BRAND NAME DEVELOPMENT AND ARCHITECTURES IN THE NORTH AMERICAN WOOD FIBER-PLASTIC COMPOSITE INDUSTRY

A Thesis in
Forest Resources
by
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Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science

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ABSTRACT

In response to consumer demand for low maintenance and durable timber construction, increased environmental regulation of preservative treated lumber, and manufacturers employing push/pull marketing strategies, the North American wood-fiber plastic composite (WPC) industry has seen significant growth in the last decade. As consumer demand has grown, the number of manufacturers producing decking, railing, fencing, and a multitude of other WPC products has also grown. Today the WPC marketplace is defined by a myriad of product offerings differentiated on a wide array of product and service attributes. This myriad of product offerings has triggered a marketplace that is now defined by its branded offerings. Understanding the importance and benefits of employing well managed brand strategies, this study investigates the brand name development, brand architectures, and brand strategies employed by North American WPC manufacturers in the Fall of 2008.

Using data collected through secondary sources and semi-structured interviews (response rate of 60.9%), all WPC brands in the Fall of 2008 were identified and subsequently each manufacturer’s brand-product matrix was categorized according to a brand architecture scheme. The findings indicate that WPC manufacturers perceive branding as an important marketing tool and utilize a wide array of resources when developing brand names. It was also found that product identification was the largest perceived benefit of employing brand strategies and that the proliferation of brand names that exist in the industry is largely a result of the proliferation of manufactures and the ability to differentiate product offerings. Moreover, a comparison between a firm’s
architecture fit (branded house, mixed house, or house of brands) and firm size (small vs. large) showed significant differences among firm’s perceptions on various branding benefits.
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PREFACE

The first chapter provides the problem statement for this study along with the study objectives. Chapter two is a comprehensive literature review that provides background information on the wood-fiber plastic composite industry and also the concepts and theories used in regards to branding. Chapter three presents a detailed description of the methodology. Chapters two and three provide the background information for chapter four. Since chapter four is written in manuscript form, the information found in chapters two and three can be found in chapter four in less detailed form. Conclusively, chapter four presents the quantitative and qualitative results from secondary and primary data collection. Chapter four addresses the objectives of this study to understand brand development, brand architectures, and brand strategies in the wood-fiber composite (WPC) industry.
I would like to thank my family, friends, and all faculty members that have supported me along the way.
Chapter 1
Problem Statement and Objectives

Problem Statement

The commercial market for extruded wood-plastic composites (WPCs) has seen significant growth in the North American building materials industry over the past 18 years with a substantial growth stage between 1997 and 2005. WPCs grew from an estimated 2% of the U.S. residential and industrial deckboard industry in 1997 to an estimated 18% in 2005 (Smith and Wolcott 2006). The growth of the WPC market has been largely driven by four factors: value proposition in terms of life cycle costs, substitution for chemically treated lumber, general builder acceptance of wood composite building materials, and effective push/pull marketing communication (Smith and Wolcott 2006). With the growth of the WPC market, the number of WPC manufacturing firms and subsequently the number of brand names has also grown. In the Fall of 2008, 23 North American manufacturers of extruded WPC products existed and collectively marketed over approximately 90 trademarked/copyrighted brand names. The vast array of brands that now define the WPC marketplace is a relatively unique situation compared to that of traditional wood decking and railing products which generally do not have consumer brands and are sold as commodities graded according to classifications established by the U.S. Department of Commerce (Trex 2006). Thus, WPC
manufacturers have the flexibility to differentiate on various tangible product attributes as well as a multitude of service/supplier attributes (Table 1-1).

<table>
<thead>
<tr>
<th>Product Attributes</th>
<th>Service/Supplier Attributes</th>
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<td>Resistance to Decay</td>
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<td>Ease of installation</td>
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<td>UV Resistance</td>
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<td>Certified Contractors</td>
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<td>Full Product Line/ Range of Products (decking &amp; railing)</td>
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Table 1-1. WPC Attributes

It is believed that the myriad of brands which exist within the WPC market is due in large measure to the ability of WPCs to be differentiated on numerous tangible and intangible attributes. As the WPC industry continues to grow in new and existing markets, as distribution efforts expand, and as consolidation of mature markets form, emphasis on market strategies and brand strategies will become increasingly important as
manufacturers compete for market share. As companies grow, merge, and acquire new companies, WPC producers will benefit from a brand architecture strategy that will support future growth (Wheeler 2006). Coherent organization of brand portfolios will lead to impact, clarity, synergy, and leverage rather than weakness, confusion, waste, and missed opportunities (Aaker and Joachimsthaler 2000).
Objectives

The objectives of this study are to address the void in the literature concerning the development of brands, the management of brand product-matrices (Keller 2003) and brand architectures (Aaker and Joachimsthaler 2000), and the benefits of employing a brand strategy in the WPC industry. Therefore the objectives can be itemized as follows:

1. Identify all North American WPC manufacturers and classify all of the brands that comprise their firm’s brand portfolios according to each brand’s driver role (Aaker 2004). Also gain insight to the proliferation of brand names within the industry.

2. Understand the objectives and rationale for each firm’s brand strategy. Categorize each firm’s brand-product matrix (Keller 2003) according to the Brand Relationship Spectrum (BRS) outlined in Aaker and Joachimsthaler (2000).

3. Understand branding benefits for WPC manufacturers.
References


Chapter 2

Literature Review

Part I: Wood Plastic Composites

What Are WPCs

Wood-Plastic Composite (WPC) is the simplified name for a wood and/or natural fiber thermoplastic composite. The term wood-plastic composite refers to any composite that contains wood (of any form) and thermoplastics (Clemons 2002). Thermoplastics are plastics capable of being repeatedly softened by heat and hardened by cooling and thus can be generally recycled (Killough 1995).

WPCs are typically extruded using 30% to 60% wood filler or reinforcements which are most often in particulate form (e.g., wood flour) or very short fibers, rather than longer individual wood fibers. Common wood species include pine, maple, and oak. Wood flour is made commercially by grinding postindustrial material such as planer shavings, chips, and sawdust, into a fine, flour-like consistency. Wood fiber is available from both virgin (including small diameter trees and underutilized species) and recycled sources which include pallets, demolition lumber, and old newsprint. Wood fibers can lead to superior composite properties by acting as reinforcement rather than filler (Clemons 2002; http://www.fpl.fs.fed.us/documnts/techline/wood-plastic-composites.pdf). The most common method for WPC product manufacturing is either
profile or sheet extrusion, which is a process of forcing a molten compound through a die. Other popular product manufacturing options include injection molding (forcing molten composite into a cold mold), and compression molding (pressing molten composite between mold halves) (Youngquist 1995). Deck boards and railings are primarily manufactured through profile extrusion methods. This study is exclusively on extruded WPCs.

**WPC Commercial Market**

The commercial market for extruded wood plastic composites has seen significant growth in the North American building materials industry over the past 15 years. Initially extruded WPCs were used in applications such as landscape timbers, picnic tables, playground equipment, benches, fencing, and trash receptacles (Smith and Wolcott 2005). More recently the extruded WPC market has been dominated by residential decking and railing, which was estimated in 2005 to account for approximately two-thirds of the United States $1 billion retail extruded market (Smith and Wolcott 2006). From 1997 to 2005 WPCs grew from 2% of the total U.S. residential and industrial deckboard and railing industry to an estimated 18% in 2005 (Smith and Wolcott 2006) (Figure 2-1).
New WPC Product Opportunities

As capacity efforts are increased and new products and markets are being explored, WPCs have found recent penetration into fencing, fenestration (e.g., window lineal, door stiles, and rails), moldings, and exterior covering (siding and trim) applications (Smith and Wolcott 2006). The growth of the WPC market has been largely driven by four factors: value proposition in terms of life cycle costs, substitution for chemically treated lumber, general builder acceptance of wood composite building materials, and effective push/pull marketing communication (Smith and Wolcott 2006). These factors, coupled with the fact extruded WPCs combine the favorable performance and cost attributes of wood (and non-wood agricultural fibers) with the processability of
thermoplastic polymers, create future product development opportunities (Smith and Wolcott 2005).

Smith and Wolcott (2006) state, “New WPC products are being designed for applications where long-term performance, consistent appearance, and dimensional stability are important. More recently, structural applications for WPCs in both low-rise buildings and industrial structures (e.g., docks, piers, and bridges) have captured the attention of the industry.” Accordingly research has been conducted at Penn State University (McGraw and Smith 2007) in which the USDA- Forest Service Regional Bridge Engineers, the Professional Trailbuilders Association, Bridge Manufacturing firms, and U.S. Architectural and Engineering firms were surveyed to better understand the current substitution potential and new market opportunities for extruded WPCs. Decking and railing applications were found as having the greatest substitution potential over wood/lumber, while decking, marine applications (including docks, piers, fendering), and flooring were found to have the highest infrastructure substitution potential. Other markets with potential for WPC substitution potential include roofing, siding, foundations, structural components, sheathing and interface elements (Smith and Wolcott 2006) (Figure 2-2).
Competitive Landscape of the WPC Industry

External Competition

The estimated retail market for extruded WPCs in 2005 was estimated to be a one billion dollar market. Of the one billion dollar market, residential decking and railing accounted for roughly two-thirds of market, followed by window and door frames (11%), and a wide variety of other materials including siding and accessories, fencing, boardwalks, docks, shingles, playground equipment, industrial infrastructure, and pallets (Morton et al. 2004; Smith and Wolcott 2006)
The U.S. residential decking and railing market (estimated at $3.9 billion in 2005) continues to dominate the demand for WPC products. In 2005, WPCs accounted for an estimated 18% of the decking and railing industry, second only to pressure treated lumber which accounted for 64% of the industry. Other materials fighting for market share are naturally durable woods (redwood and western red cedar) imported wood species, and plastics (Smith and Wolcott 2005; Shook and Eastin 2001). Several factors establish the competitive environment among the materials used in the residential deck market. The relative difference in material, installation, and maintenance costs between differing products is the primary basis for differentiation. In addition, product quality attributes such as longevity, durability, and maintenance requirements are considered when differentiating deck materials (Shook and Eastin 2001) (Table 2-1).
Unlike the primary species used for decking, which consist largely of treated southern yellow pine, treated fir, redwood and cedar, WPCs are differentiated on an array of product and service attributes (Table 2-2).
<table>
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<td>Demonstration Projects</td>
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<td>Full Product Line/ Range of Products (decking &amp; railing)</td>
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</table>

Table 2-2. WPC Attributes
(Source: Clemons 2002; http://www.tangram.co.uk/; Sears 2006)

**Internal Competition**

The North American WPC extruded industry has seen rapid growth fueled by an increasing number of market entrants since the mid to late 90’s (Smith and Tichy 2007). The first company entered the commercial WPC market in 1989 and produced solid extruded WPCs that were used for deck boards, landscape timbers, picnic tables, and industrial flooring (Clemmons 2002). This pioneer company established the commercial
WPC product category and faced relatively little direct competition for roughly 4 years. However, once the WPC market was established and growth opportunities were explored the competitive landscape exploded with new market entrants every year until 2005 (Smith and Tichy 2007) (Figure 2-3).

Figure 2-3. Growth of the WPC Industry
(Source: Smith and Tichy 2007)

Today the competitive environment of the WPC industry is best described by the President and CEO of an industry leader, “The WPC product category is firmly established today and is in transition from a hyper growth stage or ‘euphoria’ to a slower growth rate or ‘reality’” (Mancosh 2007).
**WPC Channels of Distribution**

Smith and Wolcott (2006) identified access to distribution channels and effective marketing communication as being two key and related elements for competing in the U.S. building materials market. They describe the distribution landscape of the WPC industry as follows, “Competition for key building materials distributors is high, and channel positions are highly coveted for the significant competitive advantages they represent. An effective push-pull communications strategy is a key requisite for securing distribution contracts. The synchronization of the push-pull promotional efforts creates impressions and excitement regarding the products or brand and thus strengthens the manufacturers channel position.”

A firm’s channel strategy must ultimately be consistent with the firm’s marketing objectives and be used to reach the firm’s target markets. The channel strategy selected by a firm can play a large role in the firm’s success (Sinclair 1992). There are various channel strategy decisions which must be made when selling products; the most obvious one is whether to sell products directly to the consumer, or one that utilizes channel intermediaries (Sinclair 1992). In most cases a forest products company does not sell its products directly to the consumer, which is true of the WPC industry which typically utilizes intermediaries, such as wholesalers and retailers, who in turn provide the materials direct to either builders or Do-It-Yourself (DYI) buyers. (Juslin and Hansen 2002; Smith and Wolcott 2006).
For 2006, the wholesaler was the primary customer of WPC manufacturers with roughly 89.1% of sales being directly sold to wholesalers, followed by retailers at 8.7% (Smith and Tichy 2007) (Figure 2-4).

