Evaluating Entrepreneurial Learning from Failure through a Grief Lens

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Abstract

This paper conducts an empirical study of entrepreneurial learning and focuses on critical events, specifically failure as defined by the cessation of a company due to insolvency. The study reported in the paper draws upon the theories and hypotheses that have been proposed in the subject of learning from failure, specifically as they relate to critical setbacks and catastrophic failure. Further, the study explores how entrepreneurs experience grief from failure and how such grief impacts on their capacity to learn. The study builds and empirically tests a new conceptual model of entrepreneurial learning through failure. Results from the empirical analysis show that entrepreneurs do experience grief when their businesses fail. Further, learning and grief interact during the recovery process for the entrepreneur, in a complex manner, and grief recovery interferes with learning.

Key Words

Entrepreneurial learning; failure; grief; critical setbacks; insolvency

1. Introduction

Entrepreneurs fail and it seems to be widely expected that entrepreneurs will learn from failure. Lord Young at a Small Business Charter discussion event in the United Kingdom (UK) for example stated: "*It's a fact that nobody learns anything from success. We only ever learn something when we fail"* (Lord Young, 14/11/16). This commonly held view of experts, entrepreneurs and venture capitalists is beginning to be refuted by the evidence acquired from research studies (Ucbasaran *et al* 2010). Whilst it is possible to learn from failure, as it is possible to learn from any experience, specific processes may need to be followed that facilitate active reflection for recovery from the negative emotions, or grief, that occur when failure happens (Shepherd 2003). Reflection, it has been argued, promotes learning and the modification of behaviours (development) for future actions and new venture efforts (Cope 2005a). It has also been argued that active interventions, such

as, action learning sets might promote recovery from failure events (Cope, 2011).

The literature on grief clearly highlights some key questions that have guided our study. First, and perhaps most obviously, do entrepreneurs experience grief when they encounter significant failure events that put their business into potential jeopardy? Do they experience grief when the venture fails and enters a period of administration (perhaps ending eventually in bankruptcy)? Secondly, will grief have some identifiable stages that may impact on the ability of the entrepreneur to recover and learn from the event experienced (Kübler-Ross, 2005; Shepherd *et al*., 2011a)? Next, will excessive grief get in the way of learning (Shepherd *et al.*, 2000; Shepherd *et al*; 2011b)? Entrepreneurs with more failure experience should experience less grief when a venture fails (Cope, 2011). Finally, does distance from the failure event (in terms of time) lower the levels of grief entrepreneurs' exhibit (Cope 2011; Shepherd *et al.* 2000)? Current thinking suggests that grief should decline as a person moves away (in time) from the event of failure (Cope, 2011).

The purpose of this paper is to contribute to the debate about the way entrepreneurs learn from failure and whether or not grief occurs and, if it occurs, how it influences the learning process from failure. In doing so, we empirically test models, theories and concepts in entrepreneurial learning from failure. The research introduced seeks to test whether or not grief actually occurs when entrepreneurs experience significant failure events, such as, administration, insolvency and bankruptcy. Further, the empirical study investigates the nature of the grief recovery process, considers how grief affects learning from failure and makes important contributions to the validation of concepts in the subject area. We propose a theoretical model of entrepreneurial learning from failure, thus testing prior conceptual theories whilst bringing forward new theoretical insights to the field. We first introduce the conceptual basis of the study conducted and explain some of the key theories related to the research aim. Next, we explain the methodology adopted, the way the key constructs were operationalized and validated and how the theoretical model was tested. Following

the methodology, we report the results, introduce the sample, explain the conduct of the data analysis and report the outcomes of our work. Finally, we discuss and explain how the empirical study supports, validates and contradicts the current conceptual thinking about entrepreneurial learning from failure and the grief recovery process. In the final part of the paper we highlight the contribution of this work, indicate the implications for entrepreneurs experiencing significant business failure and note the policy ramifications. In the final part of the paper we also highlight avenues for future research.

2. Theory and Hypotheses

Previous studies of entrepreneurial learning have focused on pedagogical approaches to be emulated (or simulated) in the classroom (Rae 2000; 2004; 2006; Pittaway & Cope 2007), whilst others have sought to provide conceptual models to the theory of entrepreneurial learning (Minniti & Bygrave, 2001; Ardichvili *et al.,* 2003; Shepherd, 2003; Cope, 2005a; 2005b; 2007; Corbett, 2005; 2007; Politis, 2005; Rerup, 2005; Pittaway & Thorpe, 2011; Tseng, 2013; Wang, 2014). Despite the development of such models, few studies have attempted to empirically test an overarching model of entrepreneurial learning. A systematic literature review carried out by Ucbasaran *et al.,* (2013) listed only four articles that consisted of an empirical investigation related to entrepreneurial learning. Of these four studies, two were classified as qualitative, using a small number of case studies (Huovinen & Tihula 2008; Cope 2011) and two were quantitative (Politis & Gabrielson 2009; Ucbasaran *et al.,* 2010). Wang (2014) analysed 75 studies identified as relating to entrepreneurial learning, with 43 focusing on 'individuals' or 'entrepreneurs', and only ten articles explicitly defining entrepreneurial learning. In the literature on entrepreneurial learning there is consequently a dearth of large scale empirical studies and this study sets out to help address this deficit.

One group of studies in entrepreneurial learning have begun to focus on how entrepreneurs experience and learn from failure (Cope 2003, 2005a; Politis & Gabrielsson 2009; Shepherd 2003, 2009). Such work has typically focused on the development of the individual through a process of

social reflection and has linked learning to the experience of an event. Such failure events are described as critical setbacks (Cope 2003, 2005a, Pittaway & Cope 2007, Politis & Gabrielsson 2009). For Cope (2005a) and Politis & Gabrielsson (2009), critical setbacks are a constituent part of the construct of entrepreneurial preparedness, for others (Shepherd 2003, Ucbasaran *et al.* 2010), critical setbacks are the focus of an event which triggers modification and/or transformation of behaviour through the process of social reflection (personal development).

From a conceptual standpoint, researchers agree that entrepreneurs can learn from failure (Minniti & Bygrave, 2001; Shepherd, 2003; Politis, 2005; Rerup, 2005; Cope, 2011; Shepherd *et al.*, 2011; Ucbasaran *et al.*, 2013). This is also a commonly held view amongst experts and support networks. Despite being expected and a common-sense understanding, the assumption is not fully supported by existing empirical evidence and the literature is split in this regard (Cope, 2011; Ucbasaran *et al.*, 2013). In fact, some studies show that entrepreneurs learn from mistakes (Cannon & Edmondson, 2001; Baumard & Starbuck, 2005; Politis & Gabrielsson, 2009), whilst others argue that the learning reported in prior research may be fictitious and not accurate as it may simply reflect respondents' expectations and social norms (Shepherd, 2003; Friedman, 2004; Shepherd *et al.*, 2009; Ucbasaran *et al.*, 2013).

Whilst it is possible to learn from failure (as an experience), a stream of research suggests that negative emotions, or grief, can occur when failure happens (Shepherd *et al.*, 2011b), and that grief negatively affects learning (Shepherd, 2003; Shepherd, *et al.* 2009; Cope, 2003; Ucbasaran *et al.*, 2013). Building on this reasoning, Cope (2005a; 2011) suggests that specific support structures need to be in place to help facilitate active reflection for recovery in order to ameliorate the negative emotions.

This study consequently seeks to test the conceptual ideas of Shepherd (2003), and Cope (2005a; 2011) that entrepreneurs may suffer from grief as a response to business failure, and that such grief may have a negative effect on learning. Figure 1 depicts the theoretical framework of this

study suggesting that failure experience has a positive direct effect on personal growth, but at the same time has a negative indirect effect through grief.

2.1 Failure experience

Researchers have suggested that the most common cause of business failure is insufficient experience (Cooper *et al.,* 1994; Gimeno *et al.,* 1997; Shepherd *et al.,* 2000; Stuart & Abetti, 1990) and it has been argued that feedback obtained from the experience enhances the knowledge of the entrepreneur (Minniti & Bygrave, 2001; Ucbasaran *et al.,* 2010; 2013). Shepherd (2003) draws on the literature from both entrepreneurship and organisational behaviour to describe a consistent set of propositions that argue failure is a more important source of learning than success. A limitation of the literature, however, is the minimal exploration of the link between failure and learning (Shepherd *et al.,* 2011b) with a lack of clear understanding as to what the process of learning from failure is, and what inhibits or promotes such learning (Jenkins *et al.,* 2014).

