Disengagement of Nascent Entrepreneurs from the Start-Up Process
by Shaji A. Khan, Jintong Tang, and Kailash Joshi

This study examines the roles of entrepreneur motivation and a potentially adverse founding condition in disengagement of nascent entrepreneurs from the start-up process. Specifically, measures of goal commitment, self-efficacy, and perceived competition intensity from 943 nascent entrepreneurs are employed to predict disengagement as reported one year later. Results indicate that high perceived competition intensity renders the otherwise strong negative main effect of goal commitment on disengagement, not significant. The even stronger negative main effect of self-efficacy on disengagement, however, is not contingent on perceived competition intensity. Further, perceived competition intensity by itself does not appear to influence nascent entrepreneurs’ disengagement.

Introduction
Disengagement of nascent entrepreneurs from the start-up process, defined as seizure of all activities geared toward the goal of firm creation, warrants concern for at least three important reasons. First, research suggests that new firm creation is related to the establishment of new market sectors, net job creation, labor productivity, technical and market innovations, economic growth, and social benefits (Acs and Armington 2006; Audretsch 1995; Reynolds and Curtin 2007). Second, nascent entrepreneurs have been found to invest significant time and resources in start-up activities of new ventures. Third, on the one hand, by disengaging, it is possible that some nascent entrepreneurs may be missing out on exploiting potentially fruitful opportunities (cf., Moore, Oesch, and Zietsma 2007). On the other hand, by not disengaging, it is possible that some nascent entrepreneurs may be exhibiting overconfidence in their abilities (e.g., Camerer and Lovallo 1999) only to see their young firms fail (Koellinger, Minniti, and Schade 2007).

Indeed, among the entrepreneur motivation-related explanations of firm creation, factors such as self-efficacy beliefs related to confidence in one’s abilities to start a business have been prominent. Prior work suggests a strong...
positive link of self-efficacy beliefs and ability expectations with entrepreneurial intentions and new firm creation (Boyd and Vozikis 1994; Townsend, Busenitz, and Arthurs 2010; Zhao, Siebert, and Hills 2005). Further, researchers have observed that the strong effects of such entrepreneur related factors on their decisions to start a business may be even indicative of entrepreneurial overconfidence (Busenitz and Barney 1997; Koellinger, Minniti, and Schade 2007) and a myopic self-focus (Moore, Oesch, and Zietsma 2007). This is noteworthy as the nascent entrepreneurs may face potentially adverse contextual conditions upon firm creation which have implications for not only the survival of their future firms (e.g., Carroll and Hannan 1989) but also for growth and success (e.g., Eisenhardt and Schoonhoven 1990).

Overall, this literature suggests that entrepreneurs' self-efficacy beliefs and other likely motivational factors are strong predictors of firm creation (Boyd and Vozikis 1994; Koellinger, Minniti, and Schade 2007; Shane, Locke, and Collins 2003). Using the same line of reasoning, one would expect that if entrepreneur motivation-related factors are so positively linked with firm creation, then they should also strongly prevent nascent entrepreneurs from disengaging—perhaps even to their own detriment. Nevertheless, research suggests that not all nascent entrepreneurs actually start their businesses and some do disengage (Reynolds and Curtin 2008). One possible explanation for such disengagement is that, for the nascent entrepreneurs who disengage, the motivation-related factors are not strong enough. Another related explanation is that there may be other contextual factors at play. One important question then becomes, what contextual factors may be running counter to entrepreneur motivation-related factors and, further, mitigating their impact of preventing nascent entrepreneurs from disengaging?

To our knowledge, this question has been unaddressed in the literature despite its relevance to better understanding disengagement. It is especially important to address this gap given the potential socioeconomic benefits of new firm creation and the fact that tremendous time and resources go into the start-up process (Acs and Armington 2006; Audretsch 1995; Reynolds and Curtin 2007).

The purpose of this research is to link disengagement with the combination of nascent entrepreneurs’ perceptions of the firm founding context and their motivation-related factors. Specifically, we incorporate nascent entrepreneurs' perceptions of a key, potentially adverse, environmental founding condition, competition intensity. Along with this, we include two motivation-related factors, self-efficacy and goal commitment into a model predicting disengagement. We include self-efficacy (beliefs of nascent entrepreneurs in their abilities to start a business) due to its strong implications for performance in a wide variety of situations (Bandura 1982, 1991) and its special relevance for entrepreneurial intentions and firm creation (Boyd and Vozikis 1994; Zhao, Siebert, and Hills 2005). We include the heretofore unexplored motivational factor of goal commitment (nascent entrepreneurs’ determination to start a firm [cf., Locke and Latham 2002]) in this context because of its strong relevance to theories of motivation besides that of goals (here, the nascent entrepreneurs’ already held and stated goal of firm creation) and self-efficacy (Locke et al. 1984). Goal commitment is a strong predictor of performance and a crucial condition for the goal–performance relationship to hold (Locke and Latham 1990; Locke, Latham, and Erez 1988). Finally, we include perceived competition intensity as a contextual condition. High competition intensity (a large number of existing firms) has long been considered a potentially adverse environmental founding condition for new entrant firms (Carroll and Hannan 1989; Swaminathan 1996). Incorporation of such a contextual variable may provide an explanation for disengagement that goes beyond entrepreneur motivation. At the same time, such an approach allows for the exploration of both the direct impact of entrepreneur motivation as well as its interaction with potentially adverse contextual conditions in predicting nascent entrepreneurs’ disengagement. Both such aspects, especially with respect to the constructs of interest in this study, remain unexplored yet critical areas for theory and research (Carsrud and Brannback 2011; Shane, Locke, and Collins 2003).

\[\text{(Reynolds and Curtin (2008) report that about one third of nascent entrepreneurs will disengage from start-up efforts toward the goal of creating a new firm within the first six years.)}\]
Our model proposes that nascent entrepreneurs’ goal commitment and self-efficacy negatively influence their disengagement from start-up efforts whereas perceived competition intensity increases disengagement. More importantly, the model explores key contingency effects of perceived competition intensity. That is, both of the former relationships are proposed to be moderated by perceived competition intensity—being weaker when perceived competition intensity is high. Later, we describe the theoretical foundations of this model and develop hypotheses. Next, we employ a data set of 943 nascent entrepreneurs with a stated goal of establishing a new firm to test our hypotheses. Then, discussion, implications for theory, limitations, suggestions for future research, and implications for entrepreneurship education and training are offered.

Hypothesis Development

According to the social cognitive theory, self-efficacy is the most central mechanism of personal agency and self-directedness (Bandura 1982). Self-efficacy refers to individuals’ beliefs in their ability to perform a certain task (Bandura 1997) and involves assessment or judgment of one’s capability. Judgments of self-efficacy influence what activities and environments people select. Activities and behavioral settings which are viewed as exceeding their coping capabilities are avoided and activities and situations which they judge themselves to be self-efficacious in are sought after (Bandura 1997; Wood and Bandura 1989). Self-efficacy not only affects the choices people make, but it also influences their aspirations, the level of effort they mobilize in a given endeavor, skills acquisition, how long they persevere in the face of difficulties and obstacles, and whether their thought patterns are self-hindering or self-aiding (Bandura 1982, 1991).