Figure 2-4. Primary Customer of WPC Manufacturers for 2006
(Source: Smith and Tichy 2007)

In the retail channel, U.S. home centers accounted for roughly $398 billion in retail sales for 2005, with home centers/lumberyards accounting for roughly $260 billion in sales or 65% of total home channel sales. The home center market is dominated two “big box” giants, Home Depot ($81.5 billion retail sales in 2004) and Lowes ($43.2 billion retail sales in 2004) which accounted for 48% of the home center retail market in 2004 (Directory of Home Center Operators & Hardware Chains). In the Fall of 2008 WPCs were currently stocked in both Lowes and the Home Depot with special order options available for a wider selection of products and brands.
Marketing Communications

The second element of success for competing in the U.S. building materials markets identified by Smith and Wolcott (2006) is effective marketing communications. Marketing communications is defined as the means by which firms attempt to inform, persuade, and remind consumers directly or indirectly about the products and brands they sell (Kotler and Keller 2006). Typically marketing communication strategies employ both push and pull marketing strategies. In a push strategy the manufacturer uses a promotional mix heavy on personal selling to “push” the product to the wholesaler and subsequently encourage the sales personnel at the wholesale or retail level to recommend that particular product to their customers (Sinclair 1992). Kotler and Keller (2006) state, “A push strategy is appropriate where there is low brand loyalty in a category, brand choice is made in the store, the product is an impulse item, and product benefits are well understood.” On the other hand a pull strategy uses a promotional mix aimed at the end consumer to encourage them to “pull” the product off the retail shelf (Sinclair 1992). Kotler and Keller (2006) state, “A pull strategy is appropriate when there is high brand loyalty and high involvement in the category, when people perceive differences between the brands, and when people choose the brand before they go to the store.” A common approach to pull promotion used by forest product producers is co-op advertising where manufactures provide the retailer with promotional resources and share the cost of advertisement (Sinclair 1992).

As is the case in top marketing companies such as Nike, Intel, and Coca-Cola, an integration of push-pull communication for WPCs companies is a key requisite for
securing distribution contracts. The synchronization of the push-pull promotional efforts creates impressions and excitement regarding the products or brand and thus strengthens the manufacturers channel position (Kotler and Keller 2006; Smith and Wolcott 2006).

An effective synchronization of push-pull marketing is dependent on the marketing communications mix which is primarily composed of six major modes of communication (Table 2-3):

<table>
<thead>
<tr>
<th>Modes of Marketing Communication</th>
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<tr>
<td>• Advertising</td>
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<td>• Sales Promotion</td>
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<tr>
<td>• Events and Experiences</td>
</tr>
<tr>
<td>• Public Relations and Publicity</td>
</tr>
<tr>
<td>• Direct Marketing</td>
</tr>
<tr>
<td>• Personal Selling</td>
</tr>
</tbody>
</table>

Table 2-3. Modes of Marketing Communication
(Source: Keller and Kotler 2006; Juslin and Hansen 2002)

In general, the marketing communications mix represents the “voice” of the brand and is the means by which it can establish a relationship with consumers (Kotler and Keller 2006).
Part II: Branding

What is Branding

Branding originates from the Old Norse word *brandr* which means to burn, as branding was, and still is, the means by which livestock are identified (Wiley 1992). Today there are many definitions that have evolved from the word brand. Most simply defined by the American Marketing Association, a brand is a name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers (http://www.marketingpower.com). However, many practicing managers and academics consider branding to have more of a conceptual meaning and consider branding to be a psychological phenomenon. Under this assumption the power of a brand resides in the minds of the consumer and all the thoughts, feelings, perceptions, beliefs, attitudes, behaviors and so on result from the myriad of possible brand interactions (Webster and Keller 2004)

A brand surrounds a product or service with meaning that differentiates it from other products or services intended to satisfy the same need (Webster and Keller 2004). Under this conceptualization, a brand name then, is a single piece of what constitutes what are termed brand elements. Brand elements are trademarkable devices that serve to identify and/or differentiate the brand and can be composed of brand names, URL’s, logos, symbols, characters, spokespeople, slogans, jingles, and packages (Keller 2003).
However, the basic core identifier of the brand is the name which is the basis for both awareness and communication efforts (Aaker 1991). Keller (2003) states “The brand name is a fundamentally important choice because it often captures the central theme or key associations of a product in a very compact and economical fashion. Brand names can be an extremely effective shorthand means of communication. Whereas the time it takes for consumers to comprehend marketing communications can range from a half a minute (for an advertisement) to potentially hours (for a sales call), the brand name can be noticed and its meaning registered or activated in memory within just a few seconds.” Furthermore, a brand name can serve as a substantial barrier to entry once established (Aker 1991).

**Brand Name Development**

Any brand name selection process should involve what is termed by Shipley et al. (1988) as a *brand name strategy*. Brand name strategy can be given very high levels of importance and the can precede marketing objectives in the brand name development process (Shipley et al. 1988).

The first brand strategy decision when launching a new product is to decide whether to develop a brand name for a product. Today very few products go un-branded and even commodity products such as coffee, flour, and even salt have become differentiated in the mind of consumers via brand names. Cagan and Vogal (2002) state “In small, emerging companies, it is important to understand that the first products developed establish the brand of the company. If new companies establish their brand by
accident rather than by design, it becomes expensive and difficult to reinvent or clean up the brand later.”

As new products are being developed, three main branding options exist for new products: creating a new brand, adapting or modifying an existing brand, and combining an existing brand and a new brand (Keller 2003). The selection of a brand name should be closely related to the desired product positioning and marketing strategy for the product (Wind 1982). If a firm chooses not to develop a new brand, but rather adapts, combines, or modifies an existing brand name it is considered to be a brand extension. Brand extensions can be broadly classified into line extensions and category extensions. A line extension is when a parent brand (existing brand) is used to brand a new product that targets a new market segment within a product category currently served by the parent brand. A category extension is when the parent brand is used to enter a different category form the one currently served by the parent brand (Kotler and Keller 2006).

Although extensive research on branding exists and continues to be a popular topic among academics and practitioners, there is a void in the literature concerning the actual brand name development process. Brand name generation is a very important step in naming a new product and often occurs in the new product development process (McNeal and Zeren 1981). Robertson (1989) states, “A naming decision is made hundreds of times each year by marketing executives in association with new product launches, newly formed companies, and renamed existing companies. In the opinion of some, such a naming decision may well be the most important marketing decision you can make.”
The literature search revealed 3 academic studies on how brand names are developed although a variety of studies exist devoted how brand names should be developed. McNeal and Zeren (1981) sampled 82 U.S manufacturers of consumer goods with a mail questionnaire that contained mostly open-ended questions. They concluded that the brand name selection process used by firms is variable but could be summarized by Table 2-4:

<table>
<thead>
<tr>
<th>Brand Name Selection Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Identifying objectives or criteria for the brand names</td>
</tr>
<tr>
<td>Step 2: Generating alternatives</td>
</tr>
<tr>
<td>Step 3: Screening alternatives</td>
</tr>
<tr>
<td>Step 4: Researching consumers opinions</td>
</tr>
<tr>
<td>Step 5: Reducing alternatives through a trademark search</td>
</tr>
<tr>
<td>Step 6: Brand name selection</td>
</tr>
</tbody>
</table>

Table 2-4. Brand Name Selection Process
(Source: McNeal and Zeren 1981)

Shipley et al. (1988) refined McNeal and Zeren’s (1981) 6 step brand name selection process after sampling 112 UK manufacturers of consumer goods with a mail questionnaire. Constructs for the mail questionnaire were developed using open-ended, tape-recorded exploratory discussions with 13 top marketing executives. Specifically they found that brand name strategy was a necessary step in the 6-step process. Brand name strategy according to McNeal et al. (1981) is dependent upon two decisions: whether the brand carries the producer’s name, the retailer’s name, or a generic label and the decision whether to use a family name or individual names across product offerings. Shipley et al. also re-defined step-one of McNeal and Zeren’s (1981) brand name selection process by distinguishing branding objectives from branding criteria. Branding
objectives are based on the broader objective specified by or for the marketing department, while brand criteria are characteristics of the brand name (ex. memorability, advertisability, distinctiveness, consistency with company image). The resulting 6-step brand name selection process emerged (Figure 2-5):

---

### Refined Brand Name Selection Process

- Step 1: Set branding objectives
- Step 2: Select branding strategy
- Step 3: Specify brand name criteria
- Step 4: Generate brand name ideas
- Step 5: Screen brand names
- Step 6: Select brand names

---

Table 2-5. Refined Brand Name Selection Process

(Source: Shipley et al. 1988)

A subsequent study by Shipley and Howard (1993) addressed the brand name selection process developed by Shipley et al. (1988) by sampling 135 UK marketing executives of industrial firms through a mail questionnaire. Using a 5-point Likert scale they asked respondents the importance of each of the 6 stages of the brand name selection process. They found that a very large proportion of the firms performed all or most of the steps of the name selection process developed by Shipley et al. (1988). They also found that large firms recorded mean importance score significantly above the scale midpoint in relation to step #1 (objectives), step #2 (strategy), step #5 (screening) and step #6 (deciding). Small firms recorded mean importance score significantly above the scale midpoint in relation to only step #6 (deciding). They also found the frequency
concerning the utilization of step #2 (selecting branding strategy) was significantly higher among large firms then small firms as well as all of the recorded mean importance scores.

**Brand Portfolio Management**

**Individual Brand Roles**

To create effective brand portfolios that will achieve their objectives, it is imperative to understand the namely 3 basic product-defining building blocks which defined by Aaker (2004) are as follows:

- **Masterbrand**- primary indicator of the offering
- **Subbrand**- augments or modifies the associations of the master brand
- **Endorsed Brand**- provide credibility and substance to an offering

For each individual brand within a brand portfolio, the degree to which masterbrands, subbrands, and endorsed brands are leveraged is a determining factor in the composition of a brand firm’s brand architecture. Therefore the relationships between individual brands in a brand portfolio are based upon the degree to which an individual brand drives the purchase decision (Aaker 2004). Usually the masterbrand assumes the driver role but in some cases the subbrand, endorsed brand or even generic descriptors can assume the driver role. The strategic task for manufacturers is determining the degree of intensity each individual brand within a portfolio assumes when driving the purchase decision. As explained by Aaker (2004), “When a person is asked, ‘What brand did you buy?’ or ‘What brand did you use?’ the answer given will be the brand that had the primary driver role responsibility for the decision.”
In order to quantify the total number of brands identified in the WPC industry in the Fall of 2008, each identified brand was broken into the 3 basic product defining building blocks depending upon the driver role the brand played. Once individual brands were classified according to their driver roles, a *brand-product matrix* (Keller 2003) was developed for each firm.

**Brand-Product Matrix**

To characterize the product and branding strategy of an individual firm, a graphical representation of all the products and brands a company sells, the *brand-product matrix* is a useful tool (Keller 2003). All the brand lines a firm offers for sale to buyers is termed *brand portfolio*, while all the product lines a firm offers for sale to buyers is termed a *product mix* (Kotler and Keller 2006; Keller 2003).
Aaker (1996) summarizes a firm’s brand-product matrix by stating, “The proliferation of brands and products within a single organization raises both concerns and challenges. A key to managing brands in an environment of complexity is to consider them not only individual performers but members of a system of brands that must work to support one another. A brand system can serve as a launching platform for new products or brands and as a foundation for all brands in the system.” Brands within a system usually fall into a natural hierarchy (Aaker 1996).

After an extensive literature review the researcher concluded that a firm’s brand-product matrix is based upon a system of brands that can be classified according to a brand hierarchy. A firm’s brand hierarchy can then be classified according to what was originally termed brand structures (Olins 1989), and is now termed brand architecture.
**Brand Hierarchy**

A brand hierarchy is defined as a means of summarizing the branding strategy by displaying the number and nature of common and distinctive brand elements across the firm’s products, revealing the explicit ordering of brand elements (Keller 2003). Brand elements are defined as those trademarkable devices that serve to identify and differentiate the brand (Kotler and Keller 2006). Brand elements can be composed of brand names, URL’s, logos, symbols, characters, spokespeople, slogans, jingles, and packages (Keller, 2003). Some brand elements may be shared by many products and other brand elements may be unique to certain products, therefore a hierarchy is a useful way to represent how products are nested (if at all) with other products because of their common brand elements (Keller 2003). The basic core identifier of the brand is the name which is the basis for both awareness and communication efforts (Aaker 1991). This study will focus exclusively on the brand name.

**Brand Architecture**

The term brand architecture refers to the hierarchy of brands within a single company and should mirror the companies marketing strategy (Wheeler 2006). Brand architecture became a topic of academic research when the concept of brand structures was originally formulated by Olins (1989) in an attempt to understand corporate identity. Olins constructed a simple 3-tiered hierarchy to describe a brand hierarchy:

- monolithic structure
- branded identity
- endorsed structure
Monolithic structures use a single name for a variety of offerings, using subbrands as an extension of the monolithic brand (usually corporate brand). Branded identity refers to a portfolio that would include many sub-brands, each with their own identity and visual representation that is not linked to the corporate brand. The endorsed structure is a variation of the monolithic structure and branded identity. Each sub-brand has its own identity, but is linked to the corporate or monolithic brand.

