New England Journal of Entrepreneurship

Volume 14 | Number 2 Article 1

2011

New England Journal of Entrepreneurship, Fall 2011

New England Journal of Entrepreneurship

Fall 2011 Volume 14 Number 2

NEJE

John F. Welch COLLEGE OF BUSINESS SACRED HEART UNIVERSITY

New England Journal of Entrepreneurship

New England Journal of Entrepreneurship is a semi-annual publication (Fall and Spring) of the John F. Welch College of Business, Sacred Heart University, 5151 Park Avenue, Fairfield, CT 06825-1000.

Annual subscription rate for two issues is $12.00 for individuals and $50.00 for institutions. Copies are mailed via second-class postage. Library of Congress ISSN 1550-333X.
For subscriptions or reprints of articles, call (203) 371-7854 or email: shuartj@sacredheart.edu.

See our website at www.sacredheart.edu/neje.cfm.

Editorial Consultant: Miccinello Associates, Branford, CT.

New England Journal of Entrepreneurship

Fall 2011 Volume 14 Number 2

NEJE John F. Welch COLLEGE OF BUSINESS

New England Journal of Entrepreneurship

Call for Articles and Reviewers

New England Journal of Entrepreneurship (NEJE), published twice a year by Sacred Heart University's John F. Welch College of Business, is an invaluable forum for exchange of scholarly ideas, practices, pedagogy, and policies in the field of entrepreneurship and small business management.

The *Journal* is currently seeking original contributions that have not been published or are under consideration elsewhere. The scope of the articles published in NEJE range from theoretical/conceptual to empirical research, with maximum relevance to practicing entrepreneurs.

The *Journal* will consider practitioner interviews, book reviews, experiential exercises, cases, and articles dealing with entrepreneurial education. The *Journal* appeals to a broad audience, so articles submitted should be written in such a manner that those outside of the academic community would be able to comprehend and appreciate the content of the material.

Format

Manuscripts submitted to *NEJE* should be written in Microsoft Word or saved in RTF (rich text format).

NOTE: Do not use tabs, extra spaces, hard returns except for paragraph breaks, or any other formatting within the Word file. Likewise, references should be set with returns only between entries with no extra returns, tabs, or other formatting. Use italics to indicate emphasis, non-English terms, or titles of publications.

Accompanying each manuscript, as separate files, should be (a) an abstract of the article (100 words maximum) and five keywords; (b) a biographical sketch of the author(s); (c) a page with manuscript title and the order of authors as well as the primary author's name, mailing address, preferred e-mail, phone and fax numbers; and (d) files, figures, images, and tables. Indicate location of figures and tables in the text, but attach them to the end of your document. Do not embed them in the text. Maps, photos, and similar graphics are welcome, but authors are responsible for providing separate camera-ready files, either as tiffs, jpegs, or PDFs. Sizes of images, tables, and figures must conform to the physical dimensions of the journal page. Width is 45p (7.5") and depth is 57p (9.5").

Authors' names should not appear anywhere in the manuscript including Word document properties.

Papers are to be double-spaced with one-inch margins. References should be included on separate pages at the end of the paper. Manuscripts should be no longer than 20 pages of text and 25 pages total, including abstract, text, tables or illustrations, notes, and works cited. Please consult APA style guidelines for all formatting details.

All papers should be submitted electronically, via e-mail attachment, to herbert.sherman@liu.edu.

Copyright

The copyright of published articles will belong to the publishers of *NEJE.* Authors will be granted permission to reprint or otherwise use portions of their articles published in the *Journal* upon written request.

Review Process

All articles will be double-blind refereed. Authors will normally receive reviewers' comments and the editors' publishing decision in approximately 90 days of submission.

Submission

All snail-mail and electronic correspondence should be addressed to:

Joshua A. Shuart, Ph.D., Associate Professor, Chair, Department of Marketing & Sport Management
John F. Welch College of Business, Sacred Heart University, Roncalli Hall 238
5151 Park Avenue, Fairfield, CT 06825-1000
Phone: 203-416-3601; Fax: 203-365-7538; ShuartJ@sacredheart.edu
Visit our web page at http://www.sacredheart.edu/neje.cfm.

Sample Copies

Sample copies of previous issues are available from Joshua Shuart, Associate Editor, on a first-come, first-served basis. Please contact him via e-mail at shuartj@sacredheart.edu.

New England Journal of Entrepreneurship

From the Editors:

What makes a small business successful? Many times have we heard that "nothing breeds success like success," yet how does a newbie entrepreneur "breed success" if this is his or her first time out of the gate? Alyssa Gregory[1] noted that the three ways she was armed for success after her first failure was being prepared, being flexible, and being tenacious. Even in these seemingly toughest of times for small businesses, those owners with a positive outlook seem to weather the financial storm. "Even during the recession, the SBSI (Small Business Success Index) found that most owners were satisfied with their vocation … 61 percent are highly satisfied … while only 7 percent are dissatisfied. And yes, small businesses are indeed growing. During a rather bumpy 2010, 38 percent of small businesses experienced a gain in sales over the previous year, compared to only 15 percent who experienced a decline."[2]

Several of the articles in this issue address small business performance relative to the factors that lead to a firm's success operation. Mark Simon, Chanele Stachel, and Jeffrey G. Covin in their article "The Effects of Entrepreneurial Orientation and Commitment to Objectives on Performance" examined whether characteristics of a firm's strategic management processes, such as commitment to objectives, moderated the relationship between Entrepreneurial Orientation (EO) and performance. They found that both EO and commitment to objectives had a direct positive effect on sales growth, at least among small, high-technology firms. The interaction of EO and commitment to objectives also significantly influenced performance. Commitment to objectives benefited the performance of companies higher in EO more than it benefited the performance of companies lower in EO. In fact, commitment to objectives appeared to have no effect on the performance of the low EO companies.

The second study entitled "Strategic Relationships in a Small Business Context: The Impact of Information Quality and Continuous Quality Improvement" by Michael L. Harris, William C. McDowell, and Shanan G. Gibson supports previous hypotheses and research indicating that in small and medium sized (SMEs) businesses' information quality and continuous quality improvement are positively related to performance. These findings not only add to the literature base, but also provide practical implications for SMEs in regards to building stronger relationships with other organizations. SMEs generally have access to limited resources and technologies needed to process information and improve operations, making it important to understand how to best develop strategic alliances that positively affect firm performance.

Michele K. Masterfano examined the notion of strategic alliances in a narrower setting in her article entitled "Effects of Participation in Paid Membership Organizations on Entrepreneurial Success." Her research surprisingly indicated that formalized networking, that is, paying dues to belong to an organization in order to expand one's network, does not in and of itself increase or enhance the success of a business, whether measured in the rate of revenue growth or the number of employees. While the results clearly show no difference in growth rates of those businesses whose owners belong to paid membership organizations and those who do not, there were a large number of benefits denoted by members in the open-ended questions. While these benefits may not, according to the results reported here, be in the area of explicitly increasing revenues or providing for growth in other ways, there appears to be a distinct marketing benefit of membership in the area of brand building, as well as benefits from mentoring, collaboration on specific projects, and as a resource for information exchange.

In the fourth article "Founder Characteristics and Legitimacy-Seeking Behaviors" John T. Perry, Xin Yao, and Timothy L. Pett predicted that the levels of entrepreneurial and industry experience of new ventures' founders and their growth orientations and locus of control would be related to the degree to which they engaged in legitimacy-seeking behavior. The results of their study supported their predictions. Consistent with their predictions, founding teams that have, on average, helped start more businesses and have more years of work experience in their venture's industry are more likely to engage in behavior that is aimed at increasing their venture's legitimacy. Also, they found that founding teams with lead founders who intended to grow their ventures into large firms were more likely to engage in behavior that is consistent with trying to increase their venture's legitimacy. In contrast, those who have an internal locus of control are less likely to engage in legitimacy-seeking behaviors.

We shift from empirical research to conceptual development as Jeff Vanevenhoven, Doan E. Winkel, Deborah Malewicki, William L. Dougan, and James Bronson explore the notion of "bricolage" (a propensity to rely on resources at hand in accomplishing critical tasks and/or in accomplishing goals) as conceptual framework for analyzing entrepreneurial behavior. They identify the various forms of bricolage used by entrepreneurs, the strategies by which those forms are employed, the mechanisms through which they are expressed, and the ways in which these change during various stages of the entrepreneurial process. They further argue that if aspiring entrepreneurs can be given a concisely delineated conceptual framework that identifies methods and approaches for navigating the entrepreneurial process productively, these individuals may have a greater chance of success.

New England Journal of Entrepreneurship

In "No Exit? Trying to Salvage D&H Management LLC: Parts A and B" Adva Dinur, Herbert Sherman, and Daniel J. Rowley in Part A present a "no win" scenario for the owners of D&H Management LLC; the firm has a negative cash flow from rental properties that are worth less than their outstanding mortgages. Discussed options include: selling all of the properties and assuming a loss while avoiding the negative cash flow; walking away from all of the properties and assuming a loss while avoiding the negative cash flow; delaying paying the mortgages on some of the homes allowing these properties, if necessary, to go into foreclosure (in the interim use the positive cash flow to shore up some of the more positive cash flow homes); or contact all of the lenders and try to renegotiate the mortgages so as to have lower monthly rates. In Part B the managing partner proposes splitting up the firm by quit claiming the properties to each of the general partners who were the individual mortgage holders for each property. The general partners saw this move as a "sell out" and had no interest in managing pieces of the firm.

We are quite pleased to present our readers two book reviews: *Effective Business Planning: A Structured Approach: A Guide for Entrepreneurs* (reviewed by Alison J. Paster) and *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century* (reviewed by Joseph Bell).

This Fall 2011 issue marks Dr. Sherman's 6th year as editor of NEJE and, sadly, his last issue as editor as well. We appreciate his dedicated service as well as those of our reviewers, authors, and production staff. Without their commitment this issue, and the journal, could not endure. We are also grateful to Sacred Heart University for its continued financial support of the journal.

Notes

1. Alyssa Gregory (May 3, 2011). "Three Ways to Increase Your Chances of Success." Retrieved from http://smallbusiness bonfire.com/3-ways-to-increase-your-chances-of-success, May 10, 2011.

2. Grow Smart Biz (n.d.). "The State of Small Business? Good, and Getting Better." Retrieved from http://www.networksolutions.com/smallbusiness/research-library/, May 10, 2011

Sincerely,

Herbert Sherman
Editor

Joshua Shuart
Associate Editor and Web Master

Lorry Weinstein
Editor Emeritus

The Effects of Entrepreneurial Orientation and Commitment to Objectives on Performance

Mark Simon
Chanele Stachel
Jeffrey G. Covin

The relationship between entrepreneurial orientation (EO) and performance is often moderated by different factors. Specifically, scholars have called for research examining whether commitment to long-term objectives improves EO's effectiveness, believing that commitment may help firms overcome obstacles associated with EO. In response, we collected survey data from executives in 126 small, high-technology firms, and found that EO and commitment to objectives enhanced sales growth. In addition, the study determined that commitment to objectives was associated with greater increased sales growth of companies high in EO, as compared to those low in EO.

Keywords: entrepreneurial orientation; commitment to objectives; small business; sales growth; performance

Entrepreneurial orientation (EO) refers to firm behavior and strategy that emphasizes aggressiveness, risk-taking, and innovation (Miller and Friesen, 1982). In recent decades, researchers have conducted more than 100 studies of EO, many of which focused on its effects on performance (Rauch, Wiklund, Lumpkin, Frese, 2009; Wang, 2008). This effort is consistent with Rauch and colleagues' (2009) belief that it is "essential" to explore the relationship between EO and performance, given EO's many potential benefits. The benefits may include generating new ideas and creative processes (Covin and Slevin, 1989) and improving a firm's competitive position (Chang, Lin, Chang, and Chen, 2007). Furthermore, EO may even be crucial to a firm's survival (Kropp and Zolin, 2005) by helping firms deal with many challenges (McCrea and Betts, 2008; Mintzberg and Waters, 1982) such as those associated with crisis, dynamic environments, uncertainty, and stagnant growth.

The potential benefits above might lead one to conclude EO dramatically improves performance. Close examination of the literature (e.g., Rauch et al., 2009; Wang, 2008), however, has not conclusively established this relationship. Instead, as suggested by multiple scholars (e.g., Covin, Green and Slevin, 2006; Rauch et al., 2009; Wang, 2008; Wiklund and Shepherd, 2005) when, if, and the extent to which EO improves organizational performance may depend upon additional factors. It may be especially important to examine characteristics of a firm's strategic management process, where the strategic management process refers to the methods by which organizations (1) establish their long-term objectives and (2) choose actions to reach those objectives (Chandler, 1962). A fundamental principle of the strategic management literature is that these characteristics often influence the relationship between the type of strategies (e.g., entrepreneurial strategies) and the end results of those strategies. This principle led Miller and Friesen in 1982, Lumpkin and Dess in 1996, Barringer and Bluedorn in 1999, Wiklund and Shepherd in 2003, Covin and colleagues in 2006 and De Clercq as recently as 2010, to argue the EO field needs more studies examining how characteristics of the firm's strategic management process might influence the relationship between EO and performance.

One characteristic, namely a firm's commitment to long-term objectives, might be especially important to the effectiveness of EO (Covin et al., 2006; De Clercq, Dimov, and Thongpapanl, 2010). Many (e.g., Barringer and Bluedorn, 1999; Covin et al., 2006; Ferreira, 2001) have implicitly or explicitly implied that commitment to long-term objectives may help firms pursuing EO cope with one of their greatest challenges, namely imposing the order needed to keep a firm results oriented while still providing the freedom needed to innovate and take risks. Consistent with this belief, Ferreira (2001) theorized that the success of EO may depend on having a strong identification with the organization's mission and commitment to its formal goals. Yet, despite calls to do so (Covin et al., 2006; De Clercq et al., 2010; Rauch et al., 2009), no empirical research has explored whether the effect of entrepreneurial orientation on performance depends on level of commitment to long-term objectives. The current article fills this gap.

We focus on small, high-technology manufacturing firms in a hostile environment because they more often display entrepreneurial strategies (Rauch et al., 2009). As such, it becomes most imperative to identify moderators that make those strategies effective. Furthermore, small and high-technology businesses play a vital role in our economy. The following section reviews the relevant literature on EO and presents the hypotheses. We then describe the research methods and report the empirical tests of the hypothesized relationships. Finally, the article discusses the study's findings and implications.

Entrepreneurial Orientation

EO is a major topic within both the strategic management and entrepreneurship literatures (Covin, et al., 2006). Arguably, EO research falls into three main categories. The first category is represented by studies that explore how firms can become more entrepreneurial (e.g., Burgelman, 1983; Brazeal, Schenkel, and Azriel, 2008). This stream of literature focused on how managers might overcome the natural barriers to entrepreneurship, such as risk aversion and bureaucratic cultures (Hisrich and Peters, 1986). These studies indicated that many factors, including CEO personality (Simsek, Heavey, and Veiga, 2010), organizational structure (Covin and Slevin, 1990); scanning behavior (Schafer, 1990), incentives (Arbaugh, Cox, and Camp, 2004) and championing behavior (Hisrich and Peters, 1986) may influence the extent to which firms exhibit entrepreneurial behavior.

Much of this work assumed, but did not directly test, that EO enhanced performance. Instead, a second set of EO studies emerged to empirically examine this issue. The stream grew at a phenomenal pace, with journals publishing five times as many studies on EO and performance from 2000 to 2009 as they did from 1990 to 1999 (Rauch et al., 2009). These studies generated inconsistent findings, however, with some determining that EO was strongly and positively associated with firm performance, (e.g., Lee and Tsang, 2001; Wiklund and Shepherd, 2003), others detecting only a weak positive relationship (e.g., Lumpkin and Dess, 2001; Zahra, 1991) and still others uncovering no significant linkage (Covin, Slevin, and Schutz, 1994; George, Wood, and Khan, 2001). Going one step further, Hart (1992) even theorized that EO could lower performance under certain conditions.

These conflicting results spurred a third category of EO research (which admittedly often overlapped with the second). Often, inconsistent conclusions across studies stem from unidentified constructs, known as moderators, which influence the relationship between two variables. Thus, several scholars (Rauch et al., 2009; Covin et al., 2006) stress the need to identify moderators that might influence the EO-performance relationship. In response, research has uncovered several factors, including environmental dynamism (Wiklund and Shepherd, 2005) environmental hostility (Miller and Friesen, 1982), technological intensity (Zahra, 1996) and early industry lifecycle stage (Lumpkin and Dess, 2001), that increase the effectiveness of EO. To date, however, the majority of the moderators identified are related to a firm's external surroundings (De Clercq et al., 2010; Rauch et al., 2009).

This focus on the external, while undoubtedly beneficial, did little to increase understanding of how executives can effectively and strategically manage entrepreneurial behaviors, a task that is often formidable. To produce positive performance, EO often requires overcoming significant resistance, interpreting ambiguous settings, and establishing new procedures and practices (Hisrich and Peters, 1986). Thus, scholars have suggested research focus on identifying characteristics of the strategic management process that might help managers overcome the challenges in implementing EO (Covin et al., 2006; Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003). This emphasis has generated several significant findings. For example, strategic management processes that allow for emergent strategies (Covin et al., 2006), involve longer planning horizons (Miller and Friesen, 1982), promote autocratic decision making (Covin et al., 2006), foster flexible planning (Miller and Friesen, 1982), create trust (De Clercq et al., 2010), and incorporate feedback from failed earlier initiatives (Covin et al., 2006), all increase the success of EO.

Interestingly, however, no study has explicitly examined whether one of the most important characteristics of the strategic management process, namely commitment to long-term objectives, moderates the EO-performance relationships. Although untested, the assertions of several scholars suggest empirically exploring this question might generate valuable insights. Covin and his colleagues (2006) explicitly argued that commitment and objectives might play a crucial role when engaging in entrepreneurial actions. Similarly, De Clercq and colleagues (2010) suggested that by internalizing organizational goals, committed managers can enhance their firm's entrepreneurial potential. Finally, Rauch and colleagues' (2009) assertion that decision makers use EO to achieve and sustain their long-term objectives suggests the need to explore the role which commitment to those objectives may play.

In keeping with past research exploring interactions (e.g., Simon, Elango, Houghton, and Savelli, 2002), we will initially formulate hypotheses relating to the direct effects of variables on performance, and then formulate a hypothesis about the effects of an interaction term. Our first hypothesis examines the direct effect of EO on performance. While the relationship between the two is not universally unwavering, a direct relationship might be detected in specific settings (Rauch et al., 2009), such as among small, high-technology firms, which is the current study's setting. High-technology firms often exist in environments consisting of rapid change and shortened product and business model lifecycles, suggesting that profits from existing operations are short-lived and uncertain. As such, EO may be especially beneficial. To keep revenues from drying up in these settings, firms need to seek out new opportunities constantly and frequently innovate (Callaway, Celuch, and Murphy, 2009). This belief is consistent with findings from empirical studies (Rauch et al., 2009) that determined EO enhances the performance of high-technology firms more than it enhances the performance of low-technology firms.

Firms that are smaller might also be better able to implement EO effectively. Wiklund (1999) explains that the EO-performance relationship may be particularly strong among small firms because smallness fosters the flexibility needed to make EO initiatives successful. However, it also limits their ability to compete in other ways. In a later piece, Wiklund and Shepherd (2005) explained EO provides small businesses the ability to find and/or discover new opportunities that can differentiate them from other firms and create a competitive advantage. Similarly, Slater and Narver (1995) argued EO can help small companies create breakthrough products or new markets not only ahead of competitors but before customers can even recognize their need, and in so doing generate positive financial results. These arguments are consistent with Rauch and colleagues' (2009) meta-analysis results, namely that the EO-performance relationship was strongest among small firms. Collectively, the paragraphs above suggest the following hypothesis:

H1: Entrepreneurial orientation is positively associated with small firm performance.

In addition to EO, commitment to objectives may affect performance. Commitment to objectives refers to the determination to try to achieve a goal, without abandoning or lowering it (Hollenbeck and Klein, 1987). In many situations commitment can enhance firm performance by increasing effort and generating goal-directed behaviors (Klein and Kim, 1998). As such, scholars (e.g., Klein and Kim, 1998) have argued that commitment to objectives is a key to effective goal setting. Such commitment can serve to point organizational members in the same direction, allowing a firm to achieve better results (de Waal, 2010).

Theory and empirical research both suggest, that while not universal, quite often there is a positive relationship between commitment to objectives and performance (Locke, Latham, and Erez, 1988). We believe this relationship applies to our sample of firms, given its characteristics. Commitment is most likely to be effective when managers can influence outcomes, a situation that is more likely in small organizations, such as those we studied. Consistent with this belief, Kuratko, Covin, and Garrett (2009) found small corporate ventures were more likely to thrive when the venture's goals were clear. Commitment is also especially vital to the performance of high-technology manufacturing firms. Udo and Ehie (1996), for example, found commitment, and clarity of objectives made implementing advanced manufacturing technologies more successful. Finally, it should be noted that a long-term orientation, as might be reflected by commitment to long-term objectives, enhances the performance of companies facing hostile environments (Covin and Slevin, 1989), a situation no doubt faced by our sample of Midwest manufacturing firms from states such as Michigan. Thus, it follows:

H2: Commitment to long-term objectives is positively associated with small company performance.

While the two previous hypotheses suggest that, in the context of this study, both EO and commitment to long-term objectives enhance performance, the question remains, will commitment to objectives enhance the performance of firms with greater EO, more than it will enhance the performance of firms lower in EO? To answer this question, we examine two challenges a firm faces when trying to implement EO. The first is that entrepreneurial organizations simultaneously must facilitate freedom and impose control (Burgelman, 1983). EO, with its innovative and risky actions, implicitly necessitates that companies allow managers the autonomy and flexibility to act (Covin et al., 2006; Wang, 2008). Such freedom, however, implies the strategies will have very unpredictable outcomes and a significant possibility of failure. Thus, it may be difficult to hold managers accountable and may be counterproductive to encourage people to experiment, and yet "demand" results. By the same token, allowing managers to do "whatever" regardless of outcome is unlikely to enhance a firm's performance.

Instilling a commitment to long-term objectives in these entrepreneurial settings may help resolve this potential paradox. Instead of managers just "trying things," commitment to long-term objectives will keep managers focused on making attempts until they succeed. As such, commitment to long-term objectives might play an important role in allowing freedom to act, while at the same time making sure individuals are responsible for producing results. In contrast, less entrepreneurial firms, by definition, are proceeding along well-defined paths, with more predictable outcomes. They achieve results by following well-known strategies rather than "finding" a way to succeed. While commitment to long-term objectives might still benefit them, it may be less necessary.

The second major challenge entrepreneurial firms face is internal resistance to their initiatives (Hisrich and Peters, 1986). Instead of trying to execute EO wholeheartedly, many managers tend to view the strategies negatively because of their downside risk, and are therefore reluctant to become involved (Hisrich and Peters, 1986). Such an attitude, if not dooming the initiative to failure, at the very least makes it more difficult to achieve success. Thus, it is not surprising that Henley (2007) stressed entrepreneurial firms need to counteract resistance by providing a powerful push. Stimulating a strong commitment to long-term objectives can provide this push. The managers' positive focus on ways to achieve objectives is likely to displace their tendency to stress downside risk. By more fully supporting the initiatives, they are more likely to succeed. In contrast, less entrepreneurial initiatives, by definition, usually are not as risky and are, therefore, less likely to encounter similar resistance. Thus, commitment to long-term objectives may be less important.

Research in related areas supports the idea that a strong push, whether from commitment to objectives or other means, may be crucial to EO's success. For example, autocratic decision making (Covin et al., 2006) and a centralized structure (Miller and Friesen, 1982) both increased the relationship between EO and performance. Similarly, while not directly measuring objectives, De Clercq and colleagues (2010) found higher levels of organizational commitment strengthened the link between EO and performance. Similarly, Murphy and Callaway (2004) argued that emotional commitment to entrepreneurial ventures might lead to higher persistence and better performance. Collectively, the above suggests the following hypothesis:

H3: The greater the commitment to objectives, the more positive the relationship between EO and performance.

Methods

We contacted 591 top-level executives of small (500 employees or fewer), high-technology manufacturing firms in five Midwest states (Michigan, Ohio, Indiana, Illinois, and Wisconsin), asking them to complete a Web-based survey. We focused on this type of firm because small and/or high-tech companies in hostile environments more often need entrepreneurial strategies to compete (Mintzberg, 1973), suggesting it is crucial for them to utilize EO effectively. Of those contacted, 126 filled out the survey completely, generating a response rate of 21 percent. Among other variables, the survey measured the level of the firm's EO, commitment to long-term objectives, and sales growth. We have reproduced the measures in Figure 1.

Measures

We measured EO using a 6-item, bipolar 7-point scale adapted from Covin and Slevin (1990). To calculate EO, we took the average of the individual item scores. Higher scores on the scale indicated a greater EO. Inter-item reliability was .82. Commitment to objectives was measured using a 4-item, 7-point scale. We used the average of the four items to calculate the variable, generating an inter-item reliability of .89. The higher the score, the greater the commitment was to the objectives. We used firm sale growth rate as our study's measure of firm performance. The sales growth rate was measured based on the average growth in sales revenue over that three-year period (2004–2007). Because the growth varies by industry, we subtracted the industry's average growth rate over this period from each average growth rate. We used sales growth rate to capture firm performance because EO is, essentially, a growth orientation (Lumpkin and Dess, 1996). Thus, EO effectiveness is appropriately measured using criteria that reflect a firm's success at translating entrepreneurial opportunities into growth trajectories (Covin et al., 2006).

Analysis

We used hierarchical multiple regression to examine the study's hypotheses, using sales growth as the dependent variable. The regression was conducted in two steps. We entered EO and commitment to objectives in step 1. After this, we interpreted the results of the direct effects of EO and commitment on sales growth. In step 2, we entered the interaction term to determine if it had additional explanatory power beyond the first two variables entered. Consistent with the recommendations of Aiken, West, and Reno (1991), to capture the interaction of EO and commitment to objectives, we first centered and scaled each variable, and then multiplied them together to compute their product.

Table 1 displays the intercorrelations among the study's variables. All correlations were below .50, suggesting multicollinearity is not a problem. Table 2 provides the result of the hierarchical regression analysis. Model 1 testing the direct effects was significant (R2=.05, p<.05). As predicted, EO was positively and significantly associated with sales growth (ß =.17, p<.05), supporting Hypothesis 1. Hypothesis 2, that commitment to objectives increased sales growth, was not, however, supported (ß =.10, n.s.). Model 2, which tested the interaction term, was significant (R2=.09, p<.01). In the model, the interaction of commitment to objective and EO was also significant (ß = -.26, p<.01), supporting Hypothesis 3.

Discussion

Concurrent with companies' increasing desire to be more entrepreneurial, the body of research on EO and performance has been growing at a rapid rate (Ferreira, 2001). With this growth, however, has come the recognition that EO does

Table 1. Means, Standard Deviations, and Correlations

Variables	*Mean*	*Std. Dev.*	*1*	*2*
1. Sales growth	.13	.28		
2. Entrepreneurial Orientation	4.04	1.20	.17*	
3. Commitment to Objectives	5.50	.97	.13t	.22**

ᵗp = < 0.1, *p = < 0.05, **p = < 0.01.
n = 127, One-tail tests results are reported.

Entrepreneurial Orientation: To measure entrepreneurial orientation, we used the scale below.

In general, the top managers of my business unit favor . . .

A strong emphasis on the marketing of "tried-and-true" products or services	1 2 3 4 5 6 7	A strong emphasis on R&D, technological leadership, and innovations

How many new lines of products or services has your business unit marketed during the past three years?

No new lines of product or services	1 2 3 4 5 6 7	Very many new lines of products or services
Changes in product or service lines have been mostly of a minor nature	1 2 3 4 5 6 7	Changes in product or service lines have usually been quite dramatic

In general, the top managers of my business unit have…

A strong proclivity for low-risk projects (with normal and certain rates of return)	1 2 3 4 5 6 7	A strong proclivity for high-risk projects (with chances of very high returns)

In general, the top managers of my business unit believe that . . .

Owing to the nature of the environment, it is best to explore it gradually via cautious, incremental behavior	1 2 3 4 5 6 7	Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives

When confronted with decision-making situations involving uncertainty, my business unit . . .

Typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions	1 2 3 4 5 6 7	Typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities

Commitment to Long-term Objectives: To measure commitment to long-term objectives, we used the scale below. Individuals recorded their response to each statement using a 1 to 7 scale ranging from strongly disagree to strongly agree.

1. My business unit's top managers are absolutely committed to the achievement of our long-term objectives.
2. My business unit's top managers would be very reluctant to change our long-term objectives unless overwhelming evidence compelled us to do so.
3. My business unit's top managers have strongly and personally embraced our long-term objectives as compellingly appropriate business goals.
4. There is a strong belief among our top managers that our long-term objectives are the correct ones for us.

Figure 1. Measures

not automatically lead to higher performance, and that the relationship between the two may be more complex than originally envisioned. Scholars have asserted that understanding this complexity and, thereby, determining how to maximize the effectiveness of EO is crucial, because pursuing EO often demands substantial resources and is, by definition, risky (Rauch et al., 2009).

The current study responds to this concern and answers calls (e.g., Covin et al., 2006; Zahra, 1991) to examine whether characteristics of a firm's strategic management processes, such as commitment to objectives, moderates the relationship between EO and performance. We uncovered several relationships. EO had a direct positive effect on sales growth, at least among small, high-technology firms. The interaction of EO and commitment to objectives also significantly influenced performance. As shown in Figure 2, commitment to objectives benefits the performance of companies higher in EO more than it benefits the performance of companies lower in EO. In fact, commitment to objectives appears to have no effect on performance overall, or on the performance of the low EO companies.

Although not directly tested, we believe the study's find-

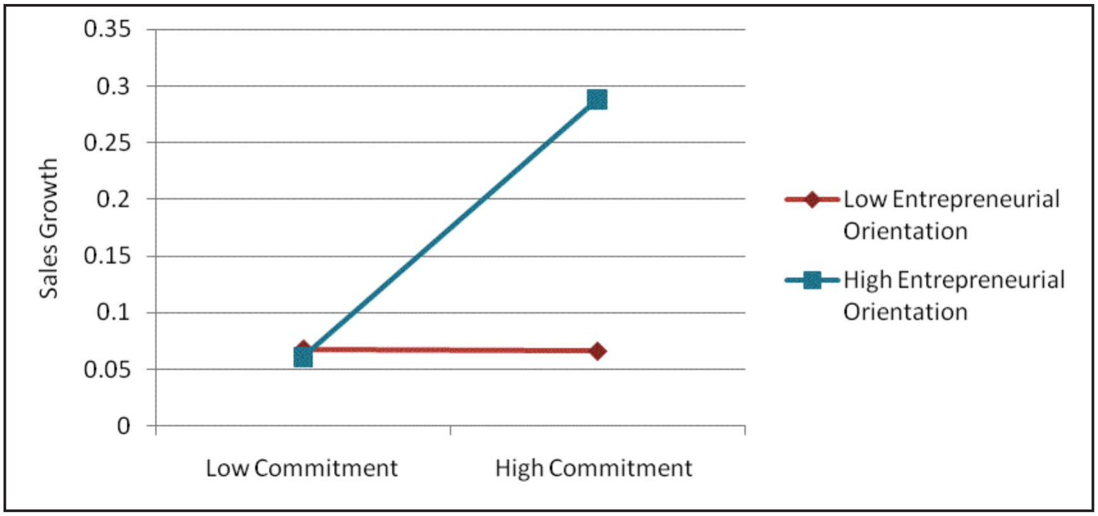


Figure 2. Interaction of Entrepreneurial Orientation and Commitment to Objectives

ings might provide insights into a fundamental dilemma posed by EO. To succeed, EO needs both discipline and flexibility (Burgelman, 1983; Simon et al., 2002). Yet on the surface, maintaining order while providing the freedom to innovate might seem paradoxical. We believe that imposing discipline through commitment to long-term objectives might help untangle this paradox. Such commitment might allow firms to try many different things, while constantly keeping focus on the firm's overall long-term goals. As such, the firm can constantly move toward improving its performance. Scholars can advance EO research more directly by examining this issue.

Table 2. Results of Hierarchical Regression Analysis

Predictor Variable	*Model 1*	*Model 2*
Step 1: Independent var		
Entrepreneurial Orientation	.17	.16*
Commitment to Objectives	.10	.24
Step 2: Interaction		
Ent. Orient. *Comm. to Obj.		.26**
ΔR^2, change from Prev. Model		.05
ΔF, change from Prev. Model		6.30**
R^2	.05	.09
Adjusted R^2	.03	.07
F	3.00*	4.19**

*p = < 0.05, **p = < 0.01.
n = 127, One-tail tests results are reported.

Future research also needs to address some of the current study's limitations. First our data was crosssectional, making it difficult to infer causality. Rather than high levels of EO and commitment to long-term objectives leading to sales growth, it is at least possible that sales growth leads to EO and commitment to long-term objectives. While we do draw our conclusions from extant theory, further research would provide additional insight by studying EO and performance over time.

A second limitation stems from the study's dependent variable, firm sales growth rate, which may, or may not, be related to another very important measure of firm performance, namely, profitability. It should be noted, however, that sales growth may be especially appropriate for assessing a firm's effectiveness when pursuing entrepreneurial opportunities, which is inherently a growth-oriented activity (Covin et al., 2006; Davidsson and Henrekson, 2002). Furthermore, Rauch and colleagues' (2009) meta-analysis indicated that the relationship between EO and performance is robust with regards to different performance measures, implying that findings related to sales growth may also apply to profitability. Nevertheless, the EO research would benefit by replicating this study's finding using measures of profitability.