Goal-setting theory is one of the most prominent theories of motivation (Latham and Pinder 2005). It suggests that under certain conditions, specific, difficult goals can lead to higher performance relative to vague or easy goals (Locke and Latham 1990). Given certain goals, one of its central predictions is that goal commitment is a direct determinant of purposeful actions (Locke and Latham 2002) and is a necessary condition for the goal–performance relationship to hold (Locke, Latham, and Erez 1988). Goal commitment refers to individuals’ determination to reach a particular goal (Locke and Latham 2002) and has been a central concept in goal-setting theory (Klein et al. 1999). Further, goal commitment is more important and relevant when the goal is difficult (Klein et al. 1999) as a lack of commitment renders the goals to have lower motivational effects (Locke and Latham 2002).

Competition intensity refers to the density of competing firms in the markets where the nascent entrepreneurs are considering to start their businesses (Bruderl, Preisendorfer, and Ziegler 1992; Moore, Oesch, and Zietsma 2007). Strategic management prescriptions have long dictated that firms should not only assess their own capabilities and strengths but also the threats of competition (Porter 1979). Given reportedly high first-year firm failure rates of about 25 percent (Shane 2009) and typically lower probabilities of success in the entrepreneurial process (Shane, Locke, and Collins 2003), assessments of the threats of competition are particularly necessary for nascent entrepreneurs. This is because the population ecology literature suggests that a high density of existing firms is among the most severe dangers for the survival of new entrant firms (Carroll and Hannan 1989). Grant (2002) observes that understanding the competitive environment is a key ingredient of a successful strategy. Further, such understanding is not limited to experience-based learning over time but could be obtained by applying models and common analytical frameworks such as Porter’s (1979) Five Forces of Competition Model (Grant 2002). Zahra, Neubaum, and El-Hagrasy (2002) suggest that understanding the competition is especially important for new venture survival and success. Thus, nascent entrepreneurs’ assessments of the implications of competition intensity on the viability of their future firms are critical. However, though competition intensity is a seemingly objective characteristic of the market environment, perceptions of the competition are subjective and possibly imperfect (Moore, Oesch, and Zietsma 2007). It is important to recognize that nascent entrepreneurs may not be able to accurately perceive the level of competition intensity in the external environment due to limitations in cognitive reasoning capabilities (March and Simon 1958). Perceptions may also vary as a function of other contextual and individual factors (Milliken 1987). Entrepreneurs respond to the environment that is noticed and interpreted, and the environmental conditions that are not perceived may not affect
their actions (Sawyer 1993; Sharfman and Dean 1991). Indeed, entrepreneurs' perceptions of the competitive environment have been documented to affect their growth intentions (Dutta and Thornhill 2008) and overall performance (Covin and Slevin 1989). Thus, it is worth noting that we are considering perceived competition intensity, rather than the objective environment, as influencing entrepreneurs' actions.

**The Direct Effects of Goal Commitment and Self-Efficacy on Disengagement**

In line with social cognitive and goal-setting theories, both self-efficacy and goal commitment predict whether nascent entrepreneurs redouble their efforts, react indifferently, or turn hopeless in the new business start-up process (cf. Bandura 1986, 1991; Baum and Locke 2004; Boyd and Vozikis 1994). Turning first to the relationship between nascent entrepreneurs' goal commitment and disengagement, we expect that nascent entrepreneurs with high goal commitment will be less likely to disengage. This is consistent with goal-setting theory which suggests a strong relationship between goal commitment and performance across a wide variety of behavioral settings (Klein et al. 1999; Locke, Latham, and Erez 1988).

The start-up process is full of inevitable setbacks, frustrations, and uncertainties, which might discourage individuals from continuing the efforts (Baron 1998; Shane, Locke, and Collins 2003). Under circumstances of high uncertainty and resource shortages, which are typical for nascent entrepreneurs (Busenitz and Barney 1997; Koellinger, Minniti, and Schade 2007; Townsend, Busenitz, and Arthurs 2010), highly committed individuals are more likely to engage in goal-directed behavior and search for task-related information (Timmons 2000). Goal commitment implies the extension of effort toward the accomplishment of an original goal and emphasizes an unwillingness to abandon or lower the goal (Hollenbeck and Klein 1987). Goal commitment also enhances people's motivation and problem-solving efforts, particularly under difficult circumstances (Locke, Latham, and Erez 1988; Wood and Bandura 1989). Thus, we expect that nascent entrepreneurs with high commitment will not only continue but will also increase their efforts, strategize, and persist to attain the goal of firm creation. Therefore, we hypothesize that

**H1a:** Nascent entrepreneurs' goal commitment will be negatively related with their disengagement from the new business start-up process.

There are also grounds for suggesting that nascent entrepreneurs' self-efficacy might be negatively associated with their disengagement as scholars have linked self-efficacy to both entrepreneurial intentions and new firm creation (e.g., Chen, Greene, and Crick 1998; Townsend, Busenitz, and Arthurs 2010; Zhao, Siebert, and Hills 2005). Social cognitive theory suggests that activities and environments are selected by people based on their judgments or perceptions of personal self-efficacy (Boyd and Vozikis 1994). People readily undertake challenging activities if they judge themselves capable of managing those activities (Bandura 1982; Wood and Bandura 1989). Self-efficacy affects an individual's beliefs regarding whether or not certain goals may be attained (Boyd and Vozikis 1994). Further, self-efficacy beliefs influence how much effort people mobilize in a given endeavor and how long they persevere in the face of difficulties (Bandura 1982). Given the uncertainty surrounding outcomes, self-efficacy is a useful indicator of action in the entrepreneurship setting (Baum and Locke 2004).

Nascent entrepreneurs are likely to avoid the behavioral setting of new firm creation if they believe that creating a new firm is beyond their capabilities (Boyd and Vozikis 1994). However, if they judge themselves to be capable of managing firm start-up, they are more likely to undertake firm creation and less likely to disengage. Further, entrepreneurs' self-efficacy will determine how much effort they exert and how long they persevere in the continuance of the start-up activities. The stronger the belief in their capabilities of establishing the new venture, the greater and more persistent will be their efforts (cf., Bandura 1986; Boyd and Vozikis 1994). When facing setbacks or high outcome uncertainty (Baum and Locke 2004), nascent entrepreneurs who have doubts about their capabilities will decrease their efforts or even abandon their attempts at firm creation. On the other hand, those who have a strong belief in their capabilities will be more likely to continue or increase efforts toward firm creation. Thus, nascent entrepreneurs with high self-efficacy will be less likely to disengage.
from the new business start-up process. This leads to the following hypothesis:

**H1b:** Nascent entrepreneurs’ self-efficacy will be negatively related with their disengagement from the new business start-up process.