In exploring the relationship between failure and learning, Shepherd (2003), Shepherd *et al.,* (2011), and Cope (2011) proposed that an individual's ability to process information from the loss of a business and therefore learn from failure, is likely to be hindered by the negative emotional response (grief) to the loss. Previous research on entrepreneurial learning has considered the development of the individual, as they engage in a process of social reflection during and after experiences gained because of significant failures. For the entrepreneur, such events present themselves as critical setbacks (Cope 2003, 2005a; Pittaway & Cope 2007; Politis and Gabrielsson 2009; Rae 2000, 2004, 2006) and/or the outright failure of the venture leading to insolvency and bankruptcy (Headd, 2003; Lin & Wang 2018; Shepherd 2003, 2009). Politis and Gabrielsson (2009) define such critical setbacks by arguing that *"these critical setbacks were based on prior theoretical work on traditional obstacles and problems that new ventures face when coping with liabilities of newness in their early years of operations (i.e. Stinchcombe, 1965; Singh et al., 1986; Shepherd et*

al., 2000)" (Politis and Gabrielsson, 2009: 370). Critical setbacks within this study are consequently defined differently to business closure, which we describe as catastrophe failure.

Some studies refer to entrepreneurial events and the merits of learning from prior experience (Politis 2005, Cope 2011). Minniti & Bygrave (2001)'s discussion on path dependence, however, indicates entrepreneurs tend to repeat the same actions that work, and not those that result in failure. Whilst much of the literature suggests that entrepreneurs learn from failure, Politis (2005, p.411) noted that "*however, not all failures are equally adept at facilitating learning*". Politis refers to Sitkin (1992) and the discussion of 'intelligent failures', which are defined as failures that have sufficient ambiguity in any possible outcome to enable learning yet do not result in catastrophic failure thus avoiding negative responses. This idea of small 'experimental' failures is a useful one, and has been discussed in other studies (Shepherd, 2009; Cope, 2010). It also gives rise to the question of how big is big? We seek to answer this question by accounting for the contextual factors surrounding the failure including the size of the financial loss (Lin and Wang, 2018) in testing our conceptual model of entrepreneurial learning from failure.

Failure can, therefore, come in several forms. Incremental experimental learning occurs through trial and error learning. For example, from an entrepreneur trying to start a venture, discovering that they need to focus on a different customer niche than originally intended and consequently pivoting their focus to adapt (Rae 2000, 2004, 2006). Such mistakes are small and require the entrepreneur to change quickly but rarely endanger the overall viability of the business itself (unless they are ignored and thus can build up to become critical setbacks). Critical setbacks in contrast are significant mistakes and occurrences that put the business into serious jeopardy from which the venture and entrepreneur might be able to recover but may tip the business into insolvency. Such events are seen to be more transformative in terms of the learning process and can lead to critical reflection that changes an entrepreneur's entire way of thinking, working and/or perceptions of self (Cope, 2005a; 2005b; 2011). An example of such an event might be the breakup of a

partnership between two entrepreneurs that must be navigated for the venture to survive. Finally, catastrophic failures are events that put the venture itself and possibly the entrepreneur personally into a position of insolvency, administration and/or bankruptcy with the various implications such events imply for financial, emotional, familial and social exposure (Politis and Gabrielsson, 2009; Shepherd 2003). An example of such a catastrophic event might be insufficient financing resulting in the company being unable to service its debt in the short term, resulting in the business becoming insolvent and being forced into administration. In this study, we include both critical setbacks, defined as *"personal mishaps and hardships experienced by the entrepreneur in the business venturing process"* (Politis and Gabrielson, 2009: 365) and catastrophic failures, defined as insolvency, administration or bankruptcy (Shepherd, 2003). We, however, exclude trial and error learning from minor errors and mistakes that do not put the business into jeopardy, since the literature suggests that there is insufficient negative response to such mistakes, and due to the difficulty of defining and measuring such minor errors and mistakes.

In synthesising the arguments made in the literature, we define failure experience as the combined extent to which an entrepreneur has experience critical setbacks and catastrophic failures. The study sought to test following hypotheses:

Hypothesis 1: There will be a positive relationship between the individual's level of failure experience and the level of grief.

Hypothesis 2: There will be a positive relationship between the individual's level of failure experience and the level of personal development.

2.2. Grief

Prior work on failure has suggested that there is a strong emotional bond between the entrepreneur and their business (Shepherd, 2003). It is proposed that, should a business fail, the entrepreneur will suffer emotional stress, which will manifest itself as grief (Shepherd *et al*., 2011a;

2011b). Here the business is analogous to a living part of the 'family' of the entrepreneur, and when it fails, it can be considered to have died. Previous research has also referred to a business as a living entity, with the suggestion that the loss of a business is akin to losing a child, where the parent is the entrepreneur (Cope *et al.,* 2004; Shepherd *et al.,* 2000). Given that grief is a negative emotional response, it is suggested that this can hinder the process of reflection, and thus stifle any learning from the failure event (Shepherd, 2003).

The idea that the business is an organic product of the entrepreneur provides a strong link to social and emotional loss. Connecting the contextual elements of the full picture of such a loss would indeed highlight the pain that could be caused by a loss of a business, and subsequently what impact this pain has on the development of an individual. Notwithstanding the associated trauma of loss of income and assets, loss of [self]-respect, and the impact of relationships with friends and family, there is the need to come to terms with the loss of all the effort – physically, mentally, and emotionally (Cope 2005a), that went into creating a business that became an entity in its own right – albeit a corporate one. The concept that such loss would cause grief and sorrow has been proposed by Shepherd (2003) and has been tested to varying degrees in a limited number of empirical studies: Cope (2011) utilised a method of interpretive phenomenological analysis with a sample of seven American entrepreneurs to demonstrate that there was evidence to support the idea that entrepreneurs show signs of grief following failure; Shepherd *et al.* (2011b) tested the negative emotional response to project failure of 257 German scientists; Jenkins *et al.* (2014) utilised an appraisal framework to assess the link between grief, and the perceived damage of failure with a sample of 120 failed Swedish entrepreneurs. There remains, however, a need to further investigate grief as a construct within the field of entrepreneurship, and the impact that grief has on the learning process of an entrepreneur who has 'lost' a business and/or experienced critical setbacks.

Prior research has proposed that high levels of grief will inhibit the learning process, and could even prevent the entrepreneur from moving on when necessary (Shepherd *et al*, 2011a). Grief

is often defined as a five-stage process through which an individual experiences denial, anger, bargaining, acceptance, and recovery (Kübler-Ross, 2005). Shepherd (2003) provides a number of measures of grief that could be used to empirically test the link between grief and failure: specifically, the Hogan Grief Reaction Checklist (HGRC) (see Hogan *et al.*, 2001), a scale used to measure the level of grief suffered by those who have recently lost a loved one. Hogan & Schmidt (2002) explored the concept of loss leading to personal growth, utilising a method of structural equation modelling to demonstrate that following a traumatic event (bereavement in this case), there is a negative relationship between grief and personal growth when social support is not present. In the context of project failure, Shepherd *et al.* (2011) tested a two-dimensional construct of negative emotions defined as disorganisation, and detachment and despair. In contrast to negative emotions, Jenkins *et al.* (2014) adopt Blau's (2007) construct of grief associated with worksite closure. This single dimension construct focuses on emotions of sadness, anger, and disbelief, as opposed to the responses to such emotions.

In our study, we seek to empirically test the concept that entrepreneurs who experience critical setbacks, and catastrophic failures will demonstrate characteristics associated with grief. We apply Hogan & Schmidt's (2002) approach to entrepreneurial learning, failure and the grief process to provide clarity on a measure of grief in the context of entrepreneurial learning. The following hypotheses are thus tested in this study:

Hypothesis 3: Entrepreneurs demonstrate grief as a result of failure experience.

2.3. Learning from failure

This paper takes the concept of entrepreneurial learning and the assumption that entrepreneurs learn through experience (Cope & Watts, 2000), with a focus on failure, and uses it as a basis of investigation into how (or if) entrepreneurs learn from failure.

