WHY DO NASCENT ENTREPRENEURS FAIL? THE IMPACTS OF NASCENT ENTREPRENEURS' OPTIMISM AND EFFORTS ON VENTURE STATUS

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ABSTRACT

How entrepreneurs' optimism influences business performance has been examined in prior studies. Yet, this study contributes to the current literature by investigating the influence of optimism on nascent entrepreneurs' venture status. In addition, since the theoretical link between optimism and venture status remains unclear, we also examine how effort - a construct that consists of work on nascent entrepreneurs' own business and on other businesses - mediates the relationship between optimism and venture status. Our findings reveal that optimistic nascent entrepreneurs do exert efforts on other businesses.
Keywords: optimism, nascent entrepreneurs, effort, venture status.

INTRODUCTION

Optimism, one of the psychological capitals, enriches our understanding toward entrepreneurs. Researchers have found that entrepreneurs are more optimistic than general managers (Forbes, 2005) and they perceive fewer risks (Simon, Houghton, & Aquino, 2000). This explains why some people are more likely to be entrepreneurs while others are not (Shane & Venkataraman, 2000). However, studies have also demonstrated that high level of optimism will adversely influence venture performance. For example, Hmieleski and Baron's (2009) findings supported that entrepreneurs who are optimistic have unsound venture performance. Thus, optimism is generally viewed as a negative precursor of firm performance.

Previous studies have shown that optimism leads to negative outcomes; nevertheless, we perceive three gaps remain in the current literature. First, cross-sectional data was used in prior studies to examine the relationship between entrepreneurs' optimism and venture performance (Hmieleski & Baron, 2009). We argue that optimism may have a lagged effect on venture performance and this can only be tested by longitudinal data. Second, it is erroneous to confound optimism with overconfidence (Trevelyan, 2008). Many extant studies utilized thinking or estimation as an outcome of optimism rather than established the link between optimism and behavior to explain venture performance, thereby blurring optimism with overconfidence. For instance, Cassar (2010) tested how ex ante expectations of individual map onto actual ex post realizations and utilized estimations as outcomes of optimism rather than achieved behaviors. Optimism is a trait that generates confidence so that positive outcomes may occur. Optimists tend to hold positive expectancies for their future (Scheier, Carver, & Bridges, 1994). Further, these positive expectations will stimulate efforts towards tasks that generate the achievement of goals and aspirations (Higgins, 1998). Overconfidence, on the other hand, is a situation specific process (Griffin & Varey, 1996) that influences thinking (Bandura, 1997). Third, previous studies only measured entrepreneurs' efforts on their own venture creation (e.g., Edelman & Yli-

Renko, 2010). However, we argue that we should take a comprehensive perspective on entrepreneurs' behavior. Thus, we do not know yet about whether optimism will influence effort behavior in other direction.

This study fills extant research gaps by studying optimism and behavior. Specifically, this study explores the relationship between nascent entrepreneurs' optimism and venture status. Nascent entrepreneurs are defined as people who do not have previous entrepreneurial experience. In addition, efforts generated by optimism influence work outcomes (Latham & Pinder, 2005; Locke & Latham, 1990, 2002; Staw & Barsade, 1993). Hence, due to the theoretical and empirical voids in previous studies that measured overconfidence as optimism and that did not capture direct behaviors of optimism, this study answers the research question of "how does optimism influence nascent entrepreneurs' venture status?" Moreover, effort - an outcome of optimism and a predictor of venture status - is included in this study. Effort here refers to work effort, meaning the expenditure of physical and mental effort in the workplace (Douglas & Shepherd, 2002).

Furthermore, we address the aforementioned theoretical and empirical gaps by examining nascent entrepreneurs' optimism and their effort on ventures by using Panel Study of Entrepreneurial Dynamics II (PSED II). PSED II features its coverage of American adults, who are involved in the process of starting new ventures. PSED II longitudinally surveyed nascent entrepreneurs throughout the startup process, thus allowing us to obtain data on ex ante optimism, ex post effort, and venture status. PSED II addressed optimism in real situation and thus samples are less influenced by experimental contexts (Gatewood, Shaver, Powers, & Gartner, 2002).

The paper proceeds in the following manner. First, we identify influences of optimism, referring to positive expectations about future, on nascent entrepreneurs' venture status. Second, we review the literature on effort and propose hypotheses linking effort and venture status. Third, we use structural equation modeling and apply PSED II to test hypotheses. Finally, we discuss the results of empirical tests, limitations, future research, and make a conclusion.

