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Entrepreneurial Orientation Capability and Firm Performance under Conditions of Organizational Learning[1]

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After more than fifteen years of research, scholars are still trying to understand the effects and consequences of dynamic capabilities, particularly in regard to firm performance and competitive advantage (Vogel and Guttel, 2013). In their seminal article, Teece *et al*. (1997) contend that dynamic capabilities are key to competitive advantage. Ten years later, Teece (2007: 1341) reiterated that dynamic capabilities are an important ingredient for gaining superior performance, calling them "the foundation of enterprise-level competitive advantage." Critics of the dynamic capabilities perspective, however, observe that this literature lacks sufficient empirical testing, does not predict ex-ante which capabilities are likely to be effective, and fails to articulate a clear trail of logic from capabilities to performance outcomes (Easterby-Smith *et al*., 2009; Lockett *et al.*, 2009; Wang and Ahmed, 2007).

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In defining dynamic capabilities as "…the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-makers," Zahra *et al*. (2006: 918) point to the role of the firm's entrepreneurial orientation (EO) as a pre-eminent dynamic capability. By infusing the firm with EO, senior management prepares the organization to seize emerging business opportunities and achieve competitive advantage. Further, in investigating the linkage between dynamic capabilities and performance, other authors suggest the firm's organizational learning (OL) mechanisms could also play a critical role, not only in the evolution of the capabilities themselves but also in supporting their performance benefits (see Easterby-Smith and Prieto, 2008 for a review). The purpose of the present study is to systematically examine the effects of EO capability on firm performance in large organizations, and under different conditions of OL.

Prior research has highlighted the interface of EO and OL as ripe for knowledge creation (Hakala, 2013; Hakala and Kohtamaki, 2011; Wang, 2008). The present research seeks to make three contributions to the literature. First, few studies have investigated the benefits of EO as a capability in large publicly traded firms (for an exception, see Short *et al.*, 2010), and almost nothing has been published on this relationship using longitudinal data. This is an important gap because as a strategic capability, EO is believed to be of value to both small and large firms (Dess and Lumpkin, 2005). In contrast with small firms, large organizations have a more complex stakeholder structure, provide more discretion to top managers for capital allocation and change leadership, and are at an advanced stage in their life cycles (Peterson *et al*., 2003), making them an interesting organizational context in which to study the impact of dynamic capabilities such as EO. Second, by integrating the two distinct but related bodies of literatures on EO and OL, attention is drawn to an important construct that can alter the EO-performance relationship. Finally, moving beyond retrospective measures of EO by employing a novel methodology allows for examining EO through the strategic posture reflected in public communications of top executives. Taken as a whole, the findings of this study provide general support for the argument that managerial capabilities matter and have a significant impact on firm performance (Castanias and Helfat, 1991; Wang and Ahmed, 2007).

THEORY AND HYPOTHESES

The emphasis on the role of managerial capabilities in facilitating superior firm performance can be traced back to the work of Penrose (1958) who noted that managers initiate and lead alignment and recombination of organizational assets in order to remain competitive in their chosen industry (Hansen *et al*., 2004). The upper echelons literature (Hambrick and Mason, 1984) also endorses the idea that top management must possess unique and hard-to-imitate capabilities to outperform competitors (Hambrick, 2007). Different capabilities originate from unique starting points and progress through varying paths (Raff, 2000), but common characteristics are identifiable across firms as managers contend with more or less effective ways of dealing with specific opportunities and problems (Eisenhardt and Martin, 2000). Importantly, the notion of dynamic capabilities in extant literature is all-encompassing (Denrell *et al*., 2003), with an "almost infinite variety" of competencies spanning a diverse range of activities (Franco *et al*., 2009). While not discounting the importance of other capabilities, the

focus of the present study is on a complex capability considered fundamental to organizational development: entrepreneurial orientation (commonly referred to as EO; Covin and Lumpkin, 2011).