Limitations notwithstanding, the study results suggest several actions managers might consider to enhance performance. First, firms may want to increase commitment to long-term objectives when pursuing EO. Scholars suggest several methods to accomplish this (for a comprehensive review see Locke et al., 1988). Perhaps, no factor is as important as that of leadership. Locke and colleagues (1988) explained that legitimate authority is a key determinant of goal commitment, and that the ability to engender such commitment is one of the most important characteristics of successful leaders.

To engender commitment, leaders must closely tie both internal and external rewards to objectives (Locke et al., 1988). Given that these rewards can be costly, however, it may prove most important for only firms high in EO to offer them, where commitment is most important. Another important lever to foster commitment is clearly communicating objectives (de Waal., 2010; Ebert, 2010). Such communication provides organization members the same frame of reference and aligns their actions. Clear communication is especially crucial to spur commitment, given findings that leaders often believe they have conveyed an objective, but employees feel it has not been shared (Ebert, 2010).

Our study results also indicate that small technology firms may benefit by increasing EO. There are several actions that may accomplish this task (Ferreira, 2001; Zahra, 1991). A firm's level of entrepreneurship depends on individuals below top management (Stevenson and Jarillo, 1990) and on senior executives (Guth and Ginsberg, 1990; Morrow, 2002). Operational-level participants can engage in environmental scanning to notice entrepreneurial opportunities (Schafer, 1990) and more importantly, take actions to exploit them (Ferreira, 2001).

There are, however, many steps senior executives should take to create a climate that facilitates the efforts of lower-level employees. Perhaps, first and foremost, they must build a culture that values entrepreneurial behavior (Guth and Ginsberg, 1990) by using several levers that are at their disposal. They can incentivize risk-taking (Arbaugh et al., 2004) and lessen any negative consequences when an isolated short-term initiative fails to achieve a desired interim outcome (Stevenson and Jarillo, 1990). Instead, they must provide employees the freedom to try different actions and adopt a long-term perspective (Barringer and Bluedorn, 1999). Senior management should also provide a significant quantity of high-quality communications about industry trends, ideas, and perhaps most of all, the importance of EO (Ferreira, 2001).

In summary, the current study answers the call of researchers to explore how commitment to long-term objectives might influence the EO-performance relationship. We explored this issue among small, high-technology firms because they have a particularly high need to implement EO effectively. Given the riskiness of entrepreneurial strategies, it is our hope this study serves as a building block for future work on how to improve EO's outcomes.

References

Aiken, L.S., West, S.G., and Reno, R. 1991. *Multiple Regression: Testing and Interpreting Interactions.* Sage Publications, Thousand Oaks, Ca.

Arbaugh, J. B., Cox, L.W. and Camp, S. M. 2004. Employee Equity, Incentive Compensation, and Growth in Entrepreneurial Firms. *New England Journal of Entrepreneurship* 7(1), 15-25

Barringer, B.R., Bluedorn, A. C. 1999. The Relationship Between Corporate Entrepreneurship and Strategic Management. *Strategic Management Journal* 20(5), 421

Brazeal, D., Schenkel, M., and Azriel, J. 2008. Awakening the Entrepreneurial Spirit: Exploring the Relationship Between Organizational Factors and Perceptions of Entrepreneurial Self-Efficacy and Desirability in a Corporate Setting. *New England Journal of Entrepreneurship* 11(1), 9-25.

Burgelman, R.A. 1983. A Model of the Interaction of Strategic Behavior, Corporate Context, and the Concept of Strategy. *Academy of Management Review* 17(1), 61-70.

Callaway, S., Celuch, K., and Murphy, G. 2009. Strategic Flexibility and SMEs: The Role of Information Technology for Managing Internal and External Relations. *New England Journal of Entrepreneurship* 12(1), 9–17.

Chang, S., Lin, R., Chang, F and Chen, R. 2007. Achieving Manufacturing Flexibility through Entrepreneurial Orientation. *Industrial Management and Data Systems* 107(7), 997–1017.

Chandler, A. D., Jr. 1962. *Strategy and Structure: Chapters in the History of the American Industrial Enterprise*. Cambridge, MA: MIT Press

Covin, J. G., Green, K., and Slevin, D. P. 2006. Strategic Process Effects on the Entrepreneurial Orientation-Sales Growth Rate Relationship. *Entrepreneurship Theory and Practice* 30(1), 57–81.

Covin, J. G., and Slevin, D. 1989. Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal* 10(1), 75

Covin, J. G., and Slevin, D. P. 1990. New Venture Strategic Posture, Structure, and Performance: An Industry Life Cycle Analysis. *Journal of Business Venturing* 5, 123–135.

Covin, J. G., Slevin, D. P., and Schultz, R. L. 1994. Implementing Strategic Missions: Effective Strategic, Structural and Tactical Choices. *The Journal of Management Studies* 31(4), 481.

Davidsson, P., and Henrekson, M. 2002. Determinants of the Prevalence of Start-Ups and High-Growth Firms. *Small Business Economics* 19(2), 81.

De Clercq, D., Dimov, D., and Thongpapanl, N. 2010. The Moderating Impact of Internal Social Exchange Processes on the Entrepreneurial Orientation-Performance Relationship. *Journal of Business Venturing* 25(1), 87.

de Waal, A. 2010. Performance-driven Behavior as the Key to Improved Organizational Performance. *Measuring Business Excellence* 14(1), 79–95.

Ebert, E. J. 2010. The Surprisingly Low Motivational Power of Future Rewards: Comparing Conventional Money-based Measures of Discounting with Motivation-based Measures. *Organizational Behavior and Human Decision Processes* 111(2), 71.

Ferreira, J. 2001. Corporate Entrepreneurship: A Strategic and Structural Perspective. *New England Journal of Entrepreneurship* 4(2), 59.

George, G., Wood, D., and Khan, R. 2001. Networking Strategy of Boards: Implications for Small and Medium-Sized Enterprises. *Entrepreneurship and Regional Development: An International Journal* 13(3), 269–285.

Guth, W., and Ginsberg, A. 1990. Guest Editors' Introduction: Corporate Entrepreneurship. *Strategic Management Journal* 11(5), 5.

Hart, Stuart L. 1992. An Integrative Framework for Strategy-Making Processes. *The Academy of Management Review* 17(2), 327.

Henley, L. G. 2007. Extending Innovation Boundaries: Corporate Venture Capital Gives Large Firms a Strategic Option. *The Journal of Business Strategy* 28(5), 36–43.

Hisrich, R. D., and Peters, M. P. 1986. Establishing a New Venture Business Unit within a Firm. *Journal of Business Venturing* 1, 307–322.

Hollenbeck, John R., and Klein, Howard J. 1987. Goal Commitment and the Goal-Setting Process: Problems, Prospects, and Proposals for Future Research. *Journal of Applied Psychology* 72(2), 212.

Klein, H. J., and Kim, J.S. 1998. A Field Study of the Influence of Situational Constraints, Leader-Member Exchange, and Goal Commitment On Performance. *Academy of Management Journal* 41(1), 88–95.

Kropp, F., and Zolin, R. 2005. Technological Entrepreneurship and Small Business Innovation Research Programs. *Academy of Marketing Science Review* 2005(7), 1.

Kuratko, D., Covin, J., and Garrett, R. 2009. Corporate Venturing: Insights from Actual Performance. *Business Horizon*. 52(5), 459.

Lee, D. Y., and Tsang, E. W. K. 2001. The Effects of Entrepreneurial Personality, Background and Network Activities on Venture Growth. *Journal of Management Studies* 38(4), 583–602.

Locke, E. A., Latham, G. P., and Erez, M. 1988. The Determinants of Goal Commitment. *The Academy of Management Review* 13(1), 23.

Lumpkin, G. T., and Dess, G. G. 1996. Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *The Academy of Management Review* 21(1), 135.

Lumpkin, G. T., and Dess, G. G. 2001. Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle, *Journal of Business Venturing* 16(5), 429–451.

McCrea, E., and Betts, S. 2008. Failing to Learn from Failure: An Exploratory Study of Corporate Entrepreneurship Outcomes. *Academy of Strategic Management Journal* 7, 111–132.

Miller, D., and Friesen, P. H. 1982. Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum: Summary. *Strategic Management Journal* 3(1), 1.

Mintzberg, H. 1973. Strategy-Making in Three Modes. *California Management Review* 16,(2), 44.

Mintzberg, H., and Waters, J.A. 1982. Tracking Strategy in an Entrepreneurial Firm. *Academy of Management Journal* 25(3), 465.

Morrow, J. L. Jr. 2002. Someone Old or Someone New? The Effects of CEO Change on Corporate Entrepreneurship. *New England Journal of Entrepreneurship* 5(2), 21–34.

Murphy, G. B., and Callaway, S. K. 2004. Doing Well and Happy About It? Explaining Variance in Entrepreneurs'' Stated Satisfaction with Performance. *New England Journal of Entrepreneurship* 7(2), 15–26.

Rauch, A., Wiklund, J., Lumpkin, G., and Frese, M. 2009. Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice* 33(3), 761–787.

Schafer, S. 1990. Level of Entrepreneurship and Scanning Source Usage in Very Small Business. *Entrepreneurship: Theory and Practice* 15, 19–32.

Simon, M., Elango, B., Houghton, S. M, and Savelli, S. 2002. The Successful Product Pioneer: Maintaining Commitment While Adapting to Change. *Journal of Small Business Management* 40(3), 187–203.

Simsek, Z., Heavey, C., and Veiga, J. 2010. The Impact of CEO Core Self-Evaluation on the Firm's Entrepreneurial Orientation. *Strategic Management Journal* 31(1), 110.

Slater, S. F., and Narver, J. C. 1995. Market Orientation and the Learning Organization. *Journal of Marketing* 59(3), 63.

Stevenson, H.H., and Jarillo, J. 1990. A Paradigm of Entrepreneurship: Entrepreneurial Management. *Strategic Management Journal* 11(5), 17.

Udo, G., and Ehie, 1996. Advanced Manufacturing Technologies Determinants of Implementation Success. *International Journal of Operations and Production Management* 16(12), 6–26.

Wang, C. 2008. Entrepreneurial Orientation, Learning Orientation, and Firm Performance. *Entrepreneurship Theory and Practice* 32(4), 635–657.

Wiklund, J. 1999. The Sustainability of the Entrepreneurial Orientation—Performance Relationship. *Entrepreneurship Theory and Practice* 24(1), 37–48.

Wiklund, J., and Shepherd, D. 2005. Entrepreneurial Orientation and Small Business Performance: A Configurational Approach. *Journal of Business Venturing* 20(1), 71–91.

Wiklund, J., and Shepherd, D. 2003. Knowledge-Based Resources, Entrepreneurial Orientation, and the Performance of Small and Medium-Sized Businesses. *Strategic Management Journal* 24(13), 1307

Zahra, S.A. 1991. Predictors and Financial Outcomes of Corporate Entrepreneurship: An Exploratory Study. *Journal of Business Venturing* 6(4), 259–285.

Zahra, S.A. 1996. Technology Strategy and New Venture Performance: A Study Of Corporate-Sponsored And Independent Biotechnology Ventures. *Journal of Business Venturing* 11(4), 289.

About the Authors

Mark Simon (simon@oakland.edu) is an associate professor of management at Oakland University. He has published articles related to entrepreneurial orientation and small business.

Chanele Stachel (chanelestachel@gmail.com) is a recent graduate from Oakland University earning a degree in finance. Her research interests include small businesses and entrepreneurship.

Jeffrey G. Covin (covin@indiana.edu) is the Samuel and Pauline Glaubinger Professor of Entrepreneurship at the Kelley School of Business, Indiana University, Bloomington. His research interests include corporate entrepreneurship, strategic management, and technology management.

Strategic Relationships in a Small Business Context: The Impact of Information Quality and Continuous Quality Improvement

Michael L. Harris
William C. McDowell
Shanan G. Gibson

This study examines the performance between operational variables for small and medium-sized businesses (SMEs) within the context of interorganizational relationships. Specifically, it investigates the role of information quality and continuous quality improvement and the varying importance that SMEs place on each of these constructs. The sample consists of 134 vendors of a large university in the southwestern region of the United States. The results indicate that there is a positive relationship between information quality and continuous quality improvement with performance in SMEs. Implications for both research and practice, as well as ideas for future research, are discussed.

Keywords: interorganizational relationships, firm performance

Introduction

Much of the past research on strategic alliances has focused on multinational companies with diverse and complex operations (Franco, 2003; Das & He, 2006; Kelly, 2007). However, in the current business environment these partnerships have become important for all types of businesses, and more research is warranted in the small business arena (Kelly, 2007). Small and medium-sized businesses (SMEs) are often more entrepreneurial in nature and can vary greatly from large companies. According to Das and He (2006), these differences can be both intrinsic and extrinsic in nature, and must be accounted for when attempting to identify prospective partners for strategic relationships.

To remain viable SMEs often work with other organizations through a variety of collaborative efforts to achieve greater performance and stay competitive (Astley & Van de Ven 1983; Nooteboom, 2000). These coordinated efforts can come in the form of networks, joint ventures, strategic alliances, or other types of interorganizational relationships that allow for the sharing of information, resources, and risk (Das & He, 2006; Li & Qian, 2007). Accordingly, the nature of the relationships among SMEs can be unique and often more varied than the traditional alliances of large corporations, particularly in terms of innovation, bargaining power, resource allocation, learning ability, and organizational capability (Das & He, 2006; Li & Qian, 2007).

Fortunately, many SMEs are often well suited to participate in strategic alliances. Some of these advantages include centralized decision making, flexibility, limited organizational structure, and a focus on sustainability and growth (Gélinas & Bigras, 2004; Das & He, 2006). In addition to suitability, SMEs often need the benefits that come from outside networks to compensate for resource limitations and inadequate internal infrastructure.

These constraints have been well documented as primary obstacles to new firm development and growth. While emerging SMEs are particularly susceptible to these restrictions, more established firms also struggle to find appropriate business networks. Interestingly, Dodge and Robbins (1992) and Harris, Grubb, and Herbert (2005) found that external problems are more prevalent in the development stage of a small business as it attempts to develop legitimacy and find its niche in the marketplace. This seems to indicate that strategic alliances can be especially beneficial for nascent entrepreneurs. Research has shown that the development of long-term relationships with other organizations can increase the viability and survival for small businesses (Aldrich & Auster, 1986), and the absence of such relationships may contribute to higher failure rates (Baum, Calabrese, & Silverman, 2000).

The purpose of this study is to investigate interorganizational relationships in SMEs, and the impact of operational variables on internal performance. Specifically, our goal is to examine the relationship among information quality and continuous quality improvement with performance in SMEs. A model of the relationships can be found in Figure 1.

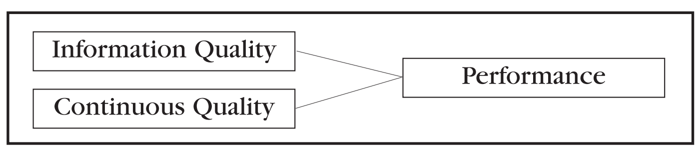


Figure 1. Information Quality, CQI and Performance in SMEs

Literature Review

Small Business

Past research (Saunders, 1997; Fuller & Lewis, 2002; Das & He, 2006; Kelly, 2007; Li & Qian, 2007) has encouraged small business owners to develop mutually beneficial relationships with external constituencies to effectively compete with larger firms. SMEs are often faced with resource limitations that cause them to be vulnerable to various environmental changes. The adoption of relationship strategies to develop both formal and informal strategic alliances can be critical to sustain external relations and adapt effectively to the constant change that exists in the business world.

One such advantage of strategic relationships is the ability for SMEs to develop further a core competency. As suggested by Li and Qian (2007), effective alliances can help SMEs become more innovative by focusing efforts on specific ideas and concepts. These alliances can also help reduce resource constraints and provide opportunities for growth and sustained value creation. An advantage of many SMEs, particularly emerging businesses, is that they are able to adapt quicker than their larger counterparts and often have a culture based on openness and trust.

Another advantage is the access to additional resources and learning opportunities that can translate into cost reductions and greater future performance (Beekman & Robinson, 2004). As stated by Sawhney and Zabin (2002), business-to-business relationships can create value networks that make up a "business ecosystem" (p. 315). This ecosystem can provide benefits that enhance the competitive advantage for all parties involved. Basu (2001) argues that it is imperative for businesses to share knowledge and best practices if they are to succeed in a collaborative economy. Empirical research (O'Farrell & Wood, 1997; Kelly, 2007) has shown the value of professional networks in developing and refining capabilities and capacity. Specially, SMEs can gain cost and service advantages and greater flexibility from strategic relationships, and these improvements are likely to strengthen their overall competitive advantage (Miller, 1988; Kelly, 2007).

The establishment of strategic alliances alone is not enough. To reap the benefits of these relationships all parties involved must gain value from the association. Research has shown that owners of SMEs often look for partnerships with businesses that offer a complementary contribution and a shared agreement of fundamental values and trust (Hoffman & Schlosser, 2001). Similarly, Saunders (1997) and Fuller and Lewis (2002) argue that SMEs should seek out organizations in which they can develop mutually beneficial relationships. According to Das and He (2006), the best strategic relationships for entrepreneurial businesses are based on compatible motivations, access to complementary business functions, and involvement and commitment from all levels of the organization. They also highlight the importance of developing purposeful relationships and acting in a timely manner to secure commitments.

SMEs need constantly to identify ways to lower costs, increase productivity, and strengthen their competitive advantage (Mentzer, DeWitt, Keebler, Min, Nix, & Smith, 2001; Das & He, 2006). Likewise, researchers continue to examine all types of variables in relationship to SME performance, including both relational and operational variables. In terms of operational variables, information quality (Huber & Daft, 1987) and continuous quality improvement (Deming, 1975; Prybutok & Ramasesh, 2005) are two of the more important aspects of interorganizational relationships that can affect firm performance. Additional research on these variables is needed to better understand their impact in the small business context.

Information Quality

Information quality has been defined as the degree to which the information received from another is accurate, timely, complete, adequate, and credible (Daft & Lengal, 1986; Huber & Daft, 1987; Monczka, Peterson, Handfield, & Ragatz, 1988). Information exchanged between parties must be systematically available for the effective completion of required tasks (Guetzkow, 1965) and interorganizational success is often somewhat dependent on effective and efficient communication (Huber & Daft, 1987). This exchange of information can predict the success of the partnership of the actors (Devlin & Bleakley, 1988).

In supply chains, companies find reduction in costs and better utilization of resources by utilizing continually advanced systems in information flow (Gopal & Cypress, 1993; Martin, 1995). Through more advanced exchanges of information, the transaction between members can be much quicker (Murphy, 1998). These benefits are becoming more available to companies through technological advancements that facilitate these exchanges, and thus enable greater performance (Stefansson, 2002). For example, the prevalence of off-the-shelf, Web-based integrated inventory management systems (like those that combine point-of-sale systems with automated inventory ordering) have made it possible for organizations not only to track orders and process receipts, but also to communicate and manage inventories in real time with their vendors. This better and more complete information allows firms to plan key variables, such as capacity of the supplier, which creates a more efficient chain (Chapman & Carter, 1990; Raturi, Meredith, McCutcheon, & Camm, 1990). Ellram and Hendrick (1995) found in their study on supply chain relationships, that partnering organizations continually share information needed for mutual understanding, operational information necessary for smooth operations, and information regarding high corporate-level issues important for good coordination.

When applying path-goal theory (House, 1971) to the interorganizational relationship and the exchange of information, the leader, or the buyer in this sense, must provide the supplier with the information of what exactly is to be expected. When looking at SMEs, the level of quality information at the beginning of the exchange as well as throughout the transaction must be thorough. Thus, it is expected that when SMEs receive more meaningful and timely information there will be a greater opportunity to perform well. Therefore, the following hypothesis is given:

Hypothesis 1: A positive relationship exists between perceived information quality and performance for small and medium-sized businesses.

Continuous Quality Improvement

Continuous quality improvement (CQI) is the process within organizations that seeks higher quality within an organization that will lead to better products and services with lower defects and with lower costs (Deming, 1975; Prybutok & Ramasesh, 2005). There are three primary elements of CQI within this definition. First is the quality of data and information gathered internally within the organization. Second is the use of the internal and external quality data by the organization. Third is the quality documentation by the organization internally. Pence (1993) emphasizes the need for suppliers to adhere to and follow the paths toward quality improvement to maintain strong relationships with partnering and collaborating organizations.

Prior research has indicated that quality practices within an organization are statistically significantly related to success within that organization. Just two of these quality practices that lead to success are service quality (Magal, 1991; Rands, 1992; Ferguson & Zawacki, 1993), and system quality (Davis, 1989). The benefits of CQI are lower costs, information accuracy, and lowers defects. Within the interorganizational setting, CQI is seen as a capability because it suggests that the processes and systems exist to carry out the organizations' tasks with a minimum of waste more effectively and efficiently. It is expected, however, that SMEs are more concerned with continuing the CQI process. SMEs, with spread-out resources and commitments, rely on CQI to improve their ability to meet each of their buyers' needs. Therefore, in this context, it is expected that these organizations will see CQI as positively related to firm performance. Thus, the following hypothesis is given:

Hypothesis 2: A positive relationship exists between continuous quality improvement and performance for small and medium-sized businesses.

Methodology

Sample

An electronic survey was administered via email to the approved vendors for a large university in the southwestern United States. The respondent for each vendor was the primary contact for the university and vendor. Of the 498 accessed surveys, 156 surveys were completed indicating a 31 percent response rate of those accessing the survey. Of the 156 completed surveys, there were 134 usable surveys that were considered an SME with fewer than 500 employees after removing those cases with low response rate. The average size firm is 34 employees.

Measures

Participants were asked to specify the size of the organization by giving the number of employees (Kimberly & Evanisko, 1981). As has been mentioned earlier, the size of the organization can impact the relationship between the supplier and the buyer (Redondo & Fierro, 2007). In addition, respondents were asked for the number of years the organization has been a vendor to the university to assess the degree of institutionalization, which can potentially affect the vendor's ability to respond to customer demands (Dimaggio & Powell, 1983). The average length of time the organization had been working with the university is 6.39 years. They were also asked to indicate the length of time that he or she has worked with the organization to help indicate the person's tendency to observe, accept, and adopt the values and norms of the organization (Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994). The average length of time the respondent had been working with the company is 9.49 years.

Information quality was examined using five dimensions of information—accuracy, timeliness, adequacy, completeness, and credibility (Daft & Lengal, 1986; Huber & Daft, 1987; Monczka et al., 1998). If one of these items proved not to be ranked high, the quality of information may not be as good. For example, if information comes in too late that a certain product has changed, the supplier may use the wrong product in servicing the buyer. Thus, the information is no longer useful. Using Mohr and Spekman's (1994) five questions on information quality (previous $\alpha = .910$), respondents indicated their level of trust on a seven-point Likert-type scale ranging from (1) not timely (accurate, adequate, etc.) to (7) very timely (accurate, adequate, etc.).

Continuous quality improvement (Deming, 1975; Prybutok & Ramasesh, 2005) consists of three factors: quality data and information gathering, quality internal and external data usage, and quality documentation. These factors were assessed using an adaptation of Prybutok and Spink's (1999) seven items for continuous quality improvement (previous $\alpha = .852$). These seven items were tested using a seven-point Likert type scale with responses ranging from strongly disagree (1) to strongly agree (7).

The items assessing performance were designed specifically for this study. They were developed through an examination of the literature and based on the expectations of the business relationship as determined by the buyer. Specifically, supplier firms as well as multiple buyers in more than one industry were questioned to determine items that would accurately assess performance in this type of relationship. The survey was then developed and examined by researchers as well as those in practice with changes made that were necessary. After a pilot study on suppliers to a global telecommunications firm resulted in good results, the survey was determined usable for this survey. These items are tied to the definition of performance as well as those areas that the supplier must monitor for quality performance for the buyer. These seven items assessed performance in areas such as on-time delivery, full compliance with buyer's requests, properly correcting all problems or mistakes prior to acknowledging completion of the work order, and using approved products and procedures. These items were measured using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7). The following paragraph describes how the reliability of these items were determined.

Data and Scale Analysis

The data were screened and prepared using Kline's (1997) recommended procedures. After a full analysis, cases with missing data points, as well as outliers identified with the frequency distribution of standard scores, were removed. Univariate normality was assessed by examining each item for skewness and kurtosis. The test showed a normal distribution. Cronbach's alpha was used to establish the reliability of the scales (Nunnally & Bernstein, 1994; Henson, 2001). The coefficient alpha's for each scale was well above Nunnally and Bernstein's (1994) suggested reliability coefficient of .70. These reliability estimates are found in Table 1.

The item scores were assessed to evaluate the consistencies of the measurement items with construct validity. Utilizing a confirmatory factor analysis (Ahire & Deveraj, 2001), LISREL was used to examined the latent variable with its corresponding items. The latent constructs were analyzed using principle components factor analysis to extract the analysis pattern. Using the K1 rule (Kaiser, 1960), each item extracted only one factor. Therefore, there is only one latent construct per list of variables (Hattie, 1985). The factor pattern/structure coefficients as well as the commonalities, eigenvalues, and Cronbach's alphas are presented in Table 1. A LISREL model assessed the fit of the individual items with the latent construct. Examining the fit indices allows for a test of discriminant validity. The analysis shows that the scale reliabilities are sufficiently larger than the correlation averages with other constructs, the interscale correlations are not perfectly correlated, and the variances extracted are greater than the squared intercorrelations of the latent variable. This does indicate a good fit. The results of the analysis are found in Table 2. In addition, the overall means, standard deviations, Cronbach's alphas, and correlations of the latent variables are found in Table 3.

Table 1. Factor Pattern/Structure Coefficient for All Constructs

Variable Item #	*Information Quality*		*CQI*		*Performance*	
	Factor	h^2	*Factor*	h^2	*Factor*	h^2
1	.847	.717	.846	.716	.792	.627
2	.964	.929	.867	.752	.794	.631
3	.930	.865	.864	.747	.863	.745
4	.958	.918	.847	.718	.828	.686
5	.906	.821	.801	.641	.866	.749
6	n/a	n/a	.916	.839	.769	.591
7	n/a	n/a	.900	.810	.864	.747
Total Variance Explained	84.911		74.458		68.364	
Initial Eigenvalue	4.250		5.223		4.777	
Second Eigenvalue	.347		.684		.579	
Alpha	$\alpha = .955$		$\alpha = .943$		$\alpha = .922$	

Results

The purpose of this study is to examine the relationship of both information quality and continuous quality improvement with performance in SMEs. Hypothesis 1 states that there is a positive relationship between information quality and performance in SMEs. In addition, hypothesis 2 states that there is a positive relationship between continuous quality improvement and performance. The hypotheses were tested by first entering control variables of organizational size, number of years with the company, number of years working for the buyer, and number of years working as a manager for this company. Following this, both information quality and continuous quality improvement were entered into the regression model.

The first model with only the control variables resulted in an ANOVA with an F statistic of .182 that was not statistically significant ($p > .05$). The second model, which includes both the control variables as well as information quality and continuous quality improvement, was statistically significant with an ANOVA with an F statistic of 18.579 ($p < .05$). These two predictor variables improved the fit of the model with an R^2 of .421, an adjusted R^2 of .398, and an $\alpha R^2 = .416$ that was statistically significant ($p < .05$). In addition, the relationship of the predictor variables with performance was examined using standardized and unstandardized coefficients, statistical significance, and confidence intervals. Table 4 presents a summary of these results. The results of the regression analysis indicate that both information quality and continuous quality improvement are statistically significantly related to performance in SMEs ($p < .01$), thus supporting hypotheses 1 and 2.

Discussion and Practical Implications

The results of this study support both of the hypotheses indicating that SMEs' information quality and continuous quality improvement are positively related to performance. These findings not only add to the literature base, but also provide practical implications for SMEs in regards to building stronger relationships with other organizations. SMEs generally have access to limited resources and technologies needed to process information and improve operations, making it important to understand how best to develop strategic alliances that positively affect firm performance.

Table 2. Construct Fit Indices

Construct	x^2	*d.f.*	*CFI*	*GFI*
Information Quality	3.37	5	1.0	.99
CQI	174.64	14	.89	.73
Performance	37.69	14	.98	.93

Table 3. Means, Standard Deviations, Cronbach's Alphas, and Correlations

Construct	*Means*	*SD*	*1*	*2*	*3*
Information Quality	5.816	1.075	(.955)		
CQI	6.105	.914	.380*	(.943)	
Performance	6.228	.793	.606*	.444*	(.922)

Note: *Correlations are significant at the 0.01 level (2-tailed). Reliability coefficients are presented on the diagonal.

SMEs should focus on sharing information that allows for both relationship development and continuous quality improvement. This requires an exchange based on quantity and quality of the information, in a manner that creates trust and commitment within the partnering organizations (Hoffman & Schlosser, 2001). As suggested in prior research (Das & He, 2006; Li & Qian, 2007), strong alliances are built on sharing information and resources, thereby reducing risk for all parties involved. By sharing relevant information in a timely manner, SMEs gain more strategic flexibility that enables them to refine their capabilities and improve performance (O'Farrell & Wood, 1997; Kelly, 2007).

While continuous improvement can help SMEs better serve existing customers, it can also be used to develop new internal processes that make them less dependent on a limited customer base and more focused on future growth. As suggested by Beekman and Robinson (2004), effectiveness is important in developing a long-term customer relationship, but ineffectiveness may be more important in determining the duration of the relationship. Although it is critically important for a SME to effectively serve its current customers, it is also important to continually identify new sources for revenue and expanded capacity to maximize performance. This can hopefully allow for the creation of a competitive advantage that is sustainable, which in turn increases long-term viability (Aldrich & Auster, 1986). As suggested by Baum, Calabrese, and Silverman (2000), without such relationships, SMEs are often faced with lower growth potential and higher failure rates.

As indicated in past research (Morrissey & Pittaway, 2006; Devins, Gold, Johnson, & Holden, 2005), developing SMEs are likely to become emotionally involved with customers and learn through social interaction rather than formalized business practices. Conversely, larger SMEs with greater resources and technologies tend to become more reliant on the flow of detailed information to make business decisions and manage customer relations. The adoption of better integrated systems allows these larger SMEs to collect more information and process it quickly to handle complex transactions (Gélinas & Bigras, 2004). As SMEs grow and mature, it is important that they create formalized arrangements and strategic alliances and rely less on social factors and more on internal processes (Morrissey & Pittaway, 2006). While SMEs are generally

Table 4. Results of Simultaneous Regression Analysis for Prediction of Performance in SMEs						
Variable	*B*	*SE B*	*β*	*95% CI Lower*	*95% CI Upper*	*VIF*
Step 1						
# of Employees	.000	.001	.000	-.003	.003	1.044
Company Years	.006	.010	.051	-.014	.025	1.062
Manager Years	.003	.009	.031	-.014	.020	1.087
Step 2						
# of Employees	.000	.001	-.004	-.002	.002	1.046
Company Years	-.002	.008	-.021	-.018	.013	1.084
Manager Years	.004	.007	.046	-.009	.018	1.098
Information Quality	.381	.054	.517*	.274	.489	1.196
CQI	.212	.064	.244*	.086	.338	1.186

Note: R^2 for first model = .004; R^2 for second model = .421; ΔR^2 = .416;
*p < .01; N = 134; two-tailed tests.

well suited for strategic relationships due to their centralized decision making and flexible organizational structure, these businesses can vary greatly in terms of size and scope, thereby making it critically important to identify appropriate partners with a similar culture and complementary resources. Once the alliance begins information quality and continuous quality improvements become important factors in the maturation of the relationship.

Another implication from our findings is that greater interaction among firms may promote a sharing of resources (Watts & Hahn, 1993), which results in improved quality, reduced costs, and increased continuous improvement for all involved parties. In addition, partnerships based on a commitment to continuous improvement where SME organizations partner with more established organizations allow the SMEs to mitigate their lack of a track record of success and therefore reduce their overall likelihood of failure (Hudson & McArthur, 1994; Aldrich & Auster, 1986). When taken together, a competitive advantage is gained as a result of an alliance based on high-quality information and continuous improvement efforts. This competitive advantage may ultimately determine a SMEs success or failure.

Future Research

While the importance of operational variables often becomes more important as SMEs grow and mature, various social factors can also greatly impact interorganizational relationship, regardless of firm size. In particular, trust, personal values, and reciprocity can play a vital role in partner identification and relationship building (Hu & Korneliussen, 1997; Hoffmann & Schlosser, 2001). While we found that information quality is important for firm performance, additional exploration is needed to determine what communication processes work best within SMEs to allow for the flow of accurate and detailed information. These processes must allow for the flow of reliable data and in a manner that effectively serves all partners and allows for continuous improvement. Interfirm cooperation is required, particularly among SMEs, if an alliance is successful and leads to increased productivity and growth (Das & He, 2006).

Future research should also consider expanding the population of SMEs studied beyond that which is seen here. Because our sample was drawn only from vendors associated with one large university, the generalizability of our findings may be limited. By examining vendors that are of various sizes and that are associated with many different types of organizations, a more nuanced understanding of vendor-supplier relationships will emerge.

Research has shown that many influences impact business relationships and organizational performance. The intent of this study was to examine some of the predictors of performance within SMEs. We found that SMEs are dependent on information quality and well-designed internal processes for quality and performance. These findings are important for both future research and practice. However, researchers must continue to examine how other operational variables impact strategic decisions and firm performance. In addition, owners and managers of SMEs must be aware of what factors affect interorganizational relationships in order to develop best practices for exchanging information, maximizing resources, and encouraging continuous quality improvement. Additional research is particularly needed within the small business arena to better understand business-to-business relationships and professional networks and the role they play in the future success of SMEs in today's ultra-competitive marketplace.

References

Ahire, S. L., & Devaraj, S. (2001). An Empirical Comparison of Statistical Construct Validation Approaches. *IEEE Transactions on Engineering Management,* 48 (3), 319–329.

