capital and production costs. However, no published work was uncovered pertaining specifically to OSB/waferboard manufacturers' product policy decisions, branding strategies, and brand naming effectiveness within the structural panel market.

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OBJECTIVES

A principal objective of this research effort is to examine the impact OSB/waferboard branding strategies have had on the structural panel market. This research study also examines the effectiveness of the manufacturers' strategic marketing efforts as perceived by buyers for retail building suppliers. Specifically these objectives include:

1. Developing a conceptual understanding of product policy decisions utilized in formulating brand naming strategies by OSB/waferboard manufacturers.
2. Determining the most important relevant structural panel attributes, as perceived by retail building supply buyers.
3. Assessing the degree of OSB/waferboard brand awareness and the subsequent level of brand comprehension as perceived by buyers for retail building supply firms.
4. Determining the dimensions which buyers for retail building supply firms use to differentiate OSB/waferboard brands.

**BRANDING, SEGMENTATION, AND POSITIONING STRATEGIES IN
THE RECONSTITUTED STRUCTURAL PANEL MARKET**

Abstract

The North American OSB/waferboard industry was surveyed in order to assess corporate marketing strategies in the reconstituted structural panel market. Ninety-five percent of the reconstituted structural panel producers have introduced a branding strategy. While the rationale behind this strategy varied considerably between producers, 58% of the respondents stressed that the brand served to differentiate their product from competing lines. However, 68% of the respondents believe that the end users' purchasing decision was primarily a function of price. Price was also perceived to be the most important attribute in terms of marketing the product line. Analysis of segmentation strategies, by end use and end user, revealed that roofdeck sheathing was the most important end use from a sales standpoint, while the residential contractor was a principal target of manufacturers' promotional campaigns. Fifty-three percent of the respondents cited their product positioning was targeted toward specific panel applications.

Introduction

The structural panel industry, characterized primarily by large scale producers of commodity products, has traditionally relied on a production oriented marketing approach. Analysts have attributed this to the low degree of product differentiation and the auction-like manner in which prices are set. The primary focus of marketing for many forest products concerns has been the generation of volume sales and the pursuit of cost effectiveness in product distribution (Rich 1979). However, with the rapid emergence of two reconstituted structural panel products, waferboard and oriented strandboard (OSB), the production oriented marketing philosophy of the industry appears to be changing. A majority of the North American OSB/waferboard manufacturers have adopted a brand naming strategy for their reconstituted structural panel line, deviating from their softwood plywood marketing policies, which generally incorporated little or no emphasis on branding.

Waferboard and OSB, competitive substitutes for plywood in a variety of applications, are rapidly penetrating the structural panel markets. In 1985, OSB/waferboard contributed 13.1% of the 25.8 billion ft² in U.S. structural panel production capacity (Anon. 1986). One analyst indicated that future growth in the structural panel market plus an increasing proportion of plywood's market share will be captured by OSB/waferboard products, with market share projections for reconstituted structural panels exceeding 51% by the year 2000 (Fuller 1984).

A review of secondary information provided considerable insight into branding strategies and concepts on a consumer good level (Kraft et. al. 1973, Traylor 1981, Keon 1983, Fry 1967). In contrast, a

limited amount of published literature has been compiled, regarding the branding of industrial products (Saunders and Watt 1979), which are generally confined to less conventional promotional avenues, characterized by narrower exposure and smaller advertising budgets than consumer goods. Information concerning the implementation and effectiveness of brand naming strategies at the wholesale or industrial level by primary wood products firms was largely unavailable (Anon 1965, Kelleher 1985), and no published work was located pertaining specifically to OSB/waferboard.

This paper will focus on assessing the rationale and product policy decisions OSB/waferboard manufacturers employed in formulating their current branding, market segmentation and product positioning strategies.

Methodology

Sample Framework

The Nineteen North American wood product concerns listed below were identified as producers of OSB/waferboard products during 1985.

Manufacturers with production facilities in the U.S.

Louisiana-Pacific
Georgia-Pacific
Potlatch
Weyerhaeuser
Blandin Wood Products
Northwood Pulp & Timber
Martin Lumber Company
J.M. Huber
Temple-Eastex
Oregon Strandboard

Manufacturers with production facilities in Canada

MacMillan Bloedel Ltd.
Weldwood (U.S. Plywood)
Pelican Spruce Mills Ltd.
Waferboard Corporation
Grant Waferboard
Great Lakes Forest Products
Normick Perron Inc.
Malette Waferboard
Forex-Leroy Inc.

Data Collection Procedures:

All 19 North American OSB/waferboard manufacturers were contacted using a telephone interview/mail survey combination. The mail survey portion of the research instrument, distributed upon completion of the telephone questionnaire, was designed to secure information from more thought provoking questions.

Each of the 19 North American OSB/waferboard producers participated in both the telephone and mail surveys. Assuming that all manufacturers were identified for inclusion in the study, the proceeding results represent the entire productive capacity of the North American OSB/waferboard industry in 1985. However, it should be noted that a number of manufacturers are in the process of entering this market (ie. International Paper, Langdale Company).

Respondents

The respondents had a combined 1985 OSB/waferboard productive capacity of 5,440 million ft² (3/8" basis). Productive capacity by firm ranged from 1.18 billion ft² to 22 million ft². U.S. facilities accounted for roughly 67% of the 1985 North American capacity.

It is important to note that the top 3 U.S. manufacturers produced 56% of the total U.S. output, and contributed to 44% of the total North American production capacity. This skewed distribution in firm size must be considered when evaluating panel producers' market strategies.

Considerable effort was made to identify the individual responsible for formulating and implementing market strategies for each firm's OSB/waferboard product line. During the initial telephone conversation, respondents were asked to define their current position or title, which in effect served as a screening mechanism. All respondents indicated they held upper level marketing/management positions and were active participants in the decision making process concerning their firm's OSB/waferboard product line. For example, 84% of the respondents were directly involved in formulating both pricing and target market strategies, while 68% of the respondents indicated they were directly involved with product development. Seventy-eight percent of the survey participants also indicated that their marketing/management responsibilities included formulating product positioning, advertising, and distribution strategies for their firm's reconstituted structural panel line.

Implementation of Branding Strategies

Brand names were being used to promote OSB/waferboard product lines by all but one manufacturer (Table 1). This clearly diverges from the promotion of generic plywood that had typified the structural panel industry.

Producers were questioned concerning the use of marketing research prior to introducing their product line. Only one firm, which controlled 22% of the North American productive capacity in 1985, indicated that no initial research was conducted prior to introducing their product. Thirty-seven percent of the manufacturers, representing a combined 1985 productive capacity of 1.669 billion ft², indicated their firm conducted both in-house marketing research and employed a private consulting agency. Thirty-two percent of the respondents, representing firms with a combined production capacity of 1.258 billion ft², conducted only in-house research, while 26% of the producers relied only on a consulting agency.

Branding Rationale

One of the primary goals of this research effort was to develop a conceptual understanding of the rationale behind the implementation of brand naming strategies by OSB/waferboard producers. To satisfy this objective, respondents were asked to explain why they introduced a separate brand name for their reconstituted structural panel line. The rationale for choosing to/not to introduce a branding strategy varied considerably between manufacturers, and has been categorized into 5 primary areas.

The first and most frequently reported rationale (58% of the producers), was that the brand name served to differentiate their product line from that of their competitors. Manufacturers' attitudes concerning product differentiation were examined by ascertaining the level of agreement or disagreement they attached to a series of statements pertaining to their product line, as illustrated in Table 2.

Forty-seven percent of the respondents agreed with a statement that retailers could not differentiate (on the basis of quality) between their OSB/waferboard brand and that of their primary competitors. This response was surprising, since the effective use of branding techniques generally depends on a number of factors, including the extent to which the product is distinctive when compared to competing product lines (Rewoldt et. al. 1977).

The second area, product identification, was perceived by 26% of the respondents as being of prime importance in the development of their branding strategy. These manufacturers contended that the brand name served as an identification tool, increasing consumer awareness while enabling the consumer to relate specific product attributes and various product lines to the respective manufacturer. Sixty-eight percent of the respondents agreed that their branding strategy provided a higher degree of protection from competitors than by selling their product line generically.

Another factor, cited by 26% of the manufacturers as a basis for implementing a branding strategy, was their claim of being the first oriented strandboard or waferboard producer on the market (or in a regional market). These manufacturers considered reconstituted

structural panel products a specialty line, and wanted to stress that by introducing an individual brand name. Tied to this concept, one firm recently entering the market indicated they chose to introduce an individual branding strategy because other producers had set a branding precedent.

A fourth rationale, interest in capitalizing on a stable consumer base by creating demand for the firm's respective brand, was also mentioned as a basis for introducing a separate brand name. Manufacturers asserted that by developing a positive brand image for their reconstituted panel products a resulting loyal consumer base (i.e. professional contractors) could be cultivated. Cranins et. al. (1980) supported this rationale, indicating that if a favorable brand image is consistently maintained, the establishment of a powerful bargaining position with retail buyers can result, especially when it is difficult for buyers to evaluate the product because of its complexity. However, only 37% of the respondents agreed with the statement that their firm can control a more stable consumer base by employing an individual brand naming strategy for their OSB/waferboard line.

Finally, two respondents, implied that a brand name did not have any impact on the purchasing decision especially when the panel was not oriented. One marketing executive stressed that OSB/waferboard panels are commodity products and that the purchasing decision is dictated by product availability and price. This statement was confirmed when manufacturers' attitudes were examined, revealing that 68% of the respondents felt that the end users' purchasing decision involving OSB/waferboard is primarily a function of price.

Perceived Benefits Associated with Branding

Thirty-seven percent of the respondents indicated that one benefit afforded by a branding strategy was the ability to differentiate their product line from their competitors. Thirty-two percent of the respondents asserted that brand naming their panel line assisted in promoting product recognition in target markets at both the distributor and consumer level. Respondents also identified a list of other benefits associated with introducing a brand naming strategy. These included: the promotion of repeat purchasing/brand loyalty, assisting the firm in evaluating its position on the market, reducing consumer confusion with competitors' product lines, enhancing the firms' ability to market a franchise for the product, and enabling the firm to command a higher market price. Evans and Berman (1982) also identified a number of these benefits and contended that price comparisons are reduced as customers perceive brand distinctiveness. Nickels (1984) reported that consumers have learned to rely on reputable brand name products and will consistently pass up lower priced, off brand goods for higher priced brand named products. It should be noted; however, that 16% of the manufacturers indicated that a branding strategy afforded their firm no particular benefit.

Market Segmentation Strategies

Before strategic market segmentation practices can be examined, it is necessary to identify the product classification boundaries and regional distribution patterns for reconstituted structural panels.

The respondents categorized reconstituted structural panel products on the basis of physical properties/composition (ie. flake arrangement,

flake size, and individual flake/strand geometry). Three reconstituted structural panel product classes were defined: waferboard produced by 58% of the firms, oriented strandboard manufactured by 42%, and oriented waferboard produced by 26%. Four of these companies manufactured both an oriented waferboard and waferboard while one firm produced both OSB and waferboard. In addition, 32% of the OSB/waferboard manufacturers also produce a plywood panel product.

Geographic Segmentation

Manufacturers identified the geographic region(s) in which their product lines were being distributed. The results were categorized into 5 regions. The Canadian market comprised one region and the United States was segmented into 4: the Northeast, South, North Central, and West as defined by the U.S. Census Bureau (Figure 1).

Reconstituted structural panels were distributed by 74% of the producers in the Northeast making it the most competitive region in terms of the number of manufacturers vying for market share. The South and North Central regions followed, with 63% of the firms distributing their product line in these areas. Forty-two percent of the manufacturers distributed a portion of their output in the Canadian market, while only 21% of the producers distributed their product line in the Western region. Fifteen of the manufacturers distributed their product in 2 or more of the 5 regions.

Marketing executives identified the single geographic region in which their OSB/waferboard brand had achieved its largest market share. The Northeast (nonweighted) and North Central (weighted) regions had the highest degree of importance in terms of market share (Figure 2). Only

one Canadian producer indicated that market share emphasis was directed primarily toward domestic markets.

User/Distributor Segmentation Strategies

Respondents were asked to identify the end user markets their firm was targeting with current promotional campaigns. Sixty-three percent of the producers were placing some promotional emphasis on the residential contractor, followed by the Do-It-Yourself (DIY) markets with 32%, wholesaler and industrial markets with 26% each, and nonresidential contractors with 10%.

Producers were then requested to assess the degree of importance currently being placed on the OSB/waferboard user/distributor segments by their respective promotional campaigns. Each potential target market segment was evaluated by the manufacturer using a five point scale (1=extremely important to 5=not at all important). Mean scores were then compiled for each market segment by averaging item scores across respondents, as displayed in Table 3. Weighted mean scores, based on the 1985 OSB/waferboard production levels of the manufacturers, were also compiled for each segment.

Based on the non-weighted mean scores, the retail market was considered to carry the greatest degree of importance (mean score of 2.00) in terms of promotional emphasis by the manufacturers. This was closely followed by the wholesaler segment (mean score of 2.05), in which 63% of the respondents rated this target market extremely important to their firm's promotional campaign. The least important segment was the industrial market (mean score of 3.47), with 32% of the manufacturers indicating this target market was of no importance in

promotional strategies.

A significant difference between the manufacturer's mean importance scores was observed ($p < .001$) when a one-way analysis of variance was applied.¹ Further analysis, employing a Fisher's least significant difference procedure, suggested that while mean importance scores for the retailer, wholesaler, residential contractor, and mobile home builder segments were indistinguishable from one another, they represented a greater degree of importance to the manufacturers in terms of promotional emphasis (lower mean scores) than the DIY, nonresidential contractor and industrial segments which were also indistinguishable.²

End Use Segmentation Strategies

Market segmentation strategies were also evaluated on the basis of the relative importance each OSB/waferboard end use represents. Five primary end use categories were defined as detailed in Figure 3. Marketing executives from each firm divided 100 points between OSB/waferboard end uses on the basis of relative importance to their firm (i.e. the total amount of sales dollars each end use category generates). Mean scores were then compiled by averaging scores across each end use category.

The most important end use, in terms of sales generated, was roofdeck sheathing (mean score of 52%). Industrial applications ranked last with a mean score of 6%. Mean scores, weighted in terms of 1985 production levels for each of the end use categories, deviated little from non-weighted means, both in terms of magnitude and rank.

A significant difference was detected between the mean scores for each end use category as revealed by a one-way analysis of variance

($p < .001$). The FSD procedure was applied, revealing four distinct groupings in which roofdeck sheathing was perceived as being significantly more important to the manufacturer in terms of sales generated as displayed below:

{Roofdeck S.} > {Subflooring} > {Wall S.} > {DIY, Industrial Uses}

Additional tests, employing a one-way analysis of variance, suggested that there was insufficient evidence to conclude that a relationship existed between end use and region ($.05 < p < .10$).

Product Positioning Strategies

A key decision variable that must be addressed before implementing a product positioning strategy is the level or degree of product differentiation within a specific product class. Rewoldt, Scott, and Warshaw (1977) asserted that by associating distinctive product features with a brand name, a sharp brand image can be created in the consumers' mind. This aids manufacturers in segmenting the market, enabling them to carve out a market niche in order to provide a foundation for price differentiation (Lazer and Culley 1983). Therefore, respondents were asked to identify the unique structural panel characteristics/attributes which differentiate their firm's product line from that of their competitors and then to assign importance values to these company/product attributes.

Product Differentiation

Thirty-two percent of the respondents indicated that their firm's product line was differentiated on the basis of quality. The term quality was used in a variety of different contexts by the producers,

such as quality of construction, highest consistent quality, quality in appearance, and the highest quality panel on the market. Other differentiating attributes that producers identified included the use of phenolic resin, species mix, flake geometry, panel construction, and electrostatic flake alignment.

The other primary category, defined as no discernable difference between brands, was identified by 32% of the producers which combined, represented 17% of the 1985 OSB/waferboard production capacity. One manufacturer stressed that with the exception of the differences between oriented strandboard and waferboard, no discernable difference exists between the various brands.

It is interesting to note however, that while a number of the producers stressed that there were no major differences between brands, 58% of the respondents (representing firms that controlled 80% of the 1985 production capacity) agreed that retailers in their primary target markets could identify specific characteristics associated with their product (Table 2).

Product/Company Attributes

Respondents evaluated a list of product/company attributes in terms of importance to the marketability of their firm's OSB/waferboard product line by rating each attribute on a five point scale (1=extremely important to 5=not at all important). Mean scores were then compiled for each attribute by averaging item scores across respondents, as displayed in Table 4.

Price was perceived by respondents to be the most important product/company attribute (mean score of 1.68) in terms of marketing

their product lines, with 63% of the manufacturers rating price as extremely important. Service support, strength/stiffness and dimensional stability closely followed (mean score of 1.79, 1.84, and 1.89 respectively) with 42% of the respondents rating these attributes extremely important to the marketability of their product. Impact resistance ranked lowest (mean score of 2.99) in terms of importance among both product and company attributes.

Significant differences were detected between importance scores for the product attributes by employing a one-way analysis of variance ($p < .001$). Further analysis (ie. FSD procedure) suggested, that while mean importance scores for price were statistically indistinguishable from panel strength/stiffness, dimensional stability and durability, it carried a greater degree of importance among respondents in terms of the marketability of their firm's product line, than panel weight, uniformity, racking and impact resistance. No significant differences were observed between mean importance scores for the designated company attributes when the data was subjected to a one-way analysis of variance ($.10 < p < .25$).

Positioning Strategies

Finally, as Y. J. Wind (1982) reported, the branding concept is a key decision variable and is tied directly to the desired product position (a brand's objective attributes in relation to other brands) and overall market potential for a given product. Therefore, respondents were directly questioned concerning their firm's product positioning strategies. Eighteen of the manufacturers, representing firms that commanded 98.7% of the 1985 OSB/waferboard productive

capacity, indicated that a product positioning strategy had been implemented by their firm. Fifty-three percent of the respondents specified that their product positioning strategy was targeted toward specific applications, while 47% of the producers positioned their brand against competing lines. Other manufacturers positioned their brand on use category/market segments, on specific product attributes, and on product benefits (Table 5).

Summary

Nineteen North American OSB/waferboard producers were identified. Their 1985 OSB/waferboard capacity was 5,440 million ft², with 67% of that capacity located in the U.S. The top 3 U.S. manufacturers produced 56% of the total U.S. output and represented 44% of the North American production capacity.

Seventy-three percent of the producers used a unique brand name, with only 1 producer distributing their product line strictly on a generic basis. While the rationale behind a branding strategy varied considerably between producers, 58% indicated the brand name served to differentiate their product line from that of their competitors. However, the actual purchasing decision, was believed to be primarily a function of price and product availability. This statement was confirmed when manufacturers attitudes were examined, revealing that 68% of the respondents felt that the end users' purchasing decision is primarily a function of price.

The strategic importance of various market segments was examined, revealing that the retail market was considered to be of primary importance in terms of promotional emphasis, followed closely by the

wholesaler and residential contractor segments. A statistical analysis suggested, that retailer, wholesaler, residential contractor, and mobile home builder segments are more important than DIY, nonresidential contractor and industrial segments.

Market segmentation strategies were also evaluated on the basis of end use categories, with roofdeck sheathing ranking highest in terms of importance. This end use also proved to be statistically more important to manufacturers (in terms of sales dollars generated) than all other structural applications.

Price was perceived by respondents to be the most important product/company attribute in terms of marketing their respective product lines, followed by service support, strength/stiffness, and dimensional stability. A statistical analysis of the product attribute data revealed that price, strength/stiffness, dimensional stability and durability carried a greater degree of importance among respondents than panel weight, uniformity, racking and impact resistance.

Ninety-five percent of the OSB/waferboard manufacturers, indicated they employed a product positioning strategy, with 53% of the respondents citing their positioning strategy was targeted toward specific panel applications.

Footnotes

Note:

The criteria used in evaluating the performance of the hypothesis tests detailed in this article is based upon the probability of type I and type II errors. In accordance with the Neyman-Pearson theory, the type I error is more serious than the type II and its probability must be controlled (Koopmans 1981). Control is achieved by assigning a significance level to the test. A traditional level of .05 was selected for each of the tests defined below. For the purposes of this study, a .05 significance level adequately satisfies any validity and sensitivity concerns which may arise.

1. The one-way analysis of variance was employed to detect differences in the frequency distributions of a measurement variable (interval scale) for $k=3$ or more populations (Koopmans 1981). The assumptions underlying the one-way analysis of variance are the following: (1) Distributions of the measurement variable of interest for the k populations are assumed to be normal. (2) Standard deviations are assumed to be equal. (3) The assumption of sample-to-sample independence is made.
2. The Fisher least significant difference (FSD) method, a multiple-comparison procedure, is a two-step process for comparing individual pairs of population means. The first step consists of a standard one-way analysis of variance (ANOVA), generally carried out at the 5% significance level (Koopmans 1981). The second step of the procedure is carried out only if H_0 is rejected. The second step essentially consists of the application of two-sample t tests to every pair of means. Means are segmented into different groups if H_0 is rejected. The assumptions for this test are the same as those defined for the ANOVA which provides an initial, simultaneous screening of all differences and holds the experimental error rate for the FSD procedure very close to the significance level used for the ANOVA.

