



# Individual responses to firm failure: Appraisals, grief, and the influence of prior failure experience ☆☆☆



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## ABSTRACT

This paper provides a systematic assessment of how entrepreneurs react to firm failure. We use appraisal theory as an overarching theoretical framework and hypothesize that the more the failure experience is appraised as stressful in terms of its implications for harm or loss, the greater the feelings of grief. To test this hypothesis we developed a unique database of entrepreneurs who recently filed for firm bankruptcy. Our results support that there is great variation in responses to firm failure, and we provide theoretically valid explanations to why this is the case. These findings have substantial implications for how scholars conceive and theorize about entrepreneurial failure.

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## 1. Executive summary

Research in entrepreneurship has started to explore the negative consequences that firm failure can have for entrepreneurs suggesting that failure is likely to be associated with emotional distress, thereby leading to grief (Shepherd et al., 2009). To date, however, there has been no systematic investigation into the factors that influence how entrepreneurs respond to entrepreneurial failure. Focusing specifically on emotional responses, we investigate the extent that entrepreneurs feel grief after firm failure and hence the reasons why entrepreneurs may react differently to the failure of their firms.

To do this, we build on appraisal theory (Lazarus and Folkman, 1984). This theory takes as its starting point that how an individual appraises a stressful experience influences how they respond to the experience. Appraisal is the process by which individuals evaluate whether a particular experience is relevant for their well-being (Lazarus and Folkman, 1984). We focus on appraisals of harm or loss which capture the negative implications of firm failure in terms of what has been lost and are thus relevant for understanding grief reactions.

To identify harm–loss appraisals that are likely to be salient after firm failure we build on findings from the job loss literature and consider the factors that distinguish self-employment from paid employment. We hypothesize that the more the failure is appraised as involving harm or loss in terms of loss of self-esteem, financial strain, and loss of independence, the greater the

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feelings of grief. We also consider whether the entrepreneur was a portfolio entrepreneur or a hybrid entrepreneur because additional employment roles can act as psychological compensation in the event of firm failure. Thus, we hypothesize that portfolio and hybrid entrepreneurs are less likely to appraise the failure as involving harm and loss. To understand the role that prior failure can have on grief reactions, we draw on the psychological capital literature and hypothesize that prior failure experience buffers the relationship between appraisals of harm or loss and grief. To test these hypotheses we developed a unique database of entrepreneurs who recently experienced firm failure and filed for firm bankruptcy.

We found that there is substantial variance in the extent that entrepreneurs feel grief after firm failure. In particular, we found that appraisal of loss of self-esteem had the strongest influence on grief. Loss of self-esteem indicates that an individual feels that they have personally failed in a domain in which they have staked their self-worth (Crocker and Wolfe, 2001). This finding can therefore help identify when firm failure is also experienced as a personal failure. We also found that the appraisal of the failure in terms of harm or loss had a greater influence on feeling grief than more distal variables such as whether the entrepreneur had additional firms or employment at the time of the bankruptcy.

## 2. Introduction

Uncertainty is a defining characteristic of entrepreneurship (cf. Knight, 1921). As such, the outcomes of entrepreneurial endeavors are unknown and unknowable a priori, leading to variance in the outcome distribution of entrepreneurial efforts (McGrath, 1999). Some ventures will be successful while others will fail. Looking across a series of entrepreneurial attempts within a society, greater variability of outcomes, including more failures and larger successes, is positive for overall development (McGrath, 1999). Thus, from a societal viewpoint, failure might not only be a necessary consequence of uncertain entrepreneurial endeavors but may also be desirable. The potentially positive consequences of failure for entrepreneurs, however, are less apparent. Scholars have started to explore the consequences of entrepreneurial failure, highlighting the negative implications it may have for entrepreneurs. It has been suggested that failure is likely to be associated with financial loss as well as emotional distress, thereby leading to grief (Shepherd et al., 2009). To the extent that failure is a learning experience, learning is neither immediate nor automatic (Shepherd, 2003). To date, however, there has been no systematic investigation of the factors that influence how entrepreneurs respond to entrepreneurial failure. Focusing specifically on emotional responses, we investigate the extent that entrepreneurs feel grief after firm failure.

Given that grief can play an influential role in the process of learning from failure and reducing entrepreneurial motivation, we examine what makes firm failure emotionally devastating for some entrepreneurs and not others. To do this, we build on appraisal theory. Central to this theory is the idea that people's emotional reactions depend on their subjective evaluation, or appraisal, of an experience (Lazarus and Folkman, 1984). Therefore, this theory can help explain why entrepreneurs vary in the extent to which they react negatively when their businesses fail.

To examine entrepreneurs' grief after firm failure, we developed a unique database of entrepreneurs who recently experienced firm failure and filed for firm bankruptcy in order to test our hypotheses. In so doing, we make five principal contributions to the literature.

First, a growing community of scholars is showing interest in further understanding the personal implications of entrepreneurial failure, but prior research has not sufficiently disentangled the failure of the business from the failure of the entrepreneur (Cardon et al., 2011). Some assume that failure has strong positive implications for the individual entrepreneur and represents the "fire that tempers the steel" (Timmons, 1999 p. 47). Others assume that failure has devastating implications for the individual (Singh et al., 2007). In this research, we develop and test hypotheses suggesting that there is substantial variance in entrepreneurs' responses to a similar failure event, i.e., they react differently to the failure of their firms and we find empirical support for this notion. Thus, we are able to conceptually and empirically resolve this apparent conflict in individuals' interpretations of failure.

Second and related to the first contribution, we specify a mechanism that can help distinguish when firm failure is also experienced as personal failure—namely, loss of self-esteem. Individuals experience loss of self-esteem when they experience personal failure, and this is manifested in the experience of negative emotions (Crocker and Wolfe, 2001). Thus, loss of self-esteem is an important mechanism that transfers the failure of the firm to a personal failure for the entrepreneur. This has important implications for how scholars conceive and theorize about entrepreneurial failure. For example, we suggest that feelings of grief and loss of self-esteem after firm failure can help identify when firm failure is also experienced as personal failure.

Third, we contribute more generally to the entrepreneurial failure literature by showing the importance of an entrepreneur's interpretation of and response to failure. By developing a set of context-specific appraisals that help explain the variance in grief after firm failure, we show that entrepreneurs' interpretation of the failure in terms of what has been lost drives feelings of grief rather than the entrepreneurs' objective situations. This suggests that future research should focus on both how firm failure is interpreted by the entrepreneur in addition to focusing on more distal variables, such as the number of firms the entrepreneur owns and runs. Our findings also give support to the empirical relevance of using theories from cognitive and social psychology for understanding how entrepreneurs respond to failure. Research to date has used theories from these fields to develop conceptual propositions to explain how entrepreneurs respond to failure; however, there has been limited empirical investigation using such theories (Ucbasaran et al., 2012).

