

# From Negative Emotions to Personal Growth: Failure and Re-entry into Entrepreneurship

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**This study explores how entrepreneurs' extent of experience of business failure affects the level of negative emotional response (NER) they experience, moderating the level of personal growth that occurs after business failure. Contrary to common assumption, the study finds no significant relationship between the extent of failure experience and the level of NER. The results show that many entrepreneurs demonstrate personal growth following business failure, however, the extent of failure experience and the level of NER. This interaction moderates the level of personal growth for the entrepreneur and suggests that high levels of failure experience interfere with the level of personal growth obtained. The study contributes to theory by providing insights into the processes and consequences of entrepreneurial failure. In particular, the study brings together key threads of debate on personal growth and failure to develop and test conceptual arguments, and further explores the way entrepreneurship scholars think about emotion, business failure and its impact on the individual and society.**

## Introduction

Entrepreneurial failure is inherent to the entrepreneurial process (Cope, 2011; Pittaway and Thorpe, 2012; Politis, 2005), as is evident from the 14,048 UK company insolvencies in 2021 (The Insolvency Service, 2021). Post-failure entrepreneur well-being is crucial, as it impacts future business performance and broader societal areas, such as mental health service reliance post-COVID-19 (Donthu and Gustafsson, 2020; Stephan *et al.*, 2022; Yen *et al.*, 2021). Failure extends beyond insolvency, administration or bankruptcy (Cope, 2011; Shepherd, 2003) to include personal hardships, mishaps and unmet venture expectations (Khelil, 2016; Politis and Gabrielsson, 2009). For this study, we define the extent of business failure

experience as the accumulation of failure experiences and associated losses.

Strong emotional bonds often tie entrepreneurs to their businesses, with failure inducing a grief-like negative emotional response (NER) (Jenkins, Wiklund and Brundin, 2014; Shepherd, Patzelt and Wolf, *et al.*, 2011; Ucbasaran *et al.*, 2010). These responses are, on the one hand, said to inhibit personal growth and future entrepreneurial efforts (Cope, 2011; Shepherd, 2003; Shepherd, Patzelt and Wolf, *et al.*, 2011) whilst, on the other hand, also providing opportunities for personal growth through the grieving process (Hogan and Schmidt, 2002; Yamakawa and Cardon, 2015).

In the entrepreneurial context, 'personal growth is concerned with self-realization and achievement of personal potential' (Ryff, 2019, p. 649), with

individuals seeking greater self-knowledge and effectiveness while developing new attitudes and behaviours (Ryff, 2019). Post-traumatic growth, defined by relating to others, new possibilities, personal strength, spiritual change and appreciation of life (Tedeschi and Calhoun, 2008), provides insights into how entrepreneurs may experience growth following failure. Such changes are produced by the struggle with loss and explain negative and positive personal transformations (Tedeschi and Calhoun, 2008). These convergent concepts align with Hogan's definition, whereby personal growth 'reflects bereaved individuals becoming transformed by the grief, experiencing positive changes as an outcome of the bereavement process' (Hogan, Greenfield and Schmidt, 2001, p. 5).

Despite the recognition of personal growth as a potential failure outcome, research on its antecedents and impact on entrepreneurs experiencing failure is limited (Bonanno, 2004; Corner, Singh and Pavlovich, 2017; Tedeschi and Calhoun, 2008). Exploring the effects, such as suffering (Shepherd, 2019) and potential 'silver linings' of failure events (Mantere *et al.*, 2013; Shepherd and Haynie, 2011; Shepherd and Patzelt, 2017; Singh, Corner and Pavlovich, 2015), remains critical.

This study examines how the extent of business failure experience impacts entrepreneurs' NER, its interaction with personal growth and implications for entrepreneurs re-entering entrepreneurship post-failure. Our study makes three main contributions.

First, we reconcile the apparent conflict between NER to business failure and its impact on personal growth in current research (Cope, 2011; Shepherd, 2003; Shepherd, Patzelt and Wolf, *et al.*, 2011). We delve into the psychological implications of failure experience, considering accumulated grief (Shepherd, Haynie and Patzelt, 2013; Shepherd and Patzelt, 2017). We test the relationship between the extent of failure experience and NER and explore if NER mediates, or the extent of failure experience moderates, the relationship between NER and personal growth (Hsu, Wiklund and Cotton, 2017; Ucbasaran, Westhead and Wright, 2009, 2013).

Second, we assert that personal growth is not always an outcome of business failure. NER and the extent of failure experience can interact to negatively affect personal growth, impacting future entrepreneurial activity and well-being (Cope, 2011;

Shepherd, 2003; Shepherd, Patzelt and Wolf, *et al.*, 2011). We challenge the notion that higher business failure levels always result in increased NER and reveal that NER can persist long after a failure event.

Finally, we apply the Hogan Grief Reaction Checklist (HGRC) (Hogan, Greenfield and Schmidt, 2001) to entrepreneurial contexts, providing additional validity for NER measurement among entrepreneurs. This aligns with Shepherd's (2019) call to research entrepreneurship's 'dark side', deepening our understanding of personal growth in relation to grief and business failure.

## Theoretical framework

A comprehensive review of the literature on the process and outcomes of entrepreneurial failure forms the basis of our study, as detailed in Appendix 1. Responding to Shepherd and Patzelt's (2017) call for a deeper understanding of how business failure can catalyse personal growth, we join Shepherd, Patzelt and Wolf *et al.* (2011) and Jenkins, Wiklund and Brundin (2014) in adopting concepts from grief literature.

Entrepreneurial learning theories underscore the significance of experiential learning – the evolution of individuals through their experiences, inclusive of failures (Amankwah-Amoah, Boso and Antwi-Agyei, 2018; Huovinen and Tihula, 2008; Politis, 2005). Entrepreneurs, in experiencing failure and the linked emotional pain, might reflect on their actions, strategies and decisions, engendering insights and fostering personal growth (Shepherd and Patzelt, 2017; Shepherd and Williams, 2018). By acknowledging and understanding this pain, entrepreneurs can derive valuable lessons from their failures, thereby fortifying their capabilities for future entrepreneurial ventures (Boso *et al.*, 2019).

There are, however, some contradictions and tensions within the literature. On the one hand, NERs could lead to personal growth; on the other hand, they could impede learning and growth, when the emotional pain becomes excessive (Cope, 2011; Shepherd, 2003). If negative emotions such as guilt, fear or shame engulf entrepreneurs, they may become immobilized, thereby blocking learning and the potential for growth from their failure experiences (Liu *et al.*, 2019; Shepherd, 2019).

Grief theory, traditionally associated with personal losses, offers a valuable lens to understand how NERs can promote personal growth (Hogan and Schmidt, 2002; Shepherd, Patzelt and Wolf, et al., 2011; Tedeschi and Calhoun, 2008). It presents the idea of post-traumatic growth (PTG), or positive psychological transformations following a traumatic event. This suggests that emotional pain can stimulate personal growth, resilience and positive transformations (Tedeschi and Calhoun, 2008).

The application of grief theory to entrepreneurial failure introduces two primary complexities: the dual role of NER as a potential catalyst and barrier to personal growth, and the challenges in using a theory rooted in personal losses to understand entrepreneurial dynamics.

Our study pivots around these intricacies, with a unique focus on how the extent of failure experience impacts personal growth resulting from NER to business failure. While other studies have considered factors such as coping mechanisms, sensemaking and emotional intelligence/regulation (Byrn and Shepherd, 2015; Fang He *et al.*, 2018; Mantere *et al.*, 2013; Shepherd and Kurakto, 2009; Singh *et al.*, 2007), our research spotlights the degree of failure experience as a critical individual difference. This focus addresses a gap in the current understanding, aimed at shedding light on the factors that determine the shift from the beneficial to the detrimental effects of NER and the role the extent of failure experience plays in this transition.

### *Negative emotional response to failure*

Grief has been used as a term to describe both the process of grieving (Hogan and Schmidt, 2002) as well as the NER elicited because of a significant loss (Shepherd and Haynie, 2011). Jenkins, Wiklund and Brundin (2014) defined grief following entrepreneurial failure with dimensions of denial, anger and sadness, whereas Shepherd, Patzelt and Wolf et al. (2011) considered dimensions of disorganization, detachment and despair as negative emotions in response to project failure. For this study, we seek to examine the relationship between NER and personal growth, and therefore follow the approach of Shepherd, Patzelt and Wolf et al. (2011) in adopting the HGRC (Hogan, Greenfield and Schmidt, 2001) as a lens to understand and

assess entrepreneurs' emotional responses to business failure.

Negative emotions present themselves in response to loss (Hogan, Greenfield and Schmidt, 2001) and it has been suggested that such NER may reduce or inhibit the personal growth of the entrepreneur following the 'loss' of a business (Cope, 2011; Shepherd, 2003; Yamakawa and Cardon, 2015). The grief to personal growth theory suggests, however, that personal growth emerges as an 'outcome of suffering' (Hogan and Schmidt, 2002, p. 616), supporting the notion that NER following failure is likely to lead to personal growth (Corner, Singh and Pavlovich, 2017).

