

COMPARING NASCENT ENTREPRENEURS AND INTRAPRENEURS AND
EXPECTATIONS OF FIRM GROWTH

Charles H. Matthews
University of Cincinnati
mattech@ucmail.uc.edu

Mark T. Schenkel
Belmont University
mark.schenkel@mail.belmont.edu

Matthew W. Ford
Northern Kentucky University
fordmw@nku.edu

Sherrie E. Human
Xavier University
human@xavier.edu

ABSTRACT

While both entrepreneurial and intrapreneurial processes yield new ventures, similarities and differences between these two initiation processes and their impact on subsequent venture performance may be substantial. Operating factors that are typically influenced by the founder, such as expectations for growth, activity such as formal business planning, perceptions of environmental uncertainty, and risk preference within the context of new venture initiation processes are explored in this study. We find that nascent entrepreneurs and intrapreneurs are largely similar in terms of their risk tolerance and perceptions of environmental uncertainty. Nascent intrapreneurs, by contrast, appear to be more sophisticated planners than their counterparts and perhaps more aggressive in their expectations for financial growth. These findings enter significantly into a path model of nascent founder growth expectations that should provide a useful foundation in future investigations.

Keywords: nascent entrepreneur; nascent intrapreneur; planning; uncertainty; risk tolerance

INTRODUCTION

Entrepreneurship involves making judgmental decisions about the coordination of scarce resources in the creation of new enterprises (Casson, 2003; Low & MacMillan, 1988) seeking to exploit profitable opportunities (Shane & Venkataraman, 2000). While both entrepreneurial and intrapreneurial processes yield new ventures, theory suggests that differences between these two initiation processes and their impact on subsequent venture performance may be substantial. For example, organizational theory suggests that entrepreneurs acting independently confront a lack of organizational legitimacy (Freeman, Carroll & Hannan, 1983) making the acquisition of scarce yet necessary resources difficult in early venture stages and the venture's demise more likely as a result (Laitinen, 1992). In contrast, while intrapreneurs acting on behalf of their respective corporations may have access to a relative wealth of resources in the absolute sense, they may elect to pursue only certain types of strategies (i.e., those consistent with existing organizational processes) as they seek to develop new opportunities for economic enterprise (Shrader & Simon, 1997). Despite theoretical evidence suggesting that important systematic differences may in fact exist, our knowledge of nascent venture activity remains limited due to the sparse and largely anecdotal nature of research to date. As a result, researchers often struggle to explain paradoxes frequently observed between the entrepreneurial and intrapreneurial contexts. For example, while a resource laden, protected corporate environment seems more conducive for nurturing a nascent intrapreneurial venture than does the

wide-open environment of the stand-alone entrepreneurial startup, evidence suggests that corporate ventures often underperform independent startups in similar industries (e.g., Christensen, 1997). In short, the comparative evidence to date suggests that our current understanding of the nascent stages of the new venture creation process, in general, and the antecedents of expectations of firm growth, in particular, remains quite limited. While a number of researchers have addressed the issue of the relationship between planning and performance, the logical extension of how these variables may or may not be relevant in the realm of early entrepreneurial activity especially with regard to growth expectations remains underdeveloped. Consequently, our ability to provide prescriptive guidance to those seeking to support, nurture or promote the development of individuals engaged in nascent entrepreneurial activity also remains limited (Honig, 2001).

Given the crucial nature of decision-making and these preliminary observations of systematic differences during the early stages of ventures, this paper seeks to take a step toward extending previous theory and research by focusing explicitly on antecedents influencing growth expectations across nascent entrepreneurs (NEs) and nascent intrapreneurs (NIs). Specifically, this study addresses four research questions. First, do NEs and NIs possess different expectations for firm growth, and if so, how? Second, do NEs and NIs engage in different levels of planning formality? Third, do NEs and NIs perceive environmental uncertainty differently, or possess different risk tolerances, and if so, how? Lastly, do the relationships between uncertainty

perceptions, risk tolerance, planning formality and expectations for firm growth differ for NEs and NIs, and if so, how?

CONCEPTUAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

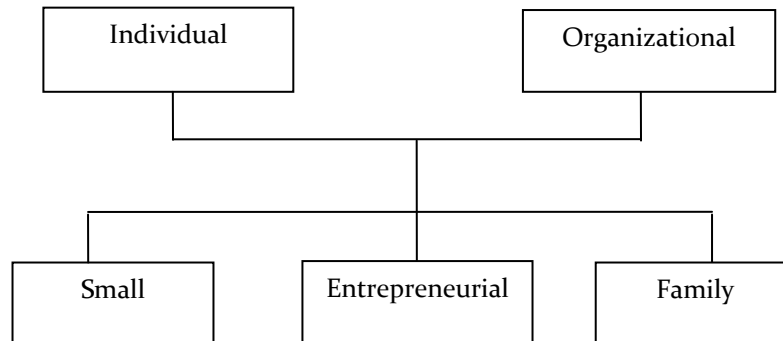
“High achievement always takes place in a framework of high expectation.”— Charles F. Kettering (1876-1958)

Entrepreneurship theory has evolved over time from streams of entrepreneurial, small business and family business research into broader and parallel research agendas that tend to focus on either the individual (e.g., Casson, 1982; 2003) or organizations (e.g., Sharma & Chrisman, 1999) engaged in the pursuit of profitable economic enterprise¹. While Figure 1 undoubtedly oversimplifies the overlap and the multidirectional nature of each of these elements, it highlights an important area of common interest for scholars and practitioners alike. Specifically, it highlights the idea that understanding the process by which individuals, either alone (nascent entrepreneur) or conjunction with others (nascent intrapreneur), form and act upon expectations about future economic conditions is central to the advancement of entrepreneurship theory (Casson, 2003; Kirzner, 1999; Schumpeter, 1934; Shane & Venkataraman, 2000). Building on extant research, nascent founders are

defined as NE status if they answered “yes” to the following question during the initial telephone screening interview: “Are you, alone or with others, now trying to start a new business?” Nascent founders were assigned NI status if they answered “yes” to the following screening question: “Are you, alone or with others, now starting a new business or new venture for your employer? An effort that is part of your job assignment?” (Reynolds, 2000) Thus, we operationally define and distinguish between the conceptualization and action of nascent entrepreneurs and intrapreneurs individually or on behalf of an existing organization. Figure 1 also draws attention to the intuitive presumption of many researchers that while some commonality is likely to exist, there are likely also important theoretical differences when such a process occurs among a collection of individuals (Reich, 1987). In addition, it provides a framework upon which both researchers and practitioners can visualize the growing facets of entrepreneurship in multiple forms. It has been suggested (e.g., Honig, 2001) that the preponderance of our current theoretical understanding of entrepreneurship as a phenomenon has evolved from the study of individual entrepreneurs. The study of entrepreneurs has generally shifted over time from an occupational perspective toward a behavioral perspective (Gartner, 1988).

¹Although a third perspective emphasizing social purpose of new venture creation has recently begun to emerge (e.g., Wallace, S. L. 1999. Social entrepreneurship: The role of social purpose enterprises in facilitating community economic development. *Journal of Developmental Entrepreneurship*, 4(2): 153-174.), its distinct theoretical contribution and distinctiveness as a field of inquiry remain controversial Spear, R. 2006. Social entrepreneurship: A different model? *International Journal of Social Economics*, 33(5/6): 399-410. Thus, a discussion of this particular perspective is beyond the scope of this investigation.

Figure 1: Evolution of Theoretical Perspectives of Entrepreneurship



In most recent times, the focus of much research has been particularly on nascent activity. Nascent activity has been defined as serious activity, such as planning, resource acquisition, networking and organizational registration, intended to culminate in a viable new firm (Reynolds, 1994). Because of its proximity to the underlying cognitive process frequently suggested as fundamental to the formation of entrepreneurial expectations (e.g., Casson, 2003; Kirzner, 1999; Schumpeter, 1934; Shane & Venkataraman, 2000), the study of nascent activity is arguably crucial to advancing theoretical development.