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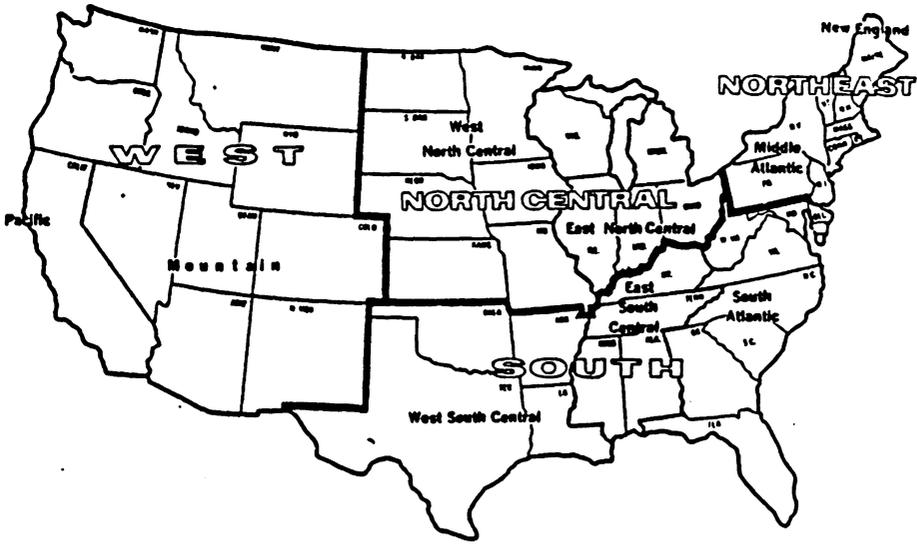


Figure 1.—Geographic breakdown of the four regional market segments as defined by the U.S. Census Bureau.

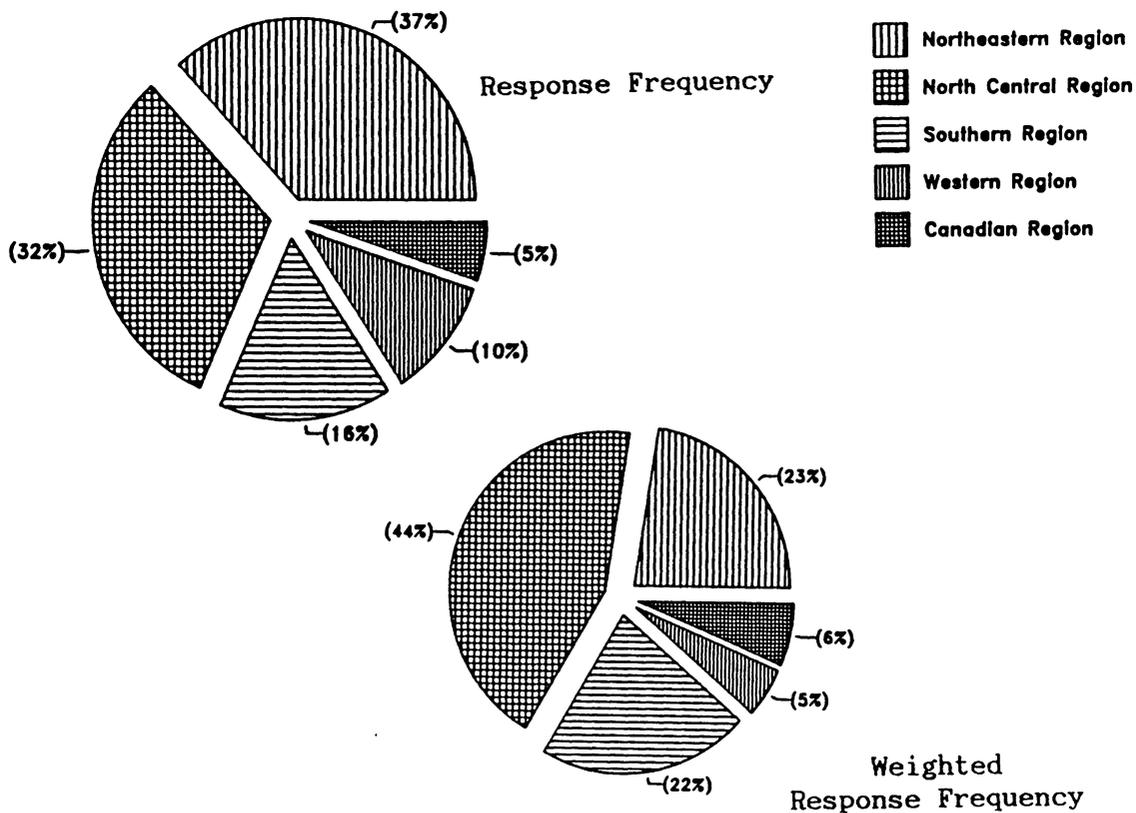


Figure 2.--Manufacturers' perceptions of the single geographic region commanding the largest market share for their panel line.

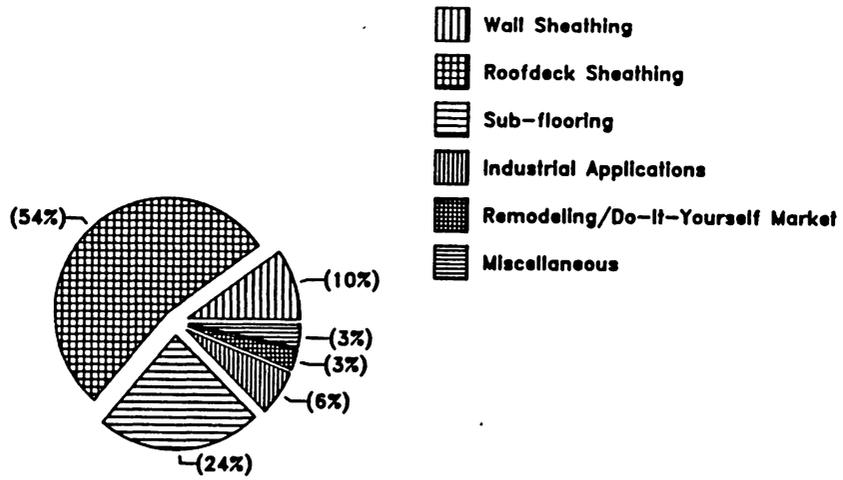


Figure 3.--Relative importance (in terms of sales generated) of oriented strandboard/waferboard end uses as perceived by producers.

TABLE 1.--*Summary of brand naming practices employed by OSB/waferboard manufacturers.*

	Responses	Frequency	Weighted Frequency ^a
Manufacturers' sell their panel product under a brand name in which the terms waferboard and strandboard are not incorporated in the name.	12	63.2	68.4
Manufacturers' sell a portion of their output under a distributor's brand name while selling the remaining portion under their own brand name (terms waferboard and strandboard are not incorporated in the name).	2	10.5	5.1
Manufacturers' employ both a generic and brand naming strategy in selling their OSB/waferboard product line.	1	5.3	4.4
Manufacturers' sell their output under a brand name or logo that incorporates the term waferboard or strandboard in identifying their respective lines.	3	15.8	19.1
Manufacturers' sell their panel product generically with no specific brand name associated with their output.	1	5.3	2.9
	19	100.1	99.9 ^b

^aFrequencies are weighted in terms of 1985 production capacities for respective firms represented in each category.

^bColumn frequencies may not equate to 100% due to rounding.

TABLE 2.--Manufacturers' attitudes concerning statements related to brand naming concepts and product differentiation within the OSB/waferboard market.

	Frequency of Response					Mean Score	Weighted Mean Score ^a
	Strongly Disagree -2	Disagree -1	Neither Agree Nor Disagree 0	Agree 1	Strongly Agree 2		
	------(%)-----						
<u>Branding Perceptions</u>							
Retailers cannot differentiate (on the basis of quality) between your OSB/waferboard brand and that of your primary competitors.	21.1 (17.9) ^b	26.3 (24.6)	5.3 (21.8)	47.4 (35.6)	0.0 (0.0)	-.21	-.25
Brand naming your OSB/waferboard line provides a higher degree of protection from competitors than does selling your line generically.	0.0 (0.0)	10.5 (4.8)	21.1 (9.9)	57.9 (75.7)	10.5 (9.5)	.68	.90
Your firm can control a more stable consumer base by employing an individual brand naming strategy for your OSB/waferboard line.	0.0 (0.0)	21.1 (22.7)	42.1 (47.5)	36.8 (29.7)	0.0 (0.0)	.15	.07
The end users' purchasing decision involving an OSB/waferboard panel product is primarily a function of price	0.0 (0.0)	10.5 (10.6)	21.1 (34.9)	42.1 (24.3)	26.3 (30.1)	.84	.74
The variety of different OSB/waferboard brand names on the market has resulted in confusing the consumer as to the correct end use of the panel product.	0.0 (0.0)	21.1 (12.5)	21.1 (14.0)	47.4 (53.5)	10.5 (19.9)	.47	.81
Retailers in your primary target market can identify specific characteristics associated with your product.	0.0 (0.0)	26.3 (13.8)	15.8 (6.1)	42.1 (64.5)	15.8 (15.5)	.47	.82

^aMean scores are weighted in terms of 1985 production capacities for respective firms represented in each category.

^bFrequencies are weighted in terms of 1985 production capacities for respective firms represented in each category.

TABLE 3.--Degree of importance assigned to specified OSB/waferboard target markets by corporate promotional campaigns.

Target Markets	Frequency of Responses					Mean Score	Weighted Mean Score ^a
	Extremely Important 1	2	Important 3	4	Not at All Important 5		
	------(%)-----						
Retailers	47.4 (57.1) ^b	15.8 (8.6)	26.3 (26.4)	10.5 (7.8)	0.0 (0.0)	2.0	1.8
Wholesalers	63.2 (60.8)	5.3 (2.0)	5.3 (2.7)	15.8 (23.8)	10.5 (10.6)	2.1	2.2
Residential Contractors	31.6 (47.4)	21.1 (12.7)	36.8 (30.3)	5.3 (4.6)	5.3 (4.9)	2.3	2.1
Mobile Home Builders	15.8 (11.9)	42.1 (40.3)	21.1 (27.7)	21.1 (20.0)	0.0 (0.0)	2.5	2.6
Modular Builders	21.1 (14.2)	31.6 (49.5)	26.3 (19.3)	10.5 (7.8)	10.5 (9.1)	2.6	2.5
Do-It-Yourself Market	10.5 (8.9)	10.5 (5.0)	31.6 (40.2)	31.6 (21.3)	15.8 (24.5)	3.3	3.5
Nonresidential Contractors	15.8 (13.3)	5.3 (3.2)	26.3 (16.6)	36.8 (52.8)	15.8 (14.0)	3.3	3.4
Industrial Markets	15.8 (9.3)	10.5 (6.4)	15.8 (10.7)	26.3 (44.7)	31.6 (28.8)	3.5	3.8

^aMean scores are weighted in terms of the 1985 production capacities for the respective manufacturers represented in each market segment.

^bFrequencies are weighted in terms of 1985 production capacities for respective firms represented in each category.

TABLR 4.--Assessment of product/company attributes in terms of their degree of importance to the marketability of the respective producer's OSB/waferboard lines.

	Frequency of Responses					Mean Score	Weighted Mean Score ^a
	Extremely Important 1	2	Important 3	4	Not At All Important 5		
------(%)-----							
Product Attributes							
Price	63.2 (68.0) ^b	5.3 (1.3)	31.5 (30.6)	0.0 (0.0)	0.0 (0.0)	1.68	1.62
Strength/Stiffness	42.1 (42.3)	31.6 (38.5)	26.3 (19.1)	0.0 (0.0)	0.0 (0.0)	1.84	1.77
Dimensional Stability	42.1 (39.5)	26.3 (33.5)	31.5 (26.9)	0.0 (0.0)	0.0 (0.0)	1.89	1.87
Durability	31.6 (22.7)	26.3 (15.2)	36.8 (57.4)	5.3 (4.6)	0.0 (0.0)	2.16	2.44
Panel Weight	31.6 (31.6)	21.1 (10.2)	26.3 (20.9)	21.1 (37.2)	0.0 (0.0)	2.37	2.64
Surface Uniformity	21.1 (9.7)	26.3 (20.9)	42.1 (32.5)	10.5 (36.8)	0.0 (0.0)	2.42	2.96
Racking	26.3 (16.7)	15.8 (11.9)	21.1 (25.0)	36.8 (46.3)	0.0 (0.0)	2.68	3.01
Impact Resistance	21.1 (9.7)	10.5 (7.3)	26.3 (25.6)	31.6 (50.4)	10.5 (6.9)	2.99	3.37
Company Attributes							
Service Support	36.8 (37.7)	47.5 (48.6)	15.7 (13.6)	0.0 (0.0)	0.0 (0.0)	1.79	1.76
Company Reputation	42.1 (59.5)	21.1 (15.0)	36.8 (25.4)	0.0 (0.0)	0.0 (0.0)	1.95	1.66
Product Line	26.3 (41.4)	26.3 (26.2)	31.5 (20.8)	15.8 (11.5)	0.0 (0.0)	2.07	2.02
Distribution Network	26.3 (29.9)	36.8 (46.3)	26.3 (16.8)	5.3 (2.0)	5.3 (4.9)	2.27	2.06
Brand Name	21.1 (20.5)	31.5 (36.0)	36.8 (39.4)	5.3 (2.0)	5.3 (2.0)	2.42	2.29
Market Coverage	26.3 (16.4)	15.8 (25.6)	47.5 (46.9)	10.5 (11.0)	0.0 (0.0)	2.42	2.53

^aMean scores are weighted in terms of 1985 production capacities for respective manufacturers represented in each attribute category.

^bFrequencies are weighted in terms of 1985 production capacities for respective firms represented in each category.

TABLE 5.—*Product positioning strategies implemented by OSB/waferboard manufacturers.*

Strategies	Responses	Frequency ^a	Weighted Frequency ^b
		(%)	
Positioned for specific applications	10	52.6	46.8
Positioned against competing product lines	9	47.4	33.9
Positioned on specific product attributes	8	42.1	60.3
Positioned for user category/market segments	8	42.1	50.5
Positioned on benefits	7	36.8	34.1

^aColumn frequencies do not sum to 100% due to multiple responses per respondent.

^bFrequencies are weighted in terms of 1985 production capacities for respective manufacturers associated with each product positioning strategy.

**RECONSTITUTED STRUCTURAL PANEL ATTRIBUTES AND TARGET MARKET
EMPHASIS EXAMINED FROM A RETAILERS' PERSPECTIVE**

Abstract

A survey was mailed to 1350 building material retailers to develop a detailed picture of their structural panel target markets and the impact product/distributor attributes have on OSB/waferboard product offerings. Approximately 79% of the 356 responding retailers carrying a structural panel product line, sold OSB/waferboard, while 96% stocked a plywood product. The market penetration of reconstituted structural wood products appeared to be highest in the North Central region, both in terms of stocking frequency and retail sales volume. Analysis of target markets, revealed that roofdeck sheathing (end use) and the residential contractor (end user) commanded the highest degree of importance among retailers. Over 66% of the respondents contended that their decision to purchase an OSB/waferboard product was primarily a function of price. Retailers perceived waferboard to be the cheapest structural panel on the market, while response frequencies were comparatively higher for OSB when evaluated in terms of strength/stiffness, durability, surface uniformity, dimensional stability, and on a performance/quality basis. Retailers perceptions of ideal structural panel attributes centered on maximizing strength/stiffness, reducing the price, and improving surface uniformity, while areas of retailer and consumer dissatisfaction focused on the lack of promotional support and dimensional instability.

Introduction

Waferboard and oriented strandboard (OSB), competitive substitutes for plywood in a variety of applications, are rapidly penetrating structural panel markets. In 1985, OSB/waferboard represented 13.1% of the total 25.8 billion ft² U.S. structural panel capacity (Anon 1986). In contrast, only three waferboard facilities were operating in North America prior to 1979 (Peace 1985). B.F. Fuller (1984) asserted that the net growth in the structural panel market, plus an increasing proportion of plywood's market share, will be captured by OSB/waferboard products, with market share projections exceeding 51% by the year 2000.

Parasuraman (1983) contended, it is critical that new products be individualized in ways that are perceived by buyers as being important. When the positively ranked dimensions are consistently reinforced by a specific product, commitment to the line results. Therefore, it is necessary that manufacturers promote those dimensions that are perceived by the end user as being important. This study identifies the combination of relevant structural panel attributes (dimensions) which are perceived by building supply retailers as being of key importance in their product class/brand purchasing decision.

Saunders and Watt (1979) asserted, consumer confusion persists when buyers are unable to place much confidence in their ability to rate a product on any attribute, which results in lowering predispositions towards a product line, making the main influence on purchasing, impersonal attributes (ie. price and availability). This is especially true for reconstituted product lines where it would be difficult to develop any personal attitudes about a product like OSB/waferboard,

which in many cases is only part of a more important purchase (ie. a house). Therefore, this research effort examines retailers' perceptions regarding product class positioning in order to assess whether reconstituted structural panel products are being purchased primarily on the basis of these impersonal attributes.

Also, an effort was made to assess the impact OSB/waferboard was having on structural panel sales, by ascertaining the level of importance retailers assigned to individual product classes (ie. waferboard, OSB, plywood).

The idealized structural panel attributes identified in this research undertaking, as well as the emphasis being placed on specific target market segments by the retailer, will aid structural panel producers in product design, directing promotional activities and better satisfying consumer demands.

Methodology

Sample Frame

Structural panel buyers for retail building supply firms from each of the 50 states were contacted for inclusion in this research effort. Retailers were randomly selected by sampling from The 1985 Directory of Home Center Operators and Hardware Chains (Friedman 1985). The directory provided a current, comprehensive listing of 6,185 home center/building material retail concerns, which controlled 14,482 building supply facilities.

Data Collection Procedures

A stratified random sample of 1350 retailers was selected from the directory. Four strata were formulated by proportionately distributing the research instrument to each of four regions (as defined by U.S. Census boundaries displayed in Figure 1), based on the percentage of the total number of firms in each specific region. Proportionately distributing the research instrument resulted in 487 firms being contacted in the South (36.2%), 401 in the North Central region (29.7%), 256 in the Northeast (18.9%), and 206 in the West (15.2%). Stratified random sampling was deemed necessary due to geographic and demographic bias, introduced by higher market penetration rates and higher concentration levels of OSB/waferboard manufacturing facilities in the North Central region.

A mail survey served as the vehicle for primary data collection. This method was considered to be the most efficient and cost effective means of securing data distributed over such a broad geographical base

while affording the respondents a high degree of anonymity. A pretest was administered to 50 randomly selected retailers prior to mailing the final draft of the questionnaire. After reviewing the pretest, the questionnaire was revised and mailed to the 1350 firms comprising the sample. In order to maximize response rates, an additional questionnaire was sent three weeks after the initial mailing to those retailers identified as nonrespondents.

Response Rates

Three hundred and ninety-six surveys were returned, resulting in a 30% response rate after adjusting for undeliverable questionnaires (less than 1% of total mailed). Response rate exceeded that of an earlier mail survey effort involving retail building material suppliers (Govett and Sinclair, 1984). This differential in response rate can be attributed primarily to the added responses obtained by conducting a follow-up questionnaire mailing. Usable regional response rates (percentage of 386 total usable responses) varied considerably. The highest response rate was recorded in the West (35%) with 72 usable returns, followed by the North Central region with 132 responses (33%), the South with 124 (26%) and the Northeast with 58 (23%).

Respondents

Firm Size

Building supply retailers were categorized by region on the basis of 1985 annual sales as displayed in Table 1. Sixty-seven percent of the 228 responding retailers grossed less than \$5,000,000 in 1985. Only 7% of the retailers sampled exceeded \$20,000,000 in gross sales.

Product Line

Structural panel products, manufactured using a variety of technologies, can be categorized into six product groups based on panel composition/configuration: veneered (plywood), nonveneered (waferboard, oriented waferboard, oriented strandboard and structural particleboard) and a veneered/nonveneered matrix (comply). Over 92% of the 386 responding retailers stocked at least one of these structural wood products. Ninety-six percent of the 356 respondents carrying structural panels, indicated their firm sold plywood, while 79% stocked a reconstituted line (ie. oriented/nonoriented waferboard, oriented strandboard). Regional percentiles, computed in terms of those building material suppliers not carrying a reconstituted line varied considerably. Forty-two percent of the retailers in the Western region sold only plywood, compared to 11% in the North Central Region.

Approximately 63% (225) of the building supply retailers carrying a structural panel line stocked a nonoriented waferboard product. Oriented strandboard ranked third in terms of response frequency with 55%, while only 20% of the retailers acknowledged selling oriented waferboard. Regional variations, examined in terms of the percentage of firms carrying the various reconstituted products, were also observed as illustrated in Table 2. The percentage of retailers stocking reconstituted structural panel products in the North Central region, exceeded those found in other regions (68%/71% of the firms carried OSB/waferboard). This suggests that market penetration was highest in the North Central region, as confirmed by Fuller (1984).

In order to ascertain the magnitude of importance retailers

assigned to the individual product classes comprising the structural panel market, respondents were requested to evaluate four product categories in terms of the total amount of sales dollars each generated. Building supply retailers divided 100 points between product categories which were then segmented on a regional basis as illustrated in Figure 2. Mean scores were then compiled by averaging point totals for all respondents across each product class category.