Laforet and Saunders (1994) built upon Olins model and described a 6 tiered brand structure by sampling suppliers of grocery products. They found that brand structures are not uniform and more complex than that proposed by Olins. From a content analysis Laforet and Saunders (1994) developed a brand hierarchy based upon a series of levels according to their breadth of use and relation to the corporate name. Laforet and Saunders (1994) state, “At the highest level is the corporate brand name that covers all a firm’s products and at the lowest a virtual brand name (brand dominant) that identifies a variant of a brands”

Closely related to their work in 1994, Laforet and Saunders (1999) attempted to identify influences on determining brand structures, by sampling UK suppliers of consumer nondurables. Using the brand structure they proposed five years earlier the influences on brand structure appeared under seven subheadings: history, centralization, company philosophy, strategy, markets, segmentation, and product range. Laforet and Saunders (1999) were able to conclude the benefits of corporate dominant structures flowed from the economy and simplicity of standardization. While the benefits of brand-dominant structures flowed from differentiation, and the specific benefits of a mixed
approach remained unclear. It was also found that non-marketing issue such as corporate history, company structure, and philosophy all played an important role in determining the brand structures of the surveyed companies. Figure 2-6 represents illustrates the brand hierarchy developed by Laforet and Saunders in 1999 which was bases upon research efforts in 1994.

Figure 2-6. Brand Structures
(Source: Laforet and Saunders 1999)

The term *brand structure* has evolved and is more clearly termed *brand architecture*. Brand architecture, defined by Aaker and Joachimsthaler (2000) is, “An organizing structure of the brand portfolio that specifies brand roles and the nature of relationships between brands.” Building upon the work of its predecessors, Aaker and
Joachimsthaler (2000) designed *The Brand Relationship Spectrum (BRS)* as a way of classifying brand architecture (Figure 2-7).

Figure 2-7. Brand Relationship Spectrum
(Source: Aaker and Joachimsthaler 2000)

The *BRS* was developed to help brand architecture strategists (brand managers) effectively employ *subbrands* and *endorsed brands*. The position on the spectrum reflects the degree to which brands are separated in strategy execution and ultimately in the customer’s mind. Without subbrands and endorsed brands a firm would be forced to use two widely different strategies located at the two extremes of the spectrum; the *branded house* strategy and the *house of brands* strategy. According to Aaker and Joachimsthaler (2000), “Without subbrands and endorsed brands the choice of a new offering would be limited to either building a new brand (an expensive and difficult proposition) or extending an existing brand (and thereby risking image dilution).

Therefore the *BRS* consists of four basic branding strategies and nine substrategies. At the left side of the spectrum in the branded house, the master brand is the driver brand and any descriptive brands have no minimal to no driver role. The branded house acts as an umbrella brand for a wide product line and enhances clarity, synergy, and leverage.
An example of a branded house strategy is illustrated by BMW (Aaker and Joachimsthaler 2000). BMW uses the master brand BMW as the driver and uses descriptors such as 1 series, 3 series, 5 series etc. to differentiate between product lines. The implications of employing branded house strategy are summarized in Table 2-6.

<table>
<thead>
<tr>
<th>Roles</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhances clarity</td>
<td>Puts eggs in one basket</td>
</tr>
<tr>
<td>Enhances synergy</td>
<td>Difficult to maintain cool image or quality position</td>
</tr>
<tr>
<td>Enhances leverage</td>
<td>Limit ability to target specific groups</td>
</tr>
</tbody>
</table>

Table 2-6. Implications of a Branded House Strategy

(Source: Aaker and Joachimsthaler 2000)

Conversely, at the right end of the spectrum in the house of brands strategy, each individual brand acts as the driver brand, which in turn drives the purchase decision. The house of brands strategy involves an independent set of stand-alone brands, each maximizing the impact on a market. An example of a house of brands strategy is illustrated by Toyota (Aaker and Joachimsthaler 2000). Toyota uses two master brands, Toyota and Lexus, with each brand assuming the driver role in the purchase decision. The implications of employing a house of brands strategy are summarized in Table 2-7.
### Roles

- Clearly position brands on functional benefits
- Connect directly to niche customer with targeted value proposition
- Avoid a brand association that would be incompatible
- Signal breakthrough advantages of new offerings
- Offer a new product class association by using a powerful name that reflects a key benefit
- Avoid or minimize channel conflict

### Drawbacks

- Sacrifices economies of scale and synergies
- Risk stagnation or decline from lack of resources
- Sacrifice brand leverage

<table>
<thead>
<tr>
<th>Roles</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cleary position brands on functional benefits</td>
<td>• Sacrifices economies of scale and synergies</td>
</tr>
<tr>
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<td>• Risk stagnation or decline from lack of resources</td>
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<tr>
<td>• Avoid a brand association that would be incompatible</td>
<td>• Sacrifice brand leverage</td>
</tr>
<tr>
<td>• Signal breakthrough advantages of new offerings</td>
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<tr>
<td>• Offer a new product class association by using a powerful name that reflects a key benefit</td>
<td></td>
</tr>
<tr>
<td>• Avoid or minimize channel conflict</td>
<td></td>
</tr>
</tbody>
</table>

Table 2-7. Implications of a House of Brands Strategy

(Source: Aaker and Joachimsthaler 2000)

As you move across the spectrum (right to left) the driver role that a masterbrand plays is minimized while the role of the individual stand-alone brand is maximized, thus resulting in two mixed brand architectures which include endorsed brand and subbrand architectures.

Endorsed brand architectures contain independent brands such as used in the house of brands strategy, however the stand alone brands are endorsed by another brand. Endorsed brands are typically added to provide credibility and substance for the individual stand-alone brand (e.g., Polo Jeans by Ralph Lauren).

Subbrand architectures described by Aaker and Joachimsthaler (2000) are brands connected to a master or parent brand and augment of modify the association of that master brand. The master brand is the primary frame of reference, which is stretched by
subbrands that add attribute associations (e.g., Microsoft Office), a signal of breakthrough newness (e.g., Sony Walkman), a brand personality (e.g., Audi TT), and even energy (e.g., Nike Force). Without subbrands or endorsed brands the choice of a new offering would be limited to creating a new brand (expensive and difficult) or extending a existing brand (risking dilution) (Aaker and Joachimsthaler 2000). Table 2-8 illustrates the benefits of employing a subbrand and/or endorsed brand strategy.

### Roles of Subbrands and Endorsed Brands

- Allow brands to stretch across products and markets
- Address conflicting brand strategy needs
- Conserve brand building resources in part by leveraging exiting brand equity
- Protect brands from being diluted by over-stretching
- Signal that an offer is new and different

Table 2-8. Roles of Subbrand and Endorsed Brand Strategies

(Source: Aaker and Joachimsthaler 2000)

The corporate brand (usually an organization brand) can be used to play a prominent role in the brand portfolio and can generally be employed across the entire brand relationship spectrum. The degree to which the corporate brand is emphasized in the brand portfolio is dependent upon the degree of organizational associations that the firms want to attach to a particular brand or brand portfolio. Associations such as heritage, assets and capabilities, people, values and priorities, local or global frame of reference, citizenship programs, and performance record are usually associated with a corporate brand. The implications of employing a corporate brand as part of a brand strategy are summarized in Table 2-9.
Potential Impact | Challenges
--- | ---
- Organizationally based differentiation  
- Corporate programs as branded energizers  
- Credibility-liking, expertise, trust  
- More effective management of the brand portfolio  
- Support for internal brand building  
- Provides a message to supplement the product brand  
- Support for communication to audiences (investors, prospective employees, political leaders)  
- Provide the ultimate branded house  

- Maintaining relevance  
- Creating value propositions  
- Avoiding visible negatives  
- Managing the brand across contexts  
- Making the brand identity emerge

Table 2-9. Implications of a Corporate Brand Strategy

(Source: Aaker and Joachimsthaler 2000)

**Benefits of Brand Strategies**

Both theoretical and empirical research efforts have uncovered a vast array brand benefits that exist throughout all levels of the value chain. Sinclair and Seward (1988) through open-ended questions uncovered what 19 North American Manufacturers of OSB/waferboard considered to be the benefits of implementing a brand name strategy in a commodity market. They found that manufacturers regarded product identity and product differentiation (36.8%) as the most frequently listed benefit followed by product recognition (31.6%) and repeat purchasing (21%). However, an unusual finding was that 15.8% of the manufacturers mentioned that implementing a brand name strategy afforded their firm no particular benefits.
Shipley and Howard (1993) sampled UK manufacturers of industrial products through a structured questionnaire in order to compare the differences in the perceived benefits of brand names between small and large manufacturers. The researchers provided respondents with a list of 10 statements regarding brand name benefits and measured their agreement with a 5 point scale. For large firms, all statements regarding brand name benefits were rated significantly higher than the mid-point of moderate importance. For small firms, 8 of 10 of the statements were rated significantly higher than the midpoint of moderate importance. Shipley and Howard (1993) concluded that industrial companies value the benefits of brand names, and thus use them widely, with large firms valuing brand benefits more highly.

Mitchell et al. (2001) followed up on Shipley and Howard’s (1993) study by again sampling UK manufacturers of industrial products through a structured questionnaire. They found the highest agreement (5-point scale) among manufacturers regarding statements relating to brand name benefits were product identity, image consistency, and the fact brands were a valuable asset to their marketing success.

Through secondary research efforts the following list of benefits attributed to brand names are summarized in Table 2-10.
Benefits of Branding

To Manufacturers:
- Means of identification to simplify handling or tracing
- Means of legally protecting unique features
- Signal quality level to satisfied customers
- Means of endowing products with unique associations
- Source of competitive advantage
- Source of financial returns
- Source of power over resellers (trade leverage)
- Higher sales volume
- Easier new product introduction
- Relationship of trust with consumer
- Differentiates the product from competitors
- Promotes repeat purchasing/loyalty
- Commands price premium
- Aids communication
- Helps market segmentation
- Enhance corporate reputation
- Raise barriers to entry
- Provide legal protection

To Channel Intermediaries:

Wholesaler
- Preestablished demand
- Lower selling costs
- Higher sales volume
- Better inventory turnover, use of warehouse space

Retailer
- Preestablished demand
- Image enhancement for retailer with consumer
- Manufacturer’s commitment to promote the product
- Relationship of trust and credibility with consumer
- Higher margins on strongest brands
- High inventory turn
- Lower selling costs
To Customers:

- Identification of source of product
- Assignment of responsibility to product maker
- Risk reducer (functional, physical, financial, social, psychological, time)
- Search cost reducer
- Promise, bond, or pact with maker of product
- Symbolic device
- Signal of quality

Table 2-10. Benefits of Brand Names

(Source: Keller 2003; Webster Jr. 2000; Seward and Sinclair 1988; Mitchell et al. 2001; Shipley and Howard 1993)

Brand Research in the Forest Products Industry

Branding theory has been largely developed in the context of consumer products. However some of the most powerful brands in the world such as Caterpillar, Cisco, DuPont, FedEx, GE etc. belong to industrial or business-to-business marketers (Webster Jr. and Keller 2004). Webster Jr. and Keller (2004) state, “Industrial brands can differentiate themselves on the basis of a whole host of attributes and benefits that range in tangibility and their relationship to the product. Some associations will be linked to the brand’s functional performance (for example, based on the products value proposition and the promised benefits); other associations will reflect more abstract considerations (for example, corporate image dimensions embodying such attributes as credibility, reliability, trust, ethics, and corporate social responsibility).”

Forest products are typically not sold directly to end consumers, but rather through channel intermediaries. The use of channel intermediaries offers fewer problems for the manufacturers by requiring less capital investment, resources, and expertise
Therefore as a hybrid between B2B and B2C industries, the utilization of a brand strategy in the forest products industry, and specifically the WPC industry, has implications for manufacturers, resellers (wholesalers, retailers, builders), and the end consumer. The relationship among brands (manufacturers), resellers, and end consumers is a three way relationship and the quality of that relationship for any single player depends on the quality and strength of the relationship between the other two (Webster Jr. 2000)(Figure 2-8).

Figure 2-8. Relationship between Brands, Resellers, and Consumers
(Source: Webster Jr. 2000)

Traditionally the wood products side of the forest product industry, specifically commodity grades of wood products such as dimensional softwood lumber, have made much less frequent use of branding as a marketing strategy than sectors such as specialty paper markets (Kleenex tissue, ScottTowels, Hammermill Bond). However, with the emergence of waferboard and OSB in the late 70’s to early 80’s as substitutes for plywood, the marketing philosophies of commodity forest products manufactures seemed
to change from one based on a production oriented approach to one based on a market oriented approach (Sinclair 1992).

Sinclair and Seward (1988), pioneers in forest products branding, investigated the effectiveness of brand names within reconstituted structural wood panels, an industrial commodity class in which branding was relatively new at the time. It was found that 18 out of 19 structural wood panel manufacturers employed a brand strategy in 1985. The authors concluded that, although manufacturers generally perceived their brand strategies to be effective, retailers identified price and availability as the two most important purchase factors. Further, Sinclair and Seward (1988) found that differentiation compared to competitors, and product recognition ranked highest among manufacturers perceived benefits of branding. There was no evidence indicating that a price premium was attained through branding and it was also found that the few producers who successfully made their brand strategy work were also perceived as the highest quality producers.