Fourth, appraisal theory has been used to explain employee reactions to job loss, suggesting that the degree of loss of self-esteem and financial strain influences the emotional stress associated with a job loss. However, empirical testing of the relationship between cognitive appraisal and emotional responses to job loss is limited (McKee-Ryan et al., 2005). We extend this

line of research by empirically testing these relationships in the context of job loss for the self-employed, a context that is often overlooked by job loss researchers. By conceptualizing loss of self-esteem as an indication of personal failure, we also contribute theoretically to the job loss literature by suggesting that some of the variance in reactions to job loss can be explained by the degree to which the individual associates job loss with personal failure. Thus, we contribute to this line of research by providing a theoretically valid explanation for why two individuals with the same circumstances after job loss may appraise their situations differently (Dewe, 1991; McKee-Ryan et al., 2005).

Finally, we contribute to appraisal theory by considering the role of prior failure for the appraisal–emotion relationship in stressful situations. Most research on this relationship does not consider whether the individual has previously experienced similar stressful life events in the past (Amir and Sol, 1999). Building on insights from the literature on psychological capital, which have found that prior failure experiences can contribute to the development of psychological capital, we suggest that previously experiencing a similar failure can provide an individual with coping resources that act as a buffer in the appraisal–emotion relationship. This finding is likely to be relevant in other settings in which bouncing back after prior failures is important for achieving goals, such as elite sports (Jones, 2002) and job loss (Leana and Feldman, 1988).

This paper proceeds as follows. Drawing on appraisal theory and research on psychological capital, we develop a model of how primary appraisals and prior firm failure influence the level of grief entrepreneurs experience after firm failure. Next, we provide a set of detailed hypotheses followed by a detailed account of the study in the *Methods* section and then our analyses and results. This is followed by a discussion about the implications of our research for theory and practice. We conclude the paper with limitations and future research and a conclusion.

### 3. An appraisal framework for understanding emotional responses to firm failure

#### 3.1. Appraisals and grief

In this paper, we focus on grief as an emotional response to firm failure. As noted in the literature, firm failure is often associated with financial loss and emotional distress (Shepherd et al., 2009). Consistent with this literature, we define grief as the negative emotional response an entrepreneur feels in response to the failure of his or her firm (Shepherd, 2003; Shepherd et al., 2009). This definition aligns with cognitive theories of grief that suggest a grief reaction can be triggered by a loss of something important to the self (Archer, 2001). Hence, this conceptualization of grief is not limited to the loss of a loved one but can include other losses, such as the loss of body parts and habitual ways of life (e.g., divorce or job loss) (Archer, 2001; Archer and Rhodes, 1993). The specific negative emotions associated with this conceptualization of grief include episodic reactions of anger and more general background disturbances involving emotions, such as sadness and depression (Archer, 1999). These negative emotions form the distress (Archer, 1999) or destructive (Blau, 2006) component of grief.

To understand the extent to which entrepreneurs feel grief as an emotional response to firm failure, we use appraisal theory (Lazarus, 1991, 1999; Lazarus and Folkman, 1984; Smith and Lazarus, 1993). This theory conceptualizes the response to loss by the extent that it is interpreted as stressful (Bonanno and Kaltman, 1999; Hewson, 1997). Central to appraisal theory is the idea that an individual's emotional reaction to an experience depends on his or her individual and subjective evaluation, or appraisal, of the experience (Lazarus, 1991; Smith and Lazarus, 1993). In this process, the individual evaluates the relationship he or she has with the environment in terms of his or her personal well-being. Implicit in the appraisal process, the individual takes into consideration his or her ability to manage the demands of the situation (Lazarus and Folkman, 1984). This determines whether the individual perceives an encounter in relation to well-being as irrelevant, benign-positive, or stressful. Irrelevant appraisals indicate that the encounter has no impact on well-being, benign-positive appraisals indicate that the encounter is positive for well-being, and stressful appraisals are characterized by situations that involve potential threats to well-being or challenges for well-being or have resulted in harm or loss to the individual. A harm–loss appraisal indicates that some form of damage has already been done to the individual and that this damage is appraised as taxing or exceeding the individual's ability to cope with the damage (Lazarus, 1991). Coping in this framework is an individual's cognitive and behavioral efforts to manage the demands that have been appraised as taxing or exceeding the individual's resources (Lazarus and Folkman, 1984). In contrast, threat and challenge appraisals are anticipatory and are concerned with the potential for harm–loss or gain, respectively.

In this study, we focus on harm–loss appraisals for three main reasons. First, we are interested in explaining grief as a response to firm failure. Prior research has shown that entrepreneurs are likely to experience negative emotions in response to their firms' failure (Cope, 2011; Singh et al., 2007), indicating that some form of damage has taken place as a result of the failure. Second, this approach is in line with the bereavement literature that has used this framework to understand how individuals respond to loss (Archer, 2001; Bonanno and Kaltman, 1999; Hewson, 1997). Research has suggested that harm–loss appraisals are most relevant for understanding grief reactions due to their focus on what has been lost (Bjorck et al., 1999; Ferguson et al., 2000). Third, in our context, the failure has already transpired, so harm–loss appraisals are likely to be the most salient and appropriate for understanding what has been lost (Folkman and Lazarus, 1985).

Empirical findings from the bereavement and loss literature support the use of cognitive appraisal for understanding grief reactions to loss (Archer, 2001; Bonanno and Kaltman, 1999). For example, Stein et al. (1997) found that loss appraisals were associated with sadness in the aftermath of a spouse's death. A number of studies have also found a relationship between harm–loss appraisals and negative emotions, such as anger and depression, in individuals responding to the impact cancer has had on their lives (e.g. Bjorck et al., 1999; Burgess and Haaga, 1998).

In the particular context of job loss, cognitive appraisal has been used to understand the impact job loss has on mental health (McKee-Ryan et al., 2005) and how employees respond to stress at work (Amoit et al., 2006; Dewe, 1991; Scheck and Kinicki, 2000). An outcome of the empirical work on the relationship between harm–loss appraisals and negative emotions is that it is difficult to disentangle these emotions (Folkman and Lazarus, 1985; Scheck and Kinicki, 2000). One reason for this is that in situations involving loss, many of the emotions associated with grief are often felt concurrently (Archer, 1999; Archer and Rhodes, 1993), suggesting that grief can be conceptualized as an overarching construct (Archer, 1999; Archer and Rhodes, 1993).

To determine whether an experience is appraised as involving harm or loss, an individual appraises the loss in relation to the damage that has already occurred (Folkman and Lazarus, 1985). Lazarus and Folkman (1984) break this process down into two components: the evaluation of the loss in terms of its relevance for the individual's goals and whether or not the experience is congruent with those goals. Harm–loss appraisals are therefore characterized as having negatively impacted important goals.

