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Economic Environment

Homebuilding Trends Part I: Opportunities & Challenges for the Components Industry by Al Schuler

We have discussed opportunities for growth in the components industry in both the April 2003 and March 2002 issues of SBC Magazine, but we have yet to detail some of the implied changes for the three major stakeholders—the homebuilders, component manufacturers, and the primary industry (e.g. sawmills and panel plants). Specifically, three questions need to be addressed: (1) how will components get to the builder, (2) who will manufacture the components, and (3) how fast will this happen? We hope to address these questions in two articles, this being the first and another later this year. This article focuses on the homebuilders and the primary industry while Part II will look at the same issue from the component industry's viewpoint.

THE HOMEBUILDING INDUSTRY

As mentioned previously in SBC Magazine, demographic studies suggest long-term labor shortages while studies by the National Association of Home Builders (NAHB) tell us that many young people don't find construction trades to be a preferred occupation. In addition, homebuilders are becoming larger as they strive to become national in scope. One result of these trends is a move to industrialize the construction site—build more of the house in a factory-controlled environment, but keep the final assembly location at the building site (Figure 1). Anticipating these trends, a 1998 NAHB study[1] made the following recommendations to the home building industry:

- Embrace new management techniques and computer technology to reduce the cycle time of construction.
- Promote more systematic integration of housing components on site by increasing their modularity, flexibility, adaptability and connectivity.
- Develop innovative technologies that combine functions traditionally performed by separate subcontractors, thereby reducing the need for separate trades and steps in the construction process.
- Prefabricate housing components under controlled conditions of the factory to simplify assembly in the field. Obviously, this means more use of engineered components (wood, steel and concrete).

	1997		2002	
	# Units	%	# Units	%

Stick Built[1]	1,175	79.7	1,195	70.0
Panelized[2]	105	7.1	230	13.0
Concrete[3]	125	8.6	210	12.0
Modular[4]	45	3.1	35	2.0
Steel Frame[5]	8	0.5	14	0.8
SIPs[6]	8	0.5	12	0.7
Other[7]	8	0.5	9	0.6
Total[1]	1,474	100	1,705	100

1 stick built walls and floor with prefab roof trusses
2 panalized wood walls built in factory
3 block or poured concrete walls
4 factory built modules (not HUD)
5 steel framing used for at least exterior walls
6 foam core with structural panels
7 log homes, post & beam, etc.
Source: APA, Ergonomics Report E169, April 2003<

Figure I. Estimates of Homebuilding Methods (1,000 units)

PRIMARY INDUSTRY—SURVEY OF FOREST PRODUCT MARKETING EXECUTIVES

The following discussion highlights the key findings from interviews with marketing executives from some of the largest North American forest products firms (primary sector) regarding homebuilding trends (Adair and Schuler 2003).[2]

Construction labor shortages. There was general agreement among those interviewed that labor shortages should lead to more home prefabrication or component part fabrication off the jobsite in a way that may reduce onsite skill requirements and/or provide a more attractive work atmosphere for employees. There was recognition that younger people entering the workforce have the perception that craft-type or manual labor is not as exciting as working with automation and technology. Rapid growth and technological advances in the 1990s have given younger workers more choices for employment. At the same time, geography may play a role in the rate of technical change. Some executives believed that regions such as the South still

contain an abundant supply of labor willing to work on the jobsite who have the skills necessary to support “stick building” for some time to come.

Jobsite waste. While the executives realized that jobsite waste is not desirable, they didn't expect to see builders or the distribution channels asking manufacturers to solve the problem. There was recognition that waste is not good for the industry, particularly due to the small profit margins most builders are operating under.[3] There was also recognition of the growing concern of green building and the sustainability of construction materials. Any product with significant jobsite waste could receive a poorer “green rating” than another material that didn't have a waste stream problem. Some were quick to point out that waste could be managed more effectively in a factory environment.

Homebuilder consolidation. The third trend was consolidation of builders and the potential impact on suppliers. The largest one hundred builders in the U.S. closed 35 percent of all home sales in 2001, up from 23 percent in 1993 (NAHB, Housing Economics, May 2002). Furthermore, the number of home sales closed by the 300 largest builders doubled from 200,000 to 400,000 between 1993 and 2001. Builders are consolidating and becoming larger to achieve national builder status as opposed to a regional focus, and other reasons, including the ability to have better access to capital and to have the financial flexibility to inventory more building sites for the future and to lock in customers for the “starter,” “move-up,” “custom” and even “retirement” selling sequence. This is important because most upward mobility is associated with job and location changes. The executives were quite aware of recent trends in builder consolidation. They recognized that large builders want to drive cost out of the system and that builders know that the use of wood components and systems can often speed the construction schedule. However, there were a wide variety of opinions about what this will mean for primary forest product manufacturers. There was a bit of skepticism about how fast consolidation will happen in the future.