**Brand Research in the WPC industry**

After an extensive literature review, very little public domain research conducted in the WPC industry with regards to branding and brand strategy was found to exist. However, one proprietary study conducted in 2002 by Hanley Wood LLC, publishers of *Builder Magazine*, and an independent research firm Readex, examined branding within the WPC and PVC (polyvinyl chloride) decking industry. The study, which is now conducted annually (http://www.meyersgroup.com/homebuilding/homebuilding.asp),
samples domestic subscribers of *Builder Magazine* and reports on their perceptions of brand familiarity, brand use, and quality ratings within the WPC and PVC deck industry.

Furthermore, Principia Partners, a private research group serving material-based companies, has published two proprietary reports specifically related to branding within the WPC industry: *WPC Decking Image Study 2004* and *Deck Image 2006*. The results of these studies are available exclusively to subscribers (http://www.principiaconsulting.com/).

Finally, *Consumer Reports*, a publication published by the Consumer Union, published a study on the synthetic decking market in 2004 titled *Serious Alternatives*. The report rated synthetic and solid wood decking brands on multiple criteria, some of which included price and various product attributes. The report gave each brand an overall score and suggested certain brands as “quick picks” according to low cost and range of styles (Consumer Reports 2004).
References


< http://www.marketingpower.com>

Builder Magazine Homepage.  24 September 2008.  
<http://www.builderonline.com>


Forest Products Laboratory.  Wood –Plastic Composites.  TechLine. Issued 01/04  


Chapter 3

Methodology

A primary objective of this study was to examine brand name architectures that existed in the WPC industry in the Fall of 2008 and subsequently understand the benefits that manufactures realized from employing their respective brand name architecture. Since there was not a methodology at the time of this study that specifically analyzed brand name architectures in a specific industry from the perspective of the manufacturer, a creative methodology was needed to address the objectives of the study. Although the methodology utilized in this study was a creative approach, the ideologies behind the qualitative research methods followed those as described by Daymon and Holloway (2002) in “Qualitative Research Methods in Public Relations and Marketing Communications”. The design and implementation of the research instrument (semi-structured telephone interviews) followed that as described in the “Tailored Design Method” of survey implementation as described by Dillman (2002) in “Mail and Internet Surveys: The Tailored Design Method”

Population

The population of interest was all North American extruders of wood-plastic composites. Since a goal of the study was to gain an industry-wide understanding of the brand strategies that existed in 2008, all North American firms that were extruding at the
onset of the study needed to be identified for inclusion. After a detailed literature review including trade magazines, industry reports, academic publications, commercial research reports, websites, and after talking to industry contacts we identified 23 North American extruders of WPCs in 2008. This total included 20 identified extruders in the U.S., 3 in Canada, and no extruding firms in Mexico.

Data Collection

Secondary Data Collection

Secondary data was collected to provide the foundation for primary data collection. Sources of secondary data are summarized in Table 3-1.

<table>
<thead>
<tr>
<th>Sources of Secondary Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company websites</td>
</tr>
<tr>
<td>Conference proceedings</td>
</tr>
<tr>
<td>Google, Yahoo Search Engines</td>
</tr>
<tr>
<td>Industry association websites</td>
</tr>
<tr>
<td>Industry contacts</td>
</tr>
<tr>
<td>Industry reports</td>
</tr>
<tr>
<td>Product literature (print advertising)</td>
</tr>
<tr>
<td>Scholarly journals</td>
</tr>
<tr>
<td>Text books</td>
</tr>
<tr>
<td>Trade journals</td>
</tr>
</tbody>
</table>

Table 3-1. Sources of Secondary Data Collection

The objectives of secondary data collection were to provide a foundation to generate the constructs for primary data collection (semi-structured telephone interviews).
For all identified WPC manufacturers, preliminary brand-product matrices were generated for each firm according to the driver role (masterbrand, subbrand, or endorsed brand) that each individual brand within the matrices assumed. Then each brand-product matrix was analyzed and initially fit according the BRS (Aaker and Joachimsthaler 2000).

For firms whose brand-product matrix was comprised of multiple masterbrands, they were fit into a house of brands architecture. Figure 3-1 illustrates the brand-product matrix for Fiber Composites, a WPC firm employing a house of brands architecture.
<table>
<thead>
<tr>
<th>Products</th>
<th>Decking</th>
<th>Railing</th>
<th>Fencing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>fiberon®</strong></td>
<td>fiberon® Home Select</td>
<td>fiberon® Horizon Mission</td>
<td>fiberon®</td>
</tr>
<tr>
<td></td>
<td>fiberon® Professional</td>
<td>fiberon® Horizon Provincial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>fiberon® Tropics</td>
<td>fiberon® Professional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>fiberon® Sanctuary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Brands**     | **WeatherBest®**                            | **WeatherBest®**                                |                                                  |
|                | WeatherBest® Premium Grade                  | WeatherBest® Premium Grade                      |                                                  |
|                | WeatherBest® Tropical                       | WeatherBest® White Composite Railing            |                                                  |
|                | WeatherBest® High Performance               |                                                  |                                                  |

| **Portico**    | **Portico**                                 |                                                  |                                                  |
|                | Portico Decking™                            | Portico Horizon Railing™                        |                                                  |
|                | Portico Eclipse Decking™                    |                                                  |                                                  |

| **Veranda™**   | **Veranda™**                                |                                                  |                                                  |

Figure 3-1. Example of Brand-Product Matrix for Fiber Composites (House of Brands Architecture)
For firms with only one masterbrand, and no subbrands or endorsed brands (instead generic descriptors i.e. deckboard, railing, fencing), they were into a branded house architecture. Figure 3-2 illustrates the brand-product matrix for LDI Composites, a WPC firm employing a branded house architecture.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Decking</td>
</tr>
<tr>
<td>GeoDeck®</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Railing</td>
</tr>
<tr>
<td></td>
<td>GeoDeck®</td>
</tr>
</tbody>
</table>

Figure 3-2. Example of Brand-Product Matrix for LDI Composites (Branded House Architecture)

For firms, such as Trex, who employed a single master brand in conjunction with subbrands that share the driver role, they were fit into either a subbrand or endorsed brand architecture depending on the magnitude the driver role each subbrand assumed. Figure 3-3 illustrates the brand-product matrix for Trex, a WPC firm employing a subbrand architecture.
Once all brand-product matrices were developed for all firms, and all WPC firms were fit into a brand architecture category, the researcher was then able to generate the constructs for primary data collection (See Appendix A).

**Primary Data Collection**

Primary data was collected through “semi structured” telephone interviews with the person within each firm most responsible for managing their firm’s WPC brand portfolio. The telephone interviews were intended to answer the questions that could not be answered through secondary data collection. The semi-structured telephone interviews gave the researcher flexibility in terms of the timing, exact wordings and time...
allocated to each research question which according to Aaker et al. (2004) is especially
effective with busy executives, technical experts, and thought leaders.

Since the population of the industry was determined to consist of 23 firms, and it
was a goal of the researcher to understand the brand strategies that existed throughout the
entire WPC industry, all 23 firms were contacted for participation in the telephone
interview. The following model (Figure 3-2) was used to collect primary data through
the semi-structured telephone interviews:

---

**Primary Data Collection Model**

**Step 1:** Identified the person within each firm most responsible for managing their firm’s WPC brand portfolio

Persons within each firm were identified through secondary research efforts
including the use of industry contacts and previous research efforts in the WPC industry
which were conducted by the Wood Products Program at Penn State University.

**Step 2:** Developed semi-structured personalized telephone scripts for each WPC firm

Telephone scripts were individualized for each firm according to their firm’s
brand product-matrix and subsequently their fit on the BRS.

**Step 3:** Pretested the population

The first point of contact with the industry was through an emailed request for
participation (See Appendix B). Since the telephone interviews were intended to be
exploratory, and the majority of data to be collected was qualitative, it was hoped that the
initial interviews with industry respondents would provide valuable data on the validity
and answerability of the constructs and also test for any omissions. Initially, to pretest the constructs, an email for request was sent to three WPC manufacturers. The three pretest firms were chosen because they employed brand architectures that were seen as “complex” compared to the rest of the industry after initial brand-product matrices were developed. Two out of the three pretest firms had an initial brand architecture that were classified as a subbrand architecture, while the other pretest firm was initially classified as a house of brands architecture (it should be noted that brand architectures did not change after primary data collection for the 3 pretest firms). After the pretest data was collected and analyzed for all three pretest firms, question #8 was added to the remaining telephone scripts (it should be noted that the three pretest firms responded to the question even though it was not included on the their copy of the telephone script)(See Appendix A).

**Step 4: Request for Participation**

Once the pretest data was collected and analyzed the remaining 20 N.A. WPC manufacturing firms were sent the email (See Appendix B) requesting their participation in the telephone interview. The email requesting participation was sent out in phases to allow the researcher time to focus on a few firms at a time, maintain a flexible interview schedule, and provide flexibility to revise the telephone script for future interviews. In the request for participation email, there was an introduction statement in the body of the email whose purpose was to personalize the request (Dillman 2002). The introduction statement also provided instructions to the Microsoft Word attachment which included the formal cover letter which addressed the details of the study (See Appendix B).
The cover letter (See Appendix C) was written under the guidance of “The Tailored Design Method” (Dillman 2002). Each email recipient was prompted to respond to the email with a date and time at their earliest convenience to participate in the interview and also provide a telephone number at which they could be contacted. In order to increase response rates a summary of results was offered to each firm who chose to participate.

Also included in the email attachment was a copy of the individualized interview script that was to be used during the telephone interview. The purpose of including the script was to familiarize the respondents with the questions that were to be asked during the interview therefore minimizing the length of the interview and interview fatigue.

**Step 5: Follow-up for Request for Participation**

For firms that did not respond to the initial email requesting participation in the telephone interview (See Appendix D) another email was sent one week after the initial email. The follow-up email was written under the guidance of the “The Tailored Design Method” (Dillman 2002). In order to expedite the data collection process the researcher suggested a date and a time to call the participant.

**Step 6: Follow-up Phone Calls**

Phone calls were placed to firms who did not respond to the follow-up questionnaire.

Figure 3-4. Primary Data Collection Model
Data Collection Process

Figure 3-5 summarizes the data collection collect process.
Figure 3-5. Data Collection Process

Secondary Data
- Identified all N.A. WPC manufacturers
- Identified all brands that existed in the N.A WPC market

Primary Data
- Modified the BRS developed by Aaker and Joachimsthaler (2000)
- Applied each firm to the modified BRS

Data Analysis
- Classified individual brands according to their driver role (Aaker 2004)
- Constructed brand-product matrices (Keller 2003) for each WPC firm.
- Fit each firm to a preliminary architecture based upon the Brand Relationship Spectrum (BRS)

Non-Respondent Firms
- Through semi-structured telephone interviews confirmed each responding firm on the BRS
Response Rate

- **14/23** extruders responded for a response rate of **60.87%**.
  - 5 firms agreed to participate from the “Initial Request for Participation” (step #4)
  - 3 firms agreed to participate from the “Follow-up Request for Participation” (step #5)
  - 6 firms agreed to participate from the “Follow-up Phone Calls” (step #6)

- The **14** respondents accounted for approx. **87.8%** of the est. $1 billion (retail) WPC industry sales in 2006.

- 9 out of the top 11 firms in 2006 sales responded; these **9** firms accounted for **85.9%** of retail sales in 2006.

Data Analysis

Due to the qualitative nature of the data, data analysis was continuous throughout the study. Data was entered into Microsoft Excel for qualitative analysis. Coding and categorizing was initially done in order to organize, simplify, and analyze the data (Daymon and Holloway 2002). Quantitative data analysis was analyzed using SPSS.
**Research Timetable**

Table 3-2 is a timetable that summarizes the methodology of the study.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review</td>
<td>June 2006-August 2008</td>
</tr>
<tr>
<td>Developed Brand-Product Matrices</td>
<td>May 2008</td>
</tr>
<tr>
<td>Fit firms according to the BRS</td>
<td>June 2008</td>
</tr>
<tr>
<td>Developed Semi-Structured Telephone Scripts</td>
<td>June 2008-July 2008</td>
</tr>
<tr>
<td>Sent Pretest</td>
<td>July 2008</td>
</tr>
<tr>
<td>Sent “Initial Request for Participation”</td>
<td>July 2008</td>
</tr>
<tr>
<td>Sent “Follow-up Request for Participation”</td>
<td>August 2008</td>
</tr>
<tr>
<td>Follow-up Phone Calls</td>
<td>August-September 2008</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>September-November 2008</td>
</tr>
</tbody>
</table>

Table 3-2. Research Timetable
References


Chapter 4

Brand Name Management and Architectures in the North American WPC Industry

Abstract

In response to consumer demand for low maintenance and durable timber construction, increased environmental regulation of preservative treated lumber, and manufacturers employing push/pull marketing strategies, the North American wood-fiber plastic composite (WPC) industry has seen significant growth in the last decade. As consumer demand has grown, the number of manufacturers producing decking, railing, fencing, and a multitude of other WPC products has also grown. Today the WPC marketplace is defined by a myriad of product offerings differentiated on a multitude of product and service attributes. This myriad of product offerings has triggered a marketplace that is now defined by its branded offerings. Understanding the importance and benefits of employing well managed brand strategies, this study investigates the brand name development, brand architectures, and brand strategies employed by North American WPC manufacturers in the Fall of 2008.