### 3.2. Appraisal in the context of firm failure

Therefore, in the context of firm failure, harm–loss appraisals capture the damage the failure has had on the entrepreneur to the extent that the failure has negatively impacted important goals. Given that self-employment is one form of employment (Dooley et al., 2000), we turn to the findings from the job loss literature to identify goal-relevant appraisals. This stream of literature has found that appraisals relating to loss of income and loss of self-esteem are significant predictors of reduced well-being after job loss (Latack et al., 1995). Because self-employment is a unique form of employment, we also turn to the self-employment literature to identify context-specific appraisals.

Appraisals of loss of self-esteem are likely to be made after experiencing firm failure. Firm failure can be accompanied by a change in role identity and role disruption for the entrepreneur (cf. Amundson, 1994; Brenner and Bartell, 1983; Waters and Moore, 2002) and can result in feelings of being stigmatized, thereby leading to a loss of social identity and feelings of self-worth (Shepherd and Haynie, 2011). Entrepreneurs also often interpret firm failure as a sign of personal inadequacy. For example, firm failure can prevent the entrepreneur from fulfilling the expected role of creating and growing a venture such that returns are maximized for stakeholders (Shepherd and Haynie, 2011). Specifically, loss of self-esteem indicates that an individual feels that they have personally failed (Crocker and Wolfe, 2001). This is because self-esteem is based on an individual's performance in domains in which they have staked their self-worth (Crocker and Wolfe, 2001). Therefore if an individual feels that they have personally failed in a domain in which they have staked their self-worth, they experience a loss of self-esteem. Thus appraisals of loss of self-esteem capture when firm failure is also interpreted as a personal failure.

Appraisals related to income loss are also likely to occur after experiencing firm failure. Financial strain is a recurring theme in the job loss literature and has been found to contribute to reduced well-being (McKee-Ryan et al., 2009; Price et al., 2002). This is because after job loss, individuals typically have less money to spend and thus reduced capacity to meet their financial obligations (Gowan and Gatewood, 1997). Financial strain associated with firm failure can occur in several ways. At the minimum, the entrepreneur experiences personal income loss as the business closes (Cope, 2011; Ucbasaran et al., 2012). Further, research suggests that many entrepreneurs delay actually closing their failing businesses because they either hope to turn the business around or because they wish to delay facing the actual closure. In such cases, entrepreneurs throw bad money after good while trying to keep the business afloat, thereby generating additional losses during the time leading up to the closure (Shepherd et al., 2009). Finally, if an entrepreneur has personally guaranteed the firm's liabilities, which is a common occurrence in small firms (White, 2001), the entrepreneur becomes personally liable for the firm's debts if the firm fails, thus adding to the financial strain.

Financial strain can result in a range of secondary stressors, such as insufficient food, shelter, inability to pay bills, and family distress (Price et al., 2002). It can also impact major goals, such as providing the desired education level to one's children, and minor goals, such as going out for dinner with friends (Frese and Mohr, 1987). Thus, appraisals of financial strain capture the damage to an entrepreneur's financial situation as a result of the failure.

The most important distinguishing characteristic between employment and self-employment is the decision autonomy that comes with being self-employed (Patzelt and Shepherd, 2011). Kolvareid (1996) found that autonomy and independence were the main reasons individuals enter into self-employment. In this context, autonomy and independence relate to having the freedom to choose one's own work tasks and to be one's own boss (Kolvareid, 1996). These two characteristics have been found to be important contributors to job satisfaction among the self-employed and also contribute more significantly to job satisfaction when the self-employed are compared with regular employees (Hundley, 2001; Lange, 2012). Benz and Frey (2008) suggest that this additional utility the self-employed gain in comparison to employed individuals stems from procedural utility, a form of utility derived from the process through which monetary rewards are obtained. The self-employed have higher procedural utility because being self-employed provides greater independence, self-determination, and freedom (Benz and Frey, 2008). If entrepreneurs become dependent on unemployment benefits or seek paid employment following their firms' failure, they lose the autonomy and independence associated with operating their own firms. Thus, firm failure impedes goal independence, self-determination, and freedom, and appraisals of loss of independence capture the extent to which such loss has a negative impact on the entrepreneur.

In sum, building on the job loss and self-employment literatures, we suggest that the appraisal of firm failure can be meaningfully represented by three appraisals: loss of self-esteem, financial strain, and loss of independence. Each type of

appraisal captures a unique aspect of the failure experience that can impact an entrepreneur's well-being. Thus, in line with the overarching logic of appraisal theory, we hypothesize the following:

**H1.** The more the failure event is appraised as being associated with (a) loss of self-esteem, (b) financial strain, and (c) loss of independence, the greater the feelings of grief.

### 3.3. Antecedents of appraisals

Inherent in the appraisal process is that individuals appraise stressful situations in terms of their well-being. Thus, from the viewpoint of understanding how a situation's characteristics influence grief after firm failure, it is important to understand the extent to which situation characteristics influence appraisals of harm or loss. This can provide insights into the extent that situation characteristics influence the appraisal of harm and loss and the extent that it is the interpretation of the situation that influences appraisals of harm and loss (cf. Rau et al., 2010).

In the context of job loss, it has been suggested that having the job as the main source of income can lead to greater appraisals of harm and loss (Latack et al., 1995). Warr and Parry (1982) suggest that alternative roles can act as psychological compensation for employment loss, thus reducing the extent that job loss is appraised as involving harm and loss (cf. Fielden and Davidson, 1999). Alternative sources of income can also reduce the financial impact of job loss and thus reduce the extent that job loss is appraised as involving harm and loss (Latack et al., 1995).

This is particularly relevant in the context of firm failure for the self-employed. Scholars have increasingly noticed that entrepreneurs are not necessarily completely dependent on one single firm as their only source of income. First, recent research shows that many entrepreneurs have paid employment in addition to owning and running their own firms, not only during a transitional stage upon entering into entrepreneurship but for extensive periods of time thereafter. The term "hybrid entrepreneurs" has been coined to describe such individuals who simultaneously run their own businesses and have paid employment (Folta et al., 2010). Second, other types of entrepreneurs concurrently own and run more than one firm; these individuals are known as "portfolio entrepreneurs" (Ucbasaran et al., 2008). Portfolio entrepreneurs can gain self-esteem, financial reward, and independence from their additional firm(s) and are therefore less likely to appraise a failure as involving harm and loss to the same degree as entrepreneurs who have firms as their sole occupation or income source and who are thus more likely to be committed to their firms (Ucbasaran et al., 2010). A similar line of reasoning can be applied to hybrid entrepreneurs. Paid employment can provide entrepreneurs with an alternative source of self-esteem and financial income, so hybrid entrepreneurs are less likely to appraise a failure as involving loss of self-esteem and financial strain compared to entrepreneurs whose firms are their sole occupation. However, given that one of the reasons hybrid entrepreneurs own and run their own firms in addition to having paid employment is to gain nonmonetary benefits, such as independence and flexibility (Folta et al., 2010), they are likely to have similar appraisals of loss of independence as entrepreneurs whose firms are their sole occupation. Thus, the failed firm's role in the context of alternative employment (paid or self-employment) can influence how the failure is appraised. This leads to the following hypotheses:

**H2.** Compared to entrepreneurs whose firms are their sole occupation, portfolio entrepreneurs are less likely to appraise the failure as involving (a) loss of self-esteem, (b) financial strain, and (c) loss of independence.