Plywood was perceived by retailers as retaining the highest relative importance level in terms of sales dollars generated (mean score of 62%). Oriented strandboard, ranking a distant second (mean score of 19%), surprisingly ranked above nonoriented waferboard (mean score of 15%) which was stocked with higher frequency. A significant difference was detected between mean score values for each product category employing a one-way analysis of variance at a .05 significance level ($p < .001$)¹. A multiple-comparison procedure (Fisher's least significant difference method²- FSD) was then applied, and revealed, four distinct groupings in which plywood was perceived as being significantly more important to retailers in terms of sales generated than reconstituted structural panel products:

{Plywood} > {OSB} > {Waferboard} > {Oriented Waferboard}

A regional analysis of the non-veneered panel importance scores revealed that reconstituted structural panel products achieved the highest mean score values in the North Central region (49%) with OSB contributing to the bulk of that score (28%). It should also be noted that while OSB achieved the highest mean percentile rankings by North Central and Southern retailers, waferboard was considered to contribute

more toward sales in the Northeast and Western regions.

In order to provide a statistical foundation for market penetration levels, which are regionally influenced by production volumes, consumer demands and building codes, a one-way analysis of variance was conducted. The test was designed to detect if mean importance scores for each product category differed by region. There was insufficient evidence to conclude that a significant difference in mean importance scores existed between regions for waferboard and oriented waferboard. This was not the case however, for OSB, where a regional difference in retailers' importance scores was observed. The FSD procedure was applied, revealing with 95% confidence ($p < .001$), that while regional mean importance scores for the Northeast, West and South were statistically indistinguishable, retailers in the North Central region placed a higher degree of importance on OSB in terms of sales generated.

Channels of Distribution

The primary channels of distribution that retailers relied on in purchasing OSB/waferboard panel products, were examined. Fifty percent of the retailers surveyed indicated their firm purchased OSB/waferboard from both an independent wholesaler and direct from the manufacturer, while 39% relied solely on the wholesaler. Regional variations were also evident as detailed in Figure 3. The Chi-square procedure³, a categorical variable comparison method, revealed that regional response frequencies were significantly different for each of the distribution categories ($p < .025$). For example, retailers in the West tended to rely more on the independent wholesaler as opposed to purchasing direct from the manufacturer.

Market Segmentation

An initial step in reviewing the various OSB/waferboard market segments involves evaluating the emphasis being placed on specific target markets by the retailer, both in terms of end use segments and end user categories.

End Use Segments

Target market emphasis was examined from a retail perspective by evaluating the importance respondents assigned to designated end use segments. Four end use categories were defined as illustrated in Figure 4. Retailers divided 100 points between the primary OSB/waferboard end uses on the basis of relative importance to their firm. Mean scores were then compiled by averaging scores across each end use category.

From the retailers' perspective, the most important application was the products use as a roofdeck sheathing material (mean score 46%). Do-It-Yourself (DIY) projects were considered to be the least important (mean score of 12%). In determining if a significant difference existed between mean importance scores for each end use category, a one-way analysis of variance was employed. The hypothesis that none of the end use categories differed with respect to relative mean importance values was strongly rejected ($p < .001$). The FSD procedure was applied, revealing four distinct groupings in which the roofdeck sheathing application was perceived as being significantly more important to retailers from a sales standpoint, than other structural applications.

{Roofdeck} > {Wall Sheathing} > {Subflooring} > {DIY Projects}

Regional variations in relative importance scores for each end use category were also examined. Statistically significant differences (employing a one-way analysis of variance) between regions were evident for wall sheathing ($p < .001$), roofdeck sheathing ($p < .001$), and subflooring applications ($.01 < p < .05$). The FSD procedure was applied to each of the end use categories and subsequent regional differences in mean importance scores were observed:

Wall Sheathing

{NE} > {W, NC} > {NC, S}

Roofdeck Sheathing

{NC, W, S} > {NE}

Subflooring

{W, S, NC} > {W, S, NE}

Significant differences were detected in mean importance scores for the end use categories, between firms carrying a nonoriented product and those stocking an oriented product line (employing a Student's two-sample t test⁴). Differences were observed for the subflooring applications ($.01 < p < .02$) and Do-It-Yourself projects ($.02 < p < .05$). Mean importance values were highest for respondents carrying oriented product lines (21.02 vs. 12.59) when considering the products' use as a subflooring medium, but the reverse held true when the product was used in DIY applications (oriented 11.39 vs. nonoriented 22.28).

End User Segments

The strategic importance of specific end user market segments, was evaluated in terms of the total amount of OSB/waferboard sales volume generated. Mean scores were compiled on a regional basis (employing a five point Lickert scale: Churchill 1983) for each of the market

segments detailed in Table 3.

Based on mean item scores, the residential contractor carried the highest level of importance in all four regions (total mean score of 1.77). Approximately 57% of the respondents indicated this end user segment was extremely important to the generation of OSB/waferboard sales. From the retailers' perspective the least important end user category was the modular builder (mean score of 4.30) with 65% of the retailers indicating this target market was of no importance to product sales volumes.

A significant difference ($p < .001$) between retailers' mean importance scores for the end user segments was revealed (employing a one-way analysis of variance) and the FSD procedure applied. The analysis suggested, with 95% confidence, that mean scores for the four end user categories were statistically distinguishable from one another.

{Residential Contractors} >
 {Nonresidential Contractors} >
 {DIY/Remodeling Market} >
 {Modular Builders}

Regional variations in importance scores for each end user segment were also examined by employing a one-way analysis of variance. In all four instances, the hypothesis of no difference between means could not be rejected ($p > .25$), suggesting that there was insufficient evidence to conclude that a relationship existed.

Attribute Analysis

The long term success of reconstituted structural panel products, will depend to a large extent upon how well the product is aligned with consumer demands. For this reason, an effort was made to identify the

combination of relevant structural panel attributes that were perceived by the retailer as being most important.

The first step was to identify ideal structural panel attributes. A summary of retailers' perceptions, illustrated in Table 4, revealed that of the characteristics identified, the need to increase panel strength/stiffness was mentioned most frequently (41%). Other structural panel characteristics included: a reduction in price (36%), and improvements in surface/thickness uniformity (28%), dimensional stability (25%), and panel durability (19%).

Impact On Purchasing

Respondents also assessed the relative importance specific attributes had on their OSB/waferboard purchasing decision. Mean scores were then compiled for each attribute by averaging item scores across respondents (Table 5). Price and product availability were perceived by retailers as being of greatest importance (both retaining a mean score of 1.68), when considering which particular OSB/waferboard brand to purchase. Service support, durability and strength/stiffness closely followed (mean scores of 1.93, 2.08, and 2.18, respectively), while promotional support and panel weight (mean scores of 3.37 and 3.49) ranked lowest in terms of importance.

A significant difference was observed between mean importance scores for the individual product and manufacturer (distributor) attributes when the data was subjected to a one-way analysis of variance ($p < .001$). The nature of these differences were then examined by employing the FSD procedure. Analysis suggested, with 95% confidence, that of the product attributes listed, price was statistically

distinguishable, exceeding other attributes in terms of its importance to the retailer when considering which product (brand) to purchase:

Durability,
Strength/Stiffness,
{Price} > Dimensional Stability, > {Impact Resistance} > {Weight}
Quality/Performance,
Surface Uniformity

Retailers' analysis of the manufacturer (distributor) attributes suggested that mean scores for product availability, service support and company reputation differed statistically, and exceeded that of other attribute groupings in terms of relative importance:

Availability > Service > Reputation > Sales Support, > Brand Name,
Brand Name Mkt. Support

Regional response differences between mean importance scores of the preceding attributes were analyzed by conducting a one-way analysis of variance. A statistical difference in regional mean scores was not detected ($p > .25$), suggesting retailer location had no significant impact on respondents evaluation of an attribute's importance when considering which particular OSB/waferboard brand to purchase. The importance of product price on the OSB/waferboard purchasing decision was also confirmed by retailers, when questioned as to their level of agreement/disagreement to a series of statements (Table 6). Sixty-seven percent of the respondents indicated that their decision to purchase an OSB/waferboard product line was primarily a function of price. In addition, 69% of the retailers agreed that the professional contractors' purchasing decision, was also dictated by panel price.

Attribute Differences By Product Class

The assessment of product attributes also focused on retailers perceptions of specific product class positions in reference to a series of designated panel characteristics. Respondents identified the single product category (i.e. waferboard, OSB, oriented waferboard, plywood, or no difference) that best satisfied each of nine corresponding structural panel attributes as displayed in Table 7. The Chi-Square procedure was employed, and revealed that the proportion of responses across the five product class categories was significantly different for each attribute examined ($p < .001$).

Eighty-two percent of the 218 respondents, perceived nonoriented waferboard to be the cheapest structural panel product on the market. Response frequencies were comparatively higher for OSB when retailers evaluated the four product classes in terms of strength/stiffness, durability, surface uniformity, dimensional stability, and on a performance/quality basis. Plywood exceeded OSB in response frequency only in terms of impact resistance and weight (lightest). This was surprising, since 87% of the 1985 annual structural panel capacity in the U.S. was in plywood (Anon. 1986). Oriented waferboard ranked a distant last in terms of total response frequency for each of the designated attributes.

Note that regional variations in response frequencies were quite evident. North Central and Southern based retailers favored reconstituted products, while the Western and Northeastern respondents placed more emphasis on plywood when considering panel durability, dimensional stability, impact resistance, and panel performance/quality.

Product Substitution

Retailers attitudes pertaining to product substitution were questioned. Sixty-six percent of the respondents agreed that plywood and OSB/waferboard products are being used interchangeably by professional contractors/builders (Table 6). A one-way analysis of variance revealed a statistically significant difference ($.001 < p < .01$) between regional mean response scores for the preceding statement. Further analysis, employing the FSD procedure, suggests that retailers operating in the West (mean=.92) were in greater agreement with the statement concerning product substitution, than respondents located in the Northeast (mean=.22) and South (mean=.29) as illustrated below:

$$\{W, NC\} > \{NC, S, NE\}$$

Only 28% of the retailers questioned disagreed with the concept that most DIY customers have a strong preference for plywood over that of OSB/waferboard. A one-way analysis of variance was conducted, to determine if a regional difference in mean agreement/disagreement response scores was evident. The null hypothesis could not be rejected, suggesting there was insufficient evidence to conclude that a difference in terms of the level of retailer agreement existed.

Product Improvements

Finally, in an effort to focus more precisely on the importance of specific attributes, respondents perceptions were investigated regarding panel improvements designed to increase retail sales. Table 8 summarizes these modifications and suggests on the basis of response frequency (33% of the 101 respondents) the need to increase

promotional/marketing support. Other areas that warrant manufacturers attention, included: improvements in dimensional stability, price reductions (increasing the differential with plywood), and increasing panel weatherability (moisture resistance).

In order to gain additional insight into potential panel improvements, retailers were asked to identify the primary areas of consumer dissatisfaction encountered in selling OSB/waferboard products. Of the 159 respondents, 32% stressed that dimensional instability (ie. swelling) was a primary area of consumer discontent (see Table 9). The problem of insufficient promotional support surfaced again, with 22% of the respondents reporting that consumers were having difficulty understanding the products' appropriate end uses while also confusing OSB/waferboard with particleboard. Consumer dissatisfaction also stemmed from the products' slippery surface, poor panel durability (ie. flaking), and excessive weight.

Summary

Oriented strandboard/waferboard products are making significant inroads into the retail structural panel market, which has traditionally been characterized as a commodity market, dominated by plywood products. Approximately 73% of the 386 respondents surveyed carried a reconstituted structural panel line, with nonoriented waferboard being stocked with the highest frequency. Plywood was perceived as being significantly more important to the retailers in terms of sales generated (61%) than nonveneered lines.

Retail market segments were evaluated on the basis of OSB/waferboard end use categories. The roofdeck sheathing application was perceived by the respondent as being significantly more important in terms of sales dollars generated than other end uses.

The strategic importance of the various end user market segments were also examined from the retailers' perspective. Results suggest, with 95% confidence, that of the four end user categories defined, the residential contractor was perceived as being most important in terms of sales generated.

Retailers assessed the relative importance specific attributes had on their OSB/waferboard purchase decision. Among manufacturer (distributor) attributes, availability was perceived as being significantly more important to the respondent, followed by service and product line reputation. Price, statistically distinguishable from other product attributes, carried the highest degree of importance among retailers. Sixty-seven percent of the respondents indicated that their decision to purchase an OSB/waferboard product line was primarily a function of price.

The relative position of individual structural panel product classes were examined in reference to a series of designated attributes. Approximately 82% of the respondents, perceived nonoriented waferboard to be the cheapest structural panel product on the market. Response frequencies were comparatively higher for OSB when retailers evaluated the four product classes in terms of strength/stiffness, durability, surface uniformity, dimensional stability, and on a performance quality basis. Plywood exceeded OSB in response frequency only in terms of

impact resistance and weight (lightest). Seventy-two percent of the retailers agreed that most DIY customers have a strong preference for plywood over that of OSB/waferboard.

Respondents perceptions were investigated, regarding panel improvements designed to increase retail sales. The need to increase promotional/marketing support was mentioned most frequently (33%). Other areas warranting manufacturers attention included: improvements in dimensional stability, increasing panel weatherability (moisture resistance) and improvements in panel durability (i.e. flaking).

Footnotes

Note:

The criteria used in evaluating the performance of the hypothesis tests detailed in this article is based upon the probability of type I and type II errors. In accordance with the Neyman-Pearson theory, the type I error is more serious than the type II and its probability must be controlled (Koopmans 1981). Control is achieved by assigning a significance level to the test. A traditional level of .05 was selected for each of the tests defined below. For the purposes of this study, a .05 significance level adequately satisfies any validity and sensitivity concerns which may arise.

1. The one-way analysis of variance was employed to detect differences in the frequency distributions of a measurement variable (interval scale) for $k=3$ or more populations (Koopmans 1981). The assumptions underlying the one-way analysis of variance are the following: (1) Distributions of the measurement variable of interest for the k populations are assumed to be normal. (2) Standard deviations are assumed to be equal. (3) The assumption of sample-to-sample independence is made.
2. The Fisher least significant difference (FSD) method, a multiple-comparison procedure, is a two-step process for comparing individual pairs of population means. The first step consists of a standard one-way analysis of variance (ANOVA), generally carried out at the 5% significance level (Koopmans 1981). The second step of the procedure is carried out only if H_0 is rejected. The second step essentially consists of the application of two-sample t tests to every pair of means. Means are segmented into different groups if H_0 is rejected. The assumptions for this test are the same as those defined for the ANOVA which provides an initial, simultaneous screening of all differences and holds the experimental error rate for the FSD procedure very close to the significance level used for the ANOVA.
3. The Chi-Square procedure, a categorical variable comparison method, is designed to detect differences in population frequency distributions (Koopmans 1981). The assumptions underlying the Chi-Square test are as follows: (1) Samples are randomly selected, (2) Observations are independent and categorized in mutually exclusive groups.
4. The two-sample Student's t test is a procedure used in comparing the frequency distributions of a measurement variable for two populations based on samples from both populations (Koopmans 1981). The basic assumptions underlying this test are as follows: (1) The variable of interest is normally distributed for both populations. (2) Population standard deviations are equal. (3) Random samples are independently taken from the two populations.

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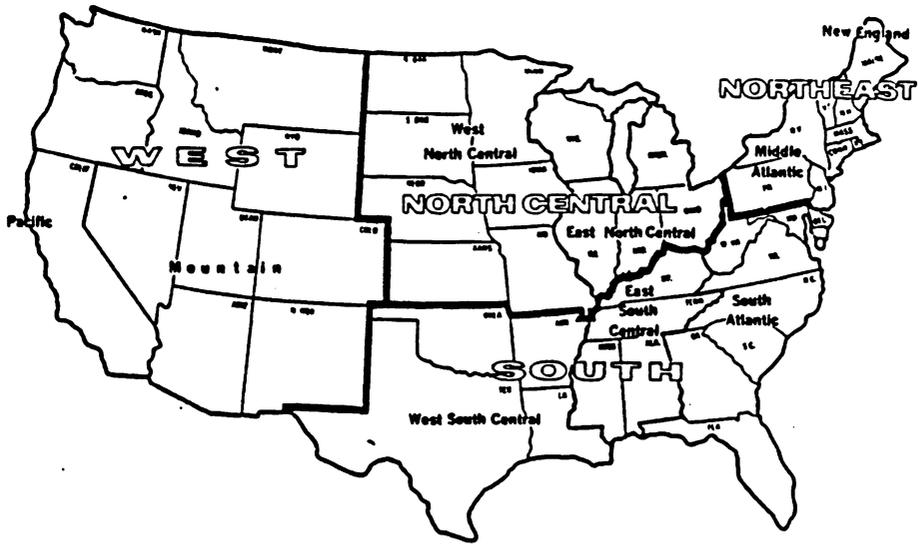


Figure 1.—*Geographic breakdown of the four regional market segments as defined by the U.S. Census Bureau.*

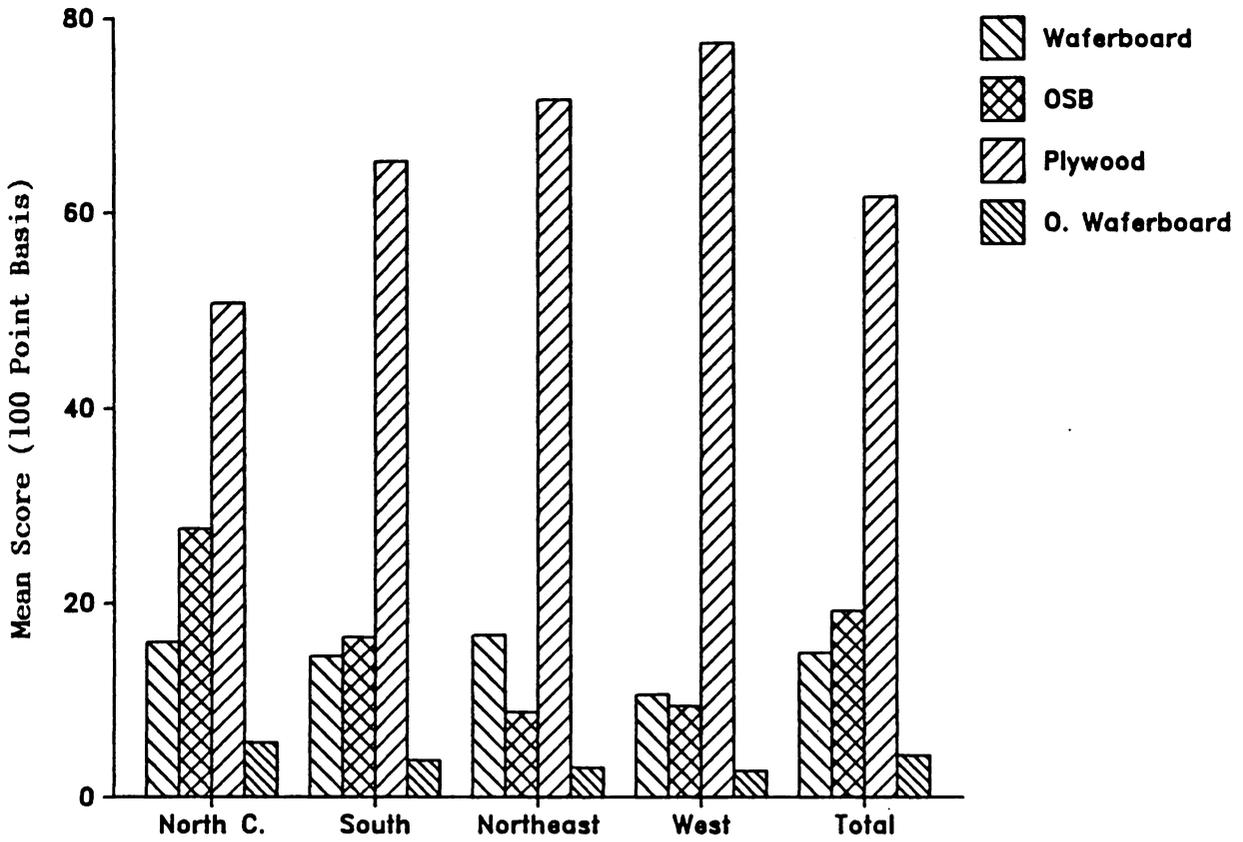


Figure 2.—*Building supply retailers' perceptions of structural panel product class importance levels (based on sales dollars generated).*

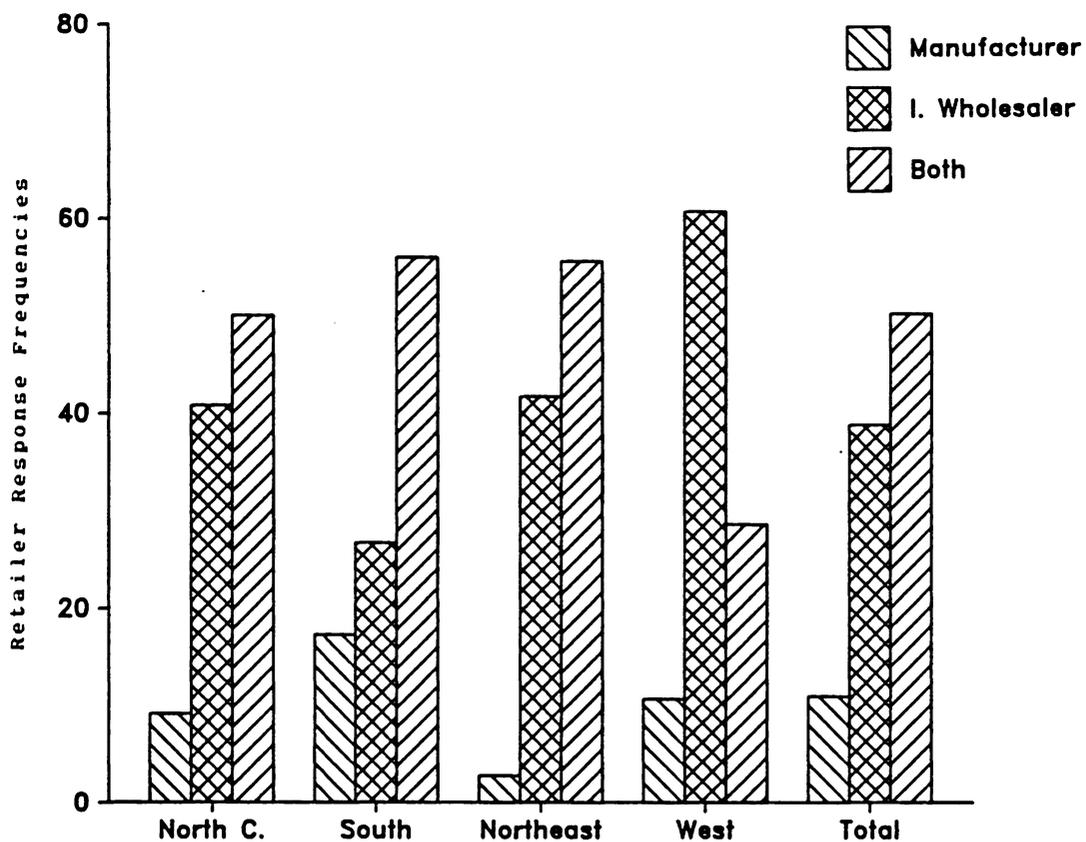


Figure 3.—Regional summary of OSB/waferboard distribution channels examined from a retailers' perspective.