Using data collected through secondary sources and semi-structured interviews (response rate of 60.9%), all WPC brands in the Fall of 2008 were identified and each manufacturer’s brand portfolio was categorized according to a brand architecture scheme. The findings indicate that WPC manufacturers perceive branding as an important marketing tool and utilize a wide array of resources when developing brand names. It was
also found that product identification was the largest perceived benefit of employing brand strategies and that the proliferation of brand names that exist in the industry is largely a result of the proliferation of manufactures and the ability to differentiate product offerings. Moreover, a comparison between a firm’s architecture fit (branded house, mixed house, or house of brands) and firm size (small vs. large) showed significant differences among firm’s perceptions on various branding benefits.

Introduction

The commercial market for extruded wood-plastic composites (WPCs) has seen significant growth in the North American building materials industry over the past 18 years with a substantial growth stage between 1997 and 2006 as the number of WPC manufactures increased from 7 to 26 firms (Smith and Tichy 2007). The growth of the WPC market has been largely driven by four factors: value proposition in terms of life cycle costs, substitution for chemically treated lumber, general builder acceptance of wood composite building materials, and effective push/pull marketing communication (Smith and Wolcott 2006). With the growth of the WPC market, the number of WPC manufacturing firms, and subsequently the number of brand names has also grown. In the Fall of 2008, 23 North American manufacturers of extruded WPC products collectively marketed over 90 trademarked/copyrighted brand names. The vast array of brands that now define the WPC marketplace is a relatively unique situation compared to that of traditional wood decking and railing products which generally have few consumer brands and are often sold as commodities graded according to classifications established
by the U.S. Department of Commerce (Trex 2006). Thus, WPC manufacturers have the flexibility to differentiate on various tangible product attributes as well as a multitude of service/supplier attributes (Table 4-1).

<table>
<thead>
<tr>
<th>Product Attributes</th>
<th>Service/Supplier Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to Decay</td>
<td>Availability</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Ease of installation</td>
</tr>
<tr>
<td>UV Resistance</td>
<td>Installation Training</td>
</tr>
<tr>
<td>Ease of Installation</td>
<td>Demonstration Projects</td>
</tr>
<tr>
<td>Surface Texture</td>
<td>Warranty</td>
</tr>
<tr>
<td>Color Options</td>
<td>Packaging</td>
</tr>
<tr>
<td>Thermal Expansion</td>
<td>Availability of Product Info</td>
</tr>
<tr>
<td>Resistance to Wear</td>
<td>On-Time Delivery</td>
</tr>
<tr>
<td>Strength</td>
<td>Promotional Support</td>
</tr>
<tr>
<td>Price</td>
<td>Good Credit Terms</td>
</tr>
<tr>
<td>Low Flame Spread</td>
<td>Relationship w/ Distributors</td>
</tr>
<tr>
<td>Recyclable</td>
<td>Company Reputation</td>
</tr>
<tr>
<td>Use of Waste/ Recyclable Material</td>
<td>Brand Awareness</td>
</tr>
<tr>
<td></td>
<td>Competitive Pricing</td>
</tr>
<tr>
<td></td>
<td>Certified Contractors</td>
</tr>
<tr>
<td></td>
<td>Full Product Line/ Range of Products</td>
</tr>
<tr>
<td></td>
<td>(decking &amp; railing)</td>
</tr>
</tbody>
</table>

Table 4-1. WPC Attributes

A literature review of secondary information provided considerable insights into brand name development, brand portfolio management, and the benefits of employing brand strategies. The literature review revealed that manufactures of both consumer and industrial products use a wide array of resources when developing brands and employ a variety of strategies when managing brands. In the WPC industry, where very little
public domain research has been conducted on brand strategies, it is believed that as the industry matures, emphasis on market and brand strategies will increase and WPC producers will stand to benefit from a brand architecture strategy that will support future growth (Wheeler 2006). As branding guru Aaker (2004) states, “A key to managing brands in an environment of complexity is to consider them not only individual performers but members of a system of brands that must work to support one another. A brand system (architecture) can serve as a launching platform for new products or brands and as a foundation for all brands in the system.” Understanding brand architectures is especially important for new market entrants and small, emerging companies, where the first products developed establish the brand of the company. If brands are developed by accident rather than by design, it becomes expensive and difficult to reinvent or clean up the brand later (Cagan and Vogal 2002). As the WPC industry continues to grow in new and existing markets, and as the market reaches maturity, managing brand architectures will be a strategic challenge each WPC manufacturer will face.
Brand Strategies

*Individual Brand Roles*

To create effective brand portfolios that will achieve their objectives, it is imperative to understand the namely 3 basic “product-defining building blocks” which defined by Aaker (2004) are as follows:

- **Masterbrand** - primary indicator of the offering
- **Subbrand** - augments or modifies the associations of the master brand
- **Endorsed Brand** - provide credibility and substance to an offering

For each individual brand within a brand portfolio, the degree to which masterbrands, subbrands, and endorsed brands are leveraged is a determining factor in the composition of a brand firm’s brand architecture. Therefore the relationships between individual brands in a brand portfolio are based upon the degree to which an individual brand drives the purchase decision (Aaker 2004). Usually the masterbrand assumes the driver role but in some cases the subbrand, endorsed brand or even generic descriptors can assume the driver role. The strategic task for manufacturers is determining the degree of intensity each individual brand within a portfolio assumes when driving the purchase decision. As explained by Aaker (2004), “When a person is asked, ‘What brand did you buy?’ or ‘What brand did you use?’ the answer given will be the brand that had the primary driver role responsibility for the decision.”
**Brand-Product Matrix**

To characterize the product and branding strategy of an individual firm, a graphical representation of all the products and brands a company sells, the brand-product matrix, is a useful tool (Keller 2003) (Figure 4-1). All the brand lines a firm offers is termed *brand portfolio*, while all the products lines a firm offers is termed a *product mix*. (Kotler and Keller 2006; Keller 2003)

![Brand-Product Matrix Diagram](Source: Keller 2003)

Once the relationship between a firm’s brand portfolio and product mix are understood, each firm’s brand-product matrix may be translated into what Aaker and Joachimsthaler (2000) term *brand architecture*. 
Brand Architecture

Brand architecture is an organizing structure of the brand-product matrix that specifies brand roles and the nature of relationships between brands (Aaker and Joachimsthaler 2000). Building upon the work of Olins (1989) and Laforet and Saunders (1994, 1999), Aaker and Joachimsthaler (2000) designed The Brand Relationship Spectrum (BRS) as a way of classifying brand architecture (Figure 4-2).

Figure 4-2. Brand Relationship Spectrum (BRS)
(Source: Aaker and Joachimsthaler 2000)

The BRS was developed primarily to help brand architecture strategists (brand managers) effectively employ subbrands and endorsed brands. Aaker and Joachimsthaler (2000) explain, “Without endorsed brands or subbrands the choice of a new product would be largely limited to either building a new brand (an expensive and difficult proposition) or extending an existing brand (and thereby risking image dilution). Subbrands and endorsed brands can play a key role in creating coherent and effective brands architecture.” The position on the spectrum reflects the degree to which brands are separated in strategy execution and ultimately in the customer’s mind. According to
the BRS there are four main architectures in which a firm’s brand-product matrix may be classified:

- Branded house
- Subbrands
- Endorsed Brands
- House of Brands

The BRS has a direct relationship to the driver role that each individual brand within the brand product-matrix assumes. On the right side of the spectrum in the house of brands architecture, a firm’s brand-product matrix is comprised of multiple masterbrands, each assuming a driver role in the purchase decision. The implications of employing a house of brands architecture are summarized in Table 4-2.

<table>
<thead>
<tr>
<th>Roles</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly position brands on functional benefits</td>
<td>Sacrifices economies of scale and synergies</td>
</tr>
<tr>
<td>Connect directly to niche customer with targeted value proposition</td>
<td>Risk stagnation or decline from lack of resources</td>
</tr>
<tr>
<td>Avoid a brand association that would be incompatible</td>
<td>Sacrifice brand leverage</td>
</tr>
<tr>
<td>Signal breakthrough advantages of new offerings</td>
<td></td>
</tr>
<tr>
<td>Offer a new product class association by using a powerful name that reflects a key benefit</td>
<td></td>
</tr>
<tr>
<td>Avoid or minimize channel conflict</td>
<td></td>
</tr>
</tbody>
</table>

Table 4-2. Implications of a House of Brands Architecture

(Source: Aaker and Joachimsthaler 2000)

In the branded house architecture, at the far left of the BRS in a directly opposite strategy, a firm’s brand-product matrix contains a single masterbrand which assumes
the driver role. This single masterbrand may be used across a firm’s entire product mix. The implications of employing a branded house architecture are summarized in Table 4-3.

<table>
<thead>
<tr>
<th>Roles</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhances clarity</td>
<td>Puts eggs in one basket</td>
</tr>
<tr>
<td>Enhances synergy</td>
<td>Difficult to maintain cool image or quality position</td>
</tr>
<tr>
<td>Enhances leverage</td>
<td>Limits ability to target specific groups</td>
</tr>
</tbody>
</table>

Table 4-3. Implications of a Branded House Architecture
(Source: Aaker and Joachimsthaler 2000)

Between the two opposing architectures which anchor the spectrum are the endorsed brand architecture and the subbrand architecture. The BRS was developed with intent to help firms to employ, with insight and subtlety, endorsed brand and subbrand architectures. For endorsed brand and subbrand architectures, the role that a masterbrand assumes is diminished as you move from right to left on the spectrum. The implications of employing an endorsed and/or subbrand architecture are summarized in Table 4-4.

**Benefits of Subbrand and/or Endorsed Brand Architectures**
- allow brands to stretch across products and markets
- address conflicting brand strategies
- conserve brand building resources in part by leveraging brand equity
- protect brands from being diluted by over-stretching
- signal that an offer is new and different

Table 4-4. Implications of a Mixed Architecture (subbrand/endorsed brand)
(Source: Aaker and Joachimsthaler 2000)
The importance of strategically managing individual brands as a system of brands is best summed up by branding expert Aaker (1996), “The proliferation of brands within a single organization raises both concerns and challenges. A key to managing brands in an environment of complexity is to consider them not only individual performers but members of a system of brands that must work to support one another. A brand system can serve as a launching platform for new products or brands and as a foundation for all brands in the system.” As companies grow, merge, and acquire new companies, WPC producers will benefit from a brand architecture strategy that will support future growth (Wheeler 2006). Coherent organization of brand portfolios will lead to impact, clarity, synergy and leverage rather then weakness, confusion, waste and missed opportunities (Aaker and Joachimsthaler 2000).

**Methodology**

Since there was not a methodology at the time of this study that specifically analyzed brand name architectures in a specific industry from the perspective of the manufacturer, a creative methodology was needed to address the objectives of the study. Although the methodology utilized in this study was a creative approach, the ideologies behind the qualitative research methods followed those as described by Daymon and Holloway (2002) in “Qualitative Research Methods in Public Relations and Marketing Communications”. The design and implementation of the research instrument (semi-structured telephone interviews) followed the “Tailored Design Method” of survey
implementation as described by Dillman (2002) in “Mail and Internet Surveys: The Tailored Design Method”.

The population of interest was all North American extruders of wood-plastic composites in the Fall of 2008. After a detailed literature review, including trade magazines, industry reports, academic publications, commercial research reports, websites and after talking to industry contacts, 23 North American WPC extruding firms were identified. This total included 20 U.S. extruders and 3 Canadian firms. No Mexican extruders were found to exist.

Data Collection

Secondary Data Collection

The objective of secondary data collection was to provide the foundation to generate the constructs for primary data collection (semi-structured telephone interviews). Sources of secondary data are summarized in Table 4-5.
Table 4-5. Sources of Secondary Data Collection

In order to identify and quantify the total number of brands identified in the WPC industry in the Fall of 2008, each identified brand was categorized according to the 3 basic product defining building blocks (masterbrands, subbrands, endorsed brands) as described by Aaker (2004), depending upon the driver role the brand played. Once individual brands were classified according to their driver role, a brand-product matrix (Keller 2003) was developed for each firm. Then each brand-product matrix was analyzed and initially fit according the BRS (Aaker and Joachimsthaler 2000).