Most executives thought that the current channels of distribution were already well developed and if builders attempt vertical integration, it will be a slowly evolving process with failures along the way. The executives said that some large builders have set up their own retail yards in attempt to supply their own company and other builders in the same geographic area, but this is not yet considered a significant trend. Other large builders have purchased framing companies in attempt to control the speed and quality of home production.

For the vast majority of transactions most believe that the historical supply chains have not been broken. Most executives thought that building material suppliers (e.g., component manufacturers and pro-yards, not primary mills) would most likely move forward first to simplify the delivery system. For example, many building material suppliers already make roof trusses while many component manufacturers are adding new products to their building material offerings such as fabricated wall panels.

Componentization. The executives interviewed understood componentization to mean manufactured items such as structural insulated panels, fabricated wall sections, corners and tees, fabricated roof and floor trusses and prehung windows and doors. Those familiar with northern and western markets recognized that the use of factory-made wall panels is growing, while those more familiar with southern markets saw less use of panelized walls. However, most

thought that as componentization emerges, there will be an increasing number of large stand-alone component businesses, large builders with their own component factories, and pro-dealers/ building material suppliers all making components. Some executives believe that we are in the early stage of evolution where builders and all parts of the distribution chain are thinking about manufacturing components and some are trying it for the first time. Even primary lumber manufacturers may try to make components. It remains to be seen who will be more efficient and who the winners and losers will be.

The marketing executives suggested “at some point, primary lumber and panel manufacturers may reconfigure products for the component industry.” However, component manufacturers will need to grow and be viewed as an industry with buying power before primary wood product manufacturers will be willing to “cut-to-size” or provide other services for component manufacturers. This statement suggests that the primary industry may not realize that the component industry is almost as large as they are (see SBC Magazine, April 2003). One complicating issue is the diversified nature of the component industry: with over 2,200 locations in the U.S., it may be hard for the primary industry to understand the “buying power” of the component industry.

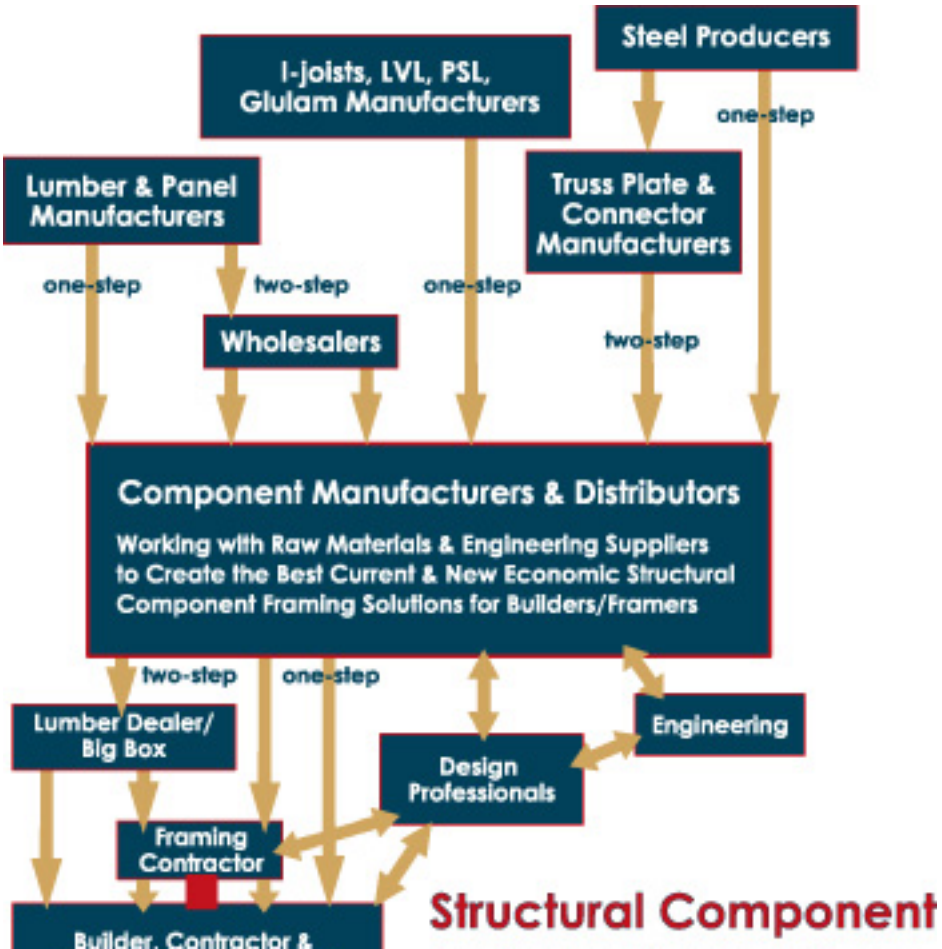
Summary of executive interviews. Pro-dealers and stand-alone component manufacturers are growing and competing and while some builders are making components, it's not yet clear how the delivery channels will develop in the future. The marketing executives recognized that buying power is slowly shifting toward the builder. For example, they said, “component manufacturers, large dealers/distributors, and the mills hold less power than in the past to simply manufacture and sell what they want.” This suggests that perhaps the primary industry doesn't realize that the wood component industry already acts as a structural framing consultant to the builder. This is analogous to the function performed by steel and concrete fabricators both in residential and non-residential construction. The executives expected more “supply chain linkage” in the future. What the mills make will eventually be driven from the builder's list of materials for a large number of homes. Again, perhaps the primary industry doesn't fully understand the function of the component industry, and that perhaps, the “list of materials” should be driven by the requirements of the component industry. One executive speculated that consolidation of builders and members of the distribution chain could even contribute to more consolidation of forest products companies. If forest product manufacturers remain regional and fragmented they may be less likely to properly serve the home building industry.