### The Direct and Moderating Effects of Perceived Competition Intensity

As noted earlier, work from the population ecology domain has shown that the higher the density of existing firms in a market, the higher the chances that new entrants will be vulnerable to death and failure (Carroll and Hannan 1989; Swaminathan 1996). Further, as discussed earlier, nascent entrepreneurs may or may not accurately perceive the intensity of competition in the environment. Nevertheless, prescriptions from strategic management have long highlighted the dangers of high competition intensity (e.g., Grant 2002; Porter 1979) which are also very relevant for new venture survival and success (Zahra, Neubaum, and El-Hagrassey 2002). As Moore, Oesch, and Zietsma (2007) observe, ideas of strategic management encourage potential entrepreneurs to compare their own abilities to those of existing and potential competitors and also consider the market’s carrying capacity when making decisions to start their new firms. In line with such prescriptions, resources for nascent entrepreneurs, such as the U.S. Small Business Administration and numerous guides to creating business plans, routinely point to the primacy of paying attention to competition when starting a business.

Thus, to the extent that entrepreneurs do perceive a high level of competition intensity, such perceptions are likely to get translated into their assessments of the ensuing dangers of intense competition. That is, if they perceive the competition to be high, they are more likely to consider this as an indication of lower chances of survival and future business success and hence more likely to disengage from firm creation efforts. Based on these arguments, we make the following hypothesis:

**H1c:** Nascent entrepreneurs’ perceived competition intensity will be positively related with their disengagement from the new business start-up process.

In addition, we expect that perceived competition intensity will moderate the relationships specified in **H1a** and **H1b**. Both social cognitive and goal-setting theories acknowledge the potential role of contextual variables (Boyd and Vozikis 1994; Latham and Pinder 2005; Wood 2005; Wood and Bandura 1989). Frameworks of entrepreneurship also suggest that entrepreneurial processes are determined by the interaction between the entrepreneur and the context (Gartner 1985). Thus, in addition to a direct positive effect of perceived competition intensity on disengagement, there is reason to believe that such perceptions may interact with self-efficacy and goal commitment in predicting disengagement. Specifically, both the self-efficacy and goal commitment effects should be weaker for those who also perceive the competition intensity to be high. As noted earlier, irrespective of the objective intensity of competition, perceptions of high competition intensity may translate into perceived difficulties in future in the form of lower chances of business survival and success. Consequently, such perceptions of potentially adverse founding conditions may attenuate the negative effects of self-efficacy and goal commitment on disengagement. Even though nascent entrepreneurs have thus far decided to pursue the behavioral setting of new firm creation based on their strong self-efficacy beliefs (Bandura 1991) and may also be highly committed to this immediate goal, those who also question the very favorability of conditions (in terms of high competition intensity) surrounding the eventual new firm are more likely to disengage despite their self-efficacy and goal commitment. These arguments lead to the following two hypotheses:

**H2a:** Competition intensity will moderate the relationship between nascent entrepreneurs’ goal commitment and disengagement so that the negative relationship will be weakened when competition intensity is perceived high.

**H2b:** Competition intensity will moderate the relationship between nascent entrepreneurs’ self-efficacy and disengagement so that the negative relationship will be weakened when competition intensity is perceived high.

### Method

Given the goal of nascent entrepreneurs to establish a new firm, the purpose of this study was to assess the impact of nascent
entrepreneurs’ self-efficacy beliefs, goal commitment, and perceived competition intensity on their disengagement from the start-up process. The Panel Study of Entrepreneurial Dynamics II (PSED II) data set provided an excellent base to test our hypotheses. Specifically, the PSED II data set covers firm creation efforts of a nationally representative sample of nascent entrepreneurs who reported a goal of creating a new firm. The longitudinal data set follows an initially screened panel of self-reported nascent entrepreneurs until they either disengage from firm creation efforts, or keep persisting in them, or eventually start a new firm. It further tracks those who started a new firm through inception and into early years of an operational new firm. Entrepreneurs located by PSED II were in the process of starting businesses. In this sense, the data set is prospective as opposed to more traditional retrospective designs thus making it an ideal sample for the current research. Additionally, the PSED II was initiated to provide systematic, reliable, and generalizable data on the underlying processes and factors that lead individuals to pursue venture creation. Based on the experience with the PSED I and Global Entrepreneurship Monitor projects, significant methodological improvements have been made to provide more reliable and valid measures in PSED II (Reynolds and Curtin 2007). Detailed information regarding the background, documentation, and data available for public use can be accessed via: http://www.psed.isr.umich.edu/psed/home.

Sample
The research design for PSED II consists of the following phases. First, a commercial survey firm screened 31,845 individuals and identified 1,214 nascent entrepreneurs between the ages of 18 and 74 years old from October 2005 to January 2006. Four criteria were employed to locate nascent entrepreneurs: (1) they consider themselves as involved in the firm creation process; (2) they have engaged in some start-up activity in the past 12 months; (3) they expect to own all or part of the new firm; and (4) the initiative has not progressed to the point it may be considered an operating business (Reynolds and Curtin 2007).

Second, the University of Michigan Institute for Social Research conducted a 60-minute interview that covers various topics on new firm creation (Wave A). Third, another 60-minute long follow-up phone interview was completed 52 weeks later (Wave B). Nascent entrepreneurs who have disengaged from the start-up received questions about the reasons for their decision. All others received the same interview questions provided in Wave A. The fourth, fifth, sixth, and seventh phases correspond to data collection Waves C, D, E, and F respectively. The independent and moderating variables in our study are from Wave A and the dependent variable, disengagement (see later) is from Wave B \( (n = 943) \). Among the 943 nascent entrepreneurs in the sample employed in our study, the average age was 43 years old; 62.7 percent were male; and 37 percent had bachelors or higher degrees.

Measures
Disengagement. Following Reynolds and Curtin (2007, 2008), nascent entrepreneurs’ disengagement was measured with PSED II variable BA50 in Wave B (i.e., one year apart from Wave A). This variable was based on the nascent entrepreneurs’ responses to PSED II items BA15, BA39, BA40, BA41, and BA42. The business was considered new firm if it had sales and revenues greater than the ongoing expenses including salaries (PSED II variable BA41), and was entered as “1.” A total of 128 businesses were in this category. The business was considered active start-up if the nascent entrepreneurs had devoted more than 160 hours in the past 12 months since the first interview and expected to spend more than 80 hours in the next 6 months (PSED II variable BA39); or considered this business start-up to be a major focus of their career over the next 12 months (PSED II variable BA40); or considered themselves to be actively involved with the new business start-up (PSED II variable BA42), and was entered as “2.” A total of 613 businesses were considered active start-up. If the nascent entrepreneur considered him/herself to be disengaged from the original business effort discussed with the interviewer a year ago (variable BA15), or disengaged from the new business start-up (PSED II variable BA42), the

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3This is the variable name used in the PSED II data set. As the data set is available for public use, we provide the original variable names for this and other variables as used in the data set for the benefit of readers.
business was considered quit and entered as “3.” A total of 231 businesses were categorized as disengaged.

Previous research indicates that substantial technological innovations may lengthen development times and reduce the speed with which first products reach the market (Schoonhoven, Eisenhardt, and Lyman 1990). Since the sample contains nascent businesses that rely on high technologies and there is only one-year lag between Wave A and Wave B interviews, it may take more than one year for those businesses to complete the start-up process and be considered new firm. Thus, given our focus on disengagement as opposed to start-up or persistence in start-up efforts, in order to create the dichotomous dependent variable, those respondents considered as disengaged were recoded as “1” (n = 231), and those considered as new firm or active start-up were consolidated and recoded as “0” (n = 741). Among these 972 respondents, 29 did not provide the necessary information to measure the key independent variables in our study (i.e., goal commitment, self-efficacy, and competition intensity). As a result, the final sample size for hypothesis testing was 943.