Cope's conceptual framework of entrepreneurial learning, developed in Pittaway & Thorpe (2013), takes experience and entrepreneurial preparedness as both input and output parameters, suggesting that there is a continuum of learning. Indeed, it would suggest that the learning gained through the discontinuous event of failure, could count towards entrepreneurial preparedness for the next venture. Cope (2011) argues that discontinuous events can stimulate learning in terms of business knowledge, and personal growth, although Singh *et al.* (2007) cautioned that grief could inhibit learning and called for further research in this area. It could, therefore, be argued that prior knowledge is a product of prior experience, since knowledge is deemed to be the end result (output) of prior learning processes (Ardichivili *et al.,* 2003). Individuals may develop an ability to identify opportunities through acquisition and transformation of experience (Corbett, 2007; Kolb, 1984; 2014; Mezirow, 1991). As such, it can be considered that prior experience accumulates into entrepreneurial preparedness and that such preparedness can impact on future learning; for example, as failure is experienced (Cope, 2011).

A number of studies have considered how experience may impact learning, and perhaps future performance (Politis 2005; Rerup, 2005; Hmieleski & Baron, 2009; Politis & Gabrielsson, 2009; Shepherd *et al.,* 2011a; 2011b). Consideration of performance as a measure of learning is likely to be unreliable due to the numerous contextual factors that result in success or failure (McKeever *et al.,* 2014). There is a school of thought that entrepreneurs do not necessarily learn, they just repeat behaviour until a different outcome occurs: a probabilistic series of random events (Kelbert *et al.,* 2005, Mullins 1996; Minniti & Bygrave, 2001). At any one point, they may be on an upward trend, or a downward trend and the probability of survival is simply a conditional probability of the likelihood of success, given a set of potential outcomes. Studies have relied on venture growth as a proxy for learning (Lichtenstein *et al.*, 2003; Baum & Locke, 2004; Politis & Gabrielsson, 2009). The proposal being, that if an entrepreneur has learned from their previous experiences, then it is likely that their new venture would perform better. It could be suggested, however, that experience

of failure lowers an individual's appetite for risk (Shepherd *et al.,* 2000; Politis, 2005; Politis & Gabrielsson, 2009; Ucbasaran, 2010; Bolton, 2012; Bolton & Lane, 2012), but this could increase their long-term survival. Given the large number of contextual variables that would need to be controlled for – the most significant of these being the general economic climate. As this is changing on a continuous basis (Harrison & Leitch, 2005) it is seemingly impossible to isolate entrepreneurial learning as a factor of business performance.

Previous studies have also alluded to the possibility that entrepreneurs overestimate the learning benefits of failure (Cannon & Edmondson, 2005) and as such, constructs formed from questions specifically referring to learning or knowledge gained may not provide the most accurate results. Instead, a consideration of personal growth – a measure of an individual's sense of empathy, consideration, and awareness of others – is less likely to be directly associated with the failure in the view of the entrepreneur, and therefore more likely to elicit reliable results (Ucbasaran *et al.,* 2013). This indirect measure of learning can help to demonstrate the significance of other variables being measured within the study, and as such will help to build a fuller understanding of the entrepreneurial learning concept.

Shepherd's (2003) research provided a number of propositions regarding the relationship between grief, information levels, and personal growth. Whilst Jenkins *et al.* (2014) examined the relationship between firm failure and grief, there was no examination of the effect this had on the individual's development (personal growth). Similarly, Ucbasaran *et al.* (2010) examined the relationship between business failure and comparative optimism (as a proxy for personal growth), yet did not consider the impact of grief. Shepherd *et al.* (2011b) sought to examine the relationship between project failure, negative emotions, and individual learning (personal growth), yet the specific context of the study makes it difficult to generalise, particularly to the field of entrepreneurial learning. The following hypothesis was, therefore, included to examine the relationships between business failure experience, grief, and personal growth:

Hypothesis 4: Entrepreneurs with high levels of grief will demonstrate lower levels of personal growth (learning) as a result of their failure experience.

For the purposes of this research, the study forms these proposed hypotheses into an empirical model that will be tested in the study (see Figure 1). The model articulates the following relationships. Failure experiences or events will lead to both the experience of grief and personal growth (learning). Grief may inhibit or enable personal growth.

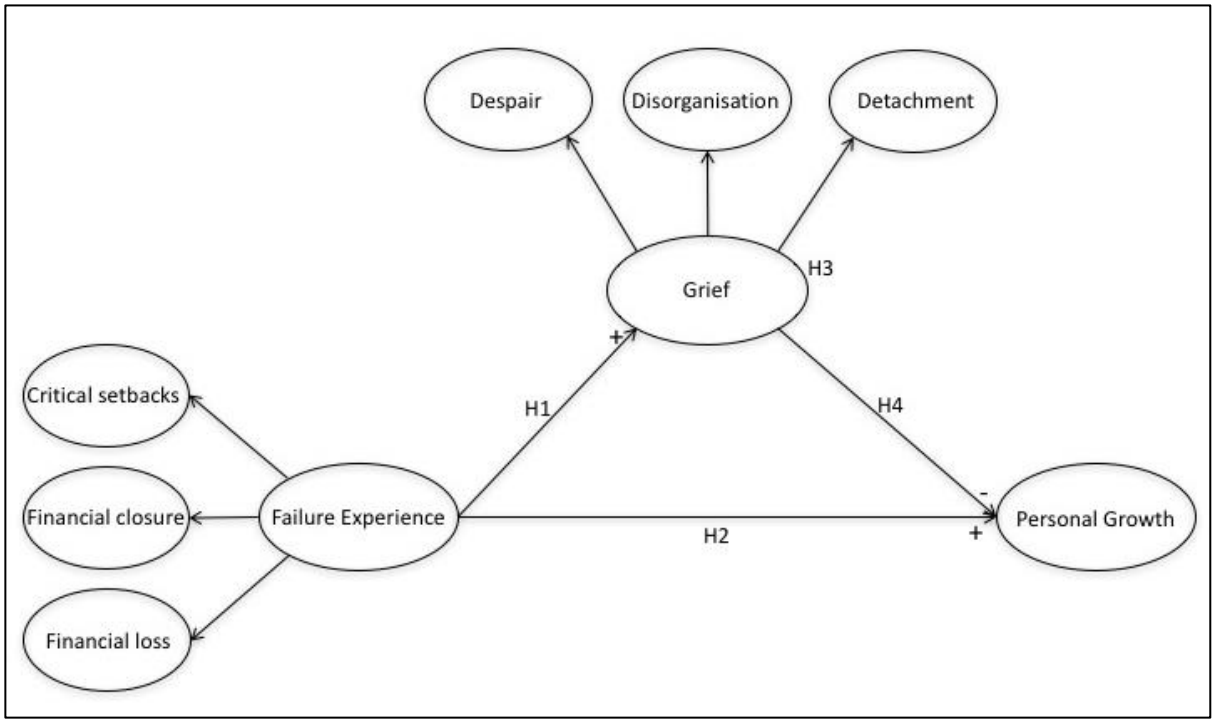


Figure 1: Empirical Model Failure, Grief and Personal Growth

3. Methodology

3.1. Development of key constructs and content validity

Having defined the main variables of the study, failure experience, grief, and personal growth, and their relationships in form of a set of hypotheses, represented in the theoretical framework depicted in Figure 1, it is now important to discuss how the key variables were operationalised to ensure content validity.

3.1.1. Failure experience

Failure experience includes three main constituent elements; critical setback experience, financial closure experience and financial loss experience. Critical setback experience consists of a six-item scale developed by Politis and Gabrielsson (2009). To gauge this variable, respondents were asked to rate the extent (1 = very low extent, 5 = very high extent) they have experienced a number of critical setbacks in the new venture creation process. These critical setbacks were based on prior theoretical work on traditional obstacles and problems that new ventures face when coping with liabilities of newness in their early years of operations (Shepherd *et al*., 2000; Singh *et al*., 1986; Stinchcombe, 1965). To distinguish between different kinds of business closure experience Politis and Gabrielsson (2009) asked respondents to rate whether they have experience of closing down a business with respect to a number of reasons for discontinuance identified in prior literature and research on the topic (Bates, 2005; Stokes and Blackburn, 2002; Watson and Everett, 1993). For the purposes of this study, a six-item scale related to financial (rather than personal) reasons were utilised to measure financial closure experience. Finally, a four-item scale developed by Lin and Wang (2018) was used to measure financial loss experience.