**H3.** Compared to entrepreneurs whose firms are their sole occupation, hybrid entrepreneurs are less likely to appraise the failure as involving (a) self-esteem loss and (b) financial strain.

### 3.4. Prior failure experience and grief

Most research on how individuals respond to stressful situations consider the influence of a specific experience but rarely consider the influence of multiple stressful experiences (Amir and Sol, 1999). Prior research has suggested that multiple stressful experiences can either steel individuals, providing a buffer effect in subsequent stressful experiences, or they can sensitize individuals, making them more vulnerable to stressful experiences (Beasley et al., 2003; Rutter, 1985). This reasoning suggests that prior failure experiences can change the nature of the relationship between appraisals and individuals' subsequent emotional responses.

Individuals who are sensitized and become more vulnerable due to failure are less likely to choose to re-enter self-employment whereas those who have successfully coped with prior failure are more likely to re-enter self-employment (cf. Amir and Sol, 1999). In order to re-enter, they have overcome the emotional and financial distress associated with the previous failure (Shepherd et al., 2009). This suggests that psychologically strong entrepreneurs are likely to re-enter self-employment after experiencing business failure (Ucbasaran et al., 2012). In support of this notion, Politis and Gabrielsson (2009) found that habitual entrepreneurs with prior failure experience have a more positive attitude toward failure compared to entrepreneurs without such experience. This also suggests that entrepreneurs who have previously experienced failure and re-entered are also likely to experience lower psychological costs if they subsequently fail (Ucbasaran et al., 2012). Having coped successfully with one failure provides individuals with the resources to effectively cope with subsequent failures (Amir and Sol, 1999). In particular, we suggest that prior failure experience can help these entrepreneurs develop psychological capital.

Psychological capital is a composite of self-efficacy, optimism, hope, and resilience (Luthans and Youssef, 2004). Self-efficacy is the belief in one's ability to achieve specific outcomes (Bandura, 1977), hope is the perception that one's goals can be met (Snyder et al., 1996), optimism is a positive explanatory style individuals use to make attributions about succeeding in the future (Luthans et al., 2007), and resilience is the ability to bounce back after experiencing hardship or failure (Richardson, 2002). Each of these

elements of psychological capital can be developed by seeking out and persevering through challenges (Hmieleski and Carr, 2008; Luthans et al., 2007).

The development of resilience is likely to be particularly relevant in the context of re-entry after experiencing firm failure (Hayward et al., 2010). For an individual to develop resilience, they must have experienced some form of threatening or adverse experience and successfully overcome and/or thrived during the experience (Luthar et al., 2000; Richardson, 2002). This is likely to be the case with entrepreneurs who have experienced prior failure and choose to re-enter. An outcome of resilience is that individuals are able to adapt more readily in stressful situations. Therefore, resilience can provide entrepreneurs with the “grit” necessary to persevere through the setbacks they face during the entrepreneurial process (Hayward et al., 2010; Hmieleski and Carr, 2007, 2008). Resilience acts as a trigger to restore confidence, hope, and optimism after a stressful experience (Luthans et al., 2006), so the other elements of psychological capital are also likely to influence the extent that individuals bounce back from adversity (Luthans et al., 2006). For example, Ong et al. (2006) suggest that positive emotions may be the underlying mechanism by which highly resilient individuals are able to bounce back from stressful experiences. Positive emotions can downplay the effect of negative emotions, thereby facilitating overall recovery from stressful situations (Fredrickson and Levenson, 1998; Ong et al., 2006; Tugade and Fredrickson, 2004). These positive emotions can also help individuals cope with change by broadening the options they perceive for managing stressful situations (Fredrickson et al., 2003). Specifically, Hayward et al. (2010) suggest that feelings of confidence after experiencing business failure can reduce the extent to which entrepreneurs are likely to perceive the failure as a traumatic experience. Therefore, psychological capital can buffer the effects of harm and loss appraisals on grief because resilience and feelings of confidence, hope, and optimism can help individuals effectively deal with the implications of stress, thereby reducing the negative impact of stress on well-being.

The buffering effect of psychological capital is thus in line with other personal resources, such as personal control, hardiness, and self-efficacy, which have previously been found to have a buffering effect in the stress–strain relationship (O’Driscoll and Dewe, 2001). These personal resources can reduce the extent to which individuals are sensitive to negative feedback (O’Driscoll and Dewe, 2001) and increase individuals’ use of effective coping strategies (Bolger and Zuckerman, 1995). For example, Leana and Feldman (1988) propose that coping strategies can help foster an active stance toward stress after job loss and enable individuals to withstand the negative feelings associated with job loss. This suggests that psychological capital serves as a moderator in the relationship between appraisals and grief, thereby leading to the following hypothesis:

**H4.** Exposure to prior failure moderates the relationship between the appraisals of (a) loss of self-esteem, (b) financial strain, and (c) loss of independence and grief such that the intensity of the positive relationships are reduced.

#### 3.4.1. Research model

An illustration of the research model that we develop and test is presented in Fig. 1. The overarching model is based on an individual’s appraisal of a stressful situation in terms of his or her well-being. The dependent variable is the intensity of grief that an entrepreneur experiences after firm failure. We hypothesize that the intensity of grief is dependent on how stressful the entrepreneur appraises the failure experience in terms of its implications for personal harm or loss (H1). To understand the role of situational characteristics in the appraisal process, we investigate how other employment sources the entrepreneurs had at the time of bankruptcy influenced the appraisals they made (H2 and H3). Because many entrepreneurs re-enter after experiencing failure (Sarasvathy and Menon, 2003), we also investigate the role of prior firm failure in the appraisal process. Based on a psychological capital argument, we hypothesize that prior failure experience may provide a buffering effect in the appraisal–emotion relationship (H4).

