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To Leave or To Stay? The Decision Context, Self-Images, and Owner-Managers' Persistence Decisions

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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Business

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**TO LEAVE OR TO STAY? THE DECISION CONTEXT, SELF-IMAGES, AND
OWNER-MANAGERS' PERSISTENCE DECISIONS**

(Spine title: Owner-managers' Persistence Decisions)

(Thesis format: Monograph)

by

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**A thesis submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy**

**The School of Graduate and Postdoctoral Studies
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London, Ontario, Canada**

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ABSTRACT

Underperforming ventures are those whose performance falls short of the owner-manager's expectations for a long period of time but whose future is not a clear failure. Persistence decisions about underperforming ventures are influenced by the environment and owner-managers' individual characteristics. Previous research leaves two research gaps. First, our knowledge about which and how individual characteristics may affect owner-managers' persistence decisions is still limited. Furthermore, owner-managers assume multiple roles in society and have opportunities to imagine a different future. Their decisions thus are affected by role demands and perceptions of the future. The growing interest in contextualizing entrepreneurship suggests the importance of putting persistence decisions in a broad social context and investigating the complexity of owner-managers' persistence decisions when owner-managers are facing multiple influences from the decision context.

To fill in the above two research gaps, I put persistence decision making in a decision context consisting of venture attachment, family time pressure, social approval pressure, and personal options outside the venture. In this dissertation, I strive to address one research question: how do the decision context and two self-images—psychological capital and fear of failure—jointly influence owner-managers' persistence decisions? I designed a metric conjoint experiment to answer this question. The experiment consists of 33 decision scenarios, each of which is a combination of a certain level of the above-mentioned four decision context factors. Ninety owner-managers of small- and medium-sized enterprises participated in my study, and were asked to indicate the extent to which

they would want to persist with a hypothetical underperforming venture in each scenario. Hierarchical linear modeling (HLM) was used to analyze the data.

The analysis yielded three important findings. First, owner-managers' persistence decisions are influenced by all four decision context factors, but in different manners. Venture attachment and social approval pressure are positively related to the likelihood of persistence, whereas family time pressure and the number of personal options are negatively associated with the likelihood of persistence. Owner-managers give the highest weight to venture attachment, followed by the number of personal options, family time pressure, and social approval pressure. Second, owner-managers' persistence decision making is a balancing act between different present roles and between the present roles and perceptions of the future. For example, family time pressure weakens the relationship between venture attachment and the likelihood of persistence, whereas social approval pressure strengthens the relationship between venture attachment and the likelihood of persistence. The opportunities for imagining a different future, represented by the number of personal options, also attenuate the positive impact of venture attachment on the likelihood of persistence. Finally, psychological capital and fear of failure do interact with the decision context to influence owner-managers' persistence decisions after controlling for several personal and environmental factors. More importantly, different components of psychological capital and fear of failure play different roles in explaining the heterogeneity of owner-managers' persistence decision policies. Whereas psychological capital is an approach-oriented factor and functions as a set of psychological resources that owner-managers can draw upon to strengthen the impact of some motivational factors (e.g., social approval) on persistence, fear of failure

is an avoidance-oriented factor and drives owner-managers to make decisions in a manner to avoid upsetting important others, shame, embarrassment, or an uncertain future.

This dissertation makes important contributions to entrepreneurial persistence research, venture attachment research, the fear of failure literature, and the psychological capital literature.

Key Words: Persistence, underperforming venture, venture attachment, role pressure, fear of failure, psychological capital

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CHAPTER 1: INTRODUCTION

1.1 Research Motivation

Underperforming ventures are those whose performance falls short of the owner's expectations for a considerable period of time (DeTienne, Shepherd, & De Castro, 2008), yet whose future is not a clear failure (Bourgeois & Eisenhardt, 1987). Persistence decisions about an underperforming venture indicate the extent to which an owner-manager, who owns, manages, and makes decisions for his or her venture (Shepherd, Wiklund, & Haynie, 2009b), wants to continue committing to the underperforming venture. As such, owner-managers' persistence decisions are the decisions to *act*. Given that individuals' behaviour is influenced by the environment and individual cognitions and personalities (Bandura, 1986), and that entrepreneurs' decisions and behaviour are a result of the interplay of the environment (i.e., social networks) and certain individual characteristics (De Carolis & Saporito, 2006; Holland & Shepherd, 2011), it is reasonable to expect that owner-managers' persistence decisions are affected by decision contexts and individuals' self-images—a set of beliefs and attitudes about the self that regulate one's behaviour, that are constructed based on one's identity, that are influenced by environmental feedback regarding one's performance, and that is subject to changes (Burke, 1980).

Existing research has suggested some contextual factors and individual characteristics as predictors of owner-managers' persistence decisions. Contextual factors include characteristics of the environment such as environmental munificence (DeTienne

et al., 2008), firm- and opportunity-related factors such as past organizational success and personal options (DeTienne et al., 2008), as well as social factors such as collective efficacy (DeTienne et al., 2008). Individual characteristics consist of human capital (Gimeno, Folta, Cooper, & Woo, 1997), personal values (Holland & Shepherd, 2011), and entrepreneurs' passion for and attachment to their ventures (Cardon, Wincent, Singh, & Drnovsek, 2009; Cardon, Zietsma, Saporito, Matherne, & Davis, 2005; Shepherd et al., 2009b).

While insightful, previous research on owner-managers' persistence decisions leaves two main research gaps, hence two avenues for future research. First, individuals' decisions and actions are shaped not only by the context but also by how individuals evaluate themselves (Franks & Marolla, 1976). Entrepreneurs are an active self. They have been found to demonstrate a high level of self-efficacy (Chen, Greene, & Grick, 1998) and optimism (Busenitz & Barney, 1997; Fraser & Greene, 2006; Lowe & Ziedonis, 2006), which play important roles in entrepreneurs' investment decisions (Cassar & Friedman, 2009) and venture performance (Hmieleski & Baron, 2008). Although studies by DeTienne et al. (2008) and Holland and Shepherd (2011) have investigated the impact of some individual characteristics (i.e., extrinsic motivation and personal values) on entrepreneurs' persistence decisions, we still know little about how other important individual characteristics (e.g., self-efficacy, optimism) may influence such decisions; thus more research is needed in this regard (Holland & Shepherd, 2011). Second, owner-managers assume multiple roles in society (e.g., business owner, family member, community member). They are embedded in and affected by various social

relationships (Aldrich & Cliff, 2003; Aldrich & Zimmer, 1986; Fauchart & Gruber, 2011; Jennings & McDougald, 2007; Kahn, Wolfe, Quinn, & Snoek, 1964). The call for more research on the implications of owner-managers' venture attachment (Cardon et al., 2005; DeTienne, 2010), the role of family conditions in entrepreneurs' venture exit decisions (Justo & DeTienne, 2008), as well as the influence of social networks and social interactions on entrepreneurs' decisions, behaviour, and new venture performance (Davidsson & Honig, 2003; Down & Reveley, 2004; Lechler, 2001) suggests the importance of examining owner-managers' persistence decisions in a broader social context. The complexity of the decision context enables researchers to capture the complexity of owner-managers' decision policies by investigating how they make persistence decisions when confronted with multiple influences from the decision context.

1.2 The Current Research

To fill in the above two research gaps, I draw on social cognitive theory as the overarching theoretical framework for this research and aim to answer the following research question: how do the decision context and self-images jointly influence owner-managers' persistence decisions? I further draw upon role theory and the mental simulation literature to conceptualize the decision context. I examine the impact of two distinctive types of self-images on owner-managers' persistence decisions: psychological capital, which represents a competent self, and fear of failure, which represents a vulnerable self (Mitchell & Shepherd, 2010). By using a metric conjoint experiment in which 90 small- and medium-business owner-managers make decisions for a series of scenarios about a hypothetical underperforming venture, I find that the decision context

and self-images interact in a complex way to influence owner-managers' persistence decisions.

This research makes three important contributions. First, it contributes to the entrepreneurial persistence research by putting persistence decision making in a broad social context and exploring the complexity of owner-managers' persistence decision policies. Entrepreneurship scholars advocate the contextualization of entrepreneurship (Welter, 2011) and have adopted some relevant theoretical lenses (e.g., social-embeddedness perspective, family-embeddedness perspective) to explain the entrepreneurial process (Aldrich & Cliff, 2003; Aldrich & Zimmer, 1986). Following and extending this line of research, I put persistence decisions in a broad context consisting of the influences of the venture, the family, the business community, and personal options. Such a context is characterized both by different types of relationships (intrapersonal versus interpersonal) and by time (present roles versus perceptions of the future). By examining the impact of these contextual factors, especially the interactions among them, I am able to explore the complexity of owner-managers' persistence decisions.

Second, this research extends previous research on the relationship between owner-managers' venture attachment and persistence by providing empirical support for this relationship and by identifying some moderators for this relationship, such as family time pressure, the number of personal options, and fear of failure. Owner-managers' venture attachment has been theorized to positively influence entrepreneurial persistence (Cardon et al., 2005), and future research on the implications of this relationship has been called for by some entrepreneurship scholars (Cardon et al., 2005). This dissertation has

answered this call and furthered our understanding of the attachment-persistence relationship.

Third, this research also deepens our understanding of how owner-managers' persistence decisions are influenced by two important self-images: psychological capital and fear of failure. Owner-managers are active agents in daily activities—they form their own evaluations of the self and actively affect the environment through their actions (Franks & Marolla, 1976). Owner-managers, however, also have a vulnerable aspect of self that affects their decisions (Mitchell & Shepherd, 2010). By examining the influence of these two qualitatively different self-images, I am able to extend previous research on the effect of individual characteristics on owner-managers' persistence decisions (DeTienne et al., 2008; Holland & Shepherd, 2011) and enrich our knowledge in this field. The findings that different dimensions of fear of failure and psychological capital interact with different decision context factors to influence persistence decisions deepen our understanding of the effect of fear of failure and psychological capital, thereby contributing to the fear of failure literature, the psychological capital literature, and affect research in the entrepreneurship context.

It should be noted that the unit of analysis for this research is the decision about a venture. I follow DeTienne et al. (2008) and Holland and Shepherd (2011) in viewing persistence as a decision, which reflects the likelihood that owner-managers continue the operations of a venture. Moreover, the level of analysis of this research is the individual. This research examines how owner-managers, as individuals, make persistence decisions. As entrepreneurship is fundamentally personal (Baum, Frese, Baron, & Katz, 2007),

investigating how owner-managers make persistence decisions thus can contribute to the individual-level entrepreneurship research.

1.3 Dissertation Structure

The remainder of this dissertation is structured as follows. In Chapter 2, I start with defining the two key constructs of this research—underperforming ventures and persistence. I then review previous entrepreneurship research on persistence. I end this chapter by identifying some gaps in previous research in a manner that highlights the two key components of the theoretical framework for this research—the decision context and self-images. In Chapter 3, I draw upon social cognitive theory, role theory, the mental simulation literature, fear of failure literature, and psychological capital literature to form the theoretical framework of this research. I then develop testable hypotheses about the impact of decision context factors and their interactions with self-images on the likelihood of persistence. In Chapter 4, I outline the methods of this research, including the sample, the conjoint analysis method, the research instrument, manipulations and measures of variables, as well as the data analysis approach. Chapter 5 reports the results of this research, including descriptive statistics, hypothesis testing results, and some exploratory analysis results. Chapter 6 discusses the implications for theories and practice, limitations of this dissertation research, and possible future research avenues. This dissertation ends with a conclusion in Chapter 7.

CHAPTER 2: LITERATURE REVIEW

As the focus of this research is owner-managers' persistence decisions—in particular, what influences owner-managers to choose to continue operating an underperforming venture, I start the literature review by defining two key constructs in this research: underperforming ventures and persistence. I then review existing research on entrepreneurial persistence and end this chapter with potential gaps in existing research.

2.1 Underperforming Ventures: Definition

Underperforming firms are also referred to as permanently failing organizations (Meyer & Zucker, 1989), chronic failures (van Witteloostuijn, 1998), the living dead (Bourgeois & Eisenhardt, 1987; Ruhnka, Feldman, & Dean, 1992), and failure-avoidance organizations (McGrath, 1999). Table 1 provides a summary of the terms used and definitions of underperforming firms in previous research.

Based on the definitions of underperforming firms given by Meyer and Zucker (1989), DeTienne et al. (2008), and Bourgeois and Eisenhardt (1987), in this research, I define underperforming ventures as business ventures whose performance falls short of the owner-managers' expectations (either financially or strategically) for a long period of time, and whose future is not a clear failure. By adopting this definition, I lose the assumption that underperforming ventures are doomed failures that are detrimental to society, the industry, and the entrepreneur. I allow for the possibility that underperforming ventures can be turned around.

Table 1. Definitions of terms used for underperforming firms

Author(s) (year)	Definition
Northcraft & Wolf (1984: 225)	<i>Losing enterprises</i> : those “clouded by what already has been invested in the venture.”
Bourgeois & Eisenhardt (1987: 143)	<i>Living dead</i> : for these firms, “success appears always to be ‘just around the corner,’ as the companies continually fall short of their targets and consume money and time. The financial backers cannot extricate themselves because there is no clear market for these companies. The venture themselves are insufficiently successful to be taken public, but neither are they clear enough failures to die.”
Meyer & Zucker (1989: 19)	<i>Permanently failing organizations</i> : organizations whose performance, by any standard, falls short of expectation, yet whose existence continues.
Ruhnka, Feldman, & Dean (1992)	<i>Living dead</i> : companies that were once expected to become winners but that stall out in revenue growth and profitability in the later stages of their development.
van Witteloostuijn (1998: 503)	<i>Chronic failure</i> : the state that “although profit remains negative, the firm stays in the market.”
McGrath (1999: 20)	<i>Failure-avoidance organizations</i> : “resources are diverted to support initiatives that might otherwise be cancelled or closed down.”
DeTienne, Shepherd, & De Castro (2008)	<i>Underperforming firms</i> : those firms whose performance, by any standard, falls short of expectations, yet whose existence continues for a long period of time.

Note: This summary is partly based on DeTienne Shepherd, & De Castro (2008).

2.2 Persistence: Definition

Persistence generally refers to the continuance of business operations despite setbacks, impediments, or enticing alternatives (Gimeno et al., 1997; Holland & Shepherd, 2011). Persistence emphasizes two aspects of such continuance: the actions taken in response to negative feedback from the environment (Gimeno et al., 1997; Hoang & Gimeno, 2010; Holland & Shepherd, 2011) and the continuance of a previously

selected action despite other attractive options (Holland & Shepherd, 2011). In this research, I also infuse the notions of commitment and engagement (Chalofsky & Krishna, 2009) in the definition of persistence. Persistent owner-managers are those who are willing to stay with the venture, and to engage in it by investing physical and psychological resources. Owner-managers who are not dissatisfied enough to leave the venture but who are biding their time and not committed to the venture, and those who are still in the venture but who are actively searching for alternative opportunities to leave the venture are not considered as persistent in my research.

It should be noted that I do not take a normative perspective of persistence in this research. Persistence can result in both beneficial and detrimental consequences. For instance, by being persistent with a previously selected course of action, individuals may enhance their self-efficacy, become more resourceful than before (Youssef & Luthans, 2007), and gain psychic income (Gimeno et al., 1997). These individuals thus may be more able to achieve entrepreneurial success than those who can easily quit entrepreneurial endeavours (Markman, Baron, & Balkin, 2005). In contrast, some individuals escalate commitment to a failing course of action, with the result of throwing good money after bad (Staw, 1981). Such persistence is an inefficient and ineffective way of deploying one's own and society's resources (DeTienne et al., 2008), and may result in decreased psychological well-being (Winnen, 2006). Whether persistence with an underperforming venture is a bad decision, however, is not the focus of this research. The focus of this research, instead, is on the antecedents and boundary conditions of owner-managers' persistence decisions. Future research could offer further valuable insights into

owner-managers' persistence decisions by exploring the positive and negative outcomes of such decisions.

2.3 Prior Research on Persistence

Scholars have adopted a variety of theoretical lenses to study persistence. As my research focuses on how owner-managers as individuals make persistence decisions, I only review research conducted on the individual level. The following theoretical perspectives will be covered: the threshold of performance model, cognitive biases resulting in escalation of commitment, the affect perspectives including procrastination, passion and attachment, the family-embeddedness perspective, the founder role identity perspective, and social cognitive theory.

2.3.1 Threshold of performance model

Gimeno and colleagues (1997) provided the first theoretical explanation regarding why some entrepreneurs continued running underperforming firms. They posited that entrepreneurs' exit decisions and organizational survival were a function of both firm economic performance and entrepreneurs' performance thresholds. The performance threshold served as a reference point used by entrepreneurs to decide whether to exit a firm. Entrepreneurs would stay with a firm as long as the firm's performance was above their performance thresholds, which were affected by human capital (Gimeno et al, 1997). Another important contribution of this study is the introduction of the notion of psychic income (e.g., entrepreneurs' venture attachment), which may lower entrepreneurs' performance thresholds, thereby speaking to an important reason for why some

underperforming firms survive. The notion of psychic income also provides one motivation for the current dissertation research to examine how owner-managers' venture attachment may affect their persistence decisions.

2.3.2 Cognitive biases resulting in escalation of commitment

Escalation of commitment is also referred to as entrapment (Brockner, Houser, Birnbaum, Lloyd, & Deitcher, 1986), the sunk cost effect (Northcraft & Wolf, 1984), and the too-much-invested-to-quit effect (Teger, 1980). Escalation of commitment is often studied in contexts with three characteristics (Brockner, 1992; Staw, 1997): (1) negative outcomes occur, such as whether to invest additional funds in a losing stock; (2) there is an opportunity to persist or withdraw; and (3) individuals who escalate have not attained their goals, nor are they certain that additional investment will help them achieve their goals.

Over the past three decades, a large body of research in psychology has focused on the factors driving individuals to escalate commitment to a losing course of action or a losing project. For example, Brockner and colleagues (1986) explored the effect of individuals' identification with previous outcomes on entrapment using two experiments. They argued that individuals were reluctant to give up a losing course of action which hurt their identity (Brockner et al., 1986). Their research showed that entrapment was greater when subjects were told that their ineffective performance revealed their abilities and skills than when they were told that it did not. Zhang and Baumeister (2006) found that egotism (maintaining favourable views of the self) motivated individuals to escalate

commitment in a losing course of action that was detrimental to individuals' financial well-being. Dietz-Uhler (1992) investigated the role of social identity in political situations where an escalation of commitment might occur. Social identity was found to be strongly related to the group's escalation of commitment to a failing project, and the effect of social identity did not show until some critical threshold determined by the severity of the project's problems was reached. Similarly, Liao and colleagues (2004) found that group responsibility and cohesiveness increased the tendency for group

In the entrepreneurship context, DeTienne and colleagues (2008) extended Gimeno's (1997) threshold of performance perspective by employing Staw's (1981) escalation of commitment model to explain entrepreneurs' persistence decisions with underperforming firms. These researchers selected decision factors that represented the major determinants of Staw's (1981) model, including the perceived probability and the value of future outcomes, motivation to justify previous decisions, and norms for consistency. They found that entrepreneurs' persistence decisions were positively related to environmental munificence (representing the probability and perceived value of future outcomes), personal investment (representing the motivation to justify previous decisions), collective efficacy, and the firm's past success (representing norms for consistency). Persistence with underperforming firms was also found to be negatively associated with personal options, which represented a motivation to justify previous decisions. DeTienne and colleagues (2008) also demonstrated that entrepreneurs with

high extrinsic motivation were more likely to be influenced by personal investment in their persistence decisions than those low in extrinsic motivation.

2.3.3 The affect perspectives

Some entrepreneurship scholars theorize entrepreneurs' or owner-managers' persistence decisions using theoretical lenses related to affect. Three major theoretical perspectives are procrastination, passion, and attachment.

Procrastination

“Procrastination occurs when present costs are unduly salient in comparison with future costs, leading individuals to postpone tasks until tomorrow without foreseeing that when tomorrow comes, the required action will be delayed yet again” (Akerlof, 1991: 1). Procrastination occurs because individuals may feel anxious or frustrated when anticipating threats from the environment. Therefore, to reduce anxiety and frustration, individuals choose to escape from the current situation (Anderson, 2003; Milgram, Sroloff, & Rosenbaum, 1988). Procrastination is a self-defeating behaviour that has short-term benefits (e.g., lower stress, less illness, and higher performance) but long-term costs (e.g., higher stress, more illness, and lower performance) (Solomon & Rothblum, 1984; Tice & Baumeister, 1997).

In entrepreneurship research, Shepherd (2009) defined procrastination as delaying an action that is emotionally unattractive even though this action will lead to positive outcomes in the future. Shepherd and colleagues (Shepherd, 2009; Shepherd et al., 2009b) attributed entrepreneurs' persistence with failing businesses to procrastination. They

argued that entrepreneurs procrastinated because they wanted to balance financial costs with emotional costs so that they could temporarily avoid the negative emotions associated with business failures, such as grief.

Passion

Passion is one type of positive affect. Passion has been defined as selfish love of work (Shane, Locke, & Collins, 2003), the “enthusiasm, joy, and even zeal that come from the energetic and unflagging pursuit of a worthy, challenging, and uplifting purpose” (Smilor, 1997: 342), intense longing (Baum & Locke, 2004; Cardon et al., 2005), drive, a pleasant high activation emotion (Huy & Zott, 2007; Shane et al., 2003), and a positive feeling that derives from activities representing the entrepreneur’s salient identity (Cardon et al., 2009).

Passion motivates individuals to work hard (Baum, Locke, & Smith, 2001), to achieve, and to make a difference (Bierly, Kessler, & Christensen, 2000). Entrepreneurs who are passionate about their ventures are willing to delay gratification and to devote considerable time, attention, and energy to the venture to deal with challenges, setbacks, and high pressure (Cardon et al., 2005). Therefore, passion drives entrepreneurs to persist with their venture despite challenges and difficulties. Passion, however, may make it difficult for entrepreneurs to walk away from their ventures even though they are underperforming, thereby leading to dysfunctional persistence (McGrath, 1999; Meyer & Zucker, 1989) because such persistence may mean throwing good money after bad.

Attachment

Closely related to passion is the notion of venture attachment. Entrepreneurs' venture attachment was first theorized by Cardon and colleagues (2005) based on the parenthood metaphor used by entrepreneurs: the venture is my baby. These scholars developed a conceptual framework to explain the role of passion, attachment, and identification in the new venture creation, development and exit processes. They defined entrepreneurs' venture attachment as the emotional connection between the entrepreneur and the venture (Cardon et al., 2005) and argued that strong venture attachment motivated entrepreneurs to commit to the venture, face up to challenges, and cope with adversity.

The notion of attachment is not new to entrepreneurship scholars. Some researchers have theorized how entrepreneurs' or business owners' venture attachment may affect their persistence decisions. For example, Gimeno and colleagues (1997) argued that poorly performing firms still continue partly because of entrepreneurs' strong psychic attachment to the venture. Shepherd (2003) proposed an emotional bond between the self-employed and their ventures. When their ventures failed, the self-employed were likely to suffer from intense grief, which, in turn, slowed down the recovery process. Wasserman (2008 :3) also argued that entrepreneurs often regarded new ventures as "labours of love" and became emotionally attached to them. This attachment resulted in founders' reluctance to walk away from their ventures (Wasserman, 2003, 2008). Attachment to the firm is also prevalent in family businesses. Family business members can develop strong emotional attachment to the tradition, culture, values and family

assets in the core family business (Sharma & Manikuttly, 2005). Over-attachment to the past values and culture of the family business and to the old CEO may make the new CEO resistant to letting go of the old culture and enabling changes that are needed in a dynamic environment. Therefore, over-attachment to the past may plague intergenerational succession in family businesses (Miller, Steier, & Le Breton-Miller, 2003).

