

Comeback of the failed entrepreneur: An integrated view of costs, learning, and residual resources associated with entrepreneurial failure

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ABSTRACT

Although failure can be financially, socially, and psychologically costly, it can promote future entrepreneurial success. This study investigated how failure can be utilized as a springboard for new ventures by considering the cost recognition, learning ability, and resources of entrepreneurs within a social environment. Failure costs, learning outcomes, and residual resources following business failure and how they influence the intention to undertake subsequent entrepreneurial endeavors were considered. With the motivation–opportunity–ability (MOA) framework as a theoretical foundation, we quantitatively analyzed the sample, which comprised 216 entrepreneurs who had experienced business failure. Perceived residual resources were a major factor affecting an entrepreneur’s decision-making in subsequent ventures, even when the entrepreneur had learned from failure and overcome the associated costs. Additionally, the psychological costs incurred exhibited a nonsignificant effect on learning from failure. Based on the MOA framework, failure costs can be regarded as learning opportunities for an entrepreneur as well as drivers promoting the intention to resume business. Such intentions are mediated by the learning ability of entrepreneurs and moderated by motivation in terms of residual resources. This study provides a holistic view re-examining the mechanisms of frustrated entrepreneurs to identify opportunities and evaluate resources.

Introduction

Entrepreneurship and related behavior have attracted a great deal of research concentrated on finding the antecedents of entrepreneurial ventures (Hannafey, 2003; Miskin & Rose, 1990). However, research should focus on the elements that enable entrepreneurial success and efforts that lead to entrepreneurial failure (McGrath, 1999; Shepherd, 2003; Singh, Corner, & Pavlovich, 2007). To gain a holistic view of entrepreneurship, studies have focused on the causes of failure (Abdullah, Hamali, Deen, Saban, & Abdurahman, 2009; Bruno, McQuarrie, & Torgrimson, 1992) and how failure drives subsequent venture success (Minniti & Bygrave, 2001). Lussier and Halabi (2010) demonstrated that an entrepreneur who is highly motivated does not guarantee the success of a venture. Establishing a new firm involves high risks, and ventures fre-

quently fail despite entrepreneurs making great efforts (Holtz-Eakin, 2000). New firms struggle to survive and achieve success in an unstable, complex, dynamic, and global environment, particularly when they lack resources and capabilities.

Failure can be painful and costly for an entrepreneur, who may be required to cope with the stigma of failure in addition to a damaged reputation (Coelho & McClure, 2005; Politis & Gabrielsson, 2009; Shepherd & Haynie, 2011). Failure can cause entrepreneurs to feel shame (Smith & McElwee, 2011), grief (Shepherd, 2003; Shepherd, Wiklund, & Haynie, 2009), discouragement, rejection (McGrath, 1999), and many other negative emotions (Smith & McElwee, 2011). Studies have observed that business failure leads to financial (Dew, Sarasathy, Read, & Wiltbank, 2009; Peng, Yamakawa, & Lee, 2010; Van Auken, Kaufmann, & Herrmann, 2009) and social costs (Hasan & Wang, 2008; Kirkwood, 2007; Shepherd et al., 2009) for an entrepreneur. Other costs caused by business failures have

also attracted research attention (Hayward, Forster, Sarasvathy, & Fredrickson, 2010; Shepherd, 2004; Singh et al., 2007). Studies have analyzed the costs of a single failure, considering the total costs of a business failure and how those costs affect the entrepreneur's life (Singh et al., 2007; Ucbasaran, Shepherd, Lockett, & Lyon, 2013).

Although business failure leads to negative consequences, failure can also lead to tremendous learning opportunities for an entrepreneur (Cope, 2005, 2011; McGrath, 1999; Singh et al., 2007). Huovinen and Tihula (2008) demonstrated that business failure can lead to the improvement of entrepreneurial skills, which can be applied to subsequent businesses. The experience of failure also effects motivation and decision-making; entrepreneurs may delay starting a new business, or conversely, they may become more determined to succeed (Cardon, Stevens, & Potter, 2011; Cope, 2011; Singh et al., 2007). Although scholars consider failure-related experiences as crucial in the entrepreneurship process, how failure influences intention in subsequent entrepreneurial activities is not understood.