EO refers to a critical capability related to a firm's ability to sense and seize new value-creating opportunities (Jantunen *et al*., 2008). Without an EO capability, firms "would be neither dynamic nor adaptive" (Bhuian *et al*., 2005: 10). EO encompasses specific entrepreneurial decision-making practices and methods guiding the pursuit of new opportunities (Barringer and Bluedorn, 1999). Teece (2007: 1321) explains that "the element of dynamic capabilities that involves shaping the environment [through new opportunities] is entrepreneurial in nature." In recent years, EO capability has become increasingly important for managers as they seek new ways to pursue novel business opportunities (Dess and Lumpkin, 2005).

The dominant conceptualization of what it means to be entrepreneurial is a strong commitment to concurrently take risks in trying out new products, innovate to rejuvenate market offerings, and become more proactive than rivals (De Clercq *et al*., 2009). As an essential aspect of this understanding, Miller (1983: 780) points out that all three EO dimensions – innovativeness, risk-taking, and proactiveness – must coexist concurrently:

> In general, theorists would not call a firm entrepreneurial if it changed its technology or product line ("innovated" according to our terminology) simply by directly imitating competitors while refusing to take any risks. Some proactiveness would be essential as well. By the same token, risk-taking firms that are highly leveraged financially are not necessarily entrepreneurial. They must also engage in product-market or technological innovation.

EO endorses a principal tenet of strategic management that competitive advantage accrues from directing key strategic competencies towards new opportunities as part of corporate venturing (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003). It is therefore not surprising that a focus of EO scholars has been on assessing the relationship between EO capability and various manifestations of firm performance. Indeed, a recent meta-analysis found a moderate positive correlation between EO – measured as a composite construct – and firm performance broadly construed (adjusted r=0.24; Rauch *et al*., 2009).

EO research has generally been situated in the context of small and medium sized firms, which have a different stakeholder structure and vary in the discretion available to managers compared to large firms (Agle *et al*., 2006). Nonetheless, theoretical arguments for the importance of entrepreneurial capabilities in large firms are referred to in the literature as well (Lumpkin and Dess, 1996). For example, Stevenson and Harmeling (1990) argue that EO is particularly important for top management as a means of renewing the organization and enhancing its competitiveness. In addition, the first-mover advantage linked to EO also allows large firms to set industry standards and, therefore, to control market access, which enables these firms to skim monopoly rents (Covin and Slevin, 1991). EO capability should also allow large firms to achieve better pricing, costs, volumes, and market penetration than their competitors because upstream and downstream partners want to be associated with organizations that are at

the cutting edge of new products and technologies (Anderson *et al*., 2004). Thus, it follows that EO should be helpful to large firms as it can be a source of competitive advantage for them. Therefore, it is hypothesized that:

Hypothesis 1: EO capability is positively associated with firm performance in large corporations.

A singular emphasis on the role of EO as a capability may be necessary but insufficient for fully realizing the wealth creation potential of the firm (Stam and Elfring, 2008). A more complete understanding of the conditions under which EO capability enhances firm performance requires a contingency perspective, emphasizing the importance of fit among the strategic posture adopted by top management and other constructs of interest (Lumpkin and Dess, 1996). OL may play a critical role in this regard (Hakala and Kohtamaki, 2011). A long tradition of research views firms as deliberate actors engaged in the development of new knowledge or insights to facilitate performance-improving organizational systems (Cyert and March, 1963). Within this view, organizational theorists (e.g., Fiol and Lyles, 1985) suggest learning helps firms adapt effectively to changes in their operational environment by understanding and interpreting the environment and assessing the effects of their actions. Using a 'juggling' metaphor, Tushman and O'Reilly (1996) celebrate the impact of OL in developing the capabilities firms need to synchronously exploit their existing knowledge as well as explore new knowledge (Gupta *et al*., 2006). OL, especially in large firms, provides the framework that helps maximize the effect of firms' strategic posture on their performance (Fiol and Lyles, 1985). Learning efforts directed towards examining, enhancing, and renewing the knowledge within the firm creates the conditions that enable a more effective application of strategic posture (Mowery *et al*., 1998), facilitating the impact of the firm's dynamic capabilities on performance. Indeed, the role played by OL in driving the performance benefits of dynamic capabilities has begun to gain significant traction in emerging literature (e.g., Ali *et al*., 2010; Ali *et al*., 2012; Romme *et al*., 2010).