Despite *ex ante* research on attachment and venture exit, empirical research is still needed to further explore what implications attachment has for entrepreneurs' persistence decisions (Cardon et al., 2005).

2.3.4 Family-embeddedness perspective

Family conditions have been found to be an important factor influencing entrepreneurs' decisions and actions (Aldrich & Cliff, 2003; Cliff, 1998; Jennings & McDougald, 2007). Given the important role played by family in the entrepreneurial process and entrepreneurial exit as an important part of the entrepreneurial process, entrepreneurship scholars have begun to examine how gender and family conditions may influence entrepreneurs' venture exit decisions. Justo and DeTienne (2008) used the family-embeddedness perspective to extend Gimeno and colleagues' (1997) threshold of performance model and to investigate how gender and family conditions may influence entrepreneurs' venture exit decisions over and above the impact of firm performance. They found that female entrepreneurs and married entrepreneurs had a higher threshold level and thus were more likely to exit business ventures than their counterparts when

controlling for firm performance. These researchers also found that gender moderated the relationship between running a family business and business exit. For those who ran a family business, female entrepreneurs had lower odds of business exit than their male counterparts in the same situation. Their research extended previous entrepreneurial exit research by showing the importance of family considerations in entrepreneurs' business decisions and the impact of gender and family conditions on entrepreneurs' performance thresholds. Justo and DeTienne's (2008) research motivated me to adopt role theory as part of the theoretical foundations of my dissertation and to include family and the business community as part of the decision context in this dissertation.

2.3.5 Founder role identity perspective

Hoang and Gimeno (2010), if not the first, are among the few entrepreneurship scholars who link role identity with entrepreneurs' persistence. They theorized the notion of founder role identity, and proposed that the type and the extent of persistence were a function of identity centrality and identity complexity. They also proposed some forms of persistence: experimentation-oriented persistence and confirmation-oriented persistence. Entrepreneurs who were high in both role complexity and role centrality would be motivated to persist in the face of adversity while searching broadly for alternative opportunities and re-evaluating the overall approach. This adaptive approach was experimentation-oriented persistence. Entrepreneurs who were high in role complexity but low in role centrality might not be motivated to persist for a long time. Instead, they might choose experimentation for a period of time because of their flexibility, but would abandon entrepreneurial endeavours in the long-run because the

founder role was not salient. Finally, entrepreneurs high in role centrality but low in role complexity were likely to have rigid responses to negative environmental feedback, thus, demonstrating confirmation-oriented persistence.

2.3.6 Social cognitive theory

Holland and Shepherd (2011) adopted social cognitive theory to explain entrepreneurs' persistence decisions. They argued that such decisions were a function of both the environment (the decision context) and personal factors. They examined how personal values and adversity interacted with entrepreneurs' decision attributes to influence their persistence decisions, and found that different entrepreneurs used different persistence decision policies depending on their personal values and the level of adversity. Table 2 lists previous theoretical perspectives and sample research on persistence.

Table 2. Previous theoretical perspectives on persistence

Theoretical perspective	Sample research (year)	Type of research	Findings/Argument regarding persistence
Threshold of performance	Gimeno, Folta, Cooper, & Woo (1997)	Empirical, survey design	Owner-managers' venture exit decisions are not solely based on venture economic performance, but also on their threshold of performance. Owner-managers will stay with a venture as long as its performance is above the threshold. Owner-managers' human capital influences their performance thresholds.

Cognitive biases resulting in escalation of commitment	DeTienne, Shepherd, & Castro (2008)	Empirical, conjoint analysis	Entrepreneurs' persistence decisions could be a form of commitment escalation. Such decisions are influenced by factors reflecting the perceived probability and value of future outcomes (e.g., environmental munificence), the motivation to justify previous decisions (e.g., personal investment, personal options), and norms for consistency (e.g., previous organizational success and perceived collective efficacy). In addition, individual extrinsic motivation can also influence entrepreneurs' decision policies.
Procrastination	Shepherd (2009); Shepherd, Wiklund, & Haynie (2009)	Theoretical	Owner-managers delay business failure because they want to temporally avoid the negative emotions associated with business failure.
Passion, attachment	Cardon, Zietsma, Saporito, Matherne, & Davis (2005)	Theoretical	Passion for and attachment to the venture may make it difficult for entrepreneurs to leave the venture when it is time to exit.
Family-embeddedness	Justo & DeTienne (2008)	Empirical	Women entrepreneurs and married entrepreneurs are more likely to exit a venture compared with their counterparts after firm performance is controlled for.
Founder role identity	Hoang & Gimeno (2010)	Theoretical	Founder role centrality and role complexity jointly influence persistence behaviour.
Social cognitive theory	Holland & Shepherd (2011)	Empirical, conjoint analysis	Persistence decisions are a function of both the environment (adversity) and personal factors (personal values).

2.4 Potential Gaps in Prior Research

Although existing research has provided insight into entrepreneurs' or owner-managers' persistence decisions, several research gaps can be identified. First, although entrepreneurship scholars have theorized and empirically examined the impact of some individual characteristics, such as human capital (Gimeno et al., 1997), passion and attachment (Cardon et al., 2005), and extrinsic motivation (DeTienne et al., 2008), given that self-concept is a multi-faceted construct, including individual and social representations (Brewer, 1991; Brewer & Gardner, 1996) and a variety of possible future selves (Markus & Nurius, 1986), our current knowledge of how the self may influence owner-managers' persistence decisions is still limited.

Second, inspired by Granovetter's (1985) social-embeddedness perspective of human action, an increasing number of entrepreneurship scholars have begun to investigate how entrepreneurs act as social selves and how their decisions are influenced by their social networks extended by family and other social relations (Aldrich & Cliff, 2003; Fauchart & Gruber, 2011). The entrepreneurial persistence research has followed this line and has shown the impact of collective efficacy (DeTienne et al., 2008) and family conditions (Justo & DeTienne, 2008) on entrepreneurs' persistence decisions. However, given the multiple roles played by individuals, and hence the potential multiple, sometimes conflicting, influences of these roles on individuals (Kahn et al., 1964), as well as the complexity that characterizes entrepreneurs' decision policies (Holland & Shepherd, 2011; Mitchell & Shepherd, 2010), it is valuable to further explore the complexity of owner-managers' decision policies in a broader social context.

Finally, although some scholars have theorized the relationship between entrepreneurs' venture attachment and persistence (Cardon et al., 2005), little empirical research has been conducted to explore how attachment may influence the persistence with underperforming ventures. More research thus is needed (Cardon et al., 2005).

Therefore, my dissertation aims to address the above-mentioned research gaps. The next chapter introduces the theoretical framework of this research and develops hypotheses accordingly.

CHAPTER 3: THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

3.1 Theoretical Framework

Owner-managers' persistence decisions about an underperforming venture reflect owner-managers' propensity to continue committing to the venture. Thus, persistence decisions are the decisions to *act* (McMullen & Shepherd, 2006). Moreover, owner-managers' persistence decisions have been found to be influenced by both the environment and individual characteristics (Holland & Shepherd, 2011); I thus draw upon social cognitive theory as the overarching theoretical framework of this research.

Social cognitive theory suggests reciprocal relationships among the environment, individual cognitive, affective, and biological factors, and individual actions. That is, individual actions are not only influenced by but also shape the environment and individual characteristics, which also affect each other (Bandura, 1986, 1999). In this research, to make my framework manageable and testable, I adopt only part of Bandura's social cognitive theory, and investigate how owner-managers' persistence decisions are influenced by the decision context and self-images—a set of beliefs and attitudes about the self that regulate one's behaviour, that are constructed based on one's identity, that are influenced by environmental feedback regarding one's performance, and that is subject to changes (Burke, 1980). Other parts of social cognitive theory are outside the scope of this research.

To further conceptualize the decision context, I draw upon role theory and the mental simulation literature. I use role theory as part of the theoretical foundation for this research because individuals seek not only uniqueness but also a sense of belonging (Baumeister & Leary, 1995; Brewer, 1991). Their decisions and actions thus are influenced by the expectations of the multiple roles they assume in society (Kahn et al., 1964). In addition to the roles currently assumed by individuals, individuals may also have opportunities to become a different being in the future, either a self that one aspires to be or a self that one wants to avoid becoming (Markus & Nurius, 1986). The presence of such opportunities, as part of the environment, may lead individuals to mentally simulate different futures, and this mental simulation has been found to influence individuals' current decisions (Taylor & Schneider, 1989). Therefore, the mental simulation literature is also related to the current research.

Finally, within the broad network of contextual influences, individuals' self-images further affect how individuals view the environment and act in the environment. Because our beliefs and attitudes about ourselves are dynamic and multi-faceted (Markus & Wurf, 1987), it is valuable to examine how different types of self-images may affect decisions differently. In this research, I draw upon the psychological capital and fear of failure literature to examine how a competent self-image (i.e., psychological capital) and a vulnerable self-image (i.e., fear of failure) (Mitchell & Shepherd, 2010) may influence owner-managers' persistence decisions. Below, I link together role theory, the mental simulation literature, and the self-image literature to introduce the theoretical framework of this dissertation.

3.1.1 Role theory

Individuals play multiple roles in society. These roles affect individuals' physical and emotional states, and hence their behaviour (Kahn et al., 1964). A role refers to the cultural expectations that are attached to certain societal status or positions (e.g., mother, father, or student)(Cast, 2004). These expectations come from people who are related to the focal individual and whose performance has a stake in the focal individual's performance. Therefore, the expectations represent a role pressure that arouses a psychological force within the focal individual to behave to meet the expectations (Kahn et al., 1964). Satisfactory role performance not only validates a person's societal statuses or positions (Callero, Howard, & Piliavin, 1987), but also enhances his or her self-esteem (Franks & Marolla, 1976; Gecas & Schwalbe, 1983). However, failing to meet role expectations may result in sanctions (Kahn et al., 1964).

Owner-managers assume multiple roles in society. They are the owners and the key decision makers for their ventures. On the one hand, starting and developing a business venture renders autonomy, control, and enjoyment (Benz & Frey, 2008; Kolvereid, 1996; Kuratko, Hornsby, & Naffziger, 1997; Shane et al., 2003), thereby increasing psychic income (Gimeno et al., 1997). Such psychic income is likely to give rise to a sense of uniqueness for owner-managers compared with organizational employees, thus enabling owner-managers to develop venture attachment, which drives owner-managers to invest considerable time, money, attention, and energy in the venture to enhance its viability (Cardon et al., 2005). On the other hand, owner-managers are also embedded in various social networks extended by family, friends, and other social groups

(Aldrich & Cliff, 2003; Aldrich & Zimmer, 1986). For example, owner-managers are family members and need to fulfill family obligations (DeMartino & Barbato, 2003). Meanwhile, owner-managers are community members and may be expected to embrace community values and contribute back to the community (Peredo & Chrisman, 2006).

Recently, there has been increasing interest in the psychological connection between the owner-manager and the venture (Cardon et al., 2005; DeTienne, 2010), the family-embeddedness perspective of entrepreneurship (Aldrich & Cliff, 2003; Jennings & McDougald, 2007; Justo & DeTienne, 2008), and the interactions of entrepreneurship and social networks (e.g., community) (Cornwall, 1998; De Carolis & Saporito, 2006; Fauchart & Gruber, 2011). These streams of research, however, develop in parallel, and leave us with an incomplete picture of how the three different domains (i.e., venture, family, community) may jointly contribute to the complexity of entrepreneurs and owner-managers' decision making (Holland & Shepherd, 2011; Mitchell & Shepherd, 2010). Thus, the call for further research on how entrepreneurial persistence will be affected by venture attachment (Cardon et al., 2005) and family conditions (Justo & DeTienne, 2008), as well as the need to look at the interactions among entrepreneurs, families, and communities (Peredo & Chrisman, 2006), motivated me to select the following three decision context factors as part of my theoretical framework: venture attachment, family time pressure, and social approval pressure.

In addition to the above-mentioned three decision context factors, I also draw on the mental simulation literature to examine the impact of a fourth decision context factor—the number of personal options.

3.1.2 Mental simulation

Mental simulation is defined as “the cognitive construction of hypothetical scenarios or the reconstruction of real scenarios (Taylor & Schneider, 1989: 175).” Mental simulation can take several forms, such as rehearsing future events that are likely to happen, reconstructing past events, imagining oneself behaving a certain way, and mixing together real and hypothetical events (Taylor & Schneider, 1989). Mental simulation enables individuals to envision the future and can help them make plans, solve problems, and manage emotional states (Taylor, Pham, Rivkin, & Armor, 1998).

Consumer behaviour research, management research, and entrepreneurship research have shown that mental simulation of the future affects individuals’ decisions, intention, and behaviour. Scholars studying consumer behaviour found that consumers were more likely to remain in a service relationship when they expected high future use and when they anticipated regret due to discontinuing the service relationship (Lemon, White, & Winer, 2002). Consumers’ expectations of future use and relative advantages of durable products also enhanced their purchase intentions (Holak, Lehmann, & Sultan, 1987). Clients who imagined themselves staying in psychotherapy for a certain period of time demonstrated a lower dropout rate than those who did not imagine themselves continuing the therapy (Sherman & Anderson, 1987). In the management literature, envisioning alternative future environmental conditions was suggested to be a useful tool for managers to evaluate the environment (Anthony, Bennett, Maddox, & Wheatley, 1993). In the entrepreneurship context, entrepreneurs were found to use moral imagination to assist their decisions in highly uncertain situations (McVea, 2009). In

summary, individuals' decisions and behaviour are likely to be influenced by considerations of the future through mental simulation.

Mental simulation is relevant to the persistence decision-making context because owner-managers may have personal options outside their current ventures, and these options provide a context for owner-managers to envision a different future, which affects owner-managers' evaluation of the current persistence decision-making context. The more options owner-managers have, the easier it is for them to visualize futures (Markus & Nurius, 1986) that are different than the owner-manager of an underperforming venture, and the more likely it is that owner-managers' persistence decisions are affected by the availability of personal options. Therefore, the number of personal options is relevant to my research and becomes the fourth decision context factor in my theoretical framework.

3.1.3 Self-images

While the decision context is an external influence on individuals' decisions, individuals' decisions are also influenced by their self-images. Self-image refers to a set of beliefs and attitudes about the self that regulate one's behaviour, that are constructed based on one's identity, that are influenced by environmental feedback regarding one's performance, and that is subject to changes (Burke, 1980). Individuals are active agents, who form their own values and beliefs and who produce feedback through their own actions that shape the environment (Bandura, 1989, 1999; Franks & Seeburger, 1980; Gecas & Schwalbe, 1983). In this research, I examine the impact of two types of self-

images that are relevant to owner-managers' persistence decisions: a competent self and a vulnerable self.

Individuals have the feelings of efficacy and competence that stem from their perceptions and experience of how their actions can affect the environment and how they can make things happen despite setbacks (Franks & Marolla, 1976). This inner, active self exerts an important influence on individuals' self-evaluations and subsequent decisions and actions. In the entrepreneurship context, entrepreneurs have been found to demonstrate high self-efficacy (Chen et al., 1998) and optimism (Busenitz & Barney, 1997; Fraser & Greene, 2006; Lowe & Ziedonis, 2006), which have been shown to affect their investment decisions and venture performance (Hmieleski & Baron, 2008, 2009; Mitchell & Shepherd, 2010). It has also been suggested that self-efficacy predicts persistence (Chen et al., 1998). Therefore, the competent self is relevant to the persistence decision-making context. In this research, I specifically choose to examine one type of competent self-image—psychological capital. Psychological capital is a positive psychological state of development consisting of efficacy, hope, optimism, and resilience (Luthans, Avolio, Avey, & Norman, 2007; Youssef & Luthans, 2007). As psychological capital is about the state of the four components of one's inner life (Luthans et al., 2007) and it directly speaks to one's belief in his or her ability to affect the world (i.e., the efficacy component) and to bounce back from adversity (i.e., the resilience component), it is a competent self-image and is relevant to this research.

Quite different from psychological capital, the notion of fear of failure leads to another type of self-image—a vulnerable self. Fear of failure has five dimensions: fear of

experiencing shame and embarrassment, fear of experiencing an uncertain future, fear of upsetting important others, fear of important others losing interest, and fear of underestimating the self (Conroy, 2001b; Conroy, Willow, & Metzler, 2002). Fear of failure is the fear of being a failure, thereby representing a vulnerable self (Mitchell & Shepherd, 2010). Individuals high in fear of failure worry about their lack of capabilities to perform certain tasks (Bryan, Sonnefeld, & Grabowski, 1983), to achieve certain goals (Burnstein, 1963), and to meet important others' expectations.

Many owner-managers invest considerable time, money, and energy in starting and developing a venture, the performance of which may reflect owner-managers' capabilities (Townsend, DeTienne, Yitshaki, & Arthurs, 2009), and may have powerful consequences on owner-managers' personal growth (Shepherd, 2003; Shepherd & Cardon, 2009). Moreover, the time invested in the venture significantly reduces the time available for family (Parasuraman & Simmers, 2001) and may upset family members. Thus, owner-managers are likely to suffer from fear of failure because of the existence of internal and external pressure on them to perform well. This fear of failure may affect owner-managers' business decisions.

Figure 1 summarizes the theoretical framework of this research. In the following section, I develop my hypotheses.

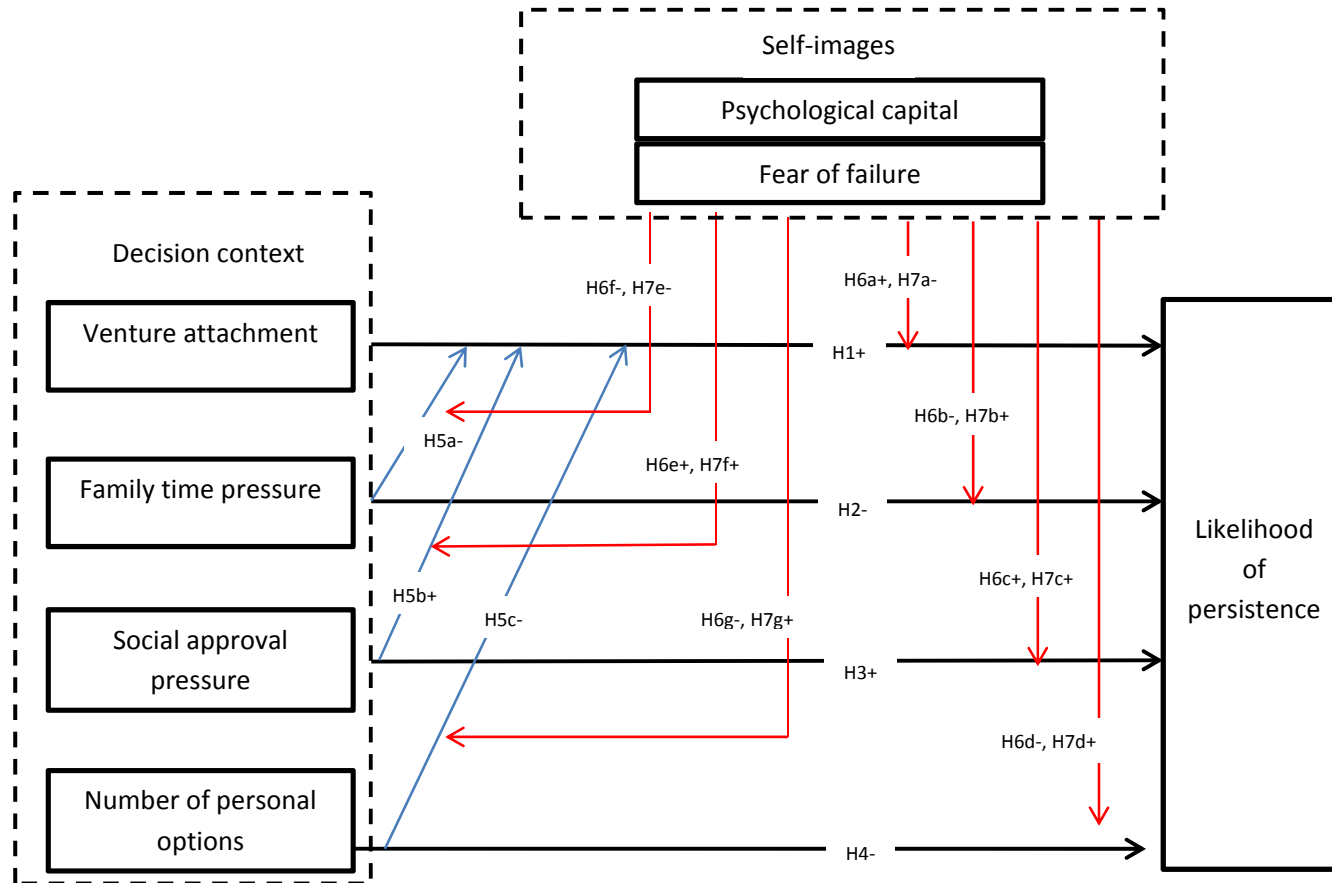


Figure 1. Theoretical framework

3.2 Hypothesis Development

3.2.1 Venture attachment and persistence decisions

I first draw upon the possession attachment literature in consumer behaviour research to define venture attachment. Our possessions are an extension of our sense of self (Belk, 1988). Possession attachment is described as the degree to which “an object, which is owned, expected to be owned, or previously owned by an individual, is used by that individual to maintain his or her self-concept” (Ball & Tasaki, 1992: 158). The key aspect of the definition of possession attachment is the identity link between the owner and the possession—that is, the owner uses the possession to extend his or her self-concept (Kleine, Kleine, & Allen, 1995; Schultz, Kleine, & Kernan, 1989). The possession functions as an identity marker (Ball & Tasaki, 1992; Richins, 1994), an extension of the self, and a window into one’s inner self (Richins, 1994).

Based on the definition of possession attachment, I define an owner-manager’s venture attachment as the degree to which the venture defines and develops the owner-manager’s self-concept. In the entrepreneurship literature, venture attachment has been viewed either as an emotional bond between the entrepreneur and the venture (Cardon et al., 2005; Shepherd, 2003) or an extension of the personality of business owners (Carland, Hoy, Boulton, & Carland, 1984; Stewart, Watson, Carland, & Carland, 1999). In this paper, I focus on the type of venture attachment that is the identity link between the owner-manager and the venture, and argue that the formation of this type of venture attachment may be owing to one of the following reasons.

First, some ventures reflect the owner-managers' identity because the owner-managers build their ventures based on their own ideas. These owner-managers identify an opportunity with earning potentials, design a business model to take advantage of the opportunity, and mobilize financial, marketing, and human resources to exploit the opportunity (Cardon et al., 2005). Owner-managers may also imprint their values, goals, and characteristics on the venture, deal with every problem it has, and wish to see it succeed (Wasserman, 2008). As one's ideas are regarded as an extension of self (Belk, 1988; Belk & Coon, 1993), owner-managers are likely to consider such ventures as things that represent who they are. For example, an individual has experienced a problem that cannot be solved by any existing products. She thus recognizes an opportunity and starts a venture by designing and selling products that can solve the problem. This owner-manager regards her venture as part of herself and feels proud because she has created it and successfully helped many people like her to solve their problems.

Second, some ventures become part of the self because they impart the feeling of ownership to owner-managers (Pierce, Kostova, & Dirks, 2001, 2003). For example, an owner-manager develops the feeling of ownership by gaining a sense of control, developing intimate knowledge about the venture, and/or investing the self in the venture. Such feeling of psychological ownership can link the owner-manager's self-identity with the identity of the venture (Shepherd, Covin, & Kuratko, 2009a).

