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Pure versus Hybrid Competitive Strategies in the Forest Sector: Performance Implications

Key Words: Ambidexterity, Business strategy, Cost Leadership, Differentiation, Financial performance

Abstract

The extant forest sector strategy research rests on Porter's classic dictum that successful firms pursue a singular strategy. A growing research stream on organizational ambidexterity, however, challenges this traditional view and recommends the pursuit of hybrid strategies, a phenomenon that we note existing among forest sector firms. In this study, we set out to compare the financial performance of firms pursuing a singular or pure strategy and those pursuing hybrid strategies. We compare whether a differentiation, overall low cost, or hybrid strategy yields higher financial performance. We first deduce our study hypotheses and then test each using data from 441 US-based manufacturing firms drawn from multiple sub-sectors. We find no evidence that a hybrid strategy is a more effective choice towards enhanced firm performance than a singular strategy. We also find that firms pursuing a differentiation strategy are the highest performers while there is little difference in performance of firms pursuing other strategies.

1.0 Introduction

Single mindedness was traditionally touted in strategy literature as a desired characteristic of successful firms. Following Porter's (1980) landmark work, it remained for an extended time almost a sacrosanct dictum that firms should pursue either a cost leadership or a differentiation strategy and that an attempt to simultaneously pursue both would result in what Porter called a "stuck-in-the-middle" situation, a recipe for poor performance. In this sense, Porter's early work vouches for successful firms pursuing a pure or singular strategy. However, later work by Porter (e.g., 1996) recognizes the potential for hybrid strategies and a growing number of studies (e.g., Hill 1988, Parnell 1997, Thornhill and White 2007, Pertusa-Ortega et al. 2009) challenge the pure strategy notion and argue a need for "dual" or "hybrid" strategies. Kotha and Vadlamanni (1995) articulate how a hybrid approach may be exactly what is needed for succeeding in the complex business environment of the 21st century.

In the forest sector, both previous research (e.g., Bush 1989, Rich 1986) and anecdotal evidence suggest that many firms indeed pursue hybrid strategies. For example, a growing number of sawmills in the US and Europe that traditionally focused on cost leadership, now also focus on new product development and nimble production to differentiate themselves. However, to date, there has been no systematic study comparing the financial performance of pure versus hybrid strategies among forest sector firms, much less offering a theoretical explanation as to why a hybrid strategy may lead to superior performance. We address these gaps through this paper.

Ultimately, our contributions to forest sector literature are threefold. Our primary contribution is investigating the impact of hybrid strategies on forest sector firm performance, a topic that has been mentioned many times in past research, but we have directly tested the impacts of hybrid

strategies on performance in forest sector firms. In doing this we introduce to the forest sector literature the growing body of knowledge around organizational ambidexterity and connect it with the concept of hybrid strategies. Finally, our findings illustrate what strategy choice is currently most effective for forest sector firms in their pursuit of superior financial performance.

We organize this paper in the following way. Our theoretical background consists of three separate sub-sections. In the first, we outline Porter's (1980) generic business strategies and the general debate surrounding pure versus hybrid strategies. In the second sub-section, we characterize the extant strategy literature in the forest sector and note how common it is for forest sector firms to pursue hybrid strategies. In the third sub-section, we introduce the fast-developing organizational ambidexterity concept to argue that firms can effectively pursue more than one strategy at a time. In the next section, we advance three separate hypotheses regarding the impacts of strategy choice on firm performance. In the section that follows, we describe study methods including design, data collection, and analysis performed to test our hypotheses. Finally, we combine results with discussion of study findings both from academic and practical perspectives, outline key study limitations, and note major conclusions drawn from this study.

2.0 Theoretical Background

2.1 Porter's generic business strategies

Porter (1980) proposed that firms may seek competitive advantage through pursuing any of three generic strategies, namely, overall cost leadership, differentiation or focus. Following previous forest sector literature (Hansen et al. 2006), and that a focus strategy is a variant of overall low cost or differentiation (Porter 1985), we limit our investigation to overall low cost and differentiation strategies. Firms pursuing a cost leadership strategy focus on economies of scale, continuous improvement, and efficiency throughout the organization with a goal of driving

out costs and competing on low price. Firms pursuing a differentiation strategy are less concerned with costs and strive to create differences between themselves and the competition that are of value to the customer base. Thus, these firms concentrate on adding value through, for example, brands, proprietary grading, customer service and promotion (Bush and Sinclair 1992).

