

Fear of Failure and Entrepreneurship: A Review and Direction for Future Research

**By Gabriella Cacciotti and
James C. Hayton**

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Gabriella Cacciotti

Warwick Business School
Gabriella.Cacciotti.12@mail.wbs.ac.uk

James C. Hayton

Warwick Business School
James.Hayton@wbs.ac.uk

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ABSTRACT

The impact of the experience of fear of failure on individual cognition and behaviour can be beneficial as well as detrimental. Despite this dualistic nature, in research on entrepreneurship, fear of failure is examined as only a barrier to entrepreneurial behaviour. A systematic review of the entrepreneurship literature on fear of failure published between 1994 and 2013 reveals a general lack of precision in the conceptualisation and operationalisation of this construct. Drawing on achievement motivation theories, the appraisal theory of emotions, and coping theories, we develop a deeper understanding of the fear of failure phenomena and identify the attributes relevant to studying fear of failure in entrepreneurship. We then address the conceptual issues related to fear of failure, and the role it may assume within the entrepreneurial process. We then propose an agenda for future research.

Key words: Fear of failure, entrepreneurship, entrepreneurial emotion, entrepreneurial cognition.

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1. INTRODUCTION

“The entrepreneurial journey starts with jumping off a cliff and assembling an airplane on the way down.” (Reid Hoffman, founder of LinkedIn)

Like base-jumpers, entrepreneurs take the plunge over the edge into uncertainty. This metaphor captures the leap of faith, commitment and urgency that surround the entrepreneurial process, and thus depicts the decision to jump off the entrepreneurial cliff as an act of courage. In base-jumping as well as in entrepreneurship, courage is not the absence of fear; rather it is the ability to take action to achieve a worthy goal, despite the presence of fear (Kilmann *et al.* 2010). Consequently, fear is incorporated in the decision making process and influences individuals' cognitive and behavioural responses (Damasio 1994; Gray, 1971).

The idea that fear plays a role within the entrepreneurial process is consistent with the assumption that entrepreneurship is an emotional journey (Baron, 2008). Starting a business is an extreme experience that inevitably involves several emotional elements that “come into play within the entrepreneur as the venture takes form and evolve” (Schindehutte, Morris, and Allen 2006: p. 349). As such, affect, emotions, moods and feelings interfere with the recognition/creation, evaluation, reformulation, and exploitation of a possible opportunity (Cardon *et al.* 2012; Hayton and Cholakova 2012). Early speculation on the role of affect in entrepreneurship has driven scholars' attention to those ‘entrepreneurial emotions’ (Cardon *et al.* 2012; p. 3) that can positively relate to entrepreneurial behaviour such as entrepreneurial passion, entrepreneurial identity, and entrepreneurial vigour (e.g. Cardon *et al.* 2009; Cardon *et al.* 2005; Hahn *et al.* 2012). Interestingly, some research has additionally sought to identify those emotional elements that can work against entrepreneurial tasks and entrepreneurial efforts such as workplace grief and doubt (Shepherd, 2003; Shepherd, Patzelt, and Wolfe, 2011; Shepherd, Wiklund, and Haynie, 2009; Shepherd, McMullen, and Jennings 2007). Unfortunately, research on the ‘heart of entrepreneurship’ has given

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only limited and cursory attention to the role of fear within the entrepreneurial process.

One of the most common fears among entrepreneurs is called the fear of failure (Bosma *et al.* 2008). Drawing on psychological and socio-psychological theories, the experience of fear of failure can be described as the appraisal of threats in evaluative situations with the potential for failure (Conroy 2001). These situations activate cognitive schema or beliefs associated with the aversive consequences of failing and may cause different behavioural responses: approach the threat aggressively (fight), avoid facing the situation (flight), or be paralysed in the situation (freeze) (Conroy 2004; Gray 1971; Elliot 1997). This changing nature of fear and the diverse cognitive and behavioural mechanisms it triggers highlights a fascinating side of this construct and suggests that it can be a friend as much as a foe (Martin and Marsh 2003).

The same interesting and counterintuitive relationships between the experience of fear of failure and cognitive and behavioural responses might be also experienced within the entrepreneurial process. However, an examination of the entrepreneurship literature shows that the fear of failure is predominantly assumed to be a barrier to entrepreneurship. This assumption has two important consequences on the study of fear of failure: 1) the role of the construct is mostly examined in relation to the decision to start/not start a business venture, and 2) the focus of the analysis is only on its detrimental rather than beneficial effects. This restrictive perspective on the nature and experience of fear of failure has led researchers to think that fear is not or should not be part of the entrepreneurial journey.

This review makes several contributions. A thorough examination of the existing entrepreneurship literature demonstrates clear limitations in research on fear of failure in this setting to date. The field has only considered a limited aspect of the behavioural and affective correlates of fear. Our review of the broader psychological and social psychological literature then helps to shine a brighter light on the fear of failure construct

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and suggests impacts that extend beyond behavioural inhibition. We highlight the emotional, cognitive, and behavioural complexities fear of failure may generate. Our review examines the relevant theoretical frameworks upon which entrepreneurship scholars might draw in developing hypotheses that consider a broader range of entrepreneurial actions in a more dynamic or process oriented approach (Dimov, 2007; Grégoire, Corbett & McMullen, 2011). A final contribution of this review is the identification of the unique characteristics of fear of failure that are relevant for conceptualisation and measurement in the entrepreneurial context.

This paper proceeds as follows. First, we review the literature on fear of failure and entrepreneurship to understand the status of fear of failure within our field. Second, we refer to the psychology research to better inform our understanding of the nature, experience and behavioural consequences of fear of failure in entrepreneurship. Finally, we address conceptual issues related to fear of failure and the role it may assume within the entrepreneurial process, and suggest direction for future research.

2. FEAR OF FAILURE IN ENTREPRENEURSHIP

Our first step in this review is to organise and synthesize the existing literature on entrepreneurial fear of failure. We therefore conducted a systematic review of the empirical literature in an effort to identify relevant studies that connect fear of failure to entrepreneurship. We searched leading electronic databases relevant to this topic (ABI-Inform, Business Source Premier, and the American Psychological Association's databases) using the search terms "fear of failure" or "fear failure" AND "entrepreneur*" in titles and abstracts as search terms. The databases we considered include extensive collections of journals that most frequently publish entrepreneurship and/or psychological research applicable to the entrepreneurship domain (e.g., *Journal of Business Venturing*, *Entrepreneurship Theory and Practice*, *Entrepreneurship and Regional*

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Development, Journal of International Business Studies, Academy of Management Journal, International Entrepreneurship and Management Journal, Journal of Applied Psychology, and Journal of Personality and Social Psychology). We also examined the reference lists of all studies found through our search to identify articles not discovered through a search of the databases. Our search results returned 33 empirical articles published between 1994 and 2013. A description of the research question, definition and measure of fear of failure, method and sample, and main results for each of these studies is reported in Table 1.

Table 1. Fear of failure and entrepreneurship

Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Ray (1994)	What are the differences between entrepreneurs and non-entrepreneurs in the city-state of Singapore with regard to the risks involved in the decision to become an entrepreneur?	An aspect of risk: the potential loss of self-image and self-respect	Choice Dilemma Question: " If the business failed, there would be a number of adverse consequences, such as the loss of money. Listed below are a number of consequences (loss of self-image and loss of self-respect= fear of failure). Assign a probability to each occurring should your hypothetical business fail"	Choice Dilemma Questionnaire. 30 Chinese entrepreneurs and 44 Singaporean managers and engineers	Whereas job security is a critical variable that holds non-entrepreneurs to the status quo in Singapore, the potential loss of self-respect and self-image, the fear of failure, appears to be a force that drives Chinese entrepreneurs in Singapore to succeed
Helms (2003)	How do Japanese Managers view entrepreneurship as well as the challenges faced by their own personal self-employment?	Not explicitly defined. Associated to risk aversion		Open-ended survey. Ten managers	The lack of a risk taking culture as well as fear of failure will continue to hinder rapid new business start-ups in Japan in the coming future