Goal Commitment. Following Tang (2008), goal commitment was measured with two items interviewed in Wave A (1 = strongly agree; 5 = strongly disagree): (1) there is no limit as to how long I would give maximum effort to establish this new business (PSED II variable AY9); and (2) my personal philosophy is to “do whatever it takes’ to establish my own business (PSED II variable AY10). This variable was reverse-coded so that higher ratings indicate higher goal commitment (cf., Hair et al. 2006). The Cronbach’s alpha for these two items was .70 (Nunnally 1978).

Self-efficacy. Following Townsend, Busenitz, and Arthurs (2010), self-efficacy was measured with three items interviewed in Wave A (1 = strongly agree; 5 = strongly disagree): (1) overall, my skills and abilities will help me start this new business (PSED II variable AY6); (2) my past experience will be very valuable in starting this new business (PSED II variable AY7); and (3) I am confident I can put in the effort needed to start this new business (PSED II variable AY8). Again, these items were reverse-coded so that higher ratings indicate higher self-efficacy (Hair et al. 2006; Townsend, Busenitz, and Arthurs 2010). The Cronbach’s alpha for these three items was .71 (Nunnally 1978).

Perceived Competition Intensity. We measured perceived competition intensity by employing PSED II variable A52 interviewed in Wave A: right now, are there many, few, or no other businesses offering the same products or services to your potential customers? Those who answered many were entered as “1”; those who answered few were entered as “5”; and those who answered no other were entered as “6.” This item gauges the density of competing firms in the market where the nascent entrepreneurs consider starting their businesses (Bruderl, Preisendorfer, and Ziegler 1992). To facilitate ease of interpretation, those respondents who answered few and no other were consolidated and recoded as “0” so that “1” indicated high perceived competition intensity and “0” low perceived competition intensity.

Control Variables. Seven control variables from Wave A were included, which are commonly believed to have an effect on nascent entrepreneurs’ business start-up. We controlled for possible “pull” factors by including items pertaining to financial security and wealth creation as motives for considering firm start-up. Carter et al. (2003) found no significant differences between entrepreneurs and nonentrepreneurs on financial reasons for their respective career choices. However, it is likely that motives of financially security and wealth creation may play a more significant role early on—in at least preventing nascent entrepreneurs from disengaging. The variable Motives was measured by asking the respondents to indicate the extent to which the following were important to them for establishing this new business (1 = no intent; 5 = a very great intent): (1) to give yourself, your spouse, and your children financial security (PSED II variable A56); (2) to earn a larger personal income (PSED II variable A59); and (3) to have a chance to build great wealth or a very high income (PSED II variable A512). Higher ratings indicate higher motives to start the business. The Cronbach’s alpha of these three items was .79 (Nunnally 1978).

Current employment status was controlled because it may be an important factor to “push” individuals to start a new business (Shapero and Sokol 1982). It was measured by asking the
respondents if they are unemployed, with “1” indicating yes and “0” indicating no (PSED II variable AX5). Previous entrepreneurial experience of the nascent entrepreneurs may have a strong impact on their ability to start a new firm (Dimov and Shepherd 2005) and also the relative weight they give to their abilities vis-à-vis the competition (Koellinger, Minniti, and Schade 2007). We used the following item (PSED II variable AX1): aside from this new business, do you own another small business or are you self-employed in some other way.4 We coded “1” to indicate nascent entrepreneurs with prior entrepreneurial experience and “0” without prior entrepreneurial experience.

Four variables regarding whether the nascent business is a high technology or low technology firm were also incorporated because technology intensity may impact the firm’s introduction of new products and services (e.g., Thornhill 2006) as well as the speed with which the new products/services are commercialized (Schoonhoven, Eisenhardt, and Lyman 1990). Three out of these four variables, available technologies, R&D spending, and high-tech, were measured with dichotomous items, with “1” indicating yes and “0” indicating no: (1) were the technologies or procedures required for this product or service generally available more than a year ago (PSED II variable AS3); (2) will spending on research and development be a major priority for this new business (PSED II variable AS5); and (3) would you consider this business to be high-tech (PSED II variable AS6). In addition, we controlled for nascent entrepreneurs’ perceived need for innovation for their planned ventures. On the one hand, a higher perceived need for innovation-related inputs such as patents or high technical/scientific expertise of the start-up team may make the business more challenging and hence discourage nascent entrepreneurs from further pursuit. That is, requirements for higher innovation-related inputs may promote disengagement. On the other hand, it is possible that such inputs take longer to accumulate and hence the nascent entrepreneurs may persist longer. We measured perceived need for innovation by three items: (1) the technical and scientific expertise of the start-up team is important for this new business to be an effective competitor (PSED II variable AF8); (2) developing new or advanced product technology or process technology for creating goods and services is important for this new business to be an effective competitor (PSED II variable AF9); (3) development of intellectual property such as a patent, copyright, or trademark is important for this new business to be an effective competitor (PSED II variable AF10). These items were anchored on a five-point Likert scale with “1” indicating strongly agree and “5” indicating strongly disagree. They were recoded so that higher ratings indicate higher perceived need for innovation. The Cronbach’s alpha for the three-item scale was .71 (Nunnally 1978).

Analysis and Results

Logistic regression analysis (using SPSS, version 16; SPSS Inc., Chicago, IL, USA) was used to test the hypothesized relationships, and guidelines provided by Garson (2011) were used to interpret results. Table 1 presents means, standard deviations, and correlations. As Table 1 shows, both goal commitment and self-efficacy were negatively related to disengagement as expected. Although competition intensity was positively related to disengagement, the correlation was not significant. In terms of multicollinearity, the highest correlation between any pair of independent variables was .39, suggesting that multicollinearity is not a major threat to the integrity of the results. To assess potential outliers, leverage values, and DfBetas were calculated. These analyses found no leverage scores higher than .01 and no standardized DfBetas greater than an absolute value of .11. These scores are well within accepted ranges (Neter et al. 1996; Tabachnick and Fidell 2001) and suggest no potential outliers. We now consider results relevant to the individual hypotheses.