Researchers have indicated that business failures benefit the economy and society overall because of the resources and knowledge generated from bankrupt firms (Hoetker & Agarwal, 2007; Knott & Posen, 2005; Ucbasaran et al., 2013); these resources can be utilized to establish new businesses (Delacroix & Carroll, 1983; Ucbasaran et al., 2013). Moreover, business failures can help reduce the costs for surviving businesses through vicarious learning (Madsen & Desai, 2010; Ucbasaran et al., 2013). The effects of business failure on individual entrepreneurs are more complex and damaging. Although failures are a useful resource because of the learning experience for the entrepreneur (McGrath, 1999), they often lead to negative emotions or traumatic experiences (Cope, 2011; Shepherd, 2003; Ucbasaran et al., 2013). The costs of failure (i.e., social and psychological costs) can be seen to outweigh the benefits of learning from failure (Ucbasaran et al., 2013).

This study explored the mechanism of failed entrepreneurs' intention to start a new venture. Specifically, we investigated the correlations among the costs associated with entrepreneurial failure (i.e., social and psychological cost), experience of learning from failure (i.e., incurred by oneself, networks, and relationships), and residual resources after a business fails (i.e., human and social capital). The correlation between busi-

ness failure and learning from failure has attracted studies focusing on management practices (Cannon & Edmondson, 2005; Madsen & Desai, 2010; Mellahi & Wilkinson, 2004) and entrepreneurship (Cope, 2011; McGrath, 1999; Minniti & Bygrave, 2001; Politis, 2005; Shepherd, 2003). Entrepreneurs have investigated the reasons for business failure and used these lessons to revise their methods to achieve more effective management of the venture process (Shepherd, 2003). Scholars have argued that failure sends a "clear signal" regarding what went wrong and motivates entrepreneurs to be more cautious (Sitkin, 1992). This signal encourages learning through reflection on the reasons for failure, which prompts changes to individual thought processes (Minniti & Bygrave, 2001; Politis, 2005; Ucbasaran et al., 2013). Although many studies have addressed the relationship between failure and the process of learning from it, none have established a holistic perspective of the mechanisms driving a failed entrepreneur to start a new venture.

Theoretical Background

Motivation–Opportunity–Ability Framework

The motivation–opportunity–ability (MOA) framework is commonly adopted in research in the fields of industrial and social psychology (Siemsen, Roth, & Balasubramanian, 2008). In the MOA framework, motivation theory is used to predict individual behavior. Hughes (2007) defined motivation as the impetus toward a behavior or motivation that reflects a willingness to act. Bayton (1958) defined motivation as the driver that initiates a behavior. In this study, motivation was considered to lead the entrepreneur toward subsequent venture behaviors, ability comprised the requisite skills and capabilities to complete the entrepreneurial action, and opportunity represented the contextual and situational constraints that prompt the development of an ability.

Numerous studies on entrepreneurship have focused on the human capital of an individual entrepreneur. Venkataraman (2002) suggested that an entrepreneur's knowledge comprises opportunity recognition and prior knowledge, which also influence opportunity exploration. Rosenbusch, Brinckmann, and Bausch (2011) used education, start-up experience, management experience, and work experience to measure human capital. Shane (2000) suggested that prior

knowledge is paramount to the human capital of entrepreneurs, which leads to the recognition of entrepreneurial opportunities. Therefore, human capital is a source of motivation and increases opportunity recognition. In this study, the ability to learn from failure was seen as a rich resource for a failed entrepreneur (McGrath, 1999) as well as a great opportunity to learn from experience and acquire valuable knowledge for the preparation of future ventures.

Attribution Theory

Attribution theory concentrates on the motivational and emotional consequences of perceived attributions of a particular experience (Weiner, 1985; 1986). This theory is relevant for understanding feedback on failure because it is based on the personal interpretation of an individual's own behavior (Prussia, Kinicki, & Bracker, 1993). Adapted from Zacharakis, Meyer, and De Castro (1999) and Cardon et al. (2011), attribution theory has been applied to the interpretation of entrepreneur reflection and motives following business failure. The attribution of failure has attracted the attention of many researchers, such as Gaskill, Van Auken, and Manning (1993) and Zacharakis et al. (1999). Attribution is often triggered by negative events (Wong & Weiner, 1981) or experiences of business failure (Diener & Dweck, 1978). Because business failures are often defined as negative (Shepherd, 2003; Shepherd et al., 2009; Singh et al., 2007), attribution theory is highly capable of exploring the learning process following business failures.