THEORETICAL BACKGROUND AND HYPOTHESES

Entrepreneurs' optimism and venture status

Entrepreneurs' psychological capital, defined as psychic resource used to satisfy the emotional challenges of the moment (Csikszentmihalyi, 2004), was found to explain a significant amount of variance in new venture performance. Optimism, defined as positive expectancies for one's future (Scheier, Carver, & Bridges, 1994), is one of the psychological capitals (Luthans & Youssef, 2004). Researchers have identified that entrepreneurs are more optimistic than general managers (Forbes, 2005). For example, Cooper, Woo and Dunkelberg (1988) found that extreme optimism is pervasive among entrepreneurs. Lovallo and Kahneman (2003) argued that a disproportionate number of entrepreneurs are optimistic.

Substantial evidence confirmed that overly optimistic individuals have a generalized positive outlook toward the future (Carver & Scheier, 2003; Cassar, 2010; Scheier & Carver, 1985). Such biased expectations will interfere with entrepreneurs' decision making and judgment (Geers & Lassiter, 2002; Segerstrom & Solberg Nes, 2006). As a result, entrepreneurs will misjudge their ventures' conditions, further influencing ventures' development. For example, Hmieleski and Baron (2009) demonstrated that entrepreneurs' optimism is negatively related to

firm performance because highly optimistic individuals hold unrealistic expectations. Taking nascent entrepreneurs as study subjects, we assume that optimism will affect entrepreneurs' venture success in the long run. Thus, we argue that nascent entrepreneurs who are overly optimistic may have low probability of venture success.

H1 Nascent entrepreneurs' optimism is negatively related to business success.

Entrepreneurs' optimism and behavior

Optimism, as a mental construct, can dynamically influence human action (Bruner, 1990; Fiske & Taylor, 1991). Although previous studies have addressed the link between entrepreneurs' optimism and firm performance, few studies have examined the correlation between cognition and behavior. This calls us to study how the optimism regarding one's immediate circumstances plays in entrepreneurship and relates it to behaviors (Gregoire, Corbett, & McMullen, 2011).

In general, people hold optimism which is influenced by many sources of information. Regardless of their sources, the positive expectations with which people return to action are reflected in subsequent behaviors (Carver & Scheier, 2001). For example, if an individual holds optimism about successful outcomes, he or she will exert efforts toward the goal. However, entrepreneurs are excessively optimistic, thereby causing them to have optimism bias. This high level of optimism in general will exert negative effects on the judgment and decision making of individuals (Hmieleski & Baron, 2009). Entrepreneurs will exert less effort because they perceive that their ventures will be successful. Thus, entrepreneurs who are optimistic will assume lower risks which may jeopardize the survival of their firms (Lovallo & Kahneman, 2003). We posit that this less effort explains why optimistic entrepreneurs face high rate of failures. Hypothesis 2a states that entrepreneurs who are optimistic are more likely to have failed ventures because they invest less effort on their own ventures.

H2a Nascent entrepreneurs' effort on their ventures mediates the effect of optimism on venture status. That is, nascent entrepreneurs who are optimistic are less likely to exert effort on their own ventures and thus are more likely to have failed ventures.

In addition to working on their own ventures, we argue that optimistic nascent entrepreneurs may spend their efforts on other entrepreneurial activities because more optimistic entrepreneurs are more likely to take entrepreneurial activities (Krueger, 2005). Specifically, optimistic entrepreneurs tend to see more opportunities everywhere they look (Segerstrom & Solberg Nes, 2006). They believe that they have the capabilities to achieve success. However, they may look for potential opportunities which are not realistically feasible. For instance, optimistic entrepreneurs are more likely to take risks on ventures (Gibson & Sanbonmatsu, 2004) and overestimate that their goals will be achieved. As a result, this effort on other ventures will cause entrepreneurs not to focus on their ventures, thus causing their own ventures' to fail.

H2b Nascent entrepreneurs' effort on other ventures mediates the effect of optimism on venture status. That is, nascent entrepreneurs who are optimistic are more likely to invest effort on other ventures and thus are more likely to have their own ventures fail.