Aldrich, H. E. & Auster, E. (1986). Even Dwarfs Started Small: Liabilities of Age and Size and Their Strategic Implications. In *Research in Organizational Behavior.* Ed. B. M. Staw and L .L. Cummings, Greenwich, CT: JAI Press, 165–198.

Astley, W. G. & Van de Ven, A. H. (1983). Central Perspectives and Debates in Organization Theory. *Administrative Science Quarterly,* 28 (2), 245–273.

Basu, R. (2001). New Criteria for Performance Management. *Measuring Business Excellence*, 5 (4), 7–12.

Baum, J. A. C., Calabrese, T., & Silverman, B. S. (2000). Don't Go It Alone: Alliance Network Composition and Startups' Performance in Canadian Biotechnology. *Strategic Management Journal*, 21 (3), 267–294.

Beekman, A. V. & Robinson, R. B. (2004). Supplier Partnerships and the Small, High-Growth Firm: Selecting for Success. *Journal of Small Business Management,* 42 (1), 59–77.

Chapman, S. & Phillip Carter, P. (1990). Supplier/Customer Inventory Relationships Under Just-in-Time. *Decision Science,* 21 (1), 35–51.

Chao, G. T., O'Leary-Kelly, A. M., Wolf, S., Klein, H. J. & Gardner. P. D. (1994). Organizational Socialization: Its Contents and Consequences. *Journal of Applied Psychology,* 79 (5), 730–743.

Daft, R. & Lengal, R. (1986). Organizational Information Requirements, Media Richness and Structural Design. *Management Science,* 32 (5), 554–571.

Das, T. K. & He, I. Y. (2006). Entrepreneurial Firms in Search of Established Partners: Review and Recommendations. *International Journal of Entrepreneurial Behaviour & Research,* 12 (3), 114–143.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly,* 13 (3), 319–340.

Deming, W. E. (1975). On Some Statistical Aids Toward Economic Production. *Interfaces,* 5 (4), 1–15.

Devins, D., Gold, J., Johnson, S. & Holden, R. (2005). A Conceptual Model of Management Learning in Micro Businesses: Implications for Research and Policy. *Education+Training,* 47 (8/9), 540–551.

Devlin, G. & Bleackley, M. (1988). Strategic Alliances—Guidelines for Success. *Long Range Planning,* 21 (5), 18–23.

Dimaggio, P. J. & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48 (2), 147–160.

Dodge, H. R. & Robbins, J. E. (1992). An Empirical Investigation of the Organizational Life Cycle Model for Small Business Development and Survival. *Journal of Small Business Management,* 30 (1), 27–37.

Ellram, L. M. & Hendrick, T. E. (1995). Partnering Characteristics: A Dyadic Perspective. *Journal of Business Logistics,* 16 (1), 41–64.

Ferguson, J. M., & Zawacki, R. A. (1993). Service Quality: A Critical Success Factor for IS Organizations. Information Strategy: *The Executive's Journal,* 9 (2), 24–30.

Franco, M. J. B. (2003). Collaboration Among SMEs as a Mechanism for Innovation: An Empirical Study. *New England Journal of Entrepreneurship,* 6 (1), 23–32.

Fuller, T. & Lewis, J. (2002). Relationships Mean Everything: A Typology of Small-Business Relationship Strategies in a Reflexive Context. *British Journal of Management,* 13 (4), 317–336.

Gélinas, R. & Bigras, Y. (2004). The Characteristics and Features of SMEs: Favorable or Unfavorable to Logistics Integration. *Journal of Small Business Management,* 42 (3), 263–278.

Gopal, C. & Cypress. H. (1993). *Integrated Distribution Management: Competing on Customer Service, Time and Cost.* Homewood, IL: Irwin Publishing.

Guetzkow, H. (1965). Communications in Organizations. In J. March (ed.), *Handbook of Organizations,* (pp. 534–573). Chicago, IL: Rand McNally and Company.

Harris, M. L., Grubb, W. L., & Hebert, F. J. (2005). Critical Problems of Rural Small Businesses: A Comparison of African American- and White-owned Formation and Early Growth Firms. *Journal of Developmental Entrepreneurship,* 10 (3), 223–238.

Hattie, J. (1985). Methodology Review: Assessing Unidimensionality of Tests and Items. Applied Psychological Measurement, 9 (2), 139–164.

Henson, R. K. (2001). Methods, Plainly Speaking—Understanding Internal Consistency Reliability Estimates: A Conceptual Primer on Coefficient Alpha. *Measurement and Evaluation in Counseling and Development,* 34 (3), 177–189.

Hoffmann, W. H. & Schlosser, R. (2001). Success Factors of Strategic Alliances in Small and Medium-Sized Enterprises: An Empirical Survey. *Long Range Planning,* 34, 357-381.

House, R. J. (1971). A Path-goal Theory of Leader Effectiveness. *Administrative Science Quarterly,* 16 (3), 321–338.

Hu, Y. & Korneliussen, T. (1997). The effects of personal ties and reciprocity on the performance of small firms in horizontal strategic alliances. *Scandinavian Journal of Management,* 13 (2), 159-173.

Huber, G. P., & Daft, R. (1987). The Information Environment of Organizations. In *Handbook of Organizational Communication*. Ed. F. Jablin et al. Sage Publications, Newbury Park, CA: Sage Publications, 130–164.

Hudson, R. L. & McArthur, A. W. (1994). Contracting Strategies in Entrepreneurial and Established Firms. *Entrepreneurship Theory and Practice,* 18 (3), 43–59.

Kaiser, H. F. (1960). The Application of Electronic Computers to Factor Analysis. *Educational and Psychological Measurement,* 20 (1), 141–151.

Kelly, S. (2007). The Function and Character of Relationship Benefits: Transferring Capabilities and Resources to the Small Firm. *Journal of Small Business and Enterprise Development,* 14 (4), 602–619.

Kimberly, J. R. & Evanisko, M. J. (1981). Organizational Innovation: The Influence of Individual, Organizational, and Contextual Factors on Hospital Adoption of Technological and Administrative Innovation. *Academy of Management Journal,* 24 (4), 689–713.

Kline, R. B. (1997). *Principles and Practice of Structural Equation Modeling.* New York, NY: Guilford Press.

Li, L. & Qian, G. (2007). Partnership or Self-Reliance: Prescriptions for Small and Medium-Sized Enterprises. *Journal of Business Strategy,* 28 (6), 29–33.

Magal, S. R. (1991). A Model for Evaluating Information Center Success. *Journal of Management Information Systems,* 8 (1), 91–106.

Martin, A. (1995). *Infopartnering: The Ultimate Strategy for Achieving Efficient Consumer Response.* Essex Junction, VT: Oliver Wight Publications.

Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D. & Zacharia, Z. G. (2001). Defining Supply Chain Management. *Journal of Business Logistics*, 22 (2), 1–25.

Miller, D. (1988). Relating Porter's Business Strategies to Environment and Structure: Analysis and Performance Implications. *Academy of Management Journal,* 31 (2), 280–308.

Mohr, J. & Spekman, R. (1994). Characteristics of Partnership Success: Partnership Attributes, Communication Behavior, and Conflict Resolution Techniques. *Strategic Management Journal,* 15 (2), 135–152.

Monczka, R. M., Peterson, K. J., Handfield, R. B. & Ragatz, G. L. (1998). Success Factors in Strategic Supplier Alliances: The Buying Company Perspective. *Decision Sciences,* 29 (3), 553–577.

Morrissey, W. J. & Pittaway, L. (2006). Buyer-Supplier Relationships in Small Firms. *International Small Business Journal,* 24 (3), 272–298.

Murphy, E. E. (1998). Information Technology Could Transform Logistics. *Purchasing,* 125 (7), 115–118.

Nooteboom, B. (2000). Institutions and Forms of Co-Ordination in Innovation Systems. *Organization Studies,* 21 (5), 915–939.

Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric Theory*. New York: McGraw-Hill Inc.

O'Farrell, P. N. & Wood, P. A. (1997). Formation of Strategic Alliances in Business Services: Towards a New Client-Oriented Conceptual Framework. *The Service Industries Journal,* 19 (1), 133–151.

Pence, J. L. (1993). Towards a New Telecommunications Industry Quality Standard. *Proceedings of the IEEE,* 81 (2), 166–180.

Prybutok, V. R. & Ramasesh, R. (2005). An Action-Research Based Instrument for Monitoring Continuous Quality Improvement. European *Journal of Operational Research,* 166 (2), 293–309.

Prybutok, V. R. Spink, A. (1999). Transformation of a Health Care Information System: A Self-Assessment Survey. *IEEE Transactions on Engineering Management,* 46 (3), 299–310.

Rands, T. (1992). Information Technology as a Service Operation. *Journal of Information Technology,* 7 (4), 189–201.

Raturi, A., Meredith, J., McCutcheon, D. & Camm, J. (1990). Coping with the Build-to-Forecast Environment. *Journal of Operations Management,* 9 (2), 230–249.

Redondo, Y. P. & Fierro, J. J. C. (2007). Importance of Company Size in Long-term Orientation of Supply Function: An Empirical Research. *Journal of Business and Industrial Marketing,* 22 (4), 236–248.

Saunders, M. (1997). *Strategic Purchasing and Supply Chain Management.* London: Pittman.

Sawhney, M. & Zabin, J. (2002). Managing and Measuring Relational Equity in the Network Economy. *Journal of the Academy of Marketing Science*, 30 (4), 313-332.

Stefansson, G. (2002). Business-to-Business Data Sharing: A Source for Integration of Supply Chains. *International Journal of Production Economics,* 75 (1–2), 135–146.

Watts, C. A. & Hahn, C. K. (1993). Supplier Development Programs: An Empirical Analysis. International *Journal of Purchasing and Materials Management,* 29(2), 10–17.

About the Authors

Michael L. Harris (harrismi@ecu.edu) holds a doctorate degree from North Carolina State University, and is currently an associate professor in the Department of Management at East Carolina University. He is also a member of the National Small Business Institute Board of Directors. His research interests include entrepreneurial attitudes and intentions, rural and minority entrepreneurship, and entrepreneurship education.

William C. McDowell (mcdowellw@ecu.edu) holds a doctorate degree from North Texas State University, and is currently an assistant professor in the Department of Management at East Carolina University. His research interests include entrepreneurship, family business, and small business management.

Shannon G. Gibson (gibsons@ecu.edu) holds a doctorate degree from Virginia Tech, and is currently an associate professor in the Department of Management at East Carolina University. She is also a member of the Social Security Administration Occupational Information Development Advisory Panel. Her research interests include entrepreneurship education, online training, and human resource management issues, such as job analysis and technology acceptance.

Effects of Participation in Paid Membership Organizations on Entrepreneurial Success

Michele K. Masterfano

Research into entrepreneurial networking activities has ignored an aspect that is important to the entrepreneurs—does it make sense to pay dues to an organization that promises networking opportunities to help build their business? This study looked at that aspect of networking by comparing revenue growth rates and average number of employees between those businesses whose owners belong to paid membership organizations and those who do not. No differences were found between the two groups of entrepreneurial firms. While there are still benefits to joining these organizations, entrepreneurs should not expect to grow their business because of membership.

Keywords: entrepreneurs; networking; memberships; growth; dues

Entrepreneurs have long been told that networking was important to their success. There is voluminous literature on networking in the entrepreneurship literature (Aldrich, Reese, Dubini, Rosen, & Woodward, 1989; Andre, 1992; Egge & Stoehr, 1997; Hansen, 1995; Johannisson & Monsted, 1997; Malewicki, 2005; Ostgaard & Birley, 1996; Reese & Aldrich, 1995; Renzulli, Aldrich, & Moody, 2000), but not enough is said about the measurable results of networking activity. Part of the problem is that the probability of business success is determined by many factors, encompassing both internal and external factors. For instance, years in business is a factor defining the probability of success, as is the experience and education of the business owner (Hienerth & Kessler, 2006). The overall economic environment of the region or country in which the firm operates will also be a factor in success or failure. As well, measures of success are highly contextual, depending on what the entrepreneur wants to accomplish, as well as other factors such as the industry within which an organization operates.

However, given the popular dictum that entrepreneurs must network to build their businesses, it is important to study the actual, measurable effects of networking activity. This study will be one step toward that goal. It looks at whether paying to join one or more organizations whose main purpose is to allow business owners to network has any measurable effect on the growth or success of that business. No literature appears to exist currently that specifically looks at those who pay to belong to a networking organization. Also, there is apparently no literature on whether there are significant differences in business success between entrepreneurs who belong to paid membership organizations and those who do not.

This article will first review the literature in this area, followed by a description of the study conducted. After describing the results of the study, the implications of it will be discussed, along with the limitations of the study and future areas of research.

Networking and the Entrepreneur

Granovetter (1973, 1983) appears to have begun the discussion of how social networks are formed from both strong and weak ties, with strong ties being those with family and close friends and weak ties being those with acquaintances, coworkers, and so on. He presented an interesting argument that weak ties are highly important, because they provide a much broader range of information to the individual; his thesis was that strong ties, unlike weak ties, all know one another, which has the ultimate effect of restricting information—what one knows, everyone knows, and therefore little new information enters the network. Granovetter's suppositions were supported by several studies. For instance, Singh, Hybels, and Hills (2000) found that entrepreneurs who were central to many different information networks were better able to recognize and capitalize on opportunities.

An early study (Dollinger, 1985) showed that business owners spend a significant amount of time in boundary spanning activities. While the most time spent outside the organization was with customers, the second highest amount of time was spent with contacts in business membership organizations, allowing one to assume that business membership organizations are second in importance to an entrepreneur behind only customers. As a percentage of total time, this activity remained small, however each contact lasted almost an hour, suggesting that there is benefit to developing and maintaining relationships with other businesspeople.

Studies also suggest that entrepreneurs are quite pragmatic in the development of their networks, adding and pruning people based on an evaluation of their exchange relationships (Larson & Starr, 1993, Staber & Aldrich, 1995). Aldrich and Zimmer (1986) suggested that an entrepreneur absolutely requires association with others in order to assemble all of the resources needed for business formation and growth. One way of constantly meeting new people would seem to be membership in a business network. In fact, Davidsson and Honig (2003) found evidence that membership in a business network had a strong, positive correlation with the report of the first sale by an entrepreneur, as well as with profits.

Strong ties are not to be ignored, of course. These family and friends are generally critical in the early stages of deciding on entrepreneurship, as well as in the acquisition of an entrepreneur's initial resources (Lechner, Dowling, & Welpe, 2006). Hite and Hesterly (2001) found that entrepreneurs make heavy use of their strong ties as they are working through the establishment of the business. Lechner, Dowling, and Welpe (2006) suggested that the personal network might be the single most important asset of the new firm. However, Hite and Hesterly also found that firm networks are dynamic, as entrepreneurs become more calculative in their exchange relationships, being motivated more by the economic benefits a network can provide.

In that regard, Shaner and Maznevski (2006) produced a piece that purported to show readers whether they had the correct network members, given a wide range of expressed needs. Their study proposed that who was in your network was highly important, and suggested that there are different types of networks that one should develop based on different goals and objectives.

The world of voluntary associations generally appears to be an arena within which one can usually meet diverse others, and thus increase network ties. While Putnam (2000) and Rotolo (1999) pointed to an overall decline in memberships in voluntary associations in the United States, they showed that there had actually been an increase in professional association memberships. One of the reasons this could be true is that these organizations, in fact almost all voluntary associations, tend to be local in nature, as are many entrepreneurial firms. Schutjens and Stam (2003) argued that spatial proximity is important in network ties, as they provide for more potent exchanges, as well as providing more opportunities for chance encounters. Thornton and Flynn (2003) noted that even with the advanced communications technologies available today, entrepreneurship is still inherently local.

Davis, Renzulli, and Aldrich (2006) suggested that maintaining multiple memberships in dissimilar organizations can increase one's network diversity; they also found that active participation, rather than simply maintaining a membership, was necessary to develop that network diversity. Unfortunately, Davis, Renzulli, and Aldrich did not study whether these diverse memberships were of any practical use to entrepreneurs in terms of gaining additional resources, finding employees, or increasing sales.

This is emblematic of much of the literature regarding entrepreneurs' networking activities. While some studies will suggest positive outcomes due to networking (Davidsson & Honig, 2003; Larson & Starr, 1993; Lechner, Dowling, & Welpe, 2006; Staber & Aldrich, 1995), there are generally no prescriptions on how one develops a network; often, the study used a sampling frame developed from an organization's membership list. Thus, there are no comparative studies that analyze any differences between results from those entrepreneurs who belong to membership organizations, and build their networks that way, and those who rely solely on informal networking through chance encounters. This is a fruitful area for research.

Since little has appeared to date in the literature regarding how an entrepreneur should or could build a network that will provide the resources necessary for business success, one can assume that participation in paid membership organizations is one way to do that. This method appears to be quite common, given the results of Putnam (2000) and Rotolo (1999) that suggest membership in business organizations is growing, while membership in other types of social organizations is declining. However, when organization membership lists have been used as sampling frames, there has been no ability to compare results to those outside this type of organizational framework. This is a key missing piece of evidence in attempting to understand the effects of formalized networking.

What Is Success?

When surveying the business literature on selecting constructs of business success, one finds a rather broad range of information, from discussions of the Balanced Scorecard (Kaplan & Norton, 1993) to configurational fit as applied to family businesses (Hienerth & Kessler, 2006) to the rough set approach (Ahmad, Hamdan, & Abu Bakar, 2004). This latter study contends that it determined the best set of success indicators for e-commerce companies. Their results suggested that there are nine indicators most commonly occurring in reduct sets—terminology from model theory that seeks to reduce the full set of the variables being studied—when analyzing 275 records and 30 success indicators. These indicators included many that entrepreneurs commonly track, such as earnings before interest (EBIT), return on assets (ROA), return on equity (ROE), and working capital, as well as some that are not typically associated with small businesses, such as business value per share and price earnings ratio (PE).

While focusing on family businesses, the Hienerth and Kessler (2006) study yielded important results in understanding how smaller businesses, such as those typically owned by entrepreneurs, define success. They argued that there were two key issues in defining success in small businesses: "(1) the ambiguous definition of success in small businesses and, as a consequence, (2) the biased perception of success for lack of adequate reference values" (p. 116). The definition of success tended toward the ambiguous because family businesses frequently have nonfinancial as well as financial goals, and thus there are no reference values that can be considered adequate, which introduces bias into the results.

Interestingly, their results seemed to indicate that the age of the company impacts all growth measures that were used, with the oldest companies showing much less success compared to younger companies. Also, the youngest companies—those that had been in business between one and five years—showed very low levels of success when success was defined as growth.

Researchers who have specifically linked networking activities to business outcomes include Reese and Aldrich (1995), Hansen (1995), Ostgaard and Birley (1996), Gilmore and Carson (1999), Renzulli, Aldrich, and Moody (2000), and Sparrowe, Liden, Wayne, and Kraimer (2001). Each of these studies will be briefly summarized as to what measure was utilized to express the concept of success.

Reese and Aldrich (1995) utilized the data collected in the Research Triangle study produced by Reese (1992) as well as additional samples of new businesses in Wake County, North Carolina. This two-phase study included questionnaires followed by in-depth telephone interviews to determine the extent to which networking activities, as measured by the size of a business owner's network and the amount of time devoted to the network, influenced business performance. The key measures of success utilized in this study included business survival over the two-year period of the study, increased revenue, and whether the business had made a profit, broke even, or suffered a loss.

Hansen (1995) studied entrepreneurial action set size, degree, and frequency of contact to see if there was a correlation with the measure he used, namely how many full-time equivalent employees had been hired by the 12th month of operation, and the dollar amount of the payroll at the time of the study. Because at least one of his responding companies utilized independent contractors rather than employees, he was careful to translate the independent contractor time into a full-time employee (FTE) equivalent so as to include all those who worked in the business.

Growth can be measured in many ways. Ostgaard and Birley (1996) used three measures of growth—sales, profit, and employment—to answer their research question: "How is new venture growth affected by the networking characteristics of the entrepreneur?" (p. 38). Their study was conducted over a three-year period.

Thus, we can see that typical measures of success include growth in the business measures of sales, profit, and employees. Simple survival is also a measure of success when taken over time.

Based on these results, our hypotheses can be developed, bringing the concepts of networking through participation in paid membership organizations and entrepreneurial success together. For this study, based on the literature, success has been defined as the growth rate in revenues and in the number of employees.

H1: Participation in paid membership organizations will increase the average growth rate of the revenues of the business. There will be a significant difference in the revenue growth rates between those businesses whose owners participate in paid membership organizations and those businesses whose owners do not.

H2: Participation in paid membership organizations will increase the average growth rate of employees or their full-time equivalents of the business. There will be a significant difference in the employee growth rates between those businesses whose owners participate in paid membership organizations and those businesses whose owners do not.

The Study

The overall purpose of this study was to explore the differences in revenue growth and in the number of employees between groups of entrepreneurs who participate in formal networking activities through membership in business organizations and those who do not participate in this type of formal networking activity. Because the research questions relied on and related to a rich body of literature on social networking constructs, as well as established measures of business success, a largely quantitative analysis was called for, with data collection relying on a survey instrument (Edmondson & McManus, 2007).

Selection of Participants

In order to develop a suitable sampling frame, a list of business owners in the city of Philadelphia, Pennsylvania, was purchased from a commercial data source, InfoUSA. This company maintains a database of approximately 15 million businesses in the United States and Canada and allows researchers to filter their selection according to several criteria, including those required for this study. These filters are described below.

The city of Philadelphia was selected as a geographic boundary for the study because it is the home base of the researcher; this guaranteed that the surveys, which were delivered through the U.S. Post Office, were received within a short timeframe after posting. The list was constructed based on the industries of manufacturing, wholesale, and business services, as this served to replicate the Hansen (1995) study's sampling frame, since he studied action set (network) size and number of full-time equivalent employees. The list was also selected to include those business owners who have been in business for more than a year and less than or equal to five years; this also replicated sampling decisions made by Hansen in his study.

It was initially expected that the number of businesses meeting these criteria would have numbered in the thousands, given the size of the city of Philadelphia. As it turned out, however, the selected list based on the filters detailed above numbered only 346. This size sampling frame was considered to be sufficient to establish statistical significance of the results, given that it was the total population based on the criteria, and therefore met Davidsson's (2004) suggestion that samples be workable from a practical point of view but that they also be theoretically relevant to the questions being tested.

The instrument used in this study was a survey written by the researcher. The majority of the questions were closed in nature, with a set of predetermined answers from which the respondents were able to choose. These types of questions were used because they are easier to standardize and provide for more efficient and complete statistical analysis. Closed-end questions also provide a more effective means with which to generalize the results.

The questions that were included in the survey comprised those that helped to classify the cases; these included the number of years in business, a check on the industry within which the business operates, and the number of full-time employees for each of the years the business had been in existence. An introduction to the concept of business membership organizations was included in the survey preceding the questions regarding whether the business owner participates in these types of organizations; how many of these organizations the business owner maintains membership in; and when he or she first joined a business membership organization. Two general questions of whether the business owner felt that they were getting their money's worth out of the membership and if they felt that membership had contributed to revenue growth were asked to determine the overall feeling regarding membership; this was followed by two open-ended questions asking the respondent to list any comments about their membership, or lack thereof, as well as if the respondent felt that one or more organizations had been particularly helpful in their business. The answers to these questions were utilized to support the quantitative results. Finally, the business owner was asked to list the percentage growth in revenues in each of the past four years. This amount of time was selected because the sample should have included only those businesses that have been operating for five years or less. A question also requested the number of employees in each of the years the business was operating, up to a total of five years.

The dependent variables measured in this study was the percentage growth rate in revenues of the businesses participating, as well as the average number of employees over the time period the business was operating. These were self-reported measures. For the average growth rate in revenues, the actual variable used in the statistical analysis was an average of the growth rates for each year reported. This is a continuous variable measured in the last question of the survey (question 12). It was suggested as a measure of performance by Ahmad, Hamdan, and Abu Bakar (2004) and was utilized by Ostgaard and Birley (1996).

A pretest of the survey was completed with a convenience sample of 21 business owners. Results showed that there were no concerns regarding how to answer the questions, and that the majority of the respondents were willing to share their revenue growth information; only one business owner refused out of the sample of 21. All respondents listed the number of full-time equivalent employees for the years the business was in operation.

Reliability appears to be assured as the respondents to the pretest had no difficulty in understanding what was being asked. As there were not multiple measures of the same construct, it was unnecessary to test for convergent or discriminant validity. As discussed by Davidsson (2004), face validity is highly important in these kinds of studies; it appeared that this issue was not a concern in this study, as the content of the survey was very straightforward.

Data Analysis

As the research focused first on comparing the growth in revenues and growth in number of employees between those entrepreneurs who participate in formalized networking activities and those who do not, the primary analysis method was a *t* test.

The qualitative data, after it was coded, was analyzed in a way that developed trends, common themes, and patterns in the information. The themes and patterns fell into two large groups: those themes and patterns resulting from comments regarding the positive benefits of membership in business organizations, and those themes and patterns resulting from those who believed there were not any benefits to formalized networking. The information collected and analyzed from the comments was used to help explicate the quantitative analysis as well as provided suggestions for areas of future research.

Of the original sample size of 346, 26 surveys were returned as undeliverable, yielding a final sample size of 320. In all, 66 surveys were returned, for an effective return rate of 21 percent. This is comparable to the return rate of Singh, Hybels, Hills, and Lumpkin (1999) and Singh, Hybels, and Hills

(2000), who also utilized mailed surveys and received a response rate of 22 percent. In addition, Ripolles and Blesa (2005) experienced a response rate of 23.8 percent, again using mailed surveys. Researchers who enjoyed a higher response rate, for instance Ostgaard and Birley (1996), utilized telephone interviewing with an initial screen that ensured that respondents fit their required profile and were interested in responding to their questions.

Results

As the survey responses were analyzed, it became clear that the list obtained did not completely adhere to the requirements. Table 1 presents the frequencies of the responses by industry; notable is that 20 responses, or just over 30 percent, were outside the three requested industries.

In addition, the number of years in business shows a large discrepancy between the requirement of between one and five years and the actual results. In fact, almost 80 percent of the respondents were in business more than five years, as shown in Table 2.

Additional discussion with InfoUSA yielded the response that the data is actually sourced from the Yellow Pages directory of the given area. This certainly belies the company's claims of using multiple sources.

Kalleberg, Marsden, Aldrich, and Cassell (1990) described multiple sources of data for research samples. They stated that their "results certainly demonstrate that it is possible to draw a reasonably representative sample from most of the sources we consider" (p. 662), and one of those sources was a commercial data source. It appears from this study that utilization of at least one commercial data source cannot be justified, or that additional discussion as to the exact sources of the data should be completed. However, analysis of the results continued.

More than half of those who belong to paid membership organizations work in the business services industry. The tabulation of the frequencies within industry is shown in Table 3.

By far, those respondents whose businesses are in the manufacturing industry had the largest average number of employees; however those in the business services industry had the largest average annual growth rate of employees, along with the smallest average number of employees. Table 4 shows these averages.

Table 1. Industry Frequencies

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Manufacturing	5	7.6	7.6	7.6
	Wholesale	5	7.6	7.6	15.2
	Business Services	36	54.5	54.5	69.7
	Other	20	30.3	30.3	100.0
	Total	66	100.0	100.0	

Two questions were asked of the respondents who belonged to paid membership organizations regarding their overall feelings regarding the worth of their memberships. Question number eight asked if they felt like they were getting their money's worth from their membership, and question number nine asked if they felt as if their membership had an impact on their company's revenue growth. Most of the respondents felt that they were, indeed, getting their money's worth; however, almost a third of respondents were unsure. More than half felt that their memberships were a factor in the growth of their business. Note, though, that a larger percentage of respondents failed to answer these questions. These results are shown in Tables 5 and 6.

The following section details the results of the analysis based on the two hypotheses. This will be followed by a discussion of the responses to the two open-ended questions.

Hypotheses

Hypothesis one stated that participation in paid membership organizations will increase the average growth rate of revenues of the business. It also stated that there will be a significant difference in the revenue growth rates between those businesses whose owners participate in paid membership organizations and those businesses whose owners do not. Hypothesis two stated there would be a significant difference in the average growth rate of those entrepreneurs whose owners participate in paid membership organizations and those whose owners do not.

Before any tests were completed on the data regarding revenue growth, further analysis of the data was in order. There appeared to be many blank responses in the question regarding revenue growth rate; it was determined, by comparing the number of years in business and the responses to the number of employees per year with the revenue growth rate response, that there were only 54 usable responses available to test Hypothesis one. However, as this represented 82 percent of the total responses, the data analysis proceeded.

Table 2. Years in Business Frequencies

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	1 to < 2 years	4	6.1	6.1	6.1
	2 to < 3 years	4	6.1	6.1	12.1
	3 to < 4 years	3	4.5	4.5	16.7
	4 to < 5 years	3	4.5	4.5	21.2
	> 5 years	52	78.8	78.8	100.0
	Total	66	100.0	100.0	

Table 3. Industry Breakdown of Membership

			Industry				*Total*
			Manufacturing	*Wholesale*	*Business Services*	*Other*	
Belong	Yes	Count	3	3	28	16	50
		% within Belong	6.0%	6.0%	56.0%	32.0%	100.0%
		% within Industry	60.0%	60.0%	77.8%	80.0%	75.8%
	No	Count	2	2	8	4	16
		% within Belong	12.5%	12.5%	50.0%	25.0%	100.0%
		% within Industry	40.0%	40.0%	22.2%	20.0%	24.2%
Total		Count	5	5	36	20	66
		% within Belong	7.6%	7.6%	54.5%	30.3%	100.0%
		% within Industry	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4. Average Employees and Growth Rate by Industry

	Averages	
	Employees	*Growth*
Manufacturing	42.20	10.30%
Wholesale	6.95	8.83%
Business Services	3.84	106.48%
Other	8.24	45.11%

Table 5. Money's Worth Frequencies

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Yes	26	39.4	63.4	63.4
	No	3	4.5	7.3	70.7
	Not sure	12	18.2	29.3	100.0
	Total	41	62.1	100.0	
Missing	System	25	37.9		
Total		66	100.0		

A *t* test was then run on the revenue growth information provided by the respondents. The mean and standard deviation for the two groups, those who belong to membership organizations and those who do not, are shown in Table 7.

Levene's test for equality of variances yielded a significance value of .005, indicating that the variances of the two groups are not the same. This yielded a two-tailed significance of .296, showing that there are no significant differences between the two groups. Therefore, Hypothesis one is not supported.

Table 6. Growth Factor Frequencies

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Yes	21	31.8	55.3	55.3
	No	17	25.8	44.7	100.0
	Total	38	57.6	100.0	
Missing	System	28	42.4		
Total		66	100.0		

Table 7. Statistics for Average Revenue Growth Rate

	Belong	*N*	*Mean*	*Std. Deviation*	*Std. Error Mean*
Revenue Growth	Yes	40	.4025	1.88301	.29773
	No	14	2.1750	6.00509	1.60493

Table 8. Statistics for Average Number of Employees

	Belong	*N*	*Mean*	*Std. Deviation*	*Std. Error Mean*
Employee Growth	Yes	50	.7732	2.03037	.28714
	No	16	.3250	.76288	.19072

Next, a *t* test was run using the average of the growth of employees over the operational years of the businesses. Table 8 shows the means and standard deviations of the two groups.

Levene's test for equality of variances in this case yielded a significance value of .158, again indicating that the variances are not the same with the two groups. This yielded a two-tailed significance value of .198, again showing that there is no significant difference in average number of employees between those businesses whose owners participate in paid membership organizations and those who do not. Therefore, Hypothesis two is not supported.

Qualitative Responses

Those who belonged to one or more paid membership organizations were asked to comment on whether one or more of the organizations they belonged to seemed particularly helpful. The specific wording of the question is as follows: "If you are a member of one or more of these organizations, has any one, in particular, seemed to be particularly helpful in building your business? Why? If none has, why do you think that is so?"

In analyzing these responses, it was interesting that more than half the respondents (35 in total) left this item blank. As only 16 respondents in the sample of 66 do not belong to paid membership organizations, this left 19 respondents without apparent strong feelings about their membership. Of those who did respond, 9 noted specific organizations that have been helpful to them. Typical positive comments in these included "excellent mentoring program and business resource" (case 63), "I get involved" (case 56), and "get good leads" (case 51). Negative comments included "unable to attend meetings" (case 13), "does not have the target audience I am looking for" (case 41), and "lack of time to leverage opportunities" (case 53).

All respondents were asked to comment on their membership, or lack thereof, in general, in an attempt to elicit free-flowing responses on the best or worst features of these organizations. This question was worded as follows:

> Please list any comments you have about your participation in business membership organizations. For instance, do you feel like you have met people who can help you in your business? Have you met people you maintain a friendly relationship with? Please comment on any aspect of your participation that you would like me to know. If you are not a member of any of these organizations, please tell me why you choose not to participate in this type of networking.

This question yielded a total of 14 nonresponses. Those who did respond were more forthcoming in this question, with longer and more thoughtful comments. A fairly typical response to this question is that given by case 1, which states, "The amount of value that is received through membership in business organizations is directly correlated to the amount of time dedicated to 'working' these organizations." One very strongly negative comment, from case 4, stated, "I have tried these groups a few times, and they always felt like Amway meetings." The positive comments can be summed up, in general, as formalized networking improves the visibility of your business. Negative comments, other than the one above, typically include factors such as lack of time or money to pay for organizational memberships, as well as not seeing any benefits.

In further analyzing the comments from both questions, it was noted that there were more comments that could be considered negative (35) than positive (25). This was determined, with the assistance of the software package Atlas.ti, by first noting key phrases in the responses, and coding them first into descriptive codes and then into pattern codes.