Literature Review

Opportunity and Ability Factors: Social Costs, Psychological Costs, and Learning from Failure

Failed entrepreneurs learn from prior business failures by reflecting upon and revising existing knowledge and perceptions (Shepherd, 2003). Entrepreneurs learn that internal and external stakeholder relationships are weakened as a result of the social costs of failure. Moreover, they can learn about creating and managing partnerships with entrepreneur teams that have been affected by business failure (Cope, 2011; Singh et al., 2007). Business failures signal that something negative has happened and motivate entrepreneurs to consider what happened more closely to further understand (Sitkin,

1992). These signals, which arise when businesses fail, motivate learning because entrepreneurs often conduct postmortems for the business to understand what led to its failure; this leads to informative and motivational changes to the perspective of the entrepreneur (Minniti & Bygrave, 2001; Politis, 2005). Close relationships, such as those with family and friends, encourage failed entrepreneurs to be more vigilant and understand the causes and consequences of failure. Cope (2011) categorized the outcome of learning from experience as a deeper understanding of oneself, the reason for the failure, the extent of social networks and relationships, and how to more effectively manage ventures in the future. Failed entrepreneurs often engage in this higher level learning to recover and learn to mitigate the costs of failure. The MOA framework enables us to view the failure of an entrepreneur in terms of social cost and as an external learning opportunity that triggers a deeper learning process.

Hypothesis 1. Social costs of entrepreneurial failure positively affect learning from entrepreneurial failure.

Failure usually represents an entrepreneur's personal loss of network relationships and motivation because of the psychological losses from negative emotional responses. Negative emotions generated by failure may affect the ability to learn from an event (Shepherd, 2003), especially if the problems concerned are ambiguous (Kumar, 1997; Shepherd, 2003). Shepherd (2003) demonstrated that to acquire a deep understanding from the costs of failure, entrepreneurs must identify the role that negative emotions play in that understanding. For entrepreneurs and their families, a firm can be considered a context for family activity, epitomizing pride and social position (Shepherd, 2003). Thus, business failure can create negative emotional feedback in the form of grief. Grief is negative emotional feedback that hinders the ability to concentrate sufficiently for information processing (Mogg, Mathews, Bird, & Macgregor-Morris, 1990; Shepherd, 2003). Moreover, this interference negatively affects the ability to learn from a negative situation (Bower, 1992; Shepherd, 2003). Based on the MOA framework, psychological cost is an internal opportunity for learning that has a negative influence on the learning process.

Hypothesis 2. Psychological costs of entrepreneurial

failure negatively affect learning from entrepreneurial failure.

Ability and Motivation Factors: Learning from Failure, Human Capital, and Social Capital

Cope (2005) mentioned that experiential learning is the primary form of entrepreneurial learning. How entrepreneurs learn from formative experiences is dependent upon entrepreneurial learning mechanisms. These learning mechanisms can be more accurately comprehended by considering the prominent role of critical events or episodes in entrepreneurial learning as a motivator (Cope, 2005; Rae & Carswell, 2000). Relevant studies have observed that the changes in perspective that result from learning from failure affect entrepreneur behavior and may improve entrepreneurial capabilities or prompt adjustments to firm strategies and practices that result in future success (Cope, 2003; Cope & Watts, 2000; Deakins & Freel, 1998). Minniti and Bygrave (2001) asserted that entrepreneurs learn from their experiences by updating a subjective stock of accumulated knowledge. According to the MOA framework, learning from failure is considered the ability to reconstruct mental reasoning. If entrepreneurs are capable of learning from failure, their new knowledge may promote the intention to start a new business.

Hypothesis 3. Learning from entrepreneurial failure positively affects the intention of entrepreneurs to start a new business.

People are motivated to become entrepreneurs for many reasons. They may select an entrepreneurial career path because of negative external forces, as indicated in “push” theory, or the desire for independence, self-fulfillment, and wealth, as indicated by “pull” theory (Segal, Borgia, & Schoenfeld, 2005). High entrepreneurial ability corresponds to ease of confronting difficult situations and learning valuable lessons from failure. Relevant studies have recognized that learning from failure is a pivotal aspect of the experience of failed entrepreneurs (Cardon & McGrath, 1999; Minniti & Bygrave, 2001). The strain on relationships that results from the social costs of failure can provide entrepreneurs with an opportunity to learn to manage social networks more effectively. Moreover, failure is beneficial for learning because it provides an opportu-