While a substantial body of theoretical insight and empirical evidence has accumulated focusing on independent entrepreneurial activity (Honig, 2001), interest in nascent intrapreneurship has only begun to intensify in recent years. This growth of interest is attributable, at least in part, due to the variety of

pressing problems confronting today's corporations (Kuratko, Montagno, & Hornsby, 1990) as the economic landscape continues to become increasingly turbulent and competitive (Bettis & Hitt, 1995). For example, the widespread diffusion of technology in the marketplace has forced corporations to place greater emphasis on innovation to avoid stagnation and decline (Miller & Friesen, 1982). Simultaneously, innovative-minded employees disenchanted with bureaucratic organizations have become increasingly willing to leave their respective corporate positions in order to develop new ventures with environments more conducive to innovative activity (Kanter, 1985). Consequently, it comes as no surprise that researchers and managers alike have increasingly sought to assess and to understand the theoretical dimensions that predict, explain and are ultimately used to enhance the likelihood of creating an organizational context where

entrepreneurial activity can, and does, flourish.

Extant intrapreneurship research has focused predominantly on the organizational environment in which the intrapreneur operates. For example, Kanter (1989) associated reporting structure, information flow, culture and climate, and reward systems with successful intrapreneurial ventures. Additional studies (e.g., Hornsby, Naffziger, Kuratko, & Montagno, 1993) extended this early work by focusing on identifying common characteristics of entrepreneurially oriented organizations. This work has shown that organizational factors such as management support, work discretion/autonomy, time availability, clear organizational boundaries, and the use of reward systems are associated with entrepreneurial activity. They are also consistent with Miller's (1983) seminal work on strategic posturing, which attempts to establish a relationship between firm-level corporate entrepreneurial characteristics (e.g., level of risk taking, pro-activeness, and radical product innovation).

Although much of this intrapreneurship research has been largely conceptual and case-based (e.g., Duncan, Ginter, Rucks, & Jacobs, 1988; Morse, 1986; Norburn, Manning, & Birley, 1986), a small yet emerging stream of empirical research has sought to compare intrapreneurial factors to entrepreneurial factors. For example, Shrader and Simon (1997) found that the two types of ventures emphasized different resources in developing competitive strategy. Carrier (1994) found that structural and system variables, such as performance and reward systems, favored success in entrepreneurial ventures over

intrapreneurial ventures. Such comparative research has been shown to be useful because it exploits a relatively sophisticated knowledge base of the stand-alone startup as a baseline for extending theoretical insights.

Because resources have been linked to strategy, and strategy to performance of new ventures in turn, researchers have also compared the financial performance of intrapreneurial and entrepreneurial ventures (e.g., Biggadike, 1979; Fast, 1981; Weiss, 1981). Interestingly, a general yet seemingly paradoxical theme resulting from this work is that despite greater access to superior resources at the outset, intrapreneurial ventures generally tend to perform less well than their entrepreneurial counterparts. However, Shrader and Simon (1997) note that this finding is by no means conclusive. Specifically, they argue and find support for the notion that both types of ventures can be equally successful, even if they follow different roads to success.

Given this potential for interpretive ambiguity in previous research, it is interesting that little comparative work has been pursued further. One potential explanation for a lack of further comparative research may be because scholars may not view the differences between these two groups as compelling enough to motivate formal study. Hisrich and Peters (1998: p. 51), for example, listed characteristics of the intrapreneur that included: good grasp of the environment, visionary and flexible, creates management options, encourages teamwork, enables open discussion, builds a coalition of supporters, and persistence. Yet entrepreneurs are also commonly presumed and/or portrayed as

possessing similar characteristics (e.g., Luchsinger & Bagby, 1987). Similarly, Carrier (1996) reviewed the literature and concluded that most studies have implied no significant difference between the two groups. In short, such work portrays intrapreneurs and entrepreneurs as possessing or employing similar cognitive and behavioral characteristics.

However, some observers have proposed that entrepreneurs and intrapreneurs do indeed differ in important ways. For instance, Luchsinger and Bagby (1987) suggested that, because intrapreneurs operate in established organizational settings, intrapreneurs have less control over their respective environments and therefore assume less financial risk. Moreover, they suggest that although intrapreneurs have access to more administrative and operational resources than do entrepreneurs, they must be able to assume a simultaneously subordinate role as they seek internal sponsorship while enduring almost certain internal resistance and criticism. In a study comparing strategic decision-making characteristics, Shrader and Simon (1997) found that intrapreneurs emphasized internal capital sources, proprietary knowledge, and marketing expertise in strategic decision making, whereas independent entrepreneurs emphasized external capital sources, technical expertise, and development of brand identification. Similarly, Honig (2001) has observed that intrapreneurs and entrepreneurs employ different learning strategies in the nascent stages of new venture creation in Sweden. Specifically, he found that intrapreneurs utilized learning strategies that focused on organizational consensus, while entrepreneurs utilized learning

strategies that were more flexible and adaptive in nature.

Collectively, our review of the literature suggests three important implications for research. First, research to date highlights the importance of, and is consistent with, the notion that entrepreneurial activity involves the continuous formulation of venture-related expectations based on the assumptions of individual decision-makers and the availability of information (e.g., Bird, 1988; Brimer, 1989; Casson, 2003; Covin & Slevin, 1989; Eisenhardt, 1989; Shrader & Simon, 1997). Second, research suggests that such processes not only appear particularly important in the nascent stages of the new venture creation process, but that it is reasonable to presume that nascent intrapreneurs (NIs) are likely to differ from nascent entrepreneurs (NEs) along a number of cognitive and behavioral dimensions (e.g., Shrader & Simon, 1997). Third, this review suggests that despite such likelihood for differences to exist, our theoretical understanding of such differences remains inconclusive, largely anecdotal and often struggles to explain the paradoxes frequently observed between the entrepreneurial and intrapreneurial contexts. Consequently, this review suggests that additional research focusing on comparisons of founders as the primary level of analysis offers the potential to extend extant entrepreneurship theory in a meaningful way.

Accordingly, this paper seeks to take a step toward extending previous theory and research by focusing explicitly on comparing the factors postulated to influence the process of growth expectation formation across nascent entrepreneurs (NEs) and nascent

intrapreneurs (NIs). Specifically, we draw upon extant literature focusing on perceptions of uncertainty (e.g., Ballantine, Cleveland, & Koeller, 1993; Pfeffer & Salancik, 1978; Sharma & Chrisman, 1999), risk tolerance (e.g., Killstrom & Laffont, 1979; Stewart, Watson, Carland & Carland, 1999), and planning formality (e.g., Harris & Ogbonna, 2006; Matthews & Scott, 1995) to develop a model of cognitive and behavioral factors that have been shown to be associated with the formation of growth expectations. The following four research questions guided this process. First, do NEs and NIs possess different expectations for firm growth, and if so, how? Second, do NEs and NIs engage in different levels of planning formality? Third, do NEs and NIs perceive environmental uncertainty differently, or possess different risk tolerances, and if so, how? Lastly, do NEs and NIs differ with respect to the relationships between uncertainty perceptions, risk tolerance, planning formality and expectations for firm growth, and if so, how?

Growth Expectations

Expectations for growth represent psychological attitudes relating to the future course of an economic time series, and are controllable to the extent that the individual forming the expectation thinks he or she can influence the outcome via his or her actions (Brimer, 1989). By implication, this suggests that expectations are a function of information related to causal factors and controllable factors, and assumptions related to past behavior and related factors. It also suggests that expectations are important to understand because they are based on forecasts, which provide the foundation

for future planning and ultimately the choice of action individuals elect to take (Ajzen, 1991; Bandura, 1986; Casson, 2003; Locke & Latham, 1990; Shane & Delmar, 2004).