### *Personal growth*

Prior studies into entrepreneurial failure have given attention to learning as an outcome (Hmielecki and Baron, 2009; Politis, 2005; Politis and Gabrielsson, 2009; Rerup, 2005; Shepherd and Haynie, 2011; Shepherd, Patzelt and Wolf, et al., 2011), yet it has been suggested that entrepreneurs overestimate the learning benefits of failure (Cannon and 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 (Ryff, 2019; Vittersø & Straume, 2020) – is less likely to be directly associated with failure in the view of the entrepreneur, and therefore more likely to elicit reliable results (Ucbasaran *et al.*, 2013). Personal growth might be demonstrated through the advent of new possibilities, whereby entrepreneurs who have experienced failure are likely to become more empathetic towards those who are experiencing the pain of loss (Hogan and Schmidt, 2002). Having experienced the struggle of coping with a major life event such as entrepreneurial failure, entrepreneurs are likely to appreciate a newfound level of strength through the action of dealing with adversity (Tedeschi and Calhoun, 2008; Williams and Shepherd, 2016). Furthermore, as an outcome of strained relationships (Kelley, Peters and O'Connor, 2009), entrepreneurs are likely to experience growth through 'a greater sense of compassion and connectedness to others' (Tedeschi and Calhoun, 2008, p. 33). If personal growth is impacted beyond re-entry, however,

this could likely act as a barrier to ‘learning new things’, since the transformation into having a fundamentally optimistic outlook is less likely to have occurred (Hogan and Schmidt, 2002). Understanding if and why this might be could provide insight into assisting entrepreneurs through such transformations and improve both their well-being and future venture performance.

As such, confirmation of the nature of the relationship between NER and personal growth is crucial in further understanding the impact of entrepreneurial failure on individual entrepreneurs.

### *The extent of business failure experience*

Entrepreneurial failure is somewhat nuanced in its taxonomy (Fang He *et al.*, 2018; Khelil, 2016), and researchers have previously explored the implications of experiencing poor business performance concerning both continuance and discontinuance of the business (Singh, Corner and Pavlovich, 2007, 2015). For the entrepreneur, such experiences present themselves as critical setbacks (Cope, 2003, 2005; Pittaway and Cope, 2007; Politis and Gabrielsson, 2009; Rae, 2000) and/or the outright failure of the venture, leading to insolvency and bankruptcy (Headd, 2003; Lin and Wang, 2018; Shepherd, 2003; Shepherd, Wiklund and Haynie, 2009).

Recent studies have considered repeated failures and entrepreneurial re-entry from a propensity and future performance perspective (Baù *et al.*, 2017; Boso *et al.*, 2019; Hsu, 2013; Yamakawa, Peng and Deeds, 2015). Experience of entrepreneurial failure may accumulate in terms of the number of closed businesses (Mueller and Shepherd, 2016; Ucbasaran *et al.*, 2010; Yamakawa, Peng and Deeds, 2015), or it may present itself as the accumulated size of financial cost to the entrepreneur, their creditors or investors (Lin and Wang, 2018). Yamakawa, Peng and Deeds (2015) theorized that the extent of business failure in terms of the number of business closures would have an impact on future performance, but found no relationship between the number of failures and new venture performance. Similarly, Lui *et al.* (2019) found that the magnitude of the financial loss on its own did not impact entrepreneurial learning, concluding that there is significant heterogeneity in learning among entrepreneurs, suggesting that ‘perception’ of loss is an important factor to consider. Ucbasaran *et al.* (2013) highlighted the likely link

between family wealth and the detriment of financial loss, suggesting, therefore, that individuals may respond differently to an ‘equal’ magnitude of failure. Shepherd, Wiklund and Haynie (2009) propose that entrepreneurs who see that failure is coming delay the failure of the business in balancing financial and emotional costs, suggesting that anticipatory grief may reduce the effect of grief following the actual loss.

Despite the progress made in this area, there has been little research on the potential accumulation of the psychological effects of multiple failures over time (Corner, Singh and Pavlovich, 2017; Shepherd and Patzelt, 2017). It is, therefore, imperative that in investigating what factors impact the personal growth and future outcomes of entrepreneurs following business failure, the interaction of accumulation of NER and ‘total’ or accumulated experience of failure be considered.

## **Hypothesis development**

### *Failure experience and negative emotional response*

Prior studies link business failure to grief (Cardon *et al.*, 2011; Jenkins, Wiklund and Brundin, 2014), implying a direct correlation between failure extent and NER (Lin and Wang, 2018; Shepherd and Haynie, 2011). Mantere *et al.* (2013) stress the importance of an entrepreneur’s perception of failure, rather than just quantification. Ucbasaran *et al.* (2010) found that serial entrepreneurs exhibited lower comparative optimism than portfolio entrepreneurs, hinting at varied emotional impacts. Shepherd *et al.* (2011) uncovered diverse emotional responses to project failure, leading Byrne and Shepherd (2015) to theorize about sensemaking processes and coping strategies. Similarly, Lui *et al.* (2019) found non-uniform learning outcomes related to loss magnitude. If entrepreneurs react differently to failure and exhibit varied cognitive responses, do they also show distinct personal growth responses when re-entering entrepreneurship?

It is suggested that how the individual perceives failure may have a greater influence on NER and personal growth than the absolute magnitude of failure (Hsu, Wiklund and Cotton, 2017; Ucbasaran *et al.*, 2013). Additionally, the significance of financial loss and its impact on emotions may vary based on the source of the initial funds.

To address this, we assess the perceived financial loss to creditors, investors and personal finances.

Furthermore, the level of experience of different reasons for closure has been found to form an overall extent of failure experience (Politis and Gabrielsson, 2009; Ucbasaran *et al.*, 2010). To distinguish between different kinds of business closure experiences, Politis and Gabrielsson (2009) asked respondents to rate whether they have experience of closing a business with respect to several reasons for discontinuance (Bates, 2005; Stokes and Blackburn, 2002; Watson and Everett, 1993). Following this prior evidence from the literature, we consider the extent of experience of business closure due to underperformance based on the expectations of the entrepreneur (Khelil, 2016; Ucbasaran *et al.*, 2010), failure to make a profit (Politis and Gabrielsson, 2009) and insolvency/bankruptcy due to economic reasons (Shepherd, 2003; Shepherd and Haynie, 2011).

Given the questions posed and the highlighted gaps in the literature, we find it imperative to understand how the experience of financial loss and prior business failure impacts NER and personal growth. As such, this study seeks to respond to the questions of multiple and inter-related implications of entrepreneurial failure (Sarasvathy *et al.*, 2013; Shepherd and Patzelt, 2017) and the following hypothesis is presented:

*H1:* The level of negative emotional response experienced increases with the extent of business failure experience.

#### *Negative emotional response and personal growth*

Whilst recent attention has been given to the effect that negative emotions may have on the entrepreneur because of failure (Ucbasaran *et al.*, 2013), there has been minimal study of the positive outcomes or ‘silver linings’ of business failure (Corner, Singh and Pavlovich, 2017; Shepherd, 2019; Shepherd and Patzelt, 2017). Personal growth has been shown to be an output of the grieving process within the psychology and bereavement literature, and has been an assumed output of business failure. Shepherd, Patzelt and Wolf *et al.* (2011) recognized this in their study of failed scientists, where they applied the HGRC (Hogan, Greenfield and Schmidt, 2001) to project failure. In the study, they removed personal growth from their analysis. Jenkins, Wiklund and Brundin (2014) uti-

lized Blau’s (2007) measure of grief based on the work of Kübler-Ross (1969). This study included personal growth in a single measure of grief, as opposed to being an outcome of grief (Shepherd, Patzelt and Wolf, *et al.*, 2011). This prior work demonstrates the application of bereavement theories to the entrepreneurial setting, yet further investigation of the long-term effects of failure, repeat failure and its impact on personal growth remains necessary (Shepherd and Williams, 2018).

It is perhaps obvious that the link between NER and personal growth exists, and this may account for the lack of explicit testing of this relationship in the context of entrepreneurial failure, yet this is an apparent gap in the empirical research to date. To address this gap, the following hypothesis is derived for describing the anticipated observed relationship between NER and positive psychological outcomes of personal growth for entrepreneurs with prior experience of business failure:

*H2:* There will be a positive relationship between negative emotional response and personal growth for entrepreneurs who have prior failure experience.

#### *Failure experience and personal growth*

As previously highlighted, it has been theorized that failure can act as a transformative event (Cope, 2011; Politis, 2005; Shepherd, 2003), providing a catalyst for personal growth in entrepreneurs who are open to change (Amankwah-Amoah, Boso and Antwi-Agyei, 2018; Boso *et al.*, 2019; Fang He *et al.*, 2018; Shepherd, Patzelt and Wolf, *et al.*, 2011; Yamakawa and Cardon, 2015). Empirical evidence of the link between failure and personal growth, however, appears limited. In combining H1 and H2, it is logical to conclude that if increased levels of the extent of failure experience have a positive relationship with NER, and NER has a positive relationship with personal growth, then there is an indirect positive relationship between the extent of failure experience and personal growth. The following hypothesis is therefore presented:

*H3a:* Negative emotional response will mediate the relationship between the extent of business failure and personal growth.