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Wagner and Stenberg (2004)	Why and how do regional environmental factors influence entrepreneurial activities and the entrepreneurial attitudes of the local population?	An indicator of a high degree of risk aversion	In survey: "Fear of failure would prevent me from starting a business"	Survey part of the Regional Entrepreneurship Monitor (REM) Germany 2001. 1,000 people from 10 regions	Fear of failure in a region was negatively associated with start-up behaviour
Arenius and Minniti (2005)	What are the variables significantly correlated with an individual's decision to become an entrepreneur?	An important component of the risk attached to starting a new business	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2002. 3,625 nascent entrepreneurs across 28 countries	Perceptual variables such as alertness to opportunities, fear of failure, and confidence about one's own skills are significantly correlated with new business creation across all countries and gender
Morales - Gualdrón and Roig (2005)	Which variables affect the new venture decision and what is the extent of their influence?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2001. 7,524 cases	A greater negative influence of the fear of failure can be seen in the group of emerging entrepreneurs born out of necessity than in the case of the group of emerging entrepreneurs through opportunity

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Minniti and Nardone (2007)	Are differences in the rate of new business creation between men and women the result of personal characteristics of the individual and of the economic environment or the result of a universal and evolutionary phenomena?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2002. 116,776 observations from 37 countries	Opportunity perception is an important factor in explaining gender differences, though self-confidence and fear of failure seem to have the dominant effects
Langowitz and Minniti (2007)	What variables influence the entrepreneurial propensity of women and how those variables correlate with differences across genders?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2001. 24,131 observations	Subjective perceptual variables (e.g. fear of failure) have a crucial influence on the entrepreneurial propensity of women and account for much of the difference in entrepreneurial activity between the sexes. Specifically, women tend to perceive themselves and the entrepreneurial environment in a less favourable light than men across all countries and regardless of entrepreneurial motivation
Wagner (2007)	What are the differences between women and men in the ceteris paribus impact of several characteristics and attitudes on the decision to start a business in Germany?	Attitudes towards risk	In survey: "Fear of failure would prevent me from starting a business"	Survey part of the Regional Entrepreneurship Monitor (REM) Germany 2003. 12,000 observations	The difference between men and women in both the extent and the effect of considering fear of failure to be a reason not to start one's own business explains the gap in entrepreneurship by sex

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Vaillant and Lafuente (2007)	Do different institutional frameworks condition the influence of local fear of failure and entrepreneurial role models over entrepreneurial activity levels in a rural area with strong industrial and entrepreneurial history versus those that are not necessarily characterised by such a tradition?	A social-cultural trait which originates from social stigma to entrepreneurial failure	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2003. 843 and 4034 observations for Spanish rural and urban areas, respectively	The difference between entrepreneurial activity levels in rural Catalonia as compared to rural areas in the rest of Spain is in large part explained by the presence of entrepreneurial role models which favour entrepreneurial activity. Although the negative influence of social stigma to entrepreneurial failure is significant, there is no difference in such influence between rural and urban areas
Alon and Lerner (2008)	Why and how do Chinese firms go global?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey	Chinese international entrepreneurship is positively affected by the levels of education and skill of the entrepreneur and the projected number of employees, and negatively affected by the fear of failure and lack of competition

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Ardeghna and Lusardi (2008)	What are the determinants of entrepreneurial activity in developed and developing nations?	A proxy for individual attitudes toward risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2001-2002 and other sources for data on countries' institutional and regulatory environments. 152,612 observations	Individual characteristics are important determinants of entrepreneurship. Regulation plays a critical role, particularly for those individuals who become entrepreneurs to pursue a business opportunity. The individual characteristics that are impacted most by regulation are those measuring working status, social network, business skills, and attitudes toward risk
Wood and Pearson (2009)	How do opportunity-related variables influence potential entrepreneurs' willingness to engage in entrepreneurship?	"The capacity or propensity to experience shame upon failure" (Atkinson, 1957: p. 360). Attitude towards risk	Adapted eight-item PFAI by Conroy (2001a)	Experimental design. 82 students from senior-level management courses	There is lack of support for the individual differences of general self-efficacy and fear of failure playing a significant role in the decision to engage in entrepreneurial action
Pathak and Autio (2010)	What is the effect of social norms on the growth aspirations of entrepreneurs with exit experience in their subsequent entrepreneurial activities?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2000-2008. 902,533 observations from 63 countries	Previous entrepreneurial exit experience exercises a positive influence on individuals' entrepreneurial growth aspirations. Moreover, social group-level prevalence of fear of failure moderates positively this relationship and the social context constitutes an important influence on individual's entrepreneurial aspirations

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Canizares and Garcia (2010)	What is the role of gender differences among potential entrepreneurs, their psychosociological traits and the incentives and principal obstacles women encounter when initiating a business activity?	An obstacle to setting up a company	Rank "Fear of failure and Ridicule" in a list of obstacles to setting up a company	Survey. 1,400 Spanish students	Entrepreneurial initiative is lower among female students and that women are more likely to view the fear of failure as an obstacle to embarking on a business venture
Mitchell and Shepherd (2010)	What are the differences in entrepreneurs and how do these differences affect their images of opportunities?	The heart of images of vulnerability. It is defined as the desire to avert the perceived consequences of the "non-attainment of one's level of aspiration" (Birney <i>et al.</i> 1969: p. 3)	Twenty-five item PFAI by Conroy (2001a) and Conroy <i>et al.</i> (2003)	Experimental design of a decision-making task. 121 executives of technology firms	Fear of failure would seem to lead to an increased focus on the internally-focused desirability components of opportunities, and a decreased focus on certain externally-focused environmental aspects. Those with a higher fear of failure are less likely to distinguish between an opportunity when many are present and an opportunity when few are present
Wood and Rowe (2011)	Do differential levels of entrepreneurial success impact entrepreneurs' feelings of entrapment and is that relationship moderated by individual differences?	"The capacity or propensity to experience shame upon failure." (Atkinson 1957: p. 360)	Five-item scale developed by Conroy, Willow, and Metzler (2002)	Survey. 120 active entrepreneurs	Fear of failure and attitude towards risk do not moderate the venture success-entrapment relationship

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Mitchell and Shepherd (2011)	What effect do the three dimensions of fear of failure (fear of devaluing one's self-estimate, fear of upsetting important others, and fear of having an uncertain future) have on the relationship between human capital and self-efficacy and the propensity to entrepreneurial action?	Fears of devaluing one's self-estimate, upsetting important others and having an uncertain future	Relevant items of PFAI by Conroy (2001) and Conroy <i>et al.</i> (2003)	Experimental design of a decision-making task. 127 decision makers small-medium sized companies	Fear of failure impedes (interaction between specific human capital and fear of devaluing self and the interaction for general self-efficacy and fear of having an uncertain future) as well as motivates (interaction between general self-efficacy and the fear of devaluing one's self, interaction between specific human capital and the fear of upsetting important others, and interaction between entrepreneurial self-efficacy and the fear of upsetting important others) the propensity for entrepreneurial action
Bosma and Schutjens (2011)	What are the factors that determine the variations in regional entrepreneurial attitude and activity?	Attitude towards risk and component of entrepreneurial attitude	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2001-2006. 127 observations over 17 European countries	Institutional factors and economic and demographic attributes determine the variations in regional entrepreneurial attitude and activity
Verheul and Mil (2011)	What determines the growth ambition of Dutch early-stage entrepreneurs?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2002-2007. 504 early-stage entrepreneurs	Fear of failure does not have a strong effect on the decision to grow the venture

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Ahmad, Khan, Kamran, and Iqbal (2011)	What is the relationship between entrepreneurship and three macroeconomic variables GDP, GNI, and unemployment rate?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2001-2009 and IFS database for GDP, GNI, and unemployment rate data.	Fear of failure rate is negatively affecting GDP and GNI. Established businesses are contributing their share to boost up GDP and GNI. Unemployment is reduced by early stage entrepreneurial activity executed by both males and females
Ozdemir and Karadeniz (2011)	What is the effects of demographic characteristics of individuals (age, gender, income level, education level, and work status) and their perceptions about themselves (networking, fear of failure, alertness to opportunities, self-confidence) on their involvement to the total entrepreneurial activities of Turkey?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2006-2008 and 2010. 9,601 observations	Fear of failure is not found to be a significant factor that influences the likelihood of being involved in the total entrepreneurial activities of Turkey
Sandhu, Sidique, and Riaz (2011)	What are the barriers that may hinder entrepreneurial inclination among Malaysian postgraduate students?	Attitude towards risk determined by high uncertainty avoidance	Five item scale adapted and modified from Henderson and Robertson (1999), and Scott and Twomey (1988)	Survey. 267 Postgraduate students from various Malaysian universities	Fear of failure is an important barrier to entrepreneurial inclination but not the main one