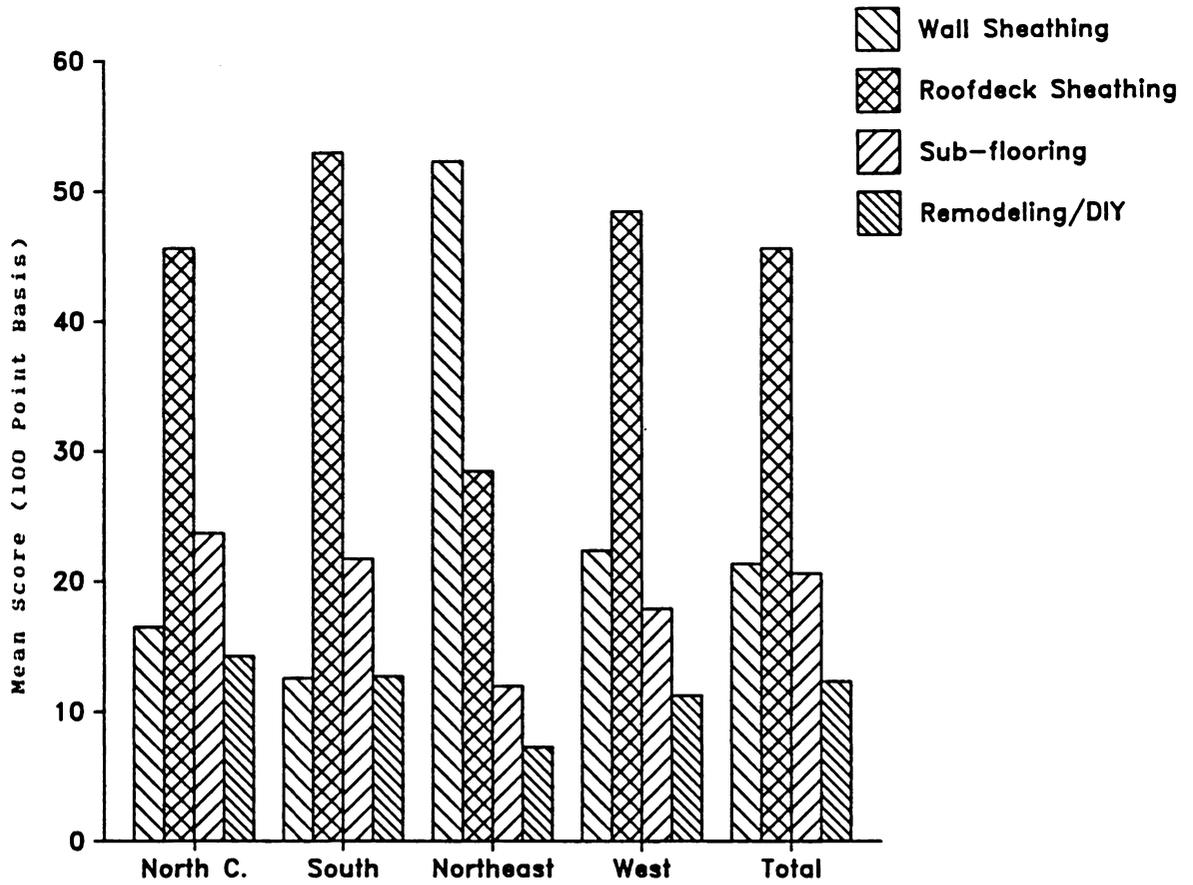


Figure 4.—*Building supply retailers' perceptions regarding the importance of end use market segments, evaluated in terms of sales dollars generated.*

TABLE 1.--Regional breakdown of respondents' 1985 annual retail sales levels.

	Regional Responses (Frequency)				Total
	North Central	South	Northeast	West	
Annual Retail Sales					
Less Than \$1 Million	18 (18.7) ^a	4 (5.6)	2 (6.1)	3 (10.7)	27 (11.8)
\$1 Million To \$2.4 Million	34 (35.4)	26 (36.6)	12 (36.4)	8 (28.6)	80 (35.1)
\$2.5 Million To \$4.9 Million	22 (22.9)	15 (21.1)	4 (12.1)	5 (17.9)	46 (20.2)
\$5 Million To \$9.9 Million	10 (10.4)	9 (12.7)	5 (15.1)	9 (32.1)	33 (14.5)
\$10 Million To \$19.9 Million	9 (9.3)	12 (16.9)	4 (12.1)	2 (7.1)	27 (11.8)
\$20 Million To \$49.9 Million	3 (3.1)	3 (4.2)	6 (18.2)	0 (0.0)	12 (5.3)
More Than \$50 Million	0 (0.0)	2 (2.8)	0 (0.0)	1 (3.6)	3 (1.3)
Total Responses	96 (99.8)^b	71 (99.9)	33 (100.0)	28 (100.0)	228 (100.0)

^a() = percentage response.

^bColumn frequencies may not equate to 100% due to rounding.

TABLE 2.—*Regional breakdown of structural panel products stocked by building supply retailers.*

	Regional Responses (Frequency) ^a				Total
	North Central	South	Northeast	West	
	—%—	—%—	—%—	—%—	—%—
Plywood	118 (92.9) ^b	106 (95.5)	51 (98.1)	66 (100.0)	341 (95.8)
Oriented Strandboard	86 (67.7)	60 (54.0)	26 (50.0)	25 (37.9)	197 (55.3)
Oriented Waferboard	29 (22.8)	18 (16.2)	9 (17.3)	14 (21.2)	70 (19.7)
Structural Particleboard	38 (29.9)	41 (36.9)	15 (28.9)	25 (37.9)	119 (33.4)
Waferboard	90 (70.9)	72 (64.9)	35 (67.3)	28 (42.4)	225 (63.2)

^aFrequencies based on total regional responses for each item category: (North Central 127, South 111, Northeast 52, West 66)

^bColumn response frequencies do not sum to 100% due to multiple responses per respondent.

TABLE 3.—Relative importance (in terms of sales generated) of OSB/waferboard end use segments as perceived by retailers.

	Response (Response Frequency) ^a					Mean Score
	Extremely Important		Important		Not At All Important	
	1	2	3	4	5	
	—x—	—x—	—x—	—x—	—x—	
<u>North Central Region</u>						
Modular Builders	4 (4.8) ^b	3 (3.6)	7 (8.4)	12 (14.5)	57 (68.7)	4.38
Residential Contractors	48 (54.5)	16 (18.2)	18 (20.4)	5 (5.7)	1 (1.1)	1.81
Nonresidential Contractors	12 (13.9)	23 (26.7)	33 (38.4)	16 (18.6)	2 (2.3)	2.68
DIY/Remodeling Markets	13 (15.5)	19 (22.6)	28 (33.3)	17 (20.2)	7 (8.3)	2.83
<u>Southern Region</u>						
Modular Builders	5 (9.4)	1 (1.9)	5 (9.4)	12 (22.6)	30 (56.6)	4.15
Residential Contractors	40 (61.5)	9 (13.8)	10 (15.3)	6 (9.2)	0 (0.0)	1.72
Nonresidential Contractor	11 (18.0)	12 (19.7)	19 (31.1)	16 (26.2)	3 (4.9)	2.80
DIY/Remodeling Markets	10 (15.9)	10 (15.9)	25 (39.7)	10 (15.9)	8 (12.7)	2.94
<u>Northeastern Region</u>						
Modular Builders	0 (0.0)	3 (12.5)	2 (8.3)	1 (4.2)	18 (75.0)	4.42
Residential Contractors	11 (44.0)	5 (20.0)	7 (28.0)	1 (4.0)	1 (4.0)	2.04
Nonresidential Contractor	4 (16.0)	6 (24.0)	9 (36.0)	4 (16.0)	2 (8.0)	2.76
DIY/Remodeling Markets	2 (8.3)	1 (4.2)	12 (50.0)	5 (20.8)	4 (16.7)	3.33
<u>Western Region</u>						
Modular Builders	0 (0.0)	3 (12.0)	3 (12.0)	4 (16.0)	15 (60.0)	4.24
Residential Contractors	17 (68.0)	4 (16.0)	3 (12.0)	1 (4.0)	0 (0.0)	1.52
Nonresidential Contractor	4 (16.0)	3 (12.0)	8 (32.0)	8 (32.0)	2 (8.0)	3.04
DIY/Remodeling Markets	3 (12.0)	4 (16.0)	10 (40.0)	4 (16.0)	4 (16.0)	3.08
<u>Total U.S.</u>						
Modular Builders	9 (4.9)	10 (5.4)	17 (9.2)	29 (15.7)	120 (64.9)	4.30
Residential Contractors	116 (57.1)	34 (16.7)	38 (18.7)	13 (6.4)	2 (1.0)	1.77
Nonresidential Contractor	31 (15.7)	44 (22.3)	69 (35.0)	44 (22.3)	9 (4.6)	2.77
DIY/Remodeling Markets	28 (14.3)	34 (17.3)	75 (38.3)	36 (18.4)	23 (11.7)	2.96

^aFrequencies based on total regional responses for each end user category.

^bRow response frequencies may not equate to 100% due to rounding.

TABLE 4.—*Summary of ideal structural panel attributes, as perceived by building supply retailers.*

	Regional Response Totals				Total ^a
	South	North Central	Northeast	West	
Strength/Stiffness	18	31	9	10	68
Low Priced	13	28	10	10	61
Product Uniformity (Surface/Thickness)	19	14	7	7	47
Dimensionally Stable	14	21	3	4	42
Durable	6	15	3	7	31
Moisture Resistant (Weatherability)	8	10	3	1	22
Maximize Performance/Quality	4	13	3	1	21
Eliminate Delamination	5	7	2	1	15
Light Weight	4	6	2	2	14
Workable (ie. Nailing, Cutting)	6	4	1	2	13
Favorable Appearance	3	5	1	4	13
Eliminate Core Voids	6	5	1	-	12
Improve Span Ratings	4	2	2	3	11
Skid Resistant Surface	5	2	1	1	9
Smooth Surface	3	5	-	-	8
Increase Availability (small quantities)	1	4	-	2	7
Increase Use Of Edge Sealant	4	-	2	-	6
Increase Density	2	3	-	-	5
Improve Profit Margins	2	-	-	1	3
Maximize Impact Resistance	-	1	-	1	2

^aRespondents are represented in more than one item response category (response total: 167).

TABLE 5.—*Assessment of product/company attributes in terms of their degree of importance to the retailer when considering which particular OSB/waferboard brand to purchase.*

	Response (Response Frequency) ^a					Mean Score
	Extremely Important 1	2	Important 3	4	Not At All Important 5	
	—x—	—x—	—x—	—x—	—x—	
<u>Product Attributes</u>						
Price	120 (55.8) ^b	48 (22.3)	43 (20.0)	4 (1.9)	0 (0.0)	1.68
Durability	73 (35.1)	66 (31.7)	55 (26.4)	7 (3.4)	7 (3.4)	2.08
Strength/Stiffness	61 (29.5)	66 (31.9)	67 (32.4)	7 (3.4)	6 (2.9)	2.18
Dimensional Stability	67 (32.7)	60 (29.3)	55 (26.8)	15 (7.3)	8 (3.9)	2.20
Quality/Performance	62 (29.9)	60 (29.0)	56 (27.0)	14 (6.8)	15 (7.2)	2.32
Surface Uniformity	51 (24.5)	62 (29.8)	63 (30.3)	21 (10.1)	11 (5.3)	2.42
Impact Resistance	18 (8.9)	31 (15.3)	82 (40.6)	51 (25.2)	20 (9.9)	3.12
Panel Weight	11 (5.4)	21 (10.3)	64 (31.4)	73 (35.8)	35 (17.2)	3.49
<u>Manufacturer Attributes</u>						
Product Availability	105 (53.0)	60 (30.3)	28 (14.1)	2 (1.0)	3 (1.5)	1.68
Service Support	88 (44.7)	54 (27.4)	38 (19.3)	14 (7.1)	3 (1.5)	1.93
Company Reputation	43 (21.4)	62 (30.8)	61 (30.3)	16 (8.0)	19 (9.4)	2.53
Sales Support/Financial Incentives	28 (14.7)	42 (22.0)	50 (26.2)	48 (25.1)	23 (12.0)	2.98
Brand Name	20 (10.2)	36 (18.4)	63 (32.1)	47 (24.0)	30 (15.3)	3.16
Depth Of Product Line	16 (8.2)	38 (19.4)	61 (31.1)	53 (27.0)	28 (14.3)	3.20
Promotional Support	13 (6.8)	29 (15.3)	57 (30.0)	57 (30.0)	34 (17.9)	3.37

^aFrequencies based on total responses for each item category.

^bRow response frequencies may not equate to 100% due to rounding.

TABLE 6.—Retailers' attitudes concerning statements related to the effectiveness of branding concepts and consumer preference/awareness.

	Responses (Response Frequency) ^a					Mean Score
	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	
	-2	-1	0	1	2	
The OSB/waferboard purchasing decision by retailers is primarily a function of price.	14 (6.6) ^b	32 (15.1)	25 (11.8)	95 (44.8)	46 (21.7)	.60
The professional contractors purchase decision involving an OSB/waferboard panel is primarily a function of price.	6 (2.9)	35 (16.7)	25 (11.9)	101 (48.1)	43 (20.5)	.67
Plywood and OSB/waferboard panel products are being used interchangeably by professional contractors/builders.	12 (5.6)	38 (17.8)	24 (11.3)	112 (52.6)	27 (12.7)	.50
Most DIY customers have a strong preference for plywood over that of OSB/waferboard products.	5 (2.4)	54 (25.6)	50 (23.7)	80 (37.9)	22 (10.4)	.28

^aFrequency based on total responses for each item category.

^bRow response frequencies may not equate to 100% due to rounding.

TABLE 7.--Summary of retailers' perceptions pertaining to the one product class category that best satisfies a series of designated attributes.

	Regional Responses [Total Frequencies] ^a																			
	Waferboard				OSB				Oriented Waferboard				Plywood				No Difference			
	NC	S	NE	W	NC	S	NE	W	NC	S	NE	W	NC	S	NE	W	NC	S	NE	W
Cheapest	89	45	27	17	1	13	3	7	0	1	1	2	2	4	0	2	0	2	2	0
	[82] ^b				[11]				[2]				[4]				[2]			
Strongest/Stiffest	1	5	0	1	47	30	8	11	2	4	0	3	38	22	17	10	3	2	4	1
	[3]				[46]				[4]				[42]				[5]			
Most Durable	3	10	1	1	48	31	7	3	4	6	1	2	28	15	15	18	5	1	4	2
	[7]				[43]				[6]				[37]				[6]			
Highest Surface Uniformity	1	16	2	8	58	26	14	10	5	5	1	3	14	12	6	5	9	4	5	1
	[13]				[53]				[7]				[18]				[9]			
Greatest Dimensional Stability	1	11	2	4	43	27	6	6	2	2	0	1	34	15	12	14	4	6	5	2
	[9]				[42]				[2]				[38]				[9]			
Greatest Impact Resistance	2	7	1	2	38	22	6	6	3	4	0	2	29	26	17	14	8	4	2	0
	[6]				[37]				[5]				[45]				[7]			
Lightest Weight (Equivalent Thickness)	16	12	3	4	0	6	2	0	2	2	1	0	59	33	13	21	8	6	8	1
	[18]				[4]				[2]				[64]				[12]			
Generates Highest Profit Margin	23	16	3	8	21	12	3	5	7	3	3	2	18	15	9	7	18	17	6	6
	[25]				[20]				[7]				[24]				[23]			
Ranks Highest On Performance/Quality Basis	3	8	0	3	51	27	6	5	4	5	1	3	23	17	19	14	5	3	4	2
	[7]				[44]				[6]				[36]				[7]			

^aFrequencies based on total responses for each attribute category.

^bRow response frequencies may not equate to 100% due to rounding.

TABLE 8.—*Summary of retailers suggested improvements, designed to increase OSB/waferboard sales.*

Suggested Improvements	Regional Response Totals ^a				Totals
	South	North Central	Northeast	West	
Increase Promotional/Marketing Support	5	19	4	5	33
Improve Dimensional Stability	5	5	2	1	13
Reduce Price (Increase Differential With Plywood)	4	5	3	1	13
Increase Weatherability (Moisture Resistance)	4	4	1	-	9
Increase Durability (ie. Flaking, Splintering)	1	1	-	4	6
Improve Tolerances Across Brands (ie. Thickness, Uniform Span Rating System, Match For T&G)	3	2	-	1	6
Increase Strength/Stiffness	1	3	1	-	5
Manufacturer Anti-Slip Surface	2	1	1	1	5
Edge Seal All Reconstituted Products	1	2	-	1	4
Need More Variations In Panel Dimensions/Sizes	-	1	1	1	3
Improve Product Appearance	2	1	-	-	3
Increase Competitive Product Availability	-	3	-	-	3
Manufacture A Lighter Product	-	-	-	1	1
Improve Surface Smoothness	-	-	-	1	1
Nail Holding Capabilities Need To Be Increased	1	-	-	-	1
No Improvements Are Necessary	3	5	2	-	10

^a Respondents may be represented in more than one category (respondent total: 101).

TABLE 9.—*Summary of retailers' perceptions concerning the primary areas of consumer dissatisfaction with OSB/waferboard product lines.*

	Regional Response Totals ^a				Totals
	South	North Central	Northeast	West	
Dimensionally Unstable (ie. Swelling)	12	20	10	9	51
Consumer Not Understanding Appropriate End Use (ie. Confusing With Particleboard)	7	18	6	4	35
Surface Is Too Slippery	12	6	1	4	23
Poor Product Durability (ie. Flaking)	8	6	3	3	20
Product Is Too Heavy	5	6	1	5	17
Difficult To Work With (ie. Nailing, Sawing)	3	2	3	3	11
Rough Surface (Painting, Staining Difficult, Cannot Lay Hardwood Flooring On It)	5	4	-	1	10
Different Brands Do Not Match (ie. Thickness Variations, T&G Joint Variations)	1	3	-	3	7
Product Too Rigid For Roofing Applications	3	1	1	1	6
Improvements in Panel Strength (ie. Sagging)	-	5	1	-	6
Large Variance In Panel Construction Quality Between Manufacturers	1	1	-	-	2
Product Too Expensive	-	1	-	-	1
Consumers Are Satisfied With The Product	7	5	2	-	14

^aRespondents may be represented in more than one category (respondent total: 159).

BRAND NAMING EFFECTIVENESS IN THE RECONSTITUTED STRUCTURAL PANEL MARKETPLACE

Abstract

North American reconstituted structural panel producers and U.S. building supply retailers were surveyed in order to assess the effectiveness of manufacturers' brand naming practices. Forty-four percent of the responding retailers agreed that branding assisted in promoting the sale of structural panel products. Approximately 46% of the retailers suggested panel quality was more consistent when a brand name was associated with the product. However, the overall effectiveness of manufacturers' branding policies can be questioned. Brand awareness measurements, compiled at the retail level, were not overly impressive. Both building supply retailers and manufacturers contended that the variety of different OSB/waferboard brand names confused the consumer as to the appropriate end use of the product. Less than 33% of the producers agreed that an individual branding strategy assisted their firm in controlling a more stable consumer base. Only 35% of the retailers surveyed asserted that branding increased buyer preference, while only 32% agreed that the respective brands their firm carried actually attracted a loyal customer base. Both manufacturers (54%) and retailers (68%) agreed that the end users' purchase decision was primarily a function of price. Price and product availability ranked statistically above all other attributes in terms of their importance to the retailers' OSB/waferboard purchasing decision.

Introduction

The primary focus of marketing for many forest products concerns has centered on the generation of volume sales and the pursuit of cost effectiveness in product distribution (Rich 1979). The structural panel industry, characterized primarily by large scale producers of commodity products (ie. plywood), has traditionally relied on this production oriented marketing approach. However, the with emergence of reconstituted structural panel products (ie. oriented strandboard/waferboard), the industry appears to be changing its production oriented marketing philosophy by adopting brand naming strategies for its OSB/waferboard lines.