nity to understand the causes of failure (Sitkin, 1992). Similarly, McGrath (1999) suggested that business failures increase knowledge and can help reduce uncertainty, increase variety, and strengthen the ability to search for market opportunities. These conditions are crucial for the increase in entrepreneurial intention to establish a new business. Politis (2008) discovered that habitual entrepreneurs seem to possess more experience than nascent entrepreneurs in terms of starting new ventures. This experience is acquired by learning from numerous entrepreneurial setbacks and failures. With such useful experience, habitual entrepreneurs continue to pursue an entrepreneurial career path because they can use what they have learned to overcome their natural tendency to view failure as strictly negative. Based on the MOA framework, entrepreneurs with the ability to transform costs into lessons also exhibit high potential to establish a new business.

Hypothesis 4. Learning from entrepreneurial failure positively mediates the relationship between the social costs of entrepreneurial failure and entrepreneurial intention to start a new business.

Hypothesis 5. Learning from entrepreneurial failure positively mediates the relationship between the psychological costs of entrepreneurial failure and entrepreneurial intention to start a new business.

According to Kim, Aldrich, and Keister (2006), Klepper (2002), Lazear (2004), Phillips (2002), and Sonfield and Lussier (2014), human capital is a critical internal factor influencing the decision to start a venture. Kim, Aldrich, & Keister (2003) argued that acquired skills and credentials are critical measurements of human capital and may create more attractive opportunities for individuals to work for others rather than pursue their own businesses. Butler and Herring (1991), and Van Auken (1999) have concluded that education is negatively correlated to entrepreneurship. We assumed that entrepreneurs who learn from failure may realize their future capabilities and exhibit a decreased intention to start a new venture.

Social capital is crucial to the intention to establish a new business (Bosma, Van Praag, Thurik, & Wit, 2004; Stam & Elfring, 2008). However, social capital in the form of a specific network of entrepreneurs can be affected by social attitudes toward failure. Kirkwood (2007) described the “tall poppy syndrome,” in

which high achievers are glorified and individuals with experiences of business failure are discouraged from starting a new venture by potentially negative public reactions. Thus, social capital, as an external factor that comprises formal and informal relationships, can have a negative effect on the intention to start a new venture. According to the MOA framework, residual resources from business failure are negative motivations that moderate the intention to start a business.

Hypothesis 6. Human capital negatively moderates the relationship between learning from entrepreneurial failure and entrepreneurial intention to start a new business.

Hypothesis 7. Entrepreneurial social capital negatively moderates the relationship between learning from entrepreneurial failure and entrepreneurial intention to start a new business.

Method

The questionnaire used in this study comprised 38 items measured on a seven-point Likert scale. These

items measured costs of entrepreneurial failure (10 items), as adapted from Blau (2007) and Harris and Sutton (1986); learning from entrepreneurial failure (7 items), as adapted from Shepherd, Patzelt, and Wolfe (2011); entrepreneurial intention to restart business (9 items), as adapted from Douglas and Shepherd (2002), Krueger (1993), and Segal et al. (2005); and entrepreneurial resources (13 items), as adapted from Baron and Markman (2003), Riggio (1986), Subramaniam and Youndt (2005), and Youndt, Subramaniam, and Snell (2004).

The sample comprised businesses that had been registered by the e-Tax portal of the Ministry of Finance, Vietnam but had ceased business operations within 12 months. A total of 11,210 companies were identified, and their registered phone number was retrieved and called. If the phone number was valid and the founder could be reached, they were invited to participate in this study. If the response was positive, a phone interview was conducted. A total of 5,000 phone calls were made, yielding a valid survey of 216 samples and return rate of 4.32%. Table 1 presents the results of the descriptive analysis.