Within the context of entrepreneurial failure, however, it has also been suggested that NER

may be a hindrance to personal growth (Cope, 2011; Shepherd, 2003). Indeed, Shepherd, Haynie and Patzelt (2013) suggest that personal growth is not necessarily expected to be found following entrepreneurial failure, despite it being an output of the grieving process. The findings therein contradict the idea that the NER to failure elicits opportunities for personal growth (Cope, 2011; Shepherd and Cardon, 2009). The question, therefore, remains as to how the extent of prior business failure impacts the relationship between NER and personal growth (Shepherd and Williams, 2018). Accordingly, there is a need to understand the effect of the extent of business failure on NER, and its possible impact on personal growth.

In exploring the boundary conditions of prior business failure and future firm performance, Yamakawa, Peng and Deeds (2015) found no direct link, but instead found a moderating effect of the extent of business failure experience (measured as the number of prior business failures) on future performance. Similarly, Fang He *et al.* (2018) demonstrate that failure velocity interacts with emotional regulation in affecting entrepreneurs' learning behaviours. It is suggested that whilst low levels of failure experience may provide experiences from which to grow, further repeated failures will have a negative effect on the individual's ability to process information and take the information into a new venture. Further exploration of the moderation effect of the extent of failure has been demonstrated by Lin and Wang (2018), where the interaction between the magnitude of the financial loss and the age of the entrepreneur was shown to affect the speed of re-entry into entrepreneurship. As with failure velocity, increased financial loss was found to have a negative effect on the speed of re-entry as the age of the entrepreneur increased.

If it is assumed that emotional response impacts outlook, could different emotional responses to the extent of failure experience (number and magnitude) result in different outcomes? If this is the case, how might an individual's perception of their level of experience of business failure impact their personal growth? Shepherd, Haynie and Patzelt (2013) suggested that multiple project failures over time may lead to accumulated negative emotions. Drawing from the psychological literature, 'Lifetime traumatic events are known to have a detrimental long-term impact on both mental and physical health' (Sacchi, Merzhvynska and Augsburg, 2020, p. 1). This suggests that re-

peated exposure to business failure may lead to accumulated psychological trauma. We postulate that the relationship between NER and personal growth is contingent upon the amount of business failure an entrepreneur experiences and the resulting accumulated psychological trauma. Specifically, for entrepreneurs who have experienced a low extent of business failure, NER can stimulate reflection and adaptation, thus promoting personal growth. Conversely, for those who have been subjected to a high extent of business failure and accumulated trauma, NER can be overwhelming and could have a detrimental impact on an entrepreneur's personal growth. This aligns with the conservation of resources theory (Yang *et al.*, 2021). Based on such a theory, we argue that entrepreneurs who have experienced numerous business failures may deplete their emotional and psychological resources over time. The repeated exposure to failure may lead to emotional exhaustion and diminished psychological well-being, ultimately impeding their personal growth from NER.

Thus, we might deduce that an individual's extent of business failure experience will likely interact with NER and impact personal growth. This line of investigation provides contrasting insight into the nature of the relationship between the extent of failure experience, NER and personal growth.

It is proposed that higher levels of experience of business failure, combined with higher levels of the extent of financial loss, will have an impact on the individual's NER to failure. We therefore present the following competing hypothesis:

*H3b:* The extent of business failure experience moderates the relationship between negative emotional response and personal growth.

For the purposes of this research, we form these proposed hypotheses into two competing empirical models that will be tested in the study (see Figures 1 and 2). The models articulate the paradoxical notions that:

1. The increased extent of business failure experience will result in accumulated NER (higher reported levels), leading to personal growth.
2. The increased (accumulated) NER will mediate the path from the extent of business failure experience to personal growth.

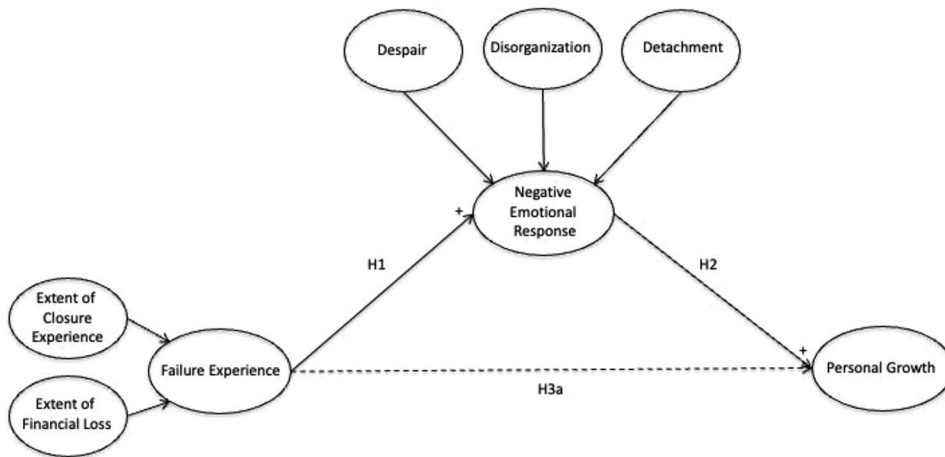


Figure 1. Empirical model 1: failure, NER and personal growth

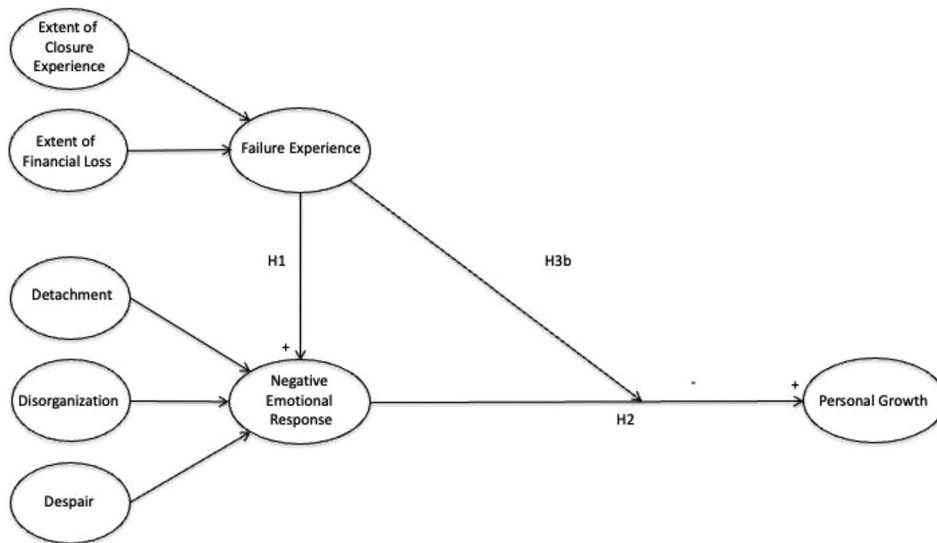


Figure 2. Empirical model 2: failure, NER and personal growth

3. The increased extent of business failure experience will moderate the path of NER to personal growth.

## Methodology

Entrepreneurial failure is difficult to investigate since, like many crises, it is unforeseeable, and the severity depends on context (Klebe, Felfe and Klug, 2021). Large cross-sectional surveys have been shown to be appropriate methods in situations where data are difficult to access longitudinally (Branicki, Kalfa and Brammer, 2022), and

are valid in circumstances where sensitive data about physical or mental health are to be collected, which may limit response rates – such as during the COVID-19 pandemic (Klebe, Felfe and Klug, 2021). In line with the majority of studies reviewed (see Appendix 1), a cross-sectional study is therefore undertaken to assess the prevalence of NER and personal growth in individuals who have re-entered entrepreneurship following failure. Whilst the cross-sectional approach has limitations in deriving causal relationships, and in presenting certain biases (Conelly, 2016), we seek to mitigate these when interpreting the associations born out of the survey. Based on current thinking on grief

and entrepreneurial failure, and the counterfactual arguments already presented, we consider it reasonable to design a model in which personal growth is the dependent variable, consistent with prior studies of such phenomena (e.g. Gao *et al.*, 2020; Klebe, Felfe and Klug, 2021).

### Sample

This study used a survey as its main instrument for data collection. An online questionnaire was created within Qualtrics and distributed, targeting entrepreneurs, defined as ‘someone who holds a significant shareholding and is a key decision maker within their organization’ (Ucbasaran *et al.*, 2010).

NER has been identified as being heightened by the stigma associated with business failure (Shepherd and Haynie, 2011; Shepherd and Patzelt, 2017; Singh, Corner and Pavlovich, 2015). It is important, therefore, to contextualize the data to a single geographical location, whereby insolvency laws are common and the perceived sociological impacts of failure are consistent (Singh, Corner and Pavlovich, 2015). The United Kingdom is often used as a comparator to the United States in studies wishing to understand the stigma associated with business failure, and it has been found that the United Kingdom’s view of failure is less favourable (Burchell and Hughes, 2006; Cope, 2011). Taking these considerations into account, a dataset from UK entrepreneurs was sought.