A key assumption underlying Porter's early thinking is that firms cannot successfully pursue more than one strategy at a time. He argues that firms attempting to do so are stuck-in-the-middle, essentially ineffective in implementing either strategy well, and are poor performers as a result. As discussed further below, there is some support for this thinking in the organizational ambidexterity literature. For example, He and Wong (2004) maintain that the skill set needed to pursue exploitation (e.g., overall cost leadership) is quite different than the skill set needed to pursue exploration (e.g., differentiation) and maintaining both skill sets is generally not viable, especially for small firms possessing fewer resources (Cao et al. 2009, Lubatkin et al. 2006).

2.2 Strategy research in the forest sector

Strategic management research, specific to the forest sector, spans nearly three decades. Much of the early work follows the Porter (1980) approach and focuses on investigating business strategies employed by forest sector firms (e.g., Bush 1989, Rich 1986). Other research largely moves away from Porter's line of thinking and focuses on identification of those resources which are critical to developing sustainable competitive advantage for firms (e.g., Lahntinen 2009, Bonsi et al. 2008), and embrace a resource-based view of the firm (Barney 1991, Wernerfelt 1984). A comprehensive synthesis of the forest sector strategy literature is provided by Toppinen et al. (2014) explaining the evolution of forest sector strategy research. As much as the Porter typology is overused in previous literature, it gains new importance in light of the emerging debates about pure versus hybrid strategies.

Generic business strategies of forest sector firms: Rich (1986) finds that, between 1976 and 1979, 50% of large U.S. forest sector companies were pursuing a cost leadership strategy. However, by 1984 this proportion had fallen to 31%. He also finds a significant portion of firms pursuing hybrid strategies. Bauerschmidt et al. (1986) examine US paper companies and find them to be more oriented towards a cost leadership strategy than differentiation. They also note the prevalence of a focus strategy among paper companies, but do not assess the pursuit of hybrid strategies.

Bush (1989), in his study of the top 100 hardwood lumber producers in the US, finds that the smallest firms have no strong orientation and are stuck-in-the-middle. He also finds a group of companies pursuing a hybrid strategy that he describes as clearly providing competitive advantage if the two can be achieved simultaneously. Companies in the study intend to move toward a differentiation strategy in the future. Based on the softwood sawmilling sectors in multiple countries, Niemelä (1993) finds between 21 and 23% of respondents pursuing hybrid strategies. Finnish sawmills are least cost leadership oriented with only 11% of companies claiming this strategy. In the U.S., 29% of companies pursue cost leadership and in Canada 23%. A differentiation strategy is pursued by 32%, 38%, and 26% of Finnish, U.S. and Canadian companies, respectively. Wan and Bullard (2009) find US furniture companies to pursue only hybrid strategies since each of four groups of firms in their research pursue some combination of Porter's strategies. Interpretation of work by Gazo and Quesada (2005) supports this picture of furniture industry strategies. Hugosson and McCluskey (2009) find a change toward differentiation in Swedish sawmills, describing a shift away from commodities and, through improved marketing, they have moved a majority of their business to what they describe as relationship marketing. This evolution is referred to by others as a move from commodity to

value-adding activities (Brege et al. 2010) or to specialty and custom-made products (Hansen et al. 2002, Niemelä and Smith 1996).