In general, researchers have found that the actual performance of small, growth-oriented company firms tends to exceed the performance of larger firms in similar industry contexts (Biggadike, 1979; Fast, 1981; Weiss, 1981). Of course, a nascent firm's position on the growth curve (e.g., Timmons, 1999: 242) implies expected potential for large year-over-year percentage gains in revenues and employees when compared to larger, more mature organizations. Research has also suggested that entrepreneurs may have a disproportionate tendency to be overconfident about their own relative abilities (Camerer & Lovallo, 1999; Geroski, 1995), suggesting that they may also be somewhat overly optimistic in the relative formation of growth expectations.

By contrast, operating NIs inside of an existing organization may succumb to managerial herd behavior pressure (Palley, 1995). This may lead decision-makers to be responsible for creating value to gravitate toward considering opportunities that are typically better developed from an industry standpoint. Such pressure, in turn, would be expected to temper NIs' relative growth expectations largely because of the increased competitive pressure that results from increasingly shared perceptions of value. In addition, Matthews & Human (2000) found that more sophisticated planning tempers expectations of growth. Given NIs' environmental propensity for planning and the previously observed tempering

effect of planning on growth expectations, they could have more reasonable expectations for growth. Stated more formally,

H1: *NIs will have lower growth expectations than NEs.*

Business Plan Formalization

A review of more than three decades of research suggests that there is relatively widespread agreement among theorists that strategic planning, whether formal or emergent in nature, generally has a positive influence on a venture's performance (Miller & Cardinal, 1994). The planning-performance relationship may be particularly acute for nascent ventures because of the substantive impact decisions made early in the lifespan of a venture can have on its developmental process. Brodsky (1995) has observed, for instance, that many entrepreneurs fail not because their business is undercapitalized, but rather because they misuse the capital they have raised. Thus, it is likely that a lack of planning compromises the discipline and flexibility necessary to avoiding resource misallocations, which can ultimately threaten the survival of new ventures (Bhide, 1992). Shane and Delmar (2004) also point out that planning as a mental process helps to guide human action because most human behavior involves forethought about desired future states and the ways in which goals can be achieved (Bandura, 1986). In short, this work suggests that formal planning is an important connection mechanism for communicating expectations to those who provide and utilize resources alike, which in turn allows for the integration of goals into subsequent behavior.

Although research specifically seeking to confirm the linkage between small business planning and performance has produced mixed results (e.g., Bracker, Keats, & Pearson, 1988; Orpen, 1985; Robinson Jr. & Pearce II, 1983), scholars tend to agree that small firms do not conduct as much *formal* planning as larger firms (e.g., Robinson Jr. & Pearce II, 1984; Unni, 1981). This finding is particularly interesting given that anecdotal evidence (i.e., Casson, 2003) suggests *both* NEs and NIs perceive the importance of formal business planning, and both report frustration by what they perceive to be a gap in their effectiveness when the planning process is not fully engaged.

Yet there is substantive theory and research to suggest small firms confront influential barriers to the planning process associated with liabilities of newness (Freeman, Carroll, & Hannan, 1983). Specifically, small entrepreneurial firms are less likely to possess the slack resources (Cyert & March, 1963) perceived as necessary to engage in the planning process. By contrast, given the planning orientation and discipline that evolves in many corporate environments, it is reasonable to expect that NIs are inherently more exposed to formal planning processes. Managerial control in intrapreneurial contexts is also likely to be based on multiple review levels (Sykes, 1986). Thus, it is further reasonable to expect that NIs will also be more motivated to engage in formal planning because they are more likely to confront pressures associated with balancing a variety of political and corporate objectives during the resource acquisition and transformation processes (Fast, 1981). Consistent with this observation, research has also suggested that once management elects

to invest time and resources into planning, such efforts are highly likely to be carried through to completion (Harris & Ogbonna, 2006). Therefore:

H₂: *NIs will be more prone to formal business planning than NEs.*

Academics and consultants have been advising nascent entrepreneurs for years that they need to do a better job of planning for the future (e.g., Baker, Addams, & Davis, 1993). However, a close look at the relevant research does not reveal clear-cut support for the planning-performance relationship (e.g., Bracker et al., 1988; Orpen, 1985; Robinson Jr. & Pearce II, 1983; Schwenk & Shrader, 1993). Lumpkin, Shrader, and Hills (1998) concluded that in the small business context, “planning is sometimes useful and sometimes not” (p. 198).

Formal planning should be particularly cumulative to nascent firms. After all, decisions made early in an organization’s or industry’s life significantly influence subsequent decisions and performance (David, 1985; Teece, 1990). At the nascent stage, planning should be related to expectations of firm growth. However, the causal order of this relationship is not perfectly clear. It could be argued that it is the founder’s expectation of firm growth that is the spark that ignites the planning process. That is, it is not so much a model of “plan and perform” (or in the case of nascency “plan and expect to perform”), as “expect to perform and plan to achieve the expectation.” Indeed, the more aggressive the expectations for firm growth, it is plausible that more sophisticated planning is specified.

While it is interesting to consider the order of planning and performance, for

the purposes of this inquiry, we focus on the extent that business planning is thought to improve the founder’s ability to effectively acquire and utilize resources. Accordingly, we should expect formal planning to ultimately affect performance and, in the meantime, influence the founder’s outlook of future performance. Therefore,

H₃: *Business planning formality will be positively related to a nascent founder’s growth expectations.*

Perceived Uncertainty

Firms seek control over their environments to reduce uncertainty and to enhance survival (Pfeffer & Salancik, 1978). Indeed, research suggests that the founder’s perception of the environment plays a key role in the firm’s chances of success (Bruno & Tyebjee, 1982; Luo, 1999). Small firms are exposed to uncertainty on many fronts, including financial, human resources and structural uncertainties (Ballantine, Cleveland, & Koeller, 1993; Sharma & Chrisman, 1999). Because nascent firms frequently operate in the early stages of industry growth curves, they also confront high degrees of uncertainty associated with the potential of great variability in the industry evolution process (Timmons, 1999). Thus, acquiring resources can also be difficult (Starr & Macmillan, 1990), at least in part, because new ventures are frequently perceived as lacking legitimacy by potential resource providers (Freeman et al., 1983).

By contrast, managers in established organizations are relatively insulated from financial, human resource and structural uncertainties (Ballantine et

al., 1993). An argument can be made, however, that there will be competitive pressures for internal resources that result from the combination of differing objectives and scarcity (Fast, 1981). Even with these internal pressures, the presence of organizational routines can provide the NI with mechanisms to address this competitive pressure. For example, NIs are likely to have easier access to critical resources as they find key influential internal sponsors that act to insulate nascent activity they endorse (Sharma & Chrisman, 1999). This insulated state should be expected to carry over to the NI, especially in terms of viewing the environment as less threatening than NEs. Therefore:

H4: *NIs will perceive less uncertainty than NEs.*

Research suggests that increased perceived uncertainty is met with increased planning in the context of large existing firms (Lindsay & Rue, 1980). This is likely to result, at least in part, because management review and control pressures are not only more widespread in intrapreneurial contexts (Sykes, 1986), but also because they are typically directed toward extending or developing momentum in the context of existing resources (Stevenson, 1999). By contrast, for small and entrepreneurial oriented ventures, evidence suggests that as uncertainty increases, sophistication of planning tends to decline (Matthews & Scott, 1995, Matthews & Human, 2000). This suggests that resource constraints make such a response less likely in independent nascent ventures (Patterson, 1986), and the lack of resource pool size in nascent ventures would suggest that momentum would not be a primary focus in the early stages (Stevenson, 1999). Consequently, this

would seem to suggest that under conditions of high uncertainty, nascent entrepreneurs may favor other activities that permit more immediate exploitation of perishable opportunities in lieu of planning (Bhide, 1994). Therefore, we posit that:

H5: *Higher perceived uncertainty by a nascent founder will result in less planning formality.*

Risk Tolerance

Economic theory has long suggested that entrepreneurs have a higher risk tolerance, or motivation to undertake the risks associated with new venture creation (e.g., Kilhlstrom & Laffont, 1979). Stewart and Roth (2001) note that, "...more risk-tolerant individuals are likely to 'self-select' into entrepreneurial careers, whereas more risk-adverse individuals choose contractual employment." Consistent with this notion, Stewart, Watson, Carland, and Carland (1999) found that propensity for risk-taking differentiated the entrepreneur from small business owners and corporate managers. However, this finding conflicts somewhat with earlier studies that suggested entrepreneurs are risk averse and leave little to chance (e.g., Miner, 1990), as well as with studies that have found that risk preference is not a distinguishing characteristic between entrepreneurs and the general population (e.g., Brockhaus, 1980; Masters & Meier, 1988).