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Hessels, Grilo, Thurik, and Roy (2011)	How does recent entrepreneurial exit relate to subsequent engagement?	Attitude towards risk of failure	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2004-2006. 348,567 from 24 countries	The probability of entrepreneurial engagement after exit is higher for males, for persons who know an entrepreneur and for persons with a low fear of failure
Patzelt and Shepherd (2011)	Do self-employed more readily accept the negative emotional consequences of their career choice and/or learn to cope with these emotional consequences?	A negative emotion	Self-report measure of emotional experience developed in the study	1996 General Social Survey (GSS) of the Inter-University Consortium for Political and Social Research (ICPSR). 2700 US citizens	Over and above the effects of positive emotions, the self-employed experienced fewer negative emotions than those who are employed, contingent on their regulatory coping behaviours
Welpe, Sporrle, Grichnik, Michl, and Audretsch (2011)	How does the interplay of opportunity evaluation and emotions determine entrepreneurial exploitation?	A negative anticipated emotions	Six items from the PANAS-X fear subscale (Watson and Clark 1994)	Questionnaire-based experiment. 138 MBA and entrepreneurship students	Fear, joy, and anger influence evaluation's effect on exploitation with higher levels of fear reducing and higher levels of joy and anger increasing the positive impact of evaluation on exploitation

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Li (2011)	How do people's feelings about the outcomes of a venture affect their subjective judgment on the value and probability of founding a new business?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business". Adopted from GEM	Survey. 761 university students from China, USA, and Belgium	Significant gender difference in the perceived importance of the fear of failure barrier is identified in the United States and Belgium (men perceiving these barriers as less important than women) but not in China. Moreover, gender has no moderating effect on the relationship between the perceived fear of failure barrier and the entrepreneurial intention for the three countries
Shinnar, Giacomini, and Janssen (2012)	Do gender differences exist in the way university students perceive barriers to entrepreneurship and what effect does gender have on the relationship between perceived barriers and entrepreneurial intentions across nations?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business". Adopted from GEM	Survey. 761 university students from China, USA, and Belgium	Significant gender difference in the perceived importance of the fear of failure barrier is identified in the United States and Belgium (men perceiving these barriers as less important than women) but not in China. Moreover, gender has no moderating effect on the relationship between the perceived fear of failure barrier and the entrepreneurial intention for the three countries
Brixy, Sternberg and Stüber (2012)	What are the determinants that impact the individual's decisions during the entrepreneurial process?	Attitude towards risk	In survey: "Fear of failure would prevent me from starting a business"	German part of GEM Survey 2002-2006. 17,000 observations	For entrepreneurs, fear that a business might not be successful is much lower for all stages than it is for non-entrepreneurs

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Quader (2012)	What are the psychological differences between men and women that influence their entrepreneurial activity in UK?	Not explicitly defined. Also addressed as fear of risk		Interviews and autobiographies, magazine articles, and transcripts written by other researchers. 7 female nascent entrepreneurs as primary data and 10 as secondary data	There is an overwhelming fear of failure by UK women
Ekore and Okekeocha (2012)	Why are many university graduates in Nigeria reluctant to start a business even when the opportunity exists?	Feeling that leaves a person discouraged and afraid that he or she will not succeed even before making an attempt	Fear of entrepreneurship (fear of failure, fear of success, fear of criticism, and fear of change) scale developed for the study	Survey. 1100 university graduates in Nigeria	Core self-evaluations (locus of control, neuroticism, generalised self-efficacy, and self-esteem) influence fear of entrepreneurship. Pre-entrepreneurial intention, attitude, and capacity significantly predict fear of entrepreneurship
Koellinger, Minniti, and Schade (2013)	Why do women own significantly fewer businesses than men although women's failure rates are not significantly different from those of men across countries?	Not explicitly defined. Associated to risk aversion	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2001-2006. 108,919 observations from 17 countries	Women are less confident in their entrepreneurial skills, have different social networks and exhibit higher fear of failure than men. After controlling for endogeneity, these variables explain a substantial part of the gender gap in entrepreneurial activity

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Authors	Research Question	Fear of Failure Definition	Fear of Failure Measure	Method and Sample	Main Results
Noguera, Alvarez, and Urbano (2013)	What are the main socio-cultural factors that influence women entrepreneurship in Catalonia?	Associated with appraisal of threats to an individual's ability to accomplish one or more personally meaningful goals when one fails in performance Associated also to risk aversion	In survey: "Fear of failure would prevent me from starting a business"	GEM survey 2009-2010. 4,000 observations	Fear of failure and 'perceived capabilities' are the most important socio-cultural factors on the probability of becoming a woman entrepreneur
Wood, McKinley, and Engstrom, (2013)	Do source of unemployment, layoff in particular, and duration of unemployment stimulate entrepreneurial intent?	The capacity or propensity to "experience shame or humiliation as a consequence of failure." (Atkinson 1966; p. 13)	Five-item scale developed by Conroy, Willow, and Metzler (2002)	Survey. 100 unemployed individuals	Layoff and duration of unemployment are stimuli for higher entrepreneurial intent, and the source of unemployment-intent relationship is moderated by fear of failure and risk propensity

Our review of this literature suggests that studies can be subdivided into two groups based upon the definition of fear of failure that is applied. The first group represents studies that define fear of failure in terms of risk aversion (e.g. Ray 1994; Helms 2003; Wagner and Stenberg 2004; Arenius and Minniti 2005; Hessels *et al.* 2011). The second, much smaller group of studies defines fear of failure as negative emotion resulting from the perception of environmental threats (e.g. Patzelt and Shepherd 2011; Welpel *et al.* 2011; Li 2011). The first set therefore implies a personological orientation, which describes fear in terms of individual characteristics: the tendency to experience fear is considered something that distinguishes one person from another. The second set assumes a motivational orientation to the construct: fear is something that is experienced as the result of environmental cues, and is associated with certain psychological and

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behavioural outcomes. This is an important distinction, which has implications for how fear of failure in entrepreneurship can be conceived and studied, and to which we will return.

2.1 Personological Approaches to Fear of Failure

Several studies define fear of failure in terms of risk aversion. For example, some authors describe fear of failure as attitude to risk (e.g. Morales-Gualdron and Roig 2005; Minniti and Nardone 2007; Langowitz and Minniti 2007). Others suggest that fear of failure is an indicator of high degree of risk aversion (e.g. Wagner and Stenberg 2004: p. 229). For Ray (1994) the fear of failure reflects two specific aspects of risk propensity: “potential loss of self-image and self-respect” (p. 157). These all assume that fear of failure reflects a dispositional preference for certainty over uncertainty (Rauch and Frese 2007). In this research, fear is important because it is associated with the perceived risk involved in starting a business, and something that might stop people from taking entrepreneurial action (Arenius and Minniti 2005; Bosma *et al.* 2008).

With few exceptions (Ray 1994; Ozdemir and Karadeniz 2011; Verheul and Mil 2011), the empirical evidence from this perspective reveals that fear of failure is an inhibitor of entrepreneurial behaviour (e.g. Sandhu *et al.* 2011; Shinnar *et al.* 2012; Helms 2003; Wagner and Stenberg 2004; Arenius and Minniti 2005; Verheul and Mil 2011). Several studies include fear of failure among the variables influencing the employment choice of individuals (Arenius and Minniti 2005; Minniti and Nardone 2007; Langowitz and Minniti 2007; Wagner 2007; Morales-Gualdron and Roig 2005; Ardegna and Lusardi 2008). They all report that fear of failure exerts a negative impact on the decision to become self-employed (Arenius and Minniti 2005; Morales-Gualdron and Roig 2005; Ardegna and Lusardi 2008).

Negative influences of fear of failure have been also examined with respect to entrepreneurial intention (Shinnar *et al.* 2012), subsequent re-engagement in entrepreneurship (Pathak and Autio 2010; Hessels *et al.* 2011), and growth ambitions of early-stage entrepreneurs (Verheul and Mil

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2011). In their comparative study of entrepreneurial intention across China, US, and Belgium, Shinnar *et al.* (2012) found that perception of fear of failure decreases the intention to become entrepreneur. Evidence of this negative relationship was found in all three countries. Using data from the Global Entrepreneurship Monitor (GEM), Hessels and colleagues (2011) reported that the probability of entrepreneurial engagement after exit is higher for individuals reporting lower level of fear of failure. Verheul and Mil (2011) hypothesized that fear of failure inhibits entrepreneurs' growth aspirations. Surprisingly, evidences from 504 early-stage entrepreneurs show no significant effects of fear of failure on the decision to grow the venture. With exception of the non-significant findings of Verheul and Mil (2011), this literature generally suggests that fear of failure is a barrier to engaging in entrepreneurial behaviour.