3.1.2. Grief

Kubler-Ross suggests five stages of grief: denial, anger, bargaining, depression, and acceptance. This model receives much criticism within the literature due to the lack of empirical testing, despite being widely accepted as fact (Maciejewski *et al*., 2007). Jenkins *et al*. (2014) use a construct for grief developed by Blau (2007), which removes the personal connection of grief associated with the loss of the business owned by the entrepreneur. As such, anger at the closure of the business in Blau's measure could be aimed at the owner (by the employees), whereas in the measure presented below, any anger can only be attributed to the entrepreneur. Further still, it is evident that blame and anger, and shock are not necessarily prevalent in such individuals (Hogan & Schmidt, 2002).

The Hogan grief reaction checklist (HGRC) developed six factors of despair, panic behaviour, blame and anger, detachment, disorganization, and personal growth (Hogan et al., 2001; Hogan & Schmidt, 2002). With prior empirical verification of the scales, the HGRC was chosen as the preferred scale for use within this study.

A modified version of the HGRC was adopted as the measure of grief, consisting of a 27-item scale with sub-measures of: despair, detachment, and disorganisation.

Two items were altered from the original questions: 'I have difficulty accepting the permanence of death', became 'I have difficulty accepting the permanence of the business closure'; 'I believe I should have died and he or she should have lived', became 'I wish I'd never started the business'. The item 'I feel like I want to die' was removed.

3.1.3. Personal growth

As discussed in Shepherd *et al.* (2011) and identified by Hogan *et al.* (2001), "*the personal growth items reflect bereaved individuals becoming transformed by the grief, experiencing positive changes as an outcome of the bereavement process*" (Hogan *et al*., 2001: 5). Thus, personal growth was treated as a separate single dimension scale to grief. Given the arguments already made with regards to reliability of measure, and to ensure internal consistency (Podsakoff *et al.*, 2003), the subscale of personal growth within the HGRC was adopted as the measure within this study (Hogan et al., 2001; Hogan & Schmidt, 2002).

3.2. Control Variables

Control for the age of the respondents is required as it may be expected that younger entrepreneurs have a less developed stock of human and social capital that can be leveraged to withstand and cope with unfavourable situations (Preseindorfer & Voss, 1990; Kautonen *et al*., 2008). It can also be expected that younger entrepreneurs have had less time to develop a track record of prior achievements (Starr & Bygrave, 1992), which may potentially influence their failure

attitude. Alternatively, it is suggested that young, less experienced entrepreneurs update their beliefs more readily than more experienced (Parker, 2006). As such, there are contradictions provided in the literature: first, experience is correlated with age, therefore age would appear to be considered a proxy for experience and perhaps more desirable (as a predictor of success); however, if age hinders the ability to learn and develop, then this suggests that the older entrepreneur may be 'stuck in their ways' and be less able to adapt to a changing market or set of circumstances.

Control for the gender of the respondents is required, as recent research has indicated that fear of failure in entrepreneurial settings differ between males and females (Wagner, 2007). This variable was measured as a dummy variable.

Control for level of education is required in order to ascertain if, and how formal education impacts entrepreneurial learning. Participants were asked to select their highest level of education (Ucbasaran, 2010).

Control for whether the respondent has experience from taking a university level course in entrepreneurship, as being exposed to structured education can influence the general awareness of the potential pitfalls that may characterize entrepreneurial undertakings (Fiet, 2001; Kolvereid & Amo, 2007). This variable was created as a dummy variable, indicating if the respondent had any experience from taking a university level entrepreneurship course.

Control for the age of the firm is required, since it is necessary to understand what stage of development the business that the entrepreneur is operating in (Hmieleski and Baron, 2009). A single item asking the respondent what year they started their main business was used.

Distance from failure refers to the temporal distance from the failure event (time since failure). Distance between failure and re-entry into entrepreneurship (Lin and Wang, 2018) was measured as the number of days between the termination of the previous business and the starting of the current main business.

Finally, in order to fully assess the entrepreneurial preparedness of the individual (Politis and Gabrielsson, 2009), participants were asked to provide the number of prior failures, the number of current businesses, and the number of prior businesses.

3.3. Survey instrument and sampling

Following the operationalisation of constructs, the survey instrument was created within Qualtrics, an online survey engine. An online survey has been used in this study for its ability to collect data economically in a short period from temporally scattered diverse sources (Hair *et al.*, 2014). The survey targeted business owners defined as *"someone who holds a significant shareholding and is a key decision maker within their organization."*[2]

An initial database of business correspondents was gathered through the Knowledge Exchange Wales (KEW) programme for inclusion into a pilot study. These 237 key informants were forwarded a link and introduction email by their known contact (the database administrator for each of the three lists) in order to increase familiarity, and thus increase response rate. 37 responses were received within a two-week period that allowed for validation and slight modification of some of the question items. This also gave an indication of the time taken to complete the questionnaire (between 10 and 25 minutes) and the likely response rate.

The FAME database (Financial Analysis Made Easy) was searched to identify potential key informants. The FAME database contains information on 3.8 million companies operating in the UK and Ireland of which 2.8 million contain complete records. FAME includes contact information, activity details, profit and loss reports, balance sheets, cash flow and ratios, credit scores and ratings (etc.). The search criteria looked to export data from companies for which there was a listed individual who was a CEO, Managing Director, or Director. 31,502 cases were retrieved. This number was then reduced by selecting companies owned by individuals. From this list, the contacts

[2] This definition was used also at the beginning of the survey instrument in form of a question with the aim at controlling whether the respondent was appropriate for the study.

were further filtered by 'Contact Function' to remove irrelevant contacts, such as, admin, PR, non-exec, operations, risk, sales, and finance. A final sample frame of 4,827 contacts were sent the initial introductory email.

This email aimed at informing the identified key informants about the purpose of the survey and notifying them to expect a second email two days later with a link to the online survey. This initial email was used also to identify email addresses that were no longer valid, or users that had moved to different jobs or retired. This email resulted in 667 bounce-backs and these contacts were removed from the sample. A second email was sent to the remaining 4160 contacts with a reintroduction to the project and the link to the survey. Participants were given two weeks to complete the survey before being sent a follow-up reminder email.

570 responses were received from the 4160 contacted businesses, representing a total response rate of 13.7% which is in line with other studies following such methods (e.g., Shepherd *et al., 2012;* Ucbasaran *et al., 2010*). Of these, 447 respondents reported that they were a business owner as defined earlier. Following removal of respondents whereby missing data constituted more than 20% of the total response (Hair *et al.*, 2014), a total of 432 respondents remained for the final analysis. Table 1 presents the summary of the demographic features of the respondents.

Demographic Features	**Frequency**	**Percent**
Gender		
Male	369	85.4
Female	63	14.6
Age		
18 – 30	21	4.9
31 – 40	116	26.9
41 - 50	97	22.4
51 – 60	144	33.3
60+	54	12.5
Education Level		
No formal education	5	1.2
Secondary School	61	14.1
College/A-Level	90	20.8
Degree	166	38.4
Masters	82	19.0
Doctoral	21	4.9
Professional Degree	7	1.6
Studied an entrepreneurship course/module?		

Yes	141	32.6
No	291	67.4
Role		
CEO	140	32.4
MD	176	40.7
Director	105	24.3
Non-exec Director	5	1.2
Manager	6	1.4
Time in role		
0 – 2 years	29	6.7
3 – 5 years	53	12.3
6 – 10 years	100	23.1
11 – 19 years	114	26.4
20+ years	136	32.5
Number of employees		
1 – 4	39	9.0
5 - 9	27	6.3
10 - 19	37	8.6
20 - 49	92	21.3
50 - 99	88	20.4
100 - 249	79	18.3
250 - 499	42	9.7
500 or more	25	5.8
0	3	0.7

Table 1: Demographic Features of the Sample

Most businesses (65%) employ less than 100 people. 84% of the businesses within the sample are categorized as Small and Medium Sized (SMEs) by the Department for National Statistics in the United Kingdom. 59% of entrepreneurs have been in their current role for more than ten years, with 64% being educated to at least degree level. The average (mean) age of respondent is 43.07 years, and 85.4% are male. Of the 432 respondents included in the analysis, 143 (33%) reported to have closed a business due to insolvency/financial reasons (business failure).