In noting the negative comments, most of the responses (12) fell under the descriptive code of UnsureBenefit, defined as the respondents expressed some level of uncertainty as to whether these organizations were worth the time or money expended. At 11 responses, NoTime was the second most cited response, meaning that the respondent felt he or she did not have the time to devote to a membership organization, either because of their overall busyness or because these organizations simply take too much time. The remaining comments covered such issues as the fact that the organizations attract those who are not in the target market for the respondents; the respondents felt that they could not afford to belong; there was no opportunity to obtain business; and the other attendees at the functions held by these organizations were only there to sell their own wares.

Figure 1 shows the linkages of the descriptive codes and pattern codes for the comments considered negative in nature. There were two patterns that emerged from the data: The first, OrgMembership, implies that the comments related to the membership within the organizations. The second, NoBenefits, is a pattern that describes comments relating to the perceived lack of benefits of becoming a member in formal networking organizations. The numbers after each of the codes describe the number of comments linked to that code, followed by the number of linkages to pattern codes.

Positive comments included the ability to build the business's brand, or as was frequently described, "getting your name out there." This led the list with eight quotations. This was followed, at seven comments, with what was labeled "Community." This descriptor included comments that indicated that friendships were developed, that the respondent felt he or she is receiving some social support, and that the respondent had met people that have introduced them to others. Several comments (five) noted that they did, indeed, obtain business as a direct result of membership in a formal networking organization, while others noted that there were opportunities to both be mentored and to mentor others,

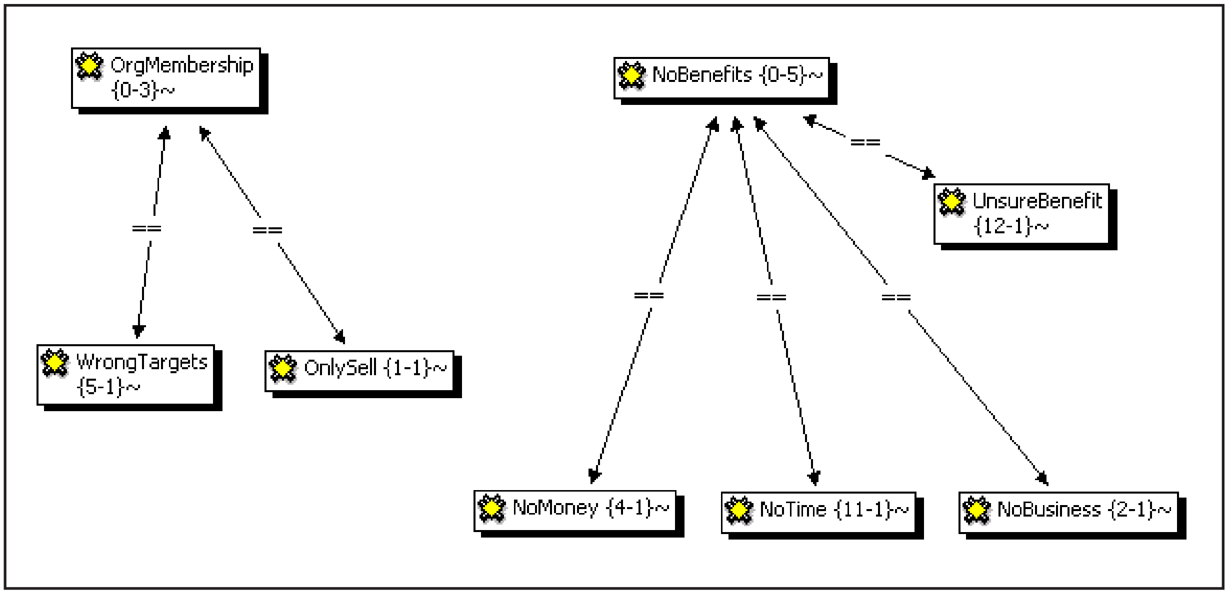


Figure 1. Patterns and Descriptors of Negative Comments

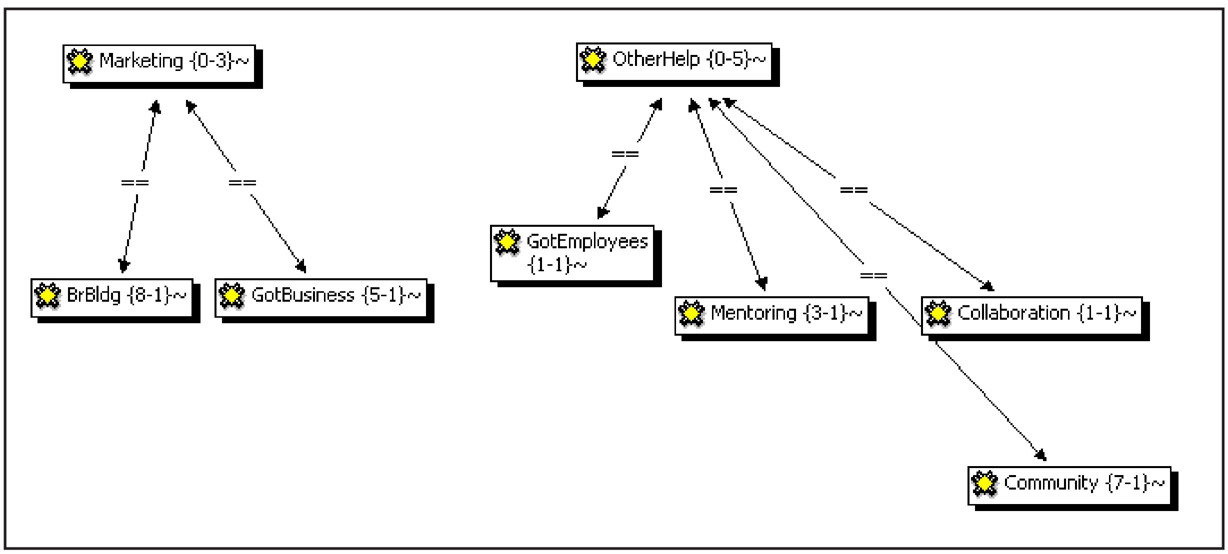


Figure 2. Patterns and Descriptors of Positive Comments

and that they were able to hire good employees or collaborate with other businesses on specific projects as a result of participating in these organizations.

The positive comments and quotations, along with their pattern and descriptive codes, are shown in Figure 2. Again, the number of comments and the number of linkages are shown after each code.

Discussion of Results

Hypothesis one stated that those business owners who belonged to paid membership organizations would see greater revenue growth than those who did not belong. This hypothesis was not supported, as there were no differences between the two groups noted. Hypothesis 2 stated that those business owners who belonged to paid membership organizations would see greater growth in their employee base. This hypothesis was also not supported.

This greatly calls into question the benefits of belonging to organizations who promote networking as the primary advantage of membership. It also calls into question whether the respondents realized they were not getting business out of the organization(s) to which they belonged, as just over 55 percent responded that they felt their membership was a factor in the growth of their business. Indeed, more than 63 percent felt they were getting their money's worth out of their membership. Either the respondents were not tracking what was actually taking place as a result of their membership in a networking organization, or the marketing message of the organization was so convincing that the members truly believed their business was growing as a result of their participation. Both of these could also be true. In addition, the mentoring aspect of these organizations could be what provides the business owners with the wherewithal to grow their businesses, even though the organizations themselves do not provide a direct outlet for sales.

Both the lack of support for the hypotheses and the question as to the benefits of membership are supported by the patterns in the negative comments among the two open-ended questions. The pattern 'OrgMembership' included the descriptors 'WrongTargets' and 'OnlySell.' This pattern, along with these descriptors, contained six quotations that suggested that the organization(s) the respondent belonged to either did not attract the types of businesses that were in the respondent's target market (WrongTargets) or the members of the organization were only interested in selling their wares, not listening to others. Comments included case number 17, who stated that, "we get business primarily through established relationships at pharma companies and word of mouth. Our targets are not at these orgs." Case number 41 stated that, "I think that the organizations I belong to does [sic] not have the target audience I am looking for." Likewise, case number four commented that, "I have tried these groups a few times, and they always felt like Amway meetings. Everyone there has an agenda to try to sell you something. I rarely have met anyone who I felt to be genuine."

Other responses to the open-ended questions that support the fact that Hypothesis One was not supported include those in the pattern 'NoBenefits.' These include comments that the respondent could not afford the time (NoTime; 11 responses) or money (NoMoney; 4 responses), implying that the investment in the organization was not expected to pay off. Two respondents explicitly noted that they achieved no additional business through their formal networking efforts (NoBusiness). As an example of this, case number 50 noted that one organization did hold some marketing benefit, in that it provided a venue for exhibiting at an annual trade show, but that there is "very little evidence that membership in any other organization has helped us grow our business. It seems mostly to make us a target for B2B sales (insurance, office supplies, consultants, etc.)."

For those who were unsure of the benefits they received from paid membership organizations, one said that their referrals come from satisfied clients, not membership organizations. Case number five commented that "all of my networking has occurred with my clients and through my clients. I started my business with one client and it has grown to 21 companies through client referrals." Others pointed out that there were many negative aspects of membership in these organizations, such as case number 24, who said, "usually too frustrating. Too many opinions, all different," and case number 22, who stated, "I did once belong to an organization like you describe and found everyone was there for the big sales pitch of their own and truly not interested in what others were bringing to the table."

Conclusions

It appears from this research that formalized networking, that is, paying dues to belong to an organization in order to expand one's network, does not increase or enhance the success of a business, whether measured in the rate of revenue growth or the number of employees. Why, then, are these organizations still in existence? While the results from the data clearly show no difference in growth rates of those businesses whose owners belong to paid membership organizations and those who do not, there were a large number of benefits denoted in the open-ended questions.

In fact, five people noted that they did get business directly from their participation in these organizations; it apparently was not enough to affect the results from the total sample, but it does appear that some are successful in obtaining business from these organizations. A larger number, however, noted that networking yielded brand building benefits. Still others found a community they could feel a part of through their networking activities.

Other benefits noted by the respondents included finding a partner for collaborative efforts, and the ability to be mentored by and to provide mentoring to others. Others pointed out that they were helped in their business, but did not explicitly state how.

So the various Chambers of Commerce, trade organizations, and other organizations that promote networking do provide both explicit and implicit benefits to entrepreneurs. While these benefits may not, according to the results reported here, be in the area of explicitly increasing revenues or providing for growth in other ways, there appears to be a distinct marketing benefit of membership in the area of brand building, as well as benefits from mentoring, collaboration on specific projects, and as a resource for information exchange.

Limitations and Delimitations

The sample utilized in this study was bounded geographically by the city of Philadelphia, Pennsylvania. The results, therefore, may not be applicable to other urban areas, let alone suburban or rural areas. The geographic boundary was set following Davidsson's (2004) dictum that the sample should be easily accessible, and that, in fact, was the case. Caution should be taken, however, in generalizing the results.

Finally, the sample size may not be sufficient for a comparative study. With only 66 responses, there could be a bias in the data resulting from the responses only coming from those who were interested in this as a topic. However, it should be noted that Singh, Hybels, and Hills (2000) obtained a similar response rate in their study.

Areas for Future Research

This study is a positive addition to the literature as it focused on an aspect of entrepreneurial networking that is little studied to date: whether participation in a paid membership organization has any affect on business success, as measured by the percentage growth rate in revenues and the average number of employees. It compared those who participate in paid membership organizations to those who do not, a factor that has not previously been studied.

This study suggests many areas for further study. Expanding the geographic area beyond the city of Philadelphia is logical. It would be interesting to compare various urban areas to note differences among the cities. It would also be interesting to compare the results of urban networking activities to those in suburban and rural areas to see if any differences exist.

The idea of formalized networking itself needs further study. Do more entrepreneurs prefer to build their networks through membership organizations, or through personal, serendipitous contacts? Are there differences in the benefits obtained between the various types of paid membership organizations? How many organizations should one belong to, if any?

An additional area of research should be an attempt to understand the time lag between when one joins an organization and when one begins to receive benefits. Are the benefits immediate, or does it take some time before one starts to enjoy a return on the investment? Should a nascent entrepreneur join one or more organizations, or wait until one's business is established?

Finally, more such comparative studies between those who participate in paid membership organizations and those who do not should be completed. It is interesting, and unfortunate, that this area had not been studied at all prior to this research. If the 76 percent of respondents in this study who belonged to paid membership organizations holds true in other geographic areas, it would be incumbent upon the research community to inform them as to whether there are distinct and quantifiable results of all this networking activity.

References

Ahmad, F., Hamdan, A. R., & Abu Bakar, A. (2004). Determining success indicators of e-commerce companies using rough set approach. *Journal of American Academy of Business* 5(1/2), 64–69.

Aldrich, H., Reese, P. R., Dubini, P. Rosen, B., & Woodward, B. (1989). Women on the verge of a breakthrough? Networking among entrepreneurs in the United States and Italy. In R. H. Brockhaus, Sr., N. C. Churchill, J.A. Katz, B.A. Kirchoff, K. H. Vesper, & W. E. Wetzel, Jr. (Eds.). *Frontiers of Entrepreneurship Research.* Wellesley, MA: Babson College.

Aldrich, H., & Zimmer, C. (1986). Entrepreneurship through social networks. In D. L. Sexton & R. W. Smilor (Eds.), *The Art and Science of Entrepreneurship.* Cambridge, MA: Ballinger Publishing Company.

Andre, R. (1992). A national profile of women's participation in networks of small business leaders. *Journal of Small Business Management* 30(1), 66–73.

Davidsson, P. (2004). *Researching Entrepreneurship*. New York: Springer.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing* 18, 301–331.

Davis, A. E., Renzulli, L. A., & Aldrich, H. E. (2006). Mixing or matching? The influence of voluntary associations on the occupation diversity and density of small business owners' networks. *Work and Occupations* 33(1), 42–72.

Dollinger, M. J. (1985). Environmental contacts and financial performance of the small firm. *Journal of Small Business Management* 23(1), 24–30.

Edmondson, A. C., & McManus, S. E. (2007). Methodological fit in management field research. *The Academy of Management Review* 32(4), 1155–1179.

Egge, K. A., & Stoehr, N. J. (1997). On the costs and benefits of paid memberships in entrepreneurial peer groups. *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College. Retreived May 7, 2006 from www.macalester.edu/~egge/Papers/PeerGroups.pdf.

Gilmore, A., & Carson, D. (1999). Entrepreneurial marketing by networking. *New England Journal of Entrepreneurship* 2(2), 31–38.

Granovetter, M. S. (1973). The strength of weak ties. *The American Journal of Sociology* 78(6), 1360–1380.

Granovetter, M. S. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory* 1, 201–233.

Hansen, E. L. (1995). Entrepreneurial networks and new organization growth. *Entrepreneurship Theory & Practice* 19(4), 7–19.

Hienerth, C., & Kessler, A. (2006). Measuring success in family businesses: The concept of configurational fit. *Family Business Review* 19(2), 115–134.

Hite, J. M., & Hesterly, W. S. (2001). The evolution of firm networks: From emergence to early growth of the firm. *Strategic Management Journal* 22(3).

Johannisson, B., & Monsted, M. (1997). Contextualizing entrepreneurial networking. *International Studies of Management & Organization* 27(3), 109–136.

Kalleberg, A. L., Marsden, P. V., Aldrich, H. E., & Cassell, J. W. (1990). Comparing organizational sampling frames. *Administrative Science Quarterly*, 35, 658–688.

Kaplan, R. S., & Norton, P. (1993). Putting the balanced scorecard to work. *Harvard Business Review* 71(5), 134–140.

Larson, A., & Starr, S. (1993). A network model of organization formation. *Entrepreneurship Theory & Practice* 17(2), 5–15.

Lechner, C., Dowling, M., & Welpe, I. (2006). Firm networks and firm development: The role of the relational mix. *Journal of Business Venturing* 21, 514–540.

Malewicki, D. S. (2005). Member involvement in entrepreneur network organizations: The role of trust and commitment. *Journal of Developmental Entrepreneurship* 10(2), 141–166.

Ostgaard, T. A., & Birley, S. (1996). New venture growth and personal networks. *Journal of Business Research* 36, 37–50.

Putnam, R. D. (2000). *Bowling Alone.* New York: Simon & Schuster.

Reese, P. R. (1992). Entrepreneurial networks and resource acquisition: Does gender make a difference? Ph.D. dissertation, The University of North Carolina at Chapel Hill. Retrieved September 15, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 9235011).

Reese, P. R., & Aldrich, H. E. (1995). Entrepreneurial networks and business performance. In S. Birley & I. C. MacMillan (Eds.), *International Entrepreneurship.* New York: Routledge.

Renzulli, L. A., Aldrich, H., & Moody, J. (2000). Family matters: Gender, networks, and entrepreneurial outcomes. *Social Forces* 79(2), 523–546.

Renzulli, L. A., & Aldrich, H. (2005). Who can you turn to? Tie activation within core business discussion networks. *Social Forces* 84(1), 323–341.

Ripolles, M., & Blesa, A. (2005). Personal networks as fosterers of entrepreneurial orientation in new ventures. *International Journal of Entrepreneurship and Innovation* 6(4), 239–248.

Rotolo, T. (1999). Trends in voluntary association participation. *Nonprofit and Voluntary Sector Quarterly* 28(2), 199–212.

Ruth, J-P. S. (2006). This networking group gets results. *NJBIZ*, 19(31).

Schutjens, V., & Stam, E. (2003). The evolution and nature of young firm networks: A longitudinal perspective. *Small Business Economics* 21(2), 115–134.

Shaner, J., & Maznevski, M. (2006). Building the right networks for business performance. *Perspectives for Managers* 132, 1–4.

Singh, R. P., Hills, G. E., Hybels, R. C., & Lumpkin, G. T. (1999). Opportunity recognition through social network characteristics of entrepreneurs. In P. Reynolds (Ed.), *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College.

Singh, R. P., Hybels, R. C., & Hills, G. E. (2000). Examining the role of social network size and structural holes. *New England Journal of Entrepreneurship* 3(2), 47–59.

Sparrowe, R. T., Liden, R. C., Wayne, S. J., & Kraimer, M. L. (2001). Social networks and the performance of individuals and groups. *Academy of Management Journal* 44(2), 316–325.

Staber, U., & Aldrich, H. E. (1995). Cross-national similarities in the personal networks of small business owners: A comparison of two regions in North America. *Canadian Journal of Sociology* 20(4), 441–467.

Thornton, P. H., & Flynn, K. H. (2003). Entrepreneurship, networks, and geographies. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of Entrepreneurship Research.* New York: Springer.

Zeithaml, V. A., & Bitner, M. J. (2003). Services Marketing: *Integrating Customer Focus Across the Firm*. New York: McGraw-Hill Irwin.

About the Author

Michele K. Masterfano (Mkm55@drexel.edu) is a clinical assistant professor of management in the LeBow College of Business at Drexel University, where she teaches entrepreneurship. She also has 30 years of industry experience, working with companies both large and small in marketing and strategic and business planning capacities. She has spent much of the last decade working with entrepreneurial firms in developing and implementing business and marketing strategies and action plans, effective work processes, and profitable growth plans. She also taught marketing at the university level for five years; in her last marketing assignment, she assisted Villanova University's School of Business in the development of an entrepreneurship minor for undergraduates, and taught its inaugural class in entrepreneurial marketing.

Founder Characteristics and Legitimacy-Seeking Behaviors

John T. Perry, Gaylen N. Chandler
Xin Yao, Timothy L. Pett

The entrepreneur's experience, personality, and values affect the entrepreneur's behaviors and decisions (Chrisman, Bauerschmidt, and Hofer 1998). Past research results show that (1) more experienced new venture founders have a greater likelihood of leading their ventures to early success than less experienced founders (Delmar and Shane 2006) and (2) founders who engage in legitimacy-seeking behaviors have a greater likelihood of leading their ventures to early success than founders who do not do so (Tornikoski and Newbert 2007). We propose that more experienced founders understand the importance of obtaining legitimacy for their ventures and therefore will engage in more legitimacy-seeking behaviors. In addition, we propose that entrepreneurs' growth aspirations and internal locus of control are also associated with engagement in legitimacy-seeking behaviors. We test and find support for these propositions in a sample of new ventures and their founders.

Keywords: founders; entrepreneurial behavior; legitimacy; PSED; entrepreneurial experience

Introduction

Legitimacy involves the means that organizations use to justify their existence to peer and stakeholder organizations (Suchman 1995). For emerging organizations, marketing a product or service early in a venture's life, projecting financial statements, preparing a business plan, filing a patent, opening a bank account, and/or establishing a new telephone listing for the venture have all been identified as legitimacy-seeking behaviors (Gartner, Shaver, Carter, and Reynolds 2004;Tornikoski and Newbert 2007). Tornikoski and Newbert (2007) demonstrated that founding teams that engaged in legitimacy-seeking behaviors were more likely to make their ventures operational than those that did not. However, the factors that influence legitimacy-seeking behavior have not been examined. What are the factors that are associated with engagement in behaviors that increase the new venture's legitimacy with other stakeholders?

In the current research we focus on both the knowledge base of the founding team and personality characteristics of the lead entrepreneur in an initial attempt to identify and substantiate some of the factors that are associated with engagement in legitimacy-seeking behaviors. Previous research indicates that ventures created by experienced founding teams are more likely to survive and succeed, which suggests that experienced firm founders may have developed their knowledge base by learning what needs to be done to successfully organize a new firm (Delmar and Shane 2006) and substantiates findings that experience and success tend to be positively correlated (e.g., Robinson and Sexton 1994). In addition to knowledge, previous research has shown that growth intentions (Wiklund, Davidsson, and Delmar 2003; Wiklund and Shepherd 2003) and locus of control (Begley Tan, and Schoch 2005) are associated with entrepreneurial activity.

We create a model that includes knowledge, growth intentions, and founder locus of control to explain engagement in legitimacy-seeking behaviors. We contribute to the new venture literature by showing that founding teams with greater entrepreneurial and industry experience, higher growth expectations, and an external locus of control are more likely to engage in legitimacy-seeking behaviors. Both experience and personality characteristics appear to influence engagement in such behaviors.

To accomplish these objectives, we describe an appropriate theoretical perspective, define the key constructs, develop hypotheses, and test the hypotheses with a sample of new ventures and their founders. Subsequently, we present the results and discuss the implications of our research.

Theoretical Perspective

The arguments that we make in this research are consistent with social cognitive theory (Bandura 1986) and the theory of planned behavior (Ajzen 1991). A key construct in social cognitive theory is self-efficacy. Self-efficacy has been described as the belief that one is capable of performing in a certain manner to attain certain goals and that one has the capabilities to execute the courses of actions required to manage prospective situations. According to social cognitive theory (Bandura 1986), the most powerful ways by which people achieve self-efficacy are via enactive mastery and vicarious experience. In other words, they practice, work, and engage themselves in the behavior until they see some success. That success leads to the belief that they will be able to accomplish that task or deal with a similar situation in the future. Alternatively, and perhaps coincidentally, as they watch others accomplish the task successfully, it also enhances their self-efficacy beliefs.

The logic of the development of self-efficacy is consistent with the theory of planned behavior. According to the theory of planned behavior (Ajzen 1991) people are more likely to engage in a specific behavior if they view the behavior as positive, think that others who are important to them want them to engage in that behavior, and have the conviction that they can successfully execute the behavior required to produce the outcomes (self-efficacy). A high correlation between these three conditions has been confirmed in many studies (e.g. Sheppard, Hartwick, and Warshaw 1988). Behavior that we seek to explain in this research is engagement in legitimacy-seeking activities. Thus, individuals who start a business are more likely to engage in legitimacy-seeking behaviors such as marketing a product or service early in a venture's life, projecting financial statements, preparing a business plan, filing a patent, opening a bank account, and/or establishing a new telephone listing for the venture, if they believe that doing so is positive, that other stakeholders expect them to do it, and that their firms will be more successful when they engage in those behaviors.

Key Constructs and Hypotheses

Entrepreneurial Experience

Minniti and Bygrave (2001) indicate that two types of knowledge are particularly relevant to starting a business—knowledge about how to start a company and knowledge about a chosen market (Minniti and Bygrave 2001). Knowledge about how to start a company includes knowledge about "how to be entrepreneurial." Minniti and Bygrave state that this type of knowledge "can be acquired only through learning-by-doing or by direct observation" (2001: 6).

The description of how individuals gain knowledge about how to start a business is also consistent with the development of entrepreneurial self-efficacy. As individuals and teams go through the process of starting a business, they face a variety of issues. These issues include receiving or not receiving financial and emotional support, being or not being taken seriously, securing or not securing health insurance, balancing or not balancing demands for time, and receiving or not receiving mentoring and/or counseling (Brush and Manolova 2004). When faced with these problems, founders search for solutions by engaging in different behaviors in an attempt to solve the problem (Minniti and Bygrave 2001). This process of experimentation requires large amounts of time and effort. But once a founder has satisfactorily solved the problem, she or he will associate their last behavior with the problem and thereby add to their knowledge base of how to start a venture. For example, when faced with the problem of being taken seriously by potential investors, a founder may develop a business plan. If she or he perceives that having developed a business plan helped the venture to be taken more seriously, they will associate the development of a business plan with the problem of being taken seriously by potential investors.

Minniti and Bygrave (2001) argue that knowledge about how to start a venture is more valuable (that is, a superior resource) than knowledge about the chosen market because it can only be acquired via direct experience or observation. Being able to acquire this knowledge only via limited means makes it rarer than if it could be acquired via a variety of means, and therefore potentially more valuable than other types of knowledge. Knowledge about how to start a venture includes knowledge related to problems that new ventures commonly experience that more mature companies do not.

Minniti and Bygrave (2001) further stated that knowledge that founders developed in earlier problems will become embedded in their beliefs and expectations; and therefore, when a founder encounters a similar problem again (for example, in a subsequent venture), to avoid a new search for a solution, the founder will engage in the same behavior (for example, she or he will again develop a business plan).

As we have described here, the learning process described by Minniti and Bygrave (2001) is consistent with the development of self-efficacy. Thus, for individuals who are starting a new venture, prior entrepreneurial experience should be directly and positively associated with the belief that engaging in legitimacy-seeking behaviors is valuable. Thus, we expect that founders who have previously helped start several ventures will have learned that legitimacy-seeking behavior, like early marketing efforts, can help them increase their venture's legitimacy in the eyes of their stakeholders and improve the likelihood of the venture's survival. Therefore, we expect that experienced founding teams will be more likely to engage in more legitimacy-seeking behaviors than founding teams with less entrepreneurial experience.

Hypothesis 1: Founding teams with greater entrepreneurial experience will be more likely to engage in legitimacy-seeking behaviors than teams with less entrepreneurial experience.

Industry Experience

Minniti and Bygrave (2001) also discuss the importance of gaining knowledge about a chosen market. Knowledge about a chosen industry may be either product or service specific or market specific, and includes knowledge specific to an industry or market, including the norms of behavior in that market. Chandler and Lyon (2009) indicate that this type of knowledge may be acquired through direct experience (that is, industry experience), indirect experience (for example, partnering with someone who has industry experience) or from education (for example, attending industry conferences, taking classes).

When starting a venture, a founding team's experience in the venture's industry can provide the venture with knowledge of industry norms and relationships with individuals in the industry who may be potential employees, suppliers, helpers, investors, and customers (Bruderl, Preisendorfer, and Ziegler 1992; Reuber and Fischer 1999; Shane and Stuart 2002). Knowledge of industry norms (for example, how contracts are awarded within the industry, and information about customers' buying cycles) is valuable because it provides a venture's founders with direction in terms of where to focus their energies (Bruderl, et al. 1992; Reuber and Fischer 1999). This knowledge can also help founders behave when interacting with industry stakeholders. Relationships with people in the industry are also valuable because establishing relationships is costly and time consuming, and because developing trust with industry stakeholders is important to engaging in future business relationships (Shane and Stuart 2002). These relationships can help founding teams know with whom they should interact.

We also expect that when they realize the importance of engaging in legitimacy-seeking behavior, because they have greater knowledge of industry norms and have more relationships with industry stakeholders, founders with more industry experience will find it easier to gain legitimacy in the industry. They will know who are likely to be the most important stakeholders for their venture, and they will know what might help their venture appear more favorable in these stakeholders' eyes. Because of this industry-based knowledge, founders who have more industry experience will take less time in the beginning to engage in legitimacy-seeking behaviors than founders who have less industry experience. With reference to the theory of planned behavior, industry knowledge includes information about the expected norms within the industry. Thus, knowing that such behavior is expected by relevant stakeholders would increase the likelihood of engagement in legitimacy-seeking behaviors.

Hypothesis 2: Founding teams with greater industry experience will engage in more legitimacy-seeking behaviors than founding teams with less industry experience.

Intentions for Growth

Thus far we have used the term "legitimacy-seeking behaviors" to represent actions that are consistent with a founder's seeking to appear credible (i.e., marketing a product or service early in a venture's life, projecting financial statements, preparing a business plan, filing a patent, opening a bank account, and establishing a new telephone listing). We have not, however, examined founders' intentions when engaging in these behaviors. The role of intention as an antecedent to starting a venture has been discussed extensively in the entrepreneurship literature (e.g., Bird 1988; 1992; Crant 1996). A specific case of intention is the degree to which the founders intend to grow their venture. Although, individual intentions are unobservable, Godfrey and Hill (1995) suggest using observable proxies that approximate or are consistent with the unobservable phenomena. One observable characteristic of founders' intentions may be their stated preferences for the future size of their ventures. In a study of nascent entrepreneurs, Dennis and Solomon (2001) found that founders differed in their intentions for the future of their ventures. Some founders intended to grow their ventures into large firms. Some founders intended to develop businesses that provided comfortable lifestyles. Some founders intended to create ventures that provided supplementary income, and some founders intended to keep their ventures afloat until a better opportunity arose. Moreover, in examining how founders translate their ideas into behavior, Bird (1988) argued that

> Entrepreneurial intentions, entrepreneurs' states of mind that direct attention, experience, and action toward a business concept, set the form and direction of organizations at their inception. Subsequent organizational outcomes such as survival, development (including written plans), growth, and change are based on these intentions. (442)

Building on Dennis and Solomon (2001) and Bird (1988), we expect that founders who intend to grow their ventures into large firms will engage in different behavior than founders who have different intentions. Wiklund, Davidsson, and Delmar (2003) used a model of the theory of planned behavior (Ajzen 1991) to test attitudes about venture growth. The model has also been applied usefully in several different studies such as decisions concerning choice of detergents, restaurants, automobiles, and blood donation. In our case, we are interested in the specific intention related to expanding a venture. We therefore focus solely on the intentions for growth expressed by the founders. The intention for growth corresponds with the third part of the theory of planned behavior (Ajzen 1991)—the conviction that they can successfully execute the behavior required to achieve the expected growth.

Hypothesis 3: Founding teams with greater aspirations for growth will engage in more legitimacy-seeking behaviors than founding teams with lower growth aspirations.

Locus of Control

Locus of control refers to the extent to which individuals believe that they can control the events that affect them (Rotter 1966). Individuals with a high internal locus of control believe that things happen primarily as a result of their own behavior and actions. Those with a high external locus of control believe that other powerful people, chance, and/or fate are the primary influencers of the things that happen. Those with a high internal locus of control have better control of their behavior, tend to exhibit more political behaviors, and are more likely to attempt to influence other people than those with a high external locus of control. They are more likely to assume that their efforts will be successful and they are more active in seeking information and knowledge concerning their situation. The concept of locus of control is related to self-efficacy, but differs because locus of control is generally a measure of cross-situational beliefs about control, while self-efficacy is used as a concept to relate to specific situations and tasks.

In a recent meta-analysis, Rauch and Frese (2007) reported that internal locus of control was positively correlated with business creation and success. In one of the studies included in the meta-analysis, Anderson (1977) argued that this finding was due to the fact that individuals who believe that events that happen in their lives are generally caused by their thoughts and actions assume that they can influence their future, which increases their motivation and their intentions. Building on this explanation, we expect that founders who believe that they can largely influence their venture's future will engage in more legitimacy- seeking behavior than founders who believe their venture's future is largely outside of their control.

Hypothesis 4: Founding teams with an internal locus of control will engage in more legitimacy-seeking behaviors than founding teams with an external locus of control.

Methods

To test our hypotheses, we used data from the first Panel Survey of Entrepreneurial Dynamics (PSED) dataset. The PSED dataset is composed of 830 individuals who were in the new venture process in the United States when the study began and 431 comparison individuals. The dataset was designed to be representative of the nascent entrepreneur population in the United States between 1998 and 1999. (For more information about the PSED, see Gartner, Shaver, Carter, and Reynolds 2004). To limit our sample to only new ventures, we used kscleans (Shaver 2006), a publicly available SPSS syntax file, to reduce the sample. In using kscleans, we eliminated the comparison individuals and six ventures that should have been screened out of the dataset because they did not qualify as new ventures (that is, at the beginning of the study, the ventures had positive cash flow for more than 90 days). We also eliminated ventures that were spin-offs of other companies (that is, nonpersons owned more than 50% of the venture). This resulted in a sample of 817 new ventures. Because we wanted to focus on founding teams, as previous research that examined founder experience had done (Delmar and Shane 2006), we eliminated ventures composed of a single founder. Finally, we reduced the sample to eliminate missing data. The final sample that we analyzed included 255 founding teams. To determine whether the founding teams in the final sample were representative of the founding teams that were not included in the sample, we compared the teams based on team size (i.e., the number of founders), the average number of years of industry experience, and the average number of ventures that members helped start. Comparisons of means via independent sample t-tests found no significant differences between the founding teams in the final sample and those not included in the sample.