An entrepreneur's risk tolerance may possess a temporal element, however. McCarthy (2000) suggests that an entrepreneur's perception of risk and risk-bearing capacity might evolve over the course of business development. If

true, then the more mature business environment in which intrapreneurs typically operate may actually, over time, lead the NI to be more open to risk tolerance. Working against this premise, however, is the observation that decision-making in established organizations tends to revert to the status quo, often to avoid risky outcomes (e.g., Silver & Mitchell, 1990; Staw, 1981). Although Stewart and Roth (2001) found some evidence to suggest that entrepreneurs generally have a greater risk propensity than managers, overall the extant research suggests no clear direction in this regard. Therefore, we hypothesize that:

H6: *There will be no significant difference in risk tolerance between NIs and NEs.*

While no difference in risk tolerance may exist between NIs and NEs, the relationship between risk taking and performance is central to the theory of the firm (Knight, 1921). In general, while little research has directly addressed the relationship between risk tolerance and planning, intuitively, a relationship appears to exist. Planning assists in the decision making process and research suggests that decision makers who are less risk averse tend to have more confidence in their decisions (Ghosh & Ray, 1997). Higher risk taking propensity has also been shown to reduce role-related stress and to improve performance perceptions in entrepreneurial ventures (Teoh & Foo, 1997). Thus, founders with higher risk tolerance may be more likely to plan in order to obtain a better reward profile. More specifically:

H7: *Nascent founders with higher risk tolerance will conduct more formal planning.*

Little extant research exists surrounding the possible links between risk tolerance and growth expectations. Of the empirical research that does exist, however, distinctions between entrepreneurs and managers, risk propensity, and income expectations are mixed due to sample issues (Stewart & Roth, 2001). However, the basic underlying financial premise of “more risk, more reward” suggests that higher risk tolerance will be positively related to greater expectations for growth. These individuals may also be more likely to be more optimistic and aggressive in their growth forecasts as they factor in riskier but potentially more rewarding actions into their expectations of firm performance. Therefore,

H8: *Nascent founders with higher risk tolerance will possess higher growth expectations.*

METHODS

Procedure and Sample

Data from the Entrepreneurship Research Consortium Panel Study of Entrepreneurial Dynamics I (ERC/PSED I), a national panel study of nascent business founders, are used for this investigation. The ERC/PSED project gathered data from more than 800 randomly selected nascent business founders utilizing both telephone interview and mail surveys methods. The reader is referred to Reynolds (2000) for a detailed account of this database’s development and content.

In the PSED I database, nascent founders were assigned an NE or NI status. For those respondents who went on to complete the phone and mail portions of the survey, over 780 NEs and about 130 NIs were obtained. However, more than 80 respondents answered “yes” to both of the screening questions, meaning that they were classified as both NEs and NIs. This was problematic for our study, since we desired “clean” samples of NEs and NIs for comparison purposes. Therefore, we excluded those respondents that answered “yes” to both screening questions. The final sample for this study consisted of 767 NEs (those that answered “yes” only to the NE screening question) and 48 NIs (those that answered “yes” only to the NI screening question).

Variables and Measures

Expectations of Financial Growth.

A single item of the phone interview asked, “We would like to ask about your expectations regarding the future of this new firm. First, what would you expect the total sales, revenues, or fees to be in the first full year of operation? And what about in the fifth year?” The fifth year estimate of revenues was used as the owner’s estimate of financial growth over the five-year horizon. Since the near term revenue base in most nascent enterprises frequently approaches zero, calculating expected revenue growth rates from years one through five produced an unacceptable amount of noise in the data. Therefore, a log transformation was performed on the fifth year value in order to approximate a normal distribution for the regression analysis.

Business Plan Formalization.

Two items from the telephone portion of the survey were used to assess business planning. One item asked, “A business plan usually outlines the markets to be served, the products or services to be provided, the resources required -- including money -- and the expected growth and profits for a new business. Has a business plan been prepared?” The responses were coded as (1) yes, (2) no. For those who responded that a business plan was prepared, a second item was then asked, “What is the current form of your business plan – unwritten or in your head, informally written, formally prepared, or something else?” Responses were coded as (0) something else, (1) unwritten in head, (2) informally written, (3) a combination of (1) and 2), or (4) formally prepared.

Perception of Environmental Uncertainty.

An 11-item measure in the mail survey using a five point Likert response scale was used to assess the respondent’s perception of environmental uncertainty. This scale focused on state uncertainty (see Milliken, 1987) referring to the inability of the nascent entrepreneur to understand or to predict the state of the environment due to a lack of information. The directions read, “Considering the economic and community context for the new firm, how certain are you that the new business will be able to accomplish each of the following?” The response scale was anchored by very high (5) to very low (1) including a category for “does not apply.” The items were reverse scored to be consistent with prior literature on environmental uncertainty.

A factor analysis performed by Matthews and Human (2000) found that the eleven items loaded on one of three factors which the researchers labeled as financial (Chronbach's alpha = .77), competitive (Chronbach's alpha = .71), and operational (Chronbach's alpha = .53) uncertainty. We group the uncertainty items similarly here using those three factor labels.

Risk Tolerance.

Two questions from the mail survey were used to capture the founder's degree of risk tolerance. One question asked, "Consider two types of new businesses. Assuming you are the sole owner, which situation would you prefer? (1) A business that would provide a good living, but with little risk of failure, and little likelihood of making you a millionaire, or (2) A business that was much more likely to make you a millionaire but had a much higher chance of going bankrupt. The other question asked, "I enjoy the challenge of situations that many consider 'risky'." The response scale was anchored by completely true (5) to completely untrue (1). In both cases, higher scores imply a greater degree of risk tolerance or risk seeking preference.

Control variables.

In addition to the independent variables, we also included three demographic variables: age, gender, and years of full-time work experience. Gender is of particular interest due to the controversial nature of its influence in the nascent process. For example, although there is some evidence to suggest that such a relationship may be attenuating (e.g., Masters et al., 1988), research has historically suggested that

female entrepreneurs have been found to possess a tendency toward taking less risk than their male counterparts (see Hisrich & Peters, 1998). Given this tendency, we would also expect that lower risk tolerance will likely temper female founder's growth expectations as well.

RESULTS

Correlations for the variables used in the regression analysis appear in Table 1. Descriptive statistics for the NE and NI groups appear in Table 2. The differences in gender, age, and experience are not statistically significant.

A comparison of the NE and NI groups using measures of growth expectations, planning formality, perceived uncertainty and risk tolerance appears in Table 2. Somewhat surprisingly, results suggested higher growth expectations among NIs than NEs—the reverse of our H1 prediction. Evidence provides support for NIs as more sophisticated planners (H2) and for no difference in risk tolerance between NIs and NEs (H6). No significant support could be found for hypothesized differences in perceived uncertainty (H4), although the differences between the means were consistent across each measure with the notion that NIs perceive less uncertainty than NEs.

Hierarchical regression with list-wise case deletion was used to test hypothesized relationships to founder growth expectations. Of the two previously noted measures of business plan formalization, only the question that assessed the business plan's formalization on the zero to four scale was utilized in the regression analysis.