Table 2 summarizes the results of the analysis. Both goal commitment and self-efficacy were mean centered prior to running the

4The variable was coded in PSED II as (1 = yes, small business owner; 2 = yes, self-employed; 5 = no, neither; 6 = only working on this business). Again, to facilitate results interpretation in the logistic regression analysis, those respondents who answered “yes, small business owner” and “yes, self-employed” were consolidated and recoded as “1;” those who answered “no, neither” and “only working on this business” were consolidated and recoded as “0.”
Table 1  
Means, Standard Deviations, and Correlations

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<td>4.47</td>
<td>.54</td>
<td>.09**</td>
<td>.04</td>
<td>.04</td>
<td>.01</td>
<td>.01</td>
<td>.04</td>
<td>.05</td>
<td>.39**</td>
<td></td>
<td></td>
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<tr>
<td>Competition Intensity</td>
<td>.34</td>
<td>.47</td>
<td>.08**</td>
<td>.04</td>
<td>.05</td>
<td>.15**</td>
<td>.06</td>
<td>.09**</td>
<td>.02</td>
<td>.01</td>
<td>.01</td>
<td>.05</td>
</tr>
<tr>
<td>Disengagement</td>
<td>.24</td>
<td>.43</td>
<td>.02</td>
<td>.04</td>
<td>.03</td>
<td>.00</td>
<td>.05</td>
<td>.05</td>
<td>.07*</td>
<td>.10**</td>
<td>.11**</td>
<td>.06</td>
</tr>
</tbody>
</table>

*p < .05.

**p < .01.
### Table 2

Results of Logistic Regression Analysis for Disengagement ($n = 943$)

| Variables | Model 1 | | | Model 2 | | | Model 3 | | | Model 4 | | | Model 5 | | | Model 6 |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Controls  |         |          |         |          |         |          |         |          |         |          |         |          |
| Motives   | -.06 (.07) | .59 (.95) | .00 (.08) | .00 (1.00) | -.00 (.08) | .00 (.99) | -.01 (.08) | .02 (.99) | -.02 (.08) | .05 (.98) | -.02 (.08) | .07 (.98) |
| Employment Status | .20 (.17) | 1.40 (1.23) | .16 (.17) | .85 (1.17) | .14 (.17) | .67 (1.15) | .13 (.17) | .47 (1.14) | .12 (.18) | .48 (1.13) | .12 (.18) | .48 (1.13) |
| Entrepreneurial Experience | .03 (.05) | .40 (1.03) | .03 (.05) | .47 (1.03) | .03 (.05) | .36 (1.03) | .03 (.05) | .30 (1.03) | .02 (.05) | .34 (1.03) | .02 (.05) | .34 (1.03) |
| Experience | -.15 (.27) | .31 (.86) | -.16 (.27) | .34 (.85) | -.22 (.27) | .62 (.81) | -.23 (.28) | .69 (1.80) | -.23 (.28) | .69 (1.80) | -.23 (.28) | .69 (1.80) |
| Available Technologies | -.27 (.21) | 1.81 (.76) | -.26 (.21) | 1.56 (.77) | -.25 (.21) | 1.45 (.78) | -.27 (.21) | 1.65 (.77) | -.26 (.21) | 1.60 (.77) | -.26 (.21) | 1.60 (.77) |
| R&D Spending | -.27 (.20) | 1.79 (.76) | -.26 (.20) | 1.64 (.77) | -.25 (.21) | 1.50 (.78) | -.25 (.21) | 1.44 (.78) | -.25 (.21) | 1.46 (.78) | -.25 (.21) | 1.46 (.78) |
| High-Tech | -.27 (.20) | 1.79 (.76) | -.16 (.07) | .62 (1.18) | .16 (.07) | .62 (1.18) | .16 (.07) | .62 (1.18) | .16 (.07) | .62 (1.18) | .16 (.07) | .62 (1.18) |
| Perceived Need for Innovation | .15* (.06) | 5.17 (1.16) | .16* (.07) | 6.12 (1.18) | .16* (.07) | 6.12 (1.18) | .16* (.07) | 6.12 (1.18) | .16* (.07) | 6.12 (1.18) | .16* (.07) | 6.12 (1.18) |
| Independent Variables |         |          |         |          |         |          |         |          |         |          |         |          |
| Goal Commitment | -.29** (.09) | 4.07 (.75) | -.21* (.10) | 4.70 (.81) | -.21* (.10) | 4.88 (.81) | -.33** (.11) | 8.78 (.72) | -.32** (.12) | 7.54 (.73) | -.32** (.12) | 7.54 (.73) |
| Self-Efficacy | -.36* (.15) | 5.84 (.70) | -.35* (.15) | 5.50 (.71) | -.35* (.15) | 5.39 (.71) | -.42* (.18) | 5.30 (.66) | -.42* (.18) | 5.30 (.66) | -.42* (.18) | 5.30 (.66) |
| Competition Intensity | -.28 (.17) | 2.89 (1.32) | .32 (.17) | 2.89 (1.32) | .32 (.17) | 2.89 (1.32) | .35 (.17) | 3.63 (1.39) | .35 (.17) | 3.63 (1.39) | .35 (.17) | 3.63 (1.39) |
| (CI) |         |          |         |          |         |          |         |          |         |          |         |          |
| Commitment* CI |         |          |         |          |         |          |         |          |         |          |         |          |
| Self-Efficacy* CI |         |          |         |          |         |          |         |          |         |          |         |          |
| Model $\chi^2$ (df) | 12.41 (7) | 23.01 (8)** | 28.79 (9)** | 31.65 (10)** | 35.90 (11)** | 36.36 (12)** |
| D $\chi^2$ | 10.60** | 5.78* | 2.86 | 4.25* | 46 |
| -2 Log-Likelihood | 1021.55 | 1010.94 | 1005.17 | 1002.31 | 998.06 | 997.60 |

*aUnstandardized regression coefficients are shown with standard errors in parentheses; Predicting disengagement = 1.

*p < .05

**p < .01

***p < .001
logistic regression. We entered the seven statistical control variables in Model 1. As evident from Model 1, none of the control variables were significant except one which assessed the extent to which nascent entrepreneurs perceived innovation would be required to be competitive. This variable was positively related to disengagement. Goal commitment was added in Model 2, self-efficacy in Model 3 and competition intensity (which is also the moderator) in Model 4. Model 5 incorporates the interaction between goal commitment and perceived competition intensity, and Model 6 adds the interaction between self-efficacy and perceived competition intensity. The direct effects (H1a–H1c) are interpreted from Model 4 and each of the interactions are interpreted from Model 5 (H2a) and Model 6 (H2b), respectively.

H1a and H1b proposed that nascent entrepreneurs’ goal commitment and self-efficacy will be negatively related to disengagement. Model 4 shows the results for H1a and H1b. The unstandardized logistic regression coefficients for goal commitment (B = −.21, Wald = 4.88, p < .05) and self-efficacy (B = −.35, Wald = 5.54, p < .05) are both negative and significant. Further, incorporating goal commitment into the model (Model 2) resulted in a significant change in the Model \( \chi^2 \) (\( \Delta \chi^2 = 10.60, p < .01 \)) from the controls only model (Model 1). Similarly, incorporating self-efficacy in Model 3 resulted in a significant change in the Model \( \chi^2 \) (\( \Delta \chi^2 = 5.78, p < .05 \)) from Model 2. Both changes indicate that the two variables improve model fit significantly. In terms of effect sizes, the goal commitment odds ratio of .81 suggests that a one-unit increase in goal commitment decreases the odds of disengagement by 19 percent. Similarly, the self-efficacy odds ratio of .71 suggests that a one-unit increase in self-efficacy decreases the odds of disengagement by 29 percent. The likelihood ratio test of the overall model indicates that Model 4 is significantly different from the baseline model (\( p < .001 \)). Both H1a and H1b are supported.