Variables

We constructed the dependent variable, *percentage of legitimacy-seeking behaviors used,* from the six institutionalization PSED items that were answered by the founding team respondent. We coded the percentage of legitimacy-seeking behaviors used as the number of times a respondent answered "yes" to the following questions divided by the number of questions the respondent answered (not including "not applicable" or "don't know"). The PSED item names were Q122, Q137, Q111, Q124, Q160, and Q171. Item Q122 asked, "Have marketing or promotional efforts been started (for the product or service this [startup/ new firm] will be selling)?" Item Q137 asked, "Have projected financial statements, such as income and cash flow statements or break-even analysis, been developed?" Item Q111 asked whether a business plan had been prepared. Item Q124 asked, "Has an application for a patent, copyright, or trademark relevant to this new business been submitted?" Item Q160 asked, "Has a bank account been opened exclusively for this new business?" And item Q171 asked, "Does the new business have its own listing in the phone book?"

For *entrepreneurial experience*, we used PSED item Q214, which asked founders how many businesses they and their fellow founding team members had helped start. Because this number would increase with the size of the founding team, we summed the number of businesses that team members had helped start, and divided this number by the number of founders.

For industry experience, we used PSED item Q213, which asked founders how many years of work experience they and their fellow founding team members had in the venture's industry. Again, because this number would increase with the size of the founding team, we computed this variable by calculating the average number of years of industry experience for all team members. That is, we summed the team members' years of industry experience, and divided this number by the number of founders.

For *growth orientation*, we used PSED item Q322, which asked founders to select their preference for the future size of their venture. Founders were forced to select between indicating that they wanted their venture to be "as large as possible" or "a size to manage by self or with key employees." The "as large as possible" selection was coded as "1" and the "a size to manage by self or with key employees" was coded as "0." Note that this item was only available for the team's lead founder. Because the PSED data collection team, however, attempted to survey the leaders of founding teams, and because founding teams were generally small (the mean team size = 2.42 founders), we assumed that the lead founder's growth orientation was representative of the team's growth orientation.

For *locus of control*, we used PSED items QL1h, QL1i, and QL1j. These items asked founders whether the following statements were completely untrue (coded as "1"), mostly untrue (coded as "2"), it depends (coded as "3"), mostly true (coded as "4"), or completely true (coded as "5") for themselves. QL1h stated, "I have no trouble making and keeping friends." QL1i stated, "When I make plans I am almost certain to make them work." And, QL1j stated, "When I get what I want, it is usually because I worked hard for it." To develop a single measure of locus of control, we averaged founders' scores across these three items. Like growth aspiration, the locus of control items were only available for the team's lead founder. In addition, because higher answer codes related to an internal locus of control, we labeled the variable in our analysis as *internal locus of control*.

Although we focus in this article on actions that founding teams take to conform to general new venture creation norms, we recognize that there are norms, regulations, and practices that differ between industries. For example, in industries in which company certifications are important (for example, automobile parts manufacturing industries), specific actions must be taken (for example, complying with certification processes) that provide a venture with a base level of legitimacy (Stouder 2002). To control for industry effects, therefore, we coded each venture's industry using the PSED item SUSECT10 to identify the venture's industry. This item places a venture's industry into one of 10 categories. We excluded the industries that were not represented in the sample (mining, financial services, and public administration). Eight dummy variables were then used to represent whether the venture was in a given sector (i.e. agriculture, forestry, or fish sector; construction sector; manufacturing sector; transportation, communication, or utilities sector; wholesale trade sector; retail trade sector; and services sector). If the venture was in one of these sectors, we coded the industry as 1; otherwise we coded it as 0. Also, because larger founding teams have more individuals who could engage in more legitimacy-seeking behaviors, we controlled for team size. To do so, we used the PSED item TEAMSZ.

Results

Because of the continuous nature of the dependent variable and because we wanted to control for several variables in our examination of the percentage of legitimacy-seeking behaviors used, we used ordinary least squares regression to test the hypotheses. See Table 1 for descriptive statistics and correlations of the study variables, and Table 2 for the hypothesis testing results.

We show in Table 1 that none of the industry characteristics are significantly correlated with percentage of legitimacy-seeking behaviors used. Team size, entrepreneurial experience, industry experience, growth orientation, and internal locus of control, however, are significantly correlated with the dependent variable ($p < .10$). However, internal locus of control is significant in the direction opposite what we initially hypothesized. Nevertheless, these findings provide initial, univariate support for our first three hypotheses, and an interesting discussion point for the fourth. These statistically significant correlations, while all lower than .20, are consistent with the range of effect sizes that Connelly, Ireland, Reutzel, and Coombs (2009) found in a recent meta-analysis of small business studies. In addition to the significant univariate correlations between the independent and dependent variables, team size is also significantly and positively correlated with both entrepreneurial experience and growth orientation. This indicates that more experienced founders and founders who intend to grow their venture into large firms organize themselves into larger founding teams than less experienced founders. In terms of the correlations between the independent variables, we show in Table 1 that entrepreneurial experience is positively and significantly correlated with industry experience ($r = .13$) and growth orientation ($r = .10$). This indicates that founding teams with more years of experience in their venture's industry have helped to start more businesses and founding teams that have started more businesses had greater growth aspirations than those that had started fewer businesses. Lastly, in terms of univariate correlations, we show in Table 1 that founders' growth orientations were positively and significantly related to having an internal locus of control. This indicates that founders who intended to grow their ventures the most were more likely to have an internal locus of control.

In Table 2, model 1, we show the results of the dependent variable regressed on the control variables. The only control

Table 1. Descriptive Statistics and Correlations among Study Variables														
Variable	*Mean*	*Std Dev*	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*10.*	*11.*	*12.*
1. Agriculture, forestry, or fish industry	.05	.21												
2. Construction industry	.04	.19	-.05											
3. Manufacturing industry	.05	.22	-.05	-.05										
4. Transportation, communication, or utilities industry	.03	.17	-.04	-.04	-.04									
5. Wholesale industry	.03	.11	-.04	-.04	-.04	-.03								
6. Retail industry	.27	.44	-.13*	-.12*	-.14*	-.11+	-.11+							
7. Services industry	.45	.50	-.20**	-.18**	-.21**	-.16**	-.16**	-.54**						
8. Team size	2.42	.84	-.05	-.01	.10+	-.03	-.02	-.09	.02					
9. Entrepreneurial experience	.98	1.63	-.04	-.01	.09	-.01	.01	-.01	-.06	.21**				
10. Industry experience	7.38	7.39	.08	.23**	.04	-.10+	-.02	-.11+	.02	.04	.13*			
11. Growth orientation	.23	.42	-.03	-.02	.08	-.05	-.05	.09	-.06	.18**	.10+	-.01		
12. Internal locus of control	4.07	.52	.07	.07	-.03	.03	.05	-.04	-.01	.02	-.02	.02	.13*	
13. Percentage of legitimacy-seeking behaviors used	.41	.27	.01	-.05	.03	.05	.02	-.01	-.09	.17**	.19**	.15*	.15*	-.10+

+p<.10, *p<.05, **p <.01

variable with a significant beta coefficient is team size (b = .17, $p < .01$). In model 2, we show the results of the test for each of our four hypotheses. All variables were entered into the equation simultaneously because the correlations among the variables are weak, thus there is little chance that the results will be distorted because of multicollinearity. Hypothesis 1 states that founding teams with more entrepreneurial experience will engage in more legitimacy-seeking behaviors than founding teams with less entrepreneurial experience. The beta coefficient of entrepreneurial experi-

Table 2. Regression Results		
Variable	*Model 1*	*Model 2*
Agriculture, forestry, or fish industry	.02	.02
Construction industry	-.04	-.06
Manufacturing industry	.02	-.01
Transportation, communication, or utilities industry	.06	.08
Wholesale industry	.02	-.03
Retail industry	.02	-.01
Team size	.17**	.11_
Entrepreneurial experience		.14*
Industry experience		.15*
Growth orientation		.13*
Internal locus of control		-.12*
N	255	255
R2	.033	.105
Adjusted R2	.005	.065
F (model)	1.199	2.602
p (model)	.304	.004

_p<.10, *p<.05, **p <.01
All beta coefficients are standardized.
Dependent variable = Percentage of legitimacy-seeking behaviors used.

ence was positive and significant ($b = .14$, $p < .05$). Hypothesis 2 states that founding teams with more industry experience will engage in more legitimacy-seeking behaviors than founding teams with less industry experience. The beta coefficient of industry experience was positive and significant ($b = .15$, $p < .05$). Hypothesis 3 states that founding teams with a greater growth orientation will engage in more legitimacy-seeking behaviors than founding teams with a lower growth orientation. The beta coefficient of growth orientation was positive and significant ($b = .13$, $p < .05$). Hypothesis 4 states that founding teams with an internal locus of control will engage in more legitimacy-seeking behaviors than founding teams with an external locus of control. Because locus of control was captured and coded as internal locus of control, we expected a positive relationship between internal locus of control and percentage of legitimacy-seeking behaviors used. The beta coefficient of internal locus of control was negative and significant ($b = -.12$, $p < .05$). When combining all four hypotheses in a single model, all of the beta coefficients of the independent variables are significant ($p < .05$) and in the hypothesized directions (except for the beta coefficient associated with internal locus of control) and the overall model fit is also significant ($F = 2.602$, $p = .004$). In sum, these results provide support for three of our four hypotheses. The fourth hypothesis, referencing internal locus of control, is opposite what we hypothesized. This discrepancy will be discussed further in the following section.

Discussion

In our search of the new venture literature, we did not find any studies that demonstrated that founding teams' experience or intentions are related to the degree to which they engage in legitimacy-seeking behaviors. Applying the logic of social cognitive theory and the theory of planned behavior, we predicted that the levels of entrepreneurial and industry experience of new ventures' founders and their growth orientations and locus of control would be related to the degree to which they engaged in legitimacy-seeking behavior. The results support our predictions. Consistent with our predictions, founding teams that have, on average, helped start more businesses and have more years of work experience in their venture's industry are more likely to engage in behavior that is aimed at increasing their venture's legitimacy. Also, we found that founding teams with lead founders who intend to grow their ventures into large firms are more likely to engage in behavior that is consistent with trying to increase their venture's legitimacy. In contrast, those who have an internal locus of control are less likely to engage in legitimacy-seeking behaviors.

This contradiction might be explained in two ways. Building on the entrepreneurial locus of control and intentions literature (Anderson 1977; Brockhaus 1975; Hansemark 2003), we expected that founders with an internal locus of control will have different intentions for their ventures than founders with an external locus of control. However, Krueger, Reilly, and Carsud (2000) argued that in addition to being related to greater entrepreneurial growth intentions, an internal locus of control in entrepreneurs reduces the importance of conforming to institutional norms for the entrepreneurs. Thus, consistent with Krueger, Reilly, and Carsud (2000), it appears that founders with an internal locus of control are less susceptible to the institutional norms that indicate what founders should do to appear credible than founders with an external locus of control; and conversely founders with an external locus of control are more susceptible to the institutional, entrepreneurial norms. This greater susceptibility seems to incline founders with an external locus of control to engage in behavior that makes them appear credible.

This seeming contradiction may be a function of restriction of range in the variable. Previous researchers (e.g. Carland, Hoy, Boulton, and Carland 1984) indicate that entrepreneurs typically have a higher internal locus of control than small businessowners, managers, and other groups. In this sample, the mean is 4.07 on a 5-point scale. Therefore, although the general concept would suggest that internal locus of control should be positively correlated with legitimacy-seeking behaviors, in this restricted range sample, those that do not score quite as high on the scale are more likely to pursue legitimacy-seeking behaviors.

With the exception of the fourth hypothesis, the results are consistent with our hypotheses. Taken in conjunction with previous researchers' findings that the ventures of more experienced founding teams are more likely to survive and succeed in their early years (Delmar and Shane 2006) and that the ventures of founders who engage in behaviors that seek to gain the legitimacy of influential stakeholders more often become operational (Tornikoski and Newbert 2007), the results of this study suggest that one of the reasons that experienced founders are more successful is because their experience provides them with the knowledge and know-how to engage in more legitimacy-seeking behavior.

Limitations

In spite of the results that support our hypotheses, we caution readers to interpret the results in light of the study's limitations. We believe there are four main limitations of our study. The first relates to the argument that knowledge about starting a new venture can be acquired only via direct experience or observation. Although we based our argument on the theory of planned behavior and previous research (Minniti and Bygrave 2001), the argument can be made that entrepreneurial knowledge may also be acquired from indirect methods (e.g., by taking entrepreneurship classes, by attending new venture seminars, by reading startup books). To address this argument, we intended to include predictors of indirect entrepreneurial experience in our study. In fact, the PSED contains data about the number of "different courses, classes, workshops, or seminars" founders have taken related to "starting a business" (item Q168). Unfortunately there were many missing data points for this item in the PSED and it would have reduced our sample size to 88 founder teams, which would have reduced our ability to test our hypotheses adequately. Therefore we chose to preserve the study's statistical power, which meant that we were unable to adequately consider indirect entrepreneurial experience.

The second limitation relates to our arguments that imply that founders with greater entrepreneurial and industry experience have learned more about being an entrepreneur and about their venture's industry than founders with less experience. We agree that length of time is only a rough proxy for knowledge gained; or in other words, greater experience does not necessarily mean greater knowledge. This may be especially true in light of the first limitation, which acknowledges that founders may be able to acquire knowledge in ways other than through direct experience.

The third limitation relates to the amount of variance explained by our analytical models. In Table 2, in spite of the fact that we have included all of our predictors and the fact that the model fit is significant, the amount of variance in the percentage of legitimacy-seeking behaviors used between founding teams is low ($R2 = .105$, Adjusted $R2 = .065$). Thus, the effects are significant, but the model effect size is not large. However, given the nature of our variables and measures and the fact that we found no other study that examined factors that relate to legitimacy-seeking behaviors, we did not expect large effect sizes.

The fourth limitation relates to our use of industry control variables. Although we acknowledge that industries may differ in their norms, regulations, and practices, the industry categorization scheme that we used may not have captured these differences well. Future researchers could address this limitation by addressing what makes it more important in some industries to seek legitimacy than in others. For researchers who are interested in this topic, we recommend reviewing the managerial discretion research (Hambrick and Finkelstein 1987), which has found that managers differ in the latitude of action that they possess partly as a result of institutional norms that exist in their industry.

Future Research

For future researchers interested in building on this study, there are four ways by which they may do so. One direct way would be to test the mediation model that we have implied. We have hinted that founders' legitimacy-seeking behavior may mediate the relationship between founders' experience and their venture's early success (for example, surviving for a longer period of time, achieving positive cash flow). To test this model, we recommend that researchers examine ventures that began at roughly the same point in time (to control for the effects of venture age) and that researchers use a longitudinal study design (to allow the measurement of legitimacy-seeking behavior measures to precede the measurement of venture success). We did not test the mediation model in this study because the sample that we used was not composed of ventures that began at roughly the same point in time.

A second way that researchers might build on this study is to answer the question, "What else do experienced entrepreneurs know that makes them successful?" In doing so, researchers may begin, as we did, by addressing one of the common problems that Brush and Manolova (2004) indicated that the founders of new ventures face (that is, receiving financial and emotional support, being taken seriously, securing health insurance, balancing demands for time, and receiving mentoring and counseling). Because more experienced founders may have encountered these problems in earlier ventures, they may have developed pertinent knowledge and learned behavior that less experienced founders do not have.

Because we tested only a few operationalizations of founders' knowledge and legitimacy- seeking behaviors, a third way future researchers could build on this study is by developing and using other operationalizations. In doing so, examining founders' entrepreneurial and industry experience within a single industry might allow researchers to develop measures of legitimacy-seeking behaviors that are specific to an industry. Industry norms, which may affect legitimacy-seeking behavior, are specific to industries and therefore vary across industry. Entrepreneurial norms, on the other hand, cut across industries. Because we examined new ventures across many industries, we focused on entrepreneurial norms and legitimacy-seeking behavior connected to these norms.

A fourth way to build on this study is to examine how the quality of founders' experiences influence their legitimacy-seeking behavior. Previous researchers have suggested that founders may learn differently from successful and failed ventures (Cope 2005; Minniti and Bygrave 2001; Parker 2006; Reuber and Fischer 1999). Therefore, researchers could examine what founders learn from successful and failed ventures, and how that learning relates to their behavior in new ventures. In terms of industry experience, researchers could also examine the relationship between the size of the companies for which founders have worked in the past (within their venture's industry) and their legitimacy-seeking behavior. It may be that founders who have worked for large companies, which may be more buffered from the need to externally legitimate themselves than smaller companies (Perrow 1986), are less likely to engage in legitimacy-seeking behaviors.

Implications

The main lesson of this study is that in new ventures, founders' experience and intentions are significantly related to the degree to which they engage in legitimacy-seeking behaviors. Coupled with Tornikoski and Newbert's (2007) finding that the degree to which new venture founders engage in legitimacy seeking is positively related to venture performance, this lesson can provide guidance for founders, investors, and entrepreneurship teachers. For founders, the main implications of this study are that there are there are important lessons to be learned from experienced founders about how to make your venture credible, and that it is important to the success of your venture to engage in behaviors that are consistent with legitimacy seeking. Less important is the implication for less experienced founders that they can learn from this study that it might be advantageous for them to partner with more experienced founders. For investors, the main implication of this study is that they should encourage the founders of the ventures in which they invest to engage in legitimacy seeking. This will allow the venture to become successful more quickly and benefit investors. But, at the same time we caution investors to be aware of the tradeoffs that accompany legitimacy seeking. For example, if a founding team begins marketing a product early in a venture's life, they may be wasting time that would be better utilized by developing and refining new products. For entrepreneurship teachers, the main implication of this study is that they should teach their students about why it is important to appear credible when staring a new venture and how appearing credible is related to venture performance. Students who graduate from entrepreneurship classes and who later start new ventures would be well served to understand the importance of legitimacy seeking.

In conclusion, this study contributes to the new venture literature by showing that founding teams that have greater entrepreneurial and industry experience are more likely to engage in legitimacy-seeking behaviors. We argue that this is because they have learned from their experience that legitimacy-seeking behavior is important in starting a new venture and they have learned how to engage in such behavior intentionally. This study, therefore, provides one answer to the question, "What do experienced entrepreneurs know that makes them more successful?" They know the importance of engaging in legitimacy-seeking behavior.

References

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational behavior and human decision processes*, 50, 179–211.

Anderson, C. R. (1977). Locus of Control, Coping Behaviors, and Performance in a Stress Setting: A Longitudinal Study. *Journal of Applied Psychology,* 62, 446–451.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, New Jersey: Prentice-Hall.

Begley, T.M., W-L. Tan, and H. Schoch. (2005). Politico-economic factors associated with interest in starting a business. *Entrepreneurship Theory and Practice,* 29(1), 35–55.

Bird, B. J. 1988. Implementing Entrepreneurial Ideas: The Case for Intention. *Academy of Management Review* 13(3): 442–453.

Bird, B. J. 1992. The Operations of Intentions in Time: The Emergence of the New Venture. *Entrepreneurship Theory and Practice* 17, 11–20.

Brockhaus, R. H. (1975). IE Locus of Control Scores as Predictors of Entrepreneurial Intentions. *Proceedings of the Academy of Management,* 35, 433–435.

Bruderl, J., P. Preisendorfer, and R. Ziegler. (1992). Survival Chances of Newly Founded Business Organizations. *American Sociological Review*, 57, 227–242.

Brush, C. G., and T. S. Manolova. (2004). Start-up Problems. *In Handbook of Entrepreneurial Dynamics: The Process of Business Creation.* Eds. W. Gartner, K. Shaver, N. Carter, and P. Reynolds. Thousand Oaks, CA: Sage, 273–284.

Carland, J. W., F. Hoy, W. R. Boulton, and J. C. Carland. (1984). Differentiating Entrepreneurs from Small Business Owners: A Conceptualization. *Academy of Management Review,* 9(2):354–359.

Chandler, G. N., and D. W. Lyon. (2009). Involvement in Knowledge-Acquisition Activities by Venture Team Members and Venture Performance. *Entrepreneurship Theory and Practice,* 33(3), 571–592.

Chrisman, J. J., A. Bauerschmidt, and C. W. Hofer. (1998). The determinants of new venture performance: An extended model. *Entrepreneurship Theory and Practice*, 23(1), 5–29.

Connelly, B. L., R. D. Ireland, C. R. Reutzel, C. R., and J. E. Coombs. (2009). The Power and Effects of Entrepreneurship Research. *Entrepreneurship Theory and Practice,* 34(1), 131–149.

Cope, J. (2005). Toward a Dynamic Learning Perspective of Entrepreneurship. *Entrepreneurship Theory and Practice,* 29, 373–397.

Crant, J. M., 1996. The Proactive Personality Scale as a Predictor of Entrepreneurial Intentions. *Journal of Small Business Management,* 34, 97–108.

Delmar, F., and S. Shane. (2006). Does Experience Matter? The Effect of Founding Team Experience on the Survival and Sales of Newly Founded Ventures. Strategic Organization, 4, 215-247.

Dennis, W. J., and G. T. Solomon. (2001). Changes in the Intention to Grow Over Time. Frontiers for Entrepreneurship Research Wellesley, MA: Babson College.

Hambrick, D. C., and S. Finkelstein. (1987). Managerial Discretion: A Bridge between Polar Views of Organizational Outcomes. *Research in Organizational Behavior,* 9, 369–406.

Gartner, W. B., K. G. Shaver, N. M. Carter, and P. D. Reynolds. (2004). *Handbook of Entrepreneurial Dynamics: The Process of Business Creation.* Thousand Oaks, CA: Sage.

Godfrey, P. C., and C. W. L. Hill. (1995). The Problem of Unobservables in Strategic Management Research. *Strategic Management Research,* 16, 519–533.

Hansemark, O. C. (2003). Need for Achievement, Locus of Control, and the Prediction of Start-ups: A Longitudinal Study. *Journal of Economic Psychology,* 24, 301–319.

Krueger, N. F., M. D. Reilly, and A. L. Carsud. (2000). Competing Models of Entrepreneurial Intentions. *Journal of Business Venturing*, 15, 411–432.

Minniti, M., and W. Bygrave. (2001). A Dynamic Model of Entrepreneurial Learning. *Entrepreneurship Theory and Practice,* 25, 5–16.

Parker, S. C. (2006). Learning about the Unknown: How Fast Do Entrepreneurs Adjust their Beliefs? *Journal of Business Venturing,* 21, 1–26.

Perrow, C. (1986). *Complex Organizations: A Critical Essay.* 3rd ed. New York: McGraw-Hill.

Rauch, A., and M. Frese. (2007). Let's Put the Person Back into Entrepreneurship Research: A Meta-analysis on the Relationship between Business Owners' Personality Traits, Business Creation, and Success. *European Journal of Work and Organizational Psychology,* 16, 353–385.

Reuber, A. R. and E. Fischer. (1999). Understanding the Consequences of Founders' Experience. *Journal of Small Business Management,* 37, 30–45.

Robinson, P .B., and E. A. Sexton (1994). The Effect of Education and Experience on Self-employment Success. *Journal of Business Venturing,* 9(2):141–156.

Rotter, J. B. (1966). Generalized Expectancies of Internal versus External Control of Reinforcements. *Psychological Monographs*, 80, 1–28.

Shane, S., and T. Stuart. (2002). Organizational Endowments and the Performance of University Start-Ups. *Management Science*, 48, 154–170.

Shaver, K. G. (2006). Kscleans.sps. http://www.cofc.edu/~shaverk/ kscleans06.sps. Accessed August 1, 2007.

Sheppard, B. H., J. Hartwick, and P. R. Warshaw. (1988). The Theory of Reasoned Action: A Meta-analysis of Past Research with Recommendations for Modifications and Future Research. *Journal of Consumer Research,* 15, 325–343.

Stouder, M. D. (2002). The Capital Structure of Decisions of Nascent Entrepreneurs. Ph.D. dissertation. Rutgers, The State University of New Jersey, Newark.

Suchman, M. C. (1995). Managing legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review,* (20)3: 571–610.

Tornikoski, E. T., and S. L. Newbert. (2007). Exploring the determinants of organizational emergence: A legitimacy perspective. *Journal of Business Venturing,* 22, 311–335.

Wiklund, J., P. Davidsson, and F. Delmar. (2003). What Do They Think and Feel about Growth? An Expectancy-Value Approach to Small Business Managers' Attitudes toward Growth. *Entrepreneurship Theory and Practice* 27 (3): 247–269.

Wiklund, J., and D. Shepherd. (2003). Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities. *Journal of Management Studies,* 40(8): 1919–1941.

Acknowledgment

The authors would like to thank the Center for Entrepreneurship and the Entrepreneurship Research Associates at Wichita State University for their support.

About the Authors

John T. Perry (john.perry@psu.edu) is an assistant professor of strategic management at Wichita State University. He earned his PhD in Management (2006) from the Smeal College of Business at Penn State University. Dr. Perry's research interests include succession issues related to entrepreneurial strategies and family business.

Gaylen N. Chandler (gaylen.chandler@wichita.edu) is a professor of entrepreneurship and the W. Frank Barton Distinguished Chair in Entrepreneurship at Wichita State University. He received his PhD (1990) from the University of Utah. His research interests include opportunity recognition processes, the role of ongoing learning in new venture development, and new venture teams.

Xin Yao (xin.yao@colorado.edu) is an assistant professor of management and entrepreneurship at the Leeds School of Business, University of Colorado at Boulder. She received her PhD from the University of Washington. Her research interests include with entrepreneur identity and motivation, early stage venture financing, venture capital, and creativity.

Timothy L. Pett(tim.pett@wichita.edu) is a professor of management, Hayes Company Faculty Fellow, and director of the Center for Entrepreneurship at Wichita State University. He earned his PhD in Strategic Management from the University of Memphis in 1997. Dr. Pett's research interests include small firm performance, innovation, new product development, and international entrepreneurship.

Varieties of Bricolage and the Process of Entrepreneurship

Jeff Vanevenhoven,
Doan Winkel, Debra Malewicki,
William L. Dougan, James Bronson

We offer a theoretical account of how two types of bricolage influence the entrepreneurial process. The first type involves social relationships or physical or functional assets, and thus pertains to an entrepreneur's external resources used in the instantiation of operations of a new venture. The second type pertains to an entrepreneur's internal resources—experiences, credentials, knowledge, and certifications—which the entrepreneur appropriates, assembles, modifies and deploys in the presentation of a narrative about the entrepreneurial process. We argue that both types of bricolage are essential to the success of a venturing attempt.

Keywords: internal bricolage; external bricolage; entrepreneurial process; entrepreneurial opportunity; prior knowledge

Bricolage is a concept first considered by French anthropologist Claude Levi-Strauss (1967) as a part of his exploration of the nature of sensemaking in some societies. This notion has been extended into many other disciplines. Briefly, it is a propensity to rely on resources at hand in accomplishing critical tasks and/or in accomplishing goals (c.f. Duymedjian and Rüling, 2010 for a recent review). We argue here that entrepreneurship is enabled through a variety of types of entrepreneurial bricolage (Baker & Aldrich, 2000), which we hereafter referred to only as "bricolage." Bricolage is fundamentally important to venturing because venturing is a process of adaptive design (Sarasvathy, Dew, Read and Wiltbank, 2008). Bricolage enables the adaptive design process by making solutions to problems more achievable, by making critical resources more obtainable and by reducing costs. We contribute to efforts to identify further the various forms of bricolage used by entrepreneurs, the strategies by which those forms are employed, the mechanisms through which they are expressed and the ways in which these change during various stages of the entrepreneurial process. We argue that if aspiring entrepreneurs can be given a concisely delineated conceptual framework that identifies methods and approaches for navigating the entrepreneurial process productively, these individuals may have a greater chance of success.

The main purpose of this paper is to address the following research question: *How does bricolage influence the process of entrepreneurship?* We theorize that bricolage makes entrepreneurship viable by providing individuals with the means to progress through the entrepreneurial process. Entrepreneurs utilize the techniques of bricolage to leverage internal and external resources to parse, to re-conceptualize, to appropriate and to assemble resources and to rework and to present narratives about the entrepreneur, venture and/or the process in such a way as to solicit further contributions of resources that can sustain and/or advance the venture. The contributions of such a scheme consist of establishing the importance of bricolage in the entrepreneurial process, incorporating an understanding of the mechanisms and methods by which bricolage is expressed and showing the value of making a contrast between internal and external bricolage to scholars of entrepreneurship.

In reviewing the literature on bricolage, Baker and Nelson (2005) characterize bricolage as a concept having three core elements: making due with what's at hand, taking on diverse or novel tasks, and accumulating and using diverse skills and resources. Baker and Nelson (2005) dealt particularly with conditions of extreme environmental constraint and argued that bricolage enables entrepreneurial activity under conditions where the startup, growth or survival of a venture (and, by implication, the entrepreneur) might not otherwise be possible. Similarly, DiDomenico, Haugh and Tracey (2010) characterize bricolage as making do with available resources, a refusal to be constrained by limitations, and improvisation. These descriptions are not inconsistent with the work of Sarasvathy (2001, 2008) who argues that successful entrepreneurs more skillfully or completely exploit established social relationships, existing knowledge, and claimable identities to reduce the risk of investment loss in a new venture. Sarasvathy examines closely the mental processes of entrepreneurs, and then makes a strong case for using this information to derive theory that elucidates effective practice. The author coins the word *effectuation* to describe the propensity of successful entrepreneurs to rely on controllable resources as a means of limiting the risk of loss of investments in a venture. We argue that one important component of her theory is that successful entrepreneurs make do with controllable resources at hand, which can be seen as a form of bricolage.

We posit that bricolage takes two distinct forms—internal and external—which serve different functions in the entrepreneurial process under different conditions and at different times. Internal bricolage employs as constituent components the often idiosyncratic predicates associated with specific individuals—life and work experiences, professional and academic certifications, idiosyncratic mental endowments, etc., which constitute unique bundles of resources that can be claimed as a basis for the legitimacy of the entrepreneur to control other resources and to guide the venture through the uncertainties and risks of venture development. Gabriel, Gray and Goregaokar (2010) identify related activity among managers and professionals who become unemployed late in their careers and who must revise, recombine, and redeploy narratives about previous employment experiences in the service of obtaining new positions. This activity is akin to the sense from which the notion of bricolage emerged—as a means for assembling from the typical experiences common to the members of a social group (like a society) the specific stories that provide guidance and a sensemaking framework for the members of that group (Levi-Strauss, 1967).

External bricolage, on the other hand, employs the pool of potential resources available to an entrepreneur in his or her external environment. These resources can be social—comprising a portion or the entirety of the web of social relations in which the entrepreneur is embedded (Baker, Miner & Eesley, 2003). They can also be physical—comprising the collection of tangible inputs like machines, materials, parts, land, by products, waste, etc. We place financial resources in this realm, but note that they have a rather unique character of being relatively easily transformed into other resources. We argue that external bricolage is closer in character to the example of bricolage evoked by Levi-Strauss (1967, 1970) to illustrate the concept—the use of available physical materials to accomplish tasks of construction or repair. We place both network bricolage (such as in the utilization of social capital) and asset bricolage (such as the modification, deployment, assemblage or transformation of physical or financial resources) in the realm of external bricolage. We assert that both internal and external types of bricolage are vital to success in the entrepreneurial process, but for different reasons. We argue that these different forms may cast light on debates regarding the agency of the entrepreneur in the venturing process.

The reason for making this distinction is important. Consistent with the work of Loundsbury and Glynn (2001), we believe that the work of an entrepreneur is not just to create an ongoing enterprise by "assembling a machine" for creating value. To obtain resources, the entrepreneur must engage in rhetorical activity (Zott & Huy, 2007). An entrepreneur must tell a story that convinces others who command resources to make those resources available (O'Connor, 2004). To do this the entrepreneur needs to describe a future world where the ongoing venture is successful, but also to represent himself or herself as the most appropriate individual to bring the new venture into being.

We also attempt here to continue the tradition of unpacking the entrepreneurial process into its constituent aspects, forms, and phases and to examine how bricolage can apply to the phases of that process. For us it is important to understand how participants locate, delineate, evaluate, assemble, and deploy the constituent inputs to the entrepreneurial process, and how they derive or construe overarching operational or existential principles that can be examined empirically for their relative importance and value in the venturing process. Such an examination has the potential to inform scholars of entrepreneurship by elucidating the means by which individuals who are involved in venturing address and surmount the common, recurring problem of adaptive design of a new venture.

We begin with a detailed explanation of bricolage and discuss how it can inform and advance entrepreneurial research. We then discuss entrepreneurship and the importance of the notion of the "processing of an opportunity" for models of the entrepreneurial process. We provide propositions regarding the importance of bricolage to the process of entrepreneurship and the salutary influence that bricolage exerts on that process. We conclude with a discussion of the implications of our approach.

Literature Review

Bricolage

Bricolage—"local, contextual, and sudden process . . . which cannot be thought of outside the specific situation where it appears" (Cunha, 2005:6)—is a concept that can lend explanatory power to scholars of entrepreneurship. Scholars in a variety of other disciplines have appropriated the notion of bricolage to address a variety of phenomena (Duymedjian & Rüling, 2010). As with many terms in the entrepreneurship field, a consistent definition of bricolage has been elusive. Organizational scholars have defined it loosely as making do with "whatever is at hand" (Miner, Bassoff, & Moorman, 2001; Weick, 1993a: 351). Alternative definitions are "to use whatever resources and repertoire one has to perform whatever task one faces" (Weick, 1993b: 352); "tinkering through the combination of resources at hand" (Ciborra, 2002: 48–49); "the invention of resources from the available materials to solve unanticipated problems" (Cunha, 2005: 6) and "resource cooptation" (DiDomenico, Haugh and Tracey, 2010:683). In their literature review, Baker and Nelson (2005) found the following common themes across definitions of bricolage: (1) active problem-solving and/or opportunity-seeking; (2)

reliance on pre-existing elements at hand; and (3) resource recombination for novel uses.