Third, some ventures become part of the self because they offer experiential enjoyment for the owner-managers, remind them of important social relationships, and store happy memories (Crocker & Wolfe, 2001: 594). For example, an owner-manager

loves music very much. He opens a music store and sells classic records. He feels excited every morning when he wakes up because he knows he is going to talk about music with people who are also passionate about music.

Finally, some ventures transform owner-managers' identity and become part of the self. For instance, an owner-manager starts a venture, also a new career, when an opportunity pops up. She finds her service meaningful and rewarding as it has changed her customers' lives. This venture thus becomes part of the self and makes her who she is.

Below, I theorize how venture attachment may influence owner-managers' persistence decisions.

First, venture attachment may influence owner-managers' persistence decisions through the intention to avoid losing part of the self. Because the venture is part of the self, losing the venture means losing part of the self and being left with an incomplete identity, which may lead to identity crisis (where owner-managers do not know how to define themselves after their ventures are gone) (Brockner et al., 1986) and arouse negative emotions (e.g., grief) (Shepherd, 2003) and even pathological consequences (Pierce et al., 2001). These negative emotions oftentimes demand a long recovery period, and interfere with owner-managers' learning from failure (Shepherd & Cardon, 2009), thus demotivating them to start new ventures in the future. The negative psychological implications of losing a venture make it reasonable to expect that owner-managers choose to persist with underperforming ventures to avoid the loss of part of the self and the dysfunctional consequences associated with such losses.

Second, venture attachment may influence owner-managers' persistence decisions through the intention to avoid an uncertain future. Owner-managers whose identity is intertwined with that of the venture are likely to view the venture as a public projection of their personality, goals, and identity. Venture outcomes, therefore, are perceived by owner-managers as a reflection of their skills, abilities, and self-worth (Townsend et al., 2009). Exiting an underperforming venture because of inability to turn it around may be viewed as a failure of the self (Shepherd et al., 2009a), making owner-managers experience decreased self-efficacy—to feel less confident in their capabilities to perform certain business tasks in the future (Cardon & McGrath, 1999; Gist, 1987), thus making the future appear even more uncertain. Therefore, I expect that owner-managers may choose to stay with underperforming ventures to avoid an uncertain future.

In contrast, owner-managers who are less attached to the venture are likely to sell it or close it down when the venture's performance is below their expectations for a long period of time. For these owner-managers, the venture has no special meaning to them, as their identities are not connected to the venture. The venture may only provide an instrumental value to the owner-managers. Thus, losing it is not psychologically damaging (Shepherd, 2009). When the venture is underperforming, instead of persisting with it, owner-managers may choose to exit the venture and actively explore other opportunities.

Hypothesis 1: There is a positive relationship between venture attachment and the likelihood of persisting with an underperforming venture.

3.2.2 Family time pressure and persistence decisions

Family has been found to be an important predictor of individuals' attitudes and behaviours at work (Rothausen, 1999). Family role pressure may be divided into different categories, for instance, the pressure to spend time with family members, the pressure to provide financial security for the family, and the pressure to sustain family businesses across generations. In this paper, I focus on the first type of family role pressure—family time pressure, which comes from family members' expectations of the focal individual to commit time to family.

I focus on family time pressure for two reasons. First, family time pressure may lead to time-based work-family conflict (Greenhaus & Beutell, 1985) because investing more resources in the family domain may result in under-investment in the work domain (Lee, Kim, & Ling, 2001). Organization studies have found a link between work-family conflict and employees' turnover intention (Burke, 1988; Jones, Chonko, Rangarajan, & Roberts, 2007). These studies suggest a potential relationship between family time pressure and owner-managers' persistence decisions. Second, existing studies on work-family considerations in the entrepreneurship context mainly focus on how family influences new venture creation decisions (Aldrich & Cliff, 2003; Boden, 1999; DeMartino & Barbato, 2003) and growth decisions (Cliff, 1998). Relatively little attention has been given to the impact of family situations on the later stages of entrepreneurship, such as venture exit decisions (Justo & DeTienne, 2008). Therefore, I draw upon the work-family interface literature to theorize how family time pressure may influence owner-managers' persistence decisions.

Work-family interface research suggests that work and family demands are mutually incompatible (Greenhaus & Beutell, 1985; Huang, Hammer, Neal, & Perrin, 2004; Martins, Eddleston, & Veiga, 2002; Netemeyer, Boles, & McMurrian, 1996; Rau & Hyland, 2002). Whereas work roles come with expectations such as improving performance at work, a family role has expectations such as spending time with the family, fulfilling household responsibilities, and being emotionally supportive of the family (Cliff, 1998; Gardner, Gabriel, & Hochschild, 2002). The incompatible nature of the two domains combined with individuals' limited cognitive resources may result in pressure from the family domain, and hence work-family conflict if one over-spends his or her effort in the business domain (Greenhaus & Beutell, 1985; Greenhaus & Powell, 2003; Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005).

In the entrepreneurship context, an increasing number of entrepreneurship scholars suggest that entrepreneurs' businesses and families are intertwined institutions (Aldrich & Cliff, 2003; Dyer, 2003; Heck & Trent, 1999) and that families influence fundamental entrepreneurial processes and outcomes (Boden, 1999; Cliff, 1998). Owner-managers have a wide variety of organization maintenance responsibilities that demand significant investment of time and energy, such as searching for and dealing with suppliers and customers, bookkeeping, hiring, and managing payroll. For owner-managers operating underperforming ventures, venture demands will be even greater because these owner-managers may experience greater financial difficulties and have fewer customers than owner-managers of well performing ventures do. In this situation, if family members require owner-managers to spend more time with them, work-family

conflict is highly likely to occur (Stoner, Hartman, & Arora, 1990). Owner-managers have been found to suffer from greater work-family conflict and lower family satisfaction than organizational employees (Parasuraman & Simmers, 2001). Failure to meet family members' expectations increases the possibility of receiving sanctions from families (Kahn et al., 1964) such as divorce (Neider, 1987), decreased life satisfaction (Kim & Ling, 2001; Parasuraman, Purohit, Godshalk, & Beutell, 1996), and poor well-being (Burke, 1988; Edwards & Rothbard, 2000). These negative consequences are likely to spill over to the business domain and cause emotional exhaustion and job burnout (Jamal, 2007), which, in turn, may leave owner-managers with few psychological resources to deal with business issues involved in the underperforming venture, thereby increasing the likelihood of disengaging from the underperforming venture.

Hypothesis 2: There is a negative relationship between family time pressure and the likelihood of persisting with an underperforming venture.

3.2.3 Social approval pressure and persistence decisions

Entrepreneurship involves community-based activities (Korsching & Allen, 2004). Community is a web of affect-laden relationships with shared values, norms, and meanings (Etzioni, 1996). Venture performance and community development are interdependent (Korsching & Allen, 2004). The community matters because it influences local ventures' survival (Cardon et al., 2005; Matteson, Burr, & Marshall, 1998), serves as a source of resources and support (Cromie & Birley, 1992), and enhances local ventures' success (Kilkenny, Nalbarte, & Besser, 1999). Meanwhile, the high

performance of ventures helps enhance community development (Flora, Sharp, Flora, & Newlon, 1997; Korsching & Allen, 2004). The performance link between ventures and the community makes the latter an important influence on owner-managers' business decisions. Thus, in order to get resources and support from the community, owner-managers operating in the community need to behave in a way that is aligned with community culture and norms (Levine & Moreland, 1990). Behaviour that is consistent with social norms can be rewarded, and this reward is social approval (Rege & Telle, 2004). Obtaining social approval, however, may exert pressure on owner-managers because community expectations may go beyond owner-managers' willingness or capabilities.

In this research, I focus on business communities consisting of various businesses operating in the same geographical area. I also focus on the impact of one type of community expectation—value for entrepreneurial persistence. I do so because successful entrepreneurs are pictured, in media stories, as mythical or heroic figures who drive economic development (Nicholson & Anderson, 2005) and who possess the following qualities: need for achievement (McClelland, 1965), locus of control (Sexton & Bowman, 1986), propensity for risk-taking (Brockhaus, 1980), passion about product commercialization (Baum & Locke, 2004; Cardon et al., 2009; Ma & Tan, 2006), personal responsibility for stakeholders (Markman et al., 2005), and resilience, optimism, and persistence (Ma & Tan, 2006). Such stories are likely to lead people to form an image of owner-managers as people who should be persistent with their own ventures to

pursue their dreams despite challenges and obstacles. Thus, persistent owner-managers are likely to gain social approval in a community that values persistence.

In this research, I argue that social approval pressure can affect owner-managers' persistence decisions through the following two mechanisms. First, high social approval pressure may indicate that behaviors inconsistent with community expectations and values may get social sanctions (Kahn et al., 1964), such as decreased social support. Business communities can serve as a professional support network by providing owner-managers with information, advice, and guidance (Hisrich, 1990). This professional support network may include other business associates, who can give constructive advice based on their own entrepreneurial experience, clients that help get the brand out of the door, and suppliers who can provide trade credits (Hisrich, 1990). Non-compliance with social expectations may result in loss of community support and a bad reputation for the owner-managers. Therefore, to avoid social sanctions, owner-managers are likely to persist with underperforming ventures.

Second, high social approval pressure might suggest that the business community may provide emotional support to the owner-managers of underperforming ventures. A business community that values persistence and that expects its members to be persistent with their ventures is likely to have a high tolerance for underperforming ventures. Owner-managers in such communities may be willing to listen to one another's stories and encourage one another to confront and fight setbacks. Such tolerance and willingness to support may lower the performance thresholds of owner-managers of underperforming ventures and motivate them to persist with their ventures.

Hypothesis 3: There is a positive relationship between social approval pressure and the likelihood of persisting with an underperforming venture.

3.2.4 Number of personal options and persistence decisions

Personal options refer to the options an owner-manager has outside the current venture, such as alternative venturing opportunities and job offers from other organizations (DeTienne et al., 2008). The number of personal options has been shown to be an important decision criterion for individuals in a variety of disciplines. In the negotiation literature, available alternatives are a source of power for negotiation parties. The negotiation party possessing more alternatives has less dependency, and hence stronger power than the other party (Emerson, 1962). Generating a variety of options before making a decision may widen the negotiation party's vision, enhance their creativity to come up with better solutions, and prevent them from compromising with the other party and accepting an agreement that is below their bottom line (Fisher, Ury, & Patton, 1991). In adult attachment literature, the attractiveness of alternatives is one influence on a partner's decision to leave a relationship (Miller, 1997). Similarly, Rusbult (1983) proposed an investment model and found that the quality of alternative opportunities was negatively related to individuals' commitment to their romantic relationships. Research in organizational settings also showed that alternative forces, such as employees' beliefs about the valued outcomes of alternatives increased employee turnover (Maertz & Griffeth, 2004), whereas low quality of alternatives enhanced employees' commitment to jobs (Rusbult & Farrell, 1983). In the entrepreneurship

context, DeTienne et al. (2008) found that entrepreneurs were more likely to leave underperforming ventures when they had many personal options than when they had few.

In this research, I theorize the influence of the number of personal options on owner-managers' persistence decisions using the mental simulation perspective. Mental simulation is the conjunction of pictures or hypothetical scenarios in one's mind to solve a problem or to regulate emotional states (Taylor & Schneider, 1989). Individuals who imagine themselves performing a target behaviour are more likely to change their behavioural intentions than individuals who do not perform imagination exercises (Anderson, 1983). I agree that the number of personal options may affect owner-managers' persistence decisions by affecting the possibility of imagining different futures. Owner-managers with many personal options are more able than their counterparts to imagine different futures in which they are no longer the owner-manager of an underperforming venture, but an owner-manager of a different venture, an employee in an organization, or a volunteer for community events. These different futures could be selves that one aspires to be, that one could become, or that one is afraid of becoming (Markus & Nurius, 1986). The more personal options owner-managers have, the more different futures they can imagine. Such imagination of different futures suggests behavioural avenues that are different from, and that are probably better than, persisting with the current underperforming venture which poses challenges. Such imagination, therefore, may drive owner-managers to discontinue the current underperforming venture. In contrast, owner-managers with few personal options are unlikely to be able to imagine different futures through pursuing alternative options; therefore, they are likely to

continue operating a poorly performing venture (Gimeno et al., 1997) and strive to turn it around.

Hypothesis 4: There is a negative relationship between the number of personal options and the likelihood of persisting with an underperforming venture.

In addition to the impact of the individual decision context factors on owner-managers' persistence decisions, I am also interested in the interactions among different decision context factors. Investigating the interactions enables me to capture the complexity of owner-managers' persistence decision-making policies (Mitchell and Shepherd, 2010). In this research, as I am interested in how the expectations of other social roles and perceptions of the future may interfere with owner-managers' decisions about underperforming ventures, I choose to examine the impact of three interactions of the decision context factors on the likelihood of persistence: the interaction of venture attachment and family time pressure, the interaction of venture attachment and social approval pressure, and the interaction of venture attachment and the number of personal options. In addition, I also examine how the two types of self-images may interact with decision context factors to influence owner-managers' persistence decisions.

3.2.5 Venture attachment, family time pressure, and persistence decisions

When family time pressure is high, owner-managers need to devote considerable attention and energy to spending time with family and meeting family expectations, such as listening to family members, taking care of kids, and fulfilling household responsibilities (Parasuraman & Simmers, 2001). Meeting family expectations may

enable owner-managers to preserve family relationships (Greenhaus & Powell, 2003). Family time demands, however, are likely to collide with the time, attention, and energy demands of underperforming ventures, thereby causing work-family conflict (Burke, 1988; Greenhaus & Beutell, 1985; Williams & Alliger, 1994), which in turn gives rise to job burnout (Burke, 1988), negative mood at work (Williams & Alliger, 1994), psychosomatic symptoms (Burke, 1988), and intention to quit (Rothausen, 1994). These negative consequences make it difficult for owner-managers to engage in underperforming ventures (Sharon & Clair, 1992; Stoner et al., 1990) because less-than-sufficient psychological resources are left for dealing with business issues involved in underperforming ventures. Venture attachment is a motivation for owner-managers to sustain their entrepreneurial efforts. Motivation alone, however, is not enough for an individual to accomplish goals (Shane et al., 2003). The skills, capabilities, and resources needed to perform certain tasks are also necessary (Shane et al., 2003). Therefore, high family time pressure that leads to insufficient resource support will weaken the relationship between venture attachment and the likelihood of persistence.

When family time pressure is low, owner-managers are able to direct more psychological resources to the business domain to deal with the challenges and difficulties of underperforming ventures. Such extra psychological resources can function together with venture attachment—the strong motivation for owner-managers to persist with their ventures—and help amplify its positive impact on persistence. Therefore, the relationship between venture attachment and the likelihood of persistence will be strengthened when family time pressure is low. Accordingly,

Hypothesis 5a: The positive relationship between venture attachment and owner-managers' likelihood of persisting with an underperforming venture is weaker when family time pressure is high than when it is low.

3.2.6 Venture attachment, social approval pressure, and persistence decisions

High social approval pressure from a business community that values persistence indicates that the business community highly expects the owner-managers in the community to be persistent with what they are doing despite obstacles. As the identity connection between the owner-managers and their ventures can arouse an internal psychological force driving the owner-managers to stay with their ventures and to avoid the identity crisis that would result from the loss of their ventures (Brockner et al., 1986), this internal drive will be externally validated by the high social approval pressure (Franks & Marolla, 1976). Therefore, the positive relationship between venture attachment and the likelihood of persistence will be amplified when social approval pressure is high.

When social approval pressure is low, few people in the business community expect one to be persistent with an underperforming venture despite setbacks. When social approval pressure, as an extrinsic incentive created by social interactions (Falk, Gächter, & Kovács, 1999), is lacking in a community, owner-managers who are persistent with their ventures will find it difficult to identify with such a business community, thereby feeling lonely (Boyd & Gumpert, 1983) and lacking a sense of belonging (Baumeister & Leary, 1995). Lack of extrinsic incentive may also mean lack

of resources that could be used to amplify the positive impact of venture attachment on persistence. Therefore, the relationship between venture attachment and the likelihood of persistence will be attenuated when social approval pressure is low. Accordingly,

Hypothesis 5b: The positive relationship between venture attachment and the likelihood of persisting with an underperforming venture becomes stronger when social approval pressure is high than when it is low.

3.2.7 Venture attachment, the number of personal options, and persistence decisions

When there are few alternative options available, owner-managers have limited ability to imagine different futures through other personal options. Therefore, they can only focus on the current underperforming venture (Gimeno et al., 1997) and hope to turn it around to achieve the goal that was initially held when the venture was started. The bricolage¹ literature suggests that some owner-managers are able to create something from nothing despite resource constraints “by exploiting the physical, social or institutional inputs that other firms rejected or ignored” (Baker & Nelson, 2005: 329). Examples include using cost-effective social media to enhance brand awareness, sharing an office with another business owner, or asking for friends’ help when short of hands. Such bricolage behaviour is able to generate more resources to alleviate venture underperformance, for example, saving some money that can be re-invested in the venture. These extra resources enable owner-managers to follow their venture attachment

¹ Bricolage refers to the process in which people use and combine existing resources to create something workable (e.g., solving a problem or exploring opportunities) (Strauss, 1963).

and to continue committing to the venture. As a result, the relationship between venture attachment and the likelihood of persistence is amplified by having few personal options.

As an underperforming venture performs below owner-managers' expectations for a certain period of time (DeTienne et al., 2008; Gimeno et al., 1997), the underperforming venture may not be able to help owner-managers to realize the goal that was initially held when the venture was started. The availability of many personal options, however, may suggest an opportunity to imagine different futures beyond the current underperforming venture, for example, an owner-manager who runs another venture with attractive earning potential and who still enjoys autonomy. Consumer behaviour research has found that consumers' purchase intention will be increased and behaviour will be changed if they engage in mental simulation of future product use (Holak et al., 1987; Sherman & Anderson, 1987). It thus is reasonable to expect that owner-managers are likely to direct more attention to the options outside the current underperforming venture if they mentally simulate different futures. These mental simulations are likely to reduce the psychological resources that could be used to strengthen the positive influence of venture attachment on persistence. Therefore, the availability of many options can weaken the relationship between venture attachment and the likelihood of persistence.

Hypothesis 5c: The positive relationship between venture attachment and the likelihood of persistence is stronger when there are few personal options than when there are many.

3.2.8 Influence of psychological capital

Psychological capital, also referred to as positive psychological capital (Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2004), is a notion that represents an efficacious self. With the emergence of positive psychology, an increasing number of scholars have begun to pay attention to health issues. Luthans and colleagues (Luthans et al., 2006; Luthans et al., 2004) developed the notion of psychological capital, which is defined as “an individual’s positive psychological state of development that is characterized by (1) having confidence (self-efficacy) to take on and put in necessary efforts to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans et al., 2006: 388). Psychological capital is a multidimensional construct and incorporates the mechanisms that are shared by self-efficacy, optimism, hope, and resiliency (Avey, Reichard, Luthans, & Mhatre, 2011). Psychological capital goes beyond human capital and social capital, and answers the questions “Who you are” and “Who you are becoming” (Luthans et al., 2006; Luthans et al., 2004).

Psychological capital is an important concept in both organizational research and entrepreneurship research. In the organizational context, psychological capital is found to contribute to desirable employee attitudes and behaviour (e.g., organizational commitment and organization citizenship behaviours) and to reduce undesirable ones (e.g., cynicism and turnover intention) (Avey et al., 2011). In the entrepreneurship

context, psychological capital has been shown to enhance entrepreneurs' job satisfaction (Hmieleski & Carr, 2007), which is a strong motivation for entrepreneurs to conduct entrepreneurial activities and deal with various challenges involved in the entrepreneurial process (Hisrich, 1990). Moreover, two defining components of psychological capital—optimism and self-efficacy have been shown to be important predictors of new venture performance (Hmieleski & Baron, 2008, 2009). While insightful, existing entrepreneurship research has not demonstrated how psychological capital may play a role in owner-managers' persistence decisions.

Psychological capital is relevant to owner-managers' persistence decisions. Owner-managers high in psychological capital strongly believe in their ability to conduct entrepreneurial activities (Chen et al., 1998), to control outcomes, and to achieve successes (Brundin, Patzelt, & Shepherd, 2008); they can re-frame challenging situations by associating them with rewards such as profit, community recognition, and psychological fulfillment (Hisrich & Brush, 1986); they are positive about the future, explore opportunities that other people find risky, and can tolerate ambiguity (Busenitz & Barney, 1997; Fraser & Greene, 2006; Lovallo & Kahneman, 2003; Simon, Houghton, & Aquino, 2000); they can come up with different approaches to solving a problem and believe in their ability to sustain actions that will lead to good results; and they are resilient in the face of setbacks and hostility (Ma & Tan, 2006). Therefore, the high psychological capital that some owner-managers possess manifests as psychological resources upon which owner-managers can draw to deal with business issues associated with underperforming ventures. Psychological capital thus can amplify the impact of the

factors that contribute to persistence (e.g., venture attachment, social approval pressure) and attenuate the impact of the factors that hinder persistence (e.g., family time pressure, and the number of personal options).

Hypothesis 6a: The positive relationship between venture attachment and the likelihood of persistence becomes stronger when psychological capital is high than when it is low.

Hypothesis 6b: The negative relationship between family time pressure and the likelihood of persistence becomes stronger when psychological capital is low than when it is high.

Hypothesis 6c: The positive relationship between social approval pressure and the likelihood of persistence becomes stronger when psychological capital is high than when it is low.

Hypothesis 6d: The negative relationship between the number of personal options and the likelihood of persistence becomes stronger when psychological capital is low than when it is high.

I also hypothesize some three-way interactions of psychological capital and the level-one interactions. The first three-way interaction is of venture attachment, social approval pressure, and psychological capital. As I have argued in hypothesis 5b, social approval pressure, as an external validation for persistence, strengthens the relationship between venture attachment and the likelihood of persistence. Because psychological capital offers extra psychological resources and can couple with social approval pressure

to create a motivational synergy (Grant, 2008) to sustain owner-managers' entrepreneurial efforts, the amplifying effect of social approval pressure on the venture attachment-persistence relationship will be stronger for owner-managers with high psychological capital than for owner-managers with low psychological capital. In contrast, owner-managers who are low in psychological capital have limited psychological resources to use because they do not believe in their abilities to perform entrepreneurial activities; they are not optimistic or hopeful about the future; and they have limited ability to bounce back from adversity. This lack of psychological resources cannot complement social approval pressure to strengthen the positive relationship between venture attachment and the likelihood of persistence. Accordingly,

Hypothesis 6e: When psychological capital is high, social approval pressure amplifies the positive relationship between venture attachment and the likelihood of persistence to a larger degree than when psychological capital is low.

In organizational studies, psychological capital has been found to buffer the impact of job stress on incivility (Roberts, Scherer, & Bowyer, 2011) because a high level of psychological capital enables individuals to better cope with demands and stressors at work than a low level of psychological capital does. I apply this line of reasoning to the persistence decision-making context and argue that psychological capital assists owner-managers to cope with stressful decision contexts, thereby influencing their persistence decisions. Stress arises when individuals' capabilities are insufficient to deal with environmental demands (Hobfoll, 1989; Lazarus & Folkman, 1984). Specifically in my research, two situations may be stressful. First, when owner-managers are highly

attached to their ventures but simultaneously experience high family time pressure, work-family conflict is likely to occur (Greenhaus & Beutell, 1985; Stoner et al., 1990) and negative emotions are likely to be induced (Burke, 1988). This situation makes continuing with an underperforming venture stressful. Second, when owner-managers are highly attached to the underperforming venture but also have many personal options that may have more attractive earning potential, owner-managers need to decide whether to keep investing time, money, and effort in something that is part of themselves with an uncertain future, or to give up that part of the self and pursue another option. This decision also involves stress. I expect that high psychological capital functions as a set of psychological resources to deal with these stressful situations. When psychological capital is high, the buffering impact of family time pressure and the number of personal options on the relationship between venture attachment and persistence will be reduced. However, when psychological capital is low, with other conditions being equal, owner-managers have limited resources to deal with the above-mentioned stressful situations. As a result, the buffering impact of family time pressure and the number of personal options on the relationship between venture attachment and persistence will be strengthened.