The personological approach seeks to examine individual characteristics that explain why people behave differently in similar situations. Consistent with this approach, several studies provide evidence that level of fear of failure varies across groups. Brixy *et al.* (2012) present evidence that the level of self-reported fear of failure distinguishes entrepreneurs from the rest of the population. They found that the fear that a business might not be successful is much lower in entrepreneurs than it is for non-entrepreneurs for all the stages of the entrepreneurial process. Similarly, Arenius and Minniti (2005) report that fear of failure is higher for non-entrepreneurs than it is for entrepreneurs. Noguera *et al.* (2013) also note that women have a higher degree of fear of failure than men and this decreases their propensity to start a business. In fact, researchers often report variation in the level of fear of failure between men and women, and that such variation is partly responsible for observed discrepancies between female and male entrepreneurship (Noguera *et al.* 2013; Wagner and Stenberg 2004; Wagner 2007; Koellinger *et al.* 2013; Minniti and Nardone 2007; Longowitz and Minniti 2007). However, while the implication is that dispositional differences between men and women with respect to fear of failure account for differences in intentions to start a venture, it is important to note that

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these studies do not provide any theoretical rationale for such differences.

A significant limitation within this literature is that the majority of the studies uses the Global Entrepreneurship Monitor (GEM) data and directly examine the extent to which the fear of failure would prevent people from founding a firm (e.g. Wagner and Stenberg 2004; Brixy *et al.* 2012; Hessels *et al.* 2011). These studies measure fear of failure using responses to a single item: “fear of failure would prevent me from starting a business” (Reynolds *et al.* 2005). Affirmative answers to this question are believed to reflect a high degree of risk aversion, which is expected to decrease the probability of becoming an entrepreneur (Weber and Millman 1997; Kihlstrom and Laffont 1979). However, asking people whether fear of failure would prevent them from starting a new venture dictates the negative relationship between the perception of fear and the decision to start. In addition the wording of the single-item measure can be misleading: it is not clear whether individuals indicating disagreement do not perceive fear of failure, or they perceive it but continue to engage in entrepreneurial actions.

Further limitations of these studies rest in the conceptual association of fear of failure with risk aversion and the empirical inconsistencies on the relationship between fear of failure and risk taking behaviour. The fundamental assumptions, implicit in much of the literature reviewed so far, are that the fear of failure is intimately related to risk-taking propensity and that risk-taking propensity is, in turn, associated with entrepreneurship (Kihlstrom and Laffont 1979; Atkinson 1957; Brockhaus 1980; McClelland 1961). However, in the psychological research tradition, the motive disposition to avoid failure (fear of failure) and the tendency to approach success (need for achievement) were originally theorised as opposing determinants of risk-taking behaviour (Atkinson 1957). In an effort to avoid negative consequences, which are particularly likely in the context of achievement situations, individuals high in fear of failure will prefer very safe tasks (where success is easily obtainable) or very difficult ones (where failure is less likely to be attributed to personal incompetence). In contrast,

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individuals high in need for achievement will prefer to bear a moderate degree of uncertainty and choose intermediate risk activities, the types of activities that will provide a challenge (Atkinson 1957; McClelland 1961; McGregor and Elliot 2005). This suggests a more complex, non-linear relationship between fear of failure and risk taking than has been adopted in existing research.

Furthermore, empirical evidence contradicts theoretical arguments on the relationship between fear of failure and risk-taking behaviour. In direct contrast to the predictions of achievement motivation theory, some researchers have observed a positive relationship between fear of failure and preferences for tasks of moderate risk (e.g. deCharms and Dave, 1965). Fear of failure can also stimulate greater striving (i.e. approach motivation rather than avoidance *per se*), since achieving success is often the best strategy to avoid failure (Martin and Marsh 2003; Birney *et al.* 1969). This evidence suggests that, rather than being inhibited, individuals high in fear of failure might alternatively be motivated to more actively engage in entrepreneurial behaviours.

2.2 Motivational Approaches to Fear of Failure

Rather than associating it with risk aversion, a second group of studies describe fear of failure in terms of negative feeling or negative affect (Welpé *et al.* 2011; Patzelt and Shepherd 2011; Ekore and Okekeocha 2012). These studies define fear of failure as a negative anticipated emotion on the possible failure (Welpé *et al.* 2011; Patzelt and Shepherd 2011; Li 2011), and as a “feeling that leaves a person discouraged and afraid that he or she will not succeed even before making an attempt” (Ekore and Okekeocha 2012: p. 516). Recognising the centrality of affect in motivation and decision-making (e.g., Damasio 1994; Isen *et al.* 1988; Loewenstein *et al.* 2001), these studies examine how the emotional experience of fear of failure influences entrepreneurial decision-making processes.

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According to this emerging stream of research, researchers have found support for the assumption that the emotional experience of fear of failure decreases an individual's probability to start a venture (Li 2011; Welpe *et al.* 2011; Patzelt and Shepherd 2011). For example, Li (2011) suggests that fear of failure is a feeling about the outcomes of a new venture, which affects people's subjective judgment on the value and probability of founding a new venture. Similarly, Welpe *et al.* (2011) report experimental evidence for the hypothesis that experienced emotions, including fear, moderate the decision to exploit hypothetical entrepreneurial opportunities. Drawing on the literature on role requirements and role characteristics, Patzelt and Shepherd (2011) hypothesised that entrepreneurs more readily accept the negative emotional consequences of their employment choice and learn to cope with these emotional consequences, including fear of failure. Using a sample of 2700 US citizens, they found that entrepreneurs report less negative emotions than employees, but this is contingent on their self-regulatory coping behaviors. Ultimately, Ekore and Okekeocha (2012) reported that fear of failure leaves university graduates discouraged in starting a business even when the opportunity exists. In summary, empirical evidence from research focusing on fear of failure as an emotional experience influencing motivational process leads to similar conclusions to the previous literature: fear of failure serves to inhibit entrepreneurial behaviour.

While Ekore and Okekeocha (2012) developed a scale to measure fear of failure for their study, the rest of this literature assumes that fear of failure is not different from other negative emotions such as irritation, anger, contempt, sadness, shame, and disappointment, and consequently measured it using combined scales such as the Bosman and Winden's (2002) emotion list or the PANAS scale (Watson and Clark 1994) that provide a single negative emotion score (Li 2011; Welpe *et al.* 2011; Patzelt and Shepherd 2011). However, this operationalisation ignores the unique features associated with each type of negative emotion. Emotions differ in important aspects such appraisal, antecedent events, probable behavioural responses, and physiological correlates, rather than solely

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positive and negative states (Lazarus 1991). This represents a significant limitation from the perspective of understanding fear of failure, in that it does not differentiate the construct from other negative emotions such as sadness or anger.

Five studies have gone beyond the risk aversion, and negative affect approaches to understanding fear of failure (Mitchell and Shepherd 2010, 2011; Wood and Pearson 2009; Wood and Rowe 2011; Wood *et al.* 2013). Consistent with the studies of affective state, these studies take a motivational perspective wherein fear of failure is considered to be a moderator that shapes individuals' attitude and beliefs about themselves and consequently affects their decision to act entrepreneurially. However, support for this moderating effect of fear of failure has been inconsistent (Wood and Pearson 2009; Wood and Rowe 2011). Wood and colleagues (Wood *et al.* 2013) provide some evidence that fear of failure and risk propensity moderate the association between layoff, and unemployment duration and entrepreneurial intent. They explained that layoff victims low in fear of failure experience higher entrepreneurial intent than colleagues who quit jobs voluntarily. Layoff victims high in fear of failure did not show high entrepreneurial intent. These results reveal the value of distinguishing the experience of fear of failure, from the behavioural impact of that experience.

Consistent with the notion of separating the individual, the experience, and the outcome, Mitchell and Shepherd (2010) provide evidence that individuals' self-esteem and experiences of fear of failure exert distinct influences on the evaluation of opportunities. Furthermore, Mitchell and Shepherd (2011) report that fear of failure moderates the relationships between human capital, self-efficacy and the evaluation of an opportunity, expressed as the likelihood of acting entrepreneurially. Importantly, the sign of its effects is different across different dimensions of fear of failure suggesting that some sources of fear (fear of devaluing one's self-estimate, fear of having an uncertain future) have an inhibitory influence on behaviour, while the fear of upsetting important others (e.g., through

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entrepreneurial choices leading to economic losses for others) has a positive influence on the decision to pursue an opportunity. This may be the first evidence within the field that fear of failure can produce both approach and avoidance behaviours.