A review of secondary information provided considerable insight into branding strategies/practices on a consumer goods level (Park et. al. 1986, Keon 1983, Traylor 1981, Smith and Lusck 1976, Kraft et al. 1973, Fry 1967, Tucker 1964, Gardner and Levy 1955). In contrast, only a limited amount of published work was uncovered pertaining to the branding of industrial products (Saunders and Watt 1979, Hill et. al. 1975, Lehmann and O'Shaughnessy 1974), while even less was available concerning the branding of primary wood products (Anon 1965, Kelleher 1985). No literature was located regarding OSB/waferboard branding policies or practices.

Branding is a procedure a firm follows in developing, researching and implementing its brands. A brand name identifies the product and services of a seller, and serves to differentiate them from that of their competitors (Evans et al. 1982). A brand should infer something of a product's worth while facilitating trade and promoting efficiency .

in the market. Successful branding strategies assist in establishing a product's position, insulating the brand from competition (Oxenfeldt and Swann 1964), while enhancing the product line's market performance (Park et.al. 1986, Wind 1982). R.J. Markin (1979) contended that the essence of a branding strategy is to market a brand so as to cultivate and maintain consumer awareness.

Effective use of branding techniques depends on a multitude of factors, including the extent to which the product is distinctive when compared to competing brands (Rewoldt et al. 1977). A key condition for profitable product branding is that the demand for the product class be substantial enough to support a marketing program and stable enough to ensure that the selling price will provide a profit margin that satisfies the additional cost of promotion (McCarthy 1978). A successful branding strategy should contribute to the establishment of a powerful bargaining position with retailers and distributors, due to better market acceptance, assurance of quality levels, higher profit margins, and the benefits associated with manufacturers' marketing efforts (Lazer and Culley 1983).

Market analyst contend that a successful branding strategy assists manufacturers in segmenting the market, enabling them to create a distinctive image in order to carve out a market niche to provide a foundation for price differentiation. Louisiana-Pacific recognized this, stressing in their 1984 annual report that selling their reconstituted structural panel line strictly as a commodity building material would limit potential profit margins. Consumer preference is another benefit afforded by a successful branding strategy. A branding

policy should give the producer the opportunity to attract and retain a set of consumers whose repeat purchases give the firm more sales stability and long run profit. If repeat purchasing can be promoted, consumer vulnerability to competitor promotional activity can be reduced.

However, there are a number of limitations associated with the introduction of a branding strategy. In most instances, substantial amounts of promotional resources are required to build a strong brand image. Rewoldt et. al. (1977), concluded that a new product that is not distinctive and affords no superior qualities over competing brands, offers only a mediocre opportunity for an individual brand name. Jones (1964) asserted that branding is most effective when the product the brand represents possess actual qualities that distinguish it from competing goods.

The intention of this research study is to investigate the effectiveness of manufacturers' branding policies at the retail building supply level. In satisfying this objective, the article examines several of the market indices previously mentioned in an attempt to assess the impact producers' branding practices have on the structural panel market.

Methodology

Due to the lack of documented literature concerning the effectiveness of manufacturer's OSB/waferboard branding policies, primary data collection was deemed necessary and comprised the bulk of the research effort. The collection and evaluation of primary data was segmented into two distinct phases; the producer and the building supply retailer.

Sample Frame

Phase I

The nineteen North American wood products concerns listed below were identified as producers of OSB/waferboard products in 1985.

Manufacturers with production facilities in the U.S.

Louisiana-Pacific
Georgia-Pacific
Potlatch
Weyerhaeuser
Blandin Wood Products
Northwood Pulp & Timber
Martin Lumber Company
J.M. Huber
Temple-Eastex
Oregon Strandboard

Manufacturers with production facilities in Canada

MacMillan Bloedel Ltd.
Weldwood (U.S. Plywood)
Pelican Spruce Mills Ltd.
Waferboard Corporation
Grant Waferboard
Great Lakes Forest Products
Normick Perron Inc.
Mallette Waferboard
Forex-Leroy Inc.

Data collection efforts were directed to each of the 19 producers using a telephone interview/mail survey combination. The telephone interview served to maximize response rates while the mail survey portion of the research instrument was designed to secure data from more thought provoking questions. Each North American OSB/waferboard manufacturer participated in both the telephone and mail surveys.

Phase II

This phase of the research effort focused on building supply retailers from each of the 50 states. Buyers for the retail firms were randomly selected by sampling from The 1985 Directory of Home Center Operators & Hardware Chains (Friedman 1985). The directory provided a current, comprehensive listing of 6,185 home center/building material retail concerns, which control 14,482 building supply facilities.

A mail survey served as the vehicle for primary data collection. This method was considered to be the most efficient and cost effective means of securing data distributed over a broad geographical base, while affording the respondents a high degree of anonymity. A pretest was administered to 50 randomly selected retailers prior to mailing the final draft. After reviewing the pretest, the research instrument was revised and mailed to those firms comprising the sample. A follow-up questionnaire was distributed three weeks after the initial mailing to those retailers identified as nonrespondents.

A stratified random sample of 1350 retailers was selected from the directory. Four strata were formulated by proportionately distributing the research instrument to each of four regions defined by U.S. Census bureau boundaries (Figure 1), based on the percentage of the total number of firms in each region. Surveys were then proportionately distributed to each state. Stratified random sampling was deemed necessary due to geographic and demographic bias, introduced by higher market penetration rates and higher concentration levels of OSB/waferboard manufacturing facilities in the North Central region.

Three-hundred and ninety-six surveys were returned, resulting in a 30% response rate after adjusting for undeliverable questionnaires. Usable regional response rates varied considerably, with the Western region achieving the highest response rate (35%), followed by the North Central (33%), Southern (26%), and Northeastern (23%) regions.

Respondents

Manufacturer

North American OSB/waferboard productive capacity equated to 5,440 million ft² (3/8" basis). Productive capacity by firm ranged from 1.18 billion ft² to 22 million ft². U.S. facilities accounted for roughly 67% of the 1985 North American capacity. It is important to note, especially when examining market penetration and brand awareness levels, that the top three U.S. manufacturers produced 56% of the total U.S. output, and contributed to 44% of the total North American productive capacity in 1985.

Manufacturers categorized reconstituted structural panel products on the basis of physical properties/composition (i.e. flake arrangement, flake size, and individual flake/strand geometry). Fifty-eight percent of the reconstituted structural panel manufacturers produced a waferboard product, while 42% manufactured oriented strandboard (OSB) and 26% an oriented waferboard. Four of these North American companies manufactured both an oriented and nonoriented waferboard line and one firm produced both OSB and a waferboard product.

Considerable effort was made to ensure that the questionnaires were completed by an individual responsible for formulating and implementing strategic marketing policies for their firm's OSB/waferboard product

lines. All respondents indicated that they held upper level marketing/management positions and were active participants in the decision making process concerning their firm's reconstituted panel line. For example, 84% of the respondents were directly involved in formulating both pricing and target market strategies. Seventy-eight percent of the survey participants also indicated that their marketing/management responsibilities included formulating product positioning, advertising, and distribution strategies for their firm's reconstituted structural panel line.

Retailer

The majority of retailers targeted by this research effort were established building material suppliers of moderate size. Sixty-seven percent of the respondents grossed less than \$5,000,000 in 1985. Only 7% of the retailers sampled exceeded \$20,000,000 in gross sales.

Ninety-two percent of the 386 respondents carried a structural panel product line (ie. plywood, OSB/waferboard, structural particleboard). Of those retail building supply firms carrying a structural panel product, 96% stocked plywood, while 79% carried a reconstituted line (ie. waferboard 63%, oriented strandboard 55%, oriented waferboard 20%). Retail stocking frequencies for OSB/waferboard products were highest in the North Central region and lowest in the West.

An effort was made to ascertain the magnitude of importance retailers assigned to the individual product classes comprising the structural panel market. Respondents evaluated four product groups; plywood, oriented strandboard, waferboard, and oriented waferboard, in

terms of the volume of sales each generated. Plywood was perceived by retailers as retaining the highest relative importance level, followed by oriented strandboard and nonoriented waferboard.

Market Penetration

Before an accurate assessment of market penetration levels can be compiled, geographic distribution patterns for manufacturers' product lines must be defined. Seventy-four percent of the producers distributed their reconstituted panel line in the Northeast, while 63% of the manufacturers distributed in the North Central and Southern regions. Only 21% of the producers sold their product line in the West.

Market share estimates, compiled in terms of retail stocking frequency, were then examined for each of the manufacturer's respective OSB/waferboard product offerings (Table 1). Forty-six percent of the 225 responding retailers sold Waferwood^R, a Louisiana-Pacific product, while 36% stocked Georgia-Pacific's line. Geographic distribution of the individual brands was analyzed by segmenting retail stocking data into designated regional boundaries. Louisiana-Pacific's dominance in the West can be readily observed, with 85% of the retailers that stock a reconstituted panel, choosing to carry the Waferwood^R brand. Also note that 58% of the retailers in the North Central region sold Oxboard^R, a Potlatch product, while over 50% of the respondents in the South and Northeast carried a Georgia-Pacific line.

In order to provide additional support for regional market penetration results, retailers were requested to identify the single product line that represented the largest portion of their total reconstituted structural panel dollar sales volume. Results, summarized

in Table 2, revealed that Louisiana-Pacific was mentioned with highest overall frequency (27%), while Georgia-Pacific and Weyerhaeuser followed, with 16% apiece. Note again Louisiana-Pacific's dominance in the Western region, Georgia-Pacific's influence in the South and Potlatch and Weyerhaeuser's position in the North Central region.

Upon close examination of the data displayed in Tables 1 and 2, note the *highlighted* regional response frequencies associated with each of the corresponding manufacturers. These *highlighted* response frequencies are categorized under the single region designated by manufacturers as their respective firm's primary target market. Manufacturers' target market emphasis should be taken into consideration when evaluating regional market penetration and brand awareness levels. For example, the Potlatch representative asserted that distribution networks and corporate marketing efforts primarily serviced North Centrally based building suppliers, which partially explains Potlatch's sizable market share in this region.

Selection Criteria

Retailers identified the selection criteria used in deciding which particular reconstituted structural panel product to stock. Response frequencies were then compared against manufacturers perceptions regarding the primary factors contributing to retailer brand preference (Table 3). Approximately 53% of the responding retailers reported that price was a primary reason for choosing to carry a particular brand. Other factors receiving a high level of priority among retailers, were product availability (44%), overall performance (30%), consumer preference (23%) and service support (6%).

Retailers' attitudes, concerning brand selection criteria, deviated from manufacturers' perceptions (based on response frequency) regarding factors contributing to brand preference. Manufacturers reported the performance/quality rationale most frequently (79%), followed by competitive pricing (53%), service (37%), product availability (26%) and product reliability (26%).

Product Promotion

Before the effectiveness of manufacturers' strategic branding practices can be accurately assessed, producers' promotional policies should be examined. The first step involved evaluating the importance manufacturers' assign to OSB/waferboard target market segments, in terms of promotional emphasis. Mean scores were compiled for each market segment by averaging item scores (derived from a five point Lickert scale) across respondents. From a promotional standpoint, the retail market was perceived by manufacturers as being the most important. After verifying the importance of the retailer segment to manufacturer promotional efforts, the type of promotional support being provided was examined. Approximately 95% of the producers indicated they supplied retailers with some form of sales literature, designed to advertise their respective brands. Over 73% of the manufacturers, reported providing retailers with technical sales support. Other forms of promotional support included: training seminars (47%), advertisement master copies (42%), co-op ad programs (16%), in-store displays (16%), monetary incentives (10%), and quantity discounts (10%).

Conflicting results were observed when promotional support programs/incentives rendered by manufacturers were compared to those

promotional services actually received by the retailer. Table 4 reveals that 48% of the 237 responding retailers receive some form of promotional literature from the manufacturer. Approximately 34% of the retailers, acknowledged they received quantity discounts, while only 4% indicated monetary incentives were provided. It should be noted that 35% of the retailers reportedly received no promotional support from manufacturers.

The methods producers employed in measuring the effectiveness of their OSB/waferboard promotional efforts were identified. Sales was considered, by 74% of the respondents, to be a primary indicator of promotional success. Market share, profit margins, and data derived from consumer research were other methods used by producers to monitor the effectiveness of their promotional programs. However, five firms asserted that no efforts were made to analyze the effectiveness of their promotional campaigns.

Retailers perceptions regarding the accuracy of the manufacturers' promotional campaigns were assessed. Only 15% of the respondents disagreed with the statement that claims made by the producers about their brands were consistent with the product's actual performance (Table 5). Regional variations, pertaining to respondents mean agreement/disagreement levels, were analyzed by employing a one-way analysis of variance¹ at the 5% significance level. The null hypothesis could not be rejected ($p > .25$), suggesting that there was insufficient evidence to conclude that regional differences in mean scores existed.

Branding Effectiveness

After reviewing manufacturer/retailer demographics, market share estimates, and promotional strategies, efforts turned toward examining the effectiveness of manufacturers branding practices. In satisfying this objective five market indicators (ie. brand awareness, brand comprehension, brand preference, promotional success, and pricing considerations), generally associated with successful branding strategies, were examined from a manufacturer/retailer perspective.

Brand Awareness

The essence of a brand strategy is to produce and market a brand so that it subsequently ends up in the consumer's awareness set (Markin 1979). Brand awareness, a critical variable in the purchasing decision, provides one measure of the effectiveness of a promotional campaign. Therefore, brand awareness measurements were compiled for the various OSB/waferboard product lines at the retail level by employing both unaided and aided recall techniques (Churchill 1983).

Brand awareness measurements (unaided recall approach) were conducted by requesting that retailers identify the producer and corresponding brand name (if one existed) associated with each OSB/waferboard line their firm carried. Results, summarized on a regional basis in Table 6, suggest that of the 55 retailers carrying the Potlatch line in the North Central region, 80% correctly associated the Oxboard[®] brand with the producer. Only 23% of the North Central based respondents carrying Waferwood[®], a Louisiana-Pacific line, correctly identified both the brand name and panel producer. In the South, Northwood Mill's product, Norbord[®], achieved the highest level of brand

awareness, with 78% of the retailers making the correct associations. Brand awareness in the Northeast appeared to be greatest for the U.S. Plywood brand, Weldbord^R, as was also the case in the West, where 100% of the respondents selling the product correctly identified the brand and manufacturer.

In reviewing these results, note the *highlighted* response frequency categories denoting manufacturers' regional target market emphasis. Target market emphasis may or may not influence brand awareness levels which are largely dependent on a producer's allocation of promotional resources.

An aided recall approach, designed to evaluate the level of brand awareness, prompted retailers by asking them to correctly match a series of brand names to the corresponding producer. Results, summarized in Table 7, revealed that 59% of the 170 participants correctly associated the Oxboard^R brand with the Potlatch product line. The top producer, Louisiana-Pacific, recorded a brand awareness level of 45%. Divergence between brand name and corporate identity prevailed, to a limited extent, between a number of brands. For example, 10% of the respondents incorrectly associated Georgia-Pacific with Louisiana-Pacific's Waferwood^R brand.

Brand Comprehension

Brand comprehension, denoted by Howard (1963) as a measure of a buyer's brand awareness and an understanding of the brand in terms of its product class, was also studied from a retailers perspective. Brand comprehension was measured by requesting the retailer to correctly identify the product class (oriented strandboard, oriented waferboard,

or waferboard) associated with each brand previously identified. Only 5% of the 95 retailers responding in the North Central region incorrectly identified the product class with a brand or manufacturer. Retailers in the Western region exhibited the highest level of brand comprehension, with 96% of the 27 respondents making the correct association. Survey participants in the Northeast (91% of 34 responses) ranked lowest, while 93% of the 69 respondents in the South made correct associations.

Brand Preference

D.W. Cranins et. al. (1980) asserted that a favorable brand image assists manufacturers in drawing their products through the channels of distribution by establishing consumer preference. Additionally, a sharp brand image, created in the consumer's mind, protects unique product qualities that serve to differentiate product lines and reduce customer vulnerability to competitor promotional campaigns (Rewoldt, Scott, and Warshaw 1977). While 68% of the OSB/waferboard manufacturers contended that branding their product line did indeed provide a higher degree of protection from competitors, only 30% of the producers agreed that an individual branding strategy assisted their firm in controlling a more stable consumer base (Table 8).

Results pertaining to brand preference at the retail level were equally unimpressive, with only 35% of the respondents reporting that branding increased buyer preference for OSB/waferboard products. In addition, only 32% of the retail participants agreed that the particular OSB/waferboard brands their firm sold attracted a loyal consumer base (i.e. difficult to substitute a competitive brand). A significant

regional difference in mean attitudinal scores for the previous statement could not be detected using a one-way analysis of variance ($p > .25$).

Factors contributing to retailers' preference for a specific product line were also examined in terms of a brand's position in reference to a particular characteristic. The Potlatch line was perceived by respondents in the North Central region to be the most expensive (60%), yet most preferred (by professional contractors) reconstituted structural panel on the market. Table 9 suggests that, with the exception of the North Central region, (where Weyerhaeuser prevailed with a response frequency high of 31%), retailers regarded Louisiana-Pacific's oriented waferboard/waferboard line to be preferred most among DIY consumers.

Retailer preference was also examined from an individual brand performance/quality perspective, as summarized in Table 10. Item scores were compiled for each manufacturer's product line by summing the products of numerical values, assigned in the order of decreasing magnitude (ie. three to one), to brands retailers perceived as ranking from first to third. Approximately 48% of the respondents operating in the North Central region, ranked the Potlatch line highest on a performance quality basis (rank score of 149). Structurwood^R, a Weyerhaeuser line, ranked a distant second (rank score of 91). No single OSB/waferboard product line dominated on a performance quality basis in the South, with Louisiana-Pacific ranking only slightly higher (rank score of 60) than Georgia-Pacific (rank score of 57), as was also the case in the Northeast (mean scores of 23 and 22 respectively). In

the West, 45% of the respondents ranked Louisiana-Pacific's panel product first, surpassing Pelican Spruce Mill's brand by 14% (rank score basis).

Promotional Success

A number of weaknesses were detected in manufacturers' branding policy, when examined in terms of promotional success. Seventy-three percent of the manufacturers questioned contended that the variety of different OSB/waferboard brand names confused the consumer as to the product's appropriate end use.

Retailers' perceptions regarding consumer discontent revealed that customer confusion was prevalent due to the end users' difficulty in understanding the product's appropriate end use. Retailers perceived this problem stemmed partially from customers incorrectly associating OSB/waferboard end uses to that of particleboard. The notion of consumer confusion being perpetuated by manufacturers' branding practices received additional support when 56% of the responding retailers agreed that the different OSB/waferboard brand names confused the DIY consumer as to the products' appropriate structural end uses. Significant regional differences were detected between mean agreement/disagreement scores for the previous statement ($.001 < p < .01$) and the FSD procedure applied. Results suggest that respondents in the North Central region were in greater agreement with the preceding statement, than retailers from the other designated regions.

Pricing Considerations

The final element used to evaluate the success of manufacturers' branding policies was the impact branding practices had on pricing

flexibility. Evans and Berman (1982) asserted that price comparisons were reduced as consumers perceived brand distinctiveness. Nickels (1984) contended that consumers have learned to rely on reputable brand named products and will consistently pass up lower priced, off brand goods. However, with the exception of the Potlach and Weyerhaeuser brands, this apparently is not the case, for the retail OSB/waferboard market segment. Only 33% of the manufacturers questioned agreed that branding their OSB/waferboard line afforded them a higher degree of pricing flexibility. In addition, only 27% of the responding retailers agreed that branding provided them a greater degree of pricing flexibility.

Both manufacturers (54%) and retailers (68%) agreed that the end users purchase decision was primarily a function of price. Sixty-seven percent of the responding retailers contended that their decision to purchase an OSB/waferboard line from a manufacturer or independent wholesaler was also primarily a function of price. Price and product availability, statistically (employing an ANOVA and FSD procedure, with $p < .001$), ranked above all other product/company attributes in terms of their importance to the retailers' OSB/waferboard purchasing decision.

Discussion

Branding Benefits

While there appears to be a number of limitations associated with the branding of reconstituted structural panel products, a few potential benefits were uncovered. Approximately 44% of the responding retailers agreed that a brand name assisted in promoting the sale of structural

panel products (Table 8). Forty-six percent of the retailers indicated that OSB/waferboard panel quality was more consistent when a brand name was associated with the product. Nickels (1984) confirmed the importance of this relationship between consistent quality and brand name, contending that a brand serves as a symbol of quality for buyers, assuring them that a products value will be consistent. Roselus (1971) also supports this claim, suggesting that a brand name evokes a favorable response and ranks high as a risk reliever for the consumer.

Branding Limitations

Several market indicators, previously used in evaluating the success of manufacturers' branding practices, were not supportive of these policies at the retail level. Although brand awareness levels (employing unaided recall measurement techniques) appeared favorable for a few producers on a regional basis, namely Potlatch and U.S. Plywood, the overall results were disappointing. For example, only 25% of the retailers stocking Louisiana-Pacific's product line correctly associated the brand name with the manufacturer. This was surprising, considering Louisiana-Pacific distributes nationally and commanded a 32% market share in terms of U.S. output in 1985. Also note that brand awareness measurements were taken at an intermediate level (buyers for retail building supply firms), and a further reduction in brand awareness could be expected at the consumer level.