Of entrepreneurs who have failed 78% move on to their next business either before or on the same day of closure of the failed business. Combining this information with the fact that 29% of current businesses purchased the assets of the previous failed business; the data suggest that there are a high number of 'phoenix' businesses within the data. In other words, there are many instances of businesses that go through insolvency, restructure and emerge without necessarily entering bankruptcy and there are also many examples of serial and portfolio entrepreneurs who move on quickly to their next venture. Entrepreneurs with experience of business failure within the sample are on average 3.5 years older, with an average (mean) age of 46.61 years. Within the sample, fewer

females reported experience of business failure, and this difference was found to be significant at the 95% confidence level ($p < 0.05$). It could be suggested that females are less likely to have experienced failure (although the sample size for females is very small (n = 13). The male failure rate is 35% (130/369) and the female failure rate is 21% (13/63). Further analysis of the two groups (Fail versus No-Fail) using an independent-samples t-test of means provides evidence to suggest that entrepreneurs with experience of failure own a business that is on average, three years older than those with no experience of failure.

4. Data analysis and results

Analysis of the data from the survey instrument was carried out at a number of levels. First, data was validated by assessing non-response bias, accuracy of respondents' data, normality of data distribution and outliers (Section 4.1). Secondly, exploratory factor analysis (EFA) was carried out within SPSS through a combined process of dimension reduction factor analysis, utilising maximum likelihood extraction through the correlation matrix with an oblique rotation and reliability analysis of scale utilising Cronbach's Alpha (Cronbach, 1951). In many studies, this process of EFA is sufficient to accept the inclusion of items for construction of measures. In order to understand further, however, from a chi-squared analysis, how such scales are validated, a process of confirmatory factor analysis was carried out using the software LISREL (Section 4.3). Finally, the structural model was assessed through LISREL, and later using PROCESS within SPSS for moderation analysis (Section 4.4).

4.1. Data validation

Survey results can be negatively affected by non-response bias (Armstrong and Overton 1977; Podsakoff *et al.*, 2003). To assess non-response bias, independent-samples t-test is used to compare the means of two groups of early and late responses. This approach suggests that late respondents – those that do not respond to the initial call, are likely to have similar responses to those that do not respond. A 10% random sample of questions were included in a non-paired means test

with those who responded before the second call to action included in the early group (62%) and those who responded after the second call to action (38%) included in the late group. The results of the independent-samples t-test demonstrate that there is no evidence of late/non-response bias in the data.

Next, examination of the data through descriptive statistics and the production of frequency tables were used as an initial analysis of the accuracy of data returned by the respondents. An analysis of range for each variable allowed the identification of any data that may have been incorrectly submitted. This was minimised due to the online method of submission, whereby answers were given a proforma for selection[3]. Finally, residual errors of each of the variables were explored to assure they were Normally distributed, and that there were no statistical outliers that could not be sufficiently explained through the data as presented. Following a series of tests and assessment of Normal PP-plots, histogram plots and indicative statistics, such as skewness and kurtosis, it was concluded that one case would be removed from the analysis due to its extreme value of grief. Removal of the outlier reduced the value of skewness from 2.432 to 1.536 with the same standard error of 0.203. The value of kurtosis reduced from 8.972 to 1.831 with a standard error of 0.404. The residuals of the regression equations were assessed for normality by analysing scatter plots of the difference between predicted outcomes and actual, plotted against predicted outcomes. In each case, there was sufficient dispersion within +/- 3 standard deviations. This is within expectations and is acceptable for analysis (Garson, 2012).

4.2. Initial measurement, model fit and modification

This section focuses on the key findings in relation to the initial measurement model fit through the exploratory factor analysis (EFA), and subsequently the confirmatory factor analysis (CFA).

[3] This was not the case for string variables. The financial data questions were omitted from analysis due to lack of data, and other text responses were either recoded where necessary, or not used in this quantitative analysis.

4.2.1. Failure experience

Failure experience was identified to have three dimensions within the exploratory factor analysis. The scale combined three-dimensions of critical set-back experience and failure experience (Politis & Gabrielson, 2009), with financial loss (Lin & Wang, 2009).

Overall there is a good model fit, confirming the items that will be used to create the latent variable failure experience. To combine each of these factors into a single latent variable, each of the standardised dimensions were summed and then averaged. This process was adopted for all variables to ensure consistency in approach (see Table 2).

Item code	Question text	Factor loading	Corrected Item-Total Correlation
EP_CSE1	Developing a new product/service	0.61	.400
EP_CSE3	Communicating with external stakeholders	0.53	.297
EP_CSE6	Finding a customer base for a product/service.	0.70	.420
EP_FC1	Problems with making the business profitable	0.86	.553
EP_FC3	The business performed under expectations	0.57	.286
EP_FC5	To prevent further economic losses	0.77	.542
LOSS_1	Financial loss to creditors	0.55	.335
LOSS_2	Financial loss to investors	0.77	.351
LOSS_3	Personal financial loss	0.50	.199

Model	χ^2, df, *p*	α	RMSEA	CFI	SRMR
Final	46, 32, 0.052	0.720	0.056	0.97	0.066

Table 2: Summary of initial findings (CFA): failure experience

4.2.2. Grief

Three sub-dimensions of the Hogan Grief Reaction Checklist (HGRC) (Hogan *et al.*, 2001) are utilised, resulting in a theoretical grief variable of 27 items. The following analysis will consider each of the sub-dimensions independently before considering the full single-order latent variable with some discussion focusing on the differences between two possible scales.

The three-dimensional scales of despair, disorganisation, and detachment was then tested within LISREL in order to confirm the measurement structure through CFA. D6 was removed from the despair dimension, DG3 was removed from the disorganization dimension, and DT3 was

removed from the distraction dimension all due to cross loading onto other factors. This resulted in a 12-item scale demonstrating discriminant validity between each of the sub-dimensions, with a high-level model fit, whilst retaining a good scale reliability ($\alpha > 0.8$) – (see Table 3).

Item code	Question text	Initial factor loading	Corrected Item-Total Correlation	Final factor loading
G_D2	I ache with loneliness	0.56	.413	0.49
G_D3	I agonize over the loss of the business	0.74	.410	0.78
G_D5	I frequently cry	0.71	.426	--
G_D6	I feel like I am in shock	0.76	.425	0.76
G_D11	I feel hopeless	0.50	.440	--
G_DG1	I forget things easily, e.g. names, phone numbers	0.64	.442	0.64
G_DG2	I have difficulty remembering things from the past	0.77	.494	0.82
G_DG3	I have difficulty concentrating	0.59	.598	--
G_DG4	I have difficulty learning new things	0.53	.417	0.52
G_DG6	I have difficulty remembering new information	0.71	.478	0.74
G_DT3	I feel unable to cope	0.65	.600	--
G_DT5	I avoid tenderness	0.57	.478	0.66
G_DT6	I feel like I don't know myself	0.37	.314	--
G_DT7	I am afraid that I will lose control	0.62	.537	0.64
G_DT8	I feel detached from others	0.80	.699	0.83

Model	χ^2, df, p	α	RMSEA	CFI	SRMR
Initial	198, 87, 0.00	0.844	0.095	0.897	0.0935
Final	60, 51, 0.173	0.804	0.036	0.984	0.0696

Table 3: Summary of initial findings (CFA): grief

Analysis of the residuals within the regression analysis demonstrated sufficient Normality within acceptable limits, thus confirming the acceptability of the variable as used.

4.2.3. Personal growth

To assess the unidimensionality and reliability of the scale for personal growth, the 12 items included in the survey from the original HGRC scale were assessed through an exploratory factor analysis within SPSS. Three items were removed based on low factor loadings. Full details of the output from the EFA and CFA process are given in Table 4.