## 4. Methods

### 4.1. Research design and sample

This study examines entrepreneurs’ responses to firm failure. Consistent with prior studies, failure is defined as occurring when a fall in revenues and/or rise in expenses are of such magnitude that the firm becomes insolvent and is unable to attract

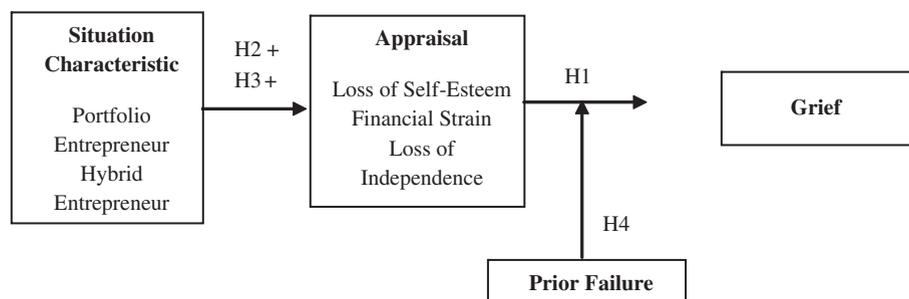


Fig. 1. Research model.

new debt or equity funding; consequently, it cannot continue to operate under the current ownership and management (Shepherd, 2003; Shepherd et al., 2000). This definition emphasizes that for economic reason, the business is unable to continue its operations and singles out firm failure from other forms of exit that are not associated with failure (e.g., a merger or trade sale) (e.g. Wennberg et al., 2010).

To identify a sample of entrepreneurs who experienced such failure, we used firm bankruptcy as the operationalization of failure. With this research design, we hold the firm-level failure event (i.e., the bankruptcy) constant, which allows us to disentangle personal failure from firm failure and examine variance in the grief felt among entrepreneurs who face similar experiences. The empirical setting for the data was Sweden. In Sweden, a firm is bankrupt when it can no longer pay its liabilities and this situation is not temporary, and either a member of the board or a creditor can file for bankruptcy. The firm is either placed into bankruptcy on the same day the application is made if the entrepreneur applies for the bankruptcy or within 2 weeks if an external party applies. The Swedish bankruptcy code is based on a cash auction procedure and is therefore similar to Chapter 7 of the U.S. bankruptcy code (Thorburn, 1998).

Using filing for firm bankruptcy as the operationalization of firm failure is particularly relevant in Sweden, where there is substantial stigma associated with firm failure (Falkenhall and Wennberg, 2010). For example, bankruptcy is still associated with shame and mistrust even though only 4% of bankruptcies are associated with improper conduct (Sannesson, 2011). Entrepreneurs who return to paid employment following bankruptcy also tend to earn less than their counterparts who have not been entrepreneurs (Falkenhall and Wennberg, 2010). Therefore, Sweden appears to be an ideal context for investigating the emotional consequences associated with firm failure identified in the literature (Shepherd, 2003; Singh et al., 2007).

The initial sampling frame consisted of all firms that had filed for bankruptcy in Sweden during September, October, and November of 2008. A total of 1451 firms qualified. Of these, 451 went through liquidation prior to the bankruptcy. Contacts with liquidators and receivers indicated that those individuals might be systematically different from those who went straight into bankruptcy. For example, this “two-step” route to bankruptcy likely extends the failing process, which might affect the emotions felt at the time of the interview (cf. Shepherd et al., 2009). These 451 firms were therefore excluded, resulting in 1000 bankrupt firms in the sampling frame.

We located telephone numbers for 1003 board members representing 885 companies. Of the 1003 board members, 64 individuals were connected to more than one firm, and 34 firms did not include a unique respondent (i.e., all board members were on the board of at least one other firm). There were also 71 cases in which the owner–manager was located overseas, and four cases in which the owner–manager had died. In cases in which one respondent owned more than one firm that had gone bankrupt, we instructed the respondent to provide answers for the firm in which they had been most active.

We adopted a key informant approach (Kumar et al., 1993) such that the first qualified respondent was interviewed. To qualify for the study, the entrepreneur had to be actively running the firm in the time up to the bankruptcy and have an ownership stake in the firm. This reflects the view that ownership and decision making are central to entrepreneurship (Gartner, 1990). The qualification questions were (1) “Were you actively running the company at the time of bankruptcy?” and (2) “Did you have an ownership stake in the company at the time of bankruptcy.” If the participants responded positively to both these questions, we asked them if they would be willing to participate in a telephone interview and, after the telephone interview, if they would accept a mail questionnaire. We telephoned respondents in March, April, and early May of 2009, approximately 5 to 6 months after the bankruptcy was filed.

The telephone interviews included approximately 50 questions and took about 8 min to complete. The questions asked covered characteristics of the firm, including size and industry, as well as characteristics of the entrepreneur, including their education, prior experience, and the number of hours they worked in the firm, and their financial situation. Trained interviewers conducted the interviews and they followed a specific interview protocol. The mail survey included questions that were asked on a Likert scale and were therefore more suited to this form of data collection.

We pre-tested the telephone interview and mail questionnaire on a random sample of 49 owner–managers who had recently filed for bankruptcy. The purpose of this pilot study was to assess the willingness of entrepreneurs who had experienced firm bankruptcy to participate in an academic study about their experience and to determine whether a sufficiently high response rate could be achieved prior to conducting the study on a larger scale. After this was deemed to be the case, we made minor adjustments to the qualification questions to ensure that only active-owner managers were included in the final analysis.

We conducted a total of 284 telephone interviews with active owner–managers. From these, 238 respondents agreed to receive the mail questionnaire and, after a three-wave mailing (i.e., two reminders), 120 usable mail questionnaires were returned. Based on the sample of 891 firms (adjusted for cases in which the owner was overseas or dead or the firm had no unique owner–managers), the overall response rate was 31.9% for the telephone interview and 14.1% for the mail questionnaire. Stated differently, out of the participants who could be reached over the telephone, 60.7% responded; of those who accepted the mail questionnaire, 49% returned it.

The main reason for non-response (304 individuals) was our inability to reach respondents (i.e., they did not answer their phone despite numerous attempts at different times or the telephone number was no longer in use), thus reflecting the difficulty of locating failed entrepreneurs (Sarasvathy and Menon, 2003; Shepherd and Wiklund, 2006). Another major reason was respondents' refusal to participate (125 individuals) due to lack of time or because they had put the bankruptcy behind them and did not want to discuss it. Another 58 individuals agreed to be interviewed, but after many attempts and agreed-upon times, they did not respond or postponed the interview indefinitely. Thus, an important conclusion from this study is that it is possible to reach a reasonably large share of recently failed entrepreneurs and to get them to respond.

The average age of the respondents was 48 years old, 85% were male, and 62% had been involved in more than one start-up. The average age of the business at the time of bankruptcy was 8.5 years, and the average number of full-time equivalent employees was 4.9.