Despite a rich repository of studies, past forest sector research has largely ignored the viability or efficacy of pure versus hybrid strategies. Notably, this issue has received considerable attention in the general strategic management literature (e.g., Hill 1988, Parnell 1997, Parnell 2000, Thornhill and White 2007, Pertusa-Ortega et al. 2009). Pertusa-Ortega et al. (2009) summarize a host of studies showing cost leadership and differentiation can be compatible. Hill (1988) argues that some situations require hybrid strategies, especially in mature industries—such as forest sector—where there may be no unique, low-cost position. Pursuit of a differentiation strategy can lead to increased sales volume, market share, and resulting economies of scale that in turn contribute to pursuit of a cost leadership strategy (Hill 1988, Pertusa-Ortega et al. 2009). In this sense, firms may have a dominant strategy but a totally pure strategic posture likely does not exist in practice. Thornhill and White (2007) specifically define strategic purity as emphasizing one type of strategy, not total adherence to one over the other.

2.3 Organizational ambidexterity

Organizational ambidexterity, a popularizing concept within strategy and organization theory literature can elucidate the prevalence of hybrid strategies as well as their impact on firm performance, and thus can inform further the pure versus hybrid strategy debate. The study of organizational ambidexterity began in earnest in the 1990s and has grown to become a research paradigm within organizational theory (Raisch and Birkinshaw 2008). The paradigm has been applied in numerous fields, including organizational learning, innovation, and strategic management (Raisch and Birkinshaw 2008). According to Gibson and Birkinshaw (2004, p. 210), "... the ambidextrous organization achieves alignment in its current operation while also adapting effectively to changing environmental demands." In its most basic sense,

organizational ambidexterity means that a firm can do two different things simultaneously (Simsek 2009), and the literature includes a host of dyads such as exploitation/exploration (March 1991), incremental/discontinuous innovation (Tushman and O'Reilly 1996), exploit assets (profit-enhancing)/new technology and markets (O'Reilly III and Tushman, 2011), alignment/adaptability (Birkinshaw and Gibson 2004), and, of particular interest here, differentiation/cost leadership strategy (Gibson and Birkinshaw 2004).

The organizational ambidexterity concept can help address the existing “stuck-in-the-middle” paradox in the literature. The literature suggests cost leadership and differentiation strategies require distinct cultures, capabilities, structures, and processes and are therefore sufficiently different activities posing an extreme challenge for a firm to do both well (e.g., He and Wong 2004, Porter 1980). However, on the other hand, the literature maintains that pursuit of a hybrid strategy may not be as elusive or difficult to achieve as once thought because organizations can, in effect, be ambidextrous (Lubatkin et al. 2006).

2.4 Hypotheses

The strategic management literature is replete with studies investigating the relationship between pursuit of generic business strategies and firm performance (e.g., Dess and Davis 1984, Campbell-Hunt 2000). Many believe that both cost leadership and differentiation strategies positively impact financial performance (Davis et al. 2002), others find that, “any competitive strategy design is as capable as any other of producing above-average performance (Campbell-Hunt 2000, page 147). Some find differentiation and cost leadership strategies to equally impact performance (Leitner and Güldenbergh 2010, Ebben and Johnson 2005), while others find differentiation to more positively impact performance than cost leadership (Wright et al. 1991). Still others explicate differences through contingency factors. Thornhill and White (2007), for example, find the relationship to differ based on industry type.

Forest sector specific research also produces similarly equivocal results. Rich (1986), for example, finds that forest industry companies pursuing a differentiation strategy out-perform (return on equity) those pursuing a cost leadership strategy. Hansen et al. (2006) find the impact of cost leadership and one type of differentiation strategy on performance to be roughly equal (Hansen et al. 2006). In contrast, some (Brege et al. 2010, Lähtinen and Toppinen 2008, Roos et al. 2001, 2002) find a differentiation strategy leading to better financial performance. Wan and Bullard (2009) find no connection between chosen strategy and firm performance in the US furniture sector.