Hypothesis 6f: The buffering impact of family time pressure on the relationship between venture attachment and the likelihood of persistence will be attenuated to a larger degree when psychological capital is high compared with when psychological capital is low.

Hypothesis 6g: The buffering impact of the number of personal options on the relationship between venture attachment and the likelihood of persistence will be

attenuated to a larger degree when psychological capital is high compared with when psychological capital is low.

3.2.9 Influence of fear of failure

Fear of failure was originally conceptualized as an avoidance motive (Clark, Teevan, & Ricciuti, 1956), which is to avoid punishment (Clark et al., 1956), failure, or shame and humiliation as a result of failure (Atkinson, 1957). Later, some researchers argued that failure itself is meaningless. It is the consequences of failure that are threatening (Birney, Burdick, & Teevan, 1966). Following this argument, Conroy and colleagues (Conroy, Poczwardowski, & Henschen, 2001; Conroy et al., 2002) developed a multidimensional model of fear of failure using the cognitive-motivational-relational theory of emotion (Lazarus, 1991). These scholars suggested that individuals experienced fear of failure when they appraised the environment and anticipated the aversive consequences of failing. Fear of failure consists of five dimensions, also five aversive consequences of failure: fear of experiencing shame and embarrassment, fear of devaluing one's self-estimate, fear of having an uncertain future, fear of important others losing interest, and fear of upsetting important others (Conroy, 2001b; Conroy et al., 2002). Some of these dimensions are intrapersonal (e.g., fear of shame and embarrassment) and may drive owner-managers to place emphasis on the impact of intrapersonal decision factors (e.g., venture attachment) on persistence; other dimensions of fear of failure are interpersonal (e.g., fear of upsetting important others) and may drive owner-managers to place emphasis on the impact of interpersonal decision factors (e.g.,

family time pressure) on persistence. Below I theorize how fear of failure may play a role in owner-managers' persistence decisions.

As owner-managers who are strongly attached to their ventures tend to associate venture performance with their own skills and capabilities (Townsend et al., 2009), those who operate underperforming ventures but who are unable to turn around their ventures are likely to view themselves as failures lacking the skills and capabilities to be an owner-manager and the control over venture performance (Sagar, Lavallee, & Spray, 2007). Research has shown that fear of failure demotivates individuals to strive for the originally set goals. For instance, motivation research has found that high fear of failure decreased the prestige of aspired-to occupations and increased individuals' willingness to settle for occupations that were less prestigious and less satisfying (Burnstein, 1963). Child education research has shown that learning-disabled children experienced higher anxiety (which was used as an index of fear of failure) than nondisabled children, and the former demonstrated low reading and mathematics achievement scores (Bryan et al., 1983). In sports psychology literature, the perception of failure was likely to demotivate athletes and aroused the thoughts of quitting (Sagar et al., 2007). When applying this line of reasoning to owner-managers, it is reasonable to expect that the perception of failure may demotivate owner-managers to persist with underperforming ventures. This demotivation is unable to serve as a psychological resource to couple with the decision factors (e.g., venture attachment) to drive owner-managers to persist with underperforming ventures despite difficulties. Therefore, high fear of failure attenuates the relationship between venture attachment and the likelihood of persistence.

Hypothesis 7a: The positive relationship between venture attachment and the likelihood of persistence becomes stronger when fear of failure is low than when fear of failure is high.

Owner-managers high in fear of failure may worry about upsetting important others and losing important others' interest (Conroy, 2001b). Unable to meet important others' expectations may lead to several negative consequences, such as unsatisfied important others, reduced support from important others that threatens venture viability, and owner-managers' poor well-being. Thus, to avoid upsetting important others, owner-managers high in fear of failure are likely to strive to satisfy important others' expectations when making persistence decisions. This avoidance motivation thus may strengthen the impact of external role pressures (i.e., family time pressure, social approval pressure) on persistence. In contrast, owner-managers who do not fear being unable to meet important others' expectations may pay little attention to the influence of external role pressures on their persistence decisions. Accordingly,

Hypothesis 7b: The negative relationship between family time pressure and the likelihood of persistence becomes stronger when owner-managers are high in fear of failure than when they are low in fear of failure.

Hypothesis 7c: The positive relationship between social approval pressure and the likelihood of persistence becomes stronger when owner-managers are high in fear of failure than when they are low in fear of failure.

Owner-managers high in fear of failure may fear having an uncertain future (Conroy, 2001b; Conroy et al., 2002). This is consistent with the sports psychology literature, which found that athletes were concerned about not getting selected to participate in future competitions or the negative emotions derived from failure that might affect their future life (Sagar et al., 2007). The availability of personal options helps reduce the uncertainty of the future because owner-managers know that they have something else to fall back on if they choose to exit their ventures. Given the high uncertainty associated with operating an underperforming venture, owner-managers high in fear of failure may prefer to take advantage of alternative personal options and pursue a more certain future. Thus, the relationship between the number of personal options and the likelihood of persistence will be amplified when owner-managers are high in fear of failure.

When fear of failure is low, however, the negative relationship between the number of personal options and the likelihood of persistence will be attenuated because owner-managers are not afraid of the uncertainty associated with operating an underperforming venture. They may be able to face up to and actively deal with the setbacks involved in the underperforming venture to turn it around. Accordingly,

Hypothesis 7d: The negative relationship between the number of personal options and the likelihood of persistence will be amplified when owner-managers are high in fear of failure compared with when fear of failure is low.

I also hypothesize some three-way interactions of fear of failure and the contingent relationships between some decision context factors.

Because owner-managers high in fear of failure fear upsetting important others and losing their interest (Conroy, Metzler, & Hofer, 2003), they will strive to meet family members' and the community's expectations so as not to upset them or lose their interest. Therefore, the buffering impact of family time pressure on the relationship between venture attachment and the likelihood of persistence will be amplified for owner-managers high in fear of failure, as will be the amplifying impact of social approval pressure on the relationship between venture attachment and the likelihood of persistence. In addition, because owner-managers high in fear of failure fear having an uncertain future, and because operating an underperforming venture involves high uncertainty regarding whether the underperforming venture will be turned around, these owner-managers will be more sensitive to the impact of personal options on persistence decisions than those low in fear of failure. That is, the buffering effect of the number of personal options on the venture attachment-persistence relationship will become stronger for owner-managers high in fear of failure compared with those low in fear of failure.

Hypothesis 7e: The buffering impact of family time pressure on the positive relationship between venture attachment and the likelihood of persistence is amplified to a larger degree when fear of failure is high than when fear of failure is low.

Hypothesis 7f: The amplifying impact of social approval pressure on the positive relationship between venture attachment and the likelihood of persistence is amplified to a larger degree when fear of failure is high than when fear of failure is low.

Hypothesis 7g: The buffering impact of the number of personal options on the positive relationship between venture attachment and the likelihood of persistence is amplified to a larger degree when fear of failure is high than when fear of failure is low.

CHAPTER 4: METHODS

4.1 Sample

To test the hypotheses of this study, I obtained a sample of owner-managers of small- and medium-sized enterprises (SMEs). The sampling frame for this research came from the Dun & Bradstreet (D&B) directory, which has been widely used in existing entrepreneurship research (DeTienne & Cardon, 2012; Hmieleski & Carr, 2007; Stoner et al., 1990). D&B is the world's leading source of commercial information and insight on businesses. Its global commercial database contains 140 million business records, including a large amount of information on privately held businesses.² The directory used in this research was last updated at the end of January 2011. It contained information on firm addresses, phone numbers, industry (both SIC and NAICS codes), number of employees, estimated sales revenue, year of founding, job title, and so forth. To arrive at my sample, I applied four selection criteria.

First, consistent with previous research that used the conjoint experimental design (Bruns, Holland, Shepherd, & Wiklund, 2008), companies within a two-hour driving distance from my research site were identified from the directory. I chose geographically proximate cities because I wanted to (1) be able to answer owner-managers' questions regarding the research instrument while they were completing it, (2) conduct a post-experiment interview to explore owner-managers' introspection of the experiment, and (3) enhance the quality of responses (Bruns et al., 2008; Shepherd & Zacharakis, 1997). In-

² Source: <http://www.dnb.ca/about-dnb.html>

person implementation of the study also provided an opportunity to observe participants so that I could learn more about owner-managers and their ventures. This administration method is widely used by entrepreneurship scholars using the conjoint experimental design in their research (Holland & Shepherd, 2011; Mitchell & Shepherd, 2010).

Second, I further selected SMEs that were for-profit firms with fewer than 500 employees and less than \$50 million annual sales revenue, according to Canada's definition of SMEs (Carrington, 2009). SMEs were chosen because the owner-managers of such firms are likely to have decision making autonomy, whereas decisions in large organizations are likely to be influenced by entities other than the owner (e.g., external investors and managers) and might therefore not fully reflect the owner's thinking.

Third, as I am interested in owner-managers' persistence decisions, I invited the owners of the selected firms to participate in this research. When I was conducting the interviews with the owner-managers, I further made sure that these owners were actively involved in the daily management of their ventures. I choose owner-managers as opposed to entrepreneurs because owner-managers are more aligned to the characteristics of my sample than entrepreneurs. Owner-managers refer to people who own, manage, and make decisions for their ventures (Shepherd et al., 2009b), whereas entrepreneurs are those people who have done something new: entering a new market, designing a new product, developing a new process, or employing a new combination of resource (Schumpeter, 1934). The respondents in my sample meet the definition of owner-managers. Not all of them, however, can be defined as entrepreneurs. As 26% of my sample replicate an existing product/service in a similar market, these people are not considered as

entrepreneurs in this dissertation. Therefore, I position this dissertation as research about owner-managers, as opposed to entrepreneurs.

Finally, consistent with prior research (McDougall, Covin, Robinson, & Herron, 1994), I selected ventures less than 8 years old to ensure that the owner-managers had the authority and control to make decisions (DeTienne et al., 2008). It should be noted that 17 ventures in my final sample were found to be more than 8 years old during my interview. I did, however, keep them in the sample after I made sure, during the interview, that the owner-managers of these ventures were actively involved in the day-to-day management of their ventures and were the key decision-makers for the ventures.

The above-mentioned four criteria enabled me to identify 531 firms from the D&B directory. A total of 421 out of the 531 firms had valid contact information, with other firms having incorrect phone numbers, having wrong mailing addresses, or having gone out of business. I first sent a letter (Appendix A) to invite the owner-managers to participate in my research. The letter introduced the purpose of the study, the importance of the study, and how the study would be conducted. In the letter, I also ensured the confidentiality of the information that would be provided by participants in order to enhance response rate. One week after the invitation letter was sent, I called the owner-managers to schedule appointments with them. During the phone call, I answered any questions they had regarding the study. If an owner-manager agreed to participate, I scheduled a face-to-face meeting to administer the experiment. Many of the meetings were in the owner-managers' offices, with other meetings in nearby coffee shops. Ninety out of the 421 owner-managers in the sample agreed to participate, resulting in a response

rate of 21.4%. Among these 90 owner-managers, 3 owner-managers provided unreliable answers to the decision-making task (their answers had low test-retest reliability), and thus were excluded from the final sample. As a result, responses from 87 owner-managers' were used for data analysis. My data collection lasted for 6 months.

Using information about the number of employees and firm age provided in the D&B directory, I conducted analysis of variance to make sure that there were no significant differences between respondents and non-respondents. Respondents and non-respondents did not vary in either the number of employees ($F=1.102, p>.1$) or firm age ($F=.034, p>.1$). In terms of the demographic characteristics of the participants and their ventures, 60% of the owner-managers in my sample were male; 65% of the owner-managers had a university degree or higher. The mean, also the median, age of owner-managers was 50 years old; the mean age of the ventures was 8 years old (median age was 6 years old); the mean size of the ventures was 5 employees (median size was 3 employees); and all of these ventures were privately held. The ventures operated across 31 different industries, according to the first two digits of the SIC codes in the D&B directory.

4.2 Research Task

4.2.1 Conjoint analysis

To examine owner-managers' persistence decisions, I used metric conjoint analysis in this research. Conjoint analysis has been used in hundreds of judgment and decision-making studies in disciplines such as marketing (Green & Srinivasan, 1990) and

entrepreneurship (Shepherd & Zacharakis, 1997). Conjoint analysis is “a technique that requires respondents to make a series of judgments, based on profiles, from which their ‘captured’ decision processes can be decomposed into its underlying structure” (Shepherd & Zacharakis, 1999: 204). A profile is a combination of all the decision attributes where each attribute is described by one of its levels. Conjoint analysis is appropriate for theory testing—that is, for investigating hypothesized relationships between a number of decision attributes and a particular judgment (Shepherd & Zacharakis, 1999). By capturing respondents’ “theory in use” (the theory that actually governs an individual’s actions) rather than their “espoused theory of action,” (the theory that an individual sticks to and communicates to others when requested) (Argyris & Schon, 1974: 7), conjoint analysis can avoid validity threats such as post hoc revisionism based on social desirability, incorrect memory, or inability to articulate complex decision processes (Shepherd & Zacharakis, 1997).

In terms of sample size, conjoint analysis permits smaller sample sizes (Shepherd & Zacharakis, 1999) because each individual in the sample makes a series of decisions for varied profiles, thereby enabling the researcher to collect a large number of observations on the decision level. This makes conjoint analysis an ideal method for research requiring data from populations that are difficult to contact or that are too busy to participate in studies—for example, SME owner-managers. Conjoint analysis has been widely used in decision-making research in the entrepreneurship context (see Table 3).

Although widely adopted by scholars in multiple disciplines, conjoint analysis is not without limitations. Three potential limitations have been pointed out in previous

research (Brundin et al., 2008). First, because respondents are making decisions based on hypothetical decision scenarios, it is argued that conjoint analysis may not be able to identify owner-managers' preference structures in real decision contexts. Second, conjoint experiment drives respondents to make decisions based on a limited number of cues that may not reflect real decision contexts. Third, conjoint experiment may have a face validity issue as respondents pay attention to the decision attributes only because the attributes are presented in the experiment. Researchers usually address the above-mentioned three limitations by conducting pre-design interviews with a small sample from the target population to explore their preference structures for a particular decision, and to make sure the selection of decision attributes matches respondents' key decision criteria. I also addressed these limitations when designing my research instrument, which will be discussed in the research instrument and manipulations sections.

Table 3. Entrepreneurship studies that have used conjoint analysis

Authors (year)	Topic	No. of attributes, higher-level variables	Sample size, survey method, no. of profiles	Analysis
Bruns & Fletcher (2008)	Banks' risk assessment of Small-and medium-sized enterprises (SMEs)	8 attributes	114 lending officers In person Orthogonal design, 32 profiles	Aggregation of individual linear model analyses
Bruns, Holland, Shepherd, & Wiklund (2008)	Loan officers' assessment of SMEs	8 attributes	114 lending officers In person Orthogonal design, 32 profiles	Hierarchical linear modeling
Brundin, Patzelt, & Shepherd (2008)	How managers' emotional display influences employees' willingness to act entrepreneurially	6 attributes, with 1 attribute as a moderator	91 employees in 31 companies Phone and mail Orthogonal design, 32 profiles	Hierarchical linear modeling
Choi & Shepherd (2004)	Entrepreneurs' decisions to exploit opportunities	6 attributes	55 lead entrepreneurs in business incubators Mail and in person Orthogonal design, 32 profiles	Hierarchical regression

Choi & Shepherd (2005)	How do stakeholders assess a venture and decide to support it	6 attributes	Four samples of 51, 70, 32, and 35 individuals Orthogonal design, 32 profiles	Hierarchical linear modeling
DeTienne et al. (2008)	Entrepreneurs' persistence with underperforming firms	7 attributes	89 entrepreneurs In person Orthogonal design, 32 profiles	Hierarchical linear modeling
Douglas & Shepherd (2002)	Career choice decisions	4 attributes	91 individuals Orthogonal design, 16 profiles	Regression
Franke et al. (2006)	How similarity biases influence venture capitalists' evaluations of start-up teams	7 attributes	51 respondents 20 conjoint cards with 2 hold-out cards	Generalized linear mixed model
Holland & Shepherd (2011)	Entrepreneurs' persistence decisions when facing adversity	4 decision-level attributes, 2 higher-level variables: values and adversity	105 entrepreneurs In person and mail 32 profiles	Hierarchical linear modeling

Mitchell & Shepherd (2010)	Image of self, image of opportunity, and entrepreneurs' investment decisions	4 decision-level attributes, 3 individual-level variables	127 entrepreneurs In person Orthogonal design, 16 profiles	Hierarchical linear modeling
Patzelt & Shepherd (2008)	Managers' decision to persist with underperforming alliances	5 attributes	93 managers Orthogonal design, 32 profiles	Hierarchical linear modeling
Shepherd (1999)	Venture capitalists' assessment of new venture survival	8 attributes	66 venture capitalists In person and mail Orthogonal design, 32 profiles	Aggregation of individual linear model analyses
Shepherd & Zacharakis (2003)	Customers' assessment of a new venture's cognitive legitimacy	4 attributes	51 respondents Mail Orthogonal design, 16 profiles	Aggregation of individual linear model analyses
Shepherd, Zacharakis, & Baron (2003)	Venture capitalists' decision processes	8 attributes	66 venture capitalists In person and mail Orthogonal design, 32 profiles	Aggregation of individual linear model analyses
Zacharakis, McMullen, & Shepherd (2007)	Venture capitalists' decision policies across 3 countries	8 decision factors	119 venture capitalists Each participant made 50 investment decisions on 8 factors	HLM

Zacharakis & Shepherd (2001)	The influence of overconfidence on venture capitalists' decision making	5 base cognitive cues (treatment 1), 3 additional cognitive cues (treatment 2), 4 task cues (treatment 3)	51 respondents Each participant made 50 investment decisions using 4 to 8 information factors	HLM
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4.2.2 Research instrument

My research instrument consists of task instructions (Appendix B), the decision-making task, and a post-experiment questionnaire (Appendix C).³ In task instructions, I asked owner-managers to keep in mind five assumptions while making decisions for the hypothetical underperforming venture. I justify these assumptions below.

I told the participants to assume that they were an owner-manager and a top decision maker for the hypothetical venture, as opposed to an investor, who is likely to have quite different decision criteria than owner-managers. Research has shown that angel investors pay great attention to factors affecting the profitability of a venture, such as product innovation, market size, entrepreneurial team, and profits (Mason & Stark, 2004; Mason & Harrison, 2002; van Osnabrugge & Robinson, 2000). An important factor in owner-managers' decisions about a venture, however, is the psychic income that they have gained from the entrepreneurial process (Gimeno et al., 1997), a factor that is considered less important by external investors.

I manipulated firm size by setting the hypothetical venture size at 10 employees because owner-managers' persistence decisions are likely to be influenced by the number of employees. The more employees owner-managers have, the less likely they will be to quit the venture because they, to some extent, are responsible for ensuring the job security of the employees (Holland & Shepherd, 2011). Moreover, 10 employees matched the characteristic of the ventures in my sample, 85% of which had fewer than 10

³ The psychological capital scale (Luthans, Youssef, & Avolio, 2007) can be obtained at www.mindgarden.com.

employees. According to the feedback from some respondents, it was difficult to imagine themselves in a situation with more than 10 employees. Ten employees is the threshold number, making it neither too easy nor too difficult for owner-managers to walk away from a venture.

I manipulated firm age by setting it at three years for two reasons. For one, three years allows owner-managers to develop attachment to the venture (Cardon et al., 2005). This sets a pre-condition for my measure of venture attachment. For another, my pre-test with small business owner-managers as well as previous research suggested that three years is often a threshold for the survival of new ventures after launch (Cooper, Gimeno-Gascon, & Woo, 1994). If a venture has been underperforming for three years, oftentimes the owner-manager of the venture needs to consider the future of the venture—that is, whether to continue committing to it. Therefore, a firm age of three years is appropriate to the context of this research.

I adopted Holland and Shepherd's (2011) and Patzelt and Shepherd's (2008) manipulation of venture performance, which told owner-managers that the performance of the hypothetical venture was below *their* expectations. This manipulation has advantages over DeTienne and colleagues' (2008) manipulation, which uses industry average performance as the reference point. The manipulation in my research allows for different types of underperformance (e.g., financial, strategic) that are known to influence persistence decisions (Patzelt & Shepherd, 2008), whereas DeTienne and colleagues' (2008) manipulation only speaks to financial underperformance. Moreover, as the participants in my research came from 31 different industries, which are likely to have

different levels of financial performance, owner-managers' own performance thresholds are more appropriate than the average performance of a particular industry to serve as the reference point.

To avoid the possibility that participants would choose to pursue a personal option (a decision factor in my experiment) while continuing to stay with the hypothetical underperforming venture, I asked respondents to remember that they had limited resources and must choose between the underperforming venture and a personal option.

As the four decision factors in my research instrument may not cover all the factors considered by owner-managers when deciding about an underperforming venture in real situations, I told participants that the underperforming venture presented was assumed to be similar to the venture in which they were currently involved in their real life. Therefore, for the factors not covered by my research instrument, owner-managers could imagine something based on their real situations.

Finally, as support from other people may lead the focal individual to be more responsive to role demands than when such support is absent (Greenhaus & Powell, 2003), I manipulated family and social support in the task instruction by informing respondents that their family and the business community have been generally supportive of their effort to fulfill their responsibilities as owner-managers. It should be noted that such manipulation is only with respect to a *general* attitude and behaviour of the family and the business community toward owner-managers' business decisions and actions, but not with respect to a specific decision.

After reading the task instructions, respondents proceeded to the metric conjoint decision-making task. During the decision-making task, owner-managers were asked to evaluate a series of hypothetical scenarios about an underperforming venture and to indicate the likelihood that they would stay with the venture (by choosing a number on a scale anchoring from 1 to 11). Upon the completion of the decision-making task, I conducted a semi-structured interview with participants and asked about their rules of making the decisions. Finally, a post-experiment survey was administered to participants to collect information about themselves, their ventures, and their business environment. The task instruction, the decision making task, and the post-experiment survey were conducted either on my laptop or the respondents' computer, where they could simply click on a survey link which linked them to the research instrument on Qualtrics—a software for designing online survey questionnaires⁴. While the respondents were answering questions on the computer, I was with them and ready to answer their questions regarding the research instrument.

4.3 Manipulations and Measures

4.3.1 Dependent variable

Consistent with previous studies on entrepreneurs' decisions to persist with underperforming firms or firms in adversity (DeTienne et al., 2008; Holland & Shepherd, 2011), the dependent variable in this research is owner-managers' likelihood of persistence with an underperforming venture. After evaluating each decision scenario,

⁴ For more information about Qualtrics, please see <http://www.qualtrics.com/>.

owner-managers were asked to indicate their likelihood of persistence on an 11-point Likert scale, anchoring from 1 (definitely leave the venture) to 11 (definitely remain in the venture).