Survey results suggest that a number of manufacturers attempted to develop unique brand images and failed to place enough emphasis on educating the end user about basic product attributes and the means of identifying them. Thirty-three percent of the responding retailers

suggested that a primary area warranting manufacturers' attention was the need to increase promotional/marketing support. These results are alarming, since it is critical that a new product be individualized in ways that are perceived as important by the consumer (Parasuraman 1983). If the customer does not perceive or appreciate any actual performance benefits, then no amount of ingenious promotion will save the brand.

Saunders and Watt (1979) reviewed a problem similar to the one facing OSB/waferboard manufacturers, where consumer confusion resulted from the variety of different brand names being assigned to nearly identical product offerings in the man-made fiber market. To overcome problems plaguing this segment of the textile industry, Saunders and Watt (1979) supported a product life cycle approach, suggesting that new products be advertised generically in introductory stages. This enables the consumer to initially gain insight into the basic product attributes afforded by the new product line. Saunders and Watt (1979) also contended that promotion of the company image would be more profitable than introducing a large number of brand names where little product differentiation exists. Hill et. al. (1975) stressed the importance of the corporate image and insisted that a company's reputation as a reliable supplier of quality products reduces the need to develop and promote individual brand images.

Emphasis on price and availability at the retail level tends to suggest that OSB/waferboard products are being sold/purchased on a commodity basis (noting the exception of the Potlatch line which was perceived as being the most expensive yet most preferred brand). Approximately 40% of the retailers questioned indicated that a brand

name was not an important consideration when deciding on which particular OSB/waferboard product line to purchase. Failure to stimulate a stable consumer base (i.e. lack of consumer preference), the apparent lack of a successful promotional campaign (as evident with retailers perceptions of consumer confusion and brand awareness levels) and the heavy dependence on price, suggests the effectiveness of manufacturers' branding strategies at the retail level may be somewhat less than satisfactory.

Summary

This research undertaking summarized manufacturers' and building supply retailers' perceptions regarding the promotional effectiveness of OSB/waferboard brand naming practices. The retailer was perceived by OSB/waferboard producers to be the most important market segment from a promotional standpoint, with 79% of the respondents stocking a structural panel product choosing to carry an OSB/waferboard line.

One market share estimate for individual OSB/waferboard product lines was compiled on the basis of retail stocking frequencies. Approximately 85% of the retailers carrying OSB/waferboard products, stocked Louisiana-Pacific's Waferwood[®] brand in the West. Fifty-eight percent of the retailers in the North Central region sold the Potlatch line, while over 50% of the respondents in the South and Northeast carried a Georgia-Pacific panel product. Retailers also detailed the selection criteria used in determining which particular OSB/waferboard brand to carry. Fifty-three percent of the respondents reported that price was a primary consideration in the purchase decision.

Manufacturers' promotional support policies were also examined.

Approximately 95% of the producers provided retailers with sales literature designed to advertise their respective brands. Over 73% of the firms supplied retailers with technical support, while only 10% used monetary and quantity discounts to stimulate sales. In contrast, 48% of the retailers actually received promotional sales literature from the manufacture, while 34% acquired quantity discounts. A third of the retailers questioned suggested that a primary area warranting manufacturers attention was the need to increase promotional/marketing support.

Brand awareness measurements, employing both unaided and aided recall techniques, were conducted at the retail level. Manufacturers recording favorable brand awareness levels were Potlatch (North Central), Northwood Mills (South), and U.S. Plywood (Northeast and West). Brand comprehension levels were satisfactory, with the proportion of retailers correctly associating the product class with the brand exceeding 90% in all regions.

Several market indices used in evaluating the effectiveness of manufacturers' OSB/waferboard brand naming strategies were not supportive of such a policy at the retail level. Approximately 56% of the retailers surveyed agreed that different OSB/waferboard brand names confused the DIY consumer as to the products correct structural panel applications. Seventy-three percent of the manufacturers also agreed that the variety of different OSB/waferboard brand names confused the consumer as to the products appropriate end use. Additionally, 40% of the retail participants did not consider a brand name to be an important factor in their OSB/waferboard purchasing decision.

In terms of buyer preference, 30% of the manufacturers agreed that an individual branding strategy assisted their firm in controlling a more stable consumer base. At the retail level only 35% of the respondents reported that branding increased buyer preference for OSB/waferboard products, while only 32% of retailers agreed that the brand their firm stocked attracted a loyal consumer base.

Both manufacturers (54%) and retailers (68%) agreed that the end users purchase decision was primarily a function of price. Sixty-seven percent of the retailers contended that their decision to purchase an OSB/waferboard line from a manufacturer or wholesaler was primarily a function of price, while 47% of these respondents failed to agree that branding afforded a greater degree of pricing flexibility.

Footnotes

Note:

The criteria used in evaluating the performance of the hypothesis tests detailed in this article is based upon the probability of type I and type II errors. In accordance with the Neyman-Pearson theory, the type I error is more serious than the type II and its probability must be controlled (Koopmans 1981). Control is achieved by assigning a significance level to the test. A traditional level of .05 was selected for each of the tests defined below. For the purposes of this study, a .05 significance level adequately satisfies any validity and sensitivity concerns which may arise.

1. The one-way analysis of variance was employed to detect differences in the frequency distributions of a measurement variable (interval scale) for $k=3$ or more populations (Koopmans 1981). The assumptions underlying the one-way analysis of variance are the following: (1) Distributions of the measurement variable of interest for the k populations are assumed to be normal. (2) Standard deviations are assumed to be equal. (3) The assumption of sample-to-sample independence is made.
2. The Fisher least significant difference (FSD) method, a multiple-comparison procedure, is a two-step process for comparing individual pairs of population means. The first step consists of a standard one-way analysis of variance (ANOVA), generally carried out at the 5% significance level (Koopmans 1981). The second step of the procedure is carried out only if H_0 is rejected. The second step essentially consists of the application of two-sample t tests to every pair of means. Means are segmented into different groups if H_0 is rejected. The assumptions for this test are the same as those defined for the ANOVA which provides an initial, simultaneous screening of all differences and holds the experimental error rate for the FSD procedure very close to the significance level used for the ANOVA.

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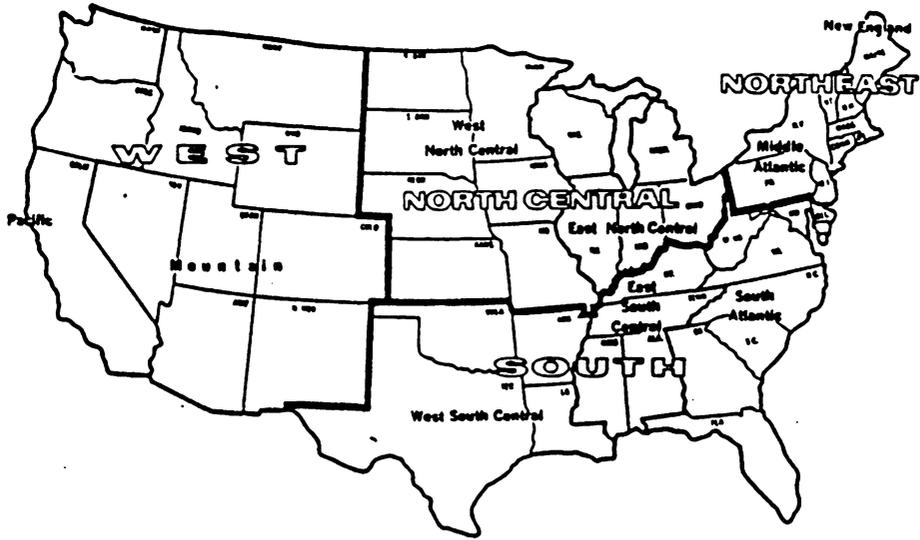


Figure 1.—*Geographic breakdown of the four regional market segments as defined by the U.S. Census Bureau.*

TABLE 1.—Regional summary of OSB/waferboard product lines stocked by building supply retailers^a.

	Responses (Frequencies) ^{b, c, d}				Total
	North Central	South	Northeast	West	
Blandin Wood Products	27 (28.4)[*]	11 (15.9)	1 (2.9)	1 (3.7)	40 (17.8)
Forex Leroy Inc.	0 (0.0)	-	0 (0.0)	-	0 (0.0)
Georgia-Pacific	23 (24.2)	38 (55.0)	19 (55.9)	1 (3.7)	81 (36.0)
Grant Waferboard	3 (3.2)	0 (0.0)	2 (5.9)	-	5 (2.2)
Great Lakes Forest Products	5 (5.3)	1 (1.4)	0 (0.0)	-	6 (2.7)
J.M. Huber	0 (0.0)	4 (5.8)	5 (14.7)	-	9 (4.0)
Louisiana-Pacific	39 (41.0)	29 (42.0)	13 (38.2)	23 (85.2)	104 (46.2)
MacMillian Bloedel Ltd.	19 (20.0)	7 (10.1)	7 (20.6)	3 (11.1)	36 (16.0)
Mallette Waferboard	-	1 (1.4)	0 (0.0)	-	1 (0.4)
Martin Lumber Co.	-	6 (8.7)	-	-	6 (2.7)
Normick Perron Inc.	0 (0.0)	0 (0.0)	0 (0.0)	-	0 (0.0)
Northwood Mills Ltd.	22 (23.2)	9 (13.0)	4 (11.8)	3 (11.1)	38 (16.9)
Oregon Strandboard	-	-	-	5 (18.5)	5 (2.2)
Pelican Spruce Mills	-	-	-	11 (40.7)	11 (4.9)
Potlatch	55 (57.9)	5 (7.2)	4 (11.8)	1 (3.7)	65 (28.9)
Temple-Eastex	-	1 (1.4)	5 (14.7)	-	6 (2.7)
U.S. Plywood	3 (3.2)	24 (34.8)	10 (29.4)	5 (18.5)	42 (18.7)
Waferboard Corp.	-	-	1 (2.9)	-	1 (0.4)
Weyerhaeuser	45 (47.4)	11 (15.9)	8 (23.5)	1 (3.7)	65 (28.9)

^aA dashed line denotes a region in which the manufacturer's respective product line was not distributed.

^bFrequencies based on total regional responses (North Central 95; South 69; Northeast 34; West 27).

^cColumn frequencies do not sum to total regional responses (ie. North Central does not equal 95) due to multiple responses per respondent and percentages do not sum to 100% for the same reason.

^d() = percentages [to be interpreted as % of responding retailers who stock the brand].

^eResponse categories *highlighted*, designate the single region manufacturers' reportedly achieved the largest market share for their respective product line.

TABLE 2.—The single OSB/waferboard brand that represents the the largest portion of individual retailers' panel sales^a.

	Responses (Frequency) ^{b, c, d}				Total
	North Central	South	Northeast	West	
Blandin Wood Products	5 (7.0)[*]	6 (10.3)	- -	- -	11 (6.3)
Forex Leroy Inc.	0 (0.0)	0 (0.0)	0 (0.0)	- -	0 (0.0)
Georgia-Pacific	3 (4.2)	20 (34.5)	5 (22.7)	- -	28 (16.1)
Grant Waferboard	2 (2.8)	0 (0.0)	2 (9.1)	- -	4 (2.3)
Great Lakes Forest Products	0 (0.0)	- -	0 (0.0)	- -	0 (0.0)
J.M. Huber	0 (0.0)	2 (3.4)	1 (4.5)	- -	3 (1.7)
Louisiana-Pacific	9 (12.7)	15 (25.9)	7 (31.8)	16 (69.6)	47 (27.0)
MacMillian Bloedel Ltd.	2 (2.8)	0 (0.0)	3 (13.6)	- -	5 (2.9)
Mallette Waferboard	- -	- -	0 (0.0)	- -	0 (0.0)
Martin Lumber Co.	- -	1 (1.7)	- -	- -	1 (0.6)
Normick Perron Inc.	0 (0.0)	0 (0.0)	0 (0.0)	- -	0 (0.0)
Northwood Mills Ltd.	7 (9.8)	1 (1.7)	- -	- -	8 (4.6)
Oregon Strandboard	- -	- -	- -	1 (4.3)	1 (0.6)
Pelican Spruce Mills	- -	- -	- -	4 (17.4)	4 (2.3)
Potlatch	21 (29.6)	2 (3.4)	1 (4.5)	- -	24 (13.8)
Temple-Eastex	- -	1 (1.7)	0 (0.0)	- -	1 (0.6)
U.S. Plywood	1 (1.4)	6 (10.3)	1 (4.5)	1 (4.3)	9 (5.2)
Waferboard Corp.	- -	- -	0 (0.0)	- -	0 (0.0)
Weyerhaeuser	21 (29.6)	4 (6.9)	2 (9.1)	1 (4.3)	28 (16.1)

^aA dashed line denotes a region in which the manufacturer's respective product line was not distributed.

^bFrequencies based on total regional responses (North Central 95; South 69; Northeast 34; West 27).

^cColumn frequencies may not sum to 100% due to rounding.

^d() = percentages [to be interpreted as % of responding retailers].

^eResponse categories *highlighted*, represent the single region manufacturers reportedly achieved the largest market share for their respective product line.

TABLE 3.—Actual versus manufacturers' perceptions of retailers' brand selection criteria.

	Response Totals ^a (Frequency) ^b	
	Retailer	Manufacturer
	—%—	—%—
Price	92 (52.9)	10 (52.6)
Availability	76 (43.7)	5 (26.3)
Highest Performance/Quality	53 (30.5)	15 (78.9)
Consumer Preference	40 (23.0)	-
Service Support	11 (6.3)	7 (36.8)
Distribute a Span Rated Panel	6 (3.4)	3 (15.8)
Reliable Product	5 (2.9)	5 (26.3)
Highest Strength/Stiffness	4 (2.3)	-
Anti-Skid Surface	4 (2.3)	-
Weatherability	4 (2.3)	-
Favorable Product Appearance	3 (1.7)	2 (10.5)
Consistent Surface Uniformity	2 (1.1)	-
Satisfactory Profit Margin	1 (0.6)	-
Distribute An Edged Sealed Product	1 (0.6)	-

^aTotal number of responding retailers (174); responding manufacturers (19).

^bColumn response frequencies do not sum to 100% due to multiple responses per respondent.

TABLE 4.—*Promotional programs provided by OSB/waferboard manufacturers versus promotional support reportedly received by retailers.*

	Response Totals ^a (Frequencies) ^b	
	Manufacturer	Retailer
	—x—	—x—
Sales Literature	18 (94.7)	114 (48.1)
Technical Sales Support	14 (73.7)	66 (27.8)
User Training Seminars	9 (47.4)	15 (6.3)
Advertisements (Master Copies)	8 (42.1)	19 (8.0)
Co-op Ad Programs	3 (15.8)	10 (4.2)
In-Store Displays	3 (15.8)	53 (22.4)
Monetary Incentives	2 (10.5)	9 (3.8)
Quantity Discounts	2 (10.5)	80 (33.7)
Sales Discounts	0 (0.0)	20 (8.4)
No Promotional Support	1 (5.3)	82 (34.6)

^aRespondents may be represented in more than one category.

^bTotal number of responding retailers (237); responding manufacturers (19).

TABLE 5.--Retailers' attitudes concerning statements related to the effectiveness of branding concepts and OSB/waferboard consumer preference/awareness.

	Responses (Response Frequency) ^a					Mean Score
	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	
	1	2	3	4	5	
Claims made by OSB/waferboard producers about their brands, are consistent with the product's actual performance.	4 (1.9) ^b	27 (13.0)	84 (40.6)	92 (44.4)	0 (0.0)	.27
Brand naming OSB/waferboard has increased buyer preference for this panel product.	12 (6.7)	75 (35.9)	49 (23.4)	62 (29.7)	11 (5.3)	-.07
The particular OSB/waferboard brand(s) your firm sells has attracted a loyal consumer base (ie. difficult to substitute a competitive brand).	23 (10.9)	62 (29.2)	60 (28.3)	50 (23.6)	17 (8.0)	-.11
Different OSB/waferboard brands confuse the DIY consumer as to the correct structural panel application.	2 (0.9)	30 (14.2)	61 (28.9)	93 (44.1)	25 (11.8)	.52
A brand named OSB/waferboard product provides the retailer a greater degree of pricing flexibility than selling an unbranded line.	15 (7.1)	83 (39.5)	56 (26.6)	54 (25.7)	2 (1.0)	-.26
The professional contractors purchase decision involving an OSB/waferboard panel is primarily a function of price.	6 (2.9)	35 (16.7)	25 (11.9)	101 (48.1)	43 (20.5)	.67
The OSB/waferboard purchasing decision is primarily a function of price.	14 (6.6)	32 (15.1)	25 (11.8)	95 (44.8)	46 (21.7)	.50
A brand name assists in promoting the sale of a structural panel product.	14 (6.6)	59 (27.8)	45 (21.2)	79 (37.3)	15 (7.1)	.10
OSB/waferboard panel quality is more consistent when a brand name is associated with the product.	5 (2.4)	36 (17.4)	71 (34.3)	89 (43.0)	6 (2.9)	.27

^aFrequency based on total responses for each item category.

^bRow response frequencies may not equate to 100% due to rounding.

TABLE 6.—Regional summary of retailer OSB/waferboard brand awareness levels (unaided recall approach for product lines stocked by the respective retailers).

	Number of Respondents Identifying: ^a					
	Correctly			Correctly		
	Corporate Name	Brand Name	Associated Both Producer/Brand	Corporate Name	Brand Name	Associated Both Producer/Brand
	North Central			South		
Blandin Wood Products	3	6	18 (66.6) ^{b,c}	2	5	4 (36.4)
Forex Leroy Inc.	0	0	0 (0.0)	0	0	0 (0.0)
Georgia-Pacific	14	0	9 (39.1)	32	0	6 (15.8)
Grant Waferboard	3	* ^d	* *	0	0	0 (0.0)
Great Lakes Forest Products	2	2	1 (20.0)	1	0	0 (0.0)
J.M. Huber	0	0	0 (0.0)	3	0	1 (25.0)
Louisiana-Pacific	28	2	9 (23.1)	22	0	7 (24.1)
MacMillian Bloedel Ltd.	5	9	5 (26.3)	0	2	5 (71.4)
Mallette Waferboard	- ^e	-	- -	1	*	* *
Martin Lumber Co.	-	-	- -	3	0	3 (50.0)
Normick Perron Inc.	0	0	0 (0.0)	0	0	0 (0.0)
Northwood Mills Ltd.	0	7	15 (68.2)	1	1	7 (77.8)
Oregon Strandboard	-	-	- -	-	-	- -
Pelican Spruce Mills	-	-	- -	-	-	- -
Potlatch	3	8	44 (80.0)	1	1	3 (60.0)
Temple-Eastex	-	-	- -	1	0	0 (0.0)
U.S. Plywood	1	0	2 (66.6)	18	2	4 (16.7)
Waferboard Corp.	-	-	- -	-	-	- -
Weyerhaeuser	11	1	33 (73.3)	7	0	4 (36.4)
	Northeast			West		
Blandin Wood Products	0	1	0 (0.0)	0	0	1 (100.)
Forex Leroy Inc.	0	0	0 (0.0)	-	-	- -
Georgia-Pacific	19	0	0 (0.0)	1	0	0 (0.0)
Grant Waferboard	2	*	* *	-	-	- -
Great Lakes Forest Products	0	0	0 (0.0)	-	-	- -
J.M. Huber	3	0	2 (40.0)	-	-	- -
Louisiana-Pacific	11	1	1 (7.7)	14	0	9 (39.1)
MacMillian Bloedel Ltd.	4	2	1 (14.3)	0	1	2 (66.7)
Mallette Waferboard	0	0	0 (0.0)	-	-	- -
Martin Lumber Co.	-	-	- -	-	-	- -
Normick Perron Inc.	0	0	0 (0.0)	-	-	- -
Northwood Mills Ltd.	1	1	2 (50.0)	0	0	3 (100.)
Oregon Strandboard	-	-	- -	5	*	* *
Pelican Spruce Mills	-	-	- -	9	0	2 (18.2)
Potlatch	1	1	2 (50.0)	1	0	0 (0.0)
Temple-Eastex	4	0	1 (20.0)	-	-	- -
U.S. Plywood	4	0	6 (60.0)	0	0	5 (100.)
Waferboard Corp.	1	0	0 (0.0)	-	-	- -
Weyerhaeuser	3	1	4 (50.0)	0	0	1 (100.)

^a Respondents may be represented in more than one category (survey participants: North Central 95; South 69; Northeast 34; West 27)

^b Frequencies compiled in terms of the percentage of retailers stocking the respective product line that correctly identified brand names with corresponding corporate names/logos.

^c Response categories *highlighted*, designate the single region manufacturers reportedly achieved the largest market share for their respective product line.

^d Manufacturer does not promote an individual brand name for their respective product line.

^e A dashed line denotes a region in which the manufacturer's respective product line was not distributed.