Table 1: Variable Correlations

Variables	1	2	3	4	5	6	7	8	9	10
1 NE/NI Status										
2 Business Plan Formalization	** .13									
3 Financial Uncertainty	-.03	-.06								
4 Competitive Uncertainty	-.03	-.03	*** .26							
5 Operational Uncertainty	-.01	-.07	*** .47	*** .39						
6 Years FT Work Exp	.02	-.02	.07	.04	.05					
7 Age	.00	-.03	.05	.07	.07	*** .76				
8 Gender	-.06	-.06	-.07	.05	-.01	* -.07	* .09			
9 Preference for Venture Startup	.06	.09	-.01	** -.12	** -.12	-.01	.01	*** -.23		
10 Enjoys Risky Situations	.00	** .16	** -.13	*** -.19	** -.09	.04	-.03	*** -.16	*** .25	
11 Fin Growth Expectations	* .08	** .17	-.06	** -.16	† -.08	† .07	.00	*** -.28	*** .25	*** .17

† p < .10
 * p < .05
 ** p < .01
 *** p < .001

Table 2: Descriptive Statistics and Means Comparison of NEs and NIs Along Key Dimensions

Descriptive	NE	NI	Diff
N	767	48	
Gender (0 = male, 1 = female)	.49	.38	-.11
Age	39.5	39.6	.10
Years F-T Paid Work Exp	17.3	18.1	-.80
Comparison	NE	NI	Diff
Growth Expectations			
Estimated 5 yr sales (log)	5.13	5.45	*-.33
Planning Formality			
Prepared business plan	1.42	1.27	*.13
Degree of business plan formalization	2.51	3.08	**-.57
Perceived Uncertainty (higher = less certain)			
Financial	2.93	2.83	.10
Competitive	1.88	1.80	.08
Operational	2.34	2.32	.02
Risk Tolerance			
Preference for working in growth venture	1.17	1.26	-.09
Enjoy challenge of risky situation	3.42	3.44	-.02

t-Test sig. t p < .10
 * p < .05
 ** p < .01
 *** p < .001

The five models that appear in Table 3 depict the effects of sequentially entering groups of variables into the equation. Model 1 examines NE/NI effects; Model 2 adds the business plan formalization variable; Model 3 adds the three perceived uncertainty variables; Model 4 adds the group of demographic control variables; Model 5 adds the two risk variables.

The five regression models were significant, and the significance level increased as more variables were added.

The coefficient of determination of the final model was rather low ($R^2 = .184$).

The largest incremental improvement in R^2 came from addition of the demographic variables in Model 4 (change in R^2 is significant $p < .001$). Although not hypothesized, gender's highly significant beta suggests a strong relationship with founder growth expectations (also supported by path analysis, see Figure 2). Business plan formalization was also significantly related to growth expectations, which supports H3.

Table 3: Regression Analysis Predicting Expectation of Financial Growth

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
NE/NI Status	t.113	.091	.097	.085	.093
Business Plan Formalization		** .209	** .211	** .163	** .157
Financial Uncertainty			.023	-.025	-.046
Competitive Uncertainty			-.094	-.111	t -.118
Operational Uncertainty			-.009	.023	.036
Years FT Work Exp				.099	.102
Age				.024	.029
Gender				*** -.302	*** -.309
Preference for Venture Startup					.063
Enjoys Risky Situations					-.068
R ²	.013	.056	.065	.178	.184
Adjusted R ²	.008	.047	.042	.146	.148
Δ Adjusted R ²		** .039	-.005	*** .104	.002
F	t 2.73	** 6.25	** 2.87	*** 5.52	*** 5.04

t p < .10
 * p < .05
 ** p < .01
 *** p < .001

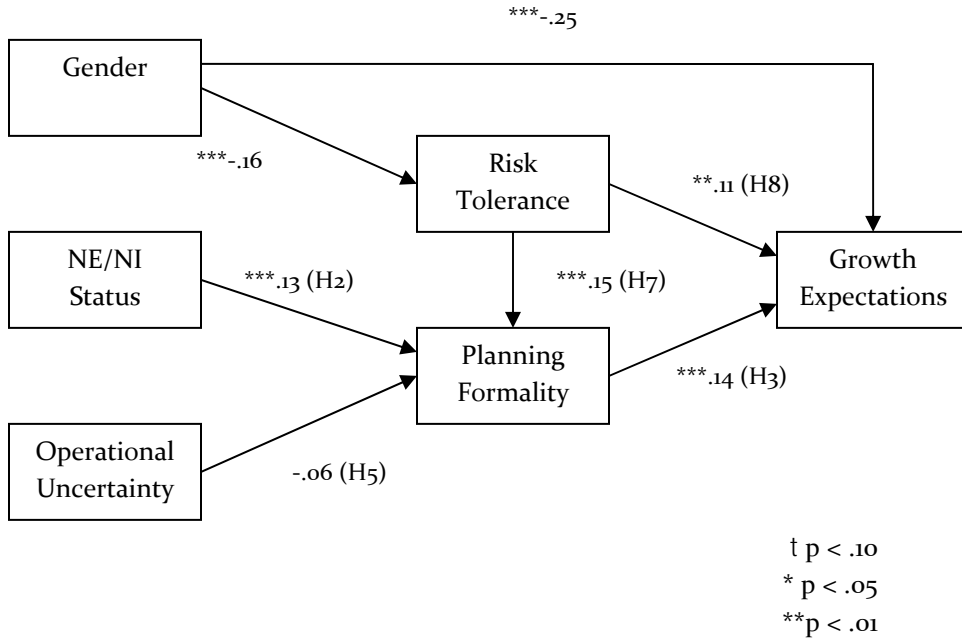
The uncertainty variables were not significant, with the exception of a minor relationship between operational uncertainty and growth expectations. Finally, we note that the NE/NI status variable was found marginally significant in Model 1, but then turned insignificant as other variables entered the model. The positive beta coefficient continues to suggest that NIs expect higher growth than NEs (the reverse of H1).

Finally, the path diagram in Figure 2 expresses a model of founder growth expectations using the variables and relationships proposed by this study. The six variables specified in Figure 2

are represented by one indicator each and their associated correlations from Table 3. From the two items used to reflect business planning formality, the question that required response on a zero to four scale was employed in the path analysis. Operational uncertainty was selected to represent perceived uncertainty due to previous research that suggests operational uncertainty as significant in the context of expected growth (see Matthews & Human, 2000).

Hypothesized relationships found to garner little or no support from the previous analysis, NIs and perceived uncertainty (H4), NIs and risk tolerance

Figure 2: Path Analysis Results



(H6), and NIs and growth expectations (H1) were not included in the path model to reflect our improved understanding of how these variables relate. To test these relationships, path analysis using the structural equations modeling methods of LISREL 8 (Joreskog & Sorbom, 2001) was conducted. Results of the path analysis reveal that, with the exception of the path between operational uncertainty and planning formalization, all parameter estimates were significant at the .01 level or better (Figure 2). The squared multiple correlation for the growth expectations

structural equation was .11—rather low but consistent with the R^2 values from the hierarchical regression analysis. Goodness of fit statistics² suggest that the model fits the data well. The chi-square of 11.15 was significant ($p = .048$). Other measures of absolute and incremental fit, including the root mean square error of approximation (RMSEA = .042), goodness of fit index (GFI = .99), adjusted goodness of fit index (AGFI = .98), and normed fit index (NFI = .92) exceeded common benchmarks (see Hair, Anderson, Tatham & Black, 1998).

²We utilize several commonly reported goodness of fit indicators and the thresholds suggested by Hair et al. (1998) as desirable. χ^2 is the chi-square statistic (a non-significant p-value of at least $p > .01$ is desirable). RMSEA is root mean square error of approximation ($< .08$). GFI is goodness of fit index (no consensus threshold but .90 often viewed as minimum acceptable value). AGFI is adjusted goodness of fit index ($> .85$). NFI is normed fit index ($> .90$).

