INVESTMENT ACTIVITIES IN THE U.S. SECONDARY WOODWORKING INDUSTRY

Matthew Bumgardner, Urs Buehlmann, and Karen Koenig[1]

Abstract.—The U.S. secondary woodworking industry has shown signs of improvement after the steep losses in sales volume associated with the housing crisis that began in 2007. Employment in several sectors has begun to increase, suggesting that companies that survived the downturn are positioning to increase sales growth. It is likely that investment plans to improve firm-level productivity or capabilities are also gaining momentum. The objective of this paper was to ascertain investment activities in the secondary woodworking industry based on a survey of "Woodworking Network" magazine subscribers conducted in 2015. The survey was the latest of a 6-year series that tracked firm performance and activities annually since 2008, with an added recent focus on investment plans. Respondents provided information regarding their planned investment levels, areas in which they planned to invest, and the most important current drivers of investment plans. While responses showed a general increase in planned investment levels over the next 3 years for large firms (65 percent planned to invest more in 2015 than in 2014), a plurality of smaller firms (42 percent) were uncertain of their investment plans. Furthermore, a higher percentage of large firms indicated they planned to invest compared to small firms in nearly every category investigated. There were some differences between small and large firms in what was driving company investment plans. The results suggest that overall investment activity might be expected to increase in the near term, but the business environment still remains somewhat uncertain for many smaller firms.

INTRODUCTION

Construction-based markets continued an overall growth trend in 2014. U.S. spending on single family housing, multi-family housing, and nonresidential construction increased in 2014, but repair and remodeling (i.e., residential improvements) declined (Fig. 1) (U.S. Census Bureau 2015). The largest proportional increase was in multi-family housing, which increased by 33 percent from 2013 to 2014, while single family housing and nonresidential construction increased by 13 and 11 percent, respectively.

Correspondingly, the secondary woodworking industry also has seen improving business conditions associated with the overall improvement in construction markets. For example, during the worst of the housing crisis from 2008 to 2009, approximately 81 percent of secondary woodworking companies reported losing sales volume; for 2012 to 2103, this percentage had declined to 26 percent (Buehlmann et al. 2014). Employment trends in secondary woodworking industries also have improved, with the number of employees in the kitchen cabinet industry (North American Industry Classification System [NAICS] code 33711) increasing by 11 percent from 2012 (employment low point) to 2014 and the millwork industry (NAICS 32191) realizing an 8 percent increase in employment for the same period (U.S. Bureau of Labor Statistics 2015). Given these improvements, it might be expected that the secondary

[1] Research Forest Products Technologist (MB), U.S. Forest Service, Northern Research Station, Delaware, OH 43015; Professor (UB), Virginia Tech, Department of Sustainable Biomaterials; Editor-in-Chief (KK), Woodworking Network, Lincolnshire, IL. MB is corresponding author: to contact, call 740-368-0059 or email at mbumgardner@fs.fed.us.