The five studies just highlighted all measure fear of failure with Conroy et al.'s Performance Failure Appraisal Inventory (PFAI) (2001a; 2002; 2003). The PFAI is a self-reported measure of fear of failure and measure the degree of individuals' cognitive beliefs in five aversive consequences of failure: experiencing shame and embarrassment, devaluing one's self-estimate, having an uncertain future, important others losing interest, and upsetting important others (Conroy, Metzeler and Hofer 2003; Conroy Willow and Metzler 2002). Although developed to test fear of failure in sport and educational environments, the scale has been applied in entrepreneurship research.

This review suggests that caution is needed before accepting the assumption that fear of failure is always, or only, a barrier to entrepreneurship. It is not clear whether fear of failure is a personality disposition that entrepreneurs should not have (Helms 2003) or whether it is a feeling that leaves people discouraged and afraid that they will not succeed even before making the attempt to start a business (Ekore and Okekecha 2012). Further, with most of the research focusing on factors that impact on the decision to start a business, there is limited understanding of how people experience fear of failure and cope with it throughout the entrepreneurial process. To shed light on the nature of this construct and its interaction with entrepreneurial behaviour we next review relevant theories on fear of failure from psychology and social psychology research tradition.

3. PSYCHOLOGICAL AND SOCIAL PSYCHOLOGICAL RESEARCH ON FEAR OF FAILURE

There is no unified theory to frame the fear of failure construct (Conroy 2001). Hence, to acquire a comprehensive understanding of the nature, experience, and behavioural responses to fear of failure we consider three different theoretical frameworks: achievement motivation theory, the appraisal theory of emotions, and coping theory. These three theories do not necessarily contradict each other; rather they integrate previous research to inform the general understanding of the fear of failure phenomena. We do not attempt a comprehensive review. Our goal here is only to identify theoretical bases for deepening understanding of fear in the context of entrepreneurship. Therefore, for each theory, we focus on the definition of fear of failure, conceptual assumptions about the nature of the construct, measurement, and selected relevant findings.

3.1 Achievement Motivation Theory

Early understanding of fear of failure developed from achievement motivation research and described the fear of failure as an individual's motive disposition to avoid failure. Motives are the learned association between an external cue and "a change in an affective situation" (McClelland *et al.* 1953: p. 28). They connect cognitive representations of environmental cues with learned affective responses in ways that the cues are sufficient to arouse the (anticipatory) affective responses and to energise and direct behaviour away from the likelihood of failure or towards the possibility of success (McClelland 1951). Within this literature, definitions of fear of failure include: the need "to quit embarrassing situations or to avoid conditions which may lead to belittlement" (Murray 1938: p. 192), the "disposition to avoid failure and/or the capacity for experiencing shame and humiliation as a consequence of failure" (Atkinson 1966: p. 13), and the "disposition to become anxious about failure under achievement stress" (Atkinson and Litwin 1973: p. 146). Classic achievement motivation theorists assumed that the motive to avoid failure

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and the motive to seek success are equally important determinates of achievement behaviour (McClelland *et al.* 1953; Atkinson 1957). Furthermore, achievement behaviour is viewed as a function of relatively stable individual differences in avoidance and approach orientations (Conroy, Elliott and Thrash 2009). This approach therefore is clearly dispositional or personological (e.g., McClelland *et al.* 1953), and seeks to explain variation in the behaviours of different individuals in similar situations (i.e., because of individual dispositional differences) (McClelland 1961).

Throughout the years, more refined conceptualisations of achievement motivation have evolved such as attribution theory (Weiner and Kukla 1970), and achievement goal theory (Dweck 1976), and found specific application, such as in test anxiety (Mandler and Sarason 1952; Spielberger 1972) and the self-worth perspective (Covington and Beery 1976). Despite some differences, this literature exhibits two common themes: fear is associated with both approach and avoidance behaviors; and fear- and hope-based motives do not represent opposing poles on a single continuum.

First, the motivation to avoid negative outcomes or environmental threats to the self can lead to approach as well as avoidance behaviors (Birney *et al.* 1969; Elliot 1997). Birney and colleagues (1969) argue that the motive to avoid failure has the function of preserving the individuals' sense of self and their esteem in the eyes of others. Under threat of failure, people motivated by a fear of that outcome will select a strategy that reduces its probability: striving for success or abandoning the situation. Accordingly, desire to avoid loss does not necessitate avoidance behaviour (Elliott and Dweck 1988; Martin and Marsh 2003). However, individuals motivated to approach a goal by fear of failure may choose goals of different difficulty, give less effort, persist less, and react differently to failure (e.g. Dweck 1986; Dweck and Leggett 1988). Thus the source of motivation is expected to exert a meaningful influence on the quality of motivation and its

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correlates.

The second point of consensus across achievement theoretic perspectives is that the achievement motives are not two opposite ends of a bipolar continuum, with individuals differing only in relative amounts of fear and hope (Feather 1961; 1963; Litwin 1966; Moulton 1965). Motives interact in ways that lead to qualitatively different motivational profiles among people (Covington 1992; Elliot and McGregor 2001; Elliot and Church 1997; Martin and Marsh 2003). For instance, it has been found that individuals high in fear of failure with a success orientation can reach impressive achievements: the combination of hope and fear drives their accomplishments (Covington 1992). However, success for those with high levels of both hope and fear might be followed by negative consequences on personal wellbeing as they experience high levels of anxiety, emotional fatigue, and burnout while performing (De Castella *et al.* 2013). This suggests that it is not only the motive, but also the interaction between motives, that influence behaviour and important outcomes.

Within the achievement motivation literature several measurement instruments have been adopted to measure fear of failure. While some early researchers measured the motive to avoid failure using the projective Thematic Apperception Test (TAT) (e.g. Murray 1938; McClelland *et al.* 1953), others used more convenient self-reported measures of trait test anxiety (e.g. Atkinson and Litwin 1960; Feather 1965). The TAT was originally developed to measure individuals' achievement motivation. Although the motive to avoid failure was conceptualised as one of the determinants of achievement motivation, the instrument was created to directly measure need for achievement and gives only indirect and unreliable scores of fear of failure (Conroy 2001). On the contrary, the trait anxiety test was explicitly employed to measure the tendency to avoid failure. Researchers using this measure argue that fear of failure and the test anxiety construct share the same affective-motivational structure oriented towards avoiding demonstration of incompetence in evaluative situations (Conroy and Elliot 2004; Bedell and Marlowe 1995; Birney *et al.*

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1969; Elliot 1997; Hagtvet and Benson 1997; Heckhausen 1975; Herman 1990; Spielberger 1972). However, regardless of how fear of failure is measured, both instruments refer to unidimensional models of fear of failure. This methodological limitation reflects a conceptual shortcoming of the achievement motivation literature, despite some calls to conceptualise fear of failure multidimensionally (Birney *et al.* 1969).

3.2 The Appraisal Theory of Emotions

A second theoretical perspective that offers an explanation of fear of failure is the cognitive-motivational-relational model, or 'appraisal theory' of emotions (Lazarus 1991). Drawing upon this theory, social psychology researchers define fear of failure as an experience involving cognitive, emotional, relational, and motivational processes (Conroy 2001; Conroy *et al.* 2001). The experience of fear of failure starts with the assessment (cognitive processes) that an actual or anticipated environmental change (relational process) represents a threat to one's ability to accomplish a personally meaningful goal (motivational process). When threats are appraised, individuals anticipate the aversive consequences of failing, and feel the anxiety (emotional process) associated with fear of failure (Conroy 2001). If the appraisal of fear involves the anticipation of a threatening outcome (Lazarus 1991), fear of failure will result either from consequences of failing that are threatening, or from consequences of succeeding that would be aversive if not experienced (Conroy 2001; Conroy and Elliot 2004). Rather than seeking to describe why different individuals react differently in the same situation, this approach explains why the same individuals react differently in different situations and similarly in similar situations. This conceptualisation of fear of failure suggests that personal and environmental characteristics are equally important in determining the experience of fear of failure, and emphasizes the internal cognitive processes that explain motivated behaviours.

Within this literature, researchers have emphasized three important conceptual distinctions regarding fear of failure: the fear-anxiety distinction;

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the trait-state distinction; and the cognitive-affective distinction. First, consistent with the achievement motivation tradition, it is argued that while fear is appraised when “facing an immediate, concrete, physical danger,” anxiety is associated with more ambiguous existential threats such as social evaluation (Lazarus 1991: p. 122). Although technically incorrect, the fear of failure term is also used to describe the appraisal of an uncertain threat that elicits both fear and anxiety (Barlow 2000; Lazarus 1991, 1999). Because of the history of fear of failure and its association with trait anxiety (see Atkinson and Litwin 1960; Feather 1965), it is very difficult to introduce a new and more precise term to refer to this construct (e.g., Conroy 2001). Accordingly, the fear and anxiety terms are often used interchangeably.