METHOD

Samples

We used data from the Panel Study of Entrepreneurial Dynamics II (PSED II), which is a longitudinal investigation involving more than 100 entrepreneurship scholars. PSED II began to screen in 2005-2006 with two follow-up interviews. It studied a representative sample of the U.S. population using random digit dialing (RDD) (Gartner, Shaver, Carter, & Reynolds, 2004) and telephone survey interviews followed by a mail questionnaire. The PSED II surveyed 1,214 individuals from the U.S. mainland, aged 18 or older, who were randomly selected. The information obtained includes data on the nature of those active nascent entrepreneurs, the activities undertaken during the start-up process, and the characteristics of start-up efforts that become new firms, thereby mitigating potential survivorship and recall biases (Conway & Ross, 1984; Hawkins & Hastie, 1990).

PSED II consists of three phases. The first is the identification of a representative sample of those actively involved in the firm creation process, named nascent entrepreneurs. The second phase is initial detailed interview with nascent entrepreneurs. The third phase includes annual follow-up interviews. To identify nascent entrepreneurs, each respondent was asked a series of questions about his or her current activities. These three questions are: (1) Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? (2) Are you, alone or with others, currently trying to start a new business or new venture for your employer, an effort that is part of your normal work? (3) Are you, alone or with others, currently the owner of a business you help manage, including self-employment or selling any goods or services to others? A respondent could answer "yes" or "no" to each question, and those who responded "yes" to any or all of these questions are considered as potential nascent entrepreneurs. In addition, these nascent entrepreneurs were asked a series of three additional questions to determine if their ventures are true nascent ventures: they performed some start-up activity in the past twelve months, they own all or part of the new firm, and the nascent venture should not have experienced positive cash flow for a period of the past twelve months (Reynolds, 2011). According to these additional questions, those who meet these three criteria are considered nascent entrepreneurs and invited to participate in a detailed interview (Reynolds, 2011). Finally, those 188 respondents who answered yes to the above questions were considered eligible for the nascent entrepreneur interview. There are 105 males in this sample.

Measures

Optimism can influence human action from two different sets of cognitive factors: one factor originates from the perception and interpretations of the circumstances when and where action is to take place and the other starts from the cognitive "resources" that people bring to these circumstances, from their genetics to their knowledge and desire (Gregoire, Corbett, & McMullen, 2011). I use the PSED II to investigate nascent entrepreneurs' positive expectations about their venture growth, e.g., revenue and employees.

Optimism. Cassar (2010) used future sales and future employees as measures of expectations in the first full year of operation. Respondents were asked: "Once this new business is operational, what is the total revenue or income expected in the first twelve months of operation?" The other question describing optimism is number of employee: "During the first

year of operation, how many managers or employees, including exclusive subcontractors, will be working for this (new) business, not counting owners?" We make data into categorization and transformed data into 7-point scales (1 = *least optimistic* and 7 = *very optimistic*) according to nascent entrepreneurs' expectations on revenue and number of employees.

Effort. Since this paper focuses on psychical efforts that nascent entrepreneurs devoted, we use the questions asking hours invested in nascent entrepreneurs' own ventures and number of other ventures they put effort as indicators of effort. Regarding business hours, nascent entrepreneurs were asked: "How many hours in total have you devoted to this (new) business?" In addition, respondents were asked: "Besides the (new) business discussed in this interview, how many other business do you own?" Similar to optimism, we transform effort toward own ventures and effort invested in other ventures by 7-point scales (1 = *little effort* and 7 = *much effort*).

Venture status. Entrepreneurs self-reported whether the start-up was an operating business in the follow-up interviews at wave B, C, D, and E. They were asked to classify the current status of the start-up as a(n): (1) operating business; (2) active start-ups; (3) inactive start-up; or (4) no longer worked on by anyone. In this paper, we focus on two business statuses: operating and dead. Thus, those who reported operating business and actively involved in the business will be considered as operating businesses. Those who reported disengaged in the business will be viewed as inactive businesses. Those who no longer work on business and no other people are still involved are dead firms. We dummy code operating businesses firstly and dead businesses next.

Control variables. We only control gender because research has shown that males and females have different levels of optimism (Henry, 1994; Puri & Robinson, 2007). Gender is a dichotomous variable and was dummy coded as '1' for male and '0' for female.

Structural equation modeling

To test the hypotheses, we used AMOS to perform structural equation modeling (SEM). SEM is appropriate because it allows for simultaneous testing of multiple regression equations. In this study, we tested two mediators: effort on own ventures and effort on other ventures. Due to small sample size issue, we used bootstrapping in AMOS to enhance the power of tests. To estimate a complete structural model, we reported goodness-of-fit parameters, such as root mean square error of approximation (RMSEA), comparative fit index (CFI) (Bentler, 1990), Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973), and chi-square. In general, Bentler's (1990) index is mostly used and TLI is commonly used as well (McDonald & Ho, 2002). The threshold of TLI and CFI above .90 and RMSEA less than .05 are considered as a "good" fit and RMSEA less than .08 is considered as "acceptable" fit (McDonald & Ho, 2002). The threshold criteria for each of the goodness-of-fit parameters are summarized in Table 1.