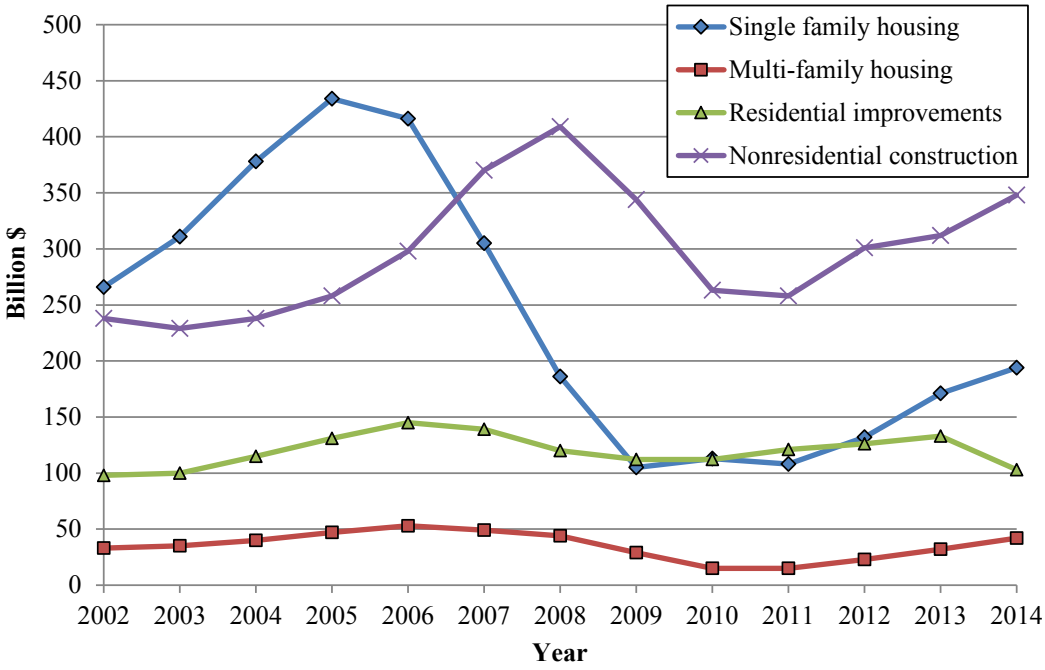

Figure 1.—Value of private U.S. construction put in place, 2002-2014 (U.S. Census Bureau 2015).

woodworking industry would be considering increasing business investments to increase capacity, decrease per unit manufacturing costs, and improve quality, or might consider offering new features or new product lines.

In economic terms, investment means business spending for capital goods to be used to provide goods and services (Boyes and Melvin 1991). Broadly, the determinants of the level of investment made by businesses include the interest rate, cost of capital goods, and profit expectations, all of which influence the potential return on investment. Other factors, such as the rate of technological change within an industry and capacity utilization, can also influence investment levels (Boyes and Melvin 1991). In the present study it was assumed that firm size played a role. According to the resource-based view of firms, resources internal to the firm are the primary source of competitive advantage (Hoopes et al. 2003). Under this scenario, large firms will have relatively greater financial means to make investments. For example, previous research has shown that small firms struggle with issues surrounding external financing (Huang and Brown 1999), and that being a large company within an industry requires the ability to make durable and irreversible investments (Ghemawat 1986). So while it might not be surprising to learn that small firms plan to spend less on investments than large firms, even less is known about the specific areas that small firms might be interesting in investing in or the current drivers of their investment decisions.

The objective of the present study was to assess business investment activities of small and large firms in the secondary woodworking industry by contrasting their planned investment levels, areas in which they plan to invest, and the most important current drivers of investment plans. A secondary objective was to determine changes in sales volume performance for secondary woodworking companies to assess the business environment for making investment decisions.

METHODS AND SAMPLE DESCRIPTION

Since February 2010, "Wood & Wood Products" or "Wood Products" magazine (now called "Woodworking Network" magazine) has conducted an online survey of their secondary wood working subscribers in February and March of each year to assess the previous year's performance, behaviors, and perceptions of market conditions in housing and related construction markets. Several of the questions have remained the same from year to year to help track industry activities over time. The 2015 study included new questions to focus on investment plans and activities, which are the focus of this paper. The number of responses received each year has ranged from 359 in 2010 to 193 in 2014, with response rates generally ranging from 1 to 3 percent. A higher response rate was achieved in 2010 (46 percent), but a more targeted list was available for use in that year. For the 2015 study there were 228 usable responses received. Although formal checks for nonresponse bias are not possible, the summary data in Table 1 suggest that samples from each year have similar firm characteristics.

Each year, most respondents were either company owners or in positions of corporate/operating management (ranging from 64 to 72 percent of the sample) and represented firms in at least 40 states. For 2015, the states of California, North Carolina, Indiana, Pennsylvania, Illinois, Michigan, New York, Texas, and Ohio each accounted for at least 4 percent of the total responses. Similar to years past, kitchen/bath cabinet producers made up the largest percentage of the 2015 sample, representing 32 percent of respondents (the lowest percentage for cabinets in the 6 years of the survey). Nearly 18 percent were household furniture producers (representing the largest percentage for household furniture in the 6 years of the study), 12 percent were millwork manufacturers, 7 percent were architectural fixtures firms, 7 percent were producers