Entrepreneurial firms tend to be future-oriented. They are proactive, engage in technological and market innovation, take risks and display a competitive aggressiveness in the marketplace. EO capability encourages employees and managers to think originally, behave differently and autonomously, and contribute their new and original ideas (Miller and Friesen, 1983). EO capability should broaden cognitive and mental maps, which increase the likelihood that myopic thinking will be prevented, learning fostered, and creative resource solutions will be generated. At the same time, to obtain full benefits from operating entrepreneurially, it is also imperative for the firm to prepare its employees to be in a learning mode. OL is characterized as a multilevel process, going from the individual through work-groups to the entire organization, incorporating the firm's interactions with the environment, with outcomes interpreted and acted on by individuals (Crossan *et al*., 1999; Fiol and Lyles, 1985). In effect, OL plays a facilitative role in enhancing the firm's performance benefit from EO (Easterby-Smith and Prieto, 2008), giving rise to a "knowledge evolution cycle" for the firm (Cepeda and Vera, 2007; Zollo and Winter, 2002). Therefore, OL should enhance EO's performance benefit through generation of creative ideas, alternatives, and solutions as well as learning from experience, in order to be innovative and risk-taking in the

marketplace. Thus, firms that focus on building an OL capability in addition to concentrating on EO should have a higher benefit in terms of performance outcomes. Summarizing this discussion, it is predicted that:

Hypothesis 2: OL positively moderates the relationship between EO capability and firm performance in large corporations.

METHODS AND ANALYSES

Data Collection Methodology

To test the hypotheses predicted here, a dataset of large publicly-traded US retailing firms from 2004 to 2008 was compiled. The organized retail sector in the US sampled here is a good setting for this study for several reasons. First, large retailers (e.g., Target, Home Depot) dominate the retail industry in the US in terms of market share and revenue (Noble *et al*., 2002). Second, retailing firms do not generally possess rent-producing rare and inimitable strategic assets such as proprietary technologies and viable patents, which are often present in many other industries (e.g., pharmaceutical or telecommunication). The retailing industry provides an even playing field in the sense that tangible assets like scanning technology and UPC bar codes are widely available to all large firms. Consequently, differences between large retail firms are likely to result from variations in managerial capabilities, rather than ownership of some tangible assets. Finally, for large-sized firms in this industry, retailing is their major line of business, so the potential for confounding influence from diversification is minimal (Yu and Canella, 2007).

As a first step, the largest retail firms listed in the Fortune 500 were identified. Specifically, there were 25 US retailers listed in the Fortune 500 in FY 2000 (Rugman and Girod, 2003). These retailers ranged from Walmart–the largest retailer in the list (FY 2009 revenue US$ 404 billion)–which was ranked number 1 globally, and TJX–the smallest retailer in the list (FY 2009 revenue US$ 20 billion)–ranked number 470 worldwide. From 2004 to 2008, nine of the large retailers went bankrupt, got acquired, or were taken private, indicating the competitiveness of the industry as a whole. This study focused on the retailers that remained US-headquartered and publicly traded during this time period. Together, these firms account for majority of the US retail sales by volume (Spector, 2005). These firms are "key players in the worldwide marketplace," and control "more than half of all world trade … make the markets, set the prices, and … produce that gigantic stream of commodities that flows across checkout counters in every major industrial economy" (Lichtenstein, 2009: 1).