An initial database of business correspondents was gathered through the Knowledge Exchange Wales programme, for inclusion in a pilot study. The FAME database (Financial Analysis Made Easy) was selected to identify potential key informants. The FAME database contains information on 3.8 million companies operating in the United Kingdom and Ireland, of which 2.8 million contain complete records. The search criteria sought to export data from companies for which there was a listed individual who was a CEO, Managing Director or Director. In total 31,502 cases were retrieved, ordered randomly, and the first 15,384 contacts selected. From this list, the contacts were further filtered to remove irrelevant functions. The remaining 14,481 contacts were then put into three groups starting from a random point, and the group was subsequently selected at random. A final sample frame of 4827 contacts were sent the

introductory email. Removing 667 bounce-backs and after two follow-up emails, 570 responses were received, representing a total response rate of 13.7%, which is in line with other studies following such methods (e.g. Shepherd *et al.*, 2011; Ucbasaran *et al.*, 2010). Of these, 447 respondents reported that they were entrepreneurs as previously defined; 15 responses were removed because of missing data higher than 20% of the total response (Hair *et al.*, 2014). Of the 432 remaining respondents, 289 had no experience of business failure, while 143 (33%) entrepreneurs reported having closed a business due to insolvency/financial reasons (business failure). The male failure rate is 35% (130/369) and the female failure rate is 21% (13/63). The subsample of 143 entrepreneurs with experience of business failure is used to test the hypotheses constituting the theoretical framework set out within this study.

## Measures

### Negative emotional response

The HGRC is a reflective measure that consists of 61 items across six dimensions of despair, panic behaviour, blame and anger, detachment, disorganization and personal growth (Hogan, Greenfield and Schmidt, 2001). With prior empirical verification of the scales, aligned with the approach followed by Shepherd, Patzelt and Wolf *et al.* (2011), the HGRC was chosen as the preferred scale to measure negative emotions from failure within this study due to its prior use in learning from project failure. Hogan and Schmidt (2002) suggest that the two dimensions of panic behaviour and blame and anger are only relevant and present in response to sudden death due to homicide or accident. Since there is no theoretical evidence to support the closure of a business being linked to homicide or the sudden death of a child, and in line with Shepherd, Patzelt and Wolf *et al.* (2011), the modified version of the HGRC was adopted as the measure of NER, consisting of a 27-item reflective scale with submeasures of despair, detachment and disorganization. This measure also has the benefit of being parsimonious with the measure of personal growth.

To ensure the measures were suitable for our context, we tested the questions with an expert panel before distribution for a pilot study. As a result, 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.

### *Personal growth*

The eight-item scale of personal growth within the HGRC was adopted as the measure for operationalization within our study (Hogan, Greenfield and Schmidt, 2001; Hogan and Schmidt, 2002) due to the alignment with the conceptual definition of growth in tolerance, personal strength and new possibilities associated with post-traumatic growth and entrepreneurial failure. Using this measure provides theoretical consistency (Durand and Vaara, 2009).

As with the NER scale, the survey instrument asked participants to 'Select the option that best describes the way you have been feeling since the most recent business closure'. Responses were recorded on a Likert scale from 1 (Does not describe me at all) to 5 (Describes me very well).

### *The extent of business failure experience*

We draw upon Politis and Gabrielsson (2009) and Khelil (2016) to operationalize the nuanced nature of failure experience, in capturing both the extent of experience of different reasons for closure (Fang He *et al.*, 2018), as well as the magnitude of loss (Lin and Wang, 2018; Liu *et al.*, 2019).

The survey instrument utilized the validated measure of Politis and Gabrielsson (2009). As with NER, we tested the questions with an expert panel before distribution for a pilot study, resulting in the removal of three items deemed applicable to 'closure' but not 'failure'. Subsequently, participants were asked to 'Rate the extent to which you have experience of closing down a business with respect to the following reasons: The business performed under expectations; Problems making the business profitable; Difficulties in acquiring necessary resources; Bankruptcy due to insolvency; To prevent further economic losses'. In doing so, the measure accounts for the perceived importance and extent of experience of closed businesses that are anticipated to result in NERs (Jenkins, Wiklund and Brundin, 2014). Subsequently, following exploratory factor analysis (EFA), 'difficulties

in acquiring necessary resources' and 'bankruptcy due to insolvency' were removed due to low factor loadings.

To operationalize the measure of magnitude of loss, participants were asked to rate the extent of their financial loss to creditors, financial loss to investors and personal financial loss.

In combining the extent of financial loss, and the extent of closure experience, this study captures a more encompassing measure of business failure experience and accounts for the accumulated effects of business failure (Shepherd, Haynie and Patzelt, 2013).

### *Control variables*

We control for general human and social capital as well as entrepreneurship-specific human capital through several operationalized variables, in line with prior studies (Fang He *et al.*, 2018; Jenkins, Wiklund and Brundin, 2014; Shepherd, Patzelt and Wolf, *et al.*, 2011; Ucbasaran *et al.*, 2010): age in years; gender (male = 1, female = 0); how many businesses they currently own; the number of prior failures; age of the firm; time in role; and level of education. It has been shown that negative emotions may be related to an individual's commitment (Shepherd, 2003; Shepherd, Patzelt and Wolf, *et al.*, 2011), and therefore respondents were asked how many hours per week they spent working on the business to control for work effort (Parker, 2006).

Time since failure was constructed, in line with Shepherd, Patzelt and Wolf *et al.* (2011), as a numerical calculation following respondents' answers to the question 'On what date did the most recent business closure occur?'

Prior studies have also shown that psychological traits may support overcoming entrepreneurial failure (Fang He *et al.*, 2018; Hsu, Wiklund and Cotton, 2017). Entrepreneurial self-efficacy (ESE) has been shown to influence an entrepreneur's ability to recover from failure (Zhao and Wibowo, 2021). We control for ESE following Baron *et al.* (2016) and apply McGee *et al.* (2009)'s scale of ESE relating to searching, planning, marshalling, implementing people and implementing financial resources. Similarly, the comparative optimism of an entrepreneur may impact growth, and we control for this following Ucbasaran *et al.* (2010). Finally, attitude towards failure can affect the way an entrepreneur deals with and learns from failure,

and we follow Politis and Gabrielsson (2009) in operationalizing this control variable.

## Data analysis and results

### Data validation

To assess non-response bias, an independent-samples t-test was used to compare the means of two groups of early and late responses. The results demonstrate that there is no evidence of late/non-response bias in the data (Armstrong and Overton, 1977; Podsakoff *et al.*, 2003). To combat common source error, 'temporal, proximal, or psychological separation between the measurement of the predictor and criterion variables' (Podsakoff *et al.*, 2003) was utilized to create a separation of measurement. The use of relatively long scales was expected to reduce the scale anchor effect by reducing the possibility that responses to previous items on the questionnaire will influence responses to current items. Participants were asked to reflect on an event in their past to assess their current thoughts and feelings. As such, participants were not required to recall details of the past event, only to consider the association of current response to the event, thus minimizing recall bias (Hasan, 2005). Finally, acquiescence bias was reduced through the avoidance of bipolar numerical scale values (see Tourangeau *et al.*, 2000).

The process of EFA and confirmatory factor analysis (CFA) has demonstrated that multiple dimensions exist across each of the variables and that loading all items onto a single factor did not account for high levels of variance. Harman's single-factor test was carried out to detect common method bias (Aguirre-Urreta and Hu, 2019). The resulting data, presented in Appendix 2, shows that the first component accounted for 19.5% of the variance, well below the 50% threshold.

The utilization of a partial correlation procedure (see Podsakoff *et al.*, 2003), to control for optimism and attitude towards failure as a surrogate for method variance, demonstrated that the correlation coefficients of the main constructs did not alter in significance. This suggests that positive and negative affectivity biases are not present in the data. The data demonstrates an increase in  $R^2$  values for key relationships (see Appendix 2), in particular that of NER and personal growth, providing further evidence that common method bias

has been effectively managed at the design stage of the study.

The procedures taken to minimize and test for common method biases provide some confidence that the inferences drawn out of the analysis can be relied upon. Tests such as the partial correlation procedure and Harman's single-factor test cannot unequivocally rule out such biases, however, and therefore our results should be interpreted with caution.

Time since failure was skewed and hence transformed using a square-root approach (e.g. Akinola, Martin and Phillips, 2018). The transformation reduced skewness to an acceptable value of 0.311 (Hair *et al.*, 2014).

### Measurement model

We adopted EFA and CFA to assess the validity and reliability of the measurement model associated with the reflective scales of NER and personal growth. EFA was carried out within SPSS in two steps. Table 1 shows the results by reporting the factor loadings of the items.

The remaining items after the two-step EFA both satisfy convergent validity (factor loading higher than 0.50) and discriminant validity (cross-loading lower than 0.40). Table 1 reports the results of the CFA in terms of factor loadings of the observed items and first-order constructs, construct reliability of the first and second-order constructs, the fit indexes for each latent variable and the overall measurement model for NER and personal growth. Table 2 reports the correlation matrix and shows that the square root of the average variance extracted (AVE) is always larger than the bivariate correlations among the variables of interest for this study, suggesting discriminant validity.