Much of the forest sector operates in commodity-like markets where low margins are the norm. The collective evidence, presented earlier, suggests that forest sector firms are transitioning towards a differentiation strategy, largely motivated by the promise of improved financial performance since higher margins may result from providing high quality, conducting savvy marketing, or providing stellar service (Miller 1992). Work in the sawmilling sector of Nordic Europe suggests that value-added production, a form of differentiation, positively impacts firm performance (Brege et al. 2010, Lähtinen and Toppinen 2008, Roos et al. 2002, Roos et al. 2001). We argue that a differentiation strategy offers multiple and complex dimensions—for example, innovation and quality (Leitner and Guldenberg 2010)—through which a firm can create competitive advantage. The complexity of a multi-faceted differentiation strategy is more difficult for competitors to mimic than the one-dimensional cost leadership strategy. Hill (1988) argues that in industries such as the forest sector it is common for many firms to possess similar minimum cost structures. As a result, a cost leadership strategy offers less opportunity for competitive advantage than a differentiation strategy. Given this logic, we hypothesize that:

H1: Firms pursuing a pure differentiation strategy have better financial performance than firms pursuing a pure cost leadership strategy.

Even though Porter's (1980) early emphasizes the superiority of pure strategies over hybrid, others argue the opposite. Miller (1992) makes the case that differentiation and cost leadership strategies are not mutually exclusive. He argues that a hybrid strategy reduces the risks associated with specialization and allows the firm to exploit synergies among aspects of strategy. In the same vein, Kotha and Vadlamani (1995) suggest that complex combinations of strategy are exactly the recipe needed to compete in modern, complex business environments.

There is growing evidence, much of which comes from the growing ambidexterity paradigm, showing firms able to pursue seemingly divergent approaches perform better than others (Voss and Voss 2013, Leitner and GüldenberG 2010, Lubatkin et al. 2006, He and Wong 2004, Gibson and Birkinshaw 2004, Wright et al. 1991). In the strategy arena, several studies indicate superior financial performance by firms that simultaneously pursue efficiencies (cost leadership) and differentiation or other hybrid strategies (Wright et al. 1991, Parnell 1997, Pertusa-Ortega et al. 2009). Pertusa-Ortega et al. (2009) suggest that cost leadership and differentiation can be developed in a complimentary way, and Miller (1992) emphasizes exploitation of potential synergies between the two. Some argue that new, modern technologies and business management practices are conducive to simultaneous pursuit of both (Leitner and GüldenberG 2010). In the forest sector, some go so far as to say that hybrid strategies are necessary for financial success (Brege et al. 2010, Lähtinen and Toppinen 2008). Brege et al. (2010) explain that employing more than one strategy helps firms in making full use of the entire log (divergent product logic) and thus enhances their financial performance.

A pure strategy can ultimately damage firm performance (March 1991). For example, if a firm is in constant exploration for new products and/or new markets and thus pursues only a differentiation strategy, it will likely fail to allocate sufficient resources to fully exploit current competencies (He and Wong 2004). Similarly, an exclusive focus on low costs puts a firm at risk

as industry structures and market requirements change (Simsek 2009). A focus on a single strength can lead to reduced adaptability and resilience (Pertusa-Ortega et al. 2009), and thereby lower financial performance. Given these theoretical underpinnings, we hypothesize that:

H2: Firms pursuing a hybrid strategy have better financial performance than firms pursuing pure strategies.

Firms pursuing a hybrid strategy aside, some firms indeed lack what can be described as a strategic thrust and pursue differentiation and cost leadership at a low or a modest level. By placing a low focus on both strategies, firms of this type are essentially making no strategic choice. Firms that have a balanced but low focus on each strategy are not considered to be ambidextrous (Simsek 2009) and some authors categorize such firms akin to Porter's stuck-in-the-middle (Pertusa-Ortega et al. 2009). These strategically irresolute firms obviously cannot reap the benefits of a pure strategy and are also unable to capitalize on the positive benefits of ambidextrous or hybrid strategies. As a result, they struggle to move beyond mediocrity and are likely only able to offer a product to the market that is priced higher than the competition with fewer differentiating factors. Ultimately, the approach results in poor firm performance relative to firms pursuing other strategic approaches (Pertusa-Ortega et al. 2009). Such strategically irresolute firms lack the capabilities necessary to be high performers. Accordingly, our final hypothesis is:

H3: Strategically irresolute firms have poorer financial performance than firms pursuing hybrid or pure strategies.