Duymedjian and Rüling (2010) identify three important components of bricolage: stock or repertoire (the compendium or collection of the elements on which the bricoleur acts), dialogue (the ongoing relationship that the bricoleur maintains with the stock or repertoire), and outcome (the end sought by the bricoleur). The elements of the repertoire can be tools, raw materials, ideas, etc. From our point of view, the adaptive process we identified earlier can easily be seen as containing a dialogue in which the entrepreneur works with ideas, predicates, technology, raw materials, tools, money, relationships, etc. An important consideration about the elements in the repertoire is that the classification or identity of these elements is not fixed. Tools can become raw materials; waste can become tools, etc. For us, the objective would be the presence of a viable new venture.

Scholars have applied bricolage to address various facets of both entrepreneurship and organizational improvisation and transformation (Baker et al., 2003; Baker & Nelson, 2005; Ciborra, 1996; Engelen, et al., 2010; Garud & Karnøe, 2003; Hendry and Harborne, 2011; Miner et al., 2001; Spicer and Sewell, 2010; Weick, 1993a,b). Baker and Nelson (2005) found that bricolage allowed firms to exploit inputs ignored by other firms to render unique services.

Theorists also argue that bricolage is used by individuals for personal benefit as well. For example, Nohria & Berkley (1994) found that bricolage effectively prepared workers for adopting new technology. Gabriel, Gray and Goregaokar (2010) find that bricolage enables unemployed professionals to cope with identity reconstruction.

Sometimes, both the personal and the social are intertwined. For example, Johannisson and Olaison (2007) showed how bricolage enabled individuals and organizations affected by a hurricane to cope with the loss and destruction of a social fabric wrought by the storm. Cabantous et al. (2010) explicate the process whereby the tools of rational decision making are applied by analysts who are responsible for executing the decision-making process. Boxenbaum and Roleau (2010) argue that bricolage enables social theorists to advance the collective theory building process.

While scholars have begun to test the waters of a bricolage←→entrepreneurship relationship, the bricolage literature has yet to address its potential direct influence on the entrepreneurial process.

Entrepreneurship

Some definitions of entrepreneurship focus on individual actions while ignoring the profitable opportunities that must also be present to incent entrepreneurial action. We assert that entrepreneurship pertains to the generation, evaluation and exploitation of market opportunities by locating, obtaining and assembling and deploying resources. Furthermore, it involves the potential sources of opportunities, the activities of opportunity creation and/or discovery, the activities of development of one or more opportunities, the activities of exploitation of one or more opportunities, and the individuals involved in those activities. The entrepreneurial process, then, is activity which "processes" opportunities. This process takes the form of a "dialogue" with these opportunities and other elements of the entrepreneur's repertoire, with the objective of transforming an opportunity into a viable venture. Thus, understanding the character of opportunities, how they enter the entrepreneurial process and how they move through the entrepreneurial process is critical to understanding how success can be achieved. Recently, a number of theorists have argued for the significance of opportunity as an explanatory concept (Gartner, Carter & Hills, 2003; Shane & Venkataraman, 2000; Venkataraman, 1997).

Opportunity Discovery v. Opportunity Creation

Eckhardt & Shane (2003) define entrepreneurial opportunities as "situations in which new goods, services, raw materials, markets, and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships" (336). For decades, the dominant logic in entrepreneurship theory was a person-centric perspective that disregarded the role of opportunity (Eckhardt & Shane, 2003). However, the examination of how opportunity is now treated by many as critical to understanding the entrepreneurial process. Much debate has centered on this particular issue. An objectivist perspective sees opportunities as objective realities that exist independently of the entrepreneur and thus are discovered by entrepreneurs. In contrast, a subjectivist perspective, sees opportunities as enacted by an entrepreneur and fellow actors through their unique knowledge (e.g., Alvarez & Barney, 2007; Kirzner, 1979; Shane & Venkataraman, 2000; Von Mises, 1949). The more recently developed constructivist perspective sees opportunities as "produced through a process of social construction and cannot exist apart from the entrepreneur" (Wood & McKinley, 2010: 66; see also Mahoney & Michael, 2005; Sarasvathy, 2001). Placing bricolage into the entrepreneurship landscape can be done through any of these three theoretical lenses; whether an entrepreneur discovers, enacts, or socially constructs an opportunity, he or she can subsequently engage in bricolage to navigate through the entrepreneurial process. It is easy to see how the previously discussed, transformative character of bricolage can change elements into an opportunity, but how an opportunity can occur almost of a piece and be "discovered" by the entrepreneur.

A long-standing dispute has developed between those who posit that opportunities exist prior to the entrepreneurial process, and those who posit that opportunities are recognized or discovered by entrepreneurs to start the process (Read, Song, & Smit, 2009). Some scholars of entrepreneurship posit that the entrepreneur is a sine qua non in the instantiation and success of new enterprises (Sarasvathy & Dew, 2005). Others, (Arrow, 1974; Kirzner, 1973, 1979) minimize the creative role of the entrepreneur in the development of new markets. Many models take intermediate positions by incorporating considerations of fundamental limits on human cognition and perception (Knight, 1921; Shackle, 1969; March, 1978) as a way of tempering the agency of the individual in the development of new markets. Still others suggest that entrepreneurship can also be an accidental process (Shah & Tripsas, 2007) emerging out of the interactions between users of products. An issue central to entrepreneurship is identifying the role of individuals in producing important ideas and innovations in today's knowledge-based economy (Sørensen & Stuart, 2000).

We argue that a process approach that is agnostic to the issue of whether an opportunity is created or discovered can still advance theory without becoming entangled in the issue of the origin of an opportunity. This is because we argue that the bricolage process can allow both discovery and creation. This can occur because a collection of elements can be perceived as an opportunity (in some cases because highly specialized knowledge is not necessary) and in other cases specialized or idiosyncratic knowledge, information or entrepreneur characteristics may be necessary for further development to be worthwhile. In fact, a number of "proto-opportunities" may exist in the entrepreneur's repertoire in forms that cause them to be perceived as incomplete, unexploitable or flawed, making the idea generation process incomplete. This can change if the entrepreneur gains access to another new element, the entrepreneur changes his or her perception of some elements or the opportunity, or external conditions change, rendering the "proto-opportunity" into one that is perceived as ready for development by the entrepreneur. We argue that it is at this point that the phase of the entrepreneurial process shifts from idea generation to idea development.

We concentrate our efforts on theorizing about what happens to an opportunity prior to when an entrepreneur decides to develop it as well as after that decision is made. This is consistent with the notion of entrepreneurship as adaptive design (Sarasvathy et al., 2008) that was presented earlier. We contend that the entrepreneurial process moves from opportunity generation to opportunity development when the entrepreneur makes a decision that an opportunity has reached the point where it deserves special attention, and the entrepreneur decides to change the character of the adaptive process to concentrate in a less tentative way on rendering the opportunity into a viable venture. Many scholars have focused a cognitive lens on the entrepreneurial process in an attempt to isolate the factors that mold the capability to generate new opportunities through superior knowledge (Ardichvili, Cardozo, & Ray, 2003; Gaglio & Katz, 2001; Krueger, 2000; Shane, 2000). Other models take a different approach to this issue, leaving aside more fundamental issues of the entrepreneur's agency and examining the process of venture initiation (c.f. Steyaert, 2007).

An Entrepreneurial Process Model

One way to elucidate the effect of bricolage on the entrepreneurial process is to consider how bricolage enables the progression of opportunities throughout the entrepreneurial process. This begs the question of what model of the entrepreneurial process to use. We draw on an analogous model of the entrepreneurial process posed by Shane (2000) and depicted in Figure 1. Shane (2000) argued that discovering entrepreneurial opportunities hinges on prior knowledge developed through work experiences, personal events, and education. The discovery of entrepreneurial opportunities depends on idiosyncratic prior knowledge, and entrepreneurial opportunities become known to individual entrepreneurs through their recognition of the value of prior knowledge instead of through active search. Shane argued that prior knowledge enables entrepreneurs to imagine the use of a technology in different markets, serving a particular market in different ways, and/or providing solutions to new and different problems. He also argued that prior knowledge influences the relationship between opportunity recognition and opportunity exploitation by influencing the selection of the market, of the way to serve the market, and of the solutions to customer problems.

Galunic and Eisenhardt (1994) found that knowledge is essential to a firm's entrepreneurial ability, and Audretsch and Lehman (2006) found that differential knowledge is a key criterion for success, bestowing a competitive advantage for entrepreneurial firms. Shane and Venkataraman (2000) argued that prior knowledge and the cognitive ability to assess that knowledge are crucial to identifying opportunities. Shane (2000) argued that discovering entrepreneurial opportunities hinges on prior knowledge developed through work experiences, personal events, and education.

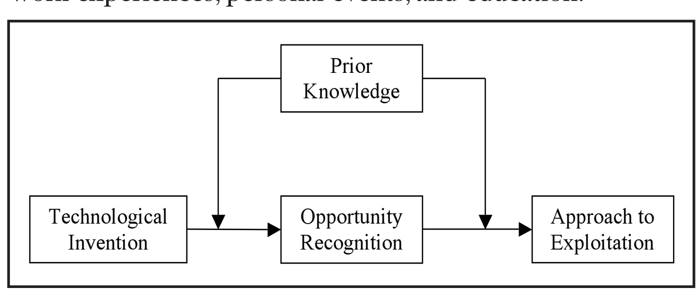


Figure 1. Shane's (2000) Conceptual Model

In this article we take an analogous approach to the entrepreneurial process, conceptualizing entrepreneurship as work on candidate opportunities, and we attempt to outline the ensemble of critical behaviors, practices and principles that are employed by entrepreneurs to navigate this process successfully. Like the activity of obtaining knowledge in Shane's model, the activity of bricolage enables better outcomes of the process (see Figure 2).

We add the phase "opportunity development" prior to opportunity exploitation in order to mimic one established definition of the entrepreneurial process (Shane & Venkataraman, 2000). We have also included feedback loops to imply that the entrepreneurial process is not strictly temporally unidirectional. The testing, modification, evaluation, and/or decision-making activities inherent in the process mean that the activities of a particular phase of the process will often return the entrepreneur to an earlier phase of the process. The cycling of entrepreneurs through the process means that new opportunities and/or resources are acquired and/or created as a result of the process, and these can trigger reinitiation of the cycle.

We also incorporate the distinction between serial and parallel development of new opportunities. This corresponds to a notion of serial and parallel bricolage that is posited by Baker and Nelson (2005). We indicate this by the parallel arrows between phases. For a specific entrepreneur, multiple opportunities may be at various stages of the process, and entrepreneurs may suspend, abandon, or rekindle efforts to bring an opportunity to fruition. So, the progress of the entrepreneur through successive stages of the process requires neither a strict sequence of transitions through the states we identify nor exclusive attention to a single opportunity.

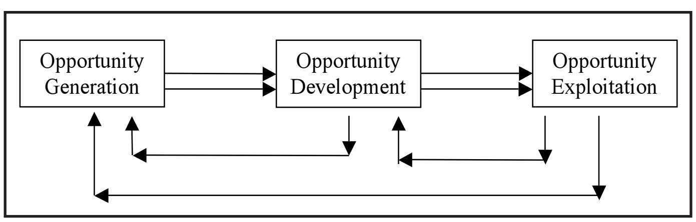


Figure 2. The Entrepreneurial Process

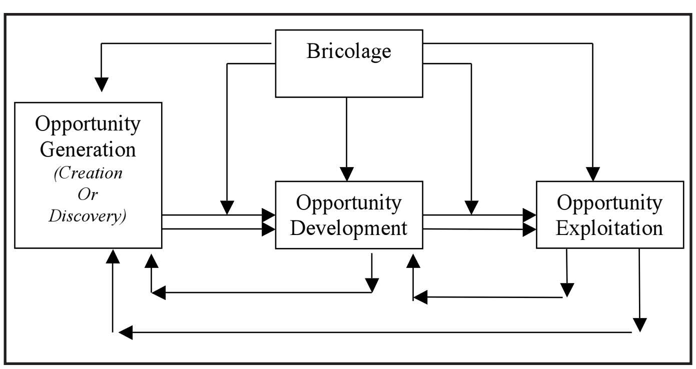


Figure 3. The Potential Effect of Bricolage on the Entrepreneurial Process

We further modify and extend the model by incorporating the influence of bricolage and by arguing that, like knowledge, bricolage also enables the entrepreneurship process in the sense that it, by definition, expands the utility of the critical inputs to the process (prior knowledge, idiosyncratic characteristics and existing resources) and the adaptive abilities (improvisation, active engagement, and integrative thinking) of the entrepreneur. These, of course, are fundamental to success within the entrepreneurial process. Entrepreneurs use bricolage to progress from the opportunity discovery to the opportunity exploitation phase of the entrepreneurial process. We introduce bricolage as an enabler of efforts within and between each of the different phases of the process (see Figure 3).

Also, as we argued earlier, we incorporate theoretical approaches that argue that opportunities are discovered as well as those that argue that opportunities are created. We define "opportunity generation" as consisting of both "opportunity discovery" and "opportunity creation," thus obviating the mutual exclusivity of the opposing theoretical perspectives. For our purposes, there is little need to exclude one source of opportunities or another. These changes are depicted in Figure 3 as the modifications of the Opportunity Generation phase.

Theory Building

The Importance of Bricolage in Entrepreneurship

We argue that bricolage is a pattern of behavior—a means for enabling and accomplishing ad hoc responses to unforeseen situations and opportunities—and that it can be an invaluable method in circumstances characterized by fluidity and uncertainty. Bricolage is especially applicable when entrepreneurs face conditions that require rapid action, because in these situations they are more likely to be limited by immediately available resources and the need to balance planning and improvisation without the benefit of time and resources for modifying existing plans or developing new ones (Cunha, 2005). For entrepreneurs to use bricolage successfully in the entrepreneurial process, they must have an intimate knowledge of their available resources, they must be observant, they must trust their ideas, and they must learn and correct through feedback (Weick, 2001).

Successfully navigating the entrepreneurial process requires the following characteristics, all of which are enhanced or activated by bricolage: adaptability, improvisation, active engagement, and integrative thinking. Entrepreneurs must be able to adapt to and exploit circumstances of opportunity. An opportunity holds no value to individuals or organizations unless they possess the knowledge to recognize the opportunity and the recognized capability to exploit it. If an opportunity is attractive enough, entrepreneurs must adapt their knowledge and other resources at their disposal during the development and exploitation stages of the process. To capitalize on the transformation of an opportunity from generation to exploitation, entrepreneurs must act swiftly. Therefore, they must often fashion a sufficient, instead of a perfect strategy from their prior knowledge and the resources at hand. This urgency drives entrepreneurs to spend their limited time surveying current predicates, knowledge, and resources and developing novel combinations of these to adapt opportunities to the changing environment or to discover new forms of opportunities instead of searching for new, costly and unfamiliar resources to develop opportunities. Another essential task is to convince those who control critical resources to make those resources available to the prospective venture. To secure control of these resources, it is paramount that the entrepreneur represents himself or herself as a responsible, knowledgeable, capable, and credentialed steward of those resources (Loundsbury & Glynn, 2001).

Improvisational scenarios, such as responding to disruptive innovation, generally contain time and uncertainty pressures (Crossan et al., 2005). Consistent with Berliner's definition of jazz improvisation, entrepreneurial improvisation "involves reworking precomposed material and designs in relation to unanticipated ideas conceived, shaped, and transformed under the special conditions of performance, thereby adding unique features to every creation" (1994: 241). Entrepreneurs often engage in a just-in-time strategy and improvise by recombining resources at hand for novel uses, which is bricolage. In time, they develop a practical approach to experimentation by amalgamating their knowledge of available resources and their past experiences.

This prior knowledge allows entrepreneurs to categorize and evaluate information from the environment, which leads directly to the possibility of opportunity creation or recognition. Individual prior knowledge accumulated through life experiences also provides the means to discover and develop entrepreneurial opportunities (Venkataraman, 1997; Shane, 2000). However, because the evidence of this knowledge and experience is often intangible, the entrepreneur must make it salient to others. The integration of prior knowledge and progressive thinking will likely result in a better fit between entrepreneur and opportunity because the resources at hand will become more than just haphazard elements that are aggregated by chance and that lack key features for success.

Cohen and Levinthal (1990) argued that knowledge provides a powerfully predictive tool in terms of environmental change and the suitability of strategic decisions, two areas of significant stress for entrepreneurs. When successful entrepreneurs harness and apply the appropriate prior knowledge, they increase chances of adapting to environmental change, taking appropriate strategic direction, and building a sustainable competitive advantage through opportunity generation, development, and exploitation. Sometimes this knowledge is present in the entrepreneur; sometimes the entrepreneur must solicit the contributions of others to obtain it. It is not enough that entrepreneurs recognize their prior knowledge; they must be able to harness and apply it to navigate the entrepreneurial process successfully. Finally, as we have argued previously, just having the appropriate knowledge is not enough. Creating persuasive accounts of this knowledge capable of assuaging the inhibitions of potential providers of resources is also necessary. Bricolage is one way entrepreneurs can accomplish these tasks.

As we have shown, bricolage can be an invaluable method for entrepreneurs as they face a changing environment and are required to apply their prior knowledge and existing resources to make quick decisions and to act rapidly to capitalize on opportunities. The above argument leads to the following proposition:

Proposition 1: Bricolage enables entrepreneurs to navigate the stages of the entrepreneurial process successfully.

Internal and External Bricolage

As we argued before, bricolage can be both internal and external. Internal bricolage refers to activities making use of an entrepreneur's idiosyncratic, internal predicates—such as the prior knowledge of markets and ways to serve markets, customer problems, life experiences, educational attainments, professional knowledge, etc. More elaborate combinations of these are likely to be more specific to the entrepreneur's life experience and the unique bundle of claimable sources of legitimacy to which he or she has access. Internal bricolage may enable the construction of arguments about these sources of legitimacy, or may enable the entrepreneur to render the sources of legitimacy perceptible or salient to evaluators. External bricolage refers to activities to exploit the pool of potential resources available to entrepreneurs in the external environment. Entrepreneurs can incorporate resources immediately at hand, can acquire resources from external stakeholders whose contributions are solicited, and can tap into external stakeholders' knowledge and then recombine these resources for their particular novel use. For instance, entrepreneurs might scan their environments for potential strategic alliances or personal contacts necessary to obtain the required manufacturing or marketing capabilities, or to gain quick access to vital markets in which they have no experience. They might have developed viable prototypes but lack the required financial or technological resources to manufacture tangible products.

Bricolage also provides a valuable means to enable application of prior knowledge and experience and to render resources in the external environment readily available for the development and exploitation of an opportunity. Bricolage is not simply environmental scanning. It combines the act of imagining novel combinations of resources in either the internal or external environment in combination with the act of acting on those resource combinations to create, develop or exploit a particular opportunity.

The sense in which bricolage was used by Levi-Strauss (1970) is consistent with this notion. For Levi-Strauss, bricolage is more about constructing narratives out of the fabric of experience to resolve existential contradictions inherent in social milieus. It is in this sense that we evoke internal bricolage as a means for constructing myths to assuage the skepticism of potential resource providers.

Using bricolage, an entrepreneur can generate opportunities, develop and exploit particular opportunities and minimize the onerous and costly work of modifying existing plans or developing entirely new plans. Entrepreneurs can also create convincing stories that enable the acquisition of new resources at low risk and low cost. By implication, internal bricolage enables an entrepreneur to represent to potential resource providers his or her correctness as the unique individual to exploit the opportunity via creative management of identity. Both of these activities lead to what Sarasvathy and Dew (2005) call an "expanding cycle of resources" that are available to the entrepreneur. The expanded pool of resources can be used as a basis for acquiring other resources.

As we discussed earlier there are three critical tasks that must be successfully accomplished to capitalize on entrepreneurial opportunities: generation, development, and exploitation. By generation, we mean the portion of the process by which the possibility to do something novel (e.g., to make a product, to perform a service, or create new ideas) becomes known to an individual. This may not necessarily be by way of conducting a conscious search, but may be a result of a conscious search. It may come from attempts to develop an opportunity and may come from collective attempts to serve the agendas and/or interests of a number of participants (Garud and Karnøe, 2003). After generating opportunities and deciding to develop them, entrepreneurs move into the development phase. While some scholars argue that opportunity development encompasses opportunity generation (Gartner et al., 2003; Sanz-Velasco, 2006), we argue that the generation and the development of opportunities are two distinct activities, the combination of which leads to the possibility of exploitation. While it is true that they can be temporally intertwined (corresponding to the feedback loops in our model), they are distinctly different in terms of how internal and external bricolage can be employed. Generation of opportunities does not necessarily require physical action (or even extended periods of time) whereas development necessitates some physical action (if only to contact customers) to move an opportunity forward in the process. Entrepreneurs often do not physically search for opportunities, but utilize prior knowledge to fabricate them through recombination of information, a process that lacks visible activity (Shane, 2000). We do not exclude physical search, however.

As we stated previously, development by its definition necessitates both action and visible activity through the utilization of resources and prior knowledge to realize the full potential of an exploitable opportunity. In addition, it is the development phase, in part through tacit knowledge, that is the occasion for formation of strategy in preparation for exploitation of an opportunity. Generation does not necessitate strategy, for it is often an unplanned occurrence or happens through casual environmental scanning. Strategy is necessary to move from generation to exploitation because that transition may require acquisition, evaluation, choice, assembly, modification, and/or disposal of external resources. Thus:

Proposition 2: Opportunity development is a distinct phase of the entrepreneurial process; after perceiving an opportunity, an entrepreneur will decide whether to direct effort to develop that opportunity to exploit it successfully.

From Generation to Development

In this article, we assume that many important behaviors and inputs initiate the activity that results in entrepreneurial opportunity generation. These behaviors can consist of recognition, scanning, search, discovery and/or construction. An opportunity can emerge as a result of accident or systematic effort, or it can be the result of years of painstaking research or a momentary conversation. We are relatively indifferent to the implications of whether this implies that opportunities are created or discovered. Our formulation argues that making do with available resources can serve both of these sources of ideas.

Once entrepreneurs decide to develop an opportunity, they face a risky choice: to commit time and effort toward development and exploitation of the particular opportunity or to forego the chance to do so (in the short term or permanently) and to pass on the prospective benefits the opportunity holds. If they commit to development, entrepreneurs engage in two important activities:

1. Internal search of their web of "knowledge corridors" for information and claimable predicates that are applicable to the particular opportunity.

2. A scan of their surroundings for available resources they can use to further the exploitation of the opportunity.

Due to time and financial constraints that often subtend strategic options, it is most effective for entrepreneurs to first evaluate the applicability of existing resources that are immediately available. In Sarasvathy's (2001) model, when entrepreneurs exploit existing knowledge, credentials and experience to construct compelling narratives that attract the contributions of others, they reduce or obviate demands that arise from the perception of risk on the part of resource provider's outcomes. When entrepreneurs exploit selected, trusted social relationships to form partnerships, they also reduce or obviate demands by partners that arise from the perception of risk.

If entrepreneurs cannot identify appropriate internal resources from the pools available to them, they will have difficulty assuaging the fears of potential resource providers. If these providers of resources increase their demands for concessions, the entrepreneurs must explore their external environments for attainable resources and then use external bricolage to exploit them. The pharmaceutical and biotechnology industries provide good examples of social external bricolage. It is commonplace in these industries to form strategic alliances, joint ventures, or other forms of partnership. These partnerships often center on R&D or manufacturing capabilities. For example, one firm may discover a new drug, but not have the R&D or manufacturing capability to successfully develop the drug. Because the firm does not control these resources, the firm must scan the external environment for firms that possess the necessary resources. The firms then enter into some form of partnership to develop the new drug. Partnerships often grow out of personal relationships gained through family relationships, common education, professional conferences, or social networking events.

Auto salvage yards are good examples of physical external bricolage. Automobiles that are no longer functional end up in salvage yards. The salvage yard can then disassemble the automobiles and sell the salvageable parts to businesses such as auto repair shops. The salvage yards use bricolage to develop these opportunities by identifying the parts from each automobile that are salvageable, and using the machinery they already possess to remove these parts from the automobiles. Identifying appropriate resources—in the case of the salvage yards, the parts and the tools necessary to salvage the parts—will speed the process from discovery to development to exploitation.

Entrepreneurs need a catalyst to facilitate their progress from opportunity generation to opportunity development. Bricolage is that catalyst because it provides the means to apply prior knowledge and combinations of resources at hand to the progression of opportunities; it allows an entrepreneur to progress from thinking to doing in the rhetorical as well as the executional realm. The above arguments lead to the following proposition:

Proposition 3: Either internal or external bricolage or a combination of the two can facilitate the movement of an opportunity into a subsequent stage of the entrepreneurial process.

Development and the Move to Exploitation

Research has shown that available resources and prior knowledge (particularly of ways to serve markets) shape the development of an opportunity (Sanz-Velasco, 2006). By definition, bricolage is a concept that incorporates the utilization of both available resources and prior knowledge. As the development phase progresses, entrepreneurs begin fashioning strategy in preparation for exploitation of an opportunity. At this point, bricolage helps the entrepreneur to surmount the cognitive impediments to the entrepreneurial process and enables strategy formation by encouraging entrepreneurs to see novel combinations of resources they can immediately and successfully apply to a particular situation. Because it provides for proactive management of the necessary resources and prior knowledge to navigate this phase, and because it aids in vital strategy formation, bricolage can increase an entrepreneur's chances of successfully developing an opportunity and moving a venture to the exploitation phase.

Once an opportunity has been sufficiently developed, entrepreneurs must turn their attention to the exploitation of that opportunity. Knowledge and its application are critical links between development and exploitation because they augment the entrepreneur's intangible ability to predict the suitability of strategic actions more accurately (Cohen & Levinthal, 1990). Prior knowledge of markets, of the ways to serve markets, and of customer needs and problems are indispensable dimensions of knowledge that entrepreneurs must employ to prepare successfully for exploitation. Inventories of existing resources are another critical link between development and exploitation because they provide entrepreneurs with the tangible *means* with which to prepare their developed opportunities for exploitation and to prepare the prospective markets and customers for their new products, services, raw materials or organizing methods. In the case of auto salvage yards, entrepreneurs use physical external bricolage to exploit the opportunity of salvaged automobile parts. In their natural course of business, they maintain relationships with insurance companies and auto repair shops that need parts. They also possess the machinery and trucks necessary to exploit opportunities, which in this case mean delivering the parts. The salvage yards possess the knowledge and resources required to exploit the opportunities. In the case of the pharmaceutical or biotechnology industries, a given entrepreneur may not possess the resources necessary to exploit the drug he or she has developed, so he or she may use external bricolage to acquire the means to do so. The entrepreneur may not have the financial resources necessary to get the drug approved and may not have the marketing expertise necessary to bring the drug to market. The entrepreneur will therefore scan the external environment for a firm or firms that possess the necessary financial and/or marketing resources and will enter into a partnership of some sort to exploit the opportunity by bringing the drug to market. Because bricolage combines the treatment of both prior knowledge and existing resources, entrepreneurs can use bricolage to progress from the opportunity development to opportunity exploitation.

Entrepreneurs use internal bricolage to serve the rhetorical aspect of the opportunity development activity (such as through elevator pitches or business plans). They construct goals toward which they are best equipped to advance. They craft narratives for which they are uniquely equipped to be the central protagonists and which result in favorable outcomes for contributors. The above arguments lead to the following:

Proposition 4: Internal bricolage, external social bricolage or external physical bricolage, or a combination of the three will help entrepreneurs to exploit a developed opportunity.

Conceptual Model

In this article, we have offered the following refinements and additions to Shane's (2000) model. Our theoretical arguments about bricolage are graphically depicted in a model provided in Figure 4.

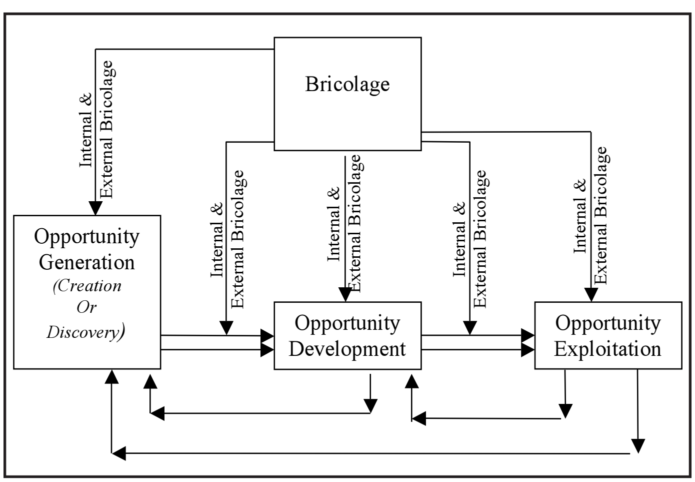


Figure 4. Conceptual Model for the Effect of Bricolage on the Entrepreneurial Process

1. Discovery is not the only source of opportunities. Following from a number of authors cited in this article, we believe that opportunities can be created through the interaction between entrepreneur and an enacted environment.
2. Opportunity discovery and opportunity creation lead to what we term "opportunity generation," which leads to opportunity development which leads to opportunity exploitation.
3. The entrepreneurial process is not strictly temporally unidirectional. An opportunity can be modified, abandoned, rekindled, revised, etc., and this means that it can return to the beginning of the process. This is indicated by the feedback loops at the bottom of Figure 4.
4. The entrepreneurial process may incorporate the development of many opportunities in parallel. These are indicated by parallel lines across the different stages of Figure 4.
5. Bricolage, which incorporates prior knowledge as well as other existing internal and external resources, enables the success of the efforts of entrepreneurs at all phases of the process and it also enables the transition of opportunities from one phase of the process to another.
6. Both internal bricolage and external bricolage have the potential to enhance the efforts of an entrepreneur during all phases of the process.
7. Both internal bricolage and external bricolage have the potential to enhance the efforts of an entrepreneur to move an opportunity across phases of the process. The more skillfully bricolage is applied to developing a generated opportunity, the more likely the entrepreneur will progress to the development phase. The more skillfully bricolage is applied to a developed opportunity, the more likely an entrepreneur will progress to the exploitation phase.

The transitions between phases can certainly be accomplished without the presence of bricolage. Bricolage is not a necessary precondition for moving from generation to development to exploitation. Bricolage does, however, influence the likelihood of traversing these phases successfully and overcoming any hurdles which may inhibit progression through the phases. By persistent and/or skillful use of bricolage, entrepreneurs are much more likely to progress to the final phase of the entrepreneurial process.

Discussion

How does entrepreneurship happen? It happens when entrepreneurs leverage their prior predicates and other existing resources, engage in bricolage and navigate the entrepreneurial process effectively. To navigate this process readily and easily, entrepreneurs need a competitive edge beyond widely available tools, skills, and knowledge. Competitors with similar tools, characteristics and skills in similar environments, using widely known logic (Kilroy, 1999) are likely to arrive at similar conclusions (Barney, 1986). Bricolage is one of the most valuable techniques that entrepreneurs can use, and is an omnipresent but underappreciated catalyst of venture success.

We have argued for integrating bricolage into models of the entrepreneurial process because it provides entrepreneurs with the wherewithal to make entrepreneurship happen successfully. While our conceptual model is analogous to Shane's (2000), we take a different approach to the entrepreneurial process by adding bricolage as a mechanism with which to apply entrepreneurial predicates and available resources to the opportunity generation→ development→ exploitation process of entrepreneurship. We also model the entrepreneurial process differently, choosing for this paper to modify the opportunity generation phase to incorporate both discovery and creation, and adding the critical development phase that links discovery to exploitation. While each phase of this process presents unique challenges for the entrepreneur, a bigger challenge is moving from one phase to the next, which is in many ways a leap of faith. To offset the risks of such a move, entrepreneurs need the tools with which to decrease uncertainty and increase the likelihood of a successful transition (Sarasvathy, 2001). Bricolage is such a tool that provides the means with which to bring an opportunity to fruition by applying readily available resources and prior knowledge in a way that is adaptable, improvisational, active, and integrative.

Contributions to Research

This article makes three important contributions to the entrepreneurship literature. First, it more fully articulates the concept of bricolage and highlights its fundamental importance to the entrepreneurial process. The entrepreneurial process is teeming with uncertainty, time pressures, and circumstances that necessitate immediate decisions and action. We argue that by relying on bricolage, entrepreneurs can mitigate uncertainty and time pressures, can make urgent decisions in an informed way, and can take the actions necessary to navigate the entrepreneurial process successfully.

Second, the article develops the concepts of internal and external bricolage. To date, most bricolage research has focused primarily on external social resources or on prior knowledge. While these are critical to the success of any entrepreneurial venture, so are internal resources. Most individuals and firms beginning the entrepreneurial process do not possess all the necessary capabilities and resources to navigate the process, so they must at some point attract resources from their external environment. Internal bricolage is an important conduit for this process. The two types of external bricolage are also invaluable to entrepreneurs; social external bricolage enables entrepreneurs to make use of the web of social relations in which they are embedded, and physical external bricolage enables them to creatively deploy social and physical resources.

Third, this article argues that opportunity generation and development are two separate phases of the entrepreneurial process instead of competing conceptualizations of the same process (Sanz-Velasco, 2006), and that opportunity development is a critical mediator between generation and exploitation. We argue that developing an opportunity takes direct action and strategy, and draws a contrast with the passivity inherent in merely discovering an opportunity. We do, however, allow for the discovery of opportunities, and the role of chance, technology or institutional forces as the sources of opportunities. We do not restrict the sources of opportunities to chance, however. We argue that entrepreneurs can play a role in generating opportunities by their own actions to create, evaluate and revise those opportunities. We also argue that entrepreneurs cannot progress from discovering an opportunity to exploiting it without first developing it.

Implications for Research and Practice

The theory as presented addresses many of the primary concerns of entrepreneurs, especially in the areas of managing uncertainty and how to progress effectively from generating an opportunity to exploiting it. In today's rapidly expanding, competitive global economy, entrepreneurs find themselves more frequently engaged in a battle for resources and time. The theory suggests that entrepreneurs can, and should, engage in internal and external bricolage to utilize resources more effectively and to capitalize on an idea more readily.