4.3.2 Level-one (decision-level) variables

The measurement for the four level-one decision context factors was developed in two stages. In the first stage, I conducted interviews with one entrepreneur and five MBA students who had entrepreneurial experience prior to their MBA study, in order to explore the factors that influenced their persistence decisions with underperforming ventures. Participants in the pre-test were asked to describe the time when their venture was underperforming, why it was underperforming, how they decided the future of the venture, and why they made that decision. The interviews suggested that owner-managers' persistence decisions were influenced by the profitability of the venture, their attachment to the venture, family factors (e.g., a pregnant wife), social pressure (mainly from other people who thought the entrepreneur should stay with the venture), alternative opportunities, self-efficacy, and fear of failure. These exploratory interviews helped justify the selection of the decision factors in my research. Then I went back to extant research to develop the manipulations of the selected decision factors.

In the second stage, I pre-tested my research instrument on five small business owner-managers before I went into the field to collect data. The purpose of the pre-test was to evaluate and modify my research instrument to make sure that the instructions, decision profiles, and the procedure were clear and made sense to owner-managers. One

potential challenge for conjoint analysis is related to its face validity. Problems with face validity occur when owner-managers place importance on factors only because of the presence of these factors in the study (Brundin et al., 2008). By theoretically justifying and pilot testing the selected decision factors, I enhanced the face validity of my research instrument.

There were four decision context factors in this research: venture attachment, family time pressure, social approval pressure, and the number of personal options. Each decision factor varied at two levels: high (or many for the number of personal options) and low (or few for the number of personal options). It should be noted that I used different labels (i.e., “family pressure” for “family time pressure” and “social pressure” for “social approval pressure”) in my research instrument. The difference in labels, however, will not affect owner-managers’ decision results because I presented both the labels and the manipulations of the decision factors to owner-managers. I also read to owner-managers the manipulations and answered their questions about the manipulations. By doing so I made sure owner-managers understood the manipulations correctly.

Venture attachment is manipulated using the identity link between the venture and the owner-manager. I choose this measure because the identity link between the venture and the owner-manager has been found to be an important reason for owner-managers to stay with their ventures (DeTienne, 2010; Shepherd, 2009). High venture attachment is manipulated as “This venture defines and reflects who you are. If you were describing yourself, this venture would be something you would mention.” Low venture attachment

is manipulated as “This venture doesn't define or reflect who you are. If you were describing yourself, this venture would not be something you would mention.”

One may argue that venture attachment is not a decision context factor, but something within an individual. I justify it as a decision context factor in two aspects. For one thing, owner-managers strongly attached to their ventures are likely to pay special attention to venture needs, strive to go beyond those needs, and wish to see their ventures successful (Cardon et al., 2005). In contrast, owner-managers weakly attached to their ventures may invest much less effort in their ventures. Therefore, owner-managers strongly attached to their ventures may perceive higher role demands than their low-attachment counterparts. For another, the manipulation is worded from the venture's perspective, thus is likely to give owner-managers an impression that the venture demands (does not demand) their efforts.

Family time pressure was manipulated using the time demands of family. Time commitment to home has been suggested as an objective indicator of family role demands, and such time commitment may consist of the time committed to housework and childcare activities (Parasuraman & Simmers, 2001). My manipulation is consistent with Greehaus and Powerll's (2003) manipulation for family role pressure. High family time pressure is manipulated as “Staying with this venture runs against what your family expects from you in your family life (e.g., spending time with your family, emotionally caring about them, fulfilling your household responsibilities). Your family insists that your meeting their expectations is critical.” Low family time pressure is manipulated as “Staying with this venture still allows you to meet your family's expectations from you in

your family life (e.g., spending time with them, emotionally caring about them, fulfilling your household responsibilities). Your family indicates that your meeting their expectations is desirable but not critical.” One may argue that the demand for emotional care is not time demands. I argue that I use the demand for emotional care as one example of family time pressure because emotional care for family members demands time and attention from owner-managers. The overall manipulation of family time pressure focuses on family members’ time demands.

Social approval pressure is manipulated by using the business community’s expectations of owner-managers’ persistence behaviour. As going against community expectations may result in community sanctions and a bad social image, which exert pressure on the focal individual (Kahn et al., 1964), my manipulation of social approval pressure is appropriate. The manipulation of high social approval pressure is “The venture operates in a business community where people are go-getters and non-quitters to support each other, to satisfy community needs, and to enhance community welfare. They also expect everyone in the community to do so.” The manipulation of low social approval pressure is “The venture operates in a business community where people decide and act to enhance their self-interest. There is no socially-held expectation as to what someone in the community should do.”

The number of personal options refers to the number of other options an owner-manager has outside of his or her venture. Such options could include a job offer from another organization or another venturing opportunity. Following DeTienne et al. (2008), many personal options is manipulated as “Outside of this venture, many other

opportunities that have attractive earning potentials are available for you (e.g., job offer, venturing opportunity).” Few personal options is manipulated as “Outside of this venture, few other opportunities that have attractive earning potentials are available for you (e.g., job offer, venturing opportunity).”

Table 4 lists the definitions and manipulations of the independent variables.

Table 4. Independent variable list

Variables	Definitions	Manipulations
Venture attachment	The extent to which the owner-manager considers the venture important	<p>High: The venture defines and reflects who you are. It is something you would mention when you were describing yourself.</p> <p>Low: The venture doesn't reflect who you are. It is not something you would mention when you were describing yourself.</p>
Family time pressure	The perceived pressure from family members who demand time from the owner-manager	<p>High: Staying with this venture runs against what your family expects from you in your family life (e.g., spending time with your family, emotionally caring about them, fulfilling your household responsibilities). Your family insists that your meeting their expectations is critical.</p> <p>Low: Staying with this venture still allows you to meet your family's expectations from you in your family life (e.g., spending time with them, emotionally caring about them, fulfilling your household responsibilities). Your family indicates that your meeting their expectations is desirable but not critical.</p>

Social approval pressure	The perceived pressure to gain approval from the business community, which values persistence	High: The venture operates in a business community where people are go-getters and non-quitters to support one another, to satisfy community needs, and to enhance community welfare. They also expect everyone in the community to do so.
		Low: The venture operates in a business community where people decide and act to enhance their self-interest. There is no socially-held expectation as to what someone in the community should do.
The number of personal options	The number of other options available to the owner-manager	Many: Outside of this venture, many other opportunities that have attractive earning potentials are available for you (e.g., job offer, venturing opportunity).
		Few: Outside of this venture, few other opportunities that have attractive earning potentials are available for you (e.g., job offer, venturing opportunity).

4.3.3 Level-two (individual- and environmental-level) variables

Level-two variables include the two self-images—psychological capital and fear of failure—and some control variables.

Psychological capital. In organizational studies, Luthans and colleagues have developed a scale for measuring psychological capital (Luthans et al., 2007) and this scale is widely used in many organizational studies (Avey et al., 2011; Luthans, Norman, Avolio, & Avey, 2008; Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011). This scale consists of 24 items that are adapted from the following scales: hope (Snyder et al., 1996), resilience (Wagnild & Young, 1993), optimism (Scheier & Carver, 1985), and efficacy (Parker, 1998). Organization studies that use this 24-item scale have demonstrated that psychological capital is a higher-order construct consisting of the four

defining components. The items of this scale have high content and face validity, and the overall measure of psychological capital has high convergent, discriminant, and criterion validity (Luthans et al., 2007). As my research is related to owner-managers' psychological capital, I adopted Hmieleski and Carr's (2007) psychological capital measure that is particularly applied to the entrepreneurship context. The difference between Hmieleski and Carr's (2007) psychological capital scale and the 24-item psychological capital scale used in organizational studies is that Hmieleski and Carr (2007) replaced the six items of the efficacy scale (Parker, 1998) with six items from the entrepreneurial self-efficacy scale developed by De Noble, Jung, and Ehrlich (1999). An overall measure of psychological capital was calculated using the sum of the four scales. The reliability (Cronbach's α) for the psychological capital scale was .929.

Fear of failure. Fear of failure was measured by a 25-item scale (Conroy, 2001b; Conroy et al., 2002). This scale had five dimensions: fear of experiencing shame and embarrassment, fear of devaluing one's self-estimate, fear of having an uncertain future, fear of important others losing interest, and fear of upsetting important others. The measure of fear of failure had been demonstrated to have high convergent, discriminant, and predictive validity, and the higher-order model (with five correlated first-order factors) had a good fit (Conroy, 2001b). Fear of failure was measured by a 7-point Likert scale, anchoring from 1 (do not believe at all) to 7 (believe 100% of the time). An overall measure of fear of failure was calculated using the sum of the five dimensions and was highly reliable (Cronbach's α = .911).

In addition to psychological capital and fear of failure, I also controlled for the factors that were theorized or found in previous research to affect owner-managers' persistence decisions (DeTienne et al., 2008; Gimeno et al., 1997; Justo & DeTienne, 2008). These factors included gender, human capital, owner-managers' actual venture attachment, family identity, business community identity, personal investment, and environmental dynamism. I argue that these factors affect owner-managers' likelihood of persistence in a similar manner across all decision contexts. Therefore, I only included them as random intercepts. I did not allow these variables to interact with level-one factors and interactions.

Gender. Gender was controlled as it was an important predictor of entrepreneurs' venture decisions (Justo & DeTienne, 2008). Gender was measured using a binary variable, with 0 indicating male and 1 indicating female.

Human capital. Human capital has been found to influence entrepreneurs' venture exit decisions (Gimeno et al., 1997). Human capital can be categorized into general human capital and specific human capital. In my research, general human capital was measured by age, education level (university degree versus no university degree), and the total years of work experience. Following Mitchell and Shepherd (2010), I calculated an index of the standardized values of the above three variables for general human capital.

Specific human capital was measured by industry experience (the total years of work experience both in the primary industry and in similar industries) (Mitchell,

Shepherd, & Sharfman, 2011) and the total number of new ventures created at the time of the interview (Ucbasaran, Westhead, Wright, & Flores, 2010). Specific human capital was also calculated using an index of the standardized values of the above two variables.

Actual venture attachment. It might be difficult for some owner-managers to put themselves in a hypothetical decision context that they have not experienced (e.g., a low venture attachment condition). Therefore, owner-managers' actual attachment to their own ventures is likely to influence their persistence decisions, and should be controlled. Ball & Tasaki's (1992) possession attachment scale was adapted to the entrepreneurship context to measure owner-managers' actual venture attachment. This possession attachment scale had a reliability of .93, and factor analysis confirmed a single factor which accounted for 87% of the common variance (Ball & Tasaki, 1992). Sample items of the venture attachment scale in this dissertation included: "My firm reminds me of who I am," and "If I were describing myself, my firm would likely be something I would mention." The reliability of the venture attachment scale was high (Cronbach's $\alpha = .854$).

Family identity. Family identity was measured by Aryee & Luk's (1996) four-item family identity scale. Sample items included "The major satisfactions in my life come from my family," and "The most important things that happen to me involve my family." The reliability of the family identity scale was .904.

Community identity. Community identity was measured using the identity scale of the collective self-esteem scale developed by Luhtanen and Crocker (1992). The identity subscale consisted of 4 items, and was reworded and adapted to my research

context. Sample items included “The business community I belong to is an important reflection of who I am,” and “In general, belonging to this business community is an important part of my self-image.” The reliability of the community identity scale was .860.

Personal investment. Personal investment refers to the time, energy, and money that owner-managers invest in their ventures. DeTienne et al. (2008) have found that the higher the personal investment, the more likely entrepreneurs are to persist with underperforming ventures. This effect of personal investment could lead to the sunk cost fallacy (Arkes & Blumer, 1985). To rule out this explanation, I controlled for personal investment, which was measured by the weekly number of hours that owner-managers had invested in their ventures and the percentage of personal wealth owner-managers had invested in their ventures. I created an index of the standardized values of the above two variables for personal investment.

Environmental dynamism. Environmental dynamism was measured by a 5-item scale developed by Miller and Friesen (1982). This measure used a 7-point Likert-type scale, with 1 indicating strong disagreement and 7 indicating strong agreement with a series of statements regarding the competitive nature of the environment. The reliability of the scale is .690, which is acceptable.

4.4 Experimental Design

I used a fully crossed factorial design. The four decision factors (i.e., venture attachment, family time pressure, social approval pressure, and the number of personal

options) resulted in 16 (2^4) decision profiles. The final experimental instrument consisted of 33 profiles, including 1 practice profile (not included in the analysis) to familiarize owner-managers with the experiment, 16 decision profiles, and 16 replicate profiles to test the reliability of owner-managers' responses. A sample decision scenario is included in Appendix D.

In order to avoid the factor order effects (Orme, Alpert, & Christensen, 1997), I developed four different versions of the experiment instrument that differed in both the order of the decision attributes within a profile and the order of the profiles within the experiment. The mean scores of the likelihood of persistence (the dependent variable) across the different versions were not significantly different ($p > .05$). Therefore, no order effects were found.

4.5 Data Analysis

Data were collected at two distinct levels: the decision level and the individual level. Given that persistence decisions are nested within individuals who make the decisions and that the decisions made by individuals are not independent of individuals, I used hierarchical linear modeling (HLM) to analyze the data because HLM accommodated the nested nature of the data by parcelling out variance at the two levels—the decision level (level one) and the individual level (level two) (Raudenbush & Bryk, 2002). Because I had 87 owner-managers with reliable responses and each owner-manager made 32 decisions, the level-one analysis consisted of 2784 observations.

CHAPTER 5: RESULTS

5.1 Descriptive Statistics

Table 5 reports the means, standard deviations, and correlations of the level-two variables. As this study used a full factorial design, the descriptive statistics and intercorrelation matrix for level-one variables are not included because the correlations of the decision factors are designed to be zero. I also computed the variance inflation factors (VIFs) to check for multicollinearity among level-two variables. The highest VIF among level-two variables was 1.470, which is well below the rule-of-thumb threshold value of 10. Therefore, there was no serious multicollinearity among level-two variables that may affect the precision of the fixed effect parameter estimates.

Table 5. Means, standard deviations, and correlations at level two

Variables	Mean	S.D.	Min.	Max.	1	2	3	4	5	6	7	8	9
1.Actual attachment	51.70	9.15	25.00	63.00									
2.Family identity	23.71	4.68	4.00	28.00	0.06								
3.Community identity	13.86	6.49	4.00	28.00	0.20	-0.08							
4.Gender	0.60	0.49	0.00	1.00	0.18	0.19	-0.02						
5.General human capital	0.00	0.71	-1.40	1.55	-0.26*	0.19	0.09	0.01					
6.Specific human capital	0.00	0.68	-1.00	2.07	0.01	0.01	0.05	-0.22*	0.36**				
7.Environmental dynamism	20.23	6.26	6.00	33.00	0.23*	0.01	-0.10	-0.06	-0.29**	-0.09			
8.Personal investment	0.00	0.76	-1.75	2.68	0.25*	-0.05	-0.16	-0.06	-0.29**	-0.11	0.22*		
9.Psychological capital	140.89	12.50	115.00	166.00	0.20	0.004	0.003	-0.05	0.07	-0.25*	-0.07	0.04	
10.Fear of failure	76.52	28.20	27.00	149.00	0.12	-0.17	0.17	-0.05	-0.06	-0.08	0.08	0.03	-0.38**

n=87

p*<.05; *p*<.01

5.2 Hypothesis Testing

I first examined whether there was variation in the likelihood of persistence both within and between individuals.⁵ This was a pre-condition for hypothesis testing using HLM. I did a one-way random effect ANOVA analysis using a null model (Model 1 in Table 6), in which neither level-one nor level-two predictors were included in the regression equations.

The null model partitioned the variance in the dependent variable, which in this research was the likelihood of persistence, into two parts—within-individual variance and between-individual variance. The analysis of the null model suggested that the likelihood of persistence varied significantly between individuals. An intra-class correlation (ICC) of 0.38 ($p < .001$) indicated that 38% of the total variance in the likelihood of persistence resided between individuals. I then moved on to test how much variance in the likelihood of persistence could be explained by the level-one decision factors and their interactions.

Model 2 in Table 6 contains the main effects of level-one decision context factors, with all these effects being treated as random with unstructured covariance matrix. Compared with Model 1, Model 2 reduced the unexplained variance of the likelihood of persistence by 62%.

Model 3 in Table 6 includes both the main effects and three interaction effects of the four decision factors, with all these effects being treated as random with unstructured

⁵ In HLM, it is usually referred to as within- and between-*group* variance. In my case, because each owner-manager made 32 decisions, each individual is viewed as a group. Therefore, I refer to within- and between-*individual* variance.

covariance matrix. Compared with Model 1, this model reduced the unexplained variance in the likelihood of persistence by 69%. That is, by adding the three interactions of the four decision context factors and associated inter-individual randomness assumptions, Model 3 explained an additional 7% of the unexplained variance in the likelihood of persistence over and above Model 2.

I hypothesized a positive relationship between venture attachment and the likelihood of persistence (Hypothesis 1), a negative relationship between family time pressure and the likelihood of persistence (Hypothesis 2), a positive relationship between social approval pressure and the likelihood of persistence (Hypothesis 3), and a negative relationship between the number of personal options and the likelihood of persistence (Hypothesis 4). The results show that owner-managers' likelihood of persistence is positively associated with venture attachment (coefficient=3.385, $p<.001$), negatively associated with family time pressure (coefficient=-.790, $p<.001$), positively associated with social approval pressure (coefficient=.586, $p<.001$), and negatively associated with the number of personal options (coefficient=-1.135, $p<.001$). These findings provide support for Hypotheses 1, 2, 3, and 4, respectively.

Table 6. Results of HLM estimation for likelihood of persistence (Hypotheses 1-4, 5a-5c)

Variables	Model 1	Model 2	Model 3
Intercept	5.505*** (0.232)	5.505*** (0.230)	5.505*** (0.230)
Venture attachment		2.514*** (0.191)	3.385*** (0.275)
Family time pressure		-1.647*** (0.143)	-0.790*** (0.095)
Social approval pressure		0.404*** (0.071)	0.586*** (0.118)
Number of personal options		-0.968*** (0.186)	-1.135*** (0.199)
Venture attachment × Family time pressure			-1.714*** (0.195)
Venture attachment × Social approval pressure			-0.364** (0.116)
Venture attachment × Number of personal options			0.335* (0.142)
Proportion of reduction in the unexplained variance compared to Model 1	–	62%	69%

$n=2784$ at the decision level (level one); $n=87$ at the individual level (level two).

Coefficient estimates are reported with robust standard errors in parentheses.

* $p < .05$; ** $p < .01$; *** $p < .001$

I hypothesize (in Hypothesis 5a) that the positive impact of venture attachment on the likelihood of persistence becomes stronger when owner-managers experience low family time pressure than when they experience high family time pressure. The coefficient for the interaction of venture attachment and family time pressure is significant and negative (coefficient=-1.714, $p < .001$). As show in Figure 2, when family time pressure is low, the relationship between venture attachment and the likelihood of persistence is stronger than when family time pressure is high. Therefore, Hypothesis 5a is supported.

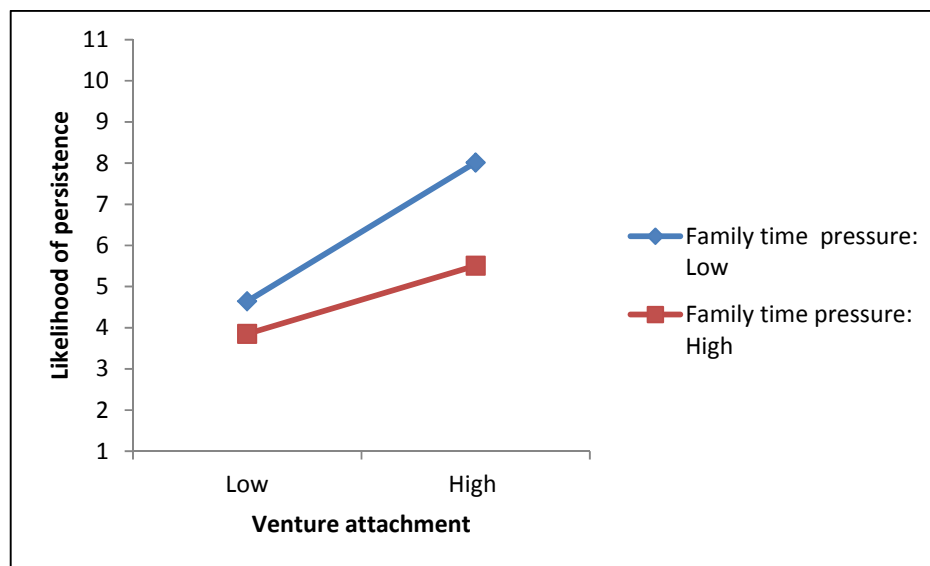


Figure 2. Venture attachment × Family time pressure

Hypothesis 5b states that the positive relationship between venture attachment and the likelihood of persistence with an underperforming venture is stronger when social approval pressure is high than when it is low. Even though the interaction relationship is significant (coefficient=-.364, $p < .01$), Hypothesis 5b is not supported. As shown in Figure 3, the positive relationship between venture attachment and the likelihood of persistence becomes weaker when social approval pressure is high than when social approval pressure is low.

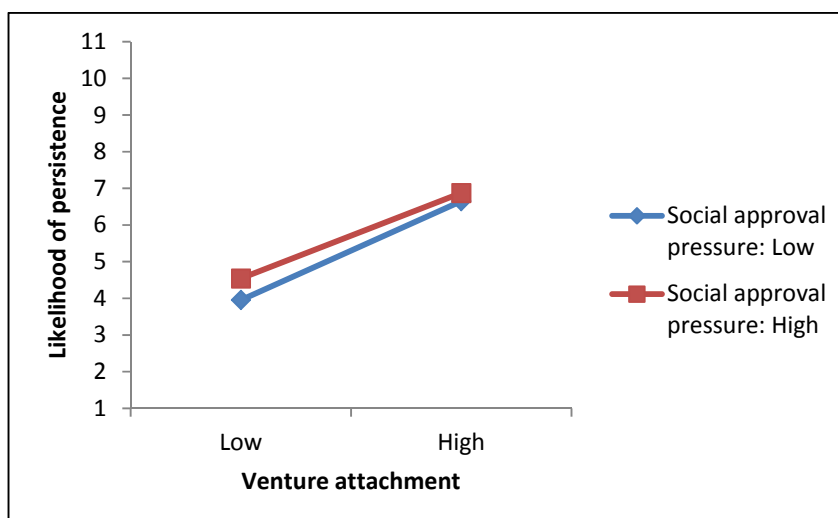


Figure 3. Venture attachment × Social approval pressure

I hypothesized (in Hypothesis 5c) that the positive relationship between venture attachment and the likelihood of persistence is stronger when the number of personal options is few than when it is many. Even though the interaction relationship is significant (coefficient=.335, $p < .05$), Hypothesis 5c is not supported. Figure 4 shows that the positive relationship between venture attachment and the likelihood of persistence becomes stronger when owner-managers have many personal options than when owner-managers have few personal options.