## 4.2. Measurement

### 4.2.1. Dependent variable—grief

We measured grief using items adapted from Blau (2007), who investigated the grief process associated with worksite closure. We chose this measure because it had been tested in an empirical setting similar to ours. The measure is based on the work by Kubler-Ross (1969) and has been identified as relevant in the context of job loss (Amundson and Borgen, 1982; Blau, 2006, 2007; Latack and Dozier, 1986). It is also a parsimonious measure and is thus suitable in the context of firm failure—a context in which researchers have suggested that entrepreneurs may be reluctant to talk about their failure experiences (Saravathy and Menon, 2003; Zacharakis et al., 1999). The items included were denial, anger, sadness, acceptance, and personal growth,<sup>1</sup> so the measure included the main negative emotions associated with grief and the outcomes of normal grieving (Archer, 1999). In this study, we focus on the negative emotions that form the distress component of grief: denial, anger, and sadness. To increase the face validity of the items, we made slight adaptations to the items to make them relevant for firm bankruptcy rather than unemployment. The stem of the question read as follows: “Please indicate how well each statement reflects how you are feeling right now.” Respondents indicated on a seven-point Likert scale (1 = completely disagree; 7 = totally agree) the extent to which each grief item applied to how they were currently feeling about the bankruptcy (see the top portion of Table 1 for the exact wording of the items).

Using the software program AMOS, we tested the structure of grief items using a confirmatory factor analysis. We compared the fit of a one-factor solution and a three-factor solution. We focused our attention on comparing the fit of a one-factor model and a three-factor model to determine whether the emotions of denial, anger, and sadness can be represented as a single construct or whether they should be analyzed as three separate emotions. We did not compare a second-order model with the first-order solutions because a second-order model with three first-order factors achieves the same model fit as a three-factor model as the same number of restrictions are placed on the model (Byrne, 2010), and the model is underspecified for the purposes of testing model fit (Byrne, 2010; Chen et al., 2005).

The fit measures of the three-factor solution, Comparative Fit Index (CFI) .975 and RMSEA .020, were slightly superior to the one-factor solution, CFI 9.22 and RMSEA .034. As expected, the more parsimonious one-factor solution had lower overall goodness of fit compared to the more complex three-factor solution (Brown, 2006). However, both models showed acceptable fit. The RMSEA was under 0.05, which indicates a very good fit (Browne and Cudeck, 1992). The CFI was also above the recommended level of 0.90 (Hair et al., 2006).

To determine the discriminant validity of the three-factor solution, we compared the average variance explained to the square of the correlation between the constructs (Hair et al., 2006). The squared correlations between anger, sadness, and denial were 0.624, 0.64, and 0.686. The average variance explained for anger, sadness, and denial were 0.50, 0.58, and 0.527, respectively. Thus, in all cases, the square of the correlation between the constructs was greater than the average variance extracted, suggesting poor discriminant validity (Hair et al., 2006). Therefore, given these results and the greater parsimony, the one-factor solution capturing the general intensity of grief was chosen over the three-factor solution. This type of measure is appropriate when examining differences in the intensity of grief felt (Archer, 1999). A similar approach has been taken in the organizational change and job loss literatures (Blau, 2007; Fugate et al., 2008; Scheck and Kinicki, 2000). When combined into an index, the Cronbach's alpha value was 0.88.

### 4.2.2. Primary appraisal variables

There is no standard method for measuring appraisals (Schneider, 2008). They can either be measured using macro-level global items, which can be applied to a variety of situations, or micro-level items, which provide richer descriptions and are context specific (Dewe, 1991; Folkman et al., 1986). As it has been shown that in work settings, context-specific questions provide greater predictive value (Dewe and Ng, 1999) and that individuals generally display more variability than consistency in reaction to stressful situations (Latack et al., 1995), we used context-specific questions to assess primary appraisals in the current study. Where possible, we adapted the items developed by Folkman et al. (1986) to assess how individuals appraise stressful situations to the specific context of firm failure to capture loss of self-esteem and financial strain. The items developed by Birley and Westhead (1994), which measure reasons for business start-up, were also adapted to capture loss of independence. In doing so, we operationalized the three identified components of primary appraisal that are likely to make firm failure particularly stressful for entrepreneurs. Respondents indicated on a seven-point Likert scale (1 = does not apply at all to me; 7 = completely applies to me) the extent to which each item was relevant to them. A principal components analysis revealed the three factors account for 65.90% of the variance: loss of self-esteem (alpha = 0.850), financial strain (alpha = 0.803), and loss of independence (alpha = 0.629). The results of the analysis are shown in the bottom portion of Table 1.

<sup>1</sup> We excluded bargaining for two main reasons. First, bargaining has rarely been investigated as a component of grief outside the Kubler-Ross (1969) model (see Archer, 1999). Second, in our factor analyses, it did not load with the other distress components of grief, suggesting that it is not as relevant to focus on this emotion as it is the other three emotions that make up the distress part of grief.

**Table 1**  
Grief and primary appraisal—factor analysis results.

Items (Cronbach's alpha)	Factor loading
Grief	
1. Grief (.88)	
I feel depressed about the bankruptcy.	.710
Sometimes I feel like crying because of the bankruptcy.	.749
I cannot believe that the company went bankrupt.	.744
I am furious that this could happen to me.	.720
I am angry that the company went bankrupt.	.664
I am very sad about the bankruptcy.	.688
I am in total disbelief that I no longer run the company.	.653
I cannot believe that this has happened to me.	.623
I feel a lot of hostility toward those involved in the bankruptcy.	.512
Primary appraisal	
1. Loss of self-esteem (.853) (33.506)	
I have lost an important person's approval or respect.	.810
I have lost faith in myself as a capable business man/woman.	.808
I have lost recognition or status.	.781
I feel that I have lost my good reputation.	.749
I have lost my self-respect.	.736
2. Financial strain (.803) (19.93)	
My finances are strained.	.868
My or my family's financial security has been jeopardized.	.807
3. Loss of independence (.629) (17.56)	
I have lost the opportunity to develop my company.	.800
I have lost the independence that comes with running a company.	.673

#### 4.2.3. Antecedents of primary appraisal

To determine if respondents were portfolio entrepreneurs or hybrid entrepreneurs, we asked them as part of the telephone interview if they owned and ran another firm at the time of the bankruptcy, had paid employment, or both. In all, 10% had paid employment, 21% owned and ran another company, and 4% had both paid employment and owned and ran another company during the time of the bankruptcy. We used these results to create the portfolio entrepreneur and hybrid entrepreneur variables. If respondents owned and ran an additional firm at the time of the bankruptcy, the variable was coded 1 to indicate that they were a portfolio entrepreneur and 0 if they did not own and ran an additional firm at the time of the bankruptcy. If respondents had paid employment at the time of the bankruptcy, the variable was coded 1 to indicate that they were a hybrid entrepreneur and 0 if he or she did not have paid employment at the time of the bankruptcy. We coded respondents who both owned and ran an additional firm and had paid employment at the time of the bankruptcy as portfolio entrepreneurs as we hypothesized that having an additional firm influences appraisals of loss of independence.