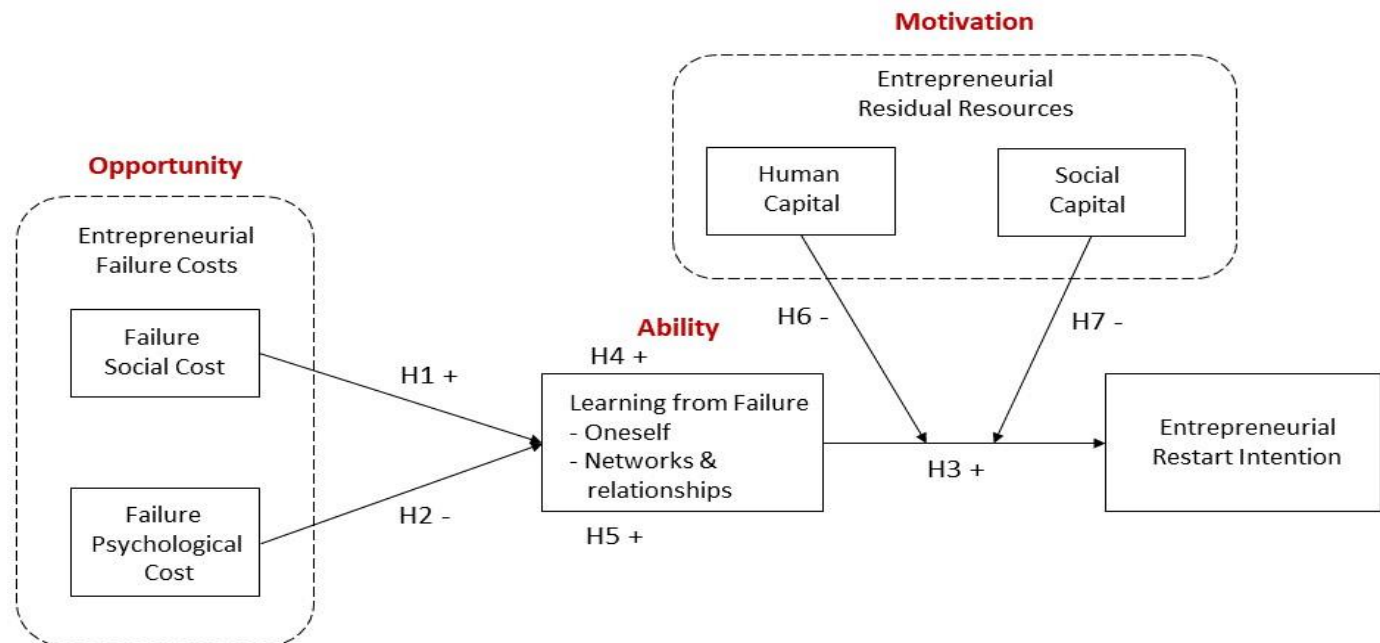


Figure 1. Research framework

Table 1
Descriptive analysis of samples (N = 216)

Variable	Category	Frequency	Percentage
Gender	Male	129	60
	Female	87	40
Age	0-20 years old	0	0
	21-30 years old	150	69.40
	31-45 years old	55	25.46
	46-60 years old	11	5.09
	More than 60 years old	0	0
Education	PhD	1	0.46
	Master	35	16.20
	Bachelor	170	78.70
	High School	7	3.24
	Primary School	1	0.46
	Other	2	0.93
Number of household	1-3 people	88	40.74
	4-5 people	102	47.22
	More than 5 people	26	12.04
Firm Age of Last Failure	1-5 years	179	82.87
	6-10 years	31	14.35
	More than 10 years	6	2.77

Analysis and Results

Factor analysis, correlation analysis, and reliability tests (Cronbach's α) were conducted to confirm the reliability and consistency of the factors. The Kaiser–Meyer–Olkin (KMO) measure was used to assess sampling adequacy, and confirmatory factor analysis was conducted to evaluate the reliability and construct validity. The hypothesized measurement model demonstrated good fit with the data ($X^2 [N = 216] = 276.785$; degrees of freedom [df] = 186; $X^2/df = 1.488$; root mean square error of approximation (RMSEA) = .048; goodness of fit index (GFI) = .895). Table 2 lists the descriptive statistics for our scales along with their intercorrelations and coefficient alphas for reliability.

Table 3 represents the results of structural equation modeling analysis to test Hypotheses 1, 2, and 3. The mediating effect of learning from entrepreneurial

failure (H4 and H5) was examined through regression analysis (Tables 4 and 5, respectively). Moderating effects were analyzed through hierarchical regression (Table 6).

Conclusion and Recommendations

Although other studies have focused on entrepreneurial success, little is known regarding the ability of entrepreneurs to cope with and learn from failure. Learning from failure is a prominent influence on subsequent entrepreneurial initiatives. This study may provide a resource for mitigating entrepreneurial failure, which reduces the motivation to undertake subsequent entrepreneurial projects. Following failure, entrepreneurs re-evaluate their resources (i.e., human and social capital) and reconsider their capability of managing the venture.