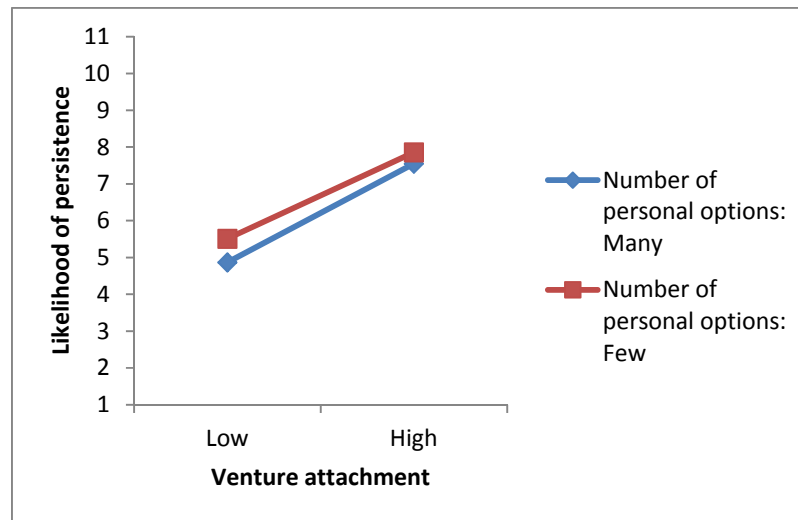


Figure 4. Venture attachment × Number of personal options

Before I moved on to test the cross-level hypotheses (i.e., whether level-two variables can explain the variance in level-one intercepts and level-one slopes), I made sure that there were significant variations in the level-one intercepts and level-one slopes across individuals. The results of the estimation of variance components (Table 7) show that there are significant variations in the level-one intercepts ($p < .001$) and in the slopes of six level-one factors and interactions. The only level-one slope that does not have significant variations across individuals is the interaction of venture attachment and social approval pressure ($p > .1$). However, I still included this slope in the cross-level analysis because previous research suggests a potential interaction among social approval pressure, venture attachment, and psychological capital.

Table 7. Estimation of variance components

Random effect	Variance component	<i>p</i>
Level-one intercept	4.604	<.001
Venture attachment slope	5.590	<.001
Family time pressure slope	0.331	<.01
Social approval pressure slope	0.685	<.001
Number of personal options slope	2.943	<.001
Venture attachment × Family time pressure	2.373	<.001
Venture attachment × Social approval pressure	0.491	>.1
Venture attachment × Number of personal options slope	0.734	<.01
Level-one r	2.246	

Table 8 contains the cross-level results. I investigate (1) whether level-two variables can explain the between-individual variation in owner-managers' likelihood of persistence after averaging out the effects of level-one factors and their interactions, and (2) whether psychological capital and fear of failure moderate the relationships between level-one variables and their interactions and owner-managers' likelihood of persistence. The results show that neither psychological capital (coefficient=.027, $p>.1$) nor fear of failure (coefficient=.006, $p>.1$) explains owner-managers' likelihood of persistence after averaging out the effects of decision context factors and their interactions. However, psychological capital interacts with family time pressure and social approval pressure to influence the likelihood of persistence, and fear of failure interacts with venture attachment to influence the likelihood of persistence.

I hypothesized that the positive relationship between social approval pressure and the likelihood of persistence becomes stronger for owner-managers high in psychological capital than for those low in psychological capital (Hypothesis 6c). The results show that the coefficient for this interaction is significant and positive (coefficient=.015, $p < .05$). As shown in Figure 5, the relationship between social approval pressure and the likelihood of persistence become stronger when psychological capital is high than when psychological capital is low. Thus, hypothesis 6c is supported.

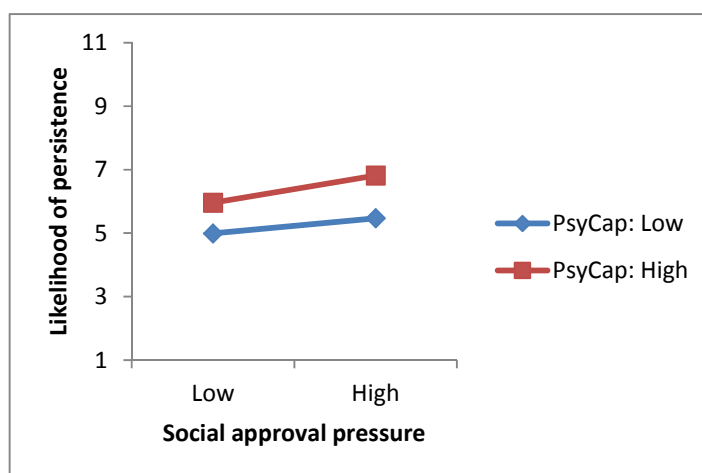


Figure 5. Social approval pressure × Psychological capital

In Hypothesis 6b, I hypothesized that the negative relationship between family time pressure and the likelihood of persistence would be weaker for owner-managers high in psychological capital than for owner-managers low in psychological capital. The coefficient for this interaction is only marginally significant (coefficient=-.015, $p < .1$). The negative coefficient suggests that the relationship between family time pressure and

the likelihood of persistence becomes weaker when psychological capital is high than when it is low. Thus, Hypothesis 6b is marginally supported.

As the coefficients for the interactions of psychological capital and other level-one factors and interactions are not significant ($p > .1$), Hypotheses 6a, 6d, 6e, 6f, and 6g are not supported.

Hypothesis 7a stated that the positive relationship between venture attachment and the likelihood of persistence would become weaker for owner-managers high in fear of failure than for those low in fear of failure. This hypothesis is marginally supported (coefficient = $-.018$, $p < .1$).

As the coefficients for the interactions of fear of failure and other level-one factors and interactions are non-significant ($p > .1$), Hypotheses 7b, 7c, 7d, 7e, 7f, and 7g are not supported.

Table 8. Results of HLM estimation for the likelihood of persistence

Variable slopes/Level 2 predictors	Level 2 intercept	PsyCap	Fear of failure	Actual attachment	Family identity	Community identity	Gender	Env. dynamism	Personal invmt	General human capital	Specific human capital
Level 1 intercept	5.505*** (0.213)	0.027 (0.018)	0.006 (0.009)	0.074** (0.026)	-0.045 (0.046)	-0.041 (0.034)	-0.681 (0.455)	-0.010 (0.030)	-0.285 (0.270)	0.105 (0.383)	-0.593 (0.406)
Venture attachment	3.385*** (0.266)	0.020 (0.025)	-0.018† (0.011)								
Family pressure	-0.790*** (0.093)	-0.015† (0.008)	-0.004 (0.004)								
Social pressure	0.586*** (0.116)	0.015* (0.006)	-0.001 (0.004)								
Number of options	-1.135*** (0.193)	-0.018 (0.017)	-0.017 (0.011)								
Venture attachment × Family pressure	-1.714*** (0.195)	-0.001 (0.020)	0.003 (0.009)								
Venture attachment × Social pressure	-0.364** (0.114)	-0.011 (0.007)	0.003 (0.003)								
Venture attachment × Number of options	0.335* (0.142)	0.003 (0.011)	-0.003 (0.005)								

Family pressure and Family time pressure are equivalent; Social pressure and Social approval pressure are equivalent.

$n=2784$ at the decision level (level one); $n=87$ at the individual level (level two).

Coefficient estimates are reported with robust standard errors in parentheses.

† $p<.1$; * $p<.05$; ** $p<.01$; *** $p<.001$

5.3 Exploratory Analyses

As only 3 out of 14 hypotheses for psychological capital and fear of failure were supported, I further examined the influence of the individual components of psychological capital and fear of failure on the likelihood of persistence. The rationale behind these exploratory analyses is as follows. It is important to further examine the impact of the individual dimensions of fear of failure because these different dimensions are argued to have different regulatory foci (Higgins, 1997), which may influence individuals' behaviour differently. For example, fear of upsetting important others has a prevention focus because individuals are likely to avoid behaviors that may upset important others; in contrast, fear of an uncertain future is likely to have a promotion focus because individuals are sensitive to non-gain after failure (Duley, Conroy, Morris, Wiley, & Janelle, 2005). Thus, it is worthwhile to examine the impact of the different dimensions of fear of failure in owner-managers' decisions, as some researchers do in previous research (Conroy, Kaye, & Fifer, 2007; Conroy, 2004).

Although psychological capital, as a higher-order construct consisting of four psychological states, has been found to be a better predictor of employee attitudes and behaviors than its individual components (Luthans et al., 2007), I feel it important to demonstrate the impact of each of the four individual components of psychological capital because the measure of psychological capital used in my research is different from that used in previous organizational research, and the measure used in my research may not demonstrate the higher-order nature of psychological capital. Thus, following Jensen

and Luthans (2006), I examined not only the overall impact of psychological capital, but also the impact of each individual component of psychological capital.

5.3.1 Impact of individual components of psychological capital

I first allowed the four components of psychological capital (i.e., optimism, entrepreneurial self-efficacy, hope, and resilience) to interact with level-one intercepts and slopes. I found that three components of psychological capital—optimism, entrepreneurial self-efficacy, and resilience—interacted with some level-one factors or interactions to affect owner-managers' likelihood of persistence. The cross-level analysis results are reported in Table 9.

Impact of optimism

The coefficient for the interaction of optimism and family time pressure is significant and negative (coefficient=-.052, $p<.05$). As shown in Figure 6, the negative relationship between family time pressure and the likelihood of persistence is amplified when optimism is high compared with when optimism is low. Interestingly, the figure suggests that when owner-managers experience low family time pressure, those high in optimism are more likely to stay with underperforming ventures than those low in optimism. However, when owner-managers experience high family time pressure, those high in optimism are less likely to stay with underperforming ventures than those low in optimism.

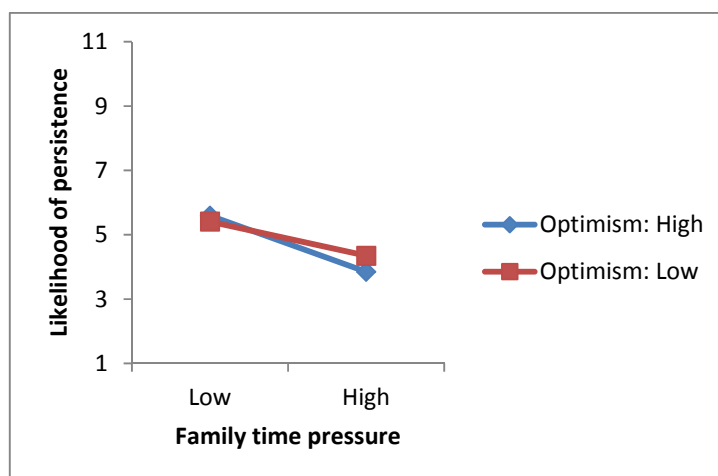


Figure 6. Family time pressure × Optimism

The coefficient for the three-way interaction of venture attachment, family pressure, and optimism is significant and negative (coefficient=-.068, $p<.05$). I plotted this interaction in Figure 7. When optimism is low, family time pressure attenuates the positive relationship between venture attachment and the likelihood of persistence, but to a lesser degree than when optimism is high. Moreover, when family time pressure is low, the positive relationship between venture attachment and the likelihood of persistence becomes much stronger when optimism is high than when optimism is low. Owner-managers high in optimism are more likely to persist with underperforming ventures than those low in optimism across both levels of venture attachment. However, when family time pressure is high, optimism also amplifies the relationship between venture attachment and the likelihood of persistence, but in a different way than when optimism is high. Owner-managers high in optimism are more likely to leave underperforming ventures than those low in optimism across both levels of venture attachment.

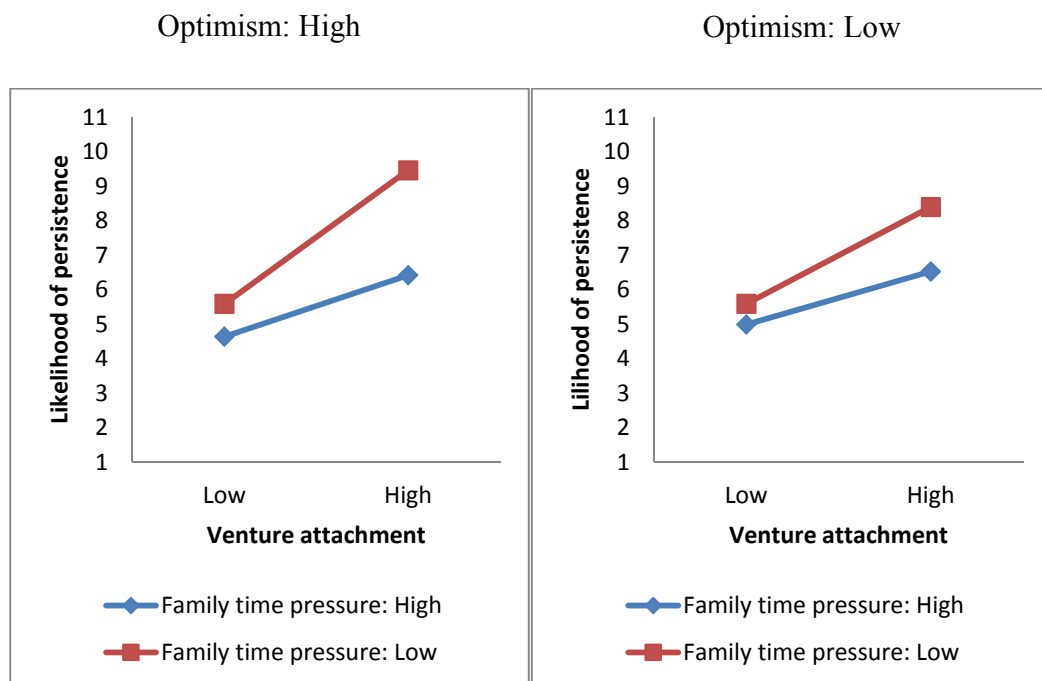


Figure 7. Venture attachment × Family time pressure × Optimism

Impact of entrepreneurial self-efficacy

The coefficient for the interaction of entrepreneurial self-efficacy and social approval pressure is significant and positive (coefficient=.107, $p < .05$). As shown in Figure 8, the positive relationship between social approval pressure and the likelihood of persistence becomes stronger when entrepreneurial self-efficacy is high than when it is low.

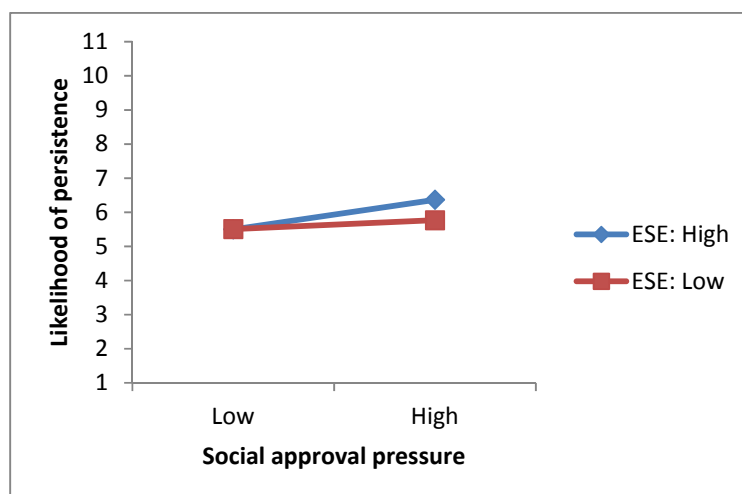


Figure 8. Social approval pressure × Entrepreneurial self-efficacy

The coefficient for the three-way interaction of venture attachment, social approval pressure, and entrepreneurial self-efficacy is significant and negative (coefficient=-.099, $p<.05$). This three-way interaction is plotted in Figure 9. When entrepreneurial self-efficacy is high, the positive relationship between venture attachment and the likelihood of persistence becomes stronger when social approval pressure is low than when social pressure is high. However, owner-managers experiencing high social approval pressure are more likely to stay with underperforming ventures across both levels of attachment than owner-managers who experience low social approval pressure. Specifically, social approval pressure affects the strength of the relationship between venture attachment and the likelihood of persistence to a larger extent when entrepreneurial self-efficacy is high than when entrepreneurial self-efficacy is low.

Entrepreneurial self-efficacy: High

Entrepreneurial self-efficacy: Low

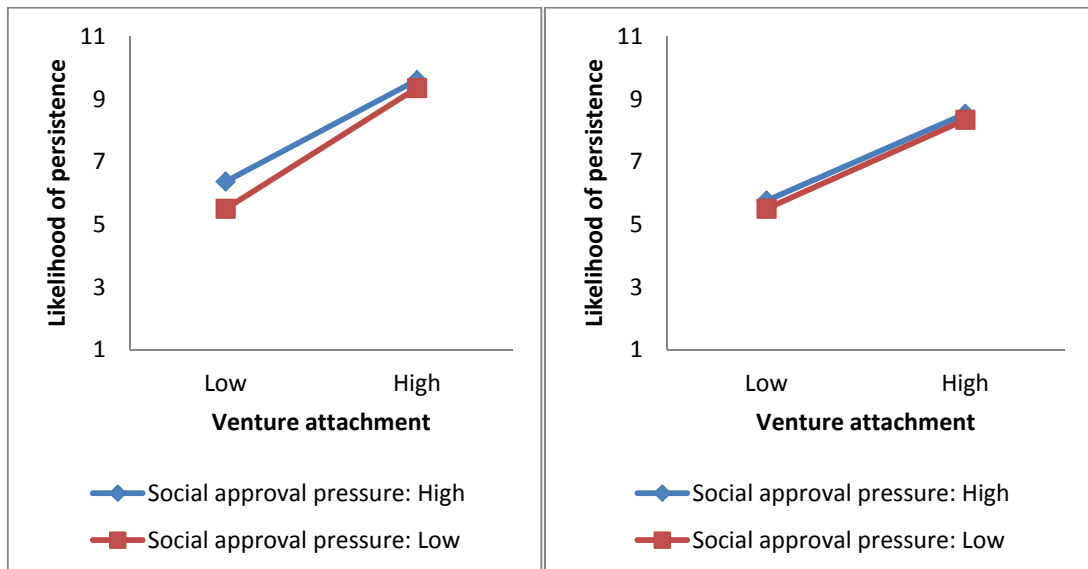


Figure 9. Venture attachment × Social approval pressure × Entrepreneurial self-efficacy

Impact of resilience and hope

The coefficient for the interaction of resilience and social approval pressure is marginally significant (coefficient=-.087, $p < .1$). Hope, however, does not interact with any level-one factors or interactions ($p > .1$).

Table 9. Results of HLM estimation for the likelihood of persistence

Variable slopes/Level 2 predictors	Level 2 intercept	Optimism	Entrepreneurial self-efficacy	Hope	Resilience	Fear of failure
Level 1 intercept	5.505*** (0.212)	0.043 (0.044)	0.008 (0.066)	0.089 (0.080)	-0.029 (0.076)	0.007 (0.009)
Venture attachment	3.385*** (0.263)	0.032 (0.050)	0.086 (0.076)	0.035 (0.080)	-0.106 (0.086)	-0.018 (0.011)
Family time pressure	-0.790*** (0.090)	-0.052** (0.018)	0.017 (0.023)	-0.034 (0.026)	0.076 (0.031)	-0.006 (0.004)
Social approval pressure	0.586*** (0.110)	-0.004 (0.018)	0.107* (0.045)	0.010 (0.032)	-0.087† (0.046)	-0.002 (0.004)
Number of options	-1.135*** (0.191)	0.002 (0.036)	0.033 (0.074)	-0.091 (0.064)	-0.035 (0.067)	-0.016† (0.010)
Venture attachment × Family time pressure	-1.714*** (0.190)	-0.068* (0.034)	0.005 (0.049)	0.009 (0.060)	0.063 (0.067)	0.002 (0.008)
Venture attachment × Social approval pressure	-0.364** (0.109)	0.005 (0.017)	-0.099* (0.045)	0.012 (0.034)	0.069 (0.048)	0.004 (0.003)
Venture attachment × Number of options	0.335* (0.135)	0.059† (0.030)	-0.080 (0.049)	0.041 (0.044)	0.012 (0.056)	-0.001 (0.005)

Table 9 continued

Variable slopes/Level 2 predictors	Attachment	Family identity	Community identity	General human capital	Specific human capital	Personal investment	Environmental dynamism	Gender
Level 1 intercept	0.071** (0.024)	-0.042 (0.042)	-0.036 (0.033)	0.099 (0.393)	-0.608 (0.406)	-0.194 (0.263)	-0.007 (0.031)	-0.554 (0.471)

$n=2784$ at the decision level (level one); $n=87$ at the individual level (level two).

Coefficient estimates are reported with robust standard errors in parentheses.

† $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

5.3.2 Impact of individual components of fear of failure

After testing the impact of the individual components of psychological capital, I allowed all five dimensions of fear of failure to interact with all the level-one intercepts and slopes. The results are reported in Table 10.

Impact of fear of shame and embarrassment

The coefficient for the interaction of venture attachment and fear of shame and embarrassment is significant and positive (coefficient=0.111, $p < .01$). As shown in Figure 10, the positive relationship between venture attachment and the likelihood of persistence becomes weaker when fear of shame and embarrassment is high than when fear of shame and embarrassment is low. More importantly, for owner-managers who are weakly attached to the venture, those who fear shame and embarrassment are more likely to stay with an underperforming venture than those who do not fear shame and embarrassment. In contrast, for owner-managers strongly attached to the venture, those who fear shame and embarrassment are less likely to stay with an underperforming venture than those who do not fear shame and embarrassment.

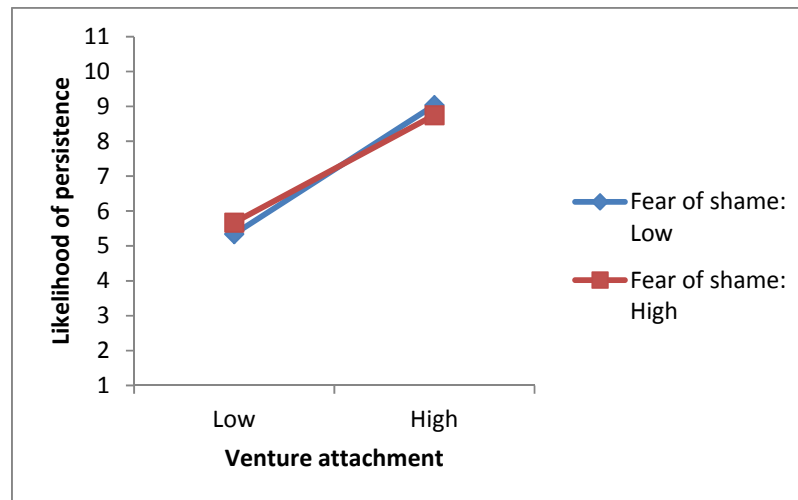


Figure 10. Venture attachment × Fear of shame and embarrassment

The coefficient for the three-way interaction among venture attachment, family time pressure, and fear of shame and embarrassment is significant and negative (coefficient=-.113, $p<.01$). As shown in Figure 11, when fear of shame and embarrassment is high, family time pressure attenuates the positive relationship between venture attachment and the likelihood of persistence to a larger degree compared with when fear of shame and embarrassment is low.