#### 4.2.4. Prior failure

Prior failure was measured using financial criteria (Davidsson, 2008). If the respondent had previously closed one or several firms with losses or filed for firm bankruptcy, he or she was considered to have previous firm failure experience. The variable was coded 1 for those who experienced prior firm failure and 0 for those who had not. A total of 14 respondents (11.6%) had experienced one prior failure. No respondents had experienced more than one failure.

#### 4.3. Control variables

We included a number of control variables in the analysis. We controlled for the amount of personal debt the respondent incurred as a result of the bankruptcy, which we labeled as financial loss. We asked respondents, "Do you have private debts caused by the bankruptcy?" A total of 47% of respondents did not have any private debt as a result of the bankruptcy. If they answered yes, we then asked, "Approximately how large are these debts?" The average amount of private debt was 44,000 USD, and the standard deviation was 96,300 USD. As the distribution of this variable was positively skewed and extended over a large range, we used a log transformation to account for outliers.

We also controlled for respondents' sex, age (in years), education (number of years of schooling), and number of previous businesses founded. To account for outliers in the latter variable, we performed a Windsor adjustment (cf. George, 2005). This means that for observations with that were greater than the 95th percentile, we imputed the value of the 95th percentile.

We also ran the analysis with additional control variables to account for variance in time between filing for firm bankruptcy and returning the mail questionnaire, whether the respondent realized the firm would fail, whether the respondent personally founded the business, the average number of hours worked per week in the firm during the year leading up to the bankruptcy, the number of years the respondent owned the firm, and the size of the firm (i.e., number of full-time equivalent employees). As these variables did not have a significant influence on the findings, they were excluded from the model for reasons of parsimony.

#### 4.4. Potential biases and their alleviation

To the best of our knowledge, this is the first study designed to draw generalizable findings about entrepreneurial failure by relying on a probability sample of failed entrepreneurs. A likely reason why prior studies refrained from doing so is failed entrepreneurs' lack of willingness to respond and discuss their failures (cf. Shepherd and Wiklund, 2006). With a response rate similar to what is reported in other entrepreneurship studies, we feel that the risk of non-response bias is no larger than in other entrepreneurship research relying on surveys.

There were two major reasons for non-response: we were unable to reach some respondents via telephone and some respondents had already put the bankruptcy behind them and no longer wanted to talk about it. It is likely that these two groups included entrepreneurs who were, on the one hand, hit the hardest by the bankruptcy (refusal to answer the phone or lack of telephone) and entrepreneurs who, on the other hand, were least affected by the bankruptcy (already put it behind them). Therefore, the variance in our dependent variable may not fully reflect the full range in the population. The consequence of this would be attenuation of results and more conservative testing of our hypotheses, increasing the risk of a Type II error.

Second, to further check for possible non-response bias, we compared the responses between those who only responded to the telephone interview but not the mail questionnaire with those who completed both surveys. Using the Heckman procedure (Heckman, 1979), we found that age increased the likelihood of participants returning the mail questionnaire and that number of previous start-ups decreased the likelihood of returning the questionnaire. When we ran regression analyses, we found that controlling for selection bias did not influence our results. Therefore, we present the results without this control variable.

Finally, our research design follows the strongest methodology for studying the relationship between appraisals and emotion after a stressful encounter (Lazarus and Smith, 1988). Lazarus and Smith (1988) summarize seven of the most frequently used methods for studying this relationship. They argue that capturing appraisals and emotions during an encounter for which there are real personal consequences for the individual is superior to other methods as this method is able to more effectively capture the personal meaning of the experience. Alternative methods that ask respondents how they would feel in a specific situation are more likely to elicit intellectual responses based on abstract knowledge rather than on the personal meaning of the experience (Lazarus and Smith, 1988). To confirm that our sampling time frame captures the personal meaning of the experience, we checked whether the respondents reported feelings of grief at the time they were surveyed. More than 20% of the sample responded that their grief was five or higher on the seven-point scale, indicating that they still associated the bankruptcy with substantial grief. Entrepreneurs also returned the mail survey 4 to 10 months after the bankruptcy, which may influence the amount of grief they reported. We correlated the amount of grief reported with the number of days between filing bankruptcy and returning the mail questionnaire. This correlation was only  $-0.076$  ( $P > 0.10$ ), suggesting that there were no systematic differences based on the length of time that passed between the bankruptcy and the response. The sampling time frame used in this study is therefore appropriate for capturing the personal meaning of the bankruptcy experience.

A limitation of this design is that it relies on self-report. However, such data is necessary to capture the relationships of interest and is a limitation of all research that tries to understand the relationships between individuals' appraisals of stressful encounters and their emotional responses (Lazarus and Smith, 1988). In order to reduce this problem, we followed recommendations by Podsakoff et al. (2003) to ensure that some of the independent and dependent variables were collected at two different points in time using different means of data collection and different response formats.

**Table 2**  
Descriptive statistics—means, standard deviations, and correlations.

	Mean	Std. dev	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Sex <sup>a</sup>	.149	.357	1										
2. Age	48.032	11.032	-.067	1									
3. Education	4.178	1.997	-.003	.160*	1								
4. Previous startups	1.869	2.553	-.166**	.220**	.270**	1							
5. Prior failure	.131	.338	-.106	.079	.170**	.279**	1						
6. Financial loss	7.401	6.293	.028	-.145*	-.035	-.096	.049	1					
7. Portfolio entrepreneur	.240	.427	-.140*	.054	.013	.381**	.236**	-.071	1				
8. Hybrid entrepreneur	.088	.284	.080	.010	.047	.026	-.048	.027	-.174**	1			
9. Appraisal loss of self-esteem	2.341	1.369	-.016	-.108	.010	-.164	-.131	.235**	-.294**	-.127	1		
10. Appraisal financial strain	4.808	1.949	.041	-.231**	-.095	-.079	-.001	.564**	-.140	.051	.462**	1	
11. Appraisal loss of independence	3.896	2.042	.105	.023	-.026	-.168	-.034	.083	-.281**	-.031	.487**	.347**	1
12. Grief	3.037	1.515	.19*	-.040	-.122	-.093	-.192*	.207*	-.245**	-.117	.524**	.435**	.309**

<sup>a</sup> 0 = man, 1 = woman.

\*  $P < 0.05$ .

\*\*  $P < 0.01$ .