H1c proposed that nascent entrepreneurs’ perceived competition intensity will be positively related to disengagement. Model 4 shows that the unstandardized logistic regression coefficient for perceived competition intensity (B = .28, Wald = 2.89, n.s.) is positive but not significant. Incorporating perceived competition intensity into the model did not result in a significant change in model \( \chi^2 \) (\( \Delta \chi^2 = 2.86, \text{n.s.} \)) from Model 3. The competition intensity odds ratio of 1.32 indicates that the odds of disengagement from the originally planned firm creation efforts compared with persisting in them are increased by a factor of 1.32 under high perceived competition intensity compared with low perceived competition intensity, controlling for other variables in the model. However, addition of perceived competition intensity (as a contextual variable) did not improve model fit significantly beyond the (internal) goal commitment and self-efficacy variables (Model 3). Further, the correlation between perceived competition intensity and disengagement was not significant, and the B coefficient was not significant. Hence, H1c is not supported.

H2a proposed that competition intensity will weaken the relationship between goal commitment and disengagement. H2b predicted that competition intensity will weaken the relationship between self-efficacy and disengagement. Model 5 displays the results for H2a and Model 6 for H2b. The unstandardized logistic regression coefficient for the interaction term of goal commitment and competition intensity is significant (B = .38, Wald = 4.19, p < .05), and the model \( \chi^2 \) is also significant (Model \( \chi^2 = 35.90, p < .001 \)). Further, incorporating the interaction term between goal commitment and competition intensity resulted in a significant improvement (\( \Delta \chi^2 = 4.25, p < .05 \)) in model fit over the main effects model (Model 4). Thus, H2a is supported. Specifically, the positive coefficient indicates that the overall effect of goal commitment on disengagement is leaning toward becoming positive in the presence of high competition intensity. To further understand the nature of this interaction, we probed it by calculating the conditional effects of goal commitment at different (i.e., at 0 and 1) values of competition intensity. Interestingly, goal commitment is negatively related to disengagement (B = −.33, Wald = 8.78, p < .01) when competition intensity is low (coded 0). However, when competition intensity is high (coded 1), although the coefficient becomes positive, it remains not significant (B = .05, Wald = .10, n.s.). Figure 1 depicts this interaction, with part

\[ \text{An SPSS Macro, MODPROBE, created by Hayes and Matthes (2009) was used.} \]
A showing the estimated log odds of disengagement on the y-axis, and part B showing the estimated log odds converted (for ease of interpretation) into conditional probabilities of disengagement, on the y-axis. Both graphs show goal commitment on the x-axis. The figure indicates that when perceived competition is low, goal commitment is negatively related to entrepreneurs’ disengagement. However, when entrepreneurs perceive higher competitive intensity, the otherwise strong negative relationship between goal commitment and disengagement is considerably attenuated. In other words, goal commitment at least does not prevent nascent entrepreneurs from disengaging when competition intensity is high. These results as shown in Figure 1 further support H2a.

Finally, Model 6 shows that the interaction term between self-efficacy and perceived competition intensity is not significant (B = .22, Wald = .46, n.s.). Further, adding the interaction term between self-efficacy and perceived competition intensity in Model 6 did not improve model fit significantly (Δχ² = .46, n.s.) over Model 5. In order to ensure that the self-efficacy-related interaction term is not being affected by the presence of the goal commitment interaction term, we ran a separate model which included only the self-efficacy-related interaction term and not the goal commitment-related interaction term. This model (not shown in Table 2) also revealed that the self-efficacy interaction term was not significant. Model 5 seems to be a better representation of the data. Overall, H2b is not supported.

To further examine the effects of goal commitment and self-efficacy on disengagement, we ran likelihood ratio test of individual model parameters (Howell 2007) using a multinomial logistic regression approach. This test can be used to drop one variable from the model to create a nested reduced model. The likelihood ratio test examines if the logistic regression coefficient for the dropped variable can be treated as 0, thus justifying dropping the variable from the model. A nonsignificant likelihood ratio test indicates no difference between the full and the reduced model, and dropping the variable to have a more parsimonious model will be justified. The likelihood ratio tests of individual parameters show that the model without either goal commitment (χ² = 4.28, p < .05) or self-efficacy

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Figure 1
Moderating Effect of Competition Intensity on the Relationship between Goal Commitment and Disengagement

Graphs based on the MODPROBE macro for SPSS and procedures outlined by Hayes and Matthes (2009). *Conditional probability of Disengagement = e^{yhat}/(1 + e^{yhat}), where yhat = Estimated log odds of disengagement
(χ² = 5.61, p < .05) will be significantly different from the full model, and therefore, both variables should be retained. Although both commitment and self-efficacy contribute significantly to the full model, the χ² statistic (i.e., the difference in −2 log-likelihood between the final and a reduced model) for self-efficacy (5.61) is larger than that for commitment (4.28). Thus, dropping self-efficacy will result in a greater loss of model fit.

The earlier result confirmed our interaction effects reported earlier. The magnitude of the relationship between self-efficacy and disengagement is more robust than the relationship between commitment and disengagement. Further, the link between self-efficacy and disengagement is not contingent upon perceived competition intensity (as indicated by the not significant interaction term), though the effect of goal commitment on disengagement is weakened when competition intensity is perceived high.

**Discussion**

Part of our basic contention was that nascent entrepreneurs with lower self-efficacy and goal commitment to establishing the new business can be particularly susceptible to disengagement from the start-up process. Though prior research has shown a strong positive link between self-efficacy and firm creation (e.g., Koellinger, Minniti, and Schade 2007; Townsend, Busenitz, and Arthurs 2010), our results suggest that nascent entrepreneurs' self-efficacy beliefs, with respect to their abilities to start a new venture, also prevent them from disengaging from firm creation efforts. Further, we found that nascent entrepreneurs' goal commitment to the start-up goal is also a good predictor of disengagement, where high commitment resulted in reduced odds of disengagement.

We also proposed that perceptions of high competition intensity will increase disengagement. Our analysis did not find support for its hypothesized direct positive effect on disengagement. It is possible that perceived competition intensity may have more pronounced effects for those entrepreneurs who are waiting longer to make their firm creation/disengagement decisions. For example, Townsend, Busenitz, and Arthurs (2010) report that the marginally positive effect of one of their variables, outcome expectancies, was further weakened for those who waited longer to make their venturing decisions. Similarly, it is plausible that as nascent entrepreneurs engage in search for more task-related information (Timmons 2000) or in other goal-directed behaviors, their perceptions of the competition intensity may gain more traction in their decisions. Further, these perceptions may themselves change as time progresses while they are waiting to make a decision. Unfortunately, given that perceived competition intensity was measured only during Wave A survey and not in subsequent surveys, we were not able to assess how changes in this variable may affect future outcomes.