Table 4: Summary of Support for Hypotheses ^a

	Hypothesized Relationship	Comparison of Means	Hierarchical Regression	Path Analysis
H1	NI (-) Growth Expectations	Reverse	Reverse	
H2	NI (+) Formal Planning	Strong		Strong
H3	Formal Planning (+) Growth Expectations		Strong	Strong
H4	NI (-) Perceived Uncertainty	n.s.		
H5	Perceived Uncertainty (-) Formal Planning			Weak
H6	NI = NE regarding Risk Tolerance	Strong		
H7	Risk Tolerance (+) Formal Planning			Strong
H8	Risk Tolerance (+) Growth Expectations		n.s.	Strong
^a blank space indicates relationship was not tested in this mode of analysis				

Results of the path analysis support many of the relationships hypothesized in this investigation. The degree to which the analyses support the hypotheses posited in this investigation is summarized in Table 4.

DISCUSSION

This study extends previous theory and practice by focusing explicitly on comparing the factors postulated to influence the process of growth expectations across nascent entrepreneurs (NEs) and nascent intrapreneurs (NIs). Specifically, we draw upon extant literature to develop a model of cognitive and behavioral antecedents that have been shown to be associated with the formation of growth expectations. It also provides a rare empirical comparison of nascent entrepreneurs and intrapreneurs as they

begin their entrepreneurial journey. Our findings suggest that both groups of founders appear similar in terms of their perceived environmental uncertainty and risk tolerance. Nascent intrapreneurs appear to be more sophisticated planners, which is reasonable given the structured organizational environment of the intrapreneur. An interesting finding was that nascent intrapreneurs appear to harbor higher growth expectations than their entrepreneurial counterparts. When viewed in a holistic model of growth expectations as portrayed in Figure 2, however, this may be an indirect effect of the nascent intrapreneurs' higher planning sophistication, and formal planning's positive relationship to growth expectations.

An additional finding of interest was the impact of gender on founder growth expectations. This is especially interesting given the growing body of evidence which suggests that gender bears a significant influence on interest in business ownership (e.g., Brush, 1992, 1997). While there appear to be important differences, the literature is relatively silent on the underlying processes which may account for these differences (Bird & Brush, 2002). Although not a central variable of this investigation, it is hard to ignore the effects of gender as reported in our models of growth expectations (Table 3, Figure 2). In particular, it is interesting to note that in the sample of nascent entrepreneurs, women are less risk tolerant. The mechanism appears related to females' aversion for risk, which appears to temper growth expectations directly and indirectly as portrayed in Figure 2.

An additional contribution of this study is the development of a path model of founder growth expectations (Figure 2). As suggested by the path analysis results, the configuration of this model garners significant empirical support. Linking the antecedent variables of risk tolerance, uncertainty, planning, gender, and founder type to firm performance extends the inquiry of Matthews and Scott (1995) and other researchers regarding how these variables are related in the small firm context. While the fit of this particular model was acceptable, the low path coefficient values and the low percentage of variability explained suggest that other variables may exist that will improve the explanatory power of this model. It would be interesting, for example, given the distinction in both the literature and in practice, to

examine the effects of a variable relating to venture type (i.e., "small business venture or lifestyle business" or "entrepreneurial venture or aggressive growth business") on this model. In addition, another interesting variable to consider in this context would be the influence of social networks. Working perhaps as a moderating effect, an entrepreneur's social network can help validate the venture concept or mentor the NE as (s)he develops the business model.

Implications for Practice

As noted above, our findings suggest that both groups of founders appear similar in terms of their perceived environmental uncertainty and risk tolerance. Nascent intrapreneurs, however, appear to be more sophisticated planners, especially in the structured organizational environment of the intrapreneur. When combined with the finding that nascent intrapreneurs appear to harbor higher growth expectations than their entrepreneurial counterparts, there are clear implications for practice. For example, recent evidence suggests that writing, or even simply completing a business plan, results in an entrepreneur being six times more likely to get into business (Liao & Gartner, 2007). Moreover, they also note that there is no evidence to suggest that planning detracts from the involvement in entrepreneurial activities, or is detrimental to the successful development of a new business. Our findings extend this work and signal practitioners that planning is not only important to the initial launch, but also to a venture's capacity for subsequent growth. We note that planning

generally fosters higher growth expectations among founders in both independent and intrapreneurial settings. However, these findings also appear to suggest that the sophistication of planning efforts is particularly important to the development of growth expectations in intrapreneurial contexts. We suspect that this result reflects the need to build momentum towards growth by explicitly seeking more widespread institutional and resource support through formal planning efforts. The development process is iterative and cyclical. As Ardichvili, Cardozo, and Ray (2003) note, entrepreneurial ventures are made, not found. As a result, our findings suggest that those considering nascent entrepreneurial activity consider carefully how the planning process, especially sophistication thereof, and the context, especially institutional context, impact the intended launch and growth of their nascent venture.

Future Research

A primary focus of this study is on the expectation of firm growth as the dependent variable that is the outcome of the planning process. We chose this focus in part because the concept of planned behavior (Ajzen, 1991) has begun to gain traction in recent entrepreneurship research (e.g., Krueger Jr. & Carsrud, 1993; Orser, Hogarth-Scott, & Wright, 1998). Thus, future research focusing on empirically testing the notion that intentions relate to actual behavior is central to the theory of planned behavior (Ajzen, 1991). In addition, considering the role of opportunity recognition in both nascent small business ventures and corporate ventures could be desirable. In fact, the combination of both opportunity

recognition and intentionality could shed additional light on the nexus of seeing an opportunity and acting upon it in either a small business and/or corporate setting.

It is important to note that one potential limitation of this study is that we have relied on a cross-sectional design to test our ideas. A more persuasive test of the idea that NIs may harbor higher growth expectations than their NE counterparts as an indirect result of the NI's tendency toward higher planning sophistication would require the use of a longitudinal research design. Therefore, future research that examines the directionality of the relationship observed between growth expectations and planning sophistication here, and the relationship between a nascent founder's growth expectations and actual future firm performance is also suggested.

Another potential limitation of this study concerned the NI sample. The small sample size of nascent intrapreneurs relative to entrepreneurs weakens the power of this study's statistical inferences. An additional concern is related to the NI group itself. The large number of nascent intrapreneurs discarded in this study due to answering "yes" to both NE and NI screening questions casts an interesting doubt about the ability to discriminate between these two groups of founders. For example, someone answering "yes" to the NE screening question ("Are you, alone or with others, now starting a new business or new venture for your employer? An effort that is part of your job assignment?") may have been a member of a stand-alone venture startup team who reported to a head founder. This experience suggests that future studies

of these two groups should ensure better discrimination between entrepreneurs and intrapreneurs. For example, the research presented here provides evidence that it would be valuable to pursue samples from a known population of intrapreneurs that could ensure an appropriate stock of legitimate NIs for comparative investigation. For future research, we would recommend that in order to secure sufficient numbers of NIs, an oversample of potential NIs be conducted in addition to the representative sampling.

Also, while this study does not address the question of industry specific growth potential and/or differential, an interesting future research question might be, "Do certain industries appear as higher growth opportunities than others across both NEs and NIs?" Further inquiry directed at these issues as well as overall size, risk, and type of venture would extend the findings presented here and contribute to the growing body of knowledge focused on *both* entrepreneurial and intrapreneurial ventures.

One final issue that future research may want to address is the order entry of the control and independent variables. In examining various articles, there seems to be several approaches to the entry order of the variables. Becker (2005) notes that in psychological studies, the "common" practice that the effects of these variables should be controlled for before investigating the predictive power of the variables of interest may not always be the best approach. He further notes that the inclusion of control variables and the order of entry, like all other variables in the regression analysis, should be justified theoretically. In this

case, we are not asserting a causal order for the well-established predictors we propose. Rather, the issue of variable order in this case is more of a practical one given the central focus of this research. Specifically, we are concerned with the relationships of these variables between NEs and NIs supported by theory (and logic) and with ruling out alternative explanations, not necessarily with establishing an 'a priori' comprehensive causal model. Of course, the SEM analysis now suggests what such a model looks like for future research.