The data source for the study was the letter to shareholders (LTS) included in corporate annual reports from 2004 to 2008 (a total of five years for each firm). The identification period of the firm (that is, FY 2008) was temporally separated from the data collection period (FY 2004-08) to avoid sampling on the dependent variable (that is, firm performance). Worldwide GDP growth from 2004 to 2008 averaged about 6% compared to about 4% during the 2001 to 2003 period and 2.81% in the 2009-12 period, suggesting that the time frame chosen was one of good global economic growth (World Bank, 2013). Thus, this time period will provide a conservative context for testing predictions about dynamic capabilities.

The LTS is an "unaudited narrative" published in the corporate annual report (Geppert and Lawrence, 2008: 287). Although LTS is not a required document and there are no laws about the exact nature of information presented in it (Michalisin and White, 2001), it receives substantial attention by external stakeholders who view it as a way to understand management's perspective at the time of publication. Senior executives spend substantial time in revising and editing the views, opinions, and factual information presented in the LTS (Barr *et al*., 1992). Notably, large retailers tend to be quite open in their discussion of company capabilities and strategic priorities in their LTS (Noble *et al*., 2002). Such openness makes LTS in corporate annual reports of retailing firms a very useful document to measure unobservable strategic constructs.

Some have raised concerns that public relations functions have taken to writing many of these letters in recent years (Barr *et al*., 1992). Although the nuances and semantic elements of the LTS may be the work of support personnel within and outside the firm, it seems reasonable to accept that the underlying beliefs and philosophy reflected in the letters are the work of senior management. Top executives take great time and effort to ensure that the LTS reflects their views during early planning meetings and final approval of these documents (Noble *et al.*, 2002). Under section 15d of the Securities and Exchange Act of 1934, senior management bears primary fiduciary responsibility for the statements made in the letter (Abrahamson and Amir, 1996). Fiol (1995) compared the ideas expressed in letters to shareholders with those in internal planning documents written during the same period by the same firms, and concluded that statements about strategy are likely to be faithfully reported in the letters. Commenting on the use of letters to shareholders in strategy research, Barr *et al*. (1992: 21) noted:

> While [they] may not be ideal, few data sources exist that can provide insights into the changing mental models of managers over time. This data source also has the critical virtue of being written during the time period of interest…. Further, informal conversations with executives indicate that they do have considerable involvement in preparing communications with investors… In the end, we used [letter to shareholders] because we believe this data is too important not to be given close attention by top management, both in terms of early subject framing and later word-level editing.

Historiometric technique was used to obtain data from LTS as it has been used with a variety of samples and research settings when historical information is available in textual format (Deluga, 2001). Historiometry involves extracting quantitative information from historical qualitative sources (Simonton, 1984). Because historical records exist about publicly-traded firms in the form of annual reports which are distributed annually to a large audience, historiometry seems to be a good choice for this study.

Qualitative historical data can be converted into quantitative indicators through psychometric assessment of textual information (PATI) as well as through computerized-aided text analysis (CATA). Whereas the former approach has the advantage of using already established instruments on qualitative data (Simonton, 2003), the latter offers the benefit of using a software program to count the frequency of relevant words in the

text (Short *et al*., 2010). In this study, both approaches- PATI to assess EO and CATA to measure OL- to avoid concerns about common method variance were used.

Variables

Dependent Variable: Firm Performance

An indicator of how profitable a company is relative to its total assets is Return on Assets (ROA), which is calculated by dividing a company's annual earnings by its total assets (Combs *et al*., 2005). ROA is measured here using data on net-income and total-assets obtained from Standard and Poor's COMPUSTAT database.