## Results

The results of a multiple regression analysis do not confirm that an increased extent of failure experience results in increased NER (H1 is not supported). This, in turn, means that H3a is not supported as there can be no mediation present. The results do confirm H2, that NER has a positive influence on personal growth, with an increased  $R^2$  value of 0.192 and a significant F-value of 2.341 (see Table 3). The results also show a significant negative moderation effect of the extent

Table 1. Exploratory factor analysis

	Factor loading (EFA)	Factor loading (CFA)	t-Value
NER $\chi^2 = 57.900$ , $df = 32$ , RMSEA = 0.0707, CFI = 0.943, construct reliability = 0.70			
DESPAIR loading on second order factor = 0.54, construct reliability = 0.72			
I ache with loneliness	0.56	0.56	–
I agonize over the loss of the business	0.74	0.75	5.18
I frequently cry	0.71	–	–
I feel like I am in shock	0.76	0.73	5.20
I feel hopeless	0.50	–	–
DISORGANIZATION loading on second order factor = 0.61, construct reliability = 0.78			
I forget things easily (e.g. names, phone numbers)	0.64	0.64	–
I have difficulty remembering things from the past	0.77	0.82	6.88
I have difficulty concentrating	0.59	–	–
I have difficulty learning new things	0.53	0.52	5.14
I have difficulty remembering new information	0.71	0.74	6.60
DETACHMENT loading on second order factor = 0.81, construct reliability = 0.73			
I feel unable to cope	0.65	–	–
I avoid tenderness	0.57	0.66	–
I am afraid that I will lose control	0.62	0.64	5.61
I feel detached from others	0.80	0.75	5.83
EXTENT OF FAILURE $\chi^2 = 11.144$ , $df = 8$ , RMSEA = 0.0516, CFI = 0.984, construct reliability = 0.60			
REASON FOR FAILURE loading on second order factor = 0.70, construct reliability = 0.79			
Problems with making the business profitable	0.78	0.87	–
The business performed under expectations	0.63	0.58	6.78
To prevent further economic losses	0.78	0.77	9.07
FINANCIAL LOSS loading on second order factor = 0.61, construct reliability = 0.74			
Financial loss to creditors	0.67	0.54	–
Financial loss to investors	0.69	0.76	5.38
Personal financial loss	0.62	0.77	5.47
PERSONAL GROWTH $\chi^2 = 17.504$ , $df = 9$ , RMSEA = 0.0750, CFI = 0.977, construct reliability = 0.82			
I have learned better to cope with life	0.61	0.57	–
I have a better outlook on life	0.60	–	–
I have more compassion for others	0.70	0.71	9.08
I am stronger because of the grief I have experienced	0.56	–	–
I am a more forgiving person	0.75	0.76	9.96
I am more tolerant of myself	0.53	0.56	6.42
I am more tolerant of others	0.74	0.76	10.01
I care more deeply for others	0.56	0.56	6.60

Overall CFA:  $\chi^2 = 45.873$ ,  $df = 41$ , RMSEA = 0.0364, CFI = 0.989.

of failure on the NER to personal growth relation, confirming H3b, with the  $R^2$  and F-values increasing further still to 0.263 and 2.995, respectively. Whilst time since failure does not impact NER, age does demonstrate some influence, suggesting that older entrepreneurs in general show lower levels of NER.

Analysis of the data presented in Table 3 demonstrates that when included as an interaction effect,

the combination of failure experience and NER has a significant negative effect on the personal growth of the individual. This indicates that high levels of failure experience suppress the level of personal growth leading from NER. The conditional effect of NER on personal growth at varying levels of failure experience is presented in Figure 3.

Further analysis of the results using the PRO-CESS macro available within SPSS (Hayes, 2013),

Table 2. Correlation matrix

Pairwise correlations														
Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. NER	0.663													
2. Personal growth	0.213**	0.660												
3. Extent of failure	0.077	0.092												
4. Number of businesses	-0.029	-0.226**	0.154											
5. Number of closures	-0.012	-0.015	0.188*	0.138										
6. Education	-0.065	0.079	0.145	0.069	0.016									
7. Gender	0.002	-0.109	-0.143	-0.118	-0.076	0.035								
8. Time in role	-0.004	0.188*	-0.077	-0.232**	-0.070	0.116	0.090							
9. Time since failure	0.019	0.157*	-0.204*	0.018	-0.036	-0.075	0.091	0.046						
10. Attitude to failure	-0.082	0.073	0.007	0.004	0.156*	-0.042	-0.004	0.023	0.025					
11. Optimism	0.050	-0.024	-0.229*	-0.011	-0.005	-0.060	0.026	0.009	0.083	-0.025				
12. Hours	-0.037	-0.082	-0.110	0.231**	0.017	-0.059	-0.021	-0.145	-	0.119	-0.082			
13. Age of firm	0.069	0.005	0.079	0.129	-0.179*	-0.038	-0.122	-0.010	0.145	-0.232*	-0.055	-0.036		
14. Age	-0.143	-0.050	-0.092	0.151	0.119	0.000	-0.038	-0.150	0.383**	-0.038	0.097	-0.049	0.334**	
15. ESE	-0.105	0.020	-0.069	0.144	0.032	-0.081	0.076	-0.064	0.079	0.111	-0.090	0.107	0.105	0.089

\*\*Correlation significant at the 0.01 level (two-tailed).

\*Correlation significant at the 0.05 level (two-tailed).

Entries in *italics* represent the square root of the AVE.

Table 3. Regression analyses

Variable	Model 0: Dependent variable = personal growth	H1: Dependent variable = NER	H2: Dependent variable = personal growth	H3b: Dependent variable = personal growth
<i>Control variables</i>				
Number of closures	0.011	−0.011	0.009	−0.034
Number of businesses	−0.227*	−0.014	−0.228**	−0.233**
Education	0.110	−0.075	0.123	0.106
Gender	−0.173*	0.024	−0.175*	−0.155*
Time in role	0.114	−0.029	0.123	0.168*
Time since failure	0.207*	0.109	0.188*	0.196*
Attitude to failure	0.058	−0.061	0.079	0.069
Optimism	−0.014	0.088	−0.026	0.012
Hours	−0.023	−0.003	−0.016	−0.026
Age of firm	0.034	0.098	0.007	−0.002
Age	−0.101	−0.207*	−0.051	−0.047
ESE	0.067	−0.077	0.087	0.120
<i>Hypothesized relations</i>				
NER			0.220**	0.265**
Extent of failure		0.154		0.149
NER × Extent of failure				−0.232**
R <sup>2</sup>	0.147	0.082	0.192	0.263
F	1.847*	0.881	2.341**	2.995**

N = 142. Standardized regression coefficients.

\*p < 0.05.

\*\*p < 0.01.

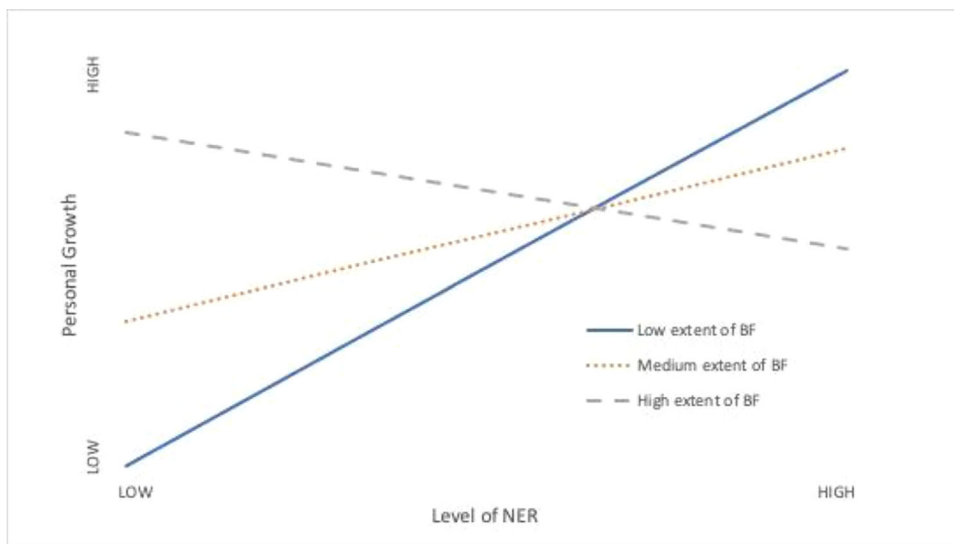


Figure 3. Moderation effect of extent of business failure on personal growth from NER [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

presented in Table 4, shows that NER leads to personal growth only for 59% of the values of failure. Beyond this, there is no personal growth, then even a negative effect for very high values. This provides evidence to support the suggestion that accumulated failure and NERs can interfere with

the grieving process leading to personal growth (Shepherd, 2019; Shepherd, Haynie and Patzelt, 2013). In addition, this finding provides evidence to explain the contradictory findings of previous studies, whereby NER can act both as a trigger for the development of personal growth and as a

Table 4. Moderator values defining Johnson–Neyman significance regions

Value	% Below	% Above
0.3505	59.8592	40.1408
2.0525	97.8873	2.1127

hindrance to personal growth if the NER becomes too high.

The analysis within this section resulted in the confirmation of H2 and H3b. H1 was not confirmed, rejecting the notion that an increased extent of business failure results in increased levels of NER. As a result, H3a is also rejected on the basis that the mediating path does not exist without H1. In addition, analysis of the data provides evidence to suggest that there is no significant difference in the outcome of either NER or personal growth with respect to the time since failure.

## Discussion

Entrepreneurial failure has been shown to be an antecedent to grief (Jenkins, Wiklund and Brundin, 2014; Shepherd, 2003), with studies investigating the link between NER and business failure. The implications of such a response to failure have been theorized to impact the personal growth of an individual (Cope, 2011; Shepherd and Patzelt, 2017), with multiple losses and accumulated grief (Shepherd, Haynie and Patzelt, 2013) expected to have long-term negative effects (Shepherd, 2019). Our study sought to apply the theory of grief to personal growth as a lens through which to understand the implications of different levels of failure experience on the personal growth of an individual, even beyond re-entry into entrepreneurship.