TABLE 7.—*Summary of retailer OSB/waferboard brand awareness levels, compiled using an aided recall technique (respondents requested to correctly match brand to manufacturer).*

	Responses ^a (Frequency) ^b	Correct Brand-Manufacturer (Frequencies) ^{c/d} Association
Aspenite (MacMillian Bloedel)	42 (24.7)	18 (42.8/10.6)
Waferwood (Louisiana-Pacific)	110 (64.7)	76 (60.0/44.7)
Wafer-Plus (Normick Perron)	10 (5.9)	0 (0.0/ 0.0)
Oxboard (Potlatch)	114 (67.1)	101 (88.6/59.4)
Sturdi-Wood (Pelican Spruce Mills)	31 (18.2)	10 (32.2/ 5.9)
Norbord (Northwood Mills)	74 (43.5)	57 (77.0/33.5)
Blandex (Blandin Wood Products)	96 (56.5)	88 (91.7/51.8)
Structurwood (Weyerhaeuser)	91 (53.5)	72 (79.1/42.3)
Panofor (Forex Leroy)	1 (0.6)	0 (0.0/ 0.0)
T-Strand (Temple Eastex)	17 (10.0)	11 (64.7/ 6.5)
Blue Ribbon OSB (Georgia-Pacific)	84 (49.4)	53 (63.1/31.2)

^a Respondents may be represented in more than one category.

^b Frequencies compiled in terms of the total number of participants (170).

^c Frequencies compiled in terms of correct responses over the number of respondents attempting to match the manufacturer with the corresponding brand.

^d Frequencies compiled in terms of correct responses over total number of participants.

TABLE 8.--Manufacturers' attitudes concerning statements tied to their respective branding policies and practices.

	Responses (Response Frequency) ^a					Mean Score	Weighted Mean Score ^b
	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree		
	1	2	3	4	5		
Brand naming your OSB/waferboard line provides a higher degree of protection from competitors than by selling generically.	0.0 (0.0) ^b	10.5 (5.0)	21.1 (10.4)	57.9 (74.6)	10.5 (9.9)	.68	.90
Your firm can control a more stable consumer base by employing an individual brand naming strategy for your OSB/waferboard line.	0.0 (0.0)	21.1 (23.8)	42.1 (46.2)	36.8 (30.1)	0.0 (0.0)	.15	.06
The variety of different OSB/waferboard brand names on the market has resulted in confusing the consumer as to the correct end use of the panel product.	0.0 (0.0)	21.1 (12.4)	21.1 (14.3)	47.4 (52.5)	10.5 (20.8)	.47	.82
Brand naming your OSB/waferboard line affords a higher degree of pricing flexibility.	0.0 (0.0)	31.6 (15.8)	36.8 (50.8)	31.6 (32.8)	0.0 (0.0)	.00	.17
The end users' purchasing decision involving an OSB/waferboard panel product is primarily a function of price.	0.0 (0.0)	10.5 (11.1)	21.1 (32.5)	42.1 (24.8)	26.3 (31.5)	.84	.77

^aMean scores are weighted in terms of 1985 production capacities for respective firms represented in each category.

^bFrequencies are weighted in terms of 1985 production capacities for respective firms represented in each category.

TABLE 9.—Retailers' perceptions of the single OSB/waferboard brand (manufacturer) that best satisfies the designated characteristic.

Brand Characteristic	Regional Responses				Total
	North Central	South	Northeast	West	
Most Expensive OSB/Waferboard Panel On The Market					
Potlatch	36	6	4	3	46
Weyerhaeuser	18	12	2	0	32
Louisiana-Pacific	2	1	0	0	3
Georgia-Pacific	0	2	0	0	2
Northwood	1	0	0	0	1
Other (Blandin, MacMillian Bloedel, Pelican Mills, U.S. Plywood, J.M. Huber)	3	14	2	9 ^a	28
Brand Ranking Highest On A Performance/Quality Basis					
Potlatch	39	4	1	0	44
Weyerhaeuser	22	9	5	1	37
Louisiana-Pacific	4	12	6	9	31
U.S. Plywood	0	9	4	1	14
Georgia-Pacific	0	8	3	1	12
Blandin	3	5	3	0	11
Northwood	6	1	0	0	7
Other (MacMillian Bloedel., Grant Waferboard, J.M. Huber, Temple Eastex, Martin Lumber, Pelican Mills, Great Lakes)	7	4	4	7	18
Brand Ranking Lowest On a Performance/Quality Basis					
Georgia-Pacific	9	12	2	0	23
Louisiana-Pacific	5	5	2	2	14
Blandin	11	0	0	0	11
Northwood	5	3	0	0	8
Macmillian Bloedel	5	1	1	0	7
Other (U.S. Plywood, Grant Waferboard, J.M. Huber, Temple Eastex, Martin, Potlatch, Pelican Mills)	2	8	2	7	19
Brand Professional Contractors Prefer Most					
Potlatch	25	3	1	1	30
Weyerhaeuser	17	7	2	0	26
Louisiana-Pacific	3	7	2	5	17
Georgia-Pacific	1	6	0	0	7
Northwood	3	1	0	0	4
Other (Blandin, U.S. Plywood, J.M. Huber, Pelican Mills, Oregon Strandboard, MacMillian Bloedel)	1	10	3	7	21
Brand That DIY Customers Prefer Most					
Louisiana-Pacific	3	4	2	4	13
Potlatch	6	3	1	0	10
Georgia-Pacific	0	4	1	0	5
Northwood	2	0	0	0	2
Weyerhaeuser	8	1	0	0	1
Other (Blandin, MacMillian Bloedel, Pelican Mills Oregon Strandboard, J.M. Huber, U.S. Plywood)	7	6	4	3	20

^aNote, all 9 responses were listed under the Pelican Spruce Mill's brand.

TABLE 10.--Summary of the retailers' perceptions concerning the ranking of OSB/waferboard product lines on a performance/quality basis.

	Responses ^a			
	North Central Total (Rank Score) ^b	South Total (Rank Score)	Northeast Total (Rank Score)	West Total (Rank Score)
Blandin Wood Products	20 (35)	9 (22)	3 (9)	1 (1)
Forex Leroy Inc.	0 (0)	0 (0)	0 (0)	- ^b
Georgia-Pacific	13 (19)	28 (57)	11 (22)	1 (3)
Grant Waferboard	3 (3)	0 (0)	0 (0)	-
Great Lakes Forest Products	2 (6)	-	0 (0)	-
J.M. Huber	0 (0)	3 (8)	3 (7)	-
Louisiana-Pacific	23 (40)	28 (60)	9 (23)	18 (44)
MacMillian Bloedel Ltd.	15 (25)	5 (10)	4 (9)	1 (2)
Mallette Waferboard	1 (1)	-	0 (0)	-
Martin Lumber Co.	-	4 (7)	-	-
Normick Perron Inc.	0 (0)	0 (0)	0 (0)	-
Northwood Mills Ltd.	16 (16)	6 (11)	-	2 (3)
Oregon Strandboard	-	-	0 (0)	4 (7)
Pelican Spruce Mills	-	-	0 (0)	11 (29)
Potlatch	56 (149)	6 (15)	4 (7)	1 (1)
Temple-Eastex	1 (1)	-	2 (2)	-
U.S. Plywood	2 (4)	21 (47)	7 (18)	7 (11)
Waferboard Corp.	1 (1)	-	1 (1)	-
Weyerhaeuser	35 (91)	11 (30)	8 (21)	1 (3)

^aA dashed line denotes a region in which the manufacturer's respective product line was not distributed.

^bRank item scores were compiled by assigning numerical values (in the order of decreasing magnitude: 3 to 1) to brands retailers perceived as ranking from first to third. A total score was then computed by summing the products of the three rank categories.

CONCLUSIONS

The following list highlights a few key results derived from this research effort. While this list is not meant to be all inclusive it should give the reader a clear picture of some of the more important aspects of the study.

Manufacturer Survey

1. Ninety-five percent of the producers have introduced a branding strategy.
2. Manufacturers' rationale for introducing a branding strategy included: product differentiation, product identification, and the ability to control a stable consumer base.
3. Manufacturers' perceived price to be the most important attribute in terms of marketing their respective product lines.
4. Analysis of segmentation strategies by end use and end user revealed that roofdeck sheathing applications and the residential contractor carried the highest degree of importance.

Retail Building Supply Survey

1. Seventy-nine percent of the responding retailers carrying a structural panel product line sold OSB/waferboard.
2. Market penetration of reconstituted structural panel products was highest in the North Central region.
3. Roofdeck sheathing (end use) and the residential contractor (end user) commanded the highest degree of importance among retailers.
4. Two-thirds of the retailers contended that their purchase decision involving an OSB/waferboard product was dictated by price.
5. Of the four structural panel product classes, waferboard was perceived as being the cheapest, while response frequencies were comparatively higher for OSB when evaluated in terms of strength/stiffness, durability, surface uniformity, dimensional stability and on a performance/quality basis.
6. Retailers' perceptions of ideal structural panel attributes centered on maximizing strength/stiffness, reducing the price, and improving surface uniformity.
7. Forty-six percent of the retailers perceived panel quality was more consistent when a brand name was associated with the product.

8. With the exception of the Potlatch and Weyerhaeuser brands, the relative effectiveness of manufacturers' branding policies can be questioned.
9. Retailers contended that the variety of different brand names confused the consumer as to the products appropriate end use.
10. Only one-third of the respondents agreed that branding increased buyer preference.
11. Only 32% of the retailers agreed that the respective brands their firm carried attracted a loyal consumer base.

RECOMMENDATIONS FOR FUTURE RESEARCH

There are several areas that afford attractive opportunities for continued research efforts:

1. Formulate a study designed to assess distributor (independent wholesaler) perceptions concerning the effectiveness of manufacturers' branding policies and market segmentation strategies. The importance of this distribution channel to the structural panel industry, can not be over emphasized. North American OSB/waferboard manufacturers distribute the bulk of their product line directly to wholesalers, and study results showed that 89% of the retailers received some or all of their reconstituted panel products from independent wholesalers.
2. As market penetration rates rise with increasing productive capacities, especially in the South and West, a study designed to assess consumer awareness, product line preference and branding effectiveness, of the more important end user segments (ie. professional contractor, DIY consumer) would be very useful. The basis for targeting the professional contractor centers around its current degree of importance to manufacturers' promotional campaigns and retailers' OSB/waferboard sales volumes. On the other hand, market penetration is well below potential for the DIY market sector, where a coordinated industry wide promotional effort could be quite effective. A study directed at these target markets would assist manufacturers in formulating and coordinating promotional activities by identifying the needs of the end user, subsequently improving sales volumes.
3. Because of the timeliness of this study, a follow up investigation designed to account for changes in the market environment (ie. market penetration, brand awareness, and brand preference levels), should be undertaken. The projected growth of the OSB/waferboard industry, especially in the South and West, combined with the increasing importance of various target markets (ie. DIY/remodeling markets) which have not been extensively tapped, dictates the need to continually monitor the market. A study of this nature should be conducted periodically (ie. every 5 years) in order to keep abreast of the changing consumer demands.

APPENDIX

Research Instruments

Telephone Survey

**Directed To Marketing Executives Of The North American OSB/Waferboard
Industry**

**Date Conducted
March 1986**

COMPANY _____
RESPONDENT'S NAME _____
DATE _____
PHONE NUMBER _____

TELEPHONE INTERVIEW
DIRECTED TO MARKETING EXECUTIVES OF THE OSB/WAFERBOARD INDUSTRY

1) PLEASE INDICATE YOUR POSITION/TITLE.

2) WHAT TYPE(S) OF STRUCTURAL PANEL PRODUCTS DO YOU MANUFACTURE?

DO ANY OF YOUR STRUCTURAL PANEL LINES CARRY AN INDIVIDUAL BRAND NAME?
IF YES, WHAT ARE THE SPECIFIC BRAND NAMES FOR THE RESPECTIVE PANEL LINES?

- STRUCTURAL PARTICLEBOARD _____
- WAFERBOARD _____
- ORIENTED STRANDBOARD _____
- PLYWOOD _____
- ORIENTED WAFERBOARD _____

3) WHY DID YOUR FIRM CHOOSE (CHOOSE NOT) TO INTRODUCE A SEPARATE BRAND NAME FOR YOUR OSB/WAFERBOARD LINE? PLEASE EXPLAIN.

4) IS THE CORPORATE NAME (LOGO) INCLUDED WHEN PROMOTING YOUR OSB/WAFERBOARD LINE?

YES NO

5) WHAT SPECIFIC CHARACTERISTICS DIFFERENTIATES YOUR OSB/WAFERBOARD LINE FROM THAT OF YOUR COMPETITORS?

6) WHAT STRUCTURAL PANEL CHARACTERISTICS ARE MOST IMPORTANT IN TERMS OF PROMOTING YOUR OSB/WAFERBOARD LINE?

Mail Survey

**Directed To Marketing Executives Of The North American OSB/Waferboard
Industry**

**Survey Conducted Following Completion Of The Telephone Interview
March 1986**

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
DEPARTMENT OF FOREST PRODUCTS
RECONSTITUTED STRUCTURAL PANEL INDUSTRY
EXECUTIVE SURVEY

1) DOES YOUR FIRM PRODUCE AN OSB/WAFERBOARD PRODUCT WHICH IS EVENTUALLY DISTRIBUTED UNDER ANOTHER MANUFACTURER'S BRAND (AND/OR CORPORATE) NAME?

- NO
 YES PLEASE LIST THOSE MANUFACTURER'S BRAND NAMING YOUR PRODUCT. _____

QUESTIONS 2 THROUGH 5 REFER TO YOUR FIRM'S MARKET SEGMENTATION STRATEGIES FOR IT'S OSB/WAFERBOARD PRODUCT LINE. YOUR FIRM'S ANONYMOUS RESPONSE TO THESE QUESTIONS IS OF KEY IMPORTANCE TO THE SUCCESS OF THIS STUDY.

2) PLEASE EVALUATE EACH PRODUCT ATTRIBUTE IN TERMS OF ITS DEGREE OF IMPORTANCE TO THE MARKETABILITY OF YOUR FIRM'S OSB/WAFERBOARD LINE. (PLEASE RATE EACH ATTRIBUTE ON A SCALE OF 1=EXTREMELY IMPORTANT TO 5=NOT AT ALL IMPORTANT BY CHECKING THE APPROPRIATE BOX.)

	EXTREMELY IMPORTANT 1	2	IMPORTANT 3	4	NOT AT ALL IMPORTANT 5
<u>PRODUCT ATTRIBUTES</u>					
PRICE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRENGTH/STIFFNESS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DURABILITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SURFACE UNIFORMITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DIMENSIONAL STABILITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RACKING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IMPACT RESISTANCE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PANEL WEIGHT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER (PLEASE SPECIFY) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>COMPANY ATTRIBUTES</u>					
COMPANY REPUTATION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SERVICE SUPPORT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRODUCT LINE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRAND NAME	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARKET COVERAGE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISTRIBUTION NETWORK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER (PLEASE SPECIFY) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) HAS YOUR FIRM IMPLEMENTED A PRODUCT POSITIONING STRATEGY FOR ITS OSB/WAFERBOARD LINE?

- YES NO (IF NO, PLEASE SKIP TO QUESTION 5)

4) HOW IS YOUR OSB/WAFERBOARD PRODUCT LINE POSITIONED ON THE MARKET? (PLEASE CHECK THE APPROPRIATE STRATEGY(S).)

- | | |
|---|---|
| <input type="checkbox"/> POSITIONED FOR SPECIFIC APPLICATIONS | <input type="checkbox"/> POSITIONED ON SPECIFIC PRODUCT ATTRIBUTES |
| <input type="checkbox"/> POSITIONED AGAINST COMPETING PRODUCT LINES | <input type="checkbox"/> POSITIONED FOR USER CATEGORY/MARKET SEGMENTS |
| <input type="checkbox"/> POSITIONED ON BENEFITS | <input type="checkbox"/> OTHER (PLEASE SPECIFY) _____ |

5) PLEASE DIVIDE 100 POINTS BETWEEN THE FOLLOWING FIVE OSB/WAFERBOARD END USES IN TERMS OF THE RELATIVE IMPORTANCE OF EACH END USE TO YOUR FIRM. (i.e. THE TOTAL AMOUNT OF SALES DOLLARS EACH END USE GENERATES)

WALL SHEATHING	_____
ROOFDECK SHEATHING	_____
SUB-FLOORING	_____
INDUSTRIAL APPLICATIONS (i.e. PALLETS, GRATING, FURNITURE)	_____
REMODELING/DO-IT-YOURSELF MARKET (i.e. SHELVING, CABINETRY)	_____
OTHER (PLEASE SPECIFY)	_____
TOTAL = 100 POINTS	

6) WHAT FACTORS DO YOU THINK CONTRIBUTE TO RETAILERS' PREFERENCE FOR YOUR FIRM'S OSB/WAFERBOARD PRODUCT OFFERING?

QUESTIONS 7 THROUGH 10 REFER TO YOUR FIRM'S PRODUCT POLICY DECISIONS REGARDING PROMOTIONAL ACTIVITY FOR ITS OSB/WAFERBOARD PRODUCT OFFERING.

7) PLEASE INDICATE THE DEGREE OF IMPORTANCE CURRENTLY BEING PLACED ON THE OSB/WAFERBOARD MARKET SEGMENTS LISTED BELOW BY YOUR CORPORATE PROMOTIONAL CAMPAIGN? (PLEASE RATE EACH MARKET SEGMENT ON A SCALE OF 1=EXTREMELY IMPORTANT TO 5=NOT AT ALL IMPORTANT BY CHECKING THE APPROPRIATE BOX.)

	EXTREMELY IMPORTANT		IMPORTANT		NOT AT ALL IMPORTANT	
	1	2	3	4	5	
WHOLESALEERS	<input type="checkbox"/>					
RETAILERS	<input type="checkbox"/>					
MODULAR BUILDERS	<input type="checkbox"/>					
DO-IT-YOURSELF MARKET	<input type="checkbox"/>					
MOBILE HOME BUILDERS	<input type="checkbox"/>					
RESIDENTIAL CONTRACTORS	<input type="checkbox"/>					
NONRESIDENTIAL CONTRACTORS	<input type="checkbox"/>					
INDUSTRIAL MARKETS (PLEASE SPECIFY)	<input type="checkbox"/>					

8) WHAT TYPE OF ADVERTISING MEDIA HAVE YOU UTILIZED TO PROMOTE YOUR OSB/WAFERBOARD LINE? (PLEASE CHECK ALL THAT APPLY.)

- | | |
|---|---|
| <input type="checkbox"/> TELEVISION/RADIO COMMERCIALS | <input type="checkbox"/> MAGAZINES ADDED AT INDUSTRIAL METS (i.e. WOOD & WOOD PRODUCTS) |
| <input type="checkbox"/> NEWSPAPER ADVERTISEMENTS | <input type="checkbox"/> DIY MAGAZINES (i.e. POPULAR MECHANICS, WORKBENCH) |
| <input type="checkbox"/> TECHNICAL SUPPORT LITERATURE | <input type="checkbox"/> HOME CENTER MAGAZINES (i.e. HOME CENTER, BUILDING PRODUCTS DIGEST) |
| <input type="checkbox"/> TRADE CONVENTIONS | <input type="checkbox"/> OTHER, PLEASE SPECIFY _____ |

9) WHAT TYPE OF PROMOTIONAL SUPPORT ARE YOU PROVIDING RETAILERS FOR YOUR OSB/WAFERBOARD PRODUCT LINE? (PLEASE CHECK ALL THAT APPLY.)

- | | | |
|--|--|---|
| <input type="checkbox"/> MONETARY INCENTIVES | <input type="checkbox"/> CO-OP AD PROGRAMS | <input type="checkbox"/> SALES LITERATURE |
| <input type="checkbox"/> QUANTITY DISCOUNTS | <input type="checkbox"/> IN STORE DISPLAYS | <input type="checkbox"/> ADVERTISEMENTS (MASTER COPIES) |
| <input type="checkbox"/> TRAINING SEMINARS | <input type="checkbox"/> TECHNICAL SALES SUPPORT | <input type="checkbox"/> SALES DISCOUNTS |
| <input type="checkbox"/> OTHER, PLEASE SPECIFY _____ | | |

10) WHAT MARKET INDICATORS DOES YOUR FIRM USE TO MEASURE THE EFFECTIVENESS OF ITS PROMOTIONAL CAMPAIGN FOR OSB/WAFERBOARD? (PLEASE CHECK ALL THAT APPLY.)

- | | |
|---|--|
| <input type="checkbox"/> MARKET SHARES | <input type="checkbox"/> FIRM DOES NOT MEASURE THE EFFECTIVENESS OF PROMOTIONAL ACTIVITY |
| <input type="checkbox"/> SALES | <input type="checkbox"/> DATA DERIVED FROM CONSUMER RESEARCH |
| <input type="checkbox"/> PROFIT MARGINS | <input type="checkbox"/> OTHER, PLEASE SPECIFY _____ |

QUESTIONS 11 THROUGH 13 REFER TO THE CORPORATE RATIONALE BEHIND IMPLEMENTING A BRAND NAMING STRATEGY.

11) HAS YOUR FIRM ADOPTED A BRAND NAMING STRATEGY FOR ITS OSB/WAFERBOARD PRODUCT LINE?

- YES NO

12) PLEASE LIST THE PRIMARY BENEFITS YOUR FIRM HAS REALIZED BY IMPLEMENTING, OR CHOOSING NOT TO IMPLEMENT, A BRAND NAMING STRATEGY FOR ITS OSB/WAFERBOARD PRODUCT OFFERING?

1. _____
2. _____
3. _____

13) PLEASE INDICATE THE LEVEL OF AGREEMENT OR DISAGREEMENT YOU ATTACH TO THE FOLLOWING STATEMENTS BY CHECKING THE APPROPRIATE BOX.