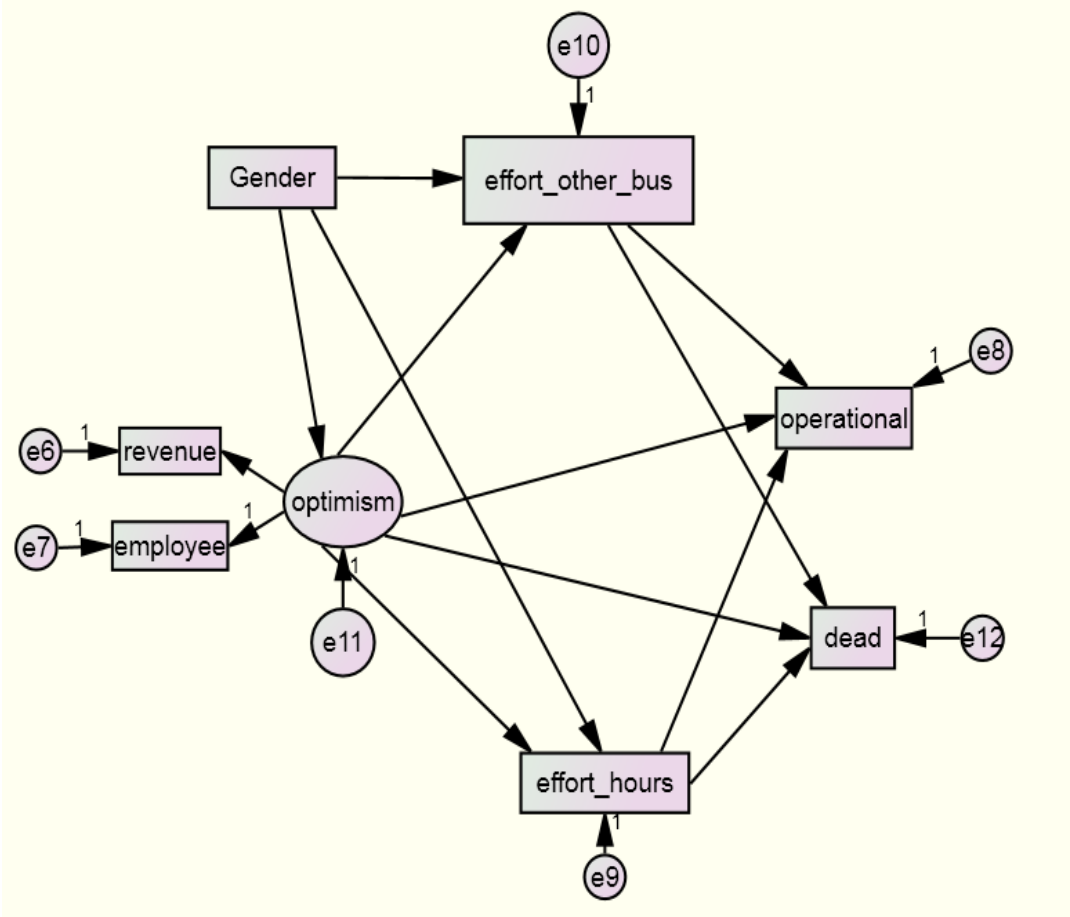
RESULTS

To see whether the proposed base model (Figure 1) is a model with good fit, we firstly examined a measurement model. We used three alternative and complementary fit indices: CFI (Bentler, 1990), TLI (Tucker & Lewis, 1973), and RMSEA to examine its model fit. The model has no Heywood case. Thus, we reported the evaluation of this model. The results of measurement model in Table 1 show that values for measurement model (CFI=1.00, TLI= .998,

RMSEA=.006) are consistently greater than their respective threshold (CFI=.90, TLI=.90, RMSEA=.05). Though chi-square = 4.026 and degree of freedom = 4 indicate that the model does not fit data well, the overall model still shows a good fit. Thus, we do not make any modification on measurement model.

Figure 1

BASE MODEL



In the second step, we added omitted paths to the base model. There were two paths, gender to operational business status and gender to dead business status. After running AMOS, however, we found that the model shows that the added specified paths are not statistically significant. In addition, chi-square difference between the base model and the model with added paths does not show statistical significance ($\Delta\chi^2 = 2.928$, $\Delta df = 2$). Thus, base model is better than the model with omitted path. We decided not to add two additional paths.