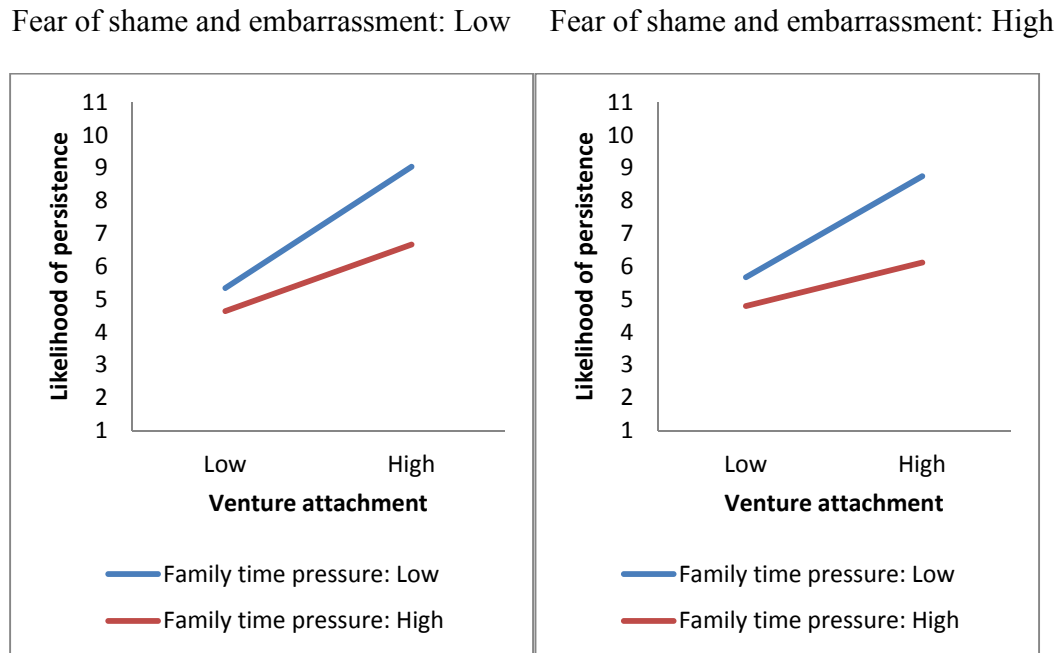


Figure 11. Venture attachment × Family time pressure × Fear of shame and embarrassment

Impact of fear of devaluating self-estimate

The coefficient for the three-way interaction of venture attachment, social approval pressure, and fear of devaluating self-estimate is significant and positive (coefficient=.052, $p < .05$). This three-way interaction is plotted in Figure 12. When fear of devaluating self-estimate is high, there is no interaction between social approval pressure and venture attachment. That is, social approval pressure does not amplify or attenuate the attachment-persistence relationship. When fear of devaluating self-estimate is low, social approval pressure changes the strength of the relationship between venture attachment and the likelihood of persistence in a manner that the relationship becomes stronger when social approval pressure is low than when it is high.

Fear of devaluating self-estimate: High Fear of devaluating self-estimate: Low

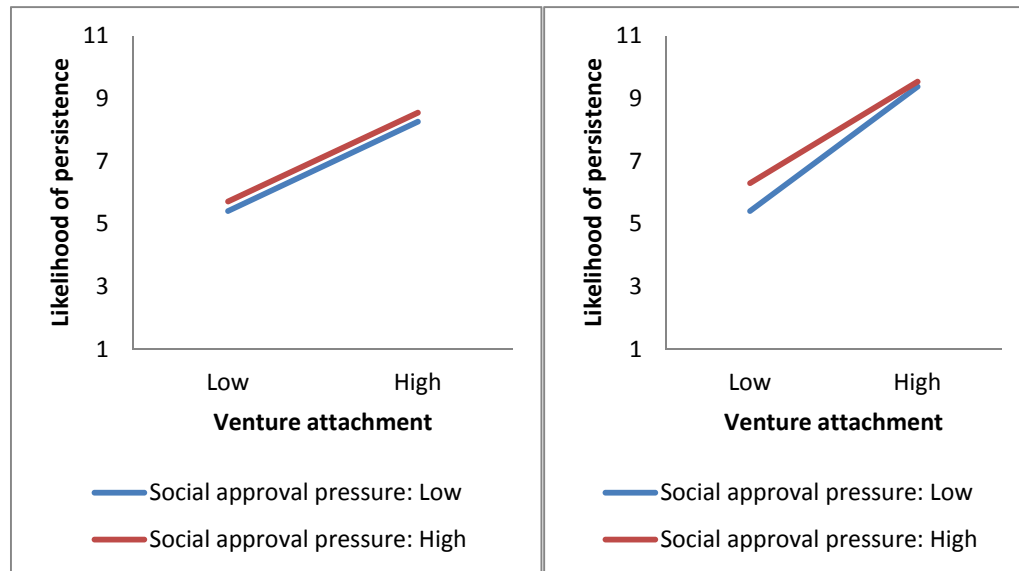


Figure 12. Attachment × Social approval pressure × Fear of devaluating self-estimate

Fear of devaluating self-estimate also moderates the relationship between social approval pressure and the likelihood of persistence, but only with marginal significance (coefficient=-.043, $p<.1$). The positive relationship between social approval pressure and the likelihood of persistence is stronger when fear of devaluating self-estimate is low than when it is high.

Impact of fear of an uncertain future

The coefficient for the three-way interaction of venture attachment, family time pressure, and fear of an uncertain future is significant and positive (coefficient=.133, $p<.05$). This interaction is plotted in Figure 13. When fear of an uncertain future is low, family time pressure moderates the positive relationship between venture attachment and

the likelihood of persistence to a larger degree than when fear of an uncertain future is high.

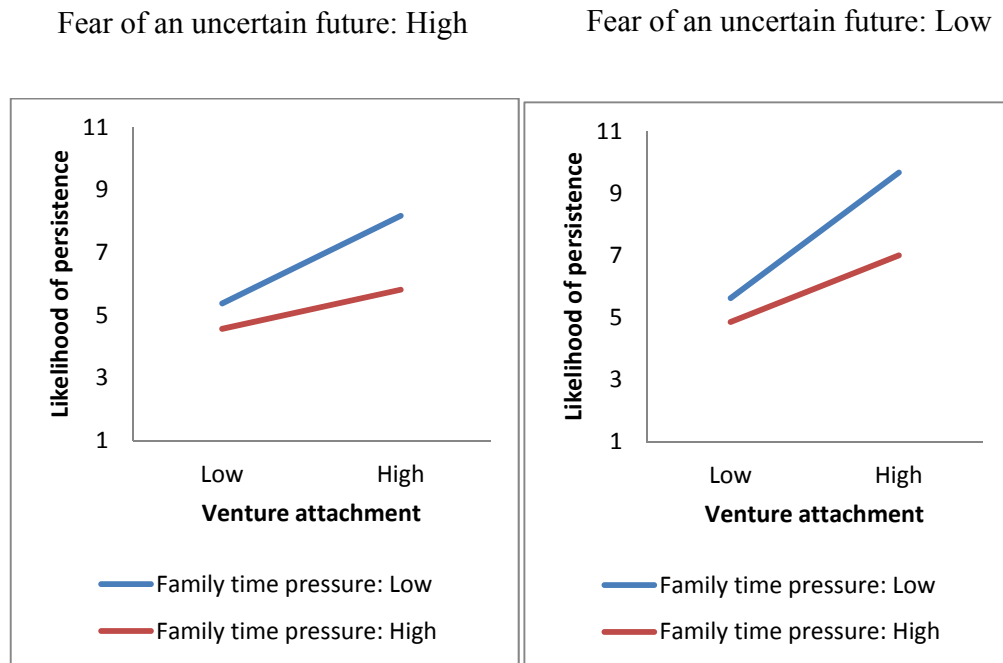


Figure 13. Venture attachment × Family time pressure × Fear of an uncertain future

Impact of fear of losing significant others' interest

Fear of losing significant others' interest predicts owner-managers' likelihood of persistence after averaging out the effects of all the level-one factors and interactions, but the influence is marginal (coefficient=.086, $p < .1$).

Impact of fear of upsetting important others

The coefficient for the interaction of venture attachment and fear of upsetting important others is significant and negative (coefficient=-.115, $p < .05$). As shown in Figure 14, the positive relationship between venture attachment and the likelihood of

persistence becomes stronger when fear of upsetting important others is low than when it is high.

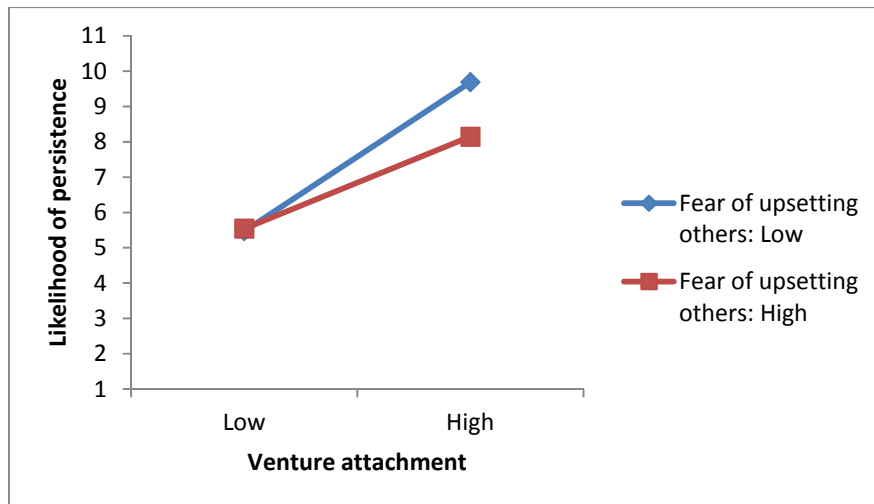


Figure 14. Venture attachment × Fear of upsetting important others

There is also a marginally significant three-way interaction of venture attachment, family time pressure, and fear of upsetting important others (coefficient=.057, $p<.1$).

Table 10. Results of HLM estimation for the likelihood of persistence

Variable slopes/Level 2 predictors	Level 2 intercept	Fear of shame	Fear of devaluating self-estimate	Fear of uncertain future	Fear of losing other's interest	Fear of upsetting others	PsyCap
Level 1 intercept	5.505*** (0.209)	-0.043 (0.045)	0.039 (0.053)	0.014 (0.054)	0.086† (0.051)	-0.024 (0.042)	0.024 (0.020)
Venture attachment	3.385*** (0.251)	0.111** (0.041)	-0.049 (0.062)	-0.094 (0.073)	-0.014 (0.049)	-0.115* (0.049)	0.027 (0.025)
Family time pressure	-0.790*** (0.092)	-0.015 (0.022)	-0.018 (0.021)	-0.013 (0.026)	-0.005 (0.024)	0.003 (0.020)	-0.014† (0.008)
Social approval pressure	0.586*** (0.098)	0.018 (0.021)	-0.043† (0.022)	0.004 (0.029)	-0.005 (0.024)	0.003 (0.020)	0.014* (0.008)
Number of options	-1.135*** (0.188)	0.001 (0.041)	0.038 (0.041)	-0.030 (0.052)	0.020 (0.042)	-0.091 (0.059)	-0.011 (0.017)
Venture attachment × Family time pressure	0.335* (0.139)	-0.113** (0.033)	0.008 (0.032)	0.133* (0.052)	-0.048 (0.034)	0.057† (0.034)	-0.008 (0.019)
Venture attachment × Social approval pressure	-0.364** (0.111)	-0.024 (0.022)	0.052* (0.025)	-0.009 (0.030)	0.001 (0.027)	0.023 (0.022)	-0.001 (0.005)
Venture attachment × Number of options	-0.335* (0.139)	-0.011 (0.028)	0.009 (0.032)	-0.0003 (0.042)	-0.048 (0.034)	0.038 (0.036)	0.004 (0.012)

Table 10 continued

Variable slopes/Level 2 predictors	Attachment	Family identity	Community identity	General human capital	Specific human capital	Personal investment	Environmental dynamism	Gender
Level 1 intercept	0.074* (0.029)	-0.045 (0.045)	-0.036 (0.032)	0.038 (0.377)	-0.611 (0.392)	-0.338 (0.280)	-0.010 (0.031)	-0.659 (0.445)

$n=2784$ at the decision level (level one); $n=87$ at the individual level (level two).

Coefficient estimates are reported with robust standard errors in parentheses.

† $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

CHAPTER 6: DISCUSSION

“Running an underperforming venture is basically like trying to find your way in a city without a map. So not knowing where you are going, you just have an idea of where you want to be in the city, but without a map. There are a lot of dead ends and a lot of going-round circles until you find your way. Certainly you try certain types of advertising with no effect. You throw a lot of money out but not a lot of money back. It’s like driving around and trying to find out what will work. If it didn’t work out, we come back and say, ok, now what? Let’s try joining the marketing group. And eventually the venture gets across the town.”

— *One owner-manager*

As is illustrated in the above quote, persistence with underperforming ventures involves many obstacles, which are compared to “going-round circles” and “dead ends.” These obstacles demand significant investment of time, money, and energy, and have great psychological implications for many owner-managers who view their ventures as their babies (Cardon et al., 2005; Dodd, 2002) or part of the self (Pierce et al., 2001). Such investment may go against owner-managers’ family expectations (Justo & DeTienne, 2008) and may incur opportunity costs as well (DeTienne et al., 2008; Gimeno et al., 1997). Persistence decisions become more than a business decision. They also involve considerations of other life domains. Moreover, the quote also evokes the important role played by owner-managers themselves in persistence decisions. It is the owner-manager who “drives around the city” and who decides which way to go. Below I discuss the important contributions made by this research, its practical implications, limitations, and opportunities for future research.

6.1 Implications for Theory

This research makes important contributions to entrepreneurial persistence research, the psychological capital and fear of failure literature, as well as venture attachment research.

6.1.1 Implications for entrepreneurial persistence research

The current research contributes to entrepreneurial persistence research by using role theory and the mental simulation literature to put persistence decision making in a broad social context to reveal the complexity of owner-managers' persistence decision policies. Owner-managers are not isolated individuals but are embedded in society that is extended by families and various social networks (Aldrich & Zimmer, 1986; Larson & Starr, 1993). Thus, their decisions and behaviour are shaped by the expectations associated with the roles they assume (Kahn et al., 1964). Moreover, owner-managers' persistence decisions are also influenced by the opportunities for imagining different futures. By simultaneously presenting the four decision context factors to owner-managers, and specifically by examining the interactions of venture attachment and the other three decision context factors, I am able to capture the complexity of owner-managers' persistence decision policies.

The findings of this research show that owner-managers' persistence decision making is a balancing act. Meeting different expectations of existing roles is one aspect of the complexity. The significant interaction of venture attachment and family time pressure and that of venture attachment and social approval pressure demonstrate that

owner-managers not only attach importance to the venture that is an identity marker, but also seek a sense of belonging—both to family and to the business community.

My explanation for why owner-managers balance out the business domain and non-business domains is that owner-managers aim to gain social approval and to avoid social sanctions (Kahn et al., 1964), such as losing social support from the family and the community (House, 1981; King, Mattimore, King, & Adams, 1995). Another factor that may also drive owner-managers to balance out the business domain and non-business domains is owner-managers' identities, which reflect owner-managers' self-categorization to or identification with certain life domains (Stets & Burke, 2000). For example, owner-managers with a strong family identity are likely to identify with family expectations and are likely to exit an underperforming venture if running it collides with family expectations. Different from the extrinsic motivation to gain social approval (Falk et al., 1999), identity is an inner driving force because individuals have incorporated role expectations to the self (Stets & Burke, 2000). To exclude the identity explanation, I accounted for the impact of three types of identities (i.e., owner-managers' actual venture attachment, family identity, and community identity) by adding them as individual-level (level-two) controls because I assume these identities affect owner-managers' persistence decisions in a similar manner across all decision contexts. The significance and direction of the contingent relationships between venture attachment and family time pressure, between venture attachment and social approval pressure, and between venture attachment and the number of personal options remained the same after controlling for the effect of the three identities.

My explanation for the significant but unsupported relationship among venture attachment, social approval pressure, and the likelihood of persistence is that venture attachment is an intrinsic motivation and has a stronger influence on persistence decisions than social approval pressure, which is an external validation. When venture attachment is high, venture attachment dominates, and the influence of social approval pressure is smaller than when venture attachment is low and when owner-managers are more sensitive to the influence of social approval pressure.

Another aspect of the complexity of owner-managers' persistence decision-making policies is reflected by the interaction of venture attachment and the number of personal options. This interaction demonstrates that owner-managers' persistence decisions are influenced not only by present roles but also by perceptions of the future. The availability of personal options enables owner-managers to mentally simulate possible futures, thereby influencing persistence decisions by suggesting different behavioral avenues. My findings show that the positive relationship between venture attachment and the likelihood of persistence becomes stronger for owner-managers with many personal options than for owner-managers with few personal options. My interpretation of this finding is that owner-managers who are weakly attached to their ventures will be more sensitive to the availability of personal options than those who are strongly attached to their ventures because leaving a venture that has no special meaning to owner-managers is easier than leaving a venture that is an identity marker. Therefore, owner-managers weakly attached to their ventures are more sensitive to the availability of personal options—a resource that owner-managers could draw on to deal with pressure

from underperforming ventures. Although owner-managers strongly attached to their ventures may be able to recognize the existence of alternative personal options, they may not have the time to imagine a different future being because of the busy involvement in their underperforming ventures. It is also likely that owner-managers strongly attached to their ventures choose not to attend to alternative options because of their salient owner-manager identity that drives them to deal with every problem of their ventures. Such persistence may reflect rigid thinking as a result of the salient owner-manager identity (Hoang & Gimeno, 2010). Mental simulation, however, was a theoretical lens I used to explain the influence of the number of personal options on owner-managers' persistence decisions. I did not, however, examine how owner-managers went through the mental simulation process and made persistence decisions. Future research can use an experimental design to examine the decision making process.

This dissertation research also contributes to entrepreneurial persistence research by showing how psychological capital and fear of failure, as two distinctive self-images, influence owner-managers' persistence decision policies. Thereby, I answer the call from some scholars for further research on the implications of individual characteristics on entrepreneurial persistence (Hoang & Gimeno, 2010; Holland & Shepherd, 2011). My research shows that psychological capital and fear of failure make a unique contribution to owner-managers' persistence decisions after controlling for the effect of many other personal and environmental characteristics, including owner-managers' actual venture attachment, family identity, community identity, gender, human capital, environmental dynamism, and personal investment.

When I included psychological capital and fear of failure in the form of a composite of different dimensions, I did not find many significant interactions between psychological capital and level-one factors or interactions, or between fear of failure and level-one factors or interactions. The reason for this finding may be that not all dimensions of psychological capital and fear of failure explain the heterogeneity of owner-managers' persistence decision policies. Moreover, different dimensions of psychological capital and fear of failure interact with different level-one factors or interactions, sometimes in different manners, to affect the likelihood of persistence. Therefore, when combining all dimensions together, the overall impact of psychological capital and fear of failure on owner-managers' persistence decision policies will be reduced or cancelled. This finding suggests the need for examining the influence of the individual dimensions of the two constructs, as I did in exploratory analyses.

Below, I have a deeper discussion on my findings about the influence of the individual dimensions of psychological capital and fear of failure on owner-managers' persistence decisions.

6.1.2 Implications for psychological capital research

My research findings suggest that psychological capital is a set of psychological resources that owner-managers can use to buffer the negative association between family time pressure and the likelihood of persistence, and to strengthen the positive relationship between social approval pressure on the likelihood of persistence. Regarding the influence of the individual components of psychological capital, I find that optimism and

entrepreneurial self-efficacy affect the heterogeneity of owner-managers' persistence decision policies in an impactful way, and they lead owner-managers to attend to different decision context factors. The role of entrepreneurial self-efficacy is mainly to complement and amplify the influence of social approval pressure on owner-managers' likelihood of persistence and the influence of social approval pressure on the positive association between venture attachment and the likelihood of persistence. My interpretation for this finding is that social approval pressure is an external social incentive (Falk et al., 1999), which may be insufficient to sustain one's efforts to achieve a goal (Deci & Ryan, 2000; Judge, Bono, Erez, & Locke, 2005; Sheldon & Elliot, 1998). To do so, it needs to couple with an inner driving force. Entrepreneurial self-efficacy—the belief that one can perform entrepreneurial activities well (Chen et al., 1998)—seems to serve as an internal force in the persistence decision-making context. When coupled with each other, entrepreneurial self-efficacy and social approval pressure create a motivational synergy (Grant, 2008), which enables the highest level of persistence.

In comparison, the role of optimism in owner-managers' persistence decisions is more complex. When optimism is high, family time pressure moderates the attachment-persistence relationship to a larger degree than when optimism is low. My explanation for this finding is that owner-managers may be optimistic about different things when they experience different levels of family time pressure and venture attachment. When family time pressure is high, owner-managers may be optimistic about the future after they leave the underperforming venture, whereas when family time pressure is low, owner-managers may be optimistic about turning around the underperforming venture. This finding also

suggests that family time pressure is an important boundary condition for the function of optimism in owner-managers' persistence decisions about underperforming ventures.

My findings regarding the influence of psychological capital and its individual components on owner-managers' persistence decisions contribute to the psychological capital literature. Organizational scholars have conducted numerous studies to examine the antecedents and consequences of psychological capital in the organizational context (Avey, Avolio, Crossley, & Luthans, 2009; Avey et al., 2011; Luthans et al., 2007; Luthans et al., 2008). Only a few studies have examined the potential moderating role played by psychological capital in coping with workplace demands and stress. My study extends this line of research by examining how psychological capital can serve as a set of psychological resources that owner-managers can draw on to cope with the role expectations that may affect persistence decisions. By doing so, I broaden our knowledge of psychological capital and highlight its role in the entrepreneurship context.

6.1.3 Implications for fear of failure and affect research

By exploring the influence of the different dimensions of fear of failure, my research also deepens our understanding of how fear of failure affects owner-managers' persistence decisions, thereby contributing to fear of failure research and affect research in the entrepreneurship context. Fear of failure has originally been developed in the achievement motivation literature (Atkinson, 1957) and has been further researched by scholars studying sport psychology (Conroy, 2001a; Sagar et al., 2007). Recently, this notion of fear of failure has been introduced to entrepreneurship research as a vulnerable

self-image that has been found to influence entrepreneurs' opportunity investment decisions (Mitchell & Shepherd, 2010). In this dissertation, I further examine the role of fear of failure in owner-managers' decisions to persist with underperforming ventures, thus extending our knowledge of fear of failure in the entrepreneurship context.

My research also contributes to affect research in the entrepreneurship context (Baron, 2008). Affect research in entrepreneurship has mainly focused on positive affect (e.g., passion) (Baron, Hmieleski, & Henry, 2012; Baron, Tang, & Hmieleski, 2011; Cardon et al., 2009; Cardon et al., 2005). Although some studies have theorized or empirically examined the role of negative affect in the entrepreneurial process (Foo, Uy, & Baron, 2009; Shepherd, 2003; Shepherd et al., 2009b), the role of negative affect in entrepreneurship is still understudied. My dissertation thus contributes to this line of research by showing how fear of failure, as an emotional burden (Sagar et al., 2007), can influence owner-managers' persistence decisions.

A general conclusion about the role of fear of failure in owner-managers' persistence decisions is that fear of failure motivates owner-managers to avoid the aversive consequences (e.g., shame and embarrassment and upsetting important others) associated with failure to protect their self-image from failure (Larrick, 1993). My findings show that the positive association between venture attachment (or social approval pressure) and the likelihood of persistence becomes weaker when fear of shame and embarrassment (or fear of devaluating self-estimate) is high than when it is low. Furthermore, family time pressure attenuates the positive relationship between venture attachment and the likelihood of persistence to a larger degree when fear of shame and

embarrassment (or fear of devaluating self-estimate) is high than when it is low. My interpretation of these findings is that owner-managers view operating an underperforming venture as something shameful and embarrassed and something that can devalue their self-estimate. Thus owner-managers place less emphasis on decision factors that motivate them to persist with underperforming ventures (e.g., venture attachment) but more emphasis on decision factors that drive them away from underperforming ventures (e.g., family time pressure).

I also find that the relationship between venture attachment and persistence becomes weaker when fear of upsetting important others is high than when it is low. I interpret this finding as follows. Operating underperforming ventures may also be viewed by owner-managers as something that upsets important others because underperforming ventures demand considerable investment of time, money, and energy, thus leaving less-than-sufficient resources for owner-managers to care about important others. To avoid upsetting important others, owner-managers place less emphasis on the impact of venture attachment on the likelihood of persistence.