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
	-2	-1	0	1	2
THE END USERS' PURCHASING DECISION INVOLVING AN OSB/WAFERBOARD PANEL IS PRIMARILY A FUNCTION OF PRICE.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YOUR FIRM'S OSB/WAFERBOARD PROMOTIONAL CAMPAIGN HAS BEEN SUCCESSFUL IN ESTABLISHING BRAND AWARENESS AMONG BUYERS FOR RETAIL BUILDING SUPPLY FIRMS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YOUR FIRM'S ADVERTISING CAMPAIGN DIFFERENTIATES YOUR OSB/WAFERBOARD LINE FROM THAT OF YOUR COMPETITORS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RETAIL BUILDING SUPPLY BUYERS CANNOT DIFFERENTIATE (ON THE BASIS OF QUALITY) BETWEEN YOUR OSB/WAFERBOARD BRAND AND THAT OF YOUR PRIMARY COMPETITORS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUYERS FOR RETAIL BUILDING SUPPLY FIRMS IN YOUR PRIMARY TARGET MARKET CAN IDENTIFY SPECIFIC CHARACTERISTICS ASSOCIATED WITH YOUR OSB/WAFERBOARD BRAND.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THE VARIETY OF DIFFERENT OSB/WAFERBOARD BRAND NAMES ON THE MARKET HAS RESULTED IN CONFUSING THE CONSUMER AS TO THE CORRECT END USE OF THE PANELS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YOUR FIRM CAN CONTROL A MORE STABLE CONSUMER BASE BY EMPLOYING AN INDIVIDUAL BRAND NAMING STRATEGY FOR YOUR OSB/WAFERBOARD LINE.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRAND NAMING YOUR OSB/WAFERBOARD LINE AFFORDS A HIGHER DEGREE OF PRICING FLEXIBILITY.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BRAND NAMING YOUR OSB/WAFERBOARD LINE PROVIDES A HIGHER DEGREE OF PROTECTION FROM COMPETITORS THAN DOES SELLING YOUR PRODUCT GENERICALLY.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IMPLEMENTING A BRAND NAMING STRATEGY FOR YOUR OSB/WAFERBOARD PRODUCT LINE ENCOURAGES EFFICIENCY WITHIN YOUR SALES ORGANIZATION.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14) WHAT IS YOUR PROJECTED OSB/WAFERBOARD PRODUCTION CAPACITY FOR 1985? _____ (FT²)

15) PLEASE INDICATE WHICH OSB/WAFERBOARD PANEL THICKNESS(ES) YOUR FIRM IS CURRENTLY PRODUCING. (PLEASE CHECK ALL THAT APPLY.) IF YOUR PANEL CARRIES A SPAN RATING, PLEASE INDICATE THE RATING ASSOCIATED WITH EACH THICKNESS.

<u>THICKNESS</u>	<u>SPAN RATING</u>
------------------	--------------------

- | | |
|--------------------------------|-------|
| <input type="checkbox"/> 1/4" | _____ |
| <input type="checkbox"/> 5/16" | _____ |
| <input type="checkbox"/> 3/8" | _____ |
| <input type="checkbox"/> 7/16" | _____ |
| <input type="checkbox"/> 1/2" | _____ |
| <input type="checkbox"/> 5/8" | _____ |
| <input type="checkbox"/> 3/4" | _____ |
| <input type="checkbox"/> OTHER | |

(PLEASE SPECIFY THICKNESS AND SPAN RATING) _____

16) USING THE LIST DETAILED BELOW, PLEASE INDICATE THE AREAS IN WHICH YOU ARE PERSONALLY INVOLVED IN THE DECISION MAKING PROCESS FOR YOUR FIRM'S OSB/WAFERBOARD LINE.

- | | | |
|---|--|---|
| <input type="checkbox"/> PRODUCT POSITIONING | <input type="checkbox"/> TARGET MARKET DECISIONS | <input type="checkbox"/> PRICING STRATEGY |
| <input type="checkbox"/> ADVERTISING (PROMOTION) | <input type="checkbox"/> PRODUCT DEVELOPMENT | <input type="checkbox"/> DISTRIBUTION |
| <input type="checkbox"/> OTHER (PLEASE SPECIFY) _____ | | |

THANK YOU FOR YOUR COOPERATION. PLEASE RETURN THE SURVEY IN THE POSTPAID ENVELOPE.

Mail Survey

Directed To U.S. Structural Panel Buyers For Retail Building Suppliers

**Date Conducted:
June 1986**

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
DEPARTMENT OF FOREST PRODUCTS
RECONSTITUTED STRUCTURAL PANEL INDUSTRY
BUILDING SUPPLY RETAILER SURVEY

1) DOES YOUR FIRM SELL STRUCTURAL PANEL PRODUCTS?

- NO
- YES PLEASE INDICATE THOSE STRUCTURAL PANEL PRODUCTS YOUR FIRM CURRENTLY SELLS BY CHECKING THE APPROPRIATE BOX.

- PLYWOOD
- ORIENTED STRAND BOARD (OSB)
- ORIENTED WAFFERBOARD
- STRUCTURAL PARTICLEBOARD
- WAFFERBOARD

2) PLEASE IDENTIFY THE STATE(S) IN WHICH YOUR RETAIL BUILDING SUPPLY STORE(S) ARE LOCATED.

NOTE: IF YOU ARE NOT FAMILIAR WITH ORIENTED STRANBOARD OR WAFFERBOARD AND DO NOT CURRENTLY STOCK THIS PRODUCT PLEASE STOP HERE AND RETURN THIS SURVEY IN THE POST PAID ENVELOPE.

3) DO YOU PURCHASE THE OSB/WAFFERBOARD PRODUCTS YOU SELL DIRECT FROM THE MANUFACTURER OR FROM A WHOLESALER?

- MANUFACTURER
- INDEPENDENT WHOLESALER
- BOTH

4) WHAT TYPE OF PROMOTIONAL SUPPORT DO YOU RECEIVE FROM MANUFACTURERS (DISTRIBUTORS) FOR YOUR OSB/WAFFERBOARD PRODUCT LINE? (PLEASE CHECK ALL THAT APPLY.)

- USER TRAINING SEMINARS
- SALES DISCOUNTS
- TECHNICAL SALES SUPPORT
- MONETARY INCENTIVES
- QUANTITY DISCOUNTS
- NONE
- CO-OP AD PROGRAMS
- IN-STORE DISPLAYS
- OTHER, PLEASE SPECIFY _____
- SALES LITERATURE
- ADVERTISEMENTS (MASTER COPIES)

QUESTIONS 5 THROUGH 9 REFER TO BRAND POSITIONING WITHIN THE RECONSTITUTED STRUCTURAL PANEL MARKET. YOUR FIRM'S ANONYMOUS RESPONSE TO THESE QUESTIONS IS OF KEY IMPORTANCE TO THE SUCCESS OF THIS STUDY.

5) PLEASE INDICATE WHICH OSB/WAFFERBOARD BRAND(S) ARE SOLD IN YOUR RETAIL BUILDING SUPPLY OUTLET(S). PLEASE INCLUDE THE BRAND NAME, PRODUCT CLASS (i.e. WAFFERBOARD, OSB, OR ORIENTED WAFFERBOARD), AND THE COMPANY PRODUCING THE PANEL.

BRAND NAME	PRODUCT CLASS (i.e. OSB, ORIENTED WAFFERBOARD, OR WAFFERBOARD)	MANUFACTURER OF THE PANEL
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

6) WHAT SINGLE OSB/WAFFERBOARD BRAND REPRESENTS THE LARGEST PORTION OF YOUR TOTAL RECONSTITUTED STRUCTURAL PANEL SALES? (BASED ON DOLLAR SALES VOLUME)

WHY DO YOU STOCK THIS PARTICULAR OSB/WAFFERBOARD BRAND?

7) FROM A RETAILERS PERSPECTIVE, PLEASE INDICATE WHICH OSB/WAFFERBOARD BRANDS YOU PERCEIVE AS RANKING HIGHEST IN TERMS OF OVERALL QUALITY/PERFORMANCE. (PLEASE RANK THEM IN ORDER OF 1ST TO 3RD IN THE SPACES PROVIDED BELOW)

1) _____ 2) _____ 3) _____

8) WHAT OSB/WAFERBOARD BRANDS ARE CURRENTLY BEING SOLD BY YOUR COMPETITORS? PLEASE INCLUDE THE BRAND NAME, PRODUCT CLASSIFICATION (i.e. WAFERBOARD, ORIENTED STRANDBOARD, OR ORIENTED WAFERBOARD), AND THE COMPANY PRODUCING THE PANEL.

BRAND NAME	PRODUCT CLASS <i>(i.e. OSB, WAFERBOARD, ORIENTED WAFERBOARD)</i>	MANUFACTURER OF PANEL
_____	_____	_____
_____	_____	_____
_____	_____	_____

9) OF THE OSB/WAFERBOARD BRANDS YOU ARE FAMILIAR WITH, WHAT BRAND DO YOU BELIEVE COMES CLOSEST TO SUPPORTING THE FOLLOWING STATEMENTS.

BRAND CHARACTERISTICS	BRAND NAME (OR MANUFACTURER)
THE MOST EXPENSIVE OSB/WAFERBOARD PANEL CURRENTLY ON THE MARKET.	_____
THE BRAND YOU WOULD RANK LOWEST ON A PERFORMANCE/QUALITY BASIS.	_____
THE OSB/WAFERBOARD BRAND THAT PROFESSIONAL CONTRACTORS PREFER MOST.	_____
THE OSB/WAFERBOARD BRAND THAT DIY CUSTOMERS PREFER MOST.	_____

QUESTIONS 10 THROUGH 12 REFER TO THE PRODUCT CLASS POSITIONS WITHIN THE STRUCTURAL PANEL MARKET.

10) PLEASE INDICATE WHICH OF THE FOLLOWING BEST DESCRIBES YOUR ANNUAL OSB/WAFERBOARD DOLLAR SALES VOLUME?

- LESS THAN \$10,000
- \$10,000 TO \$49,999
- \$50,000 TO \$99,999
- \$100,000 TO \$249,000
- \$250,000 TO \$500,000
- MORE THAN \$500,000

11) PLEASE DIVIDE 100 POINTS BETWEEN THE FOLLOWING FOUR PRODUCT CLASSES BASED ON THE RELATIVE IMPORTANCE OF EACH PRODUCT IN TERMS OF THE TOTAL AMOUNT OF SALES DOLLARS IT GENERATES FOR YOUR FIRM.

WAFERBOARD	_____
ORIENTED STRAND BOARD	_____
PLYWOOD	_____
ORIENTED WAFERBOARD	_____
TOTAL = 100 POINTS	

12) PLEASE EVALUATE EACH PRODUCT ATTRIBUTE BY CHECKING THE ONE PRODUCT CATEGORY THAT BEST SATISFIES THE CORRESPONDING CHARACTERISTIC LISTED ON THE LEFT.

	WAFERBOARD	OSB	ORIENTED WAFERBOARD	PLYWOOD	NO DIFFERENCE IN THE FOUR PRODUCT CATEGORIES
CHEAPEST	<input type="checkbox"/>				
STRONGEST/STIFFEST	<input type="checkbox"/>				
MOST DURABLE	<input type="checkbox"/>				
HIGHEST SURFACE UNIFORMITY	<input type="checkbox"/>				
GREATEST DIMENSIONAL STABILITY	<input type="checkbox"/>				
GREATEST IMPACT RESISTANCE	<input type="checkbox"/>				
LIGHTEST WEIGHT (PER EQUIVALENT THICKNESS)	<input type="checkbox"/>				
GENERATES HIGHEST PROFIT MARGIN FOR THE RETAILER	<input type="checkbox"/>				
RANKS HIGHEST ON A PERFORMANCE/QUALITY BASIS	<input type="checkbox"/>				

QUESTIONS 13 THROUGH 15 REFER TO RELEVANT STRUCTURAL PANEL ATTRIBUTES AS THEY PERTAIN TO THE OSB/WAFERBOARD MARKET.

13) FROM A RETAILER'S PERSPECTIVE, WHAT ARE THE IDEAL STRUCTURAL PANEL CHARACTERISTICS (COMBINATION OF ATTRIBUTES)?

14) PLEASE EVALUATE EACH PRODUCT ATTRIBUTE IN TERMS OF ITS DEGREE OF IMPORTANCE TO YOU WHEN CONSIDERING WHICH PARTICULAR OSB/WAFERBOARD BRAND TO PURCHASE FOR YOUR FIRM'S RETAIL BUILDING SUPPLY OUTLET(S). (PLEASE RATE EACH ATTRIBUTE ON A SCALE OF 1=EXTREMELY IMPORTANT TO 5= NOT AT ALL IMPORTANT BY CHECKING THE APPROPRIATE BOX.)

PRODUCT ATTRIBUTES	EXTREMELY		IMPORTANT		NOT AT ALL
	IMPORTANT	2	3	4	IMPORTANT
	1				5
PRICE	<input type="checkbox"/>				
STRENGTH/STIFFNESS	<input type="checkbox"/>				
DURABILITY	<input type="checkbox"/>				
SURFACE UNIFORMITY	<input type="checkbox"/>				
DIMENSIONAL STABILITY	<input type="checkbox"/>				
IMPACT RESISTANCE	<input type="checkbox"/>				
PANEL WEIGHT	<input type="checkbox"/>				
QUALITY/PERFORMANCE OF BRAND AS OPPOSED TO COMPETING LINES	<input type="checkbox"/>				
MANUFACTURER (DISTRIBUTOR) ATTRIBUTES					
COMPANY REPUTATION (ie. FAVORABLE CORPORATE IMAGE TIED TO BRAND)	<input type="checkbox"/>				
DEPTH OF PRODUCT LINE	<input type="checkbox"/>				
BRAND NAME	<input type="checkbox"/>				
PROMOTIONAL SUPPORT (ie. ADVERTISEMENTS-MASTER COPIES STORE DISPLAYS, SALES LITERATURE etc.)	<input type="checkbox"/>				
SALES SUPPORT/FINANCIAL INCENTIVES (ie. MONETARY INCENTIVES, QUANTITY DISCOUNTS, SALES DISCOUNTS etc.)	<input type="checkbox"/>				
PRODUCT AVAILABILITY	<input type="checkbox"/>				
SERVICE SUPPORT	<input type="checkbox"/>				

15) PLEASE INDICATE THE LEVEL OF AGREEMENT OR DISAGREEMENT YOU ATTACH TO THE FOLLOWING STATEMENTS BY CHECKING THE APPROPRIATE BOX.

	STRONGLY		NEITHER		STRONGLY
	DISAGREE	DISAGREE	AGREE NOR DISAGREE	AGREE	AGREE
	-2	-1	0	1	2
THE OSB/WAFERBOARD PURCHASING DECISION BY RETAIL BUILDING SUPPLY BUYERS IS PRIMARILY A FUNCTION OF PRICE WHEN CONSIDERING WHICH BRAND TO BUY.	<input type="checkbox"/>				
PLYWOOD AND OSB/WAFERBOARD PANEL PRODUCTS ARE BEING USED INTERCHANGEABLY (SUBSTITUTES) BY PROFESSIONAL CONTRACTORS/BUILDERS.	<input type="checkbox"/>				
A BRAND NAME ASSISTS IN PROMOTING THE SALE OF A STRUCTURAL PANEL PRODUCT.	<input type="checkbox"/>				
BRAND NAMING OSB/WAFERBOARD HAS INCREASED BUYER PREFERENCE FOR THIS PANEL PRODUCT.	<input type="checkbox"/>				
A BRAND NAMED OSB/WAFERBOARD PRODUCT PROVIDES YOU, THE RETAILER, A GREATER DEGREE OF PRICING FLEXIBILITY THAN DOES SELLING AN UNBRANDED PANEL.	<input type="checkbox"/>				
THE CLAIMS MADE BY OSB/WAFERBOARD MANUFACTURERS ABOUT THEIR RESPECTIVE BRANDS, ARE CONSISTENT WITH THE PRODUCT'S ACTUAL PERFORMANCE.	<input type="checkbox"/>				
THE PROFESSIONAL CONTRACTOR/BUILDER CAN CLEARLY DIFFERENTIATE, ON A PERFORMANCE BASIS, BETWEEN THE VARIOUS OSB/WAFERBOARD BRANDS.	<input type="checkbox"/>				
THE PROFESSIONAL CONTRACTOR/BUILDER PURCHASE DECISION INVOLVING AN OSB/WAFERBOARD PRODUCT IS PRIMARILY A FUNCTION OF PRICE.	<input type="checkbox"/>				
OSB/WAFERBOARD PANEL QUALITY IS MORE CONSISTENT WHEN A BRAND NAME IS ASSOCIATED WITH THE PRODUCT.	<input type="checkbox"/>				
MOST "DO-IT-YOURSELF" CUSTOMERS HAVE A STRONG PREFERENCE FOR PLYWOOD OVER THAT OF OSB/WAFERBOARD PRODUCTS.	<input type="checkbox"/>				
THE NUMBER OF DIFFERENT OSB/WAFERBOARD BRANDS CONFUSE THE "DO-IT-YOURSELF" CONSUMER AS TO THE PANEL'S CORRECT STRUCTURAL APPLICATIONS.	<input type="checkbox"/>				
THE PARTICULAR OSB/WAFERBOARD BRAND(S) YOUR FIRM SELLS HAS ATTRACTED A LOYAL CONSUMER BASE. (ie. WHERE IT IS DIFFICULT TO SUBSTITUTE OTHER COMPETITIVE BRANDS.)	<input type="checkbox"/>				

QUESTIONS 16 AND 17 REFER TO MARKET SEGMENTATION WITHIN THE OSB/WAFERBOARD INDUSTRY AT THE RETAIL LEVEL.

16) PLEASE DIVIDE 100 POINTS BETWEEN THE FOLLOWING FOUR OSB/WAFERBOARD END USES BASED ON THE RELATIVE IMPORTANCE OF EACH END USE IN TERMS OF THE TOTAL AMOUNT OF SALES DOLLARS IT GENERATES FOR YOUR FIRM.

WALL SHEATHING	_____
ROOFDECK SHEATHING	_____
SUB-FLOORING	_____
REMODELING/DO-IT-YOURSELF MARKET (i.e. SHELVING, CABINTRY)	_____
TOTAL = 100 POINTS	

17) PLEASE INDICATE THE DEGREE OF IMPORTANCE YOUR FIRM CURRENTLY PLACES ON EACH END USER SEGMENT IN TERMS OF THE TOTAL AMOUNT OF OSB/WAFERBOARD SALES VOLUME EACH USER SEGMENT GENERATES. (PLEASE RATE EACH MARKET SEGMENT ON A SCALE OF 1=EXTREMELY IMPORTANT TO 5=NOT AT ALL IMPORTANT BY CHECKING THE APPROPRIATE BOX.)

	EXTREMELY IMPORTANT		IMPORTANT		NOT AT ALL IMPORTANT
	1	2	3	4	5
MODULAR BUILDERS	<input type="checkbox"/>				
RESIDENTIAL CONTRACTORS	<input type="checkbox"/>				
NONRESIDENTIAL CONTRACTORS	<input type="checkbox"/>				
DO-IT-YOURSELF/REMODELING MARKETS	<input type="checkbox"/>				
OTHER (PLEASE SPECIFY) _____	<input type="checkbox"/>				

18) MATCH THE CORRECT BRAND NAME WITH THE OSB/WAFERBOARD MANUFACTURER BY PLACING THE LETTER ASSOCIATED WITH THE MANUFACTURER BESIDE THE RESPECTIVE BRAND NAME. ALSO INDICATE IF THE BRAND ON THE LEFT IS AN ORIENTED STRANDBOARD, WAFERBOARD OR ORIENTED WAFERBOARD. *NOTE: IF A BRAND NAME IS UNFAMILIAR PLEASE DO NOT GUESS.*

BRAND NAME	PRODUCT TYPE (OSB, WAFERBOARD, ORIENTED WAFERBOARD)	MANUFACTURER
— ASPENITE	_____	A. PELICAN SPRUCE MILLS
— WAFERWOOD	_____	B. FOREX LEROY INC.
— WAFER-PLUS	_____	C. WEYERHAEUSER
— OXBOARD	_____	D. GEORGIA-PACIFIC
— STURDI-WOOD	_____	E. LOUISIANA-PACIFIC
— NORBOARD	_____	F. NORTHWOOD MILLS LTD.
— BLANDEX	_____	G. POTLATCH
— STRUCTUREWOOD	_____	H. NORMICK PERBON INC.
— PANOFOR	_____	I. GREAT LAKES FOREST PRODUCTS
— T-STRAND	_____	J. BLANDIN WOOD PRODUCTS
— BLUE RIBBON OSB	_____	K. TEMPLE EASTEX

19) WHAT IMPROVEMENTS IN THE OSB/WAFERBOARD STRUCTURAL PANEL PRODUCT WOULD YOU SUGGEST TO INCREASE RETAIL SALES?

20) WHAT ARE THE PRIMARY AREAS OF CONSUMER DISSATISFACTION YOU HAVE ENCOUNTERED SELLING OSB/WAFERBOARD PRODUCTS?

21) PLEASE INDICATE YOUR FIRM'S TOTAL SALES IN 1986.

- LESS THAN \$1 MILLION
- \$1 MILLION TO \$2.4 MILLION
- \$2.5 MILLION TO \$4.9 MILLION
- \$5 MILLION TO \$9.9 MILLION
- \$10 MILLION TO \$19.9 MILLION
- \$20 MILLION TO \$49.9 MILLION
- MORE THAN \$50 MILLION

THANK YOU FOR YOUR COOPERATION. PLEASE RETURN THE SURVEY IN THE POSTPAID ENVELOPE.

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