Our results suggest that at low levels of failure experience, personal growth increases with the level of NER. In other words, it might be said that some emotional pain is required to promote personal growth (Politis and Gabriellson, 2009). At high levels of experience though – situations where the failure has been catastrophic, resulting in high financial loss, or perhaps multiple failures have been experienced – the relationship between NER and personal growth becomes negative (Shepherd, Patzelt and Wolf, et al., 2011), suggesting that entrepreneurs with high levels of fail-

ure experience will be more negatively impacted by NER than those with low levels of failure experience. For well-being, these results imply that NERs experienced during significant failures (such as insolvency) are pronounced enough to impact physical and mental health. Failure has clear psychological consequences that could be acknowledged more openly and managed more effectively by relevant support services.

Analysis of the conditional effect of experience on personal growth, accounting for NER, demonstrates that higher NER generally leads to more personal growth. Over time, many entrepreneurs can move on from their grief, especially with low to medium levels of failure experience. When NER levels increase, however, and/or failure experience increases, through either accumulated losses and/or accumulated NER, the ability to ‘transform’, and perhaps learn from the experience, is suppressed, thus hindering personal growth. For well-being, this finding suggests that the impact of high entrepreneurial failure rates (e.g. during the COVID-19 pandemic) has notable implications for society in general. These individuals simultaneously experience high levels of negative emotions and these emotions get in the way of their ability to grow, which impacts their capacity to bring forward their experience and apply it to new ventures. High failure rates imply both a greater psychological toll and a larger number of future entrepreneurs who have not fully adjusted following their prior failures.

Our results demonstrate that an increased extent of business failure acts as a moderator of the relationship between NER and personal growth. There appears to be no statistical relationship between the extent of business failure and how this might impact the level of (accumulated) NER (Cope, 2011; Shepherd, Haynie and Patzelt, 2013). In addition, our results suggest that NER does not necessarily reduce over time and that entrepreneurs still demonstrate NER and symptoms of grief 20 or more years after the failure event. The existence of grief symptoms after such long periods also indicates the value gained from counselling and other mental health services for entrepreneurs experiencing grief during, or soon after, entrepreneurial failures.

Our results support the concept that grief is not something to be recovered from, but rather it is a transformative experience (Tedeschi and Calhoun, 2008), which may lead to several possible future

trajectories (Corner, Singh and Pavlovich, 2017). The personal growth items refer to changes the entrepreneur has experienced since the loss of the business and include phrases like ‘more tolerant’ and ‘stronger because of the loss’. Further, our results show that entrepreneurs may re-enter entrepreneurship activity, whilst harbouring high levels of NER and having not achieved such personal growth, suggesting that they have not successfully transitioned through a grieving process, which has implications for their well-being and the future success of their new venture.

### *Implications for theory*

Our study presents a nuanced examination of the emotional consequences of entrepreneurial failure, the potential for personal growth and the moderating effects of the extent of business failure, contributing to a richer understanding of the complex dynamics at play in the aftermath of entrepreneurial failure.

Our study extends the understanding of entrepreneurial failure and applies the theory of grief to personal growth within this context. We empirically demonstrate the negative impact that increased levels of failure experience can have on personal growth stemming from NER (Corner, Singh and Pavlovich, 2017; Shepherd, 2019). Additionally, our findings offer evidence that the extent of entrepreneurial failure modifies the relationship between NER and personal growth, creating a scenario where individuals who have re-entered entrepreneurship continue to exhibit high levels of NER without exhibiting expected transformations from the grieving process (Hogan and Schmidt, 2002; Shepherd and Williams, 2018).

We also make a theoretical contribution by revealing that NER does not scale proportionally with the extent of failure experienced, countering the presumption that the size or number of failures necessarily leads to an increased level of NER (Shepherd, Haynie and Patzelt, 2013). Our results suggest, however, that personal growth from NER is indeed conditional on the extent of failure experience, with an increased extent of failure possibly obstructing the entrepreneur’s development from the failure event(s). This possibly hinders the reflection process and the examination of critical information, particularly under high levels of NER.

This study also supports the idea that grief is not a state from which entrepreneurs simply recover and return to their previous state, aligning with Tedeschi and Calhoun’s (2008) view of grief as a transformative process leading to changed behaviours indicative of personal growth. Our results emphasize the role of long-lasting grief symptoms and their implications for entrepreneurs’ well-being and their future entrepreneurial activities.

Further, we advance the grief literature by applying validated constructs of NER and personal growth within the entrepreneurial failure domain. Our data from 142 failed entrepreneurs revealed three significant dimensions, consistent with Hogan and Schmidt’s (2002) findings. Participants who had experienced failure demonstrated despair, detachment and disorganization – each negatively correlated with personal growth, demonstrating divergent validity and lending further support to the grief to personal growth process model for entrepreneurial failure.

### *Implications for practice*

This study has demonstrated that entrepreneurial failure can result in long-term NER beyond re-entry, which, combined with high levels of failure experience, can negatively impact the personal growth of an individual. Educators and trainers should do more to build resilience and awareness of the impact that high levels of NER may have on the ability of the entrepreneur to effectively grieve and subsequently learn from failure experience. Furthermore, post-failure support groups would aid in the reduction of the effect of NER in the initial aftermath of failure (Cope, 2011; Gao *et al.*, 2020), assisting well-being and promoting personal growth and learning (Stephan *et al.*, 2022). Further still, by integrating failed entrepreneurs with current or nascent entrepreneurs, the opportunity to learn vicariously, through the experiences of others, offers greater opportunities for future entrepreneurs to avoid making similar mistakes. We also recommend that failure and grief become embedded into the current provision of curricula and training, to increase awareness and perhaps reduce the fear of failure and associated stigma (Cope, Cave and Eccles, 2004; Shepherd and Haynie, 2011; Singh, Corner and Pavlovich, 2015; Wyrwich, Stuetzer and Sternberg, 2016).



### *Limitations and future research*

Data was sourced from a UK context, where laws and company legal structures are specific. Similarly, cultural aspects surrounding insolvency are likely to be perceived differently in other contexts, and this could have an impact on the overall results. 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 the individual are separate legal entities. A study of sole traders and partnerships may elicit different results due to the necessity for personal bankruptcy during insolvency (Companies House, 2016). Our research also examines individual grief recovery. Further study could examine the impact of heterogeneity of the social consequences of failure and grief, for example, in the context of family businesses (Stephan, 2018; Wach *et al.*, 2021), since it is possible that there is stronger socio-emotional wealth within the business, differing goal systems and governance structures (Molly *et al.*, 2019). As such, future research on business failure, emotional response and re-entry might consider a comparative study of family firms and non-family firms. This comparative approach is warranted not only due to the different nature of their goal systems, but also because of the distinct governance structures found in family businesses, encompassing aspects such as ownership, management and decision-making processes (Worek *et al.*, 2018).

Further research in this area might also focus on the gender divide in failure rates, which could add further information to the discussion on re-entry into entrepreneurial ecosystems (Simmons *et al.*, 2018). Furthermore, in considering how best to support entrepreneurs post-failure, future research may wish to consider alternative trajectories (Corner, Singh and Pavlovich, 2017) and how such trajectories may impact personal growth and thus affect future performance following entrepreneurial re-entry. Given the goal-orientated nature of entrepreneurship, it would be interesting to see studies that examine these trajectories as they relate to the individual's goal system (Uy, Sun and Foo, 2017).

Further research into personal growth would benefit from a longitudinal study of post-entrepreneurial failure trajectories (Corner, Singh and Pavlovich, 2017). Doing so would allow a

deeper understanding of how time might affect the process of grieving with respect to business failure. Researchers may wish to consider an intervention study of post-failure entrepreneurs, thus providing further insight into how entrepreneurs learn to cope with grief, through such mechanisms as reflection, social support and counselling (Stroebe and Schut, 2010) and the impact this may have on the level and rate of personal growth (Bryde, 2005; Cope, 2011).

Our operationalized measure of the extent of failure experience makes some improvement to that of Politis and Gabrielsson (2009), yet no weightings of importance are given to any one area of loss, or reason for failure. As such, future research may wish to consider the relative importance of each of these factors.

Finally, future research could investigate the intricate dynamics of the three-way interaction among failure experience, NER and time since failure, drawing inspiration from the event system theory (Morgeson, Mitchell and Liu, 2015). This theory posits that individuals' emotional-cognitive reactions to events can evolve as time passes. Investigating the applicability of this concept to business failure, which is inherently influenced by temporal factors like time since failure, holds promise for insightful discoveries.

### **Conclusion**

This paper has demonstrated a strong link between negative emotional response (NER) and personal growth in entrepreneurs with experience of business failure. Contrary to prior conceptions, no direct link between the extent of business failure and the level of NER was found. It has been shown, however, that although high levels of NER and low extents of failure experience can lead to high personal growth, high levels of NER combined with high levels of failure experience can reduce the levels of personal growth of an individual. This result demonstrates the negative impact of repeated failures, accrued losses and accumulated grief. Consequently, it is recommended that future research considers how the transformative process of grief may be assisted post-business failure, for the entrepreneur to be better prepared for future entrepreneurial activity and improved personal well-being.