Second, while achievement motivation research seeks to identify fear of failure as a trait that develops during early childhood (Elliot and Thrash 2004; McClelland *et al.* 1953), the cognitive-motivational literature tends to emphasize the temporary nature of the state of fear of failure. If fear of failure refers to an emotional and somatic reaction towards a stimulus apprehended as a threat in achievement contexts (Conroy 2001), then it must be defined as a state and not only as a trait. While the trait is a relatively stable predisposition to experience fear of failure, the state is the actual experience of the phenomenon and refers to the transitory condition elicited in response to intrapersonal factors and environmental features. It is this temporary arousal that remains fundamental in the study of behavioural consequences of fear of failure.

Third, because fear of failure is an experience, it encompasses both cognition and affect. When a situational change is appraised (‘primary appraisal’), individuals assess the relevance (goodness/badness and importance/unimportance) of such change for their goals. The cognitive evaluation is then followed by the emotional experience (‘secondary appraisal’) whose valence (positive/negative) and intensity (strong/weak) are modulated by the cognitive judgement (Lazarus 1991). Making the distinction between fear of failure as cognitive judgement and emotional experience might lead to the conclusion that these components should be

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treated as separate phenomena with distinct and/or overlapping consequences. On the other hand, a complete understanding of the construct must account for both cognitive and affective aspects of the experience.

3.3 Coping Theories

A third theoretical perspective relevant to understanding fear of failure is found in theories of coping. Coping refers to “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus and Folkman 1984: p. 141). Studies adopting theories of coping define fear of failure as an emotional reaction to stressful situations (Poczwadowski and Conroy 2002; Sagar *et al.* 2009). Consistent with cognitive-motivational-relation model of fear of failure, the emphasis is upon the emotional dimension of the construct and the strategies that people adopt to cope with negative feelings. Coping theorists assume that when individuals experience fear of failure they may engage with behavioural as well as cognitive coping responses to adapt to stressful situations (Abraido-Lanza, Vasquez, and Echeverria 2004; Li and Yand 2009). Thus, rather than explaining the experience of fear of failure, coping theories examine the relationship between fear of failure and cognitive and behavioural consequences.

Despite the vast literature on coping (see Skinner *et al.* 2003), few studies have specifically investigated individuals’ coping responses to the effects of fear of failure (Poczwadowski and Conroy 2002; Sagar *et al.* 2009). Poczwadowski and Conroy (2002) conducted an exploratory study on 16 athletes and performing artists to identify coping strategies they used when facing failure or success. They found 36 coping strategies which were classified in four higher order themes of coping responses reported in the performance psychology literature: problem-focused coping (PFC), emotion-focused coping (EFC), appraisal-focused coping (AFC), and avoidance-focused coping (AvFC) (Hardy, Jones, and Gould 1996). The

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first coping strategy, PFC, is described as active coping, planning, and training (Crocker and Isaak 1997). Individuals engaging with PFC increase their effort to solve problems (Madden *et al.* 1989) and adopt behavioural strategies (Gould, Eklund and Jackson 1993). The second coping strategy, EFC, reflects general emotionality responses (Madden *et al.* 1989), emotional control strategies (Gould, Eklund, and Jackson 1993), psychological techniques (Wesner, Noyes, and Davis 1990), the use of negative feelings as stimulant (Mahoney and Avenier 1977), and seeking social support (Crocker and Isaak 1997; Gould, Finch, and Jackson 1993; Madden *et al.* 1989). AFC, instead, focuses on emphasizing the positive (Madden *et al.* 1989). Some aspects of this strategy are the positive reinterpretation and growth (Crocker and Isaak 1997), thought- control (Gould, Eklund, and Jackson 1993), realistic appraisals (Steptoe 1989), positive thinking (Steptoe and Fidler 1987), and role redefinition (Frederickson and Rooney 1988). Finally, avoidance-focused coping strategies are described as both behavioural (e.g., moving to a different task, isolation) and psychological (e.g., cognitive distancing, ignore/block things out, wishful thinking) efforts to disengage from the demanding situation (Gould *et al.* 1997; Anshel 1996; Endler and Parker 1990; Crocker and Isaak 1997; Krohne 1993). Poczwardowski and Conroy (2002) noticed that individuals used combinations of coping strategies to deal with stressors before, during, and after the performance. More interesting, cross-domain comparisons showed significant differences in patterns of coping behaviour among individuals. This finding suggests that domain specific investigation is needed to understand individuals' coping responses to the effects of fear of failure.

Like Poczwardowski and Conroy (2002), Sagar *et al.* (2009) also examined how athletes cope with the fear of failure experience. They conducted semi-structured interviews with 9 young athletes and found that subjects employed a combination of problem-focused, emotion-focused, and avoidance-focused coping strategies, with avoidance strategies being the most frequently adopted. They emphasized the importance of effective coping skills to deal with fear of failure in an effort to reach elite

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performance. Although these results were consistent with those reported by Poczwardowski and Conroy (2002), the reference to the sport environment suggests caution in generalising findings across performance domains. If coping behaviour is a function of qualitative differences such as activity situation, personality, skill level, and culture (Anshel, Williams and Hodge 1997; Yoo 2001), then any attempt to study the link between fear of failure and coping strategy selection should be addressed to the specific achievement context and to consider relevant individual differences.

Notwithstanding the lack of a universal path of the coping responses to the effects of fear of failure, it is valuable to consider three fundamental observations emerging from the coping literature. First, coping has a strong relationship with performance: “excellence in coping precedes excellence in performance” (Poczwardowski and Conroy 2002: p. 313; Lazarus 2000). Hence, if we are to understand the impact of fear of failure on entrepreneurial performance, we will need to consider the mediating role of coping responses. Second, because coping outcomes are accounted for by one’s appraisal of the stressful event, there is an inherent endogeneity in the appraisal-coping outcomes relationship (Anshel *et al.* 2001; Hardy *et al.* 1996; Lazarus 2000). In other words, coping outcomes influence future appraisal of similar events, which in turn may predict a different type of coping response. Thus, coping reflects deep meaning structures embedded in a unique set of a person’s experiences (Eklund *et al.* 1993). Interestingly, this would explain dynamism in coping responses as well as in cognitive appraisal and ensuing emotions within the same achievement context. Third, as coping strategy selection is a complex phenomenon for the reason stated above, it might make more sense to evaluate the individuals’ coping flexibility within and across stressful situations. Being flexible in coping means being able to select the coping strategies that fit the specific situational demands (Cheng and Cheung 2005). Flexibility leads to effective coping, which in turn leads to effective performance. These observations should guide research on coping regardless the type of achievement contexts.

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Our review of these three theoretical lenses on fear of failure identifies several factors relevant for deepening our understanding of the role of individual differences, internal cognitive processes and behavioural outcomes. First, fear of failure has a dualistic nature: it may lead to approach as well as avoidance behaviour (e.g. Birney *et al.* 1969). Second, fear of failure and success orientation are not independent or mutually exclusive constructs: they coexist within individuals and interact to influence cognitive and behavioural responses (e.g. Covington 1992). Third, dispositional fear of failure and trait anxiety are considered essentially equivalent (e.g. Conroy 2001; Atkinson and Litwin 1960). Fourth, fear of failure can be conceptualised as state as well as a trait (e.g. Martin 2012). Fifth, the temporary experience of fear of failure has a cognitive and an affective component (Lazarus 1991). Sixth, the impact of fear of failure on performance is mediated by coping responses (e.g. Poczwardowski and Conroy 2002). Seventh, coping responses to the effects of fear of failure do not follow a universal path and are strongly influenced by the features of the achievement domain as well as the individuals' unique experience (e.g. Sagar *et al.* 2009; Yoo 2001). Eighth, the circular nature of the fear of failure appraisal-coping outcomes relationship may explain the dynamism of the fear of failure phenomena over time (e.g. Lazarus 2000). Ultimately, being flexible in coping might be fundamental in the relationship between fear of failure and performance. All of these aspects contribute to explaining the fear of failure phenomenon.

While the classroom and the sport performance environments share similar characteristics, the entrepreneurial setting differs in terms of the variety of tasks involved as well as in the range of potential outcomes (see Hitt, Keats and DeMarie 1998). If it is a state that is activated by the appraisal of threats in evaluative situations, fear of failure must be studied in relation to the specific conditions in the entrepreneurial environment. Accordingly, the features of the entrepreneurial setting may play a relevant role in modeling behaviour of fearful individuals and should be different from those of educational and sport domains. Addressing these issues is a primary step towards the explanation of fear of failure mechanisms within the

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entrepreneurial process. We extend this analysis in the next section.