Executives mentioned other trends that will affect them in the future. They said some builders are pushing for more “installed sales” beyond just windows and doors. Some are asking component manufacturers or pro-dealers for installed floor systems or complete framing packages. Builders want to spend more time with financing and customer relations and less time finding and training jobsite labor. This will push labor away from the jobsite and into factories. In addition, when discussing the trend toward componentization, most of the marketing executives voluntarily brought up the subject of product quality. They said that component manufacturers will want improved quality products delivered to their factories. (The component industry has been saying this for years.) With automation and assembly lines comes the need to minimize defects and waste. On the jobsite, framing crews are accustomed to culling some pieces and trimming out defects and this won't be tolerated in a factory atmosphere. Some simply said that componentization will force mills into better quality and reconfigured products.

Component manufacturers will also want more properly dried and precision-cut parts with tight tolerances.

CONCLUSIONS

There is a real opportunity for component manufacturers—wood, steel or concrete—to take the lead in shoring up the supply line between the builder and primary industry. The executive survey suggests that the supply chain is evolving, but to date, there is no dominant leadership. Also, some of the statements made by the marketing executives suggest that perhaps there is a difference of opinion regarding the respective roles of the component and primary industries. The homebuilder wants high value components to support their need for more “installed sales” which will help them deal with labor shortages, jobsite waste and other nagging issues. It's not clear who will take the lead in manufacturing components and distributing them to the builders. We have a viable components industry, but large builders like Pulte Homes are making some of their own components. One example is a recent factory in metropolitan Detroit that makes panelized wall components. The primary industry, to date, doesn't seem interested in making components, perhaps because it would require a major paradigm shift, which is always difficult. What about the component industry? They are consolidating like everybody else, and larger outfits like Universal Forest Products Inc., Builders FirstSource, BMC West, Stock Components and Trussway, Ltd., are buying smaller companies in an attempt to become national component suppliers. Currently, there is a large global oversupply problem with commodity forest products that won't go away anytime soon. That means more consolidation (with the primary industry) in the future, and a move to more value added products (for example, components). Perhaps there is an opportunity for the component industry to line up potential partners to supply the homebuilders.



There are problems.
Fragmentation in the component industry is a reason the primary industry doesn't see the component industry as having buying power. This may be needed to induce the primary industry to provide “cut-to-size” and other services that would make it easier for the component industry to provide the homebuilders with their transition to industrializing the jobsite.

There is a real opportunity for the component industry to streamline the supply chain. The way in which this might be done is the subject of a future article. There are many ideas to this nature enumerated in the August 2001 issue of SBC Magazine. Marketplace structure is evolving and considering the many participants (Figure 2), there are numerous questions, opportunities and challenges that lie ahead. How will the component industry address the same issues facing the primary industry-marketing executives? Do the two industries have different views of the future and does it matter?

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1 NAHB, 1998. Labor Shortages and Productivity in the Home Building Industry: Background and Results for 1998 Building Industries Technical Roundtable. NAHB, Washington, DC.
2 Adair, C. and Schuler, A., 2003. Homebuilding Trends: the View among Forest Products Marketing Executives. Engineered Wood Journal, 6(1): 20-22.
3 Based on personal correspondence with Michael Carliner, Staff Vice President, NAHB. An article in Housing Economics (March 2003) details the various costs of a new home. Profit margins average less than 10% of the sales price; finished lot is 25%; labor and materials is 50%. The rest is financing, overhead and marketing.

Al Schuler works for Forestry Sciences Lab in Princeton, WV. Please note that the economic information/opinions contained in this article are not necessarily those of the USDA Forest Service. Dr. Schuler can be reached at 304/431-2727.

SBC HOME PAGE

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