To achieve a learning outcome, entrepreneurs re-

Table 2
Results for Pearson correlation coefficient (N = 216)

	Mean	S.D	CR	1	2	3	4	5	6	7	8	9
1 Failure Social Costs	4.2685	0.85884	.788	(.744)								
2 Failure Psycho. Costs	4.5009	1.05071	.740	.487**	(.647)							
3 Learning from failure	5.7415	0.97834	.709	0.096	0.066	(.742)						
4 Restart Intention	4.9514	1.06389	.696	0.103	0.06	.370**	(.709)					
5 Human Capital	5.088	1.1755	.851	0.128	.136*	.489**	.469**	(.737)				
6 Social Capital	5.0856	1.09012	.726	0.123	0.105	.608**	.454**	.685**	(.698)			
7 Gender	0.4306	0.4963		-0.052	-0.039	.147*	0.009	-0.032	0.043			
8 Age	2.3889	0.60745		0.011	-0.078	-0.093	-0.094	-0.009	-.136*	-.280**		
9 Education	3.1111	0.61506		.169*	.148*	-0.13	0.001	-0.014	-0.086	-0.112	0.095	
10 Firm age on failure	3.4769	2.64477		0.045	-0.047	0.013	-0.091	0.105	0.008	-.263**	.645**	0.024

Note: ** $p < .01$; * $p < .05$. The number in parentheses is the square root of AVE. CR and AVE are calculated based on values obtained in the full measurement model

Table 3
Results of structural equation modeling

Variable	Standardized Coefficients	C.R.
Social Costs → Learning from failure	0.19**	1.790
Psychological Costs → Learning from failure	-0.07	-0.637
Learning from failure → Restart Intention	0.53***	5.271
Fit Index		
$X^2 = 59.096$		
$df = 49.996$		
$X^2/df = 1.182$		
GFI = 0.956		
AGFI = 0.932		
RMSEA = 0.029		

Table 4

Regression results of learning from entrepreneurial failure as mediator between social costs of entrepreneurial failure and intention to restart business

Independent	Dependent Variable			
	Restart Intention	Learning from Failure	Restart Intention	
	Model 1	Model 2	Model 3	Model 4
Step 1: Control Variable				
Gender	-0.021	0.0135	-0.075	-0.072
Age	-0.058	-0.119	-0.015	-0.012
Education	-0.013	-0.130	0.048	0.036
Firm age before last failure	-0.063	0.033	-0.107	-0.111
Step 2: Predictor				
ESC	0.108	0.106		0.069
Step 3: Mediator				
EFL			0.383***	0.376***
R^2	-0.012	0.041	0.151	0.156
ΔR^2	-0.002	0.023	0.135	0.136
F-value	2.410	2.444	35.451	33.722***
P-value (sig.)	0.122	0.119	0.000	0.000

Note: ESC = social costs of entrepreneurial failure; EFL = learning from entrepreneurial failure.

Table 5

Regression results of learning from entrepreneurial failure as mediator between psychological costs of entrepreneurial failure and intention to restart business

Independent	Dependent Variable			
	Restart Intention	Learning from Failure	Restart Intention	
	Model 1	Model 2	Model 3	Model 4
Step 1: Control Variable				
Gender	-0.021	0.135	-0.075	-0.073
Age	-0.059	-0.117	-0.015	-0.013
Education	-0.003	-0.122	0.048	0.045
Firm age before last failure	-0.056	0.132	-0.107	-0.107
Step 2: Predictor				
ESC	0.053	0.086		0.019
Step 3: Mediator				
EFL			0.388***	0.386***
R^2	0.014	0.060	0.154	0.156
ΔR^2	-0.014	0.033	0.129	0.126
F-value	0.568	1.597	35.183***	34.459***
P-value (sig.)	0.452	0.208	0.000	0.000

Note: ESC = social costs of entrepreneurial failure; EFL = learning from entrepreneurial failure.