For firms whose brand-product matrix was comprised of multiple masterbrands, they were fit into a house of brands architecture. Figure 4-3 illustrates the brand-product matrix for Fiber Composites, a WPC firm employing a house of brands architecture.
<table>
<thead>
<tr>
<th>Products</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Decking</td>
<td>Railing</td>
<td>Fencing</td>
</tr>
<tr>
<td>fiberon®</td>
<td>fiberon®</td>
<td>fiberon®</td>
</tr>
<tr>
<td>fiberon® Home Select</td>
<td>fiberon® Horizon Mission</td>
<td></td>
</tr>
<tr>
<td>fiberon® Professional</td>
<td>fiberon® Horizon Provincial</td>
<td></td>
</tr>
<tr>
<td>fiberon® Tropics</td>
<td>fiberon® Professional</td>
<td></td>
</tr>
<tr>
<td>fiberon® Sanctuary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WeatherBest®</td>
<td>WeatherBest®</td>
<td></td>
</tr>
<tr>
<td>WeatherBest® Premium Grade</td>
<td>WeatherBest® Premium Grade</td>
<td></td>
</tr>
<tr>
<td>WeatherBest® Tropical</td>
<td>WeatherBest® White Composite Railing</td>
<td></td>
</tr>
<tr>
<td>WeatherBest® High Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portico</td>
<td>Portico</td>
<td></td>
</tr>
<tr>
<td>Portico Decking™</td>
<td>Portico Horizon Railing™</td>
<td></td>
</tr>
<tr>
<td>Portico Eclipse Decking™</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veranda™</td>
<td>Veranda™</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4-3. Example of Brand-Product Matrix for Fiber Composites (House of Brands Architecture)
For firms with only one masterbrand, and no subbrands or endorsed brands (instead generic descriptors i.e. deckboard, railing, fencing), they were into a branded house architecture. Figure 4-4 illustrates the brand-product matrix for LDI Composites, a WPC firm employing a branded house architecture.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geodeck®</td>
<td>Decking</td>
</tr>
<tr>
<td>Geodeck®</td>
<td>Railing</td>
</tr>
</tbody>
</table>

Figure 4-4. Example of Brand-Product Matrix for LDI Composites (Branded House Architecture)

For firms, such as Trex, who employed a single master brand in conjunction with subbrands that shared the driver role, they were fit into either a subbrand or endorsed brand architecture depending on the magnitude the driver role each subbrand assumed. Figure 4-5 illustrates the brand-product matrix for Trex, a WPC firm employing a subbrand architecture.
Once all WPC firms were fit into a brand architecture category the researcher was then able to generate the constructs for primary data collection (See Appendix A).

**Primary Data Collection**

Primary data was collected through semi structured telephone interviews with the person within each firm most responsible for managing their respective firm’s WPC brand portfolio. The telephone interviews were intended to answer the questions that could not be answered through secondary data collection and to confirm secondary data on each firm’s brand-product matrix and subsequently their position on the BRS. The semi-structured telephone interviews gave the researcher flexibility in terms of the timing, exact wording, and the time allocated to each research question which according
to Aaker et al. (2004) is especially effective with busy executives, technical experts, and thought leaders.

Since the population of the industry was determined to consist of 23 firms, and it was a goal of the researcher to understand the brand strategies that existed throughout the entire WPC industry, all 23 firms were contacted for participation in the telephone interview.

**Data Collection Process**

Figure 4-6 summarizes the data collection collect process.
Identified all N.A. WPC manufacturers

Identified all brands that existed in the N.A WPC market

Classified individual brands according to their driver role (Aaker 2004)

Constructed brand-product matrices (Keller 2003) for each WPC firm.

Fit each firm to a preliminary architecture based upon the Brand Relationship Spectrum (BRS)

Classification of individual brands according to their driver role (Aaker 2004)

Primary Data

Modified the BRS developed by Aaker and Joachimsthaler (2000)

Applied each firm to the modified BRS

Data Analysis

Secondary Data

Non-Respondent Firms

Through semi-structure telephone interviews confirmed each responding firm on the BRS

Figure 4-6. Data Collection Process
Response Rate

- 14/23 extruders responded for a response rate of 60.87%.

- The 14 respondents accounted for approx. 88.1% of the est. $1 billion (retail) WPC industry sales in 2006.

- 9 out of the top 11 firms in 2006 sales responded; these 9 firms accounted for 85.9% of retail sales in 2006.

Firms were classified into “large” firms and “small” firms according to their estimated retail sales for 2006 (Table 4-6).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>n</th>
<th>Response Rate</th>
<th>% of 2006 Sales</th>
<th>Sales in 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(respondents)</td>
<td>(respondents)</td>
</tr>
<tr>
<td>Large</td>
<td>6</td>
<td>6</td>
<td>100</td>
<td>79.2</td>
<td>$114,738,521</td>
</tr>
<tr>
<td>Small</td>
<td>17</td>
<td>8</td>
<td>47.1</td>
<td>8.9</td>
<td>$9,662,906</td>
</tr>
<tr>
<td>All</td>
<td>23</td>
<td>14</td>
<td>60.9</td>
<td>88.1</td>
<td>$54,695,313</td>
</tr>
</tbody>
</table>

Table 4-6. Respondent Firms (small vs. large)

Results & Discussion

The qualitative data collected through the semi-structured telephone interviews was subject to interpretation by the researcher with respondents providing any response they felt was appropriate (Mariampolski 2000). Therefore coding data for analysis was difficult and often the assignment of a response involved a judgment decision (Aaker et al. 2004) and was up to the discretion of the researcher. Quantitative data was analyzed using SPSS.
**Brand Managers**

To ensure that the participants in the telephone interview were knowledgeable about their firm’s marketing/branding strategies and the respective histories, it was requested in the cover letter (See Appendix C) that the “Initial Request for Participation” be forwarded to the person within each firm most responsible for managing their firm’s brand portfolio. Table 4-7 is a list of the respondent’s respective job titles.

<table>
<thead>
<tr>
<th>Job Titles</th>
<th>Responses (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>President/CEO/Owner</td>
<td>4</td>
</tr>
<tr>
<td>Sales/Marketing Manager</td>
<td>3</td>
</tr>
<tr>
<td>Senior VP Sales/Marketing</td>
<td>3</td>
</tr>
<tr>
<td>National Sales/Marketing Manager</td>
<td>2</td>
</tr>
<tr>
<td>Director of Consumer Products</td>
<td>1</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4-7. Job Titles of Respondents

**Brand Name Development**

To understand the brand name development process, we asked respondents through a fixed response construct to indicate the internal and/or external sources that were utilized when their firm developed its most recent brand. To mitigate the possibility that the most recent brand added to a firm’s brand portfolio had been acquired by the firm, it was emphasized that the most recent developed brand name be used to answer the question (Figure 4-6).
The results show that WPC firms used a wide array of both internal and external sources when developing their firm’s most recent brand. Furthermore, large firms utilized an average of 8.3 (50/6) sources per firm, while small firms utilized 3.75 (30/8) sources per firm. An interesting observation is that all large firms utilized both a marketing and sales manager in the development process and 5/6 large firms utilized both the CEO/president/owner and a product/brand manager. In comparison, 5/8 small firms utilized a marketing manager, only 2/8 utilized a sales manager, 5/8 utilized the CEO/President/Owner, and only 2/8 utilized a product/brand manager.
Proliferation of Brand Names

Through an open-ended question each respondent was asked their opinion on why a proliferation of brand names existed in the N.A. WPC industry for 2008 (Figure 4-7).

* Respondents could provide more than one answer

Figure 4-7. Proliferation of Brand Names in the WPC Industry

Respondents indicated that the proliferation of manufacturers was one of the two primary reasons for the proliferation of brand names. Under this assumption, each firm who enters the marketplace will develop at least one brand to identify their product offering(s), adding to the myriad of names that already exist. The other major reason for the proliferation of brand names was differentiation. Differentiation as an objective for brand development is consistent with brand architectures that are located towards the right hand side of the BRS and include the house of brands, the subbrand, and endorsed brand architectures.
Branded Products Manufactured

In secondary data collection each WPC firm’s product mix and brand portfolio were sorted according to the three dominant product lines that define the WPC industry (decking, fencing, and railing). Then, through the telephone interviews, each respondent firm’s brand-product matrix was confirmed. All branded WPC products other than decking, railing and fencing were labeled “other”. Figure 4-8 depicts the number of manufacturers that were identified to manufacture branded products in each product line after primary data was collected.

![Number of Firms Producing Branded Products](source)

(Source: 2006 data from Smith & Tichy, 2007)
*For 2006 brands were not examined in the “Other” category

Figure 4-8. Number of Firms Extruding Products in 2006 & 2008

Although 3 fewer firms produced WPCs in 2008, the same number of firms produced decking (n=21) and railing (n=17) brands as in 2006. However, fencing being
a relatively new product application for the WPC industry grew from four firms producing branded fencing in 2006 to 10 firms producing brands in 2008.

**Individual Brand Roles in the WPC industry**

Through the confirmed brand-product matrices for the respondent firms (81.1% of the total brands), and the brand-product matrices generated through secondary data for non-respondent firms, a total number of 95 brands were identified to exist in the WPC industry in the Fall of 2008. To quantify the number of brands that existed in the WPC in the Fall of 2008, identified brands were first categorized by product line (decking, railing, fencing, and other) and then categorized by the driver role each brand played (masterbrand, subbrand, endorsed brand, ingredient brand), so that brand-product matrices could be generated for each firm. Using the aforementioned categories, Table 4-8 summarizes the number of WPC brands that existed in the WPC industry in the Fall of 2008.

<table>
<thead>
<tr>
<th>Brand Type*</th>
<th>Decking</th>
<th>Railing</th>
<th>Fencing</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># Brands</td>
<td>28</td>
<td>35</td>
<td>5</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>Total # Brands</td>
<td><strong>68</strong></td>
<td><strong>50</strong></td>
<td><strong>16</strong></td>
<td><strong>10</strong></td>
<td><strong>94</strong></td>
</tr>
</tbody>
</table>

* M = Master Brand; S = Subbrand; E = Endorsed Brand (Note: Only one ingredient brand was identified and is not represented in the table. The total number of brands in the industry would be 95 if included.)

** Primary data categorized 77 brands (81.1%); the other 18 brands (18.9%) were categorized from secondary data sources listed in Table 4-5.**

Table 4-8. Number of Brands in the WPC Industry
The data reveals that branded decking, railing, and fencing products continue to dominate the WPC industry. This is consistent with data collected by Smith and Tichy (2007) where it was found that decking comprised 81.1% of 2006 sales, followed by railing at 11.9%, and fencing at 2.4% of 2006 sales. It is interesting to note that although the difference between sales in 2006 for decking and railing was rather large (81.10% vs. 11.85%), the difference in the number of brands was rather small (68 vs. 50). This could be explained by the fact that railings, as described by an industry participant, are a highly differentiated product line made up of many component parts adding to their complexity and the number of SKUs a company produces. Under this assumption, a hypothesis could be formed that the number of brands that exist in the WPC industry, especially the railing product mix, is due to the fact WPCs are differentiated upon a host of tangible (as well as intangible) product attributes. The products manufactured labeled “other” included fenestration materials, landscaping products (edging, stepping stones) exterior coverings, and trim/molding.

An interesting observation from the data is revealed in the fact that there were 33 total master brands identified in the WPC industry in the Fall of 2008 as a whole despite the fact there were 28 master brands in decking, 27 master brands in railing, 11 master brands in fencing, and 8 master brands in “other” products. Using the additive property one might conclude that 74 master brands existed. However, this observation can be explained by the fact that some firms employed a brand strategy that used a single master brand across multiple product categories. It is also interesting to note that there are almost twice as many subbrands (53) and endorsed brands (8) compared to master brands.
These observations lead the researcher to believe WPC manufacturers are capitalizing on the advantages of subbrands and endorsed brands (See Table 4-4).

**Brand Architecture**

Secondary and primary data were used to classify each individual brand identified in the WPC industry according to the driver role the brand played (i.e. masterbrand, subbrand, endorsed brand, and ingredient brand) (Aaker 2004). Using the theories behind Aaker’s (2004) product-defining building blocks, brand-product matrices (Keller 2004) were then able to be generated (Figure 4-3) for each WPC firm. Once brand-product matrices were generated, the researcher was then able to preliminarily classify each firm’s brand architecture according to the BRS (Aaker and Joachimsthaler 2000).

Each firm’s (n=23) brand-product matrix was initially categorized into a house of brands, subbrand, endorsed brand, or branded house architecture. Then, to confirm the preliminary architecture classification, open-ended interview questions prompted respondents to explain the objectives and thought processes behind their respective brand architecture and strategy. Starting on the right side of the BRS with the house of brands architecture, Table 4-9 summarizes the objectives and reasons given by respondents for employing their firm’s respective brand architecture.
Reasons for Employing Brand Architecture (n=14)*

House of Brands
- Distribution strategy (n=4)
- Differentiate product lines (n=3)
- Acquisition of brands (n=2)
- OEM conflicts with other firms (n=2)
- Distribution into foreign markets (Canada) (n=1)
- Market penetration (n=1)
- Resolve channel conflicts (n=1)

Subbrand & Endorsed Brands**
- Provide brand identity to new brands (n=2)
- Differentiate brands on product attributes (n=1)
- Extend the master brand across products (n=1)
- Keep the brand within the family (leverage family brand) (n=1)
  - word of mouth very strong in the industry
  - maintain positive brand experience with new brands
- Reach different market segments with subbrands brands (n=1)
  - focus subbrands to brands to b2b customers
  - focus family brand to consumer

Branded House
- Inexperience in marketing (n=2)
- Simplicity (n=2)
- Acquisition of the brand name and marketing strategy (n=1)
- Focus on pushing one brand through channels (efficiency) (n=1)
- Only manufacture one product line (n=1)

Table 4-9. Reasons Firms Employ Brand Architectures
* There was not a limit on the # of responses per respondent. Responses were summarized from question # 6 in the personalized telephone scripts (See Appendix A)
** Subbrand and Endorsed brand strategies were combined to form “Mixed House”

Due to the qualitative nature of the data, the researcher categorized each responding firm with secondary data that was confirmed or adjusted through the open-ended telephone interviews. For non-responding firms, the researcher had to rely on secondary data and intuition in order to assign firms to a brand architecture type. It
should be noted that one non-responding firm did not fit into any of the four architecture categories which is a result of the firm being an OEM supplying firm.