Possible extensions and empirical testing of this conceptual model could prove interesting. Bricolage enables the transition of opportunities through the entrepreneurial process, and understanding its intricacies and its influence on the various phases of the process will provide scholars of entrepreneurs with a better understanding of this controversial process. We have shown that bricolage is necessary to move rapidly or inexpensively from one phase to another within this process. Bricolage similarly provides the means to obtain the requisite knowledge and other resources necessary to begin developing and exploiting an opportunity. Bricolage increases the chance of success as individuals traverse the entrepreneurial process and reduces the time that required developing an opportunity at each phase of the process. One main question to be answered is whether there is a relatively consistent pattern of behaviors that can be systematically applied during these phases, or whether bricolage is a chaotic response to a specific situation. We would argue that internal bricolage is always in order during the transition between generation and development and during the development phase.

We would argue that it is also important to consider the entrepreneurial process in a more macro social context as a basis for further modeling of the process of venturing. Garud and Karnøe (2003), for example, assert that bricolage is as much an emergent outcome of collective efforts and activities of individuals in a number of social collectives as it is an individual behavior. Their model argues that the development of an industry is a collective product of bricolage by government functionaries, individual entrepreneurs and providers of resources such as financing. The implication is whether the behaviors prescribed above will enable more successful development of industries, not just individual firms.

Furthermore, we think that it would be interesting to consider the adaptive behaviors that we describe here in a normative as well as a behavioral context. It would be interesting to distinguish between what the best entrepreneurs do and what most entrepreneurs actually do. By establishing a normative theory as well as a theory of variance from the norm, we can generate a more comprehensive theory.

Of course, empirical testing of the model is a logical next step. While Shane's (2000) study found interesting results using a case study method, the model posited here should be tested with robust empirical data across industries, and longitudinally if possible. We hope our theoretical arguments surrounding the entrepreneurial process will spark debate and discovery regarding the entrepreneurial phenomenon.

Conclusion

In the current business environment, examination of the entrepreneurial process is a significant and relevant concern. As new markets are discovered, and existing markets consolidate and show the characteristics of turbulence, it is the enlightened use of entrepreneurial techniques that can lead to success and survival for individuals, organizations, and perhaps societies. Our purpose has been to refine the existing theoretical framework for activities of entrepreneurship and to incorporate the important explanatory mechanism of bricolage into emerging models of the entrepreneurial process. We argue that the use of bricolage as an explanatory concept is an appropriate means to examine entrepreneurship, and that opportunity development is a necessary link between opportunity generation and exploitation. We explain that bricolage is an invaluable means by which entrepreneurs can quickly and successfully move through the process from opportunity generation to exploitation. While our conceptual framework needs the support of subsequent data, we hope we have advanced efforts to create a reasoned model of the entrepreneurial process that will provide valuable insights when tested empirically.

Acknowledgements

A prior version of this paper was presented at the 2008 Annual Meeting of the Academy of Management in Anaheim, CA. We wish to thank several anonymous reviewers who provided their comments at that time. We, of course, are responsible for any errors.

We dedicate this work to the late Deborah Malewicki, who received her Ph.D. in marketing and entrepreneurship at the University of Illinois at Chicago. She is sorely missed by her colleagues and friends.

References

Alvarez, S.A., & Barney, J.B. 2007. Discovery and creation: alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal,* 1(1–2): 11–26.

Ardichvili, A., Cardozo, R., & Ray, S. 2003. A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing,* 18: 105–123.

Arrow, K. 1974. Limited knowledge and economic analysis. *American Economic Review,* 64(1): 1–10.

Audretsch, D.B. & Lehmann, E. Entrepreneurial access and absorption of knowledge spillovers: Strategic board and managerial composition for competitive advantage. *Journal of Small Business Management,* 44: 155–166.

Baker, T., & Aldrich, H. 2000. Bricolage and resource seeking: improvisational responses to dependence in entrepreneurial firms. Unpublished paper, http://www.unc.edu/~healdric/Workpapers/WP134.pdf.

Baker, T., Miner, A.S., & Eesley, D.T. 2003. Improvising firms: Bricolage, account giving and improvisational competencies in the founding process. *Research Policy,* 32: 255–276.

Baker, T., & Nelson, R.E. 2005. Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly,* 50: 329–366.

Barney, J. 1986. Strategic factor markets: Expectations, luck and business strategy. *Management Science,* 32: 1231–1241.

Berliner, P.F. 1994. Thinking in jazz: *The infinite art of improvisation.* Chicago: University of Chicago Press.

Boxenbaum, E., & Roleau, L. 2011. New knowledge products as bricolage: Metaphors and scripts in organization theory. *Academy of Management Review,* 36(2):272–296.

Cabantous, L., Gond, J., and Johnson-Cramer, M. 2010. Decision theory as practice: Crafting rationality in organizations. *Organization Studies,* 31(11): 1531–1566.

Ciborra, C.U. 1996. The platform organization: Recombining strategies, structures, and surprises. *Organization Science,* 7: 103–118

Ciborra, C.U. 2002. *The labyrinths of information: Challenging the wisdom of systems.* New York: Oxford University Press.

Cohen, W.M., & Levinthal, D.A. 1990. Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly,* 35: 128–152.

Crossan, M., Cunha, M.P., Vera, D., & da Cunha, J.V. 2005. Time and organizational improvisation. *The Academy of Management Review,* 30: 129–145.

Cunha, M.P. 2005. "Bricolage in organizations." FEUNL Working Paper No. 474 http://portal.fe.unl.pt/FEUNL/bibliotecas/BAN/WPFEUNL/WP2005/wp474.pdf.

DiDomenico, M., Haugh, H. & Tracey, P. 2010. Social bricolage: Theorizing social value creation in social enterprises. *Entrepreneurship Theory and Practice,* 34(4):601–703.

Duymedjian, R., & Rüling, C. 2010. Towards a foundation of bricolage in organization and management theory. *Organization Studies,* 31(2):133–151.

Eckhardt, J.T., & Shane, S.A. 2003. Opportunities and entrepreneurship. *Journal of Management,* 29, 333–349.

Engelen, E., Ertuk, I., Froud, J. Leaver, A., & Williams, K. 2010. Reconceptualizing financial innovation: frame, conjuncture and bricolage. *Economy and Society,* 39(1):33–63.

Gabriel, Y., Gray, D. & Goregaokar, H. 2010. Temporary derailment or the end of the line? Managers coping with unemployment at 50. *Organization Studies,* 31(12):1687–1712.

Gaglio, C.M., & Katz, J. 2001. The psychological basis of opportunity identification: Entrepreneurial alertness. *Small Business Economics: An International Journal,* 16, 95–111.

Galunic, D., & Eisenhardt, K. 1994. Renewing the strategy-structure-performance paradigm. *Research in Organizational Behavior,* 16: 215–255.

Gartner, W., Carter, N., & Hills, G. 2003. The language of opportunity. In C. Steyaert and D. Hjorth (Eds.), *New Movements in Entrepreneurship,* 103–124. Cheltenham, England: Edward Elgar.

Garud, R., & Karnøe, P. 2003. Bricolage versus breakthrough: Distributed and embedded agency in technology entrepreneurship. *Research Policy,* 32: 277–300.

Hendry, C. & Harborne, P. 2011. Changing the view of wind power development: More than bricolage. *Research Policy,* 40:778–789.

Johannisson, B., and Oliason, L. 2007. The moment of truth—reconstructing entrepreneurship and social capital in the eye of the storm. *Review of Social Economy,* 65(1):55–78.

Kilroy, D. 1999. Creating the future: How creativity and innovation drive shareholder wealth. *Management Decision,* 37: 363–374.

Kirzner, I. 1973. *Competition and Entrepreneurship.* University of Chicago Press, Chicago, IL.

Kirzner, I. 1979. *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship.* University of Chicago Press, Chicago, IL.

Knight, F.H. 1921. *Risk, Uncertainty, and Profit.* August M. Kelley, New York.

Krueger, N.F. 2000. The cognitive infrastructure of opportunity recognition. *Entrepreneurship Theory & Practice,* 24, 5–23.

Levi-Strauss, C. 1967. *The savage mind.* Chicago: University of Chicago Press.

Levi-Strauss, C. 1970. *The Raw and the Cooked.* Trans. John and Doreen Weightman. New York: Harper & Row.

Loundsbury, M., & Glynn, M. 2001. Cultural entrepreneurship: Stories, legitimacy and the acquisition of resources. *Strategic Management Journal,* 22(6-7): 545–564.

Mahoney, J.T., & Michael, S.C. 2005. A subjectivist theory of entrepreneurship. In Alvarez, S.A., Agarwal, R., & Sorenson, O. (eds), *Handbook of Entrepreneurship Research: Interdisciplinary Perspectives,* Springer: New York, pp. 33–54.

March, J. 1978. Bounded rationality, ambiguity and the engineering of choice. *Bell Journal of Economics*, 9(2): 587–608.

Miner, A.S., Bassoff, P., & Moorman, C. 2001. Organizational improvisation and learning: A field study. *Administrative Science Quarterly,* 46: 304–337.

Nohria, N., & Berkley, J.D. 1994. Whatever happened to the take-charge manager? *Harvard Business Review,* January-February: 128–137.

O'Connor, E. 2004. Storytelling to be real: narrative, legitimacy building and venturing, in Hjorth, D. and Steyaert, C. (eds), *Narrative and Discursive Approaches in Entrepreneurship,* Cheltenham, UK: Edward Elgar, pp. 105–124.

Read, S., Song, M. and Smit, W. 2009. A meta-analytic review of effectuation and venture performance, *Journal of Business Venturing,* 24:573–587.

Sanz-Velasco, S.A. 2006. Opportunity development as a learning process for entrepreneurs. *International Journal of Entrepreneurial Behavior & Research,* 12: 251–271.

Sarasvathy, S. 2001. Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review,* 26:243–263.

Sarasvathy, S. 2008. *Effectuation: Elements of Entrepreneurial Expertise.* Edward Elgar: Cheltenham, UK.

Sarasvathy, S., Dew, N. 2005. New market creation through transformation. *Journal of Evolutionary Economics,* 15:533–65.

Sarasvathy, S., Dew, N., Read, S., & Wiltbank, R. 2008. Designing organizations that design environments: Lessons from experimental expertise. *Organization Science,* 29:331–350.

Shackle, G. 1969. *Decision, order and time in human affairs 2nd ed.* Cambridge University Press, Cambridge

Shah, S. & Tripsas, M. 2007. The accidental entrepreneur: The emergent and collective process of user entrepreneurship. *Strategic Entrepreneurship Journal,* 1(1–2):123–140.

Shane, S. 2000. Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science,* 11(4): 448–469.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review,* 25: 217–226.

Spicer, A. & Sewell, G. 2010. From national service to global player: Transforming the organizational logic of a public broadcaster. *Journal of Management Studies,* 47(6): 913–943.

Sørensen, J.B., & T.E. Stuart. 2000. Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly*, 45: 81-112.

Steyaert, C. 2007. 'Entrepreneuring' as a conceptual attractor: A review of process theories in 20 years of entrepreneurship studies. *Entrepreneurship and Regional Development,* 19:453–477.

Venkataraman, S. 1997. The distinctive domain of entrepreneurship research. In J.A. Katz and R.H. Brockhaus (Eds.), *Advances in entrepreneurship, firm emergence and growth,* Vol. 3: 119–138, Greenwich, CT: JAI Press.

Von Mises, L. 1949. *Human action: A treatise on economics.* New Haven, CT: Yale University Press.

Weick, K.E. 1993a. The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly,* 38: 628–652.

Weick, K.E. 1993b. Organizational redesign as improvisation. In G.P. Huber and W.H. Glick (Eds.), *Organizational Change and Redesign,* 346–379. New York: Oxford University Press.

Weick, K.E. 2001. *Substitutes for strategy: Making sense of the organization.* Malden, MA: Blackwell.

Wood, M.S., & McKinley, W. 2010. The production of entrepreneurial opportunity: A constructivist perspective. *Strategic Entrepreneurship Journal,* 4: 66–84.

Zott, C., & Huy, Q. 2007. How entrepreneurs use symbolic management to acquire resources. *Administrative Science Quarterly,* 52: 70–105.

NEJE

About the Authors

Jeff Vanevenhoven (vanevenj@uww.edu) is an assistant professor of management and the entrepreneurship coordinator at the University of Wisconsin–Whitewater. He received a Ph.D. in Management Science from the University of Wisconsin–Milwaukee. Primary teaching interests are strategic management, organizational theory, and entrepreneurship. Dr. Vanevenhoven is an active researcher in the study of entrepreneurship education (see www.entrepeduc.org) and the determinants of entrepreneurship success. His research focuses on bricolage, executive scanning, environmental uncertainty, and cross-cultural cognition comparison.

Doan Winkel (dwinkel@ilstu.edu) is an assistant professor of entrepreneurship in the Department of Management and Quantitative Methods at Illinois State University. He received a Ph.D. in Management Science from the University of Wisconsin–Milwaukee. His teaching interests focus on using active learning, problem-solving, and experiential approaches to open students' eyes to the wonder of entrepreneurship. Dr. Winkel is an active researcher in the study of entrepreneurship education (see www.entrepeduc.org) and the determinants of entrepreneurship success. His work has been published in the *Journal of Vocational Behavior, Journal of Occupational and Organizational Psychology,* has been recognized in the 2008 and 2010 Academy of Management Best Paper Proceedings and with the 2010 Academy of Management Careers Division Best Overall Paper Award.

Debra Malewicki sadly passed away during the review process of this manuscript. We dedicate this work to her.

William L. Dougan (douganw@uww.edu) is currently the Irvin L. Young Professor of Entrepreneurship and Professor of Management at the University of Wisconsin–Whitewater. He received his Ph.D. from the Johnson Graduate School of Management at Cornell University. He serves as an executive board member of the Organization and Management Theory Division of the Academy of Management. His current research interests are in venture proposal evaluation and university venturing.

James Bronson (bronsonj@uww.edu) is an Associate Professor at the University of Wisconsin–Whitewater. Teaching and research interests include strategic management and small business performance. His research appears in such publications as the *Journal of Business Research, Journal of Small Business Management,* and *New England Journal of Entrepreneurship*.

Instructional Case Study

No Exit? Trying to Salvage D&H Management LLC[1]: Parts A and B

Herbert Sherman
Adva Dinur
Daniel Rowley

In this two-part case, Richard Davis and Stephen Hodgetts, co-owners of D&H Management LLC, are trying to come to terms with changes in the real estate market—changes that have made their rental homes worth less than their mortgages and at best yielding at most a break-even cash flow. In Part A Davis and Hodgetts are weighing the following options: (1) sell all of the properties, assume a loss (walk away with nothing), and avoid the negative cash flow; (2) walk away from all of the properties, assume a loss (walk away with nothing), and avoid the negative cash flow; (3) delay paying the mortgage on some of the homes, allow these properties, if necessary, to go into foreclosure, and in the interim use the positive cash flow to shore up some of the more positive cash flow homes; (4) contact all of the lenders and try to renegotiate the mortgages so as to have lower monthly rates.

In Part B Davis proposes that he and Hodgetts go their separate ways. Davis walks away with the two properties that have mortgages in his name, while Hodgetts obtains the four properties that have mortgages in his. From Hodgetts' perspective this is a losing proposition since (1) he would have to take over the management of four "loser" properties rather than Davis's two, an 'unfair' split of the liabilities; (2) he had no interest in managing properties; and (3) he and Davis would be splitting up a long-standing team

Part A

Richard Davis and Stephen Hodgetts, best of friends, academic colleagues, and coauthors, had finally reached the end of their proverbial ropes. Sitting in a small, secluded diner late Sunday night drinking cheap cups of coffee and munching on "the blue plate special," Hodgetts and Davis could not believe that in summer of 2009 they were living a "riches to rags" story, but that was the gist of the situation. Gone were the Merlots, Pinot Noirs, and Cabernets, the gourmet meals, and the long affable chats by the fireplace (in fact, gone was the fireplace!). Gone were the dreams of wealth, early retirement, and perhaps even some local fame. All of their hopes and wishes had been trampled in what seemed like a worldwide calamity, the greatest "recession" since the Great Depression. They were in the eye of the hurricane, the epicenter of this man-made earthquake called the collapse of the U.S. real estate market.

As they huddled together, broken both financially and in spirit, they could not help but wonder what more was in store for them. They went from reminiscing about their past successes and their accumulated wealth (both had financially benefitted from the fast growth in the real estate market in the earlier part of the decade), to wondering how the stock market ever got to be over 9000 under the current economic conditions, to musing as to where all their money had gone when they were caught in the real estate collapse of 2008. The discussion kept moving in this vicious circle, with no resolution in sight.

The crumpling of their local real estate market had not only forced the dissolution of their construction company (DHR Patio Homes LLC), but also pushed Davis into insolvency and left Hodgetts financially bankrupt. The firms' lenders had chased Davis into bankruptcy protection while simultaneously taking Hodgetts' collateral (a rather large CD) for the outstanding balances due on purchased vacant properties. Furthermore the lenders were also suing Hodgetts for repayment of construction mortgage loans (two speculation homes[2]) that he had personally guaranteed but had no way of repaying. Both had lost their homes and their nest eggs and could emotionally and economically ill afford more bad news.

In the quiet of the deserted diner, Hodgetts and Davis realized that they had falsely placed their slim hopes on the fact that they had vacant property and with possible new construction (and therein a new construction company) thought that they could build their way out of this financial hole. Yet all of their leads had dried up as home construction in the vicinity and nationally came to a near standstill. To make matters worse, their real estate management firm (D&H Management LLC) was starting to hemorrhage cash as renters fell behind in their monthly payments and vacancy rates climbed (see box story). One of their properties was already in foreclosure while the values of the rest of their rental homes were lower than the associated property mortgages. With negative cash flows, negative equity, and no access to capital (they had very low credit scores) there seemed like there was little that Hodgetts and Davis could do; there was no exit. On the other hand they felt that they had to do something since doing nothing would unmistakably mean the eventual loss of their other rental properties and literally everything they owned.

They looked sorrowfully at each other, shook their heads in despair and mumbled a few friendly platitudes of optimism. Action was needed, vital decisions needed to be made that meant the survival of their firm and their remaining assets . . . but really what could they possibly do?

Reports

The Housing and Rental Market in 2009

http://blog.hometownrent.com/2009/05/28/the-u-s-residential-rental-property-market/ July 27, 2009

The global credit crisis, rise in foreclosures and a glut of new houses on the market with no buyers translates into more renters and more rental property. Owners turned landlords are desperate to fill their vacancies, property managers hunt for as many ways as possible to reach renters online and tenants face more economic pressure to make **smart rental choices.**

. . . With over 36 million rental households, and between 5–10 million units for rent each year, property managers spend hundreds of dollars and dozens of hours a year advertising each property.

On March 25, 2008, the Associated Press reported that "Home prices slumped 10.7 percent from a year ago in major US cities," based on a Standard & Poor's/Case-Shiller index. Goldman Sachs predicted prices will fall 20-30% from 2006 levels before reaching a bottom.

House prices over the past 10 years went much higher than fundamentals would support, far beyond any historically known relationship to rents or salaries. The current housing crisis reflects a contraction in the housing market—both in terms of new construction, sales and prices—that will likely last for two or more years. On average, **yearly rents are 3% of the purchase prices of similar homes.** If mortgage rates are 6%, then it costs more than twice as much to borrow money to buy a house than it does to rent it. Total owner costs including taxes, maintenance, and insurance can reach up to 9%, which is three times the revenue from renting! Many people's salaries cannot cover mortgages. A safe purchase price is a maximum of three times the buyer's yearly income, but most purchases from 2005 to 2007 went well beyond that. Many people who bought recently suffered losses immediately and will for the next several years, as prices keep falling.

The Impact of the Real Estate Crisis:

The National Association of House Builders estimated that 25% of houses bought in the last few years were pure speculation, not houses to live in, and that speculators are going into foreclosure in large numbers now. JP Morgan foresees nearly 40% of all foreclosures in 2008–2009 coming out of investment and speculative property.

A record number of homeowners who cannot sell condominiums and houses are competing for tenants with the biggest apartment owners. Houses that end up in foreclosure probably will be bought by people who will rent them until demand improves, adding to supply on the market.

Impacts on the Rental Market:

- Buyers are unable to find credit, constricted by salary limits and skittish about entering the market while prices are still likely to fall further.
- Creditors are constricted by default rates and unable to extend credit to many buyers.
- Sellers are forced to rent unsold property if they need to move.
- Real estate investors and speculators are pressured to find renters for unsold properties.
- Vacancy rates are driven higher because builders have a huge excess of inventory they cannot sell.
- It will take years before demand, driven by population increase and young people earning enough to buy their first home, increases.

This glut of rental property on the market means more choices for renters, downward pressure on rent and an expanded number of landlords and property managers forced to advertise more aggressively to make sure their rentals do not end up on the vacancy list.

. . . While homeownership rates have risen slightly in the past 20 years—from 64% in 1987 to 68.1% in 2007—younger Americans (under 25) have seen a slight but important drop in their homeownership rates from the highs of 25.7% in 2005 to 24.8% in 2007. Younger buyers and first-time homeowners are hard hit by the housing crisis, and a further transition from buyer to renter is expected in coming years. Only when prices have hit a bottom and the U.S. economy pulls out of the upcoming recessionary period do ownership rates stabilize and rise again.

Apartment Rental Vacancies Rise Across the Nation

July 10, 2009 Matt DiChiara (http://www.mynewplace.com/blog/2009/07/10/apartment-rental-vacancies-rise-across-the-nation/, July 27, 2009)

Fueled by the climbing unemployment rate, vacancy rates in the nation's apartment buildings have risen to their highest rate since 1987. The national vacancy rate reached 7.5 percent in the second quarter, up .2 percent from the previous quarter and 1.4 percent higher than Q2 2008.

The speed that the vacancy rate is approaching the all time high (7.8 percent in 1987) is especially worrisome; it was only 2006 when the only 5.5 percent (that cycle's trough) of apartments for rent were vacant.

As a result, Q2 asking rents fell .7 percent from a year ago to $1,040 a month, the bulk (.6 percent) of that drop occurring in the second quarter. Effective rents fell even further, down 1.9 percent to $975, that decline spurred on by apartment management companies offering concessions to renters. Effective rents dropped almost 1 percent from the first quarter to the second in 2009.

Reis, Inc, who conducted the study, expects more than 100,000 units from new construction to add to the rental inventory by the end of the year, which, along with unemployment rates softening demand, will keep vacancies high and rents low.

continued

continued

Regional and Demographic Trends

Earlier this week we mentioned housing statistics from the Census Bureau (which include both the rental and for sale markets) showed a higher growth rate for urban areas than in suburban areas. While the national rental market figures are useful as macroeconomic indicators of the economy as a whole, they don't exactly provide insightful information for apartment management companies in terms of their respective markets.

According to the LA Times, the effect of the high vacancy rate is visible to anyone walking down the street, even in traditionally popular areas. Landlords are dropping rents and making concessions for Westwood apartments and apartments in Redondo Beach, trying to keep their units occupied.

The only apartments in Los Angeles where rents haven't gone down are those apartments near UCLA, where demand is buttressed by college students. Also, UCLA, with a high percentage of graduate students will probably have more students than during years when the job market was stronger, as young professionals take the opportunity to go back to school.

With almost 2,000 units in the construction or planning phase this year and rampant job losses, Greenville apartments' vacancy rates have risen high above the national average at 12.5 percent.

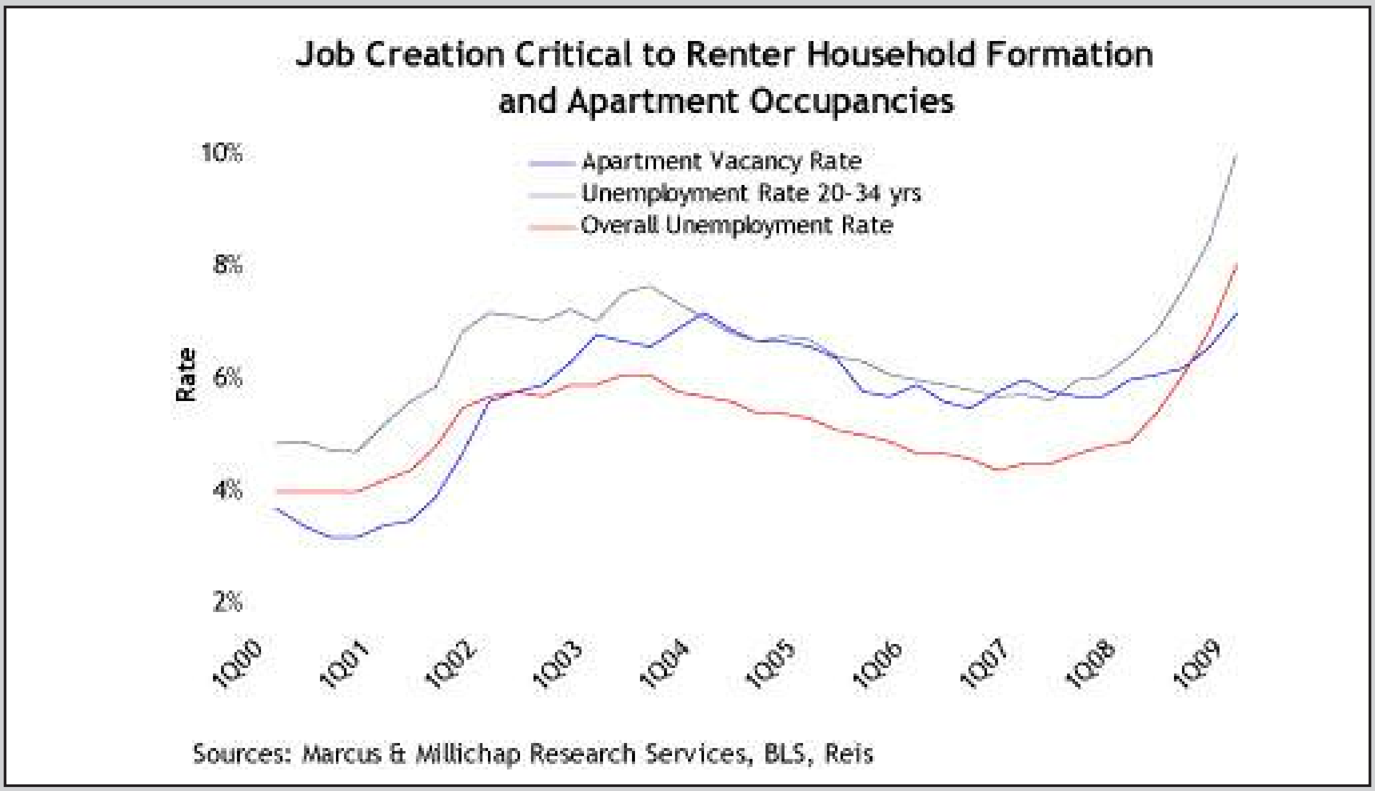
There are a few bright spots, however. Apartments in Columbus, Ohio, are currently enjoying their lowest vacancy rates in years, investors are beginning to buy up Orlando apartments again, and renters moved into Atlanta apartments in volumes that far exceeded previous quarters.

Apartment Vacancy Rising as Steep Job Losses Stall Renter Household Formation

http://www.jackmangroup.com/Outlook_2009June.asp, July 27, 2009

Apartment Demand Weakening

Vacancy increased to 7.2 percent in early 2009, matching the peak level recorded during the last cyclical downturn. At the end of the first quarter, vacancy was up 60 basis points from year-end 2008 and 120 basis points from one year earlier, as net absorption posted its largest decrease since early 2002, excluding conversion-related declines in 2006. Extreme job losses and rapidly rising unemployment are hampering household formation, forcing many renters to double up or even move back with family. In addition, deeply discounted home prices due to foreclosure sales and an $8,000 tax credit for first-time homebuyers are encouraging some current renters to purchase houses.



continued

continued

New Supply Contributing to Weakness

At an annualized rate, first-quarter apartment completions were 45 percent below the long-term average, but new supply was down only modestly when compared to last year. In addition, a flood of shadow-rental stock continues to plague many markets. Fortunately, apartment starts have dropped 50 percent from peak levels, while the number of units in the final planning stages has declined more than 60 percent since the first quarter of 2008, and multi-family permits have retreated 50 percent over the past 12 months, all trends that suggest a drop-off in construction starting next year. Furthermore, many development projects are likely to stall as softer fundamentals make it difficult to justify construction.

Apartment Property Sales Continue to Slide

During the first quarter of 2009, sales dollar volume was down 55 percent from the previous quarter and 90 percent from a peak in the fourth quarter of 2006. The number of transactions declined to a lesser degree over the same period, as smaller deals accounted for a greater share of overall activity. Financing properties over $15 million has become a considerable challenge, as most lenders are wary of originating large loans and increasing their single-asset risk exposure. A handful of large property sales have closed recently, though prices for many of these assets reflect significant discounts when compared to the market's peak. In early May, for example, the first multi-family REIT acquisition of the year was completed by AvalonBay. The property, located in Bellevue, Wash., traded for slightly more than $33 million, which is 45 percent below the estimated replacement cost.

Lending Still Tight, but Apartments Faring Better than Other Core Property Sectors

Year over year, total commercial mortgage originations were down 70 percent as of first quarter; however, the apartment sector recorded a less severe decline due to lending by Fannie Mae and Freddie Mac. Like other lenders, the two government sponsored-enterprises (GSEs) have reduced originations of new multi-family loans over the past year, but by only 26 percent.

Risk Premiums More Pronounced Based on Quality and Location

Apartment cap rates continue to rise, with the current average at 6.7 percent, up from a record low of 5.6 percent in 2006. The degree of change in prices and cap rates vary widely by property quality and location. Cap rates for properties in primary markets have increased by an average of 80 basis points from their most recent low point, while cap rates among assets in tertiary markets are up approximately 150 basis points. Further upward correction is anticipated as fundamentals continue to weaken and distress rises amid a wave of maturing debt. From 2009 to 2012, more than $300 billion of multi-family loans are expected to mature, including $36 billion in CMBS mortgages. Based on current estimates, more than 70 percent of the multi-family CMBS loans reaching maturity during this time may not qualify for refinancing. This will likely result in strong acquisition opportunities for well-capitalized investors who are ready to move quickly as properties are brought to market.

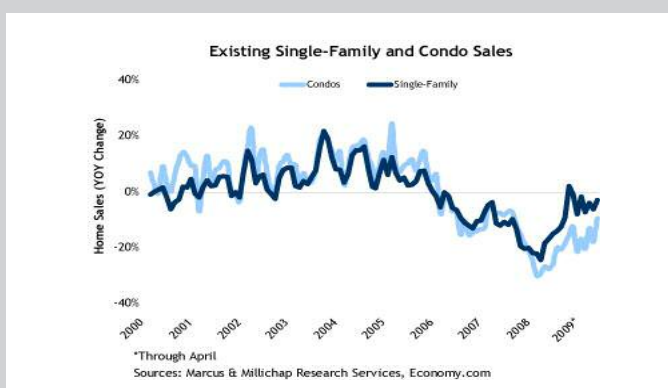
Forecast

Further Weakening in Fundamentals Expected. Apartment vacancy is forecast to approach 8 percent this year, the highest level on record since at least 1980. Effective rents are expected to lose 4.5 percent to 5.0 percent in 2009, with rents in some markets forecast to fall at double-digit rates. Apartment owners are finding it necessary to compete aggressively to retain and attract renters, resulting in concessions rising to more than 7 percent of asking rents by year end, compared to approximately 5 percent at year-end 2008. Market rents began to slip in late 2008 and are forecast to decrease by 1.2 percent in 2009, the largest decline on record.

Benefits of Development Pullback, Economic Recovery to Emerge in 2011. New supply is forecast at 80,000 units this year, down from 107,300 units in 2008. Based on the diminishing development pipeline, completions are expected to slow in the second half of 2009 and drop dramatically in 2010, setting the stage for a relatively swift recovery once housing finds its bottom and the economy turns the corner.

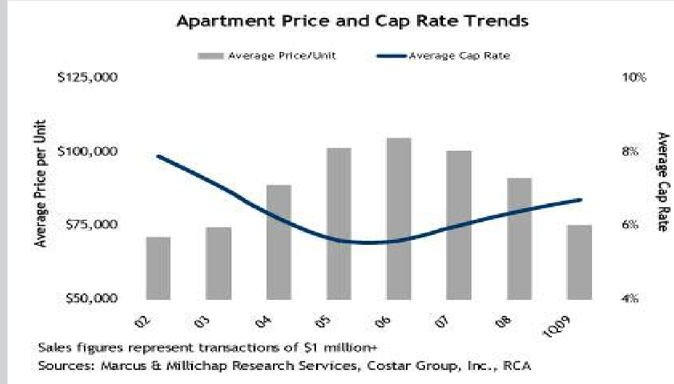
Freddie Mac's Securitization Model a Step in Right Direction. Freddie Mac is in the process of securitizing approximately $1 billion of multi-family loans originated in 2008. The sale of the highly rated securities will mark the first full-scale securitization for the GSE and the first CMBS issuance since the market stalled last June. Compared to the original securitization model, whereby all risk was passed through to investors who purchase the CMBS, Freddie Mac will guarantee the senior bond classes. If its inaugural issue is a success, Freddie Mac could move forward with another securitization of multi-family debt this fall. By shifting a significant amount of debt off its balance sheets, Freddie Mac will be able to free up capital for new multi-family lending.