3.0 Methods

3.1 Sampling

Our sample frame consisted of all U.S. manufacturers with fifty or more employees from the wood products (SIC 24), furniture (SIC 25) and paper (SIC 26) sectors via a purchased database from the North American Industrial Classification Association. The top individual (i.e., president or CEO) was our target respondent. For companies with multiple manufacturing sites, firm level information was used as this is where business-level strategies are formulated. A total of 4120 total firms met our criteria. We divided the total sample of 4120 firms into two groups, a randomly selected sample of 400 firms for conducting a pilot study and 3720 firms for final data collection.

3.2 Measures

We assessed firm financial performance and two generic, business-level strategies, overall cost leadership and differentiation for the period 2008-2011. For the two strategy constructs we adapted items used in previous studies (e.g., Davis et al. 2002, Hansen et al. 2006).

Cost Leadership: Four items were used to assess overall cost leadership: major improvements in operating efficiency, maintaining competitive prices, reducing distribution costs, and major cost reduction efforts. Respondents were asked to provide the degree to which each had been emphasized by their firm during the period 2008-2011. Responses were recorded on a seven-point, Likert-type scale ranging from “very low” to “very high.” Scores of the four different items were combined into a composite variable.

Differentiation: Five items were adapted to assess differentiation: achieving higher product quality than competition, building brand identification, developing new products, refining existing products, and developing new and innovative marketing techniques. Respondents were asked to provide the degree to which each had been emphasized by their firm during the period 2008-

2011. Responses were recorded on a seven-point, Likert-type scale ranging from “very low” to “very high.” The scores on five different items were combined into a composite variable.

Financial performance: Given the challenge of obtaining financial data from private firms, we assessed financial performance via subjective measures used in a number of previous studies (e.g., Morgan and Strong 2003, Beal 2000, Dess and Robinson 1984). Specifically, we included the following five items: Return on sales, return on investment, rate of sales growth, net profit, and cash flow. Respondents indicated their firms’ financial performance on a seven point bipolar scale which captured low to high performance for the period 2008-2011. Scores of the five different items were combined into a composite variable.

3.3 Pretesting and pilot testing

Subsequent to initial questionnaire design and refinement within the research team, pre-tests were completed with ten academic colleagues and six industry representatives. Slight rewording of some items occurred at this stage. We pilot tested to refine our measures using a randomly selected sample of 400 firms from the overall database (we received 21 responses). Based on the results of the analysis and the low response rate, we sought to shorten the questionnaire significantly. Therefore, the number of items used to measure each of the strategy constructs was reduced to the nine outlined above.

3.4 Data collection

We generally followed the principles of the Tailored Design Method (Dillman 2007). After accounting for undeliverables, a total of 3,408 questionnaires were sent in late 2012 and 441 valid responses were received for an adjusted response rate of 13%. Testing the potential for non-response bias was completed by comparing early versus late respondents (n=100) (Armstrong and Overton 1977) and by comparing metrics from the database provider.

Comparisons were made on company size, measured by sales and the number of employees. We found no significant differences between early and late respondents. We found a statistically significant difference between respondents and non-respondents with respect to the number of employees. However, there was no statistical difference with respect to company sales. This evidence suggests larger firms may be under-represented in our study.

3.5 Data analysis

Statistical analyses were performed using SPSS 20.0 software. A Pearson correlation matrix is provided in Table 1, including the means for cost leadership, differentiation, and financial performance.

****Table 1 here***

In step one an exploratory factor analysis (Rotation Method: Varimax with Kaiser Normalization) was conducted. Results show that all items load on the three main latent variables indicated that none of the items cross-loaded (Hair et al., 2010). The analysis was followed up with a Cronbach's alpha test and values are in an acceptable range (see Table 2). In the second step a confirmatory factor analyses was conducted in EQS (Byrne, 2006). The goodness of fit measures exhibit satisfactory values ($\chi^2 = 266.298$; $df = 74$; $\chi^2 / df = 3.60$; $CFI = .935$; $IFI = 0.936$, $RMSEA = .069$). Furthermore, we analyzed discriminant validity following Fornell & Lacker (1981) and find that all constructs met the minimum criteria. To prepare for hypotheses testing, we first categorized responding firms into four groups based on their strategic postures (Table 3). For example, firms scoring lower than 5 were considered low on differentiation and firms scoring higher than six were considered high on differentiation. The first group (strategically irresolute) consists of firms that scored low on both cost leadership and differentiation strategies. The second group (pure differentiation) consists of firms that scored low or medium