4. CONCEPTUAL ISSUES IN ENTREPRENEURIAL FEAR OF FAILURE

Establishing the meaning of fear of failure is the first step towards a rigorous conceptualisation of this phenomenon in entrepreneurship. Within the psychological research tradition, the term ‘fear of failure’ has been used to refer to a stable disposition (e.g. McClelland *et al.* 1953) and a psychological state (e.g. Conroy 2001).

The dispositional approach involves the study of internal stable personality characteristics to explain individuals’ attitudes and behaviour. According to this approach, individuals are characterised by certain dimensions that are stable over time, and predict behaviour across situations (Stew and Ross 1985). When framed as disposition, fear of failure is a stable individuals’ tendency to become anxious about failure which influences approach as well avoidance behaviour, independent of the specific characteristics of the achievement context (Atkinson and Litwin 1973; Birney *et al.* 1969).

In contrast to focusing on personal characteristics that lead to predictable responses across situation, an equally revealing approach is to examine the situational characteristics that lead the same individuals to respond differently. Thus a state approach assumes that behaviour is a function of psychological states stimulated by situational characteristics (Leary and Hoyle 2009). According to this approach, certain situational variables create differences in individuals’ psychological states, which in turn result in different behavioural responses. Fear of failure is a temporary cognitive and emotional state that arouses from the appraisal of threatening environmental cues, and manifests in approach as well as avoidance behaviour (Conroy 2001). These approaches refer to two different concepts of fear of failure (trait vs. state), and thus offer two different avenues to explain its nature, experience and behavioural consequences.

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In order to understand how dispositional factors influence behaviour, it is important to consider the relevant environmental cues and stimuli. This suggests that, although there is an inherent interdependence between the personological and motivational approaches to understanding psychological processes, the priority should go to understanding states. Therefore, we define fear of failure as temporary cognitive and emotional reaction towards environmental stimuli that are apprehended as threats in achievement contexts. The threats, anticipated or actual, derive either from the consequences of failing or from the absence of desired consequences of succeeding. By suggesting more focus on the temporary experience of fear of failure, we are not saying that dispositions should be ignored; rather, we are simply arguing that the temporary arousal of the construct should be considered at the centre of a theoretical framework, where dispositions and situational features exist harmoniously in the service of behavioural explanation.

The concept of fear of failure as a state rather than trait is more useful for explaining the dualistic nature of fear of failure, manifested in approach as well as avoidance behaviour. In this context the dispositional approach alone is not useful; in particular because it cannot explain why individuals with traits associated with avoidance tendencies (e.g., trait anxiety) might also decide to approach. A trait approach is optimal for describing differences in reactions across individuals. On the other hand, a state approach provides an explanation for differences in reactions within individuals across situations. Within the entrepreneurship research tradition, studies on personal characteristics such as need for achievement and attitude towards risk have already showed that trying to explain entrepreneurial behaviour from enduring personality differences lead to inconsistent and inconclusive findings (e.g., Brockhaus 1980; Hornaday and Aboud 1971; McGrath, McMillan and Scheinberg 1992). Therefore, we suggest that future research should prioritise the psychological state that anticipates the behavioural manifestation of fear of failure.

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Second, conceptualising fear of failure as a state highlights connections between the construct and other relevant variables, including dispositions, which can be expected to amplify or reduce the fear of failure arousal. For example, it would be interesting to consider the 'Big Two', extraversion and neuroticism, which reflect dispositional approach and avoidance (McCrae and Costa 1987). Similarly and closely related to the Big Two personality traits, positive and negative affective dispositions and trait optimism and trait pessimism can be expected to influence how different individuals attend to, process, and respond to similar environmental cues. Thus, a state approach helps to explain the mechanisms through which certain dispositional variables influence the cognitive, emotional, and behavioural manifestation of fear of failure within the entrepreneurial process. Although research in the field of entrepreneurial personality has examined the direct relationship between dispositions and entrepreneurial behaviour and outcomes (e.g. Ciaverella *et al.* 2004; Hmielesky and Baron 2009), general dispositions are only distally related to approach and avoidance behaviors in specific settings and times (Rauch and Frese 2007). Therefore, while traits or dispositions are certainly important, it is the cognitive and emotional experience that is central in understanding and explaining both the process and the consequences of fear of failure.

Third, if fear of failure is defined as psychological state, it may be more appropriately treated as an event-based experience (Dimov, 2007). Events are defined as "important happenings" that occur in specific time and place, and that imply a "change in what one is currently experiencing" (Weiss and Cropanzano 1996: p. 31). The experience fear of failure begins with the appraisal of significant events that might threaten an individual's sense of self and her esteem in the eyes of others (Birney *et al.* 1969). While individuals' appraisals are influenced by intrapersonal factors (Lazarus 1991), the impact of significant events is also a function of the achievement context in which they unfold. If we are interested in understanding fear of failure in entrepreneurship, then we must consider those 'entrepreneurial events' that can generate individuals' fearful reactions. Therefore, the analysis of the features of the entrepreneurial setting is required in an effort

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to identify the proximal causes of fear of failure.

Having raised the topic of the entrepreneurial setting and its role in eliciting fear of failure, it is important to understand the extent to which this setting differs from other achievement settings such as the educational and sport contexts where the majority of research on fear of failure has been conducted (e.g. Conroy 2001; Covington 1992). An achievement context is defined as a situation in which an individual sees her- or him-self as responsible for somewhat uncertain outcome and knows that such outcome will be evaluated against a standard of excellence (Atkinson 1957; Maehr and Sjogren 1971). Achievement situations involve the tasks that have to be performed, the standards against which the performance will be evaluated, the competences requested to carry out the tasks according to established standards. The specificity of the entrepreneurship domain can be analysed according to the unique characteristics of these three elements – tasks, standards, and competences.

First, unlike students and athletes, entrepreneurs face several tasks and are constantly exposed to the possibility of success or failure (see Hitt, Keats, and DeMarie 1998). The entrepreneurial process is defined as a series of stages or events that follow one another including the idea or conception of a business, the initiation of operations, the implementation of the business and its subsequent growth. The development of each stage requires actions aimed to acquire and organise resources and competences associated with idea discovery, evaluation, and exploitation (Shane and Venkataraman 2000). From the perception of opportunities to the creation of organisations to pursue them, entrepreneurs are constantly exposed to potential setbacks and negative feedback that reduce the chance of success and increase the likelihood of failure. As such, in comparison to sports and education, the entrepreneurial setting is a more complex collection of events that offer diverse potential triggers to fear of failure experiences.

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Second, entrepreneurs are evaluated by stakeholders using diverse criteria. When individuals decide to start a venture, they are inevitably exposed to other people's judgement and criticism. They are judged from those whose approval and money they seek, including peers, mentors, family, friends, investors, venture capitalists, competitors, and customers (Davidsson 2005). Because they use different parameters to measure performance, these evaluators have different expectations that might influence individuals' anticipated affective reactions to success and failure as well as their cognitive evaluations of the aversive consequences of failure (Passer 1983). Therefore, these evaluations play a significant role in shaping the meaning that entrepreneurs attribute to failure. Any analysis of entrepreneurs' fearful reactions should consider the role of different stakeholders, as their performance expectations contribute to shape individuals' sources of fear of failure within the entrepreneurship domain.

Third, entrepreneurs have to demonstrate competence, both in terms of personal skills and knowledge and in the quality or potential of the opportunity they pursue. Entrepreneurship is commonly defined in terms of relationship between enterprising individuals and valuable opportunities (Shane and Venkataraman 2000). Individuals form beliefs about the existence of opportunities "to sell products and services at a price greater than the cost of their production" (Autio *et al.* 2013: p. 1348). However, for them to act entrepreneurially, individuals also need to form beliefs about their ability to exploit these opportunities (McMullen and Shepherd 2006). When an individual decides that a discovered opportunity represents a desirable and feasible course of action for her- or him-self, she or he establishes the individual-opportunity nexus, and starts a process of identification with and attachment to the venture (Shane and Venkataraman 2000; Cardon *et al.* 2005; Shepherd, McMullen, and Jennings 2007). Entrepreneurs often refer to their business as "their baby" (Cardon *et al.* 2005: p. 127), and assume responsibilities for the successes and failures of their venture, which can be attributed to their personal abilities as well as to the potential and quality of the opportunity (Shepherd 2003; Ucbasaran *et al.* 2012). Thus, the nexus of individual and opportunity

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suggests the existence of both self-oriented and opportunity-oriented sources of fear of failure, an observation that deserves attention from future research (e.g. McMullen and Shepherd, 2006).