Independent Variables

EO Capability. To capture information about EO capability, independent raters (n = 70; 36 men and 34 women) were asked to carefully read the LTS provided to them and use a series of five-point Likert scale items to indicate the extent to which each statement seemed consistent with the information presented in the letter. Each rater evaluated either two or three letters, and was not informed of the names of the companies associated with the letters or given any information about the hypotheses (Bedell-Avers *et al*., 2009). An open-ended question at the end of the questionnaire asked respondents to 'guess' the name of the company they were evaluating, and none of the raters correctly identified the company associated with the LTS they read, providing confidence that evaluation was not influenced by pre-existing biases and prejudices about the firm. Within-letter reliability of the ratings was quite strong: ICC(1) and ICC(2) were found to be above minimum threshold values (0.2 for ICC(1) and 0.6 for ICC(2)).

The EO measure comprised ten items derived from prior research (e.g., Hughes and Morgan, 2007; Morgan and Strong, 2003), asking raters to indicate the extent to which they believed the firm seemed to "be willing to take risks," "have a tendency to take bold and aggressive actions," and "open to pursuing risky projects" (three risk-taking items), "look for new ways to do things," "actively improve and innovate its way of doing business," "be willing to engage in new innovations," and "have a strong proclivity for innovation" (four innovativeness items), and "have a strong tendency to be ahead of others," "want to be a leader in its industry," and "interested in always being the first-to-market" (three proactiveness items). Factor analysis confirmed a unidimensional solution for the ten EO items (all items loaded greater than 0.7; α = 0.87).

Organizational Learning. Uotila *et al*.'s (2009) 17 root words for organizational learning (OL) were used to generate a total of 95 words reflecting learning. The software package DICTION 5.0 (Hart, 2000) helped count the number of learning-related words appearing in each letter for each company-year. The length of the letters in the sample varied greatly (from 410 to 2985 words), and so, the number of learning-related words in each letter was divided by the total number of words in the letter to obtain a standardized score for OL for each firm year.

Table 1
Descriptive Statistics

Variable	Mean	Std. dev.	Min	Max	1	2	3	4	5	6
1. Firm Performance	0.062	0.082	-0.35	0.182	1					
2. Organizational Learning	0.0038	0.003	0	0.013	-0.015	1				
3. Entrepreneurial Orientation	3.57	0.42	2.5	4.5	0.104	0.098	1			
4. Firm Size (in '000s)	290	444	2100	38	0.09	-0.19	0.08	1		
5. TMT size	5.95	1.25	5	11	0.051	-0.23	-0.13	-0.09	1	
6. Board Size	11.26	1.94	8	17	-0.013	-0.178	0.14	0.43*	0.26*	1

Notes: Data on 16 firms over five years. All correlations above |0.21| are significant at the 0.05 level.

Control Variables

Firm size (measured as absolute number of employees), management team size (number of individuals listed as top executives), and board size (number of individuals in the corporate board) were used as control variables. In addition, the analytical approach controls for prior year's performance, which has been identified as an important influence on current performance (Ling *et al*., 2008).

Table 1 provides descriptive statistics and correlations for the variables. The average value of firm performance across all firm-year observations is 0.062. For EO, the average value is 3.57. The average number of employees working in sample firms is 290,000.

Estimation and Results

The dataset is a time-series-cross-section (TSCS) data covering a limited number of retail companies from 2004 to 2008. Firm performance is measured from 2005 to 2009. TSCS data- characterized by repeated observations (often annual) for a set of fixed units- is appropriate when the total number of units is limited and all inferences are based on the observed units (Beck, 2001). The impact of the EO capability on firm performance with organizational learning as a moderator is estimated by using ordinary lease squares (OLS) with panel-corrected standard errors (PCSE).

To test Hypothesis 1, the following model was employed:

$$(1)\quad ROA_{i,t+1} = \alpha_0 + \alpha_1 \log(Size_{i,t}) + \alpha_2 TMT_{i,t} + \alpha_3 Board_{i,t} + \alpha_4 EO_{i,t} + \varepsilon_{i,t}$$

Where: t = 1-5 when year goes from 2004 to 2008; $ROA_{i,t+1}$ = Return on Assets at time t+1 for firm i; $EO_{i,t}$ = EO of firm i at time t; $Size_{i,t}$ = Size of firm i at time t in terms of the number of employees; $TMT_{i,t}$ = Total number of top management team of firm i at time t; $Board_{i,t}$ = Size of the board of director of firm i at time t.