on cost leadership but high on differentiation and thus predominantly pursue a differentiation strategy. The third group (pure cost leadership) comprises firms that scored high on cost leadership but low or medium on differentiation and thus predominantly pursue a cost leadership strategy. The final group (hybrid) is made up of firms that scored high on both cost leadership and differentiation and thus pursue a hybrid strategy. ANOVA with Bonferroni post hoc was used to test differences among the four groups of companies.

****Table 2 here****

****Table 3 here****

4.0 Results and Discussion

Results obtained through formal testing of hypotheses are summarized in Table 4. We find support for H1 suggesting firms pursuing a pure differentiation strategy obtain superior financial performance to those firms pursuing a pure cost leadership strategy. H2 was not supported, leading us to conclude that firms pursuing a hybrid strategy do not exhibit superior performance compared to firms pursuing pure strategies. Finally, H3 suggesting that strategically irresolute firms are the poorest performers of all, receives mixed support since we find that irresolute firms perform poorer only to firms pursuing a pure differentiation strategy, but perform similarly to firms that either pursue a pure cost leadership or a hybrid strategy.

****Table 4 here****

That differentiation focused firms are better financial performers than cost leadership focused is consistent with literature in both business management and the forest sector. We expect that increased revenues are the reason for enhanced financial performance and speculate that increasing demand for new bio-based products and traditional products developed using

environmentally benign processes significantly contribute to better financial performance of differentiation focused firms. We also speculate that differentiation focused firms over time develop other dynamic capabilities (Eisenhardt and Martin 2000) that cost leadership focused firms do not which helps differentiation focused firms better succeed in the marketplace. It is also possible that through these new capabilities differentiation focused firms discover insights into maintaining low costs that are unavailable to cost leadership focused firms. Adoption or development of resource and energy efficient production technologies, distribution channels, and recovery from recyclable products may lead to significant cost reductions that traditionally cost leadership focused firms may fail to identify. In this sense, we suggest that differentiation and cost leadership dimensions intertwine with each other such that differentiation leads to cost reduction and a focus on cost reduction may stimulate differentiation stoking a virtuous circle of enhanced performance.

We were surprised to find that firms pursuing a hybrid strategy—a high emphasis on both differentiation and cost leadership—do not exhibit superior performance compared to firms pursuing pure strategies. This finding is particularly perplexing in the light of our stating above that differentiation and cost leadership may be mutually reinforcing. We offer two possible explanations to reconcile the incongruence between what we predicted and what we find: First, maintaining the skills to simultaneously pursue low-cost and differentiation strategies is highly challenging (March 1991, He and Wong 2004) and is possible that there may not be a sufficiently large set of firms in the sector that have mastered this approach to be manifested in our sample. Second, it is also possible that there is a significant time-lag before the results of a hybrid strategy are realized. Previous research also recognizes a number of contingency factors affecting the ambidexterity- performance link (Voss and Voss 2013) and we speculate that temporal dimension presents another plausible contingency.

Our finding that financial performance of strategically irresolute firms does not differ from those pursuing a hybrid or a cost leadership strategy also warrants closer attention. We believe that the study period—between 2008 and 2011— characterized a time when only the pure differentiation firms reaped niche market benefits and all others were playing the same game: survive through the recession via a sort of hibernation strategy, thus, creating a strategically inert context when barring the true differentiators or innovators, performance did not significantly differ among firms. Overall, we contend that strategy choice affects performance only when the external market conditions provide space for it. Within a recessionary market context, the strategy-performance link looks more homogenous, distinguishing only between pure differentiators versus others, while bunching others as a composite category.