Table 6

Hierarchical regression of entrepreneurial resources as moderators between learning from entrepreneurial failure and intention to start a new business

Variable	Dependence	Restart Intention			
		Model 1	Model 2	Model 3	Model 4
Control	Gender	-0.007	-0.002	-0.033	-0.030
	Age	-0.010	0.009	0.023	0.030
	Education	-0.088	0.053	0.083	0.070
	Firm age on failure	-0.147	-0.144	-0.146	-0.135
Independent	Oneself	0.099		0.016	
	Networks & Relationship		0.073		0.026
Moderator	Human Capital	0.361***	0.360***		
	Social Capital			0.396***	0.356***
Interaction	Oneself x Human Capital	-0.241***			
	Networks&Relationship x Human Capital		-0.206***		
	Oneself x Social Capital			-0.256***	
	Networks&Relationship x Social Capital				-0.228**
	R^2	0.305	0.284	0.276	0.264
	ΔR^2	0.278	0.257	0.248	0.235
	F-value	11.371***	10.287***	9.883***	9.258***
	F change	12.707***	8.105**	12.657***	9.719**

quire a process for overcoming the grief of failure. Three such processes are recovery, cognitive reflection, and behavioral modification. Shepherd et al. (2009) acknowledged that an entrepreneur's recovery from failure occurs when grief subsides and business losses are overcome. Entrepreneurs recover from failure when the events surrounding their business losses no longer generate a negative emotional response (Shepherd, 2003). After negative emotions have been overcome, cognitive constructs such as confidence or optimism replace grief. Hayward et al. (2010) suggested that although optimism explains the high rate of failures, it also constitutes an opportunity for failed entrepreneurs to recover.

This study determined no significant correlation between the psychological costs of entrepreneurs and learning from entrepreneurial failure (Hypothesis 2). One possible reason for this is that even learning from failure can be viewed as a recovery outcome; if the psychological cost is excessively high, then learning per-

formance can be inhibited. Wolfe and Shepherd (2015) used college football teams as a sample to investigate how failure influences their subsequent performance. They discovered that negative emotional content and subsequent performance exhibited a U-shaped relationship, indicating a threshold for the psychological costs incurred by team players. Exceed this threshold for entrepreneurs, negative emotions may trigger positive learning processes and increase the intention to start a new venture. However, if negative emotions exceed this threshold, entrepreneurial intentions may be diminished.

This study demonstrated that learning from failure has a mediating effect on failure costs and restart intention. Learning is often viewed as a pivotal outcome of entrepreneurial failure (Cope, 2003; Corbett, Neck, & DeTienne, 2007; Shepherd, 2003). Business failures can be a rich source of feedback for entrepreneurs regarding the effectiveness of their decision-making pro-

cess (Corbett et al., 2007; Minniti & Bygrave, 2001), management skills, and social networking and relationships. Minniti and Bygrave (2001) recognized that knowledge gained from failure could be applied during subsequent entrepreneurial endeavors to enable entrepreneurs to achieve greater success in the future. Evidence indicates that highly successful entrepreneurs attribute their success to learning from past failures.

The ability to learn is a prominent factor that affects behavior after failure. Although failure is a remarkably beneficial learning experience, entrepreneurs fail to learn if they lack the ability to confront the reasons for failure effectively. Entrepreneurs may only learn lessons that correspond to their existing beliefs (Baumard & Starbuck, 2005). As a result, they may replicate their mistakes in future entrepreneurial endeavors (Shepherd, 2003). Failure does not automatically lead to valuable learning outcomes (Cope, 2011; Cannon & Edmondson, 2001), and entrepreneurs must be capable of learning to acquire knowledge that will benefit their future ventures.

This study has several limitations that constitute opportunities for further research. First, this study applied cross-sectional data, which limited our ability to evaluate real outcomes for failure recovery and learning processes as well as resource mitigation following failure. Future studies can address these limitations by analyzing longitudinal data consisting of information of failed entrepreneurs who have been monitored over time. Second, our study did not consider the skills required for different entrepreneurial ventures. Innovation-driven entrepreneurship requires greater skill and more resources and involves higher levels of uncertainty when compared with necessity-driven entrepreneurial ventures (Liao, Welsch, & Moutary, 2008). Furthermore, this study did not explore the timing and sequence of failure experiences reported by various types of entrepreneurs, which may influence how entrepreneurs comprehend their failure. The strength of emotional response (e.g., grief) may be mitigated by time (Cannon, 1999). Future studies should explore the timing of failure and consider the difficulties of business ventures. Finally, the sample used in this study was reflective of a specific culture, and we did not consider how different cultural perceptions of failure may affect the learning behaviors of entrepreneurs. We encourage researchers to explore how cultural contexts influence entrepreneurial behavior outcomes following business failure.

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