Once the primary data on the objectives behind each firm’s architecture was collected for the 14 respondent firms, a three category brand architecture spectrum emerged. Each of the 14 respondents were classified as one of the following architectures:

- Branded House
- Mixed House
- House of Brands

Figure 4-9 illustrates the emergent 3 category brand architecture spectrum that was used to classify the 14 respondents and eventually the remaining 9 non-respondents using secondary data only (See Table 4-5).

Figure 4-9. Modified Brand Relationship Spectrum

The 3 category brand architecture classification that emerged very closely represents the four architecture classification (branded house, subbrand, endorsed brand, and house of brand architectures) that comprise the BRS developed by Aaker and Joachimsthaler (2000). The primary difference between Aaker and Joachimsthaler’s
(2000) BRS and the emergent BRS that was used to analyze data in this study is the fact that the subbrand and endorsed brand architectures were combined into a single category labeled *mixed house* as illustrated in Figure 4-9. Since there was only one company that the researcher truly felt represented the endorsed architecture it was convenient to combine the architecture endorsed architecture and subbrand architecture for the purpose of data analysis. Table 4-10 illustrates the number of respondent firms that fit into each BRS architecture before and after primary data collection (semi-structure interviews).

<table>
<thead>
<tr>
<th>After Secondary Data Collection*</th>
<th>After Primary Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Architecture n=14</td>
<td>Brand Architecture n=14</td>
</tr>
<tr>
<td>Brand House 5</td>
<td>Brand House 4</td>
</tr>
<tr>
<td>Subbrand 3</td>
<td>Mixed House 4</td>
</tr>
<tr>
<td>Endorsed Brand 1</td>
<td></td>
</tr>
<tr>
<td>House of Brands 5</td>
<td>House of Brands 6</td>
</tr>
</tbody>
</table>

* For respondent firms only

Table 4-10. Brand Architectures before and after Primary Data Collection

As table 4-10 illustrates, the number firms that were preliminarily fit as a subbrand or endorsed brand architecture according to the BRS using secondary data only did not change when firms were applied to the modified brand architecture after primary data was collected. The only change to subbrand and endorsed architectures was the fact they were combined to represent one brand architecture recategorized “mixed house” (See Figure 4-9).

However, there were two firms that were preliminarily fit into a branded house architecture after secondary data collection that were re-fit into a house of brands architecture after primary data was collected. In addition there was one firm that was
preliminarily fit into a house of brands architecture that was re-fit into a branded house after data collection. Therefore, for the 14 respondent firms there was a net change of one firm for the branded house and one firm for the house of brands architecture between secondary and primary data collection.

**Brand Architecture vs. Firm Size**

Table 4-10 illustrates the breakdown of large and small firms into brand architecture categories.

<table>
<thead>
<tr>
<th>Firm Size</th>
<th>BH(N=6; n=4)</th>
<th>MH(N=6; n=4)</th>
<th>HB(N=10; n=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large (N=6; n=6)</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Small (N=17, n=8)</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Average Firm Size</td>
<td>$6,494,725</td>
<td>$76,842,667</td>
<td>$44,285,004</td>
</tr>
<tr>
<td>for Respondents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2006)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* BH= branded house, MH= mixed house; HB=house of brands
** N=23; There was one firm (“small” firm) not categorized (ingredient brand)

Table 4-11. Firm Size & Brand Architecture Matrix

Branded house firms were found to be much smaller than mixed house or house of brand firms with average sales for 2006 of $6,494,725. Mixed house firms were found to be the largest firm with average sales of $76,842,667.
**Brand Strategy Benefits**

Respondents were asked their agreement according to ten statements regarding the benefits of employing their firm’s brand strategy using the following 7-point Likert scale:

1 = Strongly Disagree
4 = Neither Agree nor Disagree
7 = Strongly Agree

Table 4-11 summarizes the results of respondent’s agreement to brand strategy benefits according to brand architecture type, and Table 4-12 summarizes the results according to firm size.
<table>
<thead>
<tr>
<th>Benefits of Employing a Brand Strategy</th>
<th>Total (n=14) Mean</th>
<th>BH (n=4) Mean</th>
<th>MH (n=4) Mean</th>
<th>HB (n=6) Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provides product identification:</td>
<td>6.07</td>
<td>4.75</td>
<td>6.75</td>
<td>6.50</td>
</tr>
<tr>
<td>2. Creates differentiation among our firm’s brands:</td>
<td>5.82</td>
<td>4.75</td>
<td>5.50</td>
<td>6.68</td>
</tr>
<tr>
<td>3. Creates differentiation from competing brands:</td>
<td>5.79</td>
<td>4.75</td>
<td>5.75</td>
<td>6.00</td>
</tr>
<tr>
<td>4. Helps in product positioning</td>
<td>5.57</td>
<td>4.25**</td>
<td>6.25**</td>
<td>6.00**</td>
</tr>
<tr>
<td>5. Increases the efficiency of marketing communication:</td>
<td>5.57</td>
<td>5.00</td>
<td>5.00</td>
<td>5.33</td>
</tr>
<tr>
<td>6. Generates a price premium:</td>
<td>5.29</td>
<td>4.75</td>
<td>5.75</td>
<td>5.33</td>
</tr>
<tr>
<td>7. Provides legal protection:</td>
<td>5.29</td>
<td>4.25</td>
<td>5.50</td>
<td>5.17</td>
</tr>
<tr>
<td>8. Promotes repeat purchasing (customer loyalty):</td>
<td>5.14</td>
<td>4.38*</td>
<td>6.50*</td>
<td>6.33*</td>
</tr>
<tr>
<td>9. Increases customer purchase confidence:</td>
<td>5.00</td>
<td>4.50</td>
<td>5.50</td>
<td>5.68</td>
</tr>
<tr>
<td>10. Affords no benefits:</td>
<td>2.00</td>
<td>3.50**</td>
<td>1.00**</td>
<td>1.68**</td>
</tr>
</tbody>
</table>

Note: BH= branded house; MH=mixed house; HB= house of brands
Note: Mean scores based upon 7-point Likert scale: 1=strongly disagree, 4=neither agree or disagree, 7=strongly agree
*Significant at .05 level
**Significant at .10 level

Table 4-12. Agreement with Statements Related to Brand Strategy Benefits (by Brand Architecture)
It is clear that WPC manufacturing firms agree that employing a brand strategies provide their firms wide array of benefits. The fact that manufacturers strongly disagreed with the fact that their brand strategy “affords no benefits” emphasizes that brand names are an important part of a firm’s marketing success. The highest ranked benefit that firms perceived by employing a brand strategy was product identification. Product identification being ranked as the #1 benefit is consistent with the studies conducted by Sinclair and Seward (1988), Shipley and Howard (1993), and Mitchell et al (2001).

For firms in the branded house, “efficiency of marketing communication” was ranked as the #1 benefit of employing the respective strategy. This is not a surprise finding since the branded house is comprised of only one brand that needs to be communicated to its customers. In other brand architectures such as the house of brands and mixed brand architectures, there are a multitude of brands that require resources for communication. The branded house can also increase marketing efficiency due to its potential to maximize clarity to the customer and synergy across product offerings according to Aaker and Joachimsthaler (2000).

For firms in the mixed house, “product identification” was ranked as the #1 benefit of employing the respective strategy. It is interesting to note that all respondent mixed house firms strongly disagreed to the statement “Our brand strategy provides no benefits to our firm”. This leads the researcher to believe that firms employing a mixed house strategy have a clear sense of their strategy’s benefits, and are using their strategy to increase impact, clarity, synergy, and leverage rather than weakness, confusion, waste,
and missed opportunities which are inherent setbacks of poorly managed brand architectures (Aaker and Joachimsthaler 2000).

For firms in the house of brands, “creates differentiation among our firm’s brands” was ranked as the #1 benefit of employing the respective strategy. This is an expected finding since a house of brands strategy involves an independent set of stand-alone brands each focused on maximizing the impact on a market. The house of brands strategy allows firms to clearly position brands on functional benefits and dominate niche segments (Aaker and Joachimsthaler 2000).

Using a one-way analysis of variance test (SPSS statistical software) to compare means across different brand architectures provided some significant findings. Overall the statistics revealed that branded house firms do not agree as highly towards statements regarding the benefits of brand strategies as those firms who employed a mixed house or house of brands strategy. The most significant difference (at the .05 level) between agreement with brand strategy benefits is observed between branded house firms agreement (4.38) on the benefit “promotes repeat purchasing” compared to the mixed house (6.5) and house of brands (6.33) firms. Other significant differences (at the .10 level) were observed between brand architectures in regard to the benefit “helps in product positioning”. Firms in the branded house ranked their agreement significantly lower then the firms in the other two architectures. This is an expected finding and it confirms that a house of brands, subbrand, and endorsed brand architecture facilitate in product positioning.

The agreement on statements related to brand strategy benefits categorized by firm size are summarized in Table 4-12.
Table 4-13. Agreement with Statements Related to Brand Strategy Benefits (by Firm Size)

<table>
<thead>
<tr>
<th>Benefits of Employing a Brand Strategy</th>
<th>Total (n=14) Mean</th>
<th>Large (n=6) Mean</th>
<th>Small (n=8) Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provides product identification:</td>
<td>6.07</td>
<td>6.67</td>
<td>5.63</td>
</tr>
<tr>
<td>2. Creates differentiation among our firm’s brands:</td>
<td>5.82</td>
<td>6.17</td>
<td>5.50</td>
</tr>
<tr>
<td>3. Creates differentiation from competing brands:</td>
<td>5.79</td>
<td>5.83</td>
<td>5.38</td>
</tr>
<tr>
<td>4. Helps in product positioning</td>
<td>5.57</td>
<td>6.17</td>
<td>5.13</td>
</tr>
<tr>
<td>5. Increases the efficiency of marketing communication:</td>
<td>5.57</td>
<td>5.33</td>
<td>5.00</td>
</tr>
<tr>
<td>6. Generates a price premium:</td>
<td>5.29</td>
<td>5.33</td>
<td>5.25</td>
</tr>
<tr>
<td>7. Provides legal protection:</td>
<td>5.29</td>
<td>4.68</td>
<td>5.25</td>
</tr>
<tr>
<td>8. Promotes repeat purchasing (customer loyalty):</td>
<td>5.14</td>
<td>6.50</td>
<td>5.31</td>
</tr>
<tr>
<td>9. Increases customer purchase confidence:</td>
<td>5.00</td>
<td>5.50</td>
<td>5.13</td>
</tr>
<tr>
<td>10. Affords no benefits:</td>
<td>2.00</td>
<td>1.00*</td>
<td>2.75*</td>
</tr>
</tbody>
</table>

Note: BH= branded house; MH=mixed house; HB= house of brands

* Significant at .05 level
The only significant difference at the .05 level between large and small firms in their agreement with statements regarding their firm’s brand strategy was whether their firm’s brand strategy “provided no benefits”. All large firms strongly disagreed with the statement which suggests that larger firms value their branding strategies more than small firms. All other mean scores were higher for large firms regarding benefits of their brand strategy except for “provides legal protection” which further supports the conclusion that large firms value their branding strategies in comparison to small firms. The fact that large firms agree with the benefit “provides legal protection” more than small firms may be attributed to the fact that large firms have legal support more widely available.

Summary

Compared to 2006 data on the WPC industry (Smith and Tichy 2007), the WPC industry has shrunk from 26 to 23 extruders as consolidation of a mature market has taken form. Decking and railing products continue to dominate the industry which is evident by the number firms manufacturing each product line (21 for decking, and 17 for railing), and in the total number of brand names that define the industry (68 decking and 50 railing brands). Fencing is a becoming a growing product line as 10 firms were extruding in the Fall of 2008, marketing 11 masterbrands, compared to four firms and four masterbrands in 2006.

It was found that WPC firms utilized an array of internal and external sources to develop their most recent brand name in the brand name development process. The data indicates that the brand name development is an important undertaking as 10/14
respondents indicated that the CEO/president/owner was involved in the development of their firm’s most recent brand. It was found that 10/14 firms utilized an external advertising agency and 9/14 firms utilized trademark agencies/attorneys. The results also illustrate that large firms utilize an average of 8.3 sources per firm, while small firms utilize 3.75 sources per firm.