Because the data involves a set of firms over time, fundamental OLS assumptions may be violated. The consequences of such violations are likely to be unbiased coefficients with biased standard errors. To ensure that standard errors are robust to these violations, *cross-section covariance* correction method was used.

To test Hypotheses 2, the following model was utilized:

$$(2)\quad ROA_{i,t+1} = \alpha_0 + \alpha_1 \log(Size_{i,t}) + \alpha_2 TMT_{i,t} + \alpha_3 Board_{i,t} + \alpha_4 EO_{i,t} + \alpha_5 OL_{i,t} + \alpha_6 EO_{i,t} * OL_{i,t} + \varepsilon_{i,t}$$

Where: t = 1-5 when year goes from 2004 to 2008; $ROA_{i,t+1}$ = Return on Assets at time t+1 for firm i; $EO_{i,t}$ = EO of firm i at time t; $Size_{i,t}$ = Size of firm i at time t in terms of the number of employees; $TMT_{i,t}$ = Total number of top management team of firm i at time t; $Board_{i,t}$ = Size of the board of director of firm i at time t; $OL_{i,t}$ = OL of firm i at time t.

In order to address multi-collinearity arising from the interaction term being highly correlated with the constituent variables, the main variables (EO and OL) were centered by subtracting the mean from observed values and computed the interaction term as the multiplicative product of the two centered variables (Aiken and West, 1991).

Table 2 depicts the empirical results. In model 1, EO capability has a positive coefficient significant at the 5% level, supporting Hypothesis 1. Even though the coefficient of OL on performance by itself has a negative sign, the interaction term of

EO capability and OL were found to have a positive coefficient, statistically significant at the 5% level. The net effect is that a one standard deviation increase in EO capability above the mean (approximately 0.42) along with a one standard deviation increase of OL above the mean (approximately 0.003), increases firm performance by 3.8 percentage points. The positive effect of EO capability on firm performance is therefore strengthened under higher levels of OL, supporting Hypothesis 2.

Table 2
Effect of Entrepreneurial Orientation on Firm Performance

Independent Variable	Model 1	Model 2
Constant	0.405	0.341
	(0.503)	(0.54)
Log(size)	-0.046	-0.034
	(0.109)	(0.114)
TMT	0.0049	0.006*
	(0.0052)	(0.0035)
Size of Board of Directors	-0.019**	-0.021**
	(0.0073)	(0.008)
Entrepreneurial Orientation	0.021**	0.034***
	(0.0093)	(0.0097)
Organizational Learning		**-7.22****
		(2.86)
Entrepreneurial Orientation x Organizational Learning		30.18**
		(13.84)
R-square	0.514	0.582

Notes: Standard errors are in parentheses. Sixteen firms over five years for all models. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

DISCUSSION

The study findings provide general support for the argument that managerial capabilities matter and have a significant impact on firm performance (Castanias and Helfat, 1991; Wang and Ahmed, 2007). Results reveal a positive relationship between the firm's EO capability and overall organizational performance and this effect is enhanced in the presence of OL.