While we did not forward formal hypotheses about strategy prevalence among firms, we find an overall tendency to pursue a cost leadership strategy (Table 1). The overall attention given to cost leadership is further evident when companies are separated into four strategic groups (Table 3). Pure differentiation firms rated cost leadership at a mean value of 4.94 showing that the firms highly focused on differentiation maintain a relatively high focus on cost leadership. In contrast, pure cost leadership firms rated differentiation at a mean value of 4.17. Our findings are consistent with a host of previous research showing that forest sector companies concentrate on cost leadership (Toppinen et al. 2014), but still surprise us given how heavily a transition in forest industry firms' overall approach is emphasized in the literature (Toppinen et al. 2014, Bush 1989). It also appears that firms pursuing a pure differentiation strategy are largely consistent in maintaining their cost leadership roots. This can be seen in the relative difference in the two strategy types between pure cost leadership and pure differentiation companies. The difference in means between cost leadership and differentiation for pure cost leadership firms was 2.5 times the same difference for pure differentiation firms. This may reflect a yet transitioning group of companies that maintains its reliance on cost leadership but is

actively exploring the offerings of differentiation. In other words, while there may be a move toward differentiation, it does not appear to be fully at the expense of the familiar cost leadership mentality in the sector.

Our findings support the notion that pure strategies may only be theoretical in nature and a combination of strategies is what is implemented in practice. Even the “pure” strategies discussed above are mixed at some level and reflect a greater focus on one or the other strategy. As Parnell (2000) suggests, “... the notion of ‘pure’ and ‘combination’ strategies perpetuated by strategic group thinking may not be appropriate.... *...all strategies* reflect unique combinations of resources, and that all businesses employ combination strategies to varying degrees.” The advice from Miller (1992) may be apt for forest industry managers, “They [companies] must seek whenever possible the synergies, robustness and greater flexibility of mixed strategies.”

5.0 Limitations and Future Research

The reach of our results is restricted by a number of limitations. First, our response rate is not high and, as previously mentioned; there is the potential that larger firms are inadequately represented in our data. Thus, study results may have limited generalizability across firms of all size. Similarly, generalization beyond the US warrants caution. Also, there may be systematic differences in the strategy-performance relationship across industry sectors. During data analysis we carefully considered the impact of industry sector on our results. We compared paper (SIC 26) companies to wood products (SIC 24 and 25) companies and found that paper companies, overall, report higher performance than wood products companies. In addition, the variation in performance was smaller for paper companies. In an attempt to further investigate the matter, we compared the strategy-performance relationship for the two sectors independently even though the paper company sample size was only marginally adequate. We

found the differences in performance for wood products companies to be the same as our overall results. Paper companies were only significantly different with respect to a differentiation focus providing better performance than a low cost focus. In the end, we conclude that there may be systematic differences between the sectors that deserve exploration via future research. Finally, our results are not obtained using time-series data, limiting the potential for temporal generalization.

As an initial foray investigating the efficacy of pure versus hybrid strategies in the forest sector, we set the stage for developmental of sequential research. In addition to ameliorating the above mentioned limitations of this study, future studies must examine the boundary effects of both firm and environment-level factors on the strategy-performance relationship. Follow-up, in-depth qualitative studies may investigate whether firms' strategic postures are deliberate or incidental. Such in-depth studies may also reveal why forest sector firms still rely heavily on a cost leadership strategy despite an increased policy emphasis on innovation and differentiation. Future studies may also consider more closely examining the intertwined and mutually reinforcing nature of differentiation and cost leadership alternatives, examining under what conditions ambidextrous organizations perform better than singularly focused organizations.