Table 1.—Selected firm characteristics for respondents by study year

	Year					
Firm characteristics	2010	2011	2012	2013	2014	2015
Number of states represented in sample	46	46	42	41	42	40
Main products produced[a]	----------*Percent*----------					
Kitchen/bath cabinets	36	44	41	42	35	32
Household furniture	8	7	13	14	12	18
Architectural fixtures	8	7	10	8	11	7
Molding/millwork	13	11	11	11	15	12
Other	35	30	25	25	28	32
Respondent position						
Corporate/Management/Owners	72	67	71	67	72	64
Number of employees[a]						
1-19	--[b]	61	68	67	66	65
20-49	--	12	11	7	6	11
50+	--	27	21	26	27	24
Price point of primary product[a]						
Low to medium[c]	36	35	29	32	36	32
Medium-high	54	54	56	56	50	50
High	10	11	16	11	14	18

[a] Yearly totals may not sum to 100 percent due to rounding.
[b] --indicates question not asked in 2010.
[c] Low, low-medium, and medium categories combined.

of dimension or components, and 5 percent manufactured office/hospitality/contract furniture. While an additional 20 percent indicated their production was in "other" categories, most could reasonably be classified into one of the aforementioned categories (especially millwork). Closets were also a somewhat common product area. Similar to past years, most responding firms were small, with 49 percent having sales of less than $1 million in 2014 and another 28 percent having sales of $1-10 million. Furthermore, 65 percent of respondents had 1-19 employees. Lastly, respondents' production was domestically focused, with 84 percent indicating that more than 60 percent of their sales in 2015 would result from domestically produced and/or sourced products; this percentage was similar to previous years' studies.

Comparative analyses were conducted by categorizing respondents as either a small firm (1-19 employees) or large firm (20 or more employees). For these analyses, there were 125 small firms and 68 large firms; 35 firms did not indicate their firm size so were only included in aggregate measures. Respondents provided information regarding their planned investment levels, areas in which they planned to invest, and the most important current drivers of investment plans. For frequency count data, chi-square tests were used. For two-group comparisons of interval-level data (i.e., comparing small and large firms on scaled responses), two-tailed *t* tests were used. When there was a difference in variances between the groups (based on a folded *F* test), the Satterthwaite method was used. An α level of 0.10 was used for all tests. Statistical analyses were carried out using SAS® Enterprise Guide 6.1 (SAS Institute, Cary, NC).

RESULTS AND DISCUSSION

Changes in Performance

Analysis of year-over-year sales performance from 2009 to 2014 revealed continued gradual improvement in the percentage of firms reporting positive changes in sales volume. In 2009, 81 percent of respondents reported losing sales volume from the previous year, and 60 percent reported losing a volume of 20 percent or more. By 2014 (the current study), this proportion had declined to 21 percent (Fig. 2). Furthermore, the proportions of respondents in the Somewhat Better (sales up by 10 percent) and Much Better (sales up by 20 percent or more) categories have been increasing or holding steady each year. Nearly a quarter of respondents indicated that their sales were up by 20 percent or more from 2013 to 2014. This year's results also showed an increasing number of respondents indicating sales were unchanged year over year, suggesting more firms are seeing a stabilizing marketplace. Overall, these changes in sales volume suggest a business environment conducive to firms considering investments to improve productivity and capabilities.

Planned Investment Activities

While 65 percent of large firms planned to invest more in 2015 than 2014 to improve productivity and capabilities, just over a third of small firms indicated they planned to increase investments in 2015 (Fig. 3). For small firms, many (42 percent) were uncertain about their investment plans for 2015 at the time of the study. In fact, this was the most common response from small firms. The "no" response was the lowest category for both small and large firms, however, suggesting a generally favorable environment for investments in the secondary wood industry.

A majority of small firms (67 percent) indicated they planned to invest less than $250,000 over the next 3 years, and nearly a quarter had no investment plans for the period. Of the small firms that responded, none had plans to spend more than $1 million in investments over the next 3 years. Conversely, large firms were somewhat equally distributed across the investment categories, and only 4 percent indicated their firms had no investment plans (Fig. 4).