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## Conflict of interest statement

The authors declare that they have no conflict of interest.

## References

- Aguirre-Urreta, M. I. and J. Hu (2019). 'Detecting common method bias: performance of the Harman's single-factor test', *SIGMIS Database*, **50**, pp. 45–70.
- Akinola, M., A. E. Martin and K. W. Phillips (2018). 'To delegate or not to delegate: gender differences in affective associations and behavioral responses to delegation', *Academy of Management Journal*, **61**, pp. 1467–1491.
- Amankwah-Amoah, J., N. Boso and I. Antwi-Agyei (2018). 'The effects of business failure experience on successive entrepreneurial engagements: an evolutionary phase model', *Group and Organization Management*, **43**, pp. 648–682.
- Armstrong, J. and T. Overton (1977). 'Estimating nonresponse bias in mail surveys', *Journal of Marketing Research*, **3**, pp. 396–402.
- Baron, R. A., B. A. Mueller, and M. T. Wolfe (2016). 'Self-efficacy and entrepreneurs' adoption of unattainable goals: The restraining effects of self-control', *Journal of Business Venturing*, **31**(1), pp. 55–71.
- Bates, T. (2005). 'Analysis of young, small firms that have closed: delineating successful from unsuccessful closures', *Journal of Business Venturing*, **3**, pp. 343–358.
- Baù, M., P. Sieger, K. A. Eddleston and F. Chirico (2017). 'Fail but try again? The effects of age, gender, and multiple-owner experience on failed entrepreneurs' reentry', *Entrepreneurship Theory and Practice*, **41**, pp. 909–941.
- Blau, G. (2007). 'Partially testing a process model for understanding victim responses to an anticipated worksite closure', *Journal of Vocational Behavior*, **71**(3), pp. 401–428.
- Bonanno, G. A. (2004). 'Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events?', *American Psychologist*, **59**, pp. 20–28.
- Boso, N., I. Adeleye, F. Donbesuur, and M. Gyensare (2019). 'Do entrepreneurs always benefit from business failure experience?', *Journal of Business Research*, **98**, pp. 370–379.
- Branicki, L., S. Kalfa and S. Brammer (2022). 'Surviving Covid-19: the role of human resource managers in shaping organizational responses to societal paradox', *British Journal of Management*, **33**, pp. 410–434.
- Bryde, D. J. (2005). 'Methods for managing different perspectives of project success', *British Journal of Management*, **16**, pp. 119–131.
- Burchell, B. and A. Hughes (2006). 'The stigma of failure: an international comparison of failure tolerance and second chancing', University of Cambridge Working Paper No. 334.
- Byrne, O. and D. A. Shepherd (2015). 'Different strokes for different folks: entrepreneurial narratives of emotion, cognition, and making sense of business failure', *Entrepreneurship: Theory and Practice*, **39**, pp. 375–405.
- Cannon, M. D., and A. C. Edmondson (2005). 'Failing to Learn and Learning to Fail (Intelligently)', *Long Range Planning*, **38**(3), pp. 299–319.
- Cardon, M. S., C. E. Stevens, and D. R. Potter (2011). 'Misfortunes or mistakes?', *Journal of Business Venturing*, **26**(1), pp. 79–92.
- Companies House (2016). 'Liquidation and insolvency: Insolvency Act 1986'. Retrieved from <http://www.gov.uk>.
- Connelly, L. M. (2016). 'Cross-sectional survey research', *Medical Nursing*, **25**, pp. 369–370.
- Cope, J. (2003). 'Entrepreneurial learning and critical reflection: discontinuous events as triggers for "higher-level" learning', *Management Learning*, **34**, pp. 429–450.
- Cope, J. (2005). 'Toward a dynamic learning perspective of entrepreneurship', *Entrepreneurship Theory and Practice*, **29**, pp. 373–397.
- Cope, J. (2011). 'Entrepreneurial learning from failure: an interpretative phenomenological analysis', *Journal of Business Venturing*, **26**, pp. 604–623.
- Cope, J., F. Cave and S. Eccles (2004). 'Attitudes of venture capital investors towards entrepreneurs with previous business failure', *Venture Capital*, **6**, pp. 147–172.
- Corner, P. D., S. Singh and K. Pavlovich (2017). 'Entrepreneurial resilience and venture failure', *International Small Business Journal: Researching Entrepreneurship*, **35**, pp. 687–708.
- Donthu, N. and A. Gustafsson (2020). 'Effects of COVID-19 on business and research', *Journal of Business Research*, **117**, pp. 284–289.
- Durand, R. and E. Vaara (2009). 'Causations, counterfactuals, and competitive advantage', *Strategic Management Journal*, **30**, pp. 1245–1264.
- Fang He, V., C. Sirén, S. Singh, G. Solomon and G. von Krogh (2018). 'Keep calm and carry on: emotion regulation in entrepreneurs' learning from failure', *Entrepreneurship: Theory and Practice*, **42**, pp. 605–630.
- Gao, Z., C. Zhao, F. L. Cooke, B. Zhang and R. Xie (2020). 'Only time can tell: whether and when the improvement in career development opportunities alleviates knowledge workers' emotional exhaustion in the Chinese context', *British Journal of Management*, **31**, pp. 206–220.
- Hair, J. F., W. C. Black, B. J. Babin and R. E. Anderson (2014). *Multivariate Data Analysis*. Harlow: Pearson Education.
- Hassan, E. (2005). 'Recall bias can be a threat to retrospective and prospective research designs', *The Internet Journal of Epidemiology*, **3**, art. 4.
- Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Perspective*. New York: Guilford Press.
- Headd, B. (2003). 'Redefining business success: distinguishing between closure and failure', *Small Business Economics*, **21**, pp. 51–61.
- Hmieleski, K. M. and R. A. Baron (2009). 'Entrepreneurs' optimism and new venture performance: a social cognitive perspective', *Academy of Management Journal*, **52**, pp. 473–488.