Conclusion

The cross sectional test and small sample of NIs does suggest that caution be applied when interpreting the findings. That said, this investigation does constitute a rare formal comparison of entrepreneurs and intrapreneurs using factors often linked to firm performance. As such, it contributes to our understanding of nascent firm behavior and should motivate further inquiry into differences between the stand-alone startup and the corporate venture. Moreover, clearly when pursuing a new venture start-up, the bottom line for practice is not so much whether to plan or not to plan, but rather the sophistication of planning and the influence for expectations for growth. It is not just whether you have a plan or not, but the sophistication of that plan that plays a role in garnering support from others.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ardichvili, A., Cardozo, R.J., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal Business Venturing*, 18(1), 105-123.
- Baker, W. H., Addams, H. L., & Davis, B. (1993). Business planning in successful small firms. *Long Range Planning*, 26(6), 82-88.
- Ballantine, J. W., Cleveland, F. W., & Koeller, C. T. (1993). Profitability, uncertainty, and firm size. *Small Business Economics*, 5(2), 87-100.
- Bandura, A. (1986). *The social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8, 274-289.
- Bettis, R. A. & Hitt, M. A. (1995). The new competitive landscape. *Strategic Management Journal*, 16(5), 7-19.
- Bhide, A. (1992). Bootstrap finance: The art of start-ups. *Harvard Business Review*, 70(6), 109-117.
- Bhide, A. (1994). How entrepreneurs craft strategies that work. *Harvard Business Review*, 72(2), 150-161.
- Biggadike, R. (1979). The risky business of diversification. *Harvard Business Review*, 57(3), 103-111.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442-453.
- Bird, B. & Brush, C. (2002). A gendered perspective on organization creation. *Entrepreneurship Theory & Practice*, 26(3), 41-65.
- Bracker, J. S., Keats, B. W., & Pearson, J. N. (1988). Planning and financial performance among small firms in a growth industry. *Strategic Management Journal*, 9(6), 591-603.
- Brimer, J. T. (1989). A theory of business expectation formulation. *Engineering Costs and Production Economics*, 15, 17-25.
- Brockhaus, R. H. (1980). Risk Taking Propensity of Entrepreneurs. *Academy of Management Journal*, 23(3), 509-520.
- Brodsky, N. (1995). Why start-ups fail, *Inc.*, 17, 27: Gruner & Jahr USA Publishing.
- Bruno, A. & Tyebjee, T. (1982). The environment of entrepreneurship. In C. Kent & D. L. Sexton & K. H. Vesper (Eds.), *Encyclopedia of entrepreneurship*. Englewood Cliffs, NJ: Prentice-Hall.
- Brush, C. G. (1992). Research on women business owners: Past trends, a new perspective and future directions. *Entrepreneurship Theory & Practice*, 16(4), 5-30.

- Brush, C. G. (1997). Women-owned businesses: Obstacles and opportunities. *Journal of Developmental Entrepreneurship*, 2(1), 1-25.
- Camerer, C. & Lovo, D. (1999). Overconfidence and excess entry: An experimental approach. *American Economic Review*, 89(1), 306-318.
- Carrier, C. (1994). Intrapreneurship in large firms and SMEs: A comparative study. *International Small Business Journal*, 12(3), 54-61.
- Carrier, C. (1996). Intrapreneurship in small businesses: An exploratory study. *Entrepreneurship Theory & Practice*, 21(1), 5-20.
- Casson, M. (1982). *The entrepreneur*. Totowa, NJ: Barnes & Noble Books.
- Casson, M. (2003). Entrepreneurship, business culture and the theory of the firm. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research: An interdisciplinary survey and introduction*, Vol. I: 223-246. Boston, NJ: Kluwer Academic Publishers.
- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Boston, MA: Harvard Business School Press.
- Covin, J. G. & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Cyert, R. & March, J. (1963). *A behavioral theory of the firm*. Englewood Cliffs: Prentice-Hall.
- David, P. A. (1985). Clio and the economics of QWERTY. *American Economic Review*, 75(2), 332-337.
- Duncan, W. J., Ginter, P. M., Rucks, A. C., & Jacobs, T. D. (1988). Intrapreneurship and the reinvention of the corporation. *Business Horizons*, 31(3), 16-21.
- Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32(3), 543-576.
- Fast, N. D. (1981). Pitfalls of corporate venturing. *Research Management*, 24(2), 21-24.
- Freeman, J., Carroll, G. R., & Hannan, M. T. (1983). The liability of newness: Age dependence in organizational death rates. *American Sociological Review*, 48(5), 692-710.
- Gartner, William B. (1988). "Who Is an Entrepreneur? Is the Wrong Question." *American Journal of Small Business*, 12 (4): 11-32.
- Geroski, P. A. (1995). What do we know about entry? *International Journal of Industrial Organization*, 13(4), 421-440.
- Ghosh, D. & Ray, M. R. (1997). Risk, ambiguity, and decision choice: Some additional evidence. *Decision Sciences*, 28(1), 81-104.

- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). New York, NY: Macmillan Publishing Co.
- Harris, L. C. & Ogbonna, E. (2006). Initiating strategic planning. *Journal of Business Research*, 59(1), 100-111.
- Hisrich, R. D. & Peters, M. P. (1998). *Entrepreneurship* (5th ed.). Boston, MA: Irwin McGraw-Hill.
- Honig, B. (2001). Learning strategies and resources for entrepreneurs and intrapreneurs. *Entrepreneurship Theory & Practice*, 26(1), 21-35.
- Hornsby, J.S., Naffziger, D. W, Kuratko, D. F, & Montagno, R. V. (1993). An interactive model of the corporate entrepreneurship process. *Entrepreneurship Theory and Practice*, 17(2), 29-37.
- Joreskog, K. G. & Sorbom, D. (2001). *LISREL 8: User's reference guide*. Lincolnwood, IL: Scientific Software International, Inc.
- Kanter, R. (1985). Supporting innovation and venture development in established companies. *Journal of Business Venturing*, 1(1), 47-60.
- Kanter, R. M. (1989). *When giants learn to dance : mastering the challenge of strategy, management, and careers in the 1990s*. New York, NY: Simon and Schuster.
- Kihlstrom, R. & Laffont, J. J. (1979). A general equilibrium entrepreneurial theory of new firm formation based on risk aversion. *Journal of Political Economy*, 87, 304-316.
- Kirzner, I. M. (1999). Creativity and/or alertness: A reconsideration of the Schumpeterian entrepreneur. *Review of Austrian Economics*, 11, 5-17.
- Knight, F. H. (1921). *Risk, uncertainty and profit*. Boston, MA: Houghton Mifflin.
- Krueger Jr., N. & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behavior. *Entrepreneurship & Regional Development*, 5, 315-330.
- Kuratko, D. F., Montagno, R. V., & Hornsby, J. S. (1990). Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurship environment. *Strategic Management Journal*, 11, 49-58.
- Laitinen, E. K. (1992). Prediction of failure of a newly founded firm. *Journal of Business Venturing*, 7(4), 323-340.
- Lindsay, W. & Rue, L. (1980). Impact of the business environment on the long-range planning process: A contingency view. *Academy of Management Journal*, 23, 385-404.
- Liao, J. & Gartner. W. B. (2007). The influence of pre-venture planning on new venture creation. *Journal of Small Business Strategy*, 18(2), 1-20.
- Locke, E. A., & Latham, G. (1990). *A theory of goal setting and task performance*. Edgewood Cliffs, NJ: Prentice-Hall.