Third, after running the base model in AMOS, we found that according to modification indices, error term of operational business status and that of dead business status show the covariance = 5.832. Though it is less than 6.0, this covariance is still sizable and we correlated these two error terms and examined whether the model fit would be improved. Further, both

operational and dead exhibit business status, which is reasonable to correlate them. We ran the final model and the model fit indices suggest that the model is greatly improved. Additionally, chi-square difference between the base model and the final model shows that it is statistically significant ($\Delta\chi^2 = 6.048$, $\Delta df = 1$, $p < .05$). As a result, the final model (Figure 2) with lower degree of freedom is preferred. The results of each model were presented in Table 1.

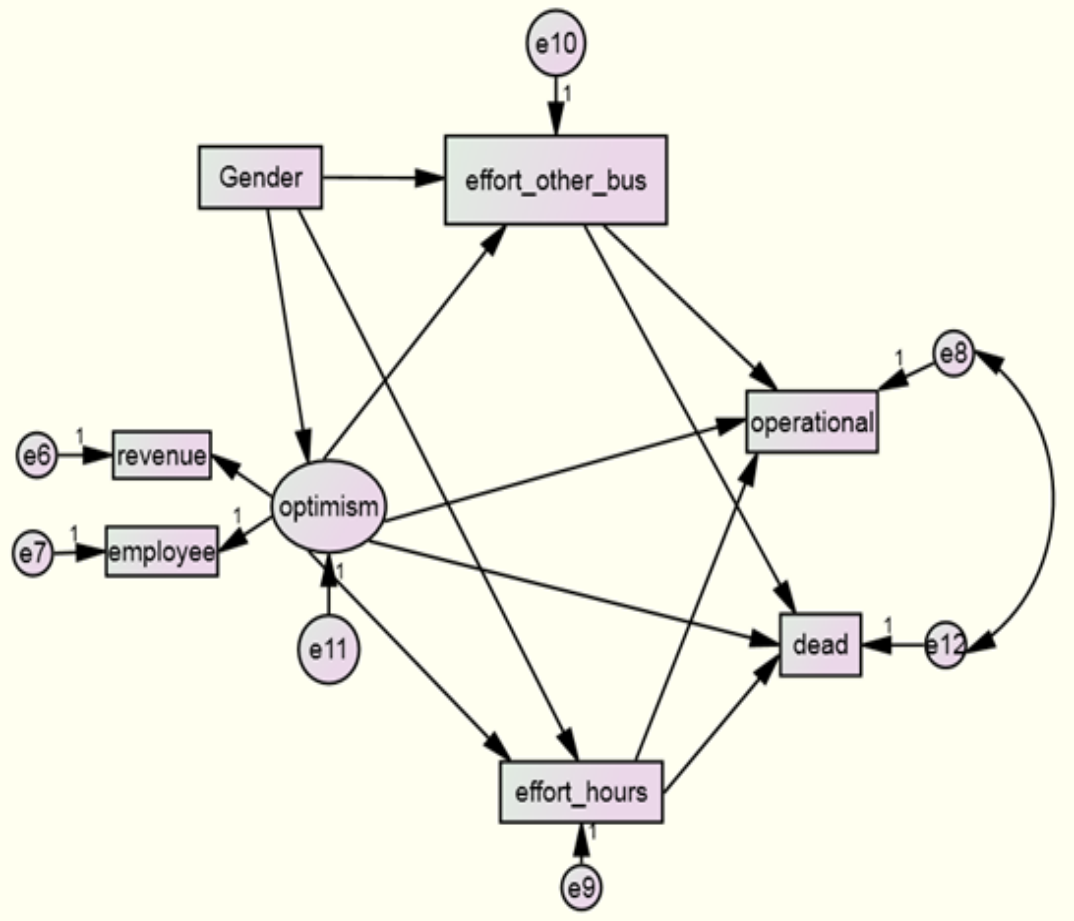
Table 1
MODEL COMPARISON

Models	Chi-square	df	CFI	TLI	RMSEA (CI)	Chi-square difference	df difference
Model 1: Measurement model	4.026	4	1.00	.998	.006 (.000 - .111)		
Model 2: Add omitted paths	10.131	6	.938	.783	.061(.000 - .123)		
Model 3: Base model	13.059	8	.924	.801	.58 (.000 - .113)	2.928	2
Model 4: Final model	7.011	7	.924	.801	.003 (.000 - .090)	6.048*	1
Goodness-of-fit threshold			>.90	>.90	<.05		

Note: CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; df = degree of freedom; RMSEA = root mean square error of approximation; CI = confidence interval.
*p< .05

Figure 2

FINAL MODEL



We used the final model to conduct SEM. In table 2, we presented descriptive statistics and sample correlations of each variable. On average, nascent entrepreneurs exert medium level of effort on their ventures. In addition, they also spend some effort on other businesses, showing that entrepreneurs search for other opportunities. The optimistic expectations toward venture revenue and number of employees are not as high as we expected.