6.0 Conclusions

Forest sector firms, especially in more developed countries, are under extreme competitive pressure and have been reeling to remain strategically fit. A growing body of literature indicates that forest sector firms are evolving from a concentration on cost leadership to a focus on differentiation. This shift is illustrated by industry's growing focus on markets and customers, organizational learning, innovation, and sustainability. These trends notwithstanding, we find that a strong reliance on cost leadership remains. Thus, the shift is either slower than anticipated or it does not follow a steady path and what we find is a snapshot of a strategic

abeyance during the economic recession. In addition, the large majority of prior strategy research in forest sector rests on Porter's classic recipe that firms should focus on one strategy, largely ignoring the growing organizational ambidexterity literature that vouches for hybrid strategies. We address this issue by comparing the efficacy of hybrid versus pure strategies and find that hybrid strategies, at least within our study context, do not yield the highest financial performance. We believe that hybrid strategies will not yield expected results unless forest sector firms cross an ambidexterity threshold, i.e., a large number of firms proactively strive to simultaneously excel at cost leadership and differentiation. Ambidexterity is not about trade-offs, after all. Single-mindedness pays off until one can become truly ambidextrous. Tomorrow's leading firms should start to develop this skill today.

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Table 1: Descriptive statistics and Pearson correlations for observed variables (n=435-438)

	<i>Mean</i>	<i>Std dev</i>	1.	2.	3.
1. Cost Leadership^a	5.34	.97	1.00	.358**	.022
2. Differentiation^a	4.68	1.16		1.00	.166**
3. Financial performance^b	3.49	1.56			1.00

* = Correlation is significant at the 0.05 level. ** = Correlation is significant at the 0.01 level.

^a Cost leadership and differentiation: 1 to 7 scale capturing very low to very high emphasis

^b Financial performance: 1 to 7 scale capturing high to low financial performance

Table 2: Means and standard deviations for study items and reliability coefficients for constructs

	<i>Mean^a</i>	<i>Std. dev.</i>	<i>Item total correlation</i>	<i>Alpha if item deleted</i>
Cost Leadership^b (Cronbach's alpha = 0.64)				
Major improvements in operating efficiency	5.65	1.31	.36	.61
Maintaining competitive prices	5.73	1.22	.41	.59
Reducing distribution costs	4.43	1.64	.45	.55
Major cost reduction efforts	5.55	1.42	.48	.53
Differentiation^b (Cronbach's alpha = 0.75)				
Achieving higher quality	5.63	1.27	.43	.74
Building brand ID	4.47	1.78	.57	.68
Developing new prods	4.38	1.83	.56	.69
Refining existing prods	4.78	1.49	.51	.71
Developing new mkt techniques	4.11	1.75	.52	.70
Financial performance^c (Cronbach's alpha = 0.93)				
ROS	3.41	1.67	.83	.91
ROI	3.43	1.66	.85	.91
Sales growth rate	3.50	1.74	.68	.94
Net profit	3.41	1.87	.89	.90
Cash flow	3.64	1.79	.85	.91

^a Mean on a 1-7 scale.

^b Cost leadership and differentiation: 1 to 7 scale capturing very low to very high emphasis

^c Financial performance: 1 to 7 scale capturing high to low financial performance

Table 3: Strategic groups of responding firms and their strategy focus

Strategy Type	Mean Cost Leadership	Mean Differentiation	N (%)
Strategically irresolute	4.63	3.88	188 (43%)
Pure differentiation	4.94	5.75	72 (16%)
Pure cost leadership	6.21	4.17	82 (19%)
Hybrid	6.27	5.89	96 (22%)

Table 4: Mean financial performance of firms and differences among strategy types

	Mean financial performance ^a	Significance level
Hypothesis 1: Firms pursuing a pure differentiation strategy have better financial performance than firms pursuing a pure cost leadership strategy		
Pure differentiation	4.15	.022
Pure cost leadership	3.43	
Hypothesis 2: Firms pursuing a hybrid strategy have better financial performance than firms pursuing pure strategies		
Hybrid	3.46	.026
Pure differentiation	4.15	
Hybrid	3.46	1.00
Pure cost leadership	3.43	
Hypothesis 3: Strategically irresolute firms have poorer financial performance than firms pursuing hybrid or pure strategies		
Pure differentiation	4.15	.000
Strategically irresolute	3.30	
Pure cost leadership	3.43	1.00
Strategically irresolute	3.30	
Hybrid	3.46	1.00
Strategically irresolute	3.30	

F= 5.514, Bonferroni post hoc test

^a Financial performance: 1 to 7 scale capturing high to low financial performance