- Low, M. B. & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139-161.
- Luchsinger, V. & Ray Bagby, D. (1987). Entrepreneurship and intrapreneurship: Behaviors, comparisons, and contrasts. *SAM Advanced Management Journal*, 52(3), 10-13.
- Lumpkin, G. T., Shrader, R. C., & Hills, G. E. (1998). *Does formal business planning enhance the performance of new ventures?* Paper presented at the Frontiers of Entrepreneurship Research, Wellesley, MA.
- Luo, Y. (1999). Environment-strategy-performance relations in small businesses in China: A case of township and village enterprises in southern China. *Journal of Small Business Management*, 37(1), 37-52.
- Masters, R. & Meier, R. (1988). Sex differences and risk-taking propensity of entrepreneurs. *Journal of Small Business Management*, 26(1), 31-35.
- Matthews, C. H. & Scott, S. G. (1995). Uncertainty and planning in small and entrepreneurial firms: An empirical assessment. *Journal of Small Business Management*, 33(4), 34-52.
- Matthews, C. H. & Human, S. E. (2000). The little engine that could: Uncertainty and growth expectations of nascent entrepreneurs. *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- McCarthy, B. (2000). Researching the dynamics of risk-taking and social learning: An exploratory study of Irish entrepreneurs. *Irish Marketing Review*, 13(1), 46-60.
- Miller, C. C. & Cardinal, L. B. (1994). Strategic planning and firm performance: A synthesis of more than two decades of research. *Academy of Management Journal*, 37(6), 1649-1665.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Miller, D. & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: state, effect, and response uncertainty. *Academy of Management Review*, 12(1), 133-143.
- Miner, J. B. (1990). Entrepreneurs, high growth entrepreneurs, and managers: Contrasting and overlapping motivational patterns. *Journal of Business Venturing*, 5(4), 221-234.
- Morse, C. W. (1986). The delusion of intrapreneurship. *Long Range Planning*, 19(6), 92-95.
- Norburn, D., Manning, K., & Birley, S. (1986). Beyond intrapreneurship: The metamorphosis of larger corporations. *Leadership & Organizational Development Journal*, 7(3), 21-26.

- Orpen, C. (1985). The effects of long-range planning on small business performance: A further examination. *Journal of Small Business Management*, 23(1), 16-23.
- Orser, B. J., Hogarth-Scott, S., & Wright, P. (1998). *On the growth of small enterprises: The role of intentions, gender and experience*. Paper presented at the Frontiers of Entrepreneurship Research, Wellesley, MA.
- Palley, T. I. (1995). Safety in numbers: A model of managerial herd behavior. *Journal of Economic Behavior & Organization*, 28(3), 443-451.
- Patterson, R. (1986). Strategic planning for small business. In J. R. Gardner & R. Rachlin & A. Sweeny (Eds.), *Handbook of strategic planning*: 242-251. New York, NY: Wiley.
- Pfeffer, J. & Salancik, G. (1978). *The external control of organizations*. New York, NY: Harper & Row.
- Reich, R. B. (1987). Entrepreneurship reconsidered: The team as a hero. *Harvard Business Review*, 65(3), 77-83.
- Reynolds, P. D. (2000). National panel study of U.S. business startups: Background and methodology. In J. A. Katz (Ed.), *Advances in entrepreneurship, firm emergence, and growth: Databases for the study of entrepreneurship*, Vol. 4: 153-228. Greenwich, CT: JAI Press, Inc.
- Reynolds, P. D. (1997). Who starts firms? Preliminary explorations of firms in gestation. *Small Business Economics*, 10, 103-115.
- Reynolds, P. D. (1994). Autonomous Firm Dynamics and Economic Growth in the United States, 1986-1990. *Regional Studies: The Journal of the Regional Studies Association*, 28(4), 429-442.
- Robinson Jr., R. B. & Pearce II, J. A. (1983). The impact of formalized strategic planning on financial performance in small organizations. *Strategic Management Journal*, 4(3), 197-207.
- Robinson Jr., R. B. & Pearce II, J. A. (1984). Research thrusts in small firm strategic planning. *Academy of Management Review*, 9(1), 128-137.
- Schumpeter, J. (1934). *Theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*. Cambridge: Harvard University Press.
- Schwenk, C. B. & Shrader, C. B. (1993). Effects of formal strategic planning on financial performance in small firms: A meta-analysis. *Entrepreneurship Theory & Practice*, 17(3), 53-64.
- Shane, S., & Delmar, F. (2004). Planning for the market: business planning before marketing and the continuation of organizing efforts. *Journal of Business Venturing*, 19(6), 767-785.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.

- Sharma, P. & Chrisman, J. J. (1999). Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship. *Entrepreneurship Theory & Practice*, 23(3), 11-27.
- Shrader, R. C. & Simon, M. (1997). Corporate versus independent new ventures: Resource, strategy, and performance differences. *Journal of Business Venturing*, 12(1), 47-66.
- Silver, W. S. & Mitchell, T. R. (1990). The status quo tendency in decision making. *Organizational Dynamics*, 18(4), 34-46.
- Spear, R. (2006). Social entrepreneurship: A different model? *International Journal of Social Economics*, 33(5/6), 399-410.
- Starr, J. A. & Macmillan, I. C. (1990). Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, 11(4), 79-92.
- Staw, B. M. (1981). The escalation of commitment to a course of action. *Academy of Management Review*, 6(4), 569-576.
- Stevenson, H. H. (1999). A perspective on entrepreneurship. In W. A. Sahlman & H. H. Stevenson & M. J. Roberts & A. Bhidé (Eds.), *The entrepreneurial venture*, 2nd ed. Boston, MA: Harvard Business School Press.
- Stewart Jr., W. H. and Roth, P. L. (2001). Risk propensity differences between entrepreneurs and managers: A meta-analytic review. *Journal of Applied Psychology*, 86(1), 145-153.
- Stewart Jr., W. H., Watson, W. E., Carland, J. C., & Carland, J. W. (1999). A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers. *Journal of Business Venturing*, 14(2), 189-214.
- Sykes, H. B. (1986). The anatomy of a corporate venturing program: Factors influencing success. *Journal of Business Venturing*, 1(3), 275-293.
- Teece, D. J. (1990). Contributions and impediments of economic analysis to the study of strategic management. In J. W. Fredrickson (Ed.), *Perspectives on Strategic Management*: 39-77. New York, NY: Harper Business.
- Teoh, H. Y. & Foo, S. L. (1997). Moderating effects of tolerance for ambiguity and risk-taking propensity on the role. *Journal of Business Venturing*, 12(1), 67-81.
- Timmons, J. A. (1999). *New venture creation*. Boston, MA: Irwin McGraw-Hill.
- Unni, V. K. (1981). The role of strategic planning in small firms. *Long Range Planning*, 14(2), 54-58.

Wallace, S. L. (1999). Social entrepreneurship: The role of social purpose enterprises in facilitating community economic development. *Journal of Developmental Entrepreneurship*, 4(2), 153-174.

Weiss, L. A. (1981). Start-up businesses: A comparison of performances. *Sloan Management Review*, 23(1), 37-53.

Charles H. Matthews is a Distinguished Teaching Professor and the Executive Director of the Center for Entrepreneurship Education & Research and Director of the Small Business Institute® at the University of Cincinnati. His research interests include strategic planning, decision-making, and leadership succession in small, entrepreneurial, and closely held firms.

Mark T. Schenkel is an Assistant Professor of Entrepreneurship at Belmont University. His teaching and research interests include entrepreneurial cognition, opportunity recognition, strategic decision-making and corporate entrepreneurship.

Matthew W. Ford is an Associate Professor of Management at Northern Kentucky University. His research interests include strategic operations, quality management, entrepreneurship and the management and control of change.

Sherrie E. Human is an Associate Professor of Management and Entrepreneurship at Xavier University. She was the inaugural holder of the Castellini Chair in Entrepreneurial Studies. Her research interests include new venture initiation, entrepreneurial careers, and entrepreneurial and interorganizational networks.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.