It may be useful to more specifically compare the present results to prior research in the dynamic capabilities literature. Cepeda and Vera (2007: 427) criticized the dynamic capability literature for being tautological: "If the firm has a dynamic capability, it must perform well, and if the firm is performing well, it must have a dynamic

capability." Others have argued that the relationship between dynamic capabilities and performance may be indirect or negligible (Zott, 2003). In a recent review, Ambrosini and Bowman (2009) noted that "while the dynamic capabilities framework is drawing support and increased validity by researchers, empirical studies remain relatively rare." Few studies have explicitly examined the performance potential of competencies available at the top of the organization (Adner and Helfat, 2003). From a theoretical perspective, research on managerial capabilities can contribute to the long-standing debate about the role of top management in impacting firm performance (Hambrick, 2007). The finding of a significant positive effect of EO capability on performance supports the upper echelon perspective that top management plays a key role in facilitating superior performance. While it is true that in the relationship between managerial capabilities and firm performance there could arise "many a slip twixt the cup and the lip," this research identifies EO as a specific managerial capability that can be unambiguously linked to performance (Ambrosini and Bowman, 2009: 44).

Examining the moderating effect of OL on EO capability also allowed for responding to repeated calls in the literature to examine the interaction between the two constructs (Harrison and Leitch, 2005). It was theorized that the effects of EO capability on overall performance would be stronger when OL is heightened. As expected, there was a significant moderating effect of OL on the linkage between EO and firm performance. When OL was low, EO had weak effect on performance. When learning was high, as predicted, the effect of EO on performance was significant and positive. Therefore, the results provide support for the idea that, to reap the full benefits of its entrepreneurial capability, a firm must be committed to learning. It is through OL that a firm maximizes the impact of EO on firm performance.

This study did not theoretically articulate a position on the main effect of OL on performance, which was found to be negative based on the empirical assessment, raising an intriguing question: Why is it that for this sample and for the timeframe of the study, OL had a negative main effect on performance even though it served to enhance the positive impact of EO on performance? To speculate, it is possible that because building organization-wide mechanisms and processes of OL is capital-intensive for the firm, direct performance impact of OL is negative in the short-run, but positive in the long-run. At the same time, even in the short-run, successfully setting up OL mechanisms and processes in place unleashes the positive impact of other dynamic capabilities such as EO on performance by setting in motion Zollo and Winter's (2003) knowledge evolution cycle through the firm, thus leading to immediate performance benefits. Clearly, further research is needed to shed light on the short-term and long-term influence of OL, both directly on firm performance as well as on the actualization of other dynamic capabilities such as EO.

Teece (2007) suggests dynamic capabilities should be focused on three core organizational needs: (1) sensing and shaping new opportunities, (2) seizing potentially profitable opportunities, and (3) maintaining competitiveness through enhancing, combining, protecting, and reconfiguring intangible and tangible assets. The first two needs relate to strategic problem-solving, in that top management is tasked with following and monitoring emerging trends and threats for the survival and growth of the firm, and as such fall within the domain of what Yeoh and Roth (1999) refer to as component capabilities. EO may be a type of component capability, in that it pertains to sensing and seizing new opportunities for future products and services (Dess and

Lumpkin, 2005). The third organizational need relates to integrative capabilities, which stem from skill and expertise in learning. Thus, OL could be an integrative capability in that it enables the firm to build on systems and processes to derive the utmost benefit from operating with EO. The distinction between component and integrative capabilities draw attentions to the most useful of all different possible capabilities, but more work needs to be done in this area. Future research should, for example, delve deeper into whether EO encompasses the full domain of sensing, shaping, and seizing new business opportunities, or whether EO needs to be combined with another capability such as market orientation as Bosos *et al*. (2013) did.

Another contribution of this study is the potential usefulness of historiometric analysis to research questions about dynamic capabilities. Historiometry permitted testing the impact of capabilities on performance in a population and in a rigorous quantitative manner that would be difficult using other methods (Ambrosini and Bowman, 2009). Historiometric analyses of management's letter also provided longitudinal data that allowed for statistically testing the relationships over time (Danneels, 2007). Letters published in annual corporate reports are suitable for such analyses as they provide non-obtrusive access to information in a reliable and replicable manner (Finkelstein and Hambrick, 1996). By combining the rich, detailed information found in the letters with the quantitative power of time-series-cross-section, it became possible to test the effect of complex capabilities that have been difficult to statistically examine otherwise. This study demonstrates the numerous advantages of combining qualitative text analyses with quantitative techniques to examine the performance potential of dynamic capabilities. In summary, the use of an unconventional research methodology helped answer some difficult theoretical questions.