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
G_PG1	I have learned better to cope with life	0.61	.566	0.61	0.57
G_PG2	I feel as though I am a better person	0.55	.530	0.53	--
G_PG3	I have a better outlook on life	0.60	.550	0.60	--
G_PG4	I have more compassion for others	0.71	.633	0.70	0.71
G_PG5	I am stronger because of the grief I have experienced	0.57	.521	0.56	--
G_PG6	I am a more forgiving person	0.72	.608	0.75	0.76
G_PG7	I am more tolerant of myself	0.53	.470	0.53	0.56
G_PG8	I am more tolerant of others	0.72	.618	0.74	0.76
G_PG9	I have hope for the future	0.47	.466	--	--
G_PG10	I reached a turning point where I began to let go of some of my grief	0.22	.218	--	--
G_PG11	I am having more good days than bad	0.42	.422	--	--
G_PG12	I care more deeply for others	0.59	.553	0.56	0.56

Model	χ^2, df, *p*	α	RMSEA	CFI	SRMR
Initial	69, 27, 0.000	0.848	0.105	0.947	0.0644
Final	31, 20, 0.055	0.834	0.067	0.979	0.0505

Table 4: Summary of initial findings (CFA): personal growth

Through the analysis of standardized residuals within LISREL during the CFA phase, PG3 (I have a better outlook on life), demonstrated high levels of covariance with PG1 (I have learned better to cope with life) and PG2 (I feel as though I am a better person). As such, PG3 was removed from the construct without loss of theoretical meaning within the measure, but with an improved model fit. This also improved the factor analysis within SPSS providing a single factor measure.

4.3. Overall measurement and model fit

In the previous part, the individual measurement model fit was tested for all the dependent and independent variables in the proposed model depicted in Figure 1. In total 12 items were removed from the model to improve the model fit, whilst retaining scale reliability and validity from a content point of view. All items are now included into a single model to measure the fit of the latent variables together. In this process, the covariance structures are examined to assess an overall model fit. Initially this produced the results in the second row Table 6. Subsequent review, suggested that removal of D2 (I ache with loneliness) would improve the overall model fit due to a reduction in cross-factor loadings. The model fit statistics of the final overall measurement model test are

presented in Table 5.

Model	Items	χ^2, df, *p*	RMSEA	CFI	SRMR
Initial	42	353, 285, 0.0036	0.041	0.85	0.075
Proposed	30	210, 178, 0.049	0.036	0.90	0.071
Final	25	190, 165, 0.087	0.033	0.97	0.066

Table 5: Summary of the fit of overall measurement model

All items in the final model loaded satisfactorily on their respective factors and that no cross-loading of items occurred.

Exploration of the correlation matrix in Table 6 shows that there is significant correlation between experience and growth, and experience and recovery; however, there is little correlation between experience and grief. Further analysis of the correlations with grief reveals that age, and the purchasing of assets has a negative and positive relationship respectively. This suggests that age may have a positive impact on reducing grief, whereas the purchasing of assets may act as an indicator of individuals that are more likely to report higher levels of grief. Of note, was the lack of correlation between size of loss, or any of the other failure experience indicators.

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Grief	1													
2	Personal growth	.239**	1												
3	Failure experience	.145	.169*	1											
4	Distance between	-.042	.128	-.082	1										
5	Distance since	.010	.190*	-.151	.158	1									
6	Employees	-.021	-.049	.224**	-.256**	.019	1								
7	Hours	-.044	-.062	-.136	.048	-.054	.068	1							
8	Num. of businesses	-.044	-.180*	.106	-.119	.027	.290**	.231**	1						
9	Num. of closures	.009	-.003	.162	.030	-.035	.101	.017	.138	1					
10	Education	-.052	.040	.110	-.034	-.095	.005	-.059	.069	.016	1				
11	Enterprise module	-.004	-.107	-.046	.052	.009	-.106	.023	.052	-.078	.059	1			
12	Gender	-.008	-.089	-.153	.019	.091	-.039	-.021	-.118	-.076	.035	-.004	1		
13	Age	-.186*	-.036	-.067	-.045	.419**	.183*	-.049	.151	.119	.000	-.032	-.038	1	
14	Yrs. Experience	-.037	-.053	-.138	.070	-.046	-.141	.140	.002	.067	-.034	.090	.049	.154	1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 6: Correlation Matrix

Exploration of the correlation matrix with control variables included revealed the following

significant ($p < 0.05$) relationships: age is negatively associated with the ability to recover. Number of businesses and time since failure are both correlated with personal growth. Size of firm is correlated with experience. It appears that there is no gender effect, no industry effect (other than on gender), education or location data also suggest no significant effect to the main effects.

4.3.1 Validity of the constructs

The items detailed and analysed in the preceding sections are part of the iterative process of item selection for the final survey instrument.

Convergent validity is confirmed within the factor and scale analysis within the sections above whereby related sub dimensions (such as despair, detachment, and disorganisation) are positively correlated, with moderate to high coefficients.

The difference test demonstrates that there is a significant difference between the discriminant model (h_1) and the combined model (h_0), thus providing evidence of discriminant validity (see Table 7). In other words, the model demonstrates that each of the constructs is sufficiently independent from one another to be defined as constructs. Further support for the discriminant validity is given within the tables of measurement construction where discussion of distinct sub-constructs is highlighted.

	Chi-Sq	df	*p*
h_0	330	90	0.000
h_1	83	69	0.122
Difference	247	21	0.000

Table 7: Discriminant validity test for unidimensionality of the full model.

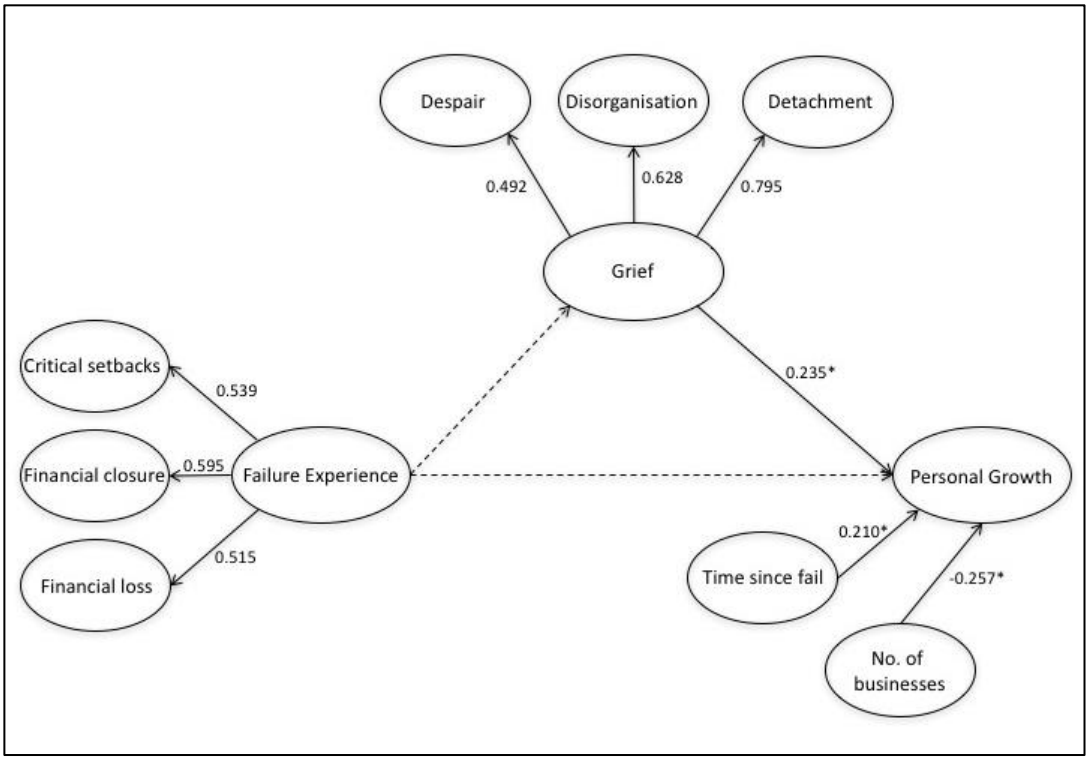
4.3.2 Overall results of measurement development

As a result of the CFA process, the three measurement models exhibited a sufficient level of fit and reliability across a number of defined indicators. These results are summarised in Table 8.