Table 2
SUMMARY OF DESCRIPTIVE STATISTICS AND CORRELATIONS

Variable	Mean	S.D.	1	2	3	4	5	6	7
1. gender	1.44	.50	1.00						
2. effort-other ventures	1.46	.98	.04	1.00					
3. effort-own venture	3.94	1.66	.12	.003	1.00				
4. dead venture	1	.19	-.05	.02	-.01	1.00			
5. operational	1	.49	-.17	-.06	-.04	-.16	1.00		
6. optimism-revenue	2.27	1.08	.18	.27	-.02	.01	-.13	1.00	
7. optimism-employee	1.68	.91	.17	.27	.04	-.13	-.09	.43	1.00

Note: N=188

Next, we used AMOS to run SEM and used bootstrapping to examine the sample mediation effects. After examining standardized total effects, standard errors, and *p* value from AMOS results, direct, indirect, and total standardized effects were presented in Table 3. In addition, direct, indirect, and total unstandardized effects were shown in Table 4. From the results, we found most of the paths are not statistically significant. We found no statistical significance of optimism on venture status. In addition, effort has no mediating effect between optimism and venture status. Only the influence of optimism on effort invested on other businesses is statistically significant (p =.001). The estimated direct effect of optimism on effort invested in other ventures is .438, indicating that optimism is positively related to effort on other ventures. In other words, when nascent entrepreneurs have one unit increase in optimism, they will exert more effort on other ventures.

Table 3
STANDARDIZED EFFECTS (DIRECT EFFECTS, INDIRECT EFFECTS, AND TOTAL EFFECTS)

Variable	Direct effects			Indirect effects			Total effects		
	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value
X1 on X4	-.195 (-.385~.001)	.121	.099	.009 (-.049~.095)	.048	.779	-.187 (-.338~.011)	.099	.073
X1 on X5	-.123 (-.314~.075)	.121	.322	.033 (-.025~.129)	.045	.334	-.090 (-.260~.079)	.104	.366
X1 on X2	-.019 (-.192~144)	.103	.823	.000 (.000~.000)	.000	...	-.019 (-.192~.144)	.103	.823
X2 on X4	-.040 (-.157~.091)	.074	.639	.000 (.000~.000)	.000	…	-.040 (-.157~.091)	.074	.639
X2 on X5	-.009 (-.127~.110)	.073	.883	.000 (.000~.000)	.000	…	-.009 (-.127~.110)	.073	.883
X1 on X3	.438 (.261~.609)	.110	.001	.000 (.000~.000)	.000	…	.438 (.261~.609)	.110	.001
X3 on X4	.018 (-.122~.181)	.093	.805	.000 (.000~.000)	.000	…	.018 (-.122~.181)	.093	.805
X3 on X5	.075 (-.064~.228)	.089	.377	.000 (.000~.000)	.000	…	.075 (-.064~.228)	.089	.377

Note: X1 = optimism; X2 = effort on own venture; X3 = effort on other ventures; X4 = operational venture; X5 = dead venture.

Table 4
UNSTANDARDIZED EFFECTS (DIRECT EFFECTS, INDIRECT EFFECTS, AND TOTAL EFFECTS)