Notwithstanding these interesting results, there are certain limitations of the present study, which also reveal potential areas for future research. First, data for managerial capabilities was based on management's letter written to shareholders published in the corporate annual report. It is possible that firms do not actually practice what they preach in their written (or verbal) communications. Future studies may augment the research here by carefully tracking actual firm behaviors so as to enhance the reliability of assessment for both EO and OL. Second, ROA is an accounting-based measure of firm performance often used in the EO literature (Rauch *et al.*, 2009), but such measures tend to be backward looking as they relate to assets already in place, and do not account for the impact of EO on expected future performance of the firm. Consideration of other measures of business performance that are forward-looking and tap into the anticipated performance outcomes for the firm would advance EO research in a new direction. Finally, this research involved firms in a specific industry (retailing) in a specific country (USA). The US retail industry comprises of different strategic groups, such as mass merchandisers or discount stores, fashion-oriented department stores, and the so-called category killers (Noble *et al*., 2002). The influence of managerial capabilities on firm outcomes may vary by strategic grouping, a topic for future research to investigate. Furthermore, the generalizability of the predictions tested here in different industries and various countries remains for future research to establish.

Insights for Practice

The findings of this research offer several insights for practicing managers. The retail industry is often perceived to have an operating environment that does not offer much scope for engaging in radical product or process innovation on a continuing basis. Established firms in this industry (e.g., Walmart or Target) have been operating for many years and have extremely large-scale operations, with structured processes, organizational arrangements, and standard operating procedures. This research reveals that, in such an organizational environment, when management emphasizes EO capability, it is able to strengthen firm performance. Furthermore, investments in learning activities help maximize the performance benefits of EO capability. Thus, this study holds an important message for practicing retail managers by highlighting the critical role of OL as an enabling contextual condition that enhances the impact of managerial capabilities on firm performance in this industry.

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Current management research on IPOs has examined how board composition and ownership structures affect IPO underpricing, while largely overlooking their implications for the long-term stock liquidity of the IPO firm. This is a significant oversight, given the many benefits to IPO issuers from having a liquid stock (e.g., reduced cost of capital, increased external monitoring, etc.). This study theoretically integrates the literatures on board ownership, underpricing, and stock liquidity using a signaling perspective, and finds that while the monitoring and incentive effects of high outside director equity help reduce underpricing (thereby solving a short-term problem by leaving less money on the table), they also reduce stock liquidity during the three years following the IPO (thereby creating a long-term problem). Underpricing is found to be positively associated with liquidity, suggesting that there are expected benefits from underpricing that need to be traded off against the upfront costs of leaving more money on the table. Finally, while the inside director equity-underpricing association is expectedly negative, there is no evidence to suggest that inside director equity affects post-IPO liquidity. Taken together, these findings convey a fuller picture of the long-term implications of underpricing and board ownership at IPO for stock liquidity, an important yet underrated measure of a firm's stock market performance.

Do dynamic capabilities help firms gain competitive advantage? Prior research has noted that notwithstanding the increasing popularity of the dynamic capabilities framework, conceptualization of capabilities is often abstract and intractable, while empirical studies often do not articulate a clear trail of logic from capabilities to superior firm performance. To address these shortcomings, a model linking an important managerial capability – entrepreneurial orientation (EO) – with business performance in a single-industry setting is conceptualized and empirically validated. Time-series-cross-section analyses is used to test hypothesized relationships on panel data obtained from annual reports of large, publicly-traded US-based retailers. EO capability is found to have a substantial positive impact on firm performance, and this relationship is seen to be enhanced in the presence of organizational learning. These findings offer support for the view that dynamic capabilities are associated with heterogeneity in firm performance and help firms attain competitive advantage.