A total of 95 brand names were identified to exist in WPC industry in the Fall of 2008. Due to the fact that masterbrands are defined as those brands that drive the purchase decision it can be hypothesized that the 34 masterbrands that were identified across all WPC product lines are the brands that are most widely identified by WPC consumers. Decking dominated the total number of brands, followed by railing, and fencing. It was found that although manufacturers are producing a multitude of “other” products which include fenestration, trim, exterior coverings and landscaping products, only 8 masterbrands existed in 2008. Only one WPC firm who sold OEM had a brand name to identify their product offering.

The fact that masterbrands in decking (28), railing (27), fencing (11) and other products (8) add up to more then a total of 34 masterbrands indicates that WPC producers are taking advantage of the benefits of subbrands and endorsed brand strategies (re-categorized mixed brands in this study). When brand portfolios were categorized by brand architecture, significant differences were uncovered in WPC firm’s agreement on the benefits of brand names. For branded house firms “the efficiency of marketing communication” was rated the #1 benefit. For mixed house firms “product identification” was ranked as the #1 benefit. And for house of brands producers “creates differentiation among our firm’s brands” was ranked as the #1 benefit. However, overall
it was found that regardless of architecture, brand strategy is an important marketing tool for WPC firms. Product identification was the highest perceived benefit, followed by differentiation, and product positioning.

Regardless of firm size “product identification” was ranked as the #1 benefit of employing a brand strategy, which is consistent with the overall industry findings. This finding is consistent with the fact that manufacturers perceive the proliferation of brand names in the WPC industry is a result of the proliferation of manufactures. This leads the researcher to believe that the number of brand names in the industry is a function of the number of manufactures. All means scores related to brand strategy benefits were ranked higher by large firms than small firms except for “provides legal protection”.

Although this study is a snapshot look at the WPC industry, the qualitative exploratory research methods and findings provide a sound foundation for further research into brand development and brand architectures within and beyond the WPC industry.

**Limitations**

The 95 brands (master, sub, endorsed, and ingredient) that were identified to exist in the WPC industry quantifies the number of brands from the manufacturer’s perspective or intent. Since all firms did not participate in the telephone interview the researcher was limited to the use of secondary data to construct brand-product matrices for non-respondents and subsequently had to rely on secondary data to assign those firms to a brand architecture.
The fact that brands live in the minds of consumers (Webster and Keller 2004) makes this data limited in the fact that it does not provide us insight towards whether or not the number of brands that exist from the manufacturer’s perspective is congruent with that of its consumers. It is hypothesized by the researcher that identifying and quantifying the number of brands from the consumer’s perspective would be a challenging task. Data collection would need to be done by precise segmentation of the customer population. The advantages of identifying brands from a consumer’s perspective is that it would provide manufacturers data that would help them analyze brand equity through measures such as brand awareness and brand image (Keller 2003).
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Laforet, S. and J. Saunders.  


Appendix A

Semi-Structured Telephone Scripts
Branded House Script

The discussion will focus exclusively on your firm’s wood-plastic composite brands. The discussion is intended to be informal, and your thoughts and opinions will be highly valued.

1) What is your job title?

2) What are your day-to-day responsibilities?

3) Is there anyone else within your firm responsible for the day-to-day management of your brand portfolio?

   1) Name _______________________________   Job Title _______________________________

   2) Name _______________________________   Job Title _______________________________

3a) If yes, what are their day-to-day responsibilities?

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________
4) The following list of brand names has been generated to confirm your firm’s brand portfolio. Please indicate the year in which each brand entered the market.

Please add any brands that may be missing and indicate the year the brand entered the market. Please indicate any discontinued brands.

<table>
<thead>
<tr>
<th>Deck Brand:</th>
<th>Market Entry Year:</th>
<th>Check if discontinued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Railing Brand:</th>
<th>Market Entry Year:</th>
<th>Check if discontinued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Brands:</th>
<th>Market Entry Year:</th>
<th>Check if discontinued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5) When your firm developed your most recent WPC brand name (please specify: __________________________) which of the following internal and/or external sources were utilized? (Check all that apply)

**Internal Sources:**
- □ Marketing Manager:
- □ Product/Brand Manager:
- □ Sales Manager:
- □ CEO/President:
- □ New Product Development Team:
- □ Other: __________________________

**External Sources:**
- □ Trademark Agency/Attorney
- □ Advertising Agency
- □ Market Research Agency
- □ Customers
- □ Distributors
- □ Focus Group
- □ Other: __________________________

6a) What are the objectives and thought process behind your firm’s brand strategy when using the single brand name Brand X to brand all of your firm’s WPC products?

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
6b) Is it a goal of your firm’s brand strategy to associate the company name *Company X* with *Brand X*? Please Explain.

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

7) Please indicate your level of **AGREEMENT** with the following statements related to your firm’s **brand name strategy** for your firm’s **WPC products**. *(Please circle one number for each statement.)*

<table>
<thead>
<tr>
<th><strong>Our brand strategy provides the following benefits to our firm:</strong></th>
<th>Strongly Disagree</th>
<th>Neither Agree or Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provides product identification.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Creates differentiation among our firm’s brands:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Creates differentiation from competing brands:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Helps in product positioning</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Increases the efficiency of marketing communication:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Generates a price premium:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Provides legal protection:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Promotes repeat purchasing (customer loyalty):</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Increases customer purchase confidence:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Affords no benefits:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8) In your opinion what has led to the proliferation of brand names within the WPC industry?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
Brand Name Management & Strategies: Wood-Plastic Composites (WPCs)

The discussion will focus exclusively on your firm’s wood-plastic composite brands. The discussion is intended to be informal, and your thoughts and opinions will be highly valued.

-----------------------------------------Start of Interview--------------------------------------------

1) What is your job title? __________________________________

2) What are your day-to-day responsibilities?

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

3) Is there anyone else within your firm responsible for the day-to-day management of your brand portfolio?

   1) Name _______________________________   Job Title _______________________________
   2) Name _______________________________   Job Title _______________________________

3a) If yes, what are their day-to-day responsibilities?

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Jonathan J. Stank
Graduate Research Assistant
226 Forest Resources Building
University Park, PA 16802

Cell Phone: 814.404.7410
Fax: 814.865.3725
E-mail: jjs359@psu.edu
4) The following list of brand names has been generated to confirm your firm’s brand portfolio. Please indicate the year in which each brand entered the market.

Please add any brands that may be missing and indicate the year the brand entered the market. Please indicate any discontinued brands.

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Market Entry Year</th>
<th>Check if discontinued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deck Brand:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Market Entry Year</th>
<th>Check if discontinued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railing Brand:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</thead>
<tbody>
<tr>
<td>Other Brands:</td>
<td></td>
<td></td>
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<tr>
<td>Other</td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5) When your firm developed your most recent WPC brand name (please specify: ____________________) which of the following internal and/or external sources were utilized? (Check all that apply)

**Internal Sources:**
- □ Marketing Manager:
- □ CEO/President:
- □ Product/Brand Manager:
- □ New Product Development Team:
- □ Sales Manager:
- □ Other: __________________________

**External Sources:**
- □ Trademark Agency/Attorney
- □ Customers
- □ Advertising Agency
- □ Distributors
- □ Market Research Agency
- □ Focus Group
- □ Other: __________________________

6a) What are the objectives and thought process behind your firm’s brand strategy when using Brand X to brand some of your firm’s WPC products and Brand Y to brand some of your firm’s WPC products?

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
6b) Is it a goal of your firm’s brand strategy to associate the company name *Company X* with your firm’s brands? Please Explain.

---

7) Please indicate your level of **AGREEMENT** with the following statements related to your firm’s **brand name strategy** for your firm’s **WPC products.** *(Please circle one number for each statement.)*

<table>
<thead>
<tr>
<th>Our brand strategy provides the following benefits to our firm:</th>
<th>Strongly Disagree</th>
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<td>1. Provides product identification.</td>
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8) In your opinion what has led to the proliferation of brand names within the WPC industry?
Brand Name Management & Strategies:
Wood-Plastic Composites (WPCs)

The discussion will focus exclusively on your firm’s wood-plastic composite brands. The discussion is intended to be informal, and your thoughts and opinions will be highly valued.

-----------------------------------------Start of Interview--------------------------------------------

1) What is your job title? ________________________________

2) What are your day-to-day responsibilities?
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3) Is there anyone else within your firm responsible for the day-to-day management of your brand portfolio?

   1) Name ________________________________   Job Title ________________________________

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3a) If yes, what are their day-to-day responsibilities?
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<td></td>
</tr>
<tr>
<td>Brand X Brand Z</td>
<td></td>
<td></td>
</tr>
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<td>Other</td>
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- □ Sales Manager:
- □ New Product Development Team:
- □ CEO/President:
- □ Other: __________________________

**External Sources:**
- □ Trademark Agency/Attorney
- □ Advertising Agency
- □ Market Research Agency
- □ Customers
- □ Distributors
- □ Focus Group
- □ Other: __________________________

6a) What are the objectives and thought process behind your firm’s brand strategy when using Brand X in conjunction to Brand Y and Brand Z to brand your firm’s WPC products?

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6b) Is it a goal of your firm’s brand strategy to associate the company name *Company X* with your firm’s brands? Please Explain.

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7) Please indicate your level of **AGREEMENT** with the following statements related to your firm’s **brand name strategy** for your firm’s **WPC products**. *(Please circle one number for each statement.)*

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8) In your opinion what has led to the proliferation of brand names within the WPC industry?
Appendix B

Initial Email
Dear Mr or Mrs. ________________,

My name is Jonathan Stank and in conjunction with the Wood Products program in School of Forest Resources at Penn State University, I am conducting a study that examines individual brand strategies that exist in today's North American wood-plastic composite (WPC) industry. In order to complete this study, which is part of my efforts to complete my M.S. degree at Penn State, I am respectfully asking Company X to participate in a telephone interview.

Please find attached a Microsoft Word document containing a short cover letter that outlines the details of the study and the questionnaire that will be used during the telephone interview. If you have any technical problems opening the attachment please reply to this email and I will send the document via an alternative format. Thank you very much for your time and help. I look forward to speaking to you soon!

Sincerely,

Jonathan J Stank
Graduate Research Assistant
226 Forest Resource Building
University Park, PA 16802
Phone: 814.404.7410
Email: jjs359@psu.edu

Attachment
Appendix C

Cover Letter (Sent in Attachment)
Dear Mr. or Mrs. ______________,

The purpose of this study is to gain an industry-wide understanding on how brand names are developed and subsequently managed by WPC manufacturing firms. The results of this study will provide your firm with an up-to-date snapshot of the WPC industry in terms of brand management, brand portfolios and brand strategies. Also, industry-specific benefits of brand strategies will be reported, and implications of brand strategies and brand architectures will be examined.

As an industry leader, we respect and value your expertise and therefore are requesting your participation in this interview. The interview is intended to be brief and will only take a few minutes of your valuable time. This interview is voluntary and completely confidential and your answers will be used only in combination with other responses for analysis and reporting. Your responses will never be associated with you or your firm. As a token of our appreciation for completing the survey, we will provide a complete summary of the results to all responding firms.

If you are the person most responsible for managing your firm’s brands, please let me know (email) when you are available to participate in the telephone interview with a date and time at your earliest convenience. Please make sure to include your phone number. If you are not the person most responsible for managing your firm’s brand(s), please forward this correspondence to the appropriate person with a request to have him/her follow-up with me accordingly.

The questionnaire that will be used during the telephone interview follows. If you have any questions and/or concerns please do not hesitate to contact me (or Dr. Smith). Thank you very much for your cooperation and help and I look forward to speaking with you soon.

Sincerely,

Jonathan J. Stank
Graduate Research Assistant
226 Forest Resources Building
University Park, PA 16802

Cell Phone: 814.404.7410
Fax: 814.865.3725
E-mail: jjs359@psu.edu

Paul Smith
Professor of Wood Products Marketing
Phone: 814-865-8841
E-mail: pms6@psu.edu
Appendix D

Follow-up Request for Participation (email)
Mr. or Mrs. ______________,

I contacted you on July 16th concerning our WPC Brand Strategy study for the North American WPC extrusion industry. I have not yet received a response from your firm concerning your participation in the telephone interview. I understand that the summer months are a busy time of the year making it difficult to find extra time. However the completion of the telephone interview should only take 5-10 minutes of your valuable time. Due to the limited number of WPC manufacturers completion of every interview is important to achieve results that are meaningful and truly representative the industry.

To expedite the data collection process, and consequently help me graduate, I am respectfully requesting that I call you on Date_____ at Time_____? If this date and time is inconvenient for you, please respond to this email with an alternate date that better fits your schedule. The telephone number I have for your firm is #_______, if there is an alternate number in which you would prefer me to call please let m know by responding to this email.

For your convenience I have attached a cover letter and copy of the questionnaire that will be used during the telephone interview.
Thank you in advance for your participation. I look forward to speaking with you soon.

Sincerely,

Jonathan J Stank
Graduate Research Assistant
226 Forest Resource Building
University Park, PA 16802
Phone: 814.404.7410
Email: jjs359@psu.edu

Enclosure