Measure	χ^2, df, p	RMSEA	CFI	SRMR	AVE	C.R
Failure experience	46, 32, 0.052	0.056	0.970	0.0660	0.669	0.895
Personal growth	31, 20, 0.055	0.067	0.979	0.0505	0.623	0.837
Grief	60, 51, 0.173	0.036	0.984	0.0696	0.650	0.893

Table 8: Summary fit statistics of the measurement models

Finally, as a check of the dimensionality of the measures, the initial model with 42 items, and the proposed model with 30 items were tested. This test resulted in a further 5 items being excluded from the final 25-item measurement model to ensure discriminant validity of each of the constructs used. The composite reliability scores (C.R.) for each measure was recorded as moderate to high with the lowest score being 0.837 on the personal growth scale. The average variance extracted (AVE) was found to be above the acceptable threshold of 0.6 for all measurement models. The final confirmed model from the SEM process is provided in Figure 2.



Notes: *p < 0.1, N = 142. Dotted lines indicate non-significant paths. Non-significant control variables not shown: Age, Number of closures.

Figure 2: LISREL structural equation model

4.4. Additional analysis: exploring the moderating role of grief

Analysis of the SEM process highlighted that whilst there was a significant relationship between grief and personal growth, there was no significant relationship between either failure experience and grief, or failure experience and growth. As such further investigation was carried out using the PROCESS macro available within SPSS (Hayes, 2013) and is presented in Table 9.

Variable	Coefficient	se	t	*p*	LLCI	ULCI
constant	.027	.078	0.345	.731	-.127	.180
Grief	.235	.084	2.800	.006	.069	0.400
Failure experience	.135	.083	1.636	.104	-.028	0.299
Grief * F.E.	-.202	.087	-2.313	.022	-.375	-.029
Distance since fail	.207	.081	2.557	.008	.047	.415
Distance between	.001	.080	.018	.937	-.165	.161
Age	-.088	.089	-.960	.338	-.268	.083
Gender	-.144	.079	-1.632	.079	-.298	.015
No. of businesses	-.266	.080	-3.170	.009	-.411	-.088

R	R-sq	MSE	F	df1	df2	*p*
0.617	0.380	0.619	3.849	9	132	0.0003

Table 10: PROCESS analysis of moderation effect of grief on learning from failure

Analysis of the data presented in Table 10 demonstrates that when included as an interaction effect, the combination of failure experience and grief has a significant negative effect on the personal growth of the individual. This indicates that grief suppresses the effect that failure experience has on personal growth. The conditional effect of failure experience on personal growth at varying levels of grief is presented in Figure 3.

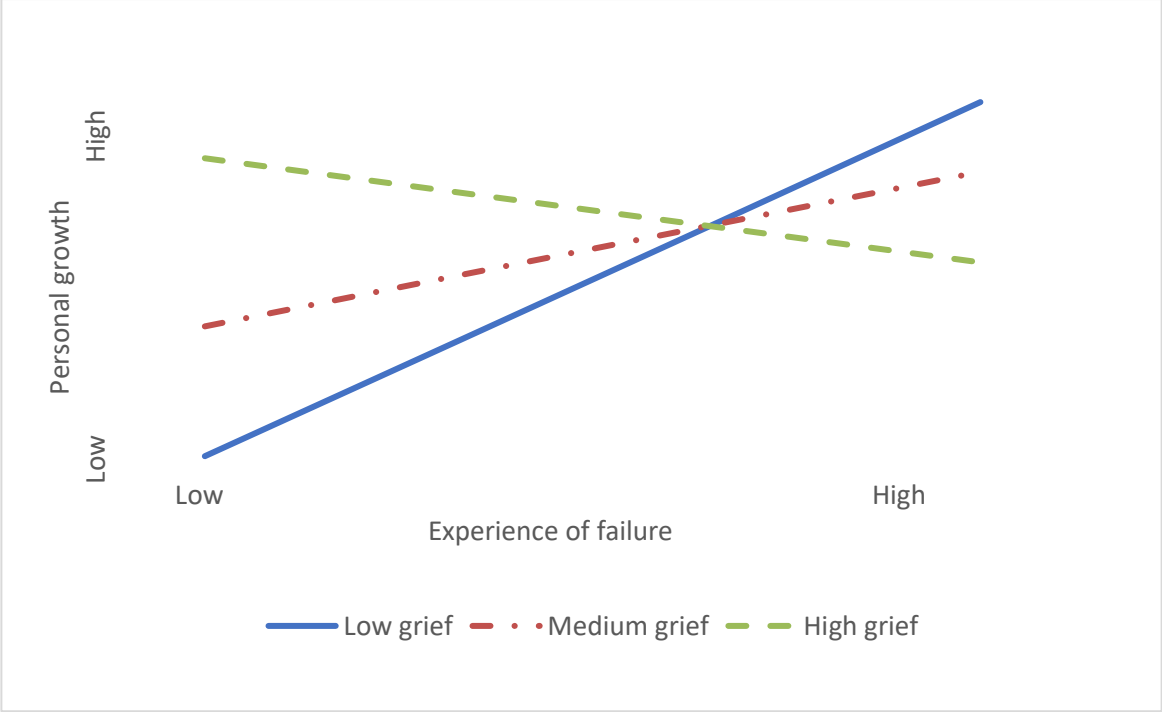


Figure 3: Moderation effect of grief on entrepreneurial learning

The analysis within this section resulted in the confirmation of a number of hypothesis, and provided counter evidence for the support of alternative theory. A summary of the hypotheses testing is provided in Table 10.

Hypothesis	Supportive evidence?
Hypothesis 1: There will be a positive relationship between the individual's level of failure experience and the level of grief.	Not supported, either in terms of correlation, or directly within the structural model.
Hypothesis 2: There will be a positive relationship between the individual's experience of failure and the level of personal development.	Supported in terms of correlation (Table 7), however, the direct effect is non-significant when grief is included in the structural model.
Hypothesis 3: Entrepreneurs demonstrate characteristics of grief as a result of a critical setback and failure experience.	Grief demonstrates both a direct effect on personal growth and a moderation effect when included as an interaction term with experience.
Hypothesis 4: Entrepreneurs with high levels of grief will demonstrate lower levels of personal growth (learning) as a result of their failure experience.	Supported following the moderation analysis in PROCESS .

Table 10: Summary of hypotheses and test outcomes

5. Discussion

Shepherd (2003) proposed that the failure of a business could have similar physiological and psychological effects on the owner as the death of a significant other (Shepherd *et al*., 2011). As has been discussed, and is shown in the data presented, there is evidence to suggest that this proposition holds true and that there is support for hypothesis 3a: Entrepreneurs demonstrate characteristics of grief as a result of a critical setback and failure experience. Entrepreneurs do experience grief as a result of failure experiences (Shepherd, 2003) and it is worth highlighting that this study is one of the few large-scale surveys available that tests and validates the relationship between failure and the experience of grief (Politis and Gabrielsson, 2009).

A factor analysis of the HRGC results produced three significant dimensions apparent in the sample data of the 142 failed entrepreneurs. This is consistent with the findings of Hogan and Schmidt (2002) and provides support for hypothesis 3: Entrepreneurs demonstrate characteristics of grief as a result of a critical setback and failure experience. The results from the study suggest that the theory of "five-stages of grief" (Kubler-Ross, 2005) perhaps be updated to better reflect the evidence presented here, which suggests a theory of three-dimensions of grief as being a more accurate representation of the data collected (despair, detachment and disorganization). Whilst each of the scales may be described as discrete stages, as with the Kolb (1984) experiential learning cycle, such 'stages' are only described to allow visual clarity of a psychological phenomenon. In reality, each of the scales may operate simultaneously to different degrees. Within the overall grief scale participants of this study who had experienced failure demonstrated three negative subscales. Despair, detachment, and disorganisation were each negatively correlated with the subscale of personal growth, demonstrating divergent validity. As per Shepherd *et al.* (2011), the three subscales of negative emotions associated with grief were grouped together, and it is these three sub-scales that have been classed as a hindrance or barrier to learning. As such, rather than describing a model of five-stages of grief, the evidence appears to support a notion of 'grief traits', whereby entrepreneurs

exhibit three traits (despair, detachment and disorganization) associated with grief (to different degrees simultaneously and at different times in different combinations), following critical set-backs and failure.