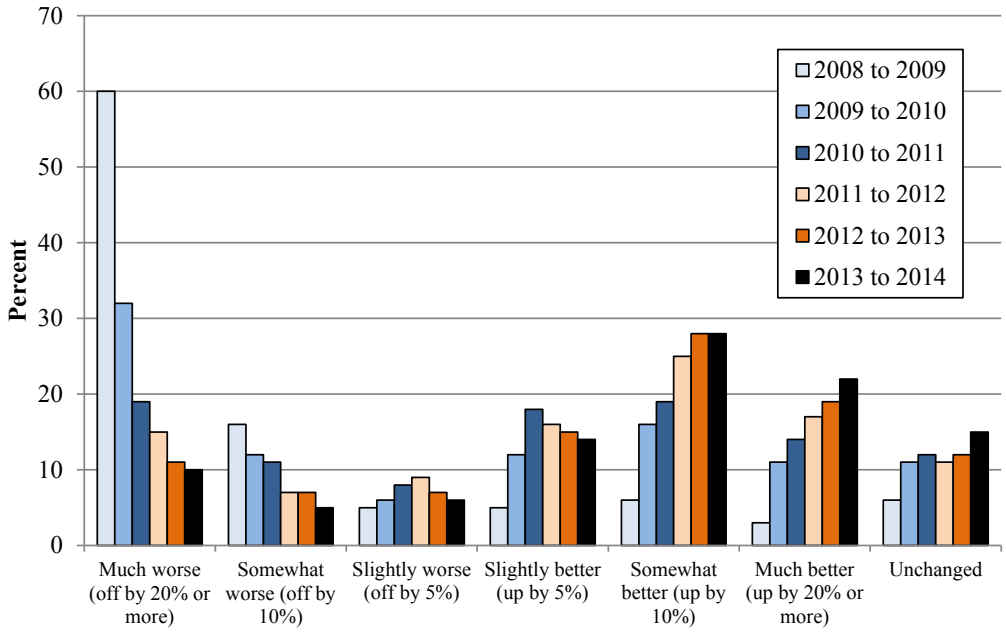

Figure 2.—Responses to the question, "Compared to the previous year, last year's sales volume was . . ." (e.g., 2015 study asked for change from 2013 to 2014), by study year.

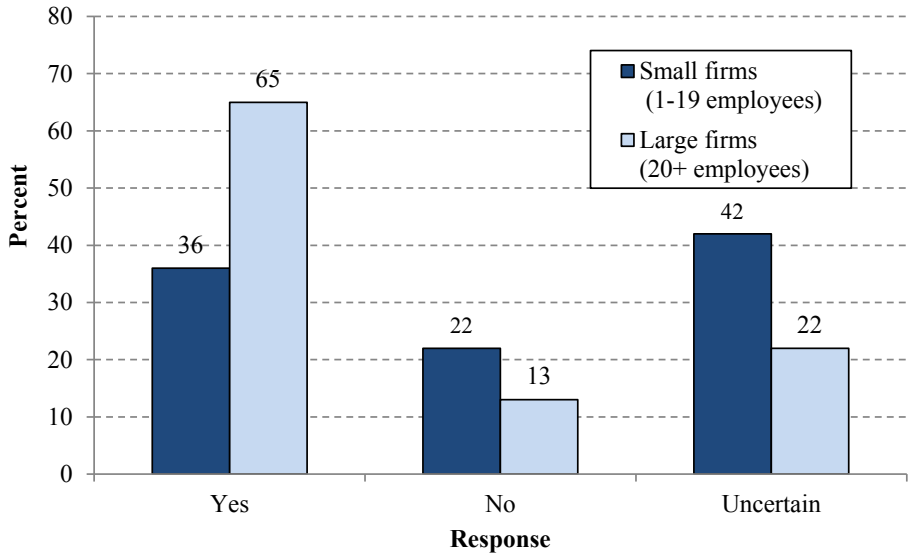

Figure 3.—Categorical responses to the question, "Does your company plan to invest more in productivity and capability improvements in 2015 than it did in 2014?" Chi-square statistic for associated frequency counts = 14.6 (P=0.001).