Variable	Direct effects			Indirect effects			Total effects		
	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value	Estimate (90% CI)	SE	*p*-value
X1 on X4	-.062 (-.142~.001)	.048	.103	.003 (-.016~.033)	.018	.777	-.060 (-.132~-.006)	.038	.062
X1 on X5	-.101 (-.260~.068)	.104	.310	.027 (-.021~.110)	.041	.335	-.074 (-.210~.075)	.088	.344
X1 on X2	-.052 (-.596~.393)	.307	.827	.000 (.000~.000)	.000	...	-.052 (-.596~.393)	.307	.827
X2 on X4	-.005 (-.018~.010)	.009	.632	.000 (.000~.000)	.000	…	-.005 (-.018~.010)	.009	.632
X2 on X5	-.003 (-.038~.032)	.022	.885	.000 (.000~.000)	.000	…	-.003 (-.038~.032)	.022	.885
X1 on X3	.723 (.397~1.154)	.265	.001	.000 (.000~.000)	.000	…	.723 (.379~1.154)	.265	.001
X3 on X4	.003 (-.024~.036)	.018	.801	.000 (.000~.000)	.000	…	.003 (-.024~.036)	.018	.801
X3 on X5	.037 (-.032~.115)	.045	.383	.000 (.000~.000)	.000	…	.037 (-.032~.115)	.045	.383

Note: X1 = optimism; X2 = effort on own venture; X3 = effort on other ventures; X4 = operational venture; X5 = dead venture.

DISCUSSION

Previous studies have confirmed that entrepreneurs are over optimistic, causing them face high failure rate. However, no studies have taken efforts toward other businesses into consideration. This study links optimism, as a cognitive attribute, with effort, and identify their influence on venture status. We predict that optimistic entrepreneurs may exert less effort on their own ventures and make effort on other venture opportunities, which explain why entrepreneurs fail. This study defines effort as work toward entrepreneurs' own ventures and work invested into other ventures. This perspective may well explain why nascent entrepreneurs fail their own ventures.

Although most of the hypotheses were not supported, this study shows an interesting finding that optimistic nascent entrepreneurs do invest efforts on other ventures. The more optimistic entrepreneurs are, the more efforts they will make on other businesses. This finding coincides with Segerstrom and Solberg Nes's (2006) argument that optimistic entrepreneurs tend to see more opportunities everywhere they look. Thus, this study implies that nascent entrepreneurs who are optimistic about their ventures' revenue and number of employee will exert efforts on other ventures. They will try to take more risks and look for other opportunities.

Limitations and future research

This study has several limitations. First, although this study takes longitudinal data source PSED II and uses optimism ex ante, effort at wave A and venture status at wave B, C, D or E, the influence of optimism and effort on venture status can be better understood if we could use specific performance at shorter time period. Venture status is a long run consequence and we think that shorter period performance may better reflect whether effort from optimism influences

venture performance. Entrepreneurs may adjust their level of efforts according to performance fluctuation.

Second, more items are required to describe optimism and effort. This study only considers optimism toward revenue and employees in the first twelve months of operation. However, there may be other optimism items which will influence effort and venture status. We suggest that future studies may consider using item scales and survey entrepreneurs to examine nascent entrepreneurs' optimism. In addition, CFA in SEM can help us obtain information on dimensions of optimism.

Third, more control variables are needed. Environment will be a factor that influences nascent entrepreneurs' optimism and effort. Optimism may be flexible and influenced by environment, thereby causing entrepreneurs' effort flexible. Future studies may control environmental factors to examine how optimism influences behavior and venture status. In addition, nascent entrepreneurs' self-efficacy may interact with optimism. Due to the limitation of data, we could not test this effect in this study. Future studies can incorporate more individual level variables in the study.

CONCLUSION

Based on the literature on optimism, we study the effect of optimism on nascent entrepreneurs' behavior, which is effort on their own ventures and on other ventures. Optimistic entrepreneurs will make less effort on their businesses while looking for other opportunities. Though this study does not support the relationship between optimism on venture status and effort on venture status, we reason that using venture performance in short period would be a better variable to test this relationship. In addition, effort and optimism can be extended into other categories. We think that research questions regarding entrepreneurs' optimism are important and should await more studies for further exploration.

REFERENCES

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bentler, P.M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107,* 238–246.

Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Carver, C.S. & Scheier, M.F. (2001). Optimism, pessimism, and self-regulation. In E. C. Chang (Ed.), *Optimism and pessimism: Implications for theory, research, and practice (*pp. 31-51). Washington, DC: American Psychological Association.

Carver, C.S. & Scheier, M.F. (2003). Optimism. In S. J. Lopez, & C. R. Snyder (Eds.), *Handbook of positive psychological assessment: A handbook of models and measures* (pp. 75-89). Washington, DC: American Psychological Association.

Cassar, G. (2010). Are individuals entering self-employment overly optimistic? An empirical test of plans and projections on nascent entrepreneur expectations. *Strategic Management Journal, 31,* 822-840.

Conway, M., & Ross, M. (1984). Getting what you want by revising what you had. *Journal of Personality and Social Psychology, 47,* 738–48.