Apartment Market Vital Signs



continued

continued



1Q 2007 to 1Q 2009 Change in Apartment Vacancy

Top 10 Markets by Change in Vacancy

Metro	1Q 2009	YOY Chg (bps)
West Palm Beach	7.7%	-30
Louisville	7.1%	10
Indianapolis	8.2%	10
San Francisco	4.2%	10
Cincinnati	7.3%	20
Washington DC	5.8%	40
Milwaukee	4.3%	50
Minneapolis	4.7%	50
Boston	6.4%	50
San Diego	4.6%	70
US Metro Average	*7.2%*	*120*

Bottom 10 Markets by Change in Vacancy

Metro	4Q 2008	YOY Chg (bps)
Tampa-St Petersburg	9.3%	190
Orlando	9.9%	190
Charlotte	8.5%	200
San Jose	5.6%	210
Austin	9.2%	230
Phoenix	11.3%	230
Jacksonville	12.7%	240
Oakland-East Bay	6.9%	250
San Antonio	9.8%	250
Tucson	11.7%	350
US Metro Average	*7.2%*	*120*

In the Beginning . . .

It was August 2002, and the Dow Jones Industrial Average had dipped under 8000. Davis had decided that he needed to take control of his own economic fate. He had done enough preliminary research on the real estate market in his own area to convince Hodgetts that there was money to be made in becoming landlords—against Hodgetts' preliminary objections. Davis became the managing partner of the business while Hodgetts focused on their academic writing. Davis would make the money while Hodgetts would crank out research and publish academic articles and books. Both were quite happy with this arrangement.

D&H Management, LLC, was formed and immediately acquired six homes. Davis and Hodgetts realized that they needed to raise additional funds for investment purposes and decided that if they finished off the basements of their rental properties they could remortgage those properties and pull out an additional $10,000 to $20,000 per home. In an attempt to "double profit" from their venture, they formed a construction company, DHR Construction, LLC. In January 2003 they hired one of their renters to finish off all of the basements.

One of Davis' students, the individual who was designing their basements, thought that Davis and Hodgetts could cut out the middleman if they built their own homes. Davis and Hodgetts were convinced that backward integrating their operation by building homes to be purchased by D&H Management as rentals, as well as for public consumption, was a good idea. Given the strength of the local housing market in May 2003, they formed DHR Construction LLC and broke ground on their first construction site in the St. Andrews development.

By January 2004, they had completed three homes at St. Andrews. By April 2004 Davis and Hodgetts had built three homes in another development (Florence), with plans to build five more in that area. Unfortunately the Florence developer did not pay his landscapers, and each of the properties that were owned by Davis and Hodgetts received mechanic's liens of $450,000 per property. This made building homes on this property economically unfeasible. Davis and Hodgetts then sold the constructed homes in the area to another real estate management firm while being stuck with several unsellable vacant properties.

Growth to Overcome Adversity or Just More Adversity?

Concurrently Davis and Hodgetts formed a third firm in the summer of 2004. DHR Patio Homes, LLC, was created in order to work on their latest construction project, Mountain Trails (see Figure 1). This was a large and challenging project for Davis and Hodgetts; it involved building nearly 40 custom homes in an upscale community. They built a number of speculative custom homes in the summer of 2005; however the real estate slowdown that started in the summer of 2006 (Hagerty and Corkery, 2006) found Davis and Hodgetts still sitting on several homes. They were cash poor and experiencing negative cash flows from having to pay off construction loans, land purchases, and home mortgages. In the interim, the Florence properties were forced into foreclosure (mortgages were swapped for the properties by the lender) and DHR Construction LLC was unincorporated.

Davis and Hodgetts were forced to offset losses from their construction firms with gains from their rental units. This was an extremely worrisome situation for Davis and Hodgetts since they had both personally signed for property loans of over $2,000,000. To secure these loans they had pledged their personal assets. If the loans could not be repaid, then either the payments would have to come out of their own pockets or their remaining assets (including their personal residences) would have to be liquidated. Both had also lent these businesses a combined total of over $1 million. Davis was in particular personal financial trouble, having built two additional speculation homes on his own in a market that became heavily saturated with existing home sales. Neither of his homes received much foot traffic and neither home had been bid upon.[3]

Typical Rental Home of D&H Management LLC[4] and the Local Market

Davis and Hodgetts' typical rental home could be categorized as a "starter home," a three-bedroom, two-bath unit sitting on less than a quarter acre plot that had approximately 1,200 to 1,600 square feet of living space, a one- or two-car attached garage, a small outside back porch, a living room with a fireplace, walk-through kitchen, dining room, and a finished basement feet. The basement added another 1,000 square feet with an additional two bedrooms, one bath, and a family room. Homes would rent from $850 to $1,200 a month based

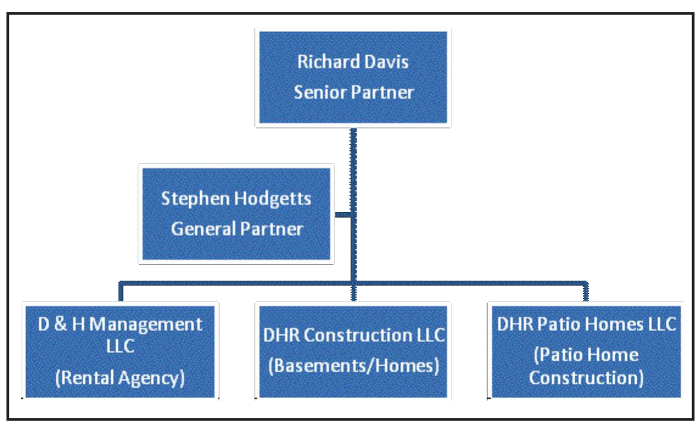


Figure 1. Davis and Hodgetts' Businesses

on square footage, demand, and additional amenities (i.e. upgraded appliances). See Figure 2.

Before their meeting, with a little on-line research, Davis and Hodgetts found that the town where they owned their rental properties was also having economic troubles. In 2009, the town had nearly 100,000 people with an annualized growth rate of about 2 percent for the past 20 years although the growth rate in 2008 was flat. Unemployment was rising and was 5.5 percent in January 2008 jumping to 9.9 percent in 2009 (U.S. avg. was 9.50%). Job growth in 2009 was negative with jobs having decreased by 3.9 percent; spending on public schools per student was $5,681 per student (U.S. was $6,058). In 2006 approximately 83 percent of the population was white, nearly 70 percent over the age of 18, 40 percent of the residential units were renter occupied (vacancy rate in 2008 was around 9%), with a median family income of nearly $55,000. The CPI rose from 1.8 in the 2nd half of 2007 to 4.0 in the 2nd half of 2008 yet the town's cost of living was 13.82 percent lower than the U.S. average. (Bureau of Labor Statistics, 2010)

Davis and Hodgetts noted that the median home cost was $162,950 with home appreciation in 2008 at -11.30 percent. Existing starter homes with similar square footage to their own rental homes cost around $135,000 to $150,000. With a 25 percent down payment, the mortgages on these homes would be somewhat over $100,000; this would translate into a monthly mortgage payment (30-year fixed mortgage, 5.25% rate)[5] of about $600 with associated real estate taxes of approximately $100 a month. Table 1 shows quarterly rental surveys conducted by the town.

Figure 2. Typical Rental Home of D&H Management LLC

Table 1. Town Rental Survey

Survey	Average Rent	Median Rent	Vacancy Rate
2009Q1	$655.57	$622.90	8.4
2008Q4	$628.77	$631.16	8.1
2008Q3	$655.11	$637.31	5.5
2008Q2	$630.30	$636.05	6.1

An Overview of the Properties in D&H Management LLC's Real Estate Portfolio

The firm owned eight properties within one specific development that was on the outskirts of town. The eight homes were within a four-block radius of one another with several homes on the same block. One of the homes was already in foreclosure, yet no action had yet been taken by the lending institution and therefore the home was still renter occupied. Summary financials for the properties are shown in Table 2; property details are provided in Table 3.

Cash flow was the critical issue for the firm. First, the firm was only solvent when all of the renters paid their rent. This was not a problem in the beginning of the business when the economy was in good shape, but as the economy worsened and unemployment increased at least one renter was either late with a payment or missed a payment or two. On several occasions renters had to be evicted due to lack of payment. Worse, several had left the property in ill repair, and the expense of the repair work far exceeded the monthly security deposit. There was little chance for legal redress for making up the difference and therefore Davis and Hodgetts had to use their own personal funds to pay for the repairs.

Table 2. Summary Financials of D&H Management LLC Portfolio—Property Cash Flow

Scheduled Rent Amount	8,675.00
Property Maintenance (10%)	(782.50)
1st Mortgage	1,185,016.00
2nd Mortgage	115,700.00
1st Mortgage Payment	6,029.64
2nd Mortgage Payment	904.22
Total Mortgage Payments	6,933.86
Difference:	**958.64**

Other Related Expenses

22,997.69	*Outstanding Lines of Credit*
420.00	Monthly Expense
150.00	Monthly Legal Expenses
62.50	Monthly Accounting Expenses
632.50	**Total Related Expenses**

Secondly, property repair and maintenance were increasing in cost. The properties were aging and starting to show some real wear and tear from multiple renters. Hodgetts and Davis' 10 percent property maintenance reserve was not large enough to cover the costs. They tried to raise the rent, but found that the availability of rental homes put a very low ceiling on home rentals prices.

Back to the Diner: Making the Impossible Possible?

Hodgetts and Davis were reviewing the Financial Information of D&H Management LLC Portfolio (Table 3) when Hodgetts received the following text message from Davis' wife:

> I have had enough. I want to be out of D&H by the end of the year. Losing our home, etc. has been a big blow emotionally. We have a nice patio home which helps the transition, but not the feelings of loss. You and Richard in the interim can discuss how to cope with these houses.

Hodgetts shared the text message with Davis who softly moaned to himself. He had had this discussion many times before with his wife and explained to her that if they wanted out of the business now that not only would all the properties be repossessed (and therefore they would be left with nothing) but that all of the personal funds they had lent the business would also be lost with no hope of recovery. Furthermore, their new patio home might also be taken by creditors since new property defaults would not be covered by their prior bankruptcy filing.

Davis and Hodgetts put their heads together and decided to list all of the available options that came to mind and their immediate ramifications:

1. *Sell all of the properties, assume a loss* (walk away with nothing), and avoid the negative cash flow. The lending institutions would be paid back part of their loans and perhaps would be willing to settle for that amount. However, there was a good likelihood that these institutions would seek legal redress from both Davis and Hodgetts and sue both of them for the difference between the sale price and the outstanding mortgages of all of the homes.
2. *Walk away from all of the properties, assume a loss (walk away with nothing), and avoid the negative cash flow.* Again, the lending institutions might seek legal redress for the differences between the selling prices of the houses and their mortgages.
3. *Delay paying the mortgage on some of the homes, allow these properties, if necessary, to go into foreclo-*

Table 3. Financial Information of D&H Management LLC Portfolio—Property Cash Flow

Address:[1]	*A1*	*A2*	*B1*	*C1*	*D1*	*A3*	*B2*[2]	*E1*
Scheduled Rent Amount	1,100.00	1,125.00	850.00	1,100.00	1,175.00	1,175.00	1,100.00	1,050.00
10% Maintenance Fee	(110.00)	(112.50)		(110.00)	(117.50)	(117.50)	(110.00)	(105.00)
1st Mortgage	179,424.68	157,941.12	174,041.81	173,287.40	179,274.43	142,399.99		178,646.57
2nd Mortgage	20,500.00	41,000.00		25,800.00		28,400.00		
1st Mortgage Payment	890.98	730.42	860.57	1,017.14	898.47	791.53		840.53
2nd Mortgage Payment	109.48	290.65		121.00	109.52	134.22		139.35
Total Mortgage Payments	1,000.46	1,021.07	860.57	1,138.14	1,007.99	925.75		979.88
Difference	**(10.46)**	**(8.57)**	**(10.57)**	**(148.14)**	**49.51**	**131.75**	**990.00**	**(34.88)**
1st Mortgage Rate	5.75%	6.00%	5.75%	5.38%	4.13%	6.50%		5.38%
2nd Mortgage Rate	7.25%	8.63%		5.75%	6.50%	6.50%		

[1]Letters indicate properties located on the same street (i.e. A1, A2, A3).
[2]Property B2 is in foreclosure but has not been repossessed by the lending institution.

sure, and in the interim use the positive cash flow to shore up some of the more positive cash flow homes. This seemed like a short-term "wait and see," culling of the flock strategy (what Hodgetts referred to as a "slow suffocation" versus a "quick hanging"). The better cash flow properties would be saved at the expense of the poorer ones, yet Davis and Hodgetts would still be subject to potential litigation.

4. *Contact all of the lenders and try to renegotiate the mortgages so as to have lower monthly rates.* This strategy had the least obvious short-term negative impact although the institutions could easily say no and Davis and Hodgetts would be back to where they were before.

They looked over the options, looked at each other, and then looked over the options again. They decided that they needed time to think through each option, or better yet, find new options. Yet the clock was ticking and they knew that they could not "do nothing" forever.

Part B

Two days after Hodgetts and Davis had discussed the dire straits that their real estate management firm was in Hodgetts was feeling quite depressed. He saw no real solutions that didn't involve both of them going into personal bankruptcy[6] as well losing all of the rental properties in foreclosure proceedings.[7] Hodgetts' biggest fear was that the foreclosed properties would sell for lower than their mortgages and that the lending institutions would file lawsuits against him and Davis for the dollar value differences; and those differences could be substantial.

What sustained Hodgetts through all of this chaos was that at least he and Davis had stuck together through the good times and the bad. They faced this problem, like all of the other problems they had in their life: together. And together Hodgetts thought they had a good chance of weathering the storm. They had known each other for more than 20 years and Hodgetts felt that their friendship was an unbreakable bond. Given his faith in Davis' comradeship, he was shaken to the core when he received the following e-mail:

> This month we had to pay a second mortgage on one of the properties mortgaged in your name out of my salary because there was no money in our contin-

gency fund and I know you have no funds to fall back on. This is doing nothing to improve my relationship with my wife … Adrianne and I will continue to do whatever we can to make this business work, but neither of us wants to be the person (people) who have to make the decisions about individual properties.

I propose that we quit claim the properties with your mortgages to you, and have the proceeds from rents collected on these 4 properties sent directly to you so that you can deal with the bills and rent as you see fit. Adrianne and I would do the same with our 2 properties. When all properties are rented and there are no problems, hopefully there will be enough cash to pay all mortgages. However, when there are extraordinary expenses (like we dealt with this month with basement flooding) or vacancies, property owners can make the decision as to how to proceed. This will take a great burden off of Adrianne, and if things work out over time, everyone can recover their investments and (hopefully) make some money. But I think it is time to recognize that is it not fair to depend on me to come up with shortages, when I no longer have our construction company to provide for deficits (all shortages are coming out of my personal income).

Let me know what you think, and whether or not this will work. I don't want to close down D&H this year, as was true last year, because Adrianne and I have lent D&H several thousand dollars, this money would be converted to income for you. If we transfer properties next year, the depreciation and other losses should overcome our loans.

Hodgetts didn't know what to think or what to say. Davis had made all of the critical decisions about the businesses and Hodgetts never blamed Davis for the series of unfortunate events that had lead to the downfall of both businesses. Rather than pointing fingers of blame and filing lawsuits, Hodgetts had remained steadfast and loyal and continued to do his part on the academic side of the house. However, he also understood that it was not fair to Davis to shoulder the burden of the economic losses alone. Davis' proposal, however, seemed quite inequitable for several reasons:

1. *Hodgetts would have to take over the management of 4 properties.* He had neither the skill nor the inclination to do so and felt that his trying to learn "on the job" when these properties could not even break-even (including the maintenance fees). He felt this was a formula for disaster.
2. *Hodgetts would manage 4 "losers" versus Davis' 2 losers.* Since Davis and Hodgetts were 50/50 owners, shouldn't they also share 50 percent of the risk (as well as the possible reward)?
3. *They would be splitting up the team.* Although there may be positive tax implications for dissolving D&H for himself as well as Davis, Hodgetts was taken aback by the proposal to change their working relationship. They may not have been successful as a team in business, but at least they were successful in the academic arena given Hodgetts' research and publishing efforts (although Hodgetts freely admits that Davis had mentored him in the early years). More importantly, they were old friends and Hodgetts felt as if Davis was abandoning him like an old shoe.

Hodgetts knew that reacting immediately to Davis' proposal was the worst possible solution. He did not want his emotions to get in the way of making a tough business decision. He gave himself a week to think through Davis' proposal and to develop a counter solution that would not only save the businesses but save his friendship as well. What that solution was, however, seemed well beyond his talent and experience, but he would develop one nonetheless.

Notes

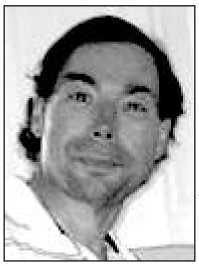
1. The names and location have been changed as per the request of the owners.
2. Homes built without a guaranteed buyer.
3. These homes were later repossessed in a deed for mortgage swap.
4. References deleted as needed to protect anonymity of the owners.
5. Washington Post (August 1, 2009). "30-Year Rates Rise for 2nd Straight Week." Retrieved from http://www.washington-post.com/wp-dyn/content/story/2009/07/31/ST2009073102656.html, August 3, 2009.
6. See Chapter 7 on liquidation of all assets and Chapter 13 on reorganization in which the debtor creates a three- to five-year payment plan in Personal Bankruptcy. (http://www.bankruptcy information.com/personal-bankruptcy.htm; retrieved August 31, 2009).
7. The legal process in which an owner's right to a property is terminated, usually due to default. Typically the process involves a forced sale of the property at public auction in which the proceeds are applied to the mortgage debt (Foreclosure: definition, http://www.investorwords.com/2039/foreclosure.html; retrieved January 20, 2010).

References

Bureau of Labor Statistics. 2010. http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheader=application%2F pdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251660026796&ssbinary=true, August 13, 2010.

Hagerty, J. R. and Corkery, M. (August 23, 2006). Housing slump proves painful for some owners and builders. 'Hard landing' on the coasts jolts those who must sell. Ms. Guth tries an auction "We're preparing for the worst". *Wall Street Journal,* A1.

About the Authors



Herbert Sherman (Herbert.Sherman@liu.edu) is a professor of Management and acting chair of the Management Science Department at LIU-Brooklyn, New York. He received his Ph.D. in Strategic Management from the Union Institute and University in Cincinnati, Ohio (1988). He is widely published in many journals including *Journal of Management Science and Policy Analysis, Entrepreneurship and Regional Development, Management Development Forum, Business Case Journal, Management Development Journal, The CASE Journal, Management Decisions,* and *Journal of Behavioral and Applied Management.* Dr. Sherman is a Fellow of CASE and has served the association as program chair and in several other capacities. He is the founding editor of *The CASE Journal*, a peer-reviewed online journal with an acceptance rate rivaling top-tier journals.

Adva Dinur (adva.dinur@liu.edu) has been an Assistant Professor at LIU since 2004. Her main research interest is capturing the illusive nature of tacit organizational knowledge and how it transfers within organizations. Prof. Dinur also enjoys combining her research and her teaching. For instance, she received a best-paper award for her work within the classroom, where she measures her own effectiveness as a teacher in achieving learning goals. Prof. Dinur often uses cases in her classes, and besides publishing cases herself, she also does research on finding tools that improve the use of cases in the classroom. Prof. Dinur holds a Ph.D. from Temple University (Philadelphia) and a B.A. from Hebrew University (Jerusalem).

DANIEL JAMES ROWLEY (daniel.rowley@unco.edu) is a distinguished professor of management of the Monfort College of Business at the University of Northern Colorado, teaching courses in business strategy and international management. He is the lead author of four scholarly books on strategic planning in colleges and universities; a workbook in the same series; a book on academic supervision; and a textbook on business strategic management with Dr. Sherman. He is the author of articles, cases, and presentations on these subjects nationally and internationally and has forthcoming articles in *Emerald's* 2007 *Handbook of Business Strategy* and *Strategic Planning for Public Research Universities.* He has served as editor and as associate editor of the *Journal of Behavioral and Applied Management,* and has published book reviews and article reviews in several different journals including *Learning and Education.* He received his B.A. from the University of Colorado at Boulder in 1969; his MPA from the University of Denver in 1978; and his Ph.D. from the University of Colorado at Boulder in 1987.

Book Review
Effective Business Planning: A Structured Approach: A Guide for Entrepreneurs

Alison J. Paster

Michele K. Masterfano, *Effective Business Planning: A Structured Approach: A Guide for Entrepreneurs,* Kendall Hunt Publishing, 2010, 104 pages.

Effective Business Planning: A Structured Approach: A Guide for Entrepreneurs is an easy-to-follow book and learning tool that provides detailed and informative guidelines for writing a business plan. For the entrepreneur who is attempting to write a business plan for the first time or the business student who would like to gain insights into the process of writing a business plan, this book is the answer. The author, Michele Masterfano, has information included in this book that provides the answers to questions about the format and design for the creation of a successful business plan and the details on creating a plan specific to meet individual needs. Masterfano's writing portrays the business plan as a living document that can be considered a guide in decision making, resource allocation, and recognition of opportunities. The reader can use this book as a reference in current and future business plan writing as well as adjustments and allocations to maintain competitiveness of a business in the marketplace.

The book is designed as a four-part method of business plan preparation. Part 1 explains how the business plan is written and planned in its design. This process begins with the organization of ideas, a table of contents, and the understanding of the target audience that will be reading the plan. Masterfano explains in detail how to prepare a plan to capture the attention of the specific individuals who will be reviewing the business plan.

Chapter 1 explores the reasons behind developing the business plan and allows the reader to learn key insights into thinking about the dynamics of the marketplace and important decisions on how to maximize competitiveness. Business planning will be the guiding force behind decision making, resource allocation, and priorities. A critical factor of the business plan is to raise financing and capital from a bank or investors. Creating an effective business plan is the driver behind the selling influence of this document. Business plans are categorized by the author as a selling, living, workable document that will be adjusted and utilized for planning purposes. Masterfano focuses specifically on the audience of the business plan as a major consideration in creating the plan to have pinpointed relevant information that will appeal to a specific audience.

Part 2 begins with the preparations needed to plan for writing the business plan. Analyzing the feasibility of the business concept and researching a full feasibility study before embarking on the writing of the plan is the first step in creating a successful plan. In addition, organizational and financial feasibility are considerations that Masterfano explores in detail. Primary and secondary research methods are reviewed and insights are provided on the process of developing an understanding of how to use and analyze this research. An explanation of how to perform primary research in conducting surveys and interviews, and research methods in gaining a thorough understanding of the target market of the business is explained as a tool to generate a successful business plan.

Masterfano provides a checklist of key points to understand fast-paced opportunities in the business world by producing a business plan that will be marketable and feasible. Suggestions on the development of business name creation and the decision-making process to follow are given in detail. Legal forms of ownership, start-up forms and government registration guidelines are covered with detailed explanations of types of ownership. Comparisons of sole proprietorship, general partnership limited partnership, Limited Liability Corporation, and S corporations are explained to help the entrepreneur make the decision as to the best type of format to choose based on the business.

Essentials of writing the business plan are covered in Part 3 of the book. Masterfano begins by reviewing points from previous chapters in developing an understanding of the target audience for the development of the business plan. The book focuses on the audience of the business plan: employees, financing companies, or investors. A detailed framework for creating a business plan with use of the target market and explanations is provided in an easily understandable format. Sections are formatted to provide explanations on each aspect of the plan, with detailed instructions on how to create that section of the plan. The sections reviewed in detail include cover sheets, table of contents, executive summary preparation, and introduction to the order of materials.

Continued emphasis is placed by the author on the marketability of the plan as well as creating a marketing plan for the business with strategy and positioning for the product or service. An analysis of how to remain competitive against other businesses is provided to give the reader insights for future business decisions. Pricing strategies are discussed in detail, with direction on the decision-making process in developing an accurate pricing model for the business. Masterfano covers a marketing action plan with advertising strategies, media planning, budget considerations, press releases, and use of Internet and social media in conjunction with promotional activities to develop a business to maximum potential.

In chapter 6 Masterfano provides an analysis of product development and the design process of the business plan. Considerations in product prototypes, manufacture, outsourcing, and a review of technology needs and material and components is included in the business plan. Areas of analysis include intellectual property rights, operations, productions and logistics faculties, equipment, and customer services strategies.

Chapter 7 reviews the importance of a strong management team and the requirements of this team for developing the business. Details are provided on how to include the management team in the business plan. An overview is given on the process of developing a board of directors, board of advisors, and key hires to assist the business with strategic issues and oversee the management of the firm. Management staff and the boards will be highlighted in the business plan to provide information on the technical expertise that will be needed if the business grows.

Chapter 8 offers detailed instruction on preparing financial projections and plans to create the optimum use of funds for a business. Sample financial statements and easy-to-understand guidelines are provided for the creation of pro-forma financial statements, which include a profit and loss statement, balance sheets, and cash flow statements. Data is clearly summarized and concisely formatted in a description of how to develop a full understanding of how these financial statements work together.

Part 4, the final section, is the overview of how to present and pitch the business plan for maximum interest. Masterfano breaks down the types of presentations based on the audience and offers presentation guidelines, question anticipation examples, slide design suggestions and resources on creating PowerPoint presentations that will highlight the key aspects of the business plan.

Effective Business Planning: A Structured Approach is a comprehensive easy-to-use and understandable book summarizing concisely the preparation of a business plan. The author has provided the ability to tailor this book for any type of business plan and reviews the importance of the audience and customer in creating the business plan to be successful in the business environment. I would highly recommend this book to students in business courses to develop an easy understanding of how to create a business plan. Entrepreneurs will benefit from this book in using it as a guide in creating an effective business plan. This is a "must have" for any entrepreneur starting a business or student in a business-related major.

About the Author

Alison J. Paster (apaster@aii.edu) is the Academic Director for Fashion Marketing and Visual Merchandising at the Art Institute of Philadelphia.

Book Review
Engines of Innovation: The Entrepreneurial University in the Twenty-First Century

Joseph R. Bell

Holden Thorp and Buck Goldstein, *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century,* Chapel Hill: UNC Press, 2010, 154 pages. List price $25.00

Engines of Innovation: The Entrepreneurial University in the Twenty-First Century is an exploration into the design of a collaborative academic institution where silos of discipline-specific competency and tradition disappear and innovation reigns supreme. The book's influence could ultimately revolutionize the structure of academia while simultaneously mounting an attack on the world's monster problems. The book provides insights into successful innovation-focused academic programs, renowned academic leaders and entrepreneurs, and offers strategies for creating truly innovative and entrepreneurial campuses. Scattered throughout the book, and emphasized in the final chapter, the authors discuss how donor giving has evolved and what institutions can do to advance campus initiatives and address the desires of this new breed of donor.

The authors set the tone and urgency for their message in the introduction by quoting Rahm Emanuel, former chief of staff for President Obama, who said, "You never want a serious crisis to go to waste." The authors then comment that universities have a major responsibility as "engines of innovation." They also go on to pose the question, "Are our great research universities ready to assume the responsibility that has been placed upon them?" Their answer is "that they [great research universities] have no choice. . . ."

The book is divided into two distinct sections. The first section (Chapters 1–5) is about innovation. Here, the authors discuss the components necessary for the entrepreneurial university—an aspirational perspective. The second section (Chapters 6–11) shares specific strategic and execution insights, along with recommendations for organizational structure and accountability.

The opening sentence in the first chapter sets the tone for the entire book in stating, "Events have conspired to place our great universities in an either enviable or terrifying position. . . ." The chapter focuses upon the responsibility of the universities of the 21st century to take on the world's great problems, and the multidisciplinary diversity necessary to achieve success. The authors encourage universities to break from traditional, hierarchical structures. The chapter goes on to provide a glimpse of what is to come in the remainder of the book.

The second chapter, "Entrepreneurial Science," establishes the book's premise: that science needs to take on a more collaborative, multidisciplinary approach if the world's great problems are to be addressed. As we all have heard, and in many cases experienced, breaking down the silos in academia is a challenge, but a necessary challenge for the 21st-century university. From funding issues to the new student-learner, the paradigm for our universities is changing.

"Translational sciences," discussed in Chapter Three, describes sciences that bridge the gap between academia and the "outside world." The chapter highlights engineering programs and the applied sciences, the up-and-coming medical research institutions, and colleges of business. The authors state that translational disciplines create businesses and then cite the success of MIT having started more than 5,000 companies that account for over $230 billion in annual sales. A nexus that is mentioned in this chapter, though understated in the book, is that between the engineering and business schools—but more on that later. The chapter highlights successful programs like Stanford and the Deshpande Center at MIT. Here, and throughout the book, the authors effectively use practical and interesting success stories.

The importance of social entrepreneurship is covered in Chapter Four, noting a decade ago few recognized the term. The authors hold that social entrepreneurship is the intersection of sustainability and accountability, though acknowledge that the definition continues to be a moving target. In the chapter, they discuss the compelling nature of social entrepreneurship and its ties to donor motivations. Once again, the authors offer compelling examples of campuses embracing successful social entrepreneurship initiatives.

In Chapter Five, the discussion turns to the elimination of departments, even commenting that the most radical approach would be to "blow [them] up." It is one of the most compelling chapters of the book, pushing the envelope on traditional university structure. The authors offer reasons not to take this approach, but more importantly, they provide commentary on why new centers of innovation are necessary. A successful example is complemented by a series of observations on why changing the fabric of universities is important and how change might be accomplished.

In Chapter Six, "Leadership," the authors begin by claiming that innovation starts with entrepreneurial thinking—and entrepreneurial thinking begins with individuals rather than departments or committees. The chapter goes on to list key leadership traits exhibited by academic visionaries interviewed by the authors. Words like *culture, strategy,* and *execution* are prominent. The profile of John Hennessy, president of Stanford, is a great read.

In addressing faculty attributes, the authors in Chapter Seven, identify and define the differing roles assumed by research faculty. From the public scholar, one with the ability to connect to a mass audience, to the entrepreneurial scholar, one more accustomed to asking forgiveness than permission, to the engaged scholar, one who creates service-learning opportunities, the chapter highlights the diverse skills and tact employed by varying academic roles.

Chapter Eight offers a notable discussion around the difficulties in reaching consensus in an academic setting. The authors recognize the challenge but embrace the devotion faculty has for their discipline and institution. They offer an insightful look at the tenure process, its value, its evolution, and its challenges. The remainder of the chapter covers cultural change, why it does not happen overnight, and again, offers suggestions on strategy and implementation.

The following chapter asks if entrepreneurship can be taught and then defers to Peter Drucker, who asserts that entrepreneurship is based upon concept and theory, and reaffirms that, in fact, entrepreneurship can be taught. The authors propose a strong preference for both the position of entrepreneurship within the university and the scope of its offerings. This is by far the most thought-provoking chapter in the book.

"Accountability," the title of Chapter Ten, talks mission and fit, but most compelling is the lack of weight the authors assign to external rankings. They are quite frank in their beliefs as to what drives academic rankings. Recognizing that each campus is unique, the authors embrace the fact that the design of campus entrepreneurial initiatives really becomes recognition of institutional autonomy and diversity.

In closing, the final chapter, "The New Donors and University Development," presents a wonderful discussion into the legacy being created by Bill Gates and his philanthropic intent. Donors, large and small, are motivated very differently today than was the case with historic giving. In coming full circle, today's donors truly fit the mold of supporting projects that address the world's monster problems.

The authors conclude that the silo mentality must give way. For innovation to flourish within the institution there must be room within the institution for the entrepreneur.

This book is a quick and enjoyable read. The authors accurately highlight concerns many in the field of entrepreneurship have observed or encountered over the years within their academic institutions. Articulation of these concerns by these extremely credible academic leaders gives credence to the struggle and should open a serious dialogue as academic institutions move into a new era of student, funding, research, and abundance of other 21st- century issues.

Chapter Nine especially challenged me to examine my preferences, having a long and, I believe, rich history in both private sector and academic settings. As business faculty, I began to take on a protectionist posture but came to realize much of what the authors propose would have more closely aligned with my needs as a student-learner—even some 30 or so years ago. In any event, I was a bit disappointed in the less-than-expected role the business school played in the book. In addition, Chapter Nine's importance may have benefited from an earlier appearance in the book. I also believe the book could have been further enhanced by a chapter devoted entirely to scientific research and its relationship to market opportunity, though I may be reaching a bit for more depth than the authors intended. *Engines of Innovation: The Entrepreneurial University in the Twenty-First Century* has drawn a line in the sand and challenges institutions to reinvent themselves. Be bold, blow up the silos, and take on the world's monster problems!

The book is a must read for all university leadership. It is very engaging for faculty, entrepreneurial or otherwise, and serves as a road map for future giving and fundraising. Be wary, colleagues, as the entrepreneurial community already has a copy of *Engine of Innovations.* I was introduced to this book via a recommendation from a friend and former colleague. He is an entrepreneur, medical doctor, and entrepreneurship educator and activist. He was quite inspired by the book and shared it with me. Since reading the book, I too have embraced the message the authors offer and I have shared the book with a number of academic administrators and colleagues. In closing, I would like to thank the authors for deftly putting in writing what has needed to have been said for some time now. Please feel free to pass on a copy.

About the Author

Joseph R. Bell (jrbell@ualr.edu) is an associate professor of entrepreneurship at the University of Arkansas at Little Rock. He is also the associate director for business development at BioVentures, the commercialization and technology transfer arm of the University of Arkansas for Medical Sciences and has cofounded a number of startup ventures. He teaches Issues in Entrepreneurship, New Venture Creation and Small Business Management. His research covers early-stage fundraising, entrepreneurship coursework, timely issues affecting entrepreneurial businesses, and case writing. His research appears in such publications as *Entrepreneurship Theory and Practice, Entrepreneurial Executive,* and *New England Journal of Entrepreneurship.* He has also written a book entitled *Finding an Angel Investor in a Day: Get It Done Right, Get It Done Fast.*

New England Journal of Entrepreneurship
John F. Welch College of Business
Sacred Heart University
5151 Park Avenue
Fairfield, Connecticut 06825-1000

New England Journal of Entrepreneurship Volume 14 Number 2 Fall 2011