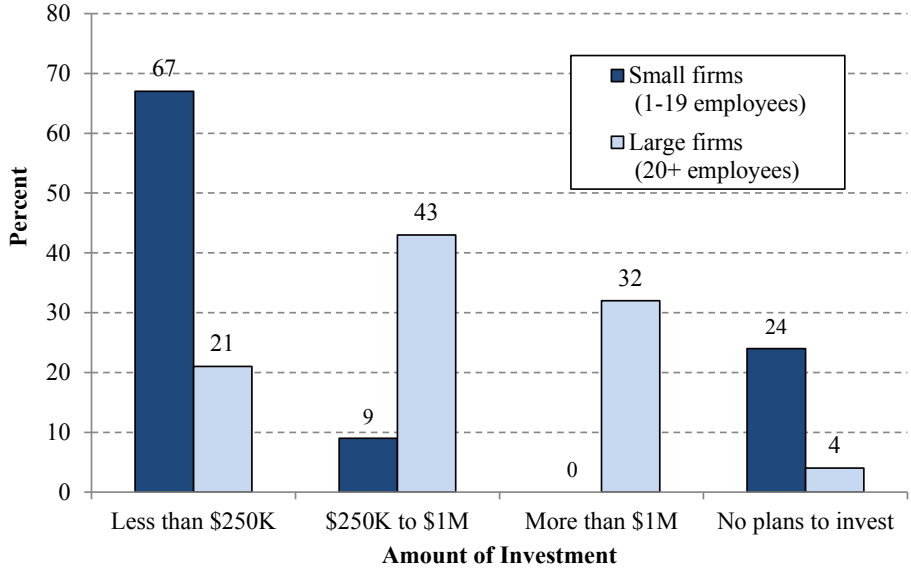

Figure 4.—Categorical responses to the question, "Over the next 3 years, about how much does your company plan to spend on investments to improve productivity or capabilities?" Chi-square statistic for associated frequency counts = 93.5 (P<0.001).

Table 2.—Areas where companies will invest significantly to improve productivity or capabilities within the next 3 years. Results ordered by large firm percentages, with greatest areas of investment at the top.

Investment areas	Small firms (*n*=125)	Large firms (*n*=68)	Chi-square statistic[a]	P[b]
	---------*Percent* ----------			
Sales force expansion/development	16.8	50.0	23.82	**<0.001**
Employee training	24.0	45.6	9.50	**0.002**
Advertising/marketing communications	30.4	41.2	2.27	0.132
Panel processing	16.8	33.8	7.25	**0.007**
Assembly	11.2	30.9	11.49	**0.001**
Inventory reduction	9.6	30.9	14.07	**<0.001**
Design/manufacturing software	22.4	29.4	1.16	0.282
Finishing	19.2	29.4	2.61	0.106
Solid wood processing	21.6	26.5	0.58	0.445
E-commerce	16.0	17.6	0.09	0.769
Decorative laminating/veneering	7.2	16.2	3.82	**0.051**
Component outsourcing	13.6	11.8	0.13	0.717
Rough mill	7.2	10.3	0.56	0.456
Certification/green initiatives	4.8	8.8	1.22	0.269

[a] Chi-square tests based on associated frequency counts in 2 x 2 tables for each investment area.
[b] Bold *P* values indicate significant differences between small and large firms at α=0.10.

This study also assessed the general categories or areas where investments were planned within the next 3 years (Table 2). For small firms, this included advertising/marketing communications (30.4 percent), employee training (24.0 percent), design or manufacturing software (22.4 percent), and solid wood processing (21.6 percent). For large firms, the areas with the most planned investment activity were sales force expansion (50.0 percent), employee training (45.6 percent), and advertising/marketing communications (41.2 percent). Thus, marketing and employee training were areas important to both small and large firms.

In every category except component outsourcing, a higher percentage of large firms indicated planned investments than did small firms (Table 2). This was especially true for sales force expansion/development, employee training, panel processing, assembly, inventory reduction, and decorative laminating/veneering, all of which were statistically significantly different between small and large firms. These results show areas especially important to larger firms, including becoming leaner (inventory reduction) and improving manufacturing capabilities. They also suggest that many large firms are expecting to expand sales in the next 3 years with the addition of more sales capabilities, which might be an important indicator of economic confidence. Three of these areas (employee training, sales force expansion, and inventory reduction) were found to be significant in a previous study conducted during the economic downturn associated with the housing crisis (Buehlmann et al. 2013). The consistency across studies for these factors suggests these are areas of enduring interest to large firms.