- Hogan, N. S. and L. A. Schmidt (2002). 'Testing the grief to personal growth model using structural equation modeling', *Death Studies*, **26**, pp. 615–634.
- Hogan, N. S., D. B. Greenfield and L. A. Schmidt (2001). 'Development and validation of the Hogan Grief Reaction Checklist', *Death Studies*, **25**, pp. 1–32.
- Hsu, D. K. (2013). '“This is my venture!” The effect of psychological ownership on intention to reenter entrepreneurship', *Journal of Small Business and Entrepreneurship*, **26**, pp. 387–402.
- Hsu, D. K., J. Wiklund and R. D. Cotton (2017). 'Success, failure, and entrepreneurial reentry: an experimental assessment of the veracity of self-efficacy and prospect theory', *Entrepreneurship: Theory and Practice*, **41**, pp. 19–47.
- Huovinen, J. and S. Tihula (2008). 'Entrepreneurial learning in the context of portfolio entrepreneurship', *International Journal of Entrepreneurial Behaviour and Research*, **14**, pp. 152–171.
- Jenkins, A. S., J. Wiklund and E. Brundin (2014). 'Individual responses to firm failure: appraisals, grief, and the influence of prior failure experience', *Journal of Business Venturing*, **29**, pp. 17–33.
- Kelley, D. J., L. Peters and G. C. O'Connor (2009). 'Intra-organizational networking for innovation-based corporate entrepreneurship', *Journal of Business Venturing*, **24**, pp. 221–235.
- Khelil, N. (2016). 'The many faces of entrepreneurial failure: insights from an empirical taxonomy', *Journal of Business Venturing*, **31**, pp. 72–94.
- Klebe, L., J. Felfe and K. Klug (2021). 'Healthy leadership in turbulent times: the effectiveness of health-oriented leadership in crisis', *British Journal of Management*, **32**, pp. 1203–1218.
- Kübler-Ross, E. (1969). *On death and dying*. New York: Touchstone.
- Lin, S. and S. Wang (2019). 'How does the age of serial entrepreneurs influence their re-venture speed after a business failure?', *Small Business Economics*, **52**, pp. 651–666.
- Liu, Y., Y. Li, X. Hao and Y. Zhang (2019). 'Narcissism and learning from entrepreneurial failure', *Journal of Business Venturing*, **34**, pp. 496–512.
- Mantere, S., P. Aula, H. Schildt and E. Vaara (2013). 'Narrative attributions of entrepreneurial failure', *Journal of Business Venturing*, **28**, pp. 459–473.
- McGee, J. E., M. Peterson, S. L. Mueller, and J. M. Sequeira (2009). 'Entrepreneurial Self-Efficacy: Refining the Measure', *Entrepreneurship Theory and Practice*, **33**(4), pp. 965–988.
- Molly, V., L. M. Uhlaner, A. De Massis and E. Laveren (2019). 'Family-centered goals, family board representation, and debt financing', *Small Business Economics*, **53**, pp. 269–286.
- Morgeson, F. P., T. R. Mitchell and D. Liu (2015). 'Event system theory: an event-oriented approach to the organizational sciences', *Academy of Management Review*, **40**, pp. 515–537.
- Mueller, B. A., and D. A. Shepherd (2016). 'Making the Most of Failure Experiences: Exploring the Relationship between Business Failure and the Identification of Business Opportunities', *Entrepreneurship Theory and Practice*, **40**(3), pp. 457–487.
- Parker, S. C. (2006). 'Learning about the unknown: how fast do entrepreneurs adjust their beliefs?', *Journal of Business Venturing*, **21**, pp. 1–26.
- Pittaway, L. and J. Cope (2007). 'Simulating entrepreneurial learning integrating experiential and collaborative approaches to learning', *Management Learning*, **38**, pp. 211–233.
- Pittaway, L. and R. Thorpe (2012). 'A framework for entrepreneurial learning: a tribute to Jason Cope', *Entrepreneurship and Regional Development*, **24**, pp. 837–859.
- Podsakoff, P. M., S. B. MacKenzie, J. Y. Lee and N. P. Podsakoff (2003). 'Common method biases in behavioural research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, **88**, pp. 879–903.
- Politis, D. (2005). 'The process of entrepreneurial learning: a conceptual framework', *Entrepreneurship Theory and Practice*, **29**, pp. 399–424.
- Politis, D. and J. Gabrielsson (2009). 'Entrepreneurs' attitudes towards failure: an experiential learning approach', *International Journal of Entrepreneurial Behavior and Research*, **15**, pp. 364–383.
- Rae, D. (2000). 'Understanding entrepreneurial learning: a question of how?', *International Journal of Entrepreneurial Behavior and Research*, **6**, pp. 145–159.
- Rerup, C. (2005). 'Learning from past experience: footnotes on mindfulness and habitual entrepreneurship', *Scandinavian Journal of Management*, **21**, pp. 451–472.
- Ryff, C. D. (2019). 'Entrepreneurship and eudaimonic well-being: five venues for new science', *Journal of Business Venturing*, **34**, pp. 646–663.
- Sacchi, L., M. Merzhvynska and M. Augsburg (2020). 'Effects of cumulative trauma load on long-term trajectories of life satisfaction and health in a population-based study', *BMC Public Health [Electronic Resource]*, **20**, art. 1612.
- Sarasvathy, S. D., A. R. Menon, and G. Kuechle (2013). 'Failing firms and successful entrepreneurs: serial entrepreneurship as a temporal portfolio', *Small Business Economics*, **40**(2), pp. 417–434.
- Shepherd, D. A. (2003). 'Learning from business failure: propositions of grief recovery for the self-employed', *Academy of Management Review*, **28**, pp. 318–3289.
- Shepherd, D. A. (2019). 'Researching the dark side, downside, and destructive side of entrepreneurship: it is the compassionate thing to do!', *Academy of Management Discoveries*, **5**, pp. 217–221.
- Shepherd, D. A. and D. F. Kuratko (2009). 'The death of an innovative project: how grief recovery enhances learning', *Business Horizons*, **52**, pp. 451–458.
- Shepherd, D. A. and H. Patzelt (2017). *Trailblazing in Entrepreneurship: Creating New Paths for Understanding the Field*. Cham: Palgrave Macmillan.
- Shepherd, D. A. and J. M. Haynie (2011). 'Venture failure, stigma, and impression management: a self-verification, self-determination view', *Strategic Entrepreneurship Journal*, **5**, pp. 178–197.
- Shepherd, D. A. and M. Cardon (2009). 'Negative emotional reaction to project failure and the self-compassion to learn from the experience', *Journal of Management Studies*, **46**, pp. 923–949.
- Shepherd, D. A. and T. A. Williams (2018). 'Hitting rock bottom after job loss: bouncing back to create a new positive work identity', *Academy of Management Review*, **43**, pp. 28–49.
- Shepherd, D. A., H. Patzelt and M. Wolf (2011). 'Moving forward from project failure: negative emotions, affective commitment, and learning from the experience', *Academy of Management Journal*, **54**, pp. 1229–1259.
- Shepherd, D. A., J. M. Haynie and H. Patzelt (2013). 'Project failures arising from corporate entrepreneurship: impact of multiple project failures on employees' accumulated emotions,

- learning, and motivation', *Journal of Product Innovation Management*, **30**, pp. 880–895.
- Shepherd, D. A., J. Wiklund and J. M. Haynie (2009). 'Moving forward: balancing the financial and emotional costs of business failure', *Journal of Business Venturing*, **24**, pp. 134–148.
- Simmons, S. A., J. Wiklund, J. Leview, S. W. Bradley and S. A. Sunny (2018). 'Gender gaps and re-entry into entrepreneurial ecosystems after business failure', *Small Business Economics*, **53**, pp. 517–531.
- Singh, S., P. D. Corner and K. Pavlovich (2007). 'Coping with entrepreneurial failure', *Journal of Management and Organization*, **13**, pp. 331–344.
- Singh, S., P. D. Corner and K. Pavlovich (2015). 'Failed, not finished: a narrative approach to understanding venture failure stigmatization', *Journal of Business Venturing*, **30**, pp. 150–166.
- Stephan, U. (2018). 'Entrepreneurs' mental health and well-being: a review and research agenda', *Academy of Management Perspectives*, **32**, pp. 290–322.
- Stephan, U., P. Zbierowski, A. Pérez-Luño, D. Wach, J. Wiklund, M. Alba Cabañas *et al.* (2022). 'Act or wait-and-see? Adversity, agility, and entrepreneur wellbeing across countries during the COVID-19 pandemic', *Entrepreneurship, Theory and Practice*, **47**, pp. 682–723.
- Stokes, D. and R. Blackburn (2002). 'Learning the hard way: the lessons of owner-managers who have closed their businesses', *Journal of Small Business and Enterprise Development*, **9**, pp. 17–27.
- Stroebe, M. S. and H. Schut (2010). 'The dual process model of coping with bereavement: a decade on', *OMEGA – Journal of Death and Dying*, **61**, pp. 273–289.
- Tedeschi, R. G. and L. G. Calhoun (2008). 'Beyond the concept of recovery: growth and the experience of loss', *Death Studies*, **32**, pp. 27–39.
- The Insolvency Service (2021). 'Monthly insolvency statistics'. Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/956644/Company\\_Insolvency\\_Infographic\\_annual\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/956644/Company_Insolvency_Infographic_annual_2020.pdf).
- Tourangeau, R., L. J. Rips, and K., Rasinski (2000). *The Psychology of Survey Response*.
- Ucbasaran, D., D. A. Shepherd, A. Lockett and S. J. Lyon (2013). 'Life after business failure: the process and consequences of business failure for entrepreneurs', *Journal of Management*, **39**, pp. 163–202.
- Ucbasaran, D., P. Westhead and M. Wright (2009). 'The extent and nature of opportunity identification by experienced entrepreneurs', *Journal of Business Venturing*, **24**, pp. 99–115.
- Ucbasaran, D., P. Westhead, M. Wright and M. Flores (2010). 'The nature of entrepreneurial experience, business failure and comparative optimism', *Journal of Business Venturing*, **25**, pp. 541–555.
- Uy, M. A., S. Sun and M. Foo (2017). 'Affect spin, entrepreneurs' well-being, and venture goal progress: the moderating role of goal orientation', *Journal of Business Venturing*, **32**, pp. 443–460.
- Vittersø, J. and L. V. Straume (2020). 'Personal growth'. In V. Zeigler-Hill and T. K. Shackelford (eds), *Encyclopedia of Personality and Individual Differences*. Cham: Springer.
- Wach, D., U. Stephan, E. Weinberger and J. Wegge (2021). 'Entrepreneurs' stressors and well-being: a recovery perspective and diary study', *Journal of Business Venturing*, **36**, art. 106016.
- Watson, J. and J. Everett (1993). 'Defining small business failure', *International Small Business Journal*, **11**, pp. 35–48.
- Williams, T. A. and D. A. Shepherd (2016). 'Victim entrepreneurs doing well by doing good: venture creation and well-being in the aftermath of a resource shock', *Journal of Business Venturing*, **31**, pp. 365–387.
- Worek, M., A. De Massis, M. Wright and V. Veider (2018). 'Acquisitions, disclosed goals and firm characteristics: a content analysis of family and nonfamily firms', *Journal of Family Business Strategy*, **9**, pp. 250–267.
- Wyrwich, M., M. Stuetzer and R. Sternberg (2016). 'Entrepreneurial role models, fear of failure, and institutional approval of entrepreneurship: a tale of two regions', *Small Business Economics*, **46**, pp. 467–492.
- Yamakawa, Y. and M. S. Cardon (2015). 'Causal ascriptions and perceived learning from entrepreneurial failure', *Small Business Economics*, **44**, pp. 797–820.
- Yamakawa, Y., M. W. Peng and D. L. Deeds (2015). 'Rising from the ashes: cognitive determinants of venture growth after entrepreneurial failure', *Entrepreneurship Theory and Practice*, **39**, pp. 209–236.
- Yang, H., L. Zhang, J. W. Yenchun and H. Shi (2021). 'Benefits and costs of happy entrepreneurs: the dual effect of entrepreneurial identity on entrepreneurs' subjective well-being', *Frontiers in Psychology*, **12**, art. 767164.
- Yen, D. A.-w., B. Cappellini, H.-P. Yang and S. Gupta (2021). 'Coping with coping: international migrants' experiences of the Covid-19 lockdown in the UK', *British Journal of Management*, **32**, pp. 1219–1241.
- Zhao, H. and A. Wibowo (2021). 'Entrepreneurship resilience: can psychological traits of entrepreneurial intention support overcoming entrepreneurial failure?', *Frontiers in Psychology*, **12**, art. 707803.

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