The literature widely agrees that entrepreneurs learn from failure (Cope, 2011; Pittaway and Thorpe, 2012), while some argue that grief may inhibit learning (Shepherd *et al.*, 2011). In this study, there is data to suggest that entrepreneurs do learn from failure and the evidence supports this proposition. Our initial conceptual model, based on the literature and presented in Figure 1, suggested that we would expect to see a mediation effect of grief on the relationship between failure experience and personal growth. Testing for this model within LISREL, however, demonstrated that there was no significant relationship between failure experience and grief, or failure experience and personal growth. Figure 2 presented the tested model with control variables. Further investigation of the data exploring this relationship, however, showed that rather than a mediation effect, there is in fact a moderation factor that affects how well entrepreneurs learn (see Figure 2 and Table 9).

It has been demonstrated then, that grief acts as a moderator of the relationship between failure experience and personal growth, and this is supported in the results from this study. An entrepreneur exhibits signs of grief as a likely outcome of thoughts and feelings brought about by the realisation that they have failed. There appears to be no statistical relationship with regard to the size of failure and how this might impact on the level of grief (Cope, 2011). Similarly, there appears to be no statistical relationship between distance from failure and the level of grief (Shepherd, 2003). It was expected that in both cases, there would be a strong relationship and as such none was found. In controlling for time since failure, we found that whilst time did demonstrate a significant positive correlation with personal growth, there was no evidence to suggest that grief diminishes with time, indicating that grief is a very individual characteristic and that different people may respond differently for different reasons. Instead, the examination of the data as represented in Figure 3, suggests that grief has the greatest impact on learning at either end of the experience scale.

The results suggest that at low levels of failure experience – situations where there may have been some small critical set-backs, but perhaps not a catastrophic failure resulting in financial loss – grief helps to promote learning. In other words, it might be said that some emotional pain is required in order to promote learning (Politis and Gabrielsson, 2009). This evidence provides support to hypothesis 4: entrepreneurs with high levels of grief will demonstrate lower levels of learning as a result of their failure experience. At high levels of experience though – situations where the failure has been catastrophic, resulting in high financial loss, perhaps – grief has a negative effect on learning (Shepherd *et al.,* 2011), suggesting that entrepreneurs with high levels of failure experience will be more negatively impacted by grief than those with low levels of failure experience. This finding provides an insight into the contextual element of learning – not from the external contextual factors usually listed as control variables in most of the literature (Shore, 2017), but in terms of the precise context of the failure. Furthermore, this is very much individualised due to the nature of grief, and thus cannot necessarily be predicted. Consideration of the conditional effect of experience on personal growth, accounting for grief, demonstrates that in general, higher levels of failure experience result in higher levels of personal growth, however this is only significant for low to medium levels of grief. This means that as grief increases, the ability to learn from the failure experience is suppressed, thus acting as a barrier to learning.

6. Conclusions

This study makes an important contribution to understanding about entrepreneurial learning from failure and the grief recovery process. It shows in a fairly definitive way that entrepreneurs do experience grief when their businesses fail (Shepherd, 2003). In addition, the study shows that grief occurs both during catastrophic failure (Shepherd *et al.,* 2011) and when critical setbacks occur (Politis and Gabrielsson, 2009). Further, it provides support for the idea that entrepreneurs learn from failure experiences (Cope, 2011; Yamakawa and Cardon, 2015) and adds to the conceptual discussion, as well as testing existing concepts. Conceptually and empirically the research presented

in this paper demonstrates the significant negative impact that grief can have on learning from business failure (Shepherd *et al.,* 2011). In addition, it provides evidence to suggest that the nature and extent of grief experienced by the entrepreneur modifies whether learning will occur and this may hold regardless of distance from the failure event itself. Excessive levels of grief can inhibit learning and certain forms of grief can make recovery and learning more difficult. This aspect of the study will be explored in further investigation of the data and will be reported elsewhere. It is anticipated that the nature of grief and the oscillation between forms of grief may impact on an entrepreneur's capacity to learn (Shepherd *et al.,* 2011). The study importantly highlights that critical setbacks are central to the learning process (Cope, 2011) and that future work should focus on these nuances regarding how the individual deals with critical set-backs, through sense making and reflection and should seek to understand in more depth the complex personal and social development of the individual learning occurring when such events are experienced.

This empirical study also contributions to theory development. It shows, for example, that there is opportunity to learn valuable information from the failure of a business venture and that it is likely that entrepreneurs who have failed are likely to take fewer risks due to more moderate levels of comparative optimism (Ucbasaran *et al.,* 2010) and this seems to result in businesses that have a longer life expectancy. This study has demonstrated that learning from failure is conditional on grief. Grief has an adverse effect on the entrepreneur being able to recover from the failure event, perhaps hindering the process of reflection and examination of crucial information. It may be assumed that all entrepreneurs consider 'what went wrong', yet the evidence provided, suggests that this process is hindered by increasing levels of grief. Furthermore, the evidence suggests that individuals continue to demonstrate attributes of grief long after the failure experience, and this would suggest that the 'pain' of losing a business never goes away for some individuals.

Failed entrepreneurs represent an underutilised and under-supported source of potential economic asset that should be given more attention within policy and practice. As educators and

trainers, more should be done to build resilience and awareness of the impact that high levels of grief may have on the ability of the entrepreneur to recover and subsequently learn from failure. Furthermore, post failure support groups would aid the reduction of the effect of grief in the initial aftermath of failure (Cope, 2011) and thereby promote learning. Further still, by integrating failed entrepreneurs with current or nascent entrepreneurs, the opportunity to learn vicariously, through the experience of others, offers greater opportunities for future entrepreneurs to avoid making similar mistakes. It is also recommended from the outcomes of this study that failure and grief become embedded into current provision of curricula and training, to increase awareness, and perhaps reduce fear of failure and the associated stigma (Cope *et al.*, 2004; Shepherd *et al.*, 2011a; Singh *et al.*, 2015; Wyrwich *et al.*, 2016). Further research in this area might focus on the highlighted gender divide in failure rates, which could add further information to the discussion on re-entry into entrepreneurial ecosystems (Simmons *et al* 2018). Similarly, there is some interest in the age gap identified, providing further information to the study of 're-venture speed' (Lin and Wang 2018).

It is important to discuss the limitations of the study as well as opportunities for future research. Data was sourced from a UK context, where laws and company legal structures are specific. Similarly, cultural aspects surround insolvency are likely to be perceived differently in other contexts, and this could have an impact on the overall results. As discussed in the previous section, only limited companies were targeted within the scope of the study, and this may have an impact on the considerations of financial loss to the individual, since the company and individual are separate legal entities. Study of sole traders and partnerships may elicit different results due to the necessity for personal bankruptcy during insolvency (Companies House, 2016).

The main limitations with the methodology is the cross-sectional study design chosen. Such a design provides benefits of gathering large amounts of data in a relatively short period of time, however this does mean that physiological changes of an individual cannot be captured in a

longitudinal nature. Further to this, the self-reporting data collection method may produce biases relating to memory recall and distortion (Podsakoff & Organ, 1986; Podsakoff *et al.*, 2003).

Finally, due to the nature of the study, access to individuals approaching, during, and immediately after insolvency is very difficult to obtain, notably due to the high levels of time commitment required during such periods, and as a direct result of the negative emotional and physiological stress that is often exhibited during such an event, thus rendering the individual unable to face talking or thinking about the event (Shepherd, 2003; Cope 2005a, 2011). As such, 82% of respondents were responding more than two years after the failure experience, and therefore the recall bias referred to above, could have a distortion effect on the results. It is also evident that our sample is of practicing small business owners who have experienced prior failures, as such, we have not sampled people who have failed in their ventures and moved on to other careers as a consequence of the failure event.

In summary, the study shows that failure is not necessarily the good thing that it is purported to be. With critical setbacks and failure, often comes grief, and this offsets the potential learning opportunities that may be available from any single failure event. This paper has highlighted the key contributions to theory of this study, based around the concepts of critical setback experience (failure), grief, and personal growth. In presenting a conceptual model of learning it was hypothesised that entrepreneurs would demonstrate levels of grief, perhaps in five stages but three forms (rather than stages) were actually observed and the time-bound nature of the recovery through stages was not observed. What is evident is that grief can have an adverse effect on the ability of the entrepreneur to learn from failure and that further research in this area is necessary.

7. References

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