Factors Influencing Investment Plans

Lastly, respondents assessed the most important current drivers of investment plans (Table 3), which offered a similar pattern to the results from Table 2. Small firms rated nearly every factor as less important than did large firms, and several of the differences were statistically significant, including to improve productivity, to reduce labor costs, to replace aging equipment, and to

Table 3.—Importance values for factors driving company investment plans over the next 3 years. Results ordered by large firm means, from least important to most important.

Factors	Mean importance value[a] Small firms (*n*=125)	Large firms (*n*=68)	*t* value	*P*[b]
To improve design capabilities	3.5	3.3	0.97	0.332
To replace aging equipment	2.8	3.3	-2.62	**0.009**
To increase capability to customize products	3.4	3.5	-0.29	0.775
To reduce labor costs	3.2	3.6	-1.94	**0.054**
To enter new product markets	3.3	3.6	-1.27	0.207
To maintain market share	3.7	3.7	-0.11	0.915
To improve product quality	3.7	3.9	-0.93	0.353
To increase market share	3.7	4.1	-2.61	**0.010**
To improve productivity	3.9	4.3	-2.23	**0.027**

[a] Scale anchored by 1 = *Not at all important* to 5 = *Very important*; no other scale points were labeled.
[b] Bold *P* values indicate significant differences between small and large firms at α=0.10.

increase market share. Improving design capabilities seemed relatively important to small firms. Given that most small firms are either uncertain of their near-term investment plans or have no plans to invest, small firms also perceive a lesser importance to investing than do large firms that invest more frequently and heavily than do small firms.

SUMMARY AND CONCLUSION

Results of the 2015 survey showed a continuation of previous trends of more firms indicating year-over-year sales increases or unchanged sales. Overall, most respondents perceived a stable or improving market, which suggests an environment where companies might be looking to invest to improve their productivity and capabilities.

Overall, 76 percent of small firms and 96 percent of large firms indicated they planned to invest to improve productivity or capabilities over the next 3 years. Large firms showed a tendency toward greater investment activity overall, as well as less uncertainty about their investment plans for the very near term (2014 to 2015). Planned investment amounts varied for larger firms, but three-quarters indicated they would spend at least $250,000. For small firms, most indicated that their investments over the next 3 years would be $250,000 or less. However, 42 percent of small firms were uncertain of their year-over-year investment plans for 2014-2015. When this 42 percent is coupled with the 76 percent of small firms indicating they would invest over the next 3 years, it suggests more comfort with planning over the longer-term (3 year) planning horizon.

For most investment areas surveyed, large firms showed a tendency to plan a greater level of investment than did small firms. Investment plans for large firms also appeared to be broad, with nearly a third planning to invest in areas ranging from sales force expansion to inventory reduction to panel processing and assembly.

Similar to previous research (Buehlmann et al. 2013), advertising and marketing communications was an especially important investment area for small firms. This is likely related to the importance of maintaining a consistent cash flow to smaller firms (Huang and Brown 1999), especially when facing some uncertainty regarding the current business environment. Furthermore, Ballantine et al. (1993) claim that small firms face inherent uncertainty regarding profitability in general (i.e., regardless of overall business conditions).

Small firms showed a tendency to rate most potential drivers of investment plans as less important than did large firms, suggesting small firms perceive fewer possible benefits to investment (especially investments related to replacing aging equipment, improving productivity, and reducing labor costs). However, the resource constraints under which small firms operate might be contributing to a link between investment plans for small firms and the perceived benefits of investment.

Overall, the results suggest that investment activity in the secondary woodworking industry might be expected to increase in the near term. However, the study also showed a business environment that remains somewhat uncertain for many smaller firms. It is important to understand investment patterns for secondary woodworkers since investments can improve productivity and ultimately contribute to the competitiveness of the industry.

ACKNOWLEDGMENTS

Use of trade names in the manuscript does not constitute endorsement of any product or service.

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