Our description of the entrepreneurial setting shows that entrepreneurship, as an achievement domain, differs from educational and sport environment where, most of the research on fear of failure has been conducted. The events that follow one another, the multiple “evaluators”, and the individual-opportunity connection contribute to shape individuals’ cognitive evaluations of aversive consequences of failing that are specific to the entrepreneurship domain. Consistent with the idea of fear of failure as context-specific phenomena (e.g. Poczwardowski and Conroy 2002), we suggest caution in integrating previous research, and invite scholars to explore fear of failure explicitly within entrepreneurial setting.

Building on our observations, the path forward should begin with the definition of fear of failure as a temporary emotional and cognitive condition. However, our conceptual understanding of fear of failure in entrepreneurship cannot be limited to the analysis of emotional and cognitive reactions. Dispositional factors and environmental cues should be also included in a theoretical framework, where different variables exist harmoniously in the service of behavioural explanation. If behavioural manifestation of fear of failure is the result of the dynamic interactions between the individual’s emotions, cognitions, and dispositions and the environmental stimuli, then a more process-oriented perspective should be adopted to explain this phenomenon. Therefore, we encourage future research to treat fear of failure not as a single variable but as a process manifested in “the unfolding dynamics between mind, environment, and action” (Gregoire *et al.* 2011: p. 1456). Only this perspective can emphasize the role and place we want to give fear of failure in entrepreneurship.

5. A RESEARCH AGENDA

Our review of the literature on fear of failure and entrepreneurship demonstrates that the idea that fear of failure is always a barrier to entrepreneurial behaviour is the result of conceptual and methodological confusions. The conceptualisation of fear of failure remains simplistic, in many cases equating it with risk aversion or negative emotion. The measurement of the construct is also very limited and in many cases with questionable validity. Furthermore, studies are almost exclusively focused on the inhibitory effects of fear of failure, ignoring the motivational force that the construct may exert on entrepreneurial behaviour. These observations suggest that there is a need for both conceptual agreement on the nature of fear of failure as well as valid measure of the construct. In an effort to shed light on the real effects of fear of failure within the entrepreneurial process, we propose three logical steps for the systematic study of this construct in entrepreneurship.

First, the development of a theoretical framework that explains the arousal, manifestation, and transformation of fear of failure within the entrepreneurial process requires an inductive investigation of the phenomenon. Despite being very useful in understanding several aspects of the fear of failure concept, the achievement motivation theory, appraisal theory, and coping theory do not offer a comprehensive view of the phenomenon that includes the dynamic interaction of emotions, cognitions, dispositions, environmental cues, and action. Furthermore, the entrepreneurship domain is sufficiently distinct achievement context, characterised by the need for action under uncertainty; action that holds possibly severe consequences for individual wellbeing or even economic survival. Therefore, inductive research may help make sense of an interesting phenomenon that has not received satisfying explanation within the entrepreneurship literature.

Second, a new measure of fear of failure is needed that reflects a more complete conceptualisation of fear of failure. Limitations of existing

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measures of fear of failure such as the GEM measure, the trait anxiety test, and the PFAI further justify the need for a new measure of fear of failure. We have already argued that the GEM item employed to survey the level of fear of failure for nascent, emergent, and experienced entrepreneurs and the rest of the population imposes a unidimensional and unidirectional relationship between fear of failure and entrepreneurial behaviour. The item “fear of failure would prevent me from starting a business” takes for granted that if fear of failure is present, it will always have an inhibitory effect. On the contrary, fear of failure can also lead to approaching behaviour and a valid measure of the construct should not hamper the assessment of its dualistic nature.

Like the GEM measure, the trait anxiety and the PFAI do not appear to accurately represent the concept of fear of failure. If fear of failure is the temporary cognitive and emotional reaction towards environmental stimuli that are apprehended as threats in the entrepreneurial settings, then a measure of fear of failure should consider both its cognitive and emotional components. While the trait anxiety test refers to a definition of fear of failure as a stable disposition, the PFAI measures the degree of individuals’ cognitive beliefs in five aversive consequences of failure (experiencing shame and embarrassment, devaluing one’s self-estimate, having an uncertain future, important others losing interests, and upsetting important others) without assessing the emotional reaction associated with the fear of failure experience. In addition, these five cognitive evaluations may not be fully representative of the entrepreneurship context, where individual’s beliefs in the aversive threats of failure relate to both the self and the opportunity (McMullen and Shepherd, 2006). We invite future research to address these issues and develop a measure that is able to assess the whole fear of failure experience within the entrepreneurial process.

Another significant observation concerning the methodological limitations of the current literature on fear of failure and entrepreneurship is the prevalence of cross-sectional studies. Data on the level of an individual’s fear of failure have been captured at one point in time, resulting in an

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evidence base of snapshots. Tracking the experience of fear of failure over time is challenging, but longitudinal research designs are needed to capture the temporal dynamics associated with transitional states. This would complete our understanding of the arousal, manifestation and transformation of this phenomenon.

Finally, future research should consider the impact of fear of failure on a broader range of behavioural outcomes. Existing literature on fear of failure and entrepreneurship mostly focuses on the influence of the construct on the decision to start a business (e.g. Arenius and Minniti 2005; Hessels *et al.* 2011; Welpel *et al.* 2011; Li 2011). However, the psychological state of fear can be experienced also throughout the entrepreneurial process, affecting nascent, emergent, experienced entrepreneurs' entrepreneurial action. For example, fear of failure might influence the type of task that is undertaken, and the level of efforts invested in the chosen task (Atkinson 1957). Future research should also be concerned with the influence of fear of failure on individuals' persistence with a chosen course of actions, despite negative results (Staw 1976). Another interesting outcome that might be influenced by fear of failure is the level of physical and psychological health: striving behaviour driven by fear of failure is often accompanied by high level of anxiety and psychological fatigue that damage individuals' wellbeing (De Castella *et al.* 2013). We encourage scholars to address these and other research questions on the influence of fear of failure on the entrepreneurial process in order to gain a complete understanding of this phenomenon and its behavioural consequences.

6. CONCLUSION

The fear of failure is an essential part of the entrepreneurial journey. Entrepreneurs are often described as passionate, enthusiastic, ambitious, resilient (e.g. Cardon *et al.* 2009; Hermans *et al.* 2013; Stam *et al.* 2012; Hmieleski and Carr 2008). However, we believe that underneath this invincible surface lies an inconvenient truth: entrepreneurs may also be fearful. During the journey, they might have to deal with fears of losing a

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client, not being paid, not winning a contract, out of control cash flow, as well as the fear of not having enough time to spend with family, friends, and loved ones. Although it is not difficult to agree on the reality of this scenario, the experience of fear of failure is the least told chapter in the life story of an entrepreneur.

Within the entrepreneurship literature, fear of failure is viewed as simply a barrier to entrepreneurial action. Actually, fear of failure can be many different things – from the worst of enemies to the best of friends (Martin and Marsh 2003). It can be the barrier to individuals' entrepreneurial aspiration, or the source of entrepreneurs' determination to win. However, more than anything, the experience of fear of failure is a complex, understudied, and highly nuanced issue. With this review, we have started to trace the contours of this interesting phenomenon.

We have argued that the lack of precision in the conceptualisation and operationalisation of fear of failure in entrepreneurship research does not imply that the construct lacks conceptual and practical utility. We have identified the unique attributes of prior research that most occupy the conceptual space we would call fear of failure in entrepreneurship. However, we have highlighted that the construct will be more useful if framed as a model that simultaneously embraces emotions, cognitions, dispositions, situational cues, and behaviour. In the absence of such model, it is hard to develop relevant research hypotheses on the relationship between fear of failure and entrepreneurship without avoiding the flaws of current research.

We hope that this review helps researchers have a firmer idea about the locus of the issue when they decide to study fear of failure, and invite them to explore the construct more in depth, so that future research can more precisely identify the nature of the fear of failure construct they are pursuing in entrepreneurship.

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Centre Manager
Enterprise Research Centre
Warwick Business School
Coventry, CV4 7AL
Enquiries@enterpriseresearch.ac.uk

Centre Manager
Enterprise Research Centre
Aston Business School
Birmingham, B1 7ET
Enquiries@enterpriseresearch.ac.uk

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