We also explored whether perceptions of high competition intensity will weaken the negative relationships between self-efficacy and disengagement and goal commitment and disengagement. For the proposed moderating effect of perceived competition intensity on the self-efficacy and disengagement relationship, our analysis did not find evidence. Although apparently counterintuitive, this is in line with a critical finding by Moore, Oesch, and Zietsma (2007) that entrepreneurs focused more on ability and internal (firm-related) factors at the expense of considering external factors in making both entry and nonentry decisions. It seems that entrepreneurs' self-efficacy beliefs and their impacts, to a certain extent, maybe resilient to hardship (Wood and Bandura 1989). A second possible explanation for this nonfinding may be a fruitful avenue for future research. It could be that as nascent entrepreneurs form their beliefs about their ability to start a business, they have already taken into account a multitude of factors, including competition intensity, which may affect the entry and eventual success/failure of the start-up. This may be why the effects of self-efficacy are so strong (both in our study and in a number of prior studies mentioned earlier) and not further contingent upon perceptions of competition intensity. We encourage replication of our H1c and H2b to help fully evaluate them in the context of nascent entrepreneurs.

However, the significant interaction effect of perceived competition intensity with goal commitment indicates that the relationship between goal commitment and disengagement is contingent upon perceived competition intensity. This is an interesting finding. At the outset, the positive sign of the significant interaction term suggests that those entrepreneurs
who perceive a high level of competition intensity in their desired areas are more likely to quit despite being highly committed to the goal of establishing their new venture. However, examination of the nature of this interaction further revealed some key insights. Specifically, we examined the conditional effects of goal commitment at low and high levels of perceived competition intensity and found that only those who perceived low competition intensity and showed higher levels of goal commitment were less likely to disengage from the start-up process. However, when perceived competition intensity was high, it rendered the otherwise strong negative effect of goal commitment, not significant. That is, goal commitment had no effect on disengagement for those who perceived a high level of competition intensity.

Overall, both the direct and interaction effects related to goal commitment provide interesting insights. In relation to the direct effects (H1a), prior research suggests that the effects of goal commitment on performance should be strong in the presence of difficult goals (Klein et al. 1999). Given that the goal of firm creation is not necessarily easy and setbacks in the pursuit of opportunities in some form or at some time are inevitable (e.g., Shane, Locke, and Collins 2003), our results with respect to the direct effects of goal commitment confirm such assertions in the context of nascent entrepreneurs’ disengagement. However, the interaction results (subject to further replications) from H2a also show that when potentially adverse contextual conditions render the goal itself as no longer appropriate (Latham and Locke 2007), the strong positive impact of goal commitment on performance is attenuated.

Implications for Theory and Research

The present results have several theoretical and research implications. At the outset, they contribute to ongoing efforts to develop theoretical models of entrepreneurship that realize the importance of the individual entrepreneur in firm creation (Baron 2007) especially with respect to entrepreneur motivation (Carsrud and Brannback 2011; Shane, Locke, and Collins 2003).

The two direct effects-related findings for self-efficacy and goal commitment lend credence to arguments that entrepreneurship researchers may have prematurely given up on studying entrepreneur motivation (Carsrud and Brannback 2011; Shane, Locke, and Collins 2003). Despite controlling for some important entrepreneur-related factors (e.g., entrepreneurial experience) and factors related to the nature of the opportunities (e.g., high-tech versus low tech etc.), the two motivation-related variables demonstrated strong direct effects. Carsrud and Brannback (2011) observed that the impact of motivation on the decision not to create a venture remained a key unanswered question. Similarly, Shane, Locke, and Collins (2003) called for research which uses motivation to distinguish between those individuals who select out at different steps in the entrepreneurial process. For example, does motivation matter in terms of those who continue to pursue opportunities versus those who abandon the effort (Shane, Locke, and Collins 2003, p. 271)? Our results suggest that situation specific motivation (i.e., self-efficacy and goal commitment) related to the goal of firm creation has strong negative direct effects on disengagement. Further, our post hoc analyses using the multinomial logistic regression approach reveal that self-efficacy has a stronger negative impact on disengagement than does goal commitment. Nevertheless, goal commitment seemed to have a distinct direct effect on disengagement and remained significant even after including self-efficacy. This is interesting because scholars have observed that given the widespread mechanisms behind the effects of self-efficacy, it may confound the effects of other entrepreneur variables such as risk-taking propensity (Shane, Locke, and Collins 2003, p. 265). These observations support the utility of incorporating goal commitment beyond the existing focus on self-efficacy in the literature. Goal commitment especially seems relevant given that (1) nascent entrepreneurs already held the goal of firm creation (Klein et al. 1999) and (2) we studied its impact early on in the entrepreneurial process (Shane, Locke, and Collins 2003), that is, disengagement versus persistence or firm creation.

Results pertaining to the interaction between goal commitment and perceived competition intensity indicate that subjective perceptions of a potentially adverse objective environmental condition (competition intensity) do attenuate the preventive impact of goal commitment on disengagement. Though scholars have acknowledged the critical role of context along with entrepreneur motivation (Carsrud and Brannback 2011; Shane, Locke,
and Collins 2003), these results highlight how some contextual factors may come into play. Perceived competition intensity by itself was not related to increased odds of disengagement. However, it mattered in mitigating the impact of goal commitment. On the other hand, this has implications for the role of goal commitment in the firm creation process in particular and in goal-directed behavior in general. Latham and Locke (2007) observe that though much importance has been placed on goal commitment less is known with regard to when to encourage goal abandonment. They suggest that disengagement from a goal that seems no longer appropriate is an adaptive strategy as it frees up resources that can be invested in appropriate and attainable goals (Latham and Locke 2007). Such disengagement further minimizes feelings experienced from accumulated failures (Latham 2007). Our finding suggests that to the extent, perceptions of high competition intensity questioned the very appropriateness of the firm creation goal; nascent entrepreneurs’ goal commitment at least did not further prevent them from disengaging. In other words, when contextual cues suggest threats to the broader goal of owning a successful business, such cues attenuate the impact of goal commitment (to starting a firm) on the more immediate goal of firm creation. Overall, it appears that perhaps, the dangers of escalated commitment in defiance of adverse contextual cues are not as universal among nascent entrepreneurs as those possibly related to focusing solely on ability beliefs at the expense of ignoring potentially unfavorable circumstances (Camerer and Lovallo 1999; Koellinger, Minniti, and Schade 2007; Moore, Oesch, and Zietsma 2007). We encourage researchers to further explore these two variables with respect to disengagement but to also include other factors related to more broad or distal goals of nascent entrepreneurs (Latham and Locke 2007).

Limitations and Suggestions for Future Research

Although the results of the present research provide evidence for the majority of our hypotheses, they are subject to several limitations that should be carefully addressed in future research. First, the measures employed were self-report in nature (e.g., goal commitment, self-efficacy, competition intensity). Although these measures were based on ones used in previous research and have been shown to possess acceptable reliability and validity, it is clear that the constructs of primary interests are complex. Further, the perceived competition intensity variable was operationalized based on a single item (PSED II variable AS2). This dichotomous measure is admittedly rather coarse. Thus, replication of the present research with additional measures of these variables should be beneficial.