Although fear of failure, as an avoidance-oriented motivation, may enable owner-managers to protect their self-image from failure, fear of failure may result in some dysfunctional consequences. For example, owner-managers who view operating underperforming ventures as something shameful and embarrassed tend to associate business performance with personal performance, and hence the failure of their ventures with the failure of themselves. Such association is likely to lead owner-managers to question their venture development abilities after venture exit and may feel demotivated

to re-enter the entrepreneurial process by exploring future business opportunities. Another potential negative consequence of fear of failure may be impeded personal growth. To avoid upsetting important others and losing important others' interest, owner-managers may leave their underperforming ventures without realizing their full potential to deal with challenges and setbacks involved in underperforming ventures, thereby losing the opportunity to become resourceful (Luthans et al., 2007) and to enhance personal growth. This is consistent with sport psychology research, which finds that high fear of failure prevents athletes from attaining high standards of performance and reaching their potential (Conroy, 2001a). My research design, however, does not allow me to further explore the above-mentioned potential negative consequences of fear of failure. Future research can continue this stream of research and deepen our understanding of the role of fear of failure in the entrepreneurship context.

6.1.4 Implications for venture attachment research

This dissertation also contributes to venture attachment research in the entrepreneurship context by providing empirical evidence for the venture attachment-persistence relationship and by identifying the moderators for this relationship, thereby answering the call from Cardon et al. (2005) who advocate for more research on the implications of venture attachment. This dissertation specifically draws on the possession attachment literature and focuses on venture attachment that makes the identity connection between the owner-manager and the venture. In the possession attachment literature, possession attachment is measured by scales consisting of multiple items describing consumers' perceived identity link with their possessions (Ball & Tasaki,

1992). Some researchers have also conducted qualitative studies and identified different types of possession attachment, such as affiliation and/or autonomy seeking and past, present, and future temporal orientation (Kleine et al., 1995). In my research, however, I only manipulated venture attachment by using a brief description of the identity connection between the venture and the owner-manager. This manipulation is not able to capture the rich characteristics of venture attachment shown by a multiple-item scale or by the findings of a qualitative research. Therefore, future research can use other measures of venture attachment to further examine its role in the entrepreneurial process.

6.2 Implications for Practice

To-leave-or-to-stay decisions about underperforming ventures have critical implications for small business owner-managers. On the one hand, many small business owner-managers invest a significant amount of personal savings or even mortgage their houses to sustain their businesses. These owner-managers may also devote considerable time and attention to their own businesses. Such personal investment makes the businesses become psychologically important to owner-managers (DeTienne, 2010). As owner-managers of underperforming ventures may have fewer opportunities to sell their ventures than those whose ventures have a good economic performance, exiting their ventures may mean a significant financial loss and even the loss of the self for owner-managers of underperforming ventures. On the other hand, exiting underperforming ventures may be good for owner-managers because such exit means the end of throwing good money after bad. Given these potential critical implications of persistence decisions, it is worthwhile to be aware of the factors that influence persistence decisions because

such knowledge can assist owner-managers in making sound decisions. By focusing on the antecedents and moderators of persistence decisions, this dissertation offers several implications for small business owner-managers.

First, owner-managers should be aware of the positive and potential detrimental impact of venture attachment. Because the entrepreneurial process involves numerous challenges and setbacks, it is necessary for owner-managers to have strong motivations that can turn into extra cognitive resources to sustain their entrepreneurial endeavours. Passion has been shown to be an important motivation for entrepreneurs to overcome challenges and difficulties (Cardon et al., 2005) and to sustain goal-directed behaviour (Cardon et al., 2009; Kuratko et al., 1997). My study contributes to this line of research and demonstrates that owner-managers' venture attachment, especially their identity connection to the venture, is another important driving force that motivates owner-managers to continue committing to their ventures despite challenges and difficulties. From this perspective, owner-managers are suggested to start and build their ventures based on who they are. However, as venture attachment drives owner-managers to persist with their ventures even they are underperforming with an uncertain future, owner-managers should also be aware that their venture attachment may be problematic in leading them to blindly stay with a venture that they should leave.

Second, owner-managers should be aware that staying with an underperforming venture could necessitate sacrifice of other important social relationships, such as family relationships because of limited cognitive resources. Owner-managers should also note that family conditions can interfere with work. A low-quality family relationship can

result in negative emotions (e.g., frustration) that can spill over to the business domain and that may impair owner-managers' performance at work. In contrast, a happy family life provides extra cognitive resources that owner-managers can draw upon to deal with business issues. Therefore, it is important to learn how to balance work and family so that owner-managers can perform well in both domains and maximize overall life satisfaction.

Third, owner-managers should be aware of the potential impact of fear of failure on their persistence decisions. Fear of failure is an avoidance-oriented motivation, and it drives owner-managers to make decisions about underperforming ventures in a manner to protect their self-image from failure. Fear of failure thus may lead owner-managers to exit their ventures early without realizing their full potential. Given the characteristics of underperforming ventures (e.g., demanding further financial investment, having an uncertain future), however, early venture exit may save resources for owner-managers. Only by knowing both the positive influence and potential dark sides of fear of failure can owner-managers make sound decisions.

Finally, given that psychological capital can be developed (Luthans et al., 2007) and that it is a set of psychological resources that owner-managers can draw on to sustain their entrepreneurial endeavours and to deal with complex decision contexts, owner-managers can look for opportunities to develop their psychological capital. For example, the Small Business Associations in some cities hold events such as bi-weekly breakfast or lunch for the small business owners in those cities. Such events provide an opportunity for owner-managers to share their entrepreneurial experience, the ups and downs with other business owners and to associate themselves with other people high in

psychological capital. Another opportunity for small business owner-managers to develop psychological capital is to participate in some training programs which teach people stress coping strategies that enhance optimism, hope, and resilience, and communication skills that enhance one's self-efficacy. Small business owner-managers may also think about going to a counsellor to seek for help to deal with the stress involved in the entrepreneurial process.

6.3 Limitations and Future Research

This research is not without limitations, which suggest several avenues for future research. First, in this research I only examine how venture attachment affects owner-managers' persistence, my research design does not allow me to explore the performance implications of venture attachment. Research on how venture attachment may affect new venture performance is important because it reveals the type of owner-manager-venture relationship that can make new ventures viable. I argue for an inverted U-shaped relationship between venture attachment and new venture performance—that is, owner-managers need to maintain a moderately attached relationship with their ventures in order to achieve a high level of venture performance. Either a strong or weak venture attachment may impair venture performance. Owner-managers who are not attached to their ventures may not be willing to devote the necessary amount of time, money, and energy to enhance venture viability, nor are they willing to go beyond their limits to persist with their ventures. In contrast, owner-managers who are strongly attached to their ventures may not be able to delegate decision making to employees. This may constrain venture growth, lower employee morale, and impair venture performance. Future

research on the relationship between venture attachment and venture performance can further our knowledge about how to properly manage the relationship with the venture to achieve the highest performance.

Second, regarding family domain factors, this research only focuses on the impact of family time pressure on owner-managers' persistence decisions and uses the work-family interface literature to form the argument. Another important factor that may also influence owner-managers' persistence decisions is family support. According to the work-family enrichment perspective (Shockley & Singla, 2011), family support may serve as a source of energy upon which owner-managers could draw to deal with business issues so that they could persist with their ventures despite difficulties. Family support is one form of social support, which is an interpersonal transaction that involves emotional support (e.g., trust, listening), instrumental aid (e.g., aid in money, labour, time), informational support (e.g., advice, suggestion), and appraisal support (e.g., appraisal, affirmation) (House, 1981; King et al., 1995). Family support can lead owner-managers to believe that they are cared for, loved, and esteemed (Cobb, 1976), thereby enhancing family satisfaction (Parasuraman, Greenhaus, & Granrose, 1992), reducing family stressors (Carlson & Perrewé, 1999), and limiting work-family conflict (Holahan & Gilbert, 1979). Given the potential important influence of family support on owner-managers' decisions and venture performance, future research could explore the role of family support in the entrepreneurial process. For instance, how does family support influence persistence decisions? Does family support interact with venture attachment to

influence owner-managers' persistence decisions? Do owner-managers who receive more family support perform better than those who receive less family support?

Third, I use the family's time demand to manipulate pressure from the family domain. This manipulation, however, may not be strong enough to induce pressure, as suggested by some participants during the interviews, because owner-managers may not close down an underperforming venture simply because their families demand more time from them. However, some owner-managers are likely to leave their ventures because a family member is suffering from a serious illness. As such, future research could develop other manipulations for family pressure and explore how family pressure may interact with other decision factors to affect owner-managers' persistence decision policies. Such manipulations could include the health situation of close family members (e.g., disabled children) and children of different ages, because children of different ages as well as adult dependents require different amounts of care (Protta & Thompson, 2006; Rothausen, 1999). Another potential manipulation of family role pressure is family members' financial stake in the underperforming venture. This manipulation is relevant as many owner-managers get financing and other resources from family members at the start-up stage (Bygrave, Hay, Ng, & Reynolds, 2003). Moreover, this manipulation of family role pressure is likely to drive owner-managers to stay with the underperforming venture, as opposed to leaving it, because owner-managers want to turn around the underperforming venture so that they can pay back their families.

Fourth, I only examine the impact of the number of personal options in this dissertation. However, personal options could also be manipulated in other ways. One

way of manipulating personal options is using the type of personal options (e.g., an employment offer from an organization versus another venturing opportunity). As the self-employed gain great satisfaction because of the autonomy of making their own decisions and the enjoyment from doing what they are passionate about (Kolvereid, 1996; Kuratko et al., 1997), it is expected that owner-managers with an option of exploring another venturing opportunity are more likely to disengage from an underperforming venture than owner-managers with a job offer from another organization. Another way of manipulating personal options is using the quality of personal options (e.g., a venturing opportunity in an industry with limited growth potential versus a venturing opportunity in a fast-growing industry). It is expected that owner-managers facing an opportunity in a fast-growing industry are more likely to exit an underperforming venture than those with a venturing opportunity in an industry with limited growth potential. Future research thus can explore how other manipulations of personal options may influence owner-managers' persistence decisions.

Fifth, in this research I choose to examine the impact of social pressure from the business community. Social pressure, however, may come from other people, such as employees, friends who are self-employed and who can serve as a source of emotional and professional support (Hisrich, 1990), and even role models (Hisrich, 1990). My post-experiment interviews with owner-managers show that some owner-managers pay more attention to employees' expectations than to community expectations. Thus, my manipulation of social approval pressure may not be strong enough to capture social pressure, thereby may become one of the reasons for the insignificant cross-level results.

Future research can manipulate social pressure in a different way and examine whether its impact on owner-managers' persistence decisions is different from what has been found in this research.

Sixth, my experimental design only allows me to examine owner-managers' real-time decision results. However, it is likely that persistence decisions are made over a certain period of time. This period of time can function as an opportunity for owner-managers to learn about the underperforming venture and their abilities and such knowledge about the venture and themselves may enable owner-managers to change their initial decisions. Therefore, it is valuable to examine owner-managers' persistence decisions with a particular venture over time. Such longitudinal research design can capture owner-managers' persistence decision policies and the factors influencing such decisions over time.

Seventh, although my sample size is acceptable compared with other conjoint studies (DeTienne et al., 2008; Patzelt & Shepherd, 2008), there is still a potential issue of lack of power, and this potential issue may be one reason for the existence of many insignificant cross-level results in this research. Future research thus can use a larger sample to examine the framework in this research.

Finally, I did not use the well-established measure of psychological capital in organizational research (Avey et al., 2011; Luthans et al., 2008; Peterson et al., 2011) but adopted Hmieleski and Carr's (2007) measure of psychological capital. One limitation of using this new measure is that psychological capital measured in this way may not be a

higher-order construct which considers the interrelationship among its four dimensions (entrepreneurial self-efficacy, hope, optimism, and resilience). Therefore, the new measure is likely to reduce the effect of psychological capital on owner-managers' persistence decisions. Future research can either adopt the measure of psychological capital in organizational research or develop a new measure of psychological capital that is specifically applied to the entrepreneurship context to capture the role of this higher-order construct in the entrepreneurship context.

CHAPTER 7: CONCLUSION

This research is motivated by Gimeno and colleagues' (1997) research and subsequent studies on the general question of why some owner-managers choose to persist with underperforming ventures when others choose to quit. Some researchers have examined entrepreneurs' threshold of performance (Gimeno et al., 1997), and other researchers complement the threshold of performance model with theoretical lenses such as cognitive biases (DeTienne et al., 2008), procrastination (Shepherd et al., 2009b), and the family-embeddedness perspective (Justo & DeTienne, 2008).

I follow this line of research and put owner-managers' persistence decisions in a broader decision context consisting of the influence of three different roles assumed by owner-managers (i.e., venture attachment, family time pressure, social approval pressure) and perceptions of the future that are represented by the number of personal options. By doing so I answer the call for contextualizing entrepreneurship (Welter, 2011). I also examine how psychological capital and fear of failure, as two distinctive self-images, interact with the decision context to influence owner-managers' persistence decisions, thereby answering the call for more research on the effect of individual characteristics on owner-managers' persistence decisions (Hoang & Gimeno, 2010; Holland & Shepherd, 2011). In this dissertation, as persistence with underperforming ventures represents the decision to commit to the ventures and sustain business operations, persistence with ventures comes with venture survival. This dissertation thus contributes to the venture survival literature by showing the role of some social context factors and owner-managers' individual characteristics in venture survival.

By conducting face-to-face interviews with 90 SME owner-managers and inviting them to complete a metric conjoint experiment and a follow-up survey, I find that owner-managers' persistence decisions are jointly influenced by the decision context and how they view themselves. In terms of the influence of the decision context, owner-managers who are strongly attached to the venture and who experience high social approval pressure are more likely to persist with underperforming ventures compared with their counterparts. Owner-managers who experience high family time pressure and who have many personal options are less likely to persist with underperforming ventures in comparison with their counterparts. Another characteristic of owner-managers' persistence decision policies is that the owner-managers in my sample are balancing different roles when making persistence decisions. My results show that family time pressure attenuates the relationship between venture attachment and the likelihood of persistence, whereas social approval pressure and the number of personal options strengthen this relationship. Regarding the impact of self-images, I find that psychological capital is an approach-oriented factor and functions as a set of psychological resources that owner-managers can draw on to assist their persistence decisions. Fear of failure, in contrast, is an avoidance-oriented factor that affects persistence decisions in a manner to help protect owner-managers' self-image from failure.

This research contributes to persistence research by examining how owner-managers make persistence decisions about underperforming ventures when experiencing influences from multiple life domains and the influence of perceptions of the future. It

also extends our knowledge of how fear of failure and psychological capital play a role in owner-managers' persistence decisions. This research contributes to the venture attachment literature by providing empirical evidence for the relationship between venture attachment and persistence and by identifying the moderators for this relationship.

This research has some implications for SME owner-managers. Owner-managers should be aware that persistence decisions are more than a business decision. Such decisions are also influenced by the family and the business community. Therefore, to satisfy a basic need for belonging, owner-managers may need to consider social influences from the family domain and the business community when making persistence decisions. Owner-managers should also be aware that the personal options available to them could offer an opportunity to leave underperforming ventures to become a different being. Owner-managers thus should have an open mind and take advantage of the multiple behaviour avenues when it is time to do so. Owner-managers should also be aware of the distinctive impact of fear of failure and psychological capital on their persistence decisions. This knowledge can help them make sound decisions.

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APPENDIX A. INVITATION LETTER

Dear (Mr/Ms. *last name*),

We are writing to solicit your help as part of a study conducted at Richard Ivey School of Business, The University of Western Ontario. The purpose of this study is to understand how business owners make decisions for a business and what they have learned from the entrepreneurial process.

This is an important research, as the goal is to develop a framework that can be presented to entrepreneurs and our MBA and HBA entrepreneurship students who are future entrepreneurs as a tool for assisting their future decisions about business ventures.

Based on our research, we have identified a small group of individuals whose level of expertise and experience qualifies them to participate in this study. Please note that this was not simply a mass mailing, but quite the opposite in that you were identified and selected to participate in this study based on your unique background and experience. Given the small number of qualified individuals, we sincerely hope you will participate in this study.

This study will take approximately 45 minutes to complete. We will call in a few days to see if it is possible to set up a time for us to meet and for you to participate in the study. We promise all the information you provide will be confidential. Should you have any questions about the study, please do not hesitate to contact Fei Zhu at (*phone number*), or by email at ([*email address*](#)).

Thank you in advance for helping us further excellence in business and entrepreneurship education. We look forward to talking with you further.

Fei Zhu
Ph.D. Candidate
Richard Ivey School of Business
The University of Western Ontario

Stewart Thornhill
Associate Professor
Executive Director for Pierre L. Morrissette
Institute for Entrepreneurship
Richard Ivey School of Business
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APPENDIX B. ASSUMPTIONS FOR THE CONJOINT EXPERIMENT

1. You are the owner-manager and top decision-maker of a three-year-old business venture, which has 10 employees.
2. Although the venture has achieved some sales during the past three years, it still has a negative profit margin. The venture's performance has been **below your expectation** for a certain period of time.
3. The resources (e.g., time, money, energy) you have (or you can access) are limited. If you choose to act on an alternative venturing opportunity, you can't be actively involved in the management of the underperforming venture.
4. Other than the information provided in the profiles, the underperforming venture presented is assumed to be similar to the venture in which you are currently involved in your real life, in terms of the industry, the economic environment, etc.
5. Regarding the social environment, your family and your business community have been generally supportive of your effort to fulfill your responsibilities as an owner-manager.

I also ask that you consider each profile as **a separate decision**, independent of all the others—please **do not refer back** to profiles already completed. Please read each scenario carefully, and use your expertise to make the requested decisions. Your answers are very important for advancing entrepreneurship theory and practice.

From the next page on, you will see a series of scenarios, based on which you need to make decisions by choosing the appropriate number.

APPENDIX C. POST-EXPERIMENT QUESTIONNAIRE

<i>Fear of failure</i>							
Please answer the following about your general attitudes toward failure:	Do not believe at all		Believe 50% of the time			Believe 100% of the time	
When I am failing, it is often because I am not smart enough to perform successfully.	1	2	3	4	5	6	7
When I am failing, my future seems uncertain.	1	2	3	4	5	6	7
When I am failing, it upsets important others.	1	2	3	4	5	6	7
When I am failing, I blame my lack of talent.	1	2	3	4	5	6	7
When I am failing, I believe that my future plans will change.	1	2	3	4	5	6	7
When I am failing, I expect to be criticized by important others.	1	2	3	4	5	6	7
When I am failing, I am afraid that I might not have enough talent.	1	2	3	4	5	6	7
When I am failing, it upsets my “plan” for the future.	1	2	3	4	5	6	7
When I am failing, I lose the trust of people who are important to me.	1	2	3	4	5	6	7
When I am not succeeding, I am less valuable than when I succeed.	1	2	3	4	5	6	7
When I am not succeeding, people are less interested in me.	1	2	3	4	5	6	7
When I am failing, I am worried about it affecting my future plans.	1	2	3	4	5	6	7
When I am not succeeding, people seem to want to help me less.	1	2	3	4	5	6	7
When I am failing, important others are not happy.	1	2	3	4	5	6	7
When I am not succeeding, I get down on myself easily.	1	2	3	4	5	6	7
When I am failing, I hate the fact that I am not in control of the outcome.	1	2	3	4	5	6	7

When I am not succeeding, people tend to leave me alone.	1	2	3	4	5	6	7
When I am failing, it is embarrassing if others are there to see it.	1	2	3	4	5	6	7
When I am failing, important others are disappointed.	1	2	3	4	5	6	7
When I am failing, I believe that everybody knows I am failing.	1	2	3	4	5	6	7
When I am not succeeding, some people are not interested in me anymore.	1	2	3	4	5	6	7
When I am failing, I believe that my doubters feel that they were right about me.	1	2	3	4	5	6	7
When I am not succeeding, my value decreases for some people.	1	2	3	4	5	6	7
When I am failing, I worry about what others think about me.	1	2	3	4	5	6	7
When I am failing, I worry that others may think I am not trying.	1	2	3	4	5	6	7
<i>Venture attachment scale</i>							
	Not at all				Neutral		Very
	true of						true of
	me						me
If someone ridiculed my firm, I would feel irritated.	1	2	3	4	5	6	7
My firm reminds me of who I am.	1	2	3	4	5	6	7
If I were describing myself, my firm would likely be something I would mention.	1	2	3	4	5	6	7
If someone destroyed my firm, I would feel a little bit personally attacked.	1	2	3	4	5	6	7
If I lost my firm, I would feel like I had lost a little bit of myself.	1	2	3	4	5	6	7
I have too many feelings about my firm.	1	2	3	4	5	6	7
If someone praised my firm, I would feel somewhat praised myself.	1	2	3	4	5	6	7
Probably, people who know me might sometimes think of my firm when they think of me.	1	2	3	4	5	6	7

If I didn't have my firm, I would feel a little bit less like myself.	1	2	3	4	5	6	7
<i>Family identity scale</i>	Strongly disagree		Neutral			Strongly agree	
The major satisfactions in my life come from my family.	1	2	3	4	5	6	7
The most important things that happen to me involve my family.	1	2	3	4	5	6	7
My life goals are mainly family oriented.	1	2	3	4	5	6	7
My family is a large part of who I am.	1	2	3	4	5	6	7
<i>Community identity scale</i>	Strongly disagree		Neutral			Strongly agree	
Overall, this group has very little to do with how I feel about myself.	1	2	3	4	5	6	7
This social group is an important reflection of who I am.	1	2	3	4	5	6	7
This social group is unimportant to my sense of what kind of a person I am.	1	2	3	4	5	6	7
In general, belonging to this social group is an important part of my self-image.	1	2	3	4	5	6	7
<i>Environmental dynamism scale</i>	Strongly disagree		Neutral			Strongly agree	
Our firm must rarely change its marketing practices to keep up with the market and competitors.	1	2	3	4	5	6	7
The rate at which products/services are getting obsolete in the industry is very slow.	1	2	3	4	5	6	7
Actions of competitors are quite easy to predict.	1	2	3	4	5	6	7
Demand and consumer tastes are fairly easy to forecast.	1	2	3	4	5	6	7
The product/service technology is not subject to very much change and is well established.	1	2	3	4	5	6	7

APPENDIX D. SAMPLE DECISION SCENARIO

Venture attachment	Low	The venture does not reflect who you are. It is not something you would mention when you were describing yourself.
Family pressure	High	Staying with this venture runs against what your family expects from you in your family life (e.g., spending time with them, emotionally caring about them, fulfilling your household responsibilities). Your family insists that your meeting their expectations is critical.
Social pressure	High	The venture operates in a community where people are go-getters and non-quitters to support one another, to satisfy community needs, and to enhance community welfare. They also expect everyone in the community to do so.
Personal options	Few	Outside of this venture, few other opportunities that have attractive earning potentials are available for you (e.g., job offer, venturing opportunity).

Imagine you were in the above situation. To what extent would you continue running the underperforming venture?

Definitely leave the venture	1	2	3	4	5	6	7	8	9	10	11	Definitely remain in the venture
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CURRICULUM VITAE

Fei Zhu

EDUCATION

Richard Ivey School of Business, The University of Western Ontario, 2007-12

- Ph.D. in Business Administration
- Dissertation: To leave or to stay? The decision context, self-images, and owner-managers' persistence decisions
- Supervisor: Dr. Stewart Thornhill

Fudan University, China, 2004-07

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RESEARCH INTERESTS

- Entrepreneurial decision-making
- Entrepreneurial cognition
- Affect
- Persistence
- Use of analogy and metaphor in managers' decision-making
- Narratives

PUBLICATIONS

- Case and Teaching Note: Zero, Brammo and the Electric Motorcycle Industry. Published at Richard Ivey School of Business. Product number: 9B11M092.