Cooper, A.C., Woo, C.Y., & Dunkelberg, W.C. (1988). Entrepreneurs' perceived chances for success. *Journal of Business Venturing, 3,* 97-108.

Csikszentmihalyi, M. (2004). *Good business: Leadership, flow, and the making of meaning*. New York: Penguin Group.

Douglas, E.J., & Shepherd, D.A. (2002). Exploring investor readiness: Assessments by entrepreneurs and investors in Australia. *Venture Capital: An International Journal of Entrepreneurial Finance, 4,* 219-236.

Edelman, L., & Yli-Renko, H. (2010). The impact of environment and entrepreneurial perceptions on venture-creation efforts: Bridging the discovery and creation views of entrepreneurship. *Entrepreneurship Theory and Practice, 34,* 833-856.

Fiske, S.T., & Taylor, S.E. (1991). *Social cognition.* New York: McGraw Hill.

Forbes, D.P. (2005). Are some entrepreneurs more overconfident than others? *Journal of Business Venturing, 20,* 623-40.

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

Gatewood, E.J., Shaver, K.G., Powers, J.B., & Gartner, W.B. (2002). Entrepreneurial expectancy, task effort and performance. *Entrepreneurship Theory and Practice, 27,* 187-206.

Geers, A.L., & Lassiter, G.D. (2002). Effects of affective expectations on affective experience: The moderating role of optimism-pessimism. *Personality and Social Psychological Bulletin, 28,* 1026-1039.

Gibson, B., & Sanbonmatsu, D.M. (2004). Optimism, pessimism, and gambling: The downside of optimism. *Personality and Social Psychological Bulletin, 30,* 149-160.

Gregoire, D., Corbett, A.C., & McMullen, J.S. (2011). The cognitive perspective in entrepreneurship: An Agenda for future research. *Journal of Management Studies, 48,* 1443-1477.

Griffin, D.W., & Varey, C.A. (1996). Towards a consensus on overconfidence. *Organizational Behavior and Human Decision Processes, 65,* 227-231.

Hawkins, S.A., & Hastie, R. (1990). Hindsight: biased judgments of past events after the outcomes are known. *Psychological Bulletin, 107,* 311-327.

Henry, R.A. (1994). The effects of choice and incentives on the overestimation of future performance. *Organizational Behavior and Human Decision Processes, 57,* 210-225.

Higgins, E.T. (1998). Promotion and prevention: regulatory focus as a motivational principle. In Zanna, M. P. (Ed.), *Advances in Experimental Social Psychology* (pp. 1-46). New York, NY: Academic Press.

Hmieleski, K.M., & Baron, R.A. (2009). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal, 52,* 473-488.

Krueger, N.F. (2005). The cognitive psychology of entrepreneurship. In Z. J. Acs, & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research: An interdisciplinary survey and introduction* (pp. 105-140). Netherlands: Kluwer Academic Publishers.

Latham, G. P., & Pinder, C. C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology, 56,* 485-516.

Locke, E.A., & Latham, G.P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57,* 705-717.

Lovallo, D., & Kahneman D. (2003). Delusions of success: How optimism undermines executives' decisions. *Harvard Business Review, 81*, 56-63.

Luthans, F., & Youssef, C.M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics, 33,* 143-160.

McDonald, R.P., & Ho, M.R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7,* 64-82.

Puri, M., & Robinson, D. T. (2007). Optimism and Economic Choice. *Journal of Financial Economics, 86,* 71-99.

Reynolds, P.D. (2011). Informal and early formal financial support in the business creation process: Exploration with the PSED II data set. *Journal of Small Business Management, 49,* 27-54.

Scheier, M.F., & Carver, C.S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, *4*, 219-247.

Scheier , M.F., Carver, C.S., & Bridges, M.W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. *Journal of Personality and Social Psychology, 67,* 1063-1078.

Segerstrom, S.C., & Solberg Nes, L. (2006). When goals conflict but people prosper: The case of dispositional optimism. *Journal of Research in Personality, 40,* 675-693.

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

Simon, M., Houghton, S.M., & Aquino, K. (2000). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing, 15,* 113-134.

Staw, B.M., & Barsade, S.G. (1993). Affect and managerial performance. A test of the sadderbut-wiser vs. happier-and-smarter hypotheses. *Administrative Science Quarterly, 38,* 304-333.

Trevelyan, R. (2008). Optimism, overconfidence and entrepreneurial activity. *Management Decision, 46,* 986-1001.

Tucker, L.R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38,* 1–10.