Second, although the present study was carefully designed to assess the key variables of interest, while controlling for important factors, it did not examine other entrepreneur and contextual factors. These include potential cognitive antecedents of nascent entrepreneurs’ disengagement, such as susceptibility to status quo bias (Burmeister and Schade 2007), cognitive styles (i.e., analytic versus holistic) (Dutta and Thornhill 2008), cognitive biases (Forbes 2005), entrepreneurial alertness (Tang, Kacmar, and Busenitz 2012), and so on. In particular, the motives of both internal and external self-justification from the escalation of commitment literature (Staw 1981) deserve further attention with respect to nascent entrepreneurs’ disengagement or lack thereof. Self-justification is the idea that individuals will invest more resources or persist in a course of action in order to prove to themselves or to others that they were not wrong in an earlier decision (Staw 1981). Inclusion of self-efficacy beliefs and self-justification in conjunction should be especially relevant. Does self-justification magnify the effects of self-efficacy? Finally, external factors such as environmental dynamism (Baron and Tang 2011; Hmieleski and Baron 2009) may serve as important moderators on the relationships between entrepreneur motivation and disengagement.

Third, despite the many advantages of this data set, we were not able to assess changes in the levels of goal commitment, self-efficacy, and perceptions of competition intensity over time. These variables were measured in the PSED II data set only during the first wave.

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6We thank an anonymous reviewer for this suggestion.
survey and not in subsequent surveys. This is regrettable as it is quite likely and theoretically plausible that these often change and such changes could result in dramatically different outcomes. Further, we could not incorporate lag effects as the dependent variable we used was from only one year later.

Fourth, in this study, we could not consider whether the disengagement and persistence/start-up decisions were in fact “appropriate.” That is, we were not able to assess the impact of our independent variables on the actual outcomes (e.g., performance of eventually created firms over time) of nascent entrepreneurs’ decisions.

Despite these limitations, our study generates a few implications for future research. First, although our results indicate that high goal commitment and self-efficacy reduce the odds of disengagement, goal commitment and self-efficacy also can be the source of inappropriate or dysfunctional task persistence (Whyte, Saks, and Hook 1997). With respect to the role of goal commitment, the escalation of commitment literature has suggested that high commitment may be dysfunctional or even detrimental under certain circumstances (Staw 1981). Specifically, initial increments in goal commitment may be associated with increasing probability to continue the start-up effort. However, beyond some determinable level, further increments in goal commitment may be associated with increasing detrimental effects especially as new information becomes available and other factors come into the picture. Anecdotally, the authors’ informal interactions with entrepreneurs suggest that this may be the case. For example, despite admittedly experiencing serious difficulties during the start-up process, one entrepreneur referred to his potential venture as “... my baby” and remarked that he would persist “no matter what.” Although our encouraging interaction results with respect to goal commitment and perceived competition intensity show that entrepreneurs do take contextual factors into account, the anecdote described earlier suggests that some nascent entrepreneurs may remain committed to their venture creation goals despite experiencing insurmountable difficulties. Similarly, high self-efficacy may not always translate into better performance. A laboratory experiment showed that as people are close to completing their goal, they slacken their effort, and as a result, their performance decreases because high self-efficacy creates complacency that undermines the level of performance (Vancouver, Thompson, and Williams 2001). Although the earlier finding was subsequently challenged by Bandura and Locke (2003) based on theoretical and methodological grounds, nascent entrepreneurs’ firm creation process may still be a fertile context to fully evaluate such claims. Future research could examine the optimum level of these variables because the relationship between goal commitment, self-efficacy, and entrepreneurs’ decision to continue or quit the business may not be linear in nature.

Second, as noted earlier, we did not explore the effects of our independent variables on eventual outcomes of nascent entrepreneurs’ firm creation/disengagement decisions. That is, are these decisions “appropriate” given nascent entrepreneurs self-efficacy, commitment, and perceptions of competition intensity? Building on the tremendous learning accumulated from scenario based and experimental studies, we believe that it is time to approach study of the impact of a given level of ability expectations and commitment as an empirical question with longitudinal, prospective, panel studies which follow entrepreneurs both before start-up and at least six or more years after business start-up. Such studies should not only allow us to study changes in these two context-specific variables over time (a limitation of our study as noted earlier) but also their impact on business success as well as other indicators of business hardships/smooth sailing faced during the early years as a consequence.

Third, it is likely that the “optimal” level of self-efficacy and goal commitment with respect to firm creation/disengagement and with respect to eventual “appropriateness” of the decisions is further contingent upon the entrepreneurial opportunity being pursued. That is, in our opinion, in attempting to explore the first two research avenues discussed earlier, it may be fruitful look at the entrepreneurial opportunity in question together with the entrepreneur. Future research may approach these issues from the perspective of “fit” between the entrepreneur and the opportunity he/she is hoping to exploit.

Fourth, although goal commitment and self-efficacy jointly inform us of new venture creation and other aspects of organizational performance, the relationship between goal commitment and self-efficacy and their relation-
ship with other individual difference variables are not examined thoroughly (Baum and Locke 2004). For instance, previous research suggests a positive relationship between self-efficacy and goal commitment such that those with high self-efficacy will develop and be more likely to accept and commit to challenging goals (e.g., Locke et al. 1984). Given the robust effect of self-efficacy found in our sample, it will be interesting for future research to further study the impact of self-efficacy on goal commitment with respect to the over time process in which nascent entrepreneurs continue in or disengage from the new business start-up activities.

**Implications for Entrepreneurship Education and Training**

A large body of organizational research has documented the effectiveness of self-regulation interventions to promote employees' commitment to difficult goals and to provide employees with environmental support. Such interventions enable individuals to develop strategies to overcome setbacks and hence boost work motivation. Numerous empirical studies support the argument that manipulations to improve self-efficacy through training enhance people’s overall performance (e.g., Locke and Latham 1990). Similar interventions, such as Productivity Measurement and Enhancement System (Pritchard et al. 2002) and entrepreneurs' self-management (Frayne and Latham 1987) can be applied to nascent entrepreneurs to improve the new venture creation rate through enhanced goal commitment and self-efficacy. Further, interventions would be more effective if tailored to a specific problem area (Vancouver and Day 2005). Since our study found a significant impact of both self-efficacy and goal commitment on disengagement from new venture creation activities, it will be fruitful to develop such interventions with the specific purpose of lowering the possibility of disengagement from the new business start-up process.

However, we make the earlier recommendations with some caveats. These are with respect to two things which are not directly discernable from our study but could very well be important. First, overconfidence in one's abilities and escalation of commitment have been identified in prior literature (e.g., Koellinger, Minniti, and Schade 2007; Kruger and Dunning 1999; Whyte, Saks, and Hook 1997) as causes of serious concern. Though in our study we were not able to assess the “appropriateness” of the decisions made and believe further empirical research is needed in this regard, it may be better to not only point to the dangers of overconfidence and overcommitment but to also qualify this advice by asking to not ignore specific entrepreneurial opportunities in question. Second, our findings related to perceived competition intensity suggest that beyond telling nascent entrepreneurs to focus on competition, we need to help them assess competition as reasonably as possible and to understand what the nature of competition in a particular market means for them and the opportunity they are pursuing.

**References**


7Although the exploration of goal commitment as an intervening mechanism on the effects of self-efficacy was tertiary to our study purposes, we acknowledge this as an additional limitation of this study. We thank an anonymous reviewer for making this valid observation.


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