## 5. Analyses and results

Table 2 presents the descriptive statistics and correlations. First, we examined the distribution of the dependent variable to provide an initial examination of the variance in grief. The mean for the grief variable was 3.037 with a standard deviation of 1.515 (measured on a seven-point Likert scale), suggesting that the scale was appropriate for tapping the levels of grief experienced in the sample. Results from a correlations analysis showed moderate to low correlations among variables, suggesting that multicollinearity should not be a main issue. The correlations among the appraisal variables range from 0.347 to 0.487. All variance inflation factors were under 10, as recommended by Hair et al. (2006).

We started out by testing H1. The regression results for the relationship between appraisal and grief are provided in Table 3. We first tested the base model, which included the study's control variables, the antecedents of appraisal, and whether the entrepreneur had experienced a prior failure. These results are displayed in Model 1 of the table.

In Model 2, we then examined the influence of the appraisal variables. Loss of self-esteem has a positive and statistically significant influence on grief ( $\beta = 0.429$ ,  $P < 0.001$ ). This provides support for H1a, which stated that the more the failure experience is appraised as being associated with loss of self-esteem, the greater the feelings of grief. Financial strain has a positive and statistically significant influence on grief ( $\beta = 0.231$ ,  $P < 0.01$ ). This provides support for H1b, which stated that the more the failure experience is appraised being associated with financial strain, the greater the feelings of grief. We did not find support for H1c, which stated that the more the failure experience is appraised as being associated with loss of independence, the greater the feelings of grief ( $\beta = -0.046$ ,  $P > 0.10$ ).

We now provide the results for H2 and H3 (i.e., how other forms of employment at the time of the bankruptcy influence appraisals). These results are provided in Table 4. For each type of appraisal, the results are presented for the control variables directly followed by the research variables. For H2, we found that being a portfolio entrepreneur had a statistically significant negative influence on the appraisals of loss of self-esteem ( $\beta = -0.965$ ,  $P < 0.01$ ) and loss of independence ( $\beta = -1.365$ ,  $P < 0.01$ ). Although being a portfolio entrepreneur had a negative influence on appraisals of financial strain ( $\beta = -0.621$ ,  $P < 0.10$ ), it did not contribute to an overall statistically significant increase in the variance explained. Thus, we found support for H2a and H2c but not H2b.

For H3, we found that being a hybrid entrepreneur had a statistically significant negative influence on the appraisal of loss of self-esteem ( $\beta = -0.943$ ,  $P < 0.05$ ). Thus, we found support for H3a. No influence was found for hybrid entrepreneurs on the appraisal of financial strain ( $\beta = -0.463$ ,  $P > 0.10$ ). Thus, we did not find support for H3b.

Next, we tested H4. The regression results for the interaction between prior failure and appraisal are provided in Models 3, 4, and 5 of Table 4. Model 3 shows the interaction between loss of self-esteem and prior failure. The interaction term is negative and statistically significant ( $\beta = -1.186$ ,  $P < 0.05$ ). This provides preliminary support for H4a. We did not find any significant interactions for the other interactions in Models 4 ( $\beta = -0.201$ ,  $P > 0.10$ ) or 5 ( $\beta = -0.044$ ,  $P > 0.10$ ). Thus, H4b and H4c are not supported.

To determine the nature of the interaction between loss of self-esteem and prior failure (H4a), based on the regression coefficients provided by the analysis presented in Model 3, we plotted the effect of loss of self-esteem on grief for values of prior failure set at the mean and at one standard deviation above and below the mean, as suggested in the literature (Cohen and Cohen, 1983). As illustrated in Fig. 2, prior failure dampens the positive effect that loss of self-esteem has on grief, thus supporting H4a.

**Table 3**  
Regression results—grief.

Grief	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control variables						
Sex <sup>a</sup>	.705 <sup>+</sup>	.783*	.781*	.775*	.779*	.819*
Age	-.002	.008	.009	.009	.008	.008
Education	-.073	-.068	-.086	-.076	-.068	-.103 <sup>+</sup>
Previous start-ups	.040	.015	-.016	-.000	.012	.042
Prior failure	-.585	-.445	1.055	.221	-.334	.724
Financial loss	.037 <sup>+</sup>	-.018	-.014	-.017	-.018	-.003
Constant	3.311***	1.127***	.996***	1.053***	1.102***	1.258
Antecedents of appraisals						
Portfolio entrepreneur	-.765*	-.270	-.325	-.303	-.273	-.644
Hybrid entrepreneur	-.488	-.157	-.103	-.172	-.154	-.310
Research variables						
Appraisal loss of self-esteem		.429***	.488***	.420***	.428***	.531***
Appraisal financial strain		.231**	.220**	.246**	.232**	.189*
Appraisal loss of independence		-.046	-.034	-.042	-.043	-.031
Prior failure*appraisal loss of self-esteem			-1.186*			-1.655**
Prior failure*financial strain				-.201		-.129
Prior failure*appraisal loss of independence					-.044	.536
F	2.475*	5.894***	6.165***	5.412***	5.359***	6.051
Adj R	.086*	.301***	.331***	.298***	.295***	.343***
$\Delta$ Adj R <sup>2</sup>		.215***	.03*	-.003	-.006	.042*
n	119					

<sup>+</sup> $P < 0.10$ ; \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .

<sup>a</sup> 0 = man, 1 = woman.

**Table 4**

Regression results—appraisal variables.

	Appraisal loss of self-esteem		Appraisal financial strain		Appraisal loss independence	
Control variables						
Sex <sup>a</sup>	-.159	-.171	.131	.205	.583	.555
Age	-.006	-.008	-.026	-.020	.018	.016
Education	.037	.031	-.070	-.087	.007	-.004
Previous start-up	-.033	.020	.033	.050	-.104	-.029
Prior failure	-.492	-.355	.000	-.218	.094	.295
Financial loss	.048*	.042*	.171***	.166***	.039	.031
Constant	2.267***	2.649***	5.042***	4.934***	2.765***	3.2719***
Research variables						
Portfolio entrepreneur		-.965**		-.621 <sup>+</sup>		-1.365**
Hybrid entrepreneur		-.943*		-.463		-1.108 <sup>+</sup>
F	1.663	3.149***	10.875***	8.733***	1.003	2.140*
Adj R <sup>2</sup>	.031	.120**	.320***	.326***	.000	.068*
ΔAdj R <sup>2</sup>		.089**		.006		.068*
n	120					

Note: <sup>+</sup>  $P < 0.10$ ; \*  $P < 0.05$ ; \*\*  $P < 0.01$ ; \*\*\*  $P < 0.001$ .<sup>a</sup> 0 = man, 1 = woman.

To check the robustness of the results, we also ran a path analysis in AMOS. The results from the path analysis support the results found using ordinary least squares.

## 6. Discussion

In this paper, we examined entrepreneurs' emotional reactions to firm failure within the framework of primary appraisals. Earlier work on failure has highlighted that entrepreneurs are likely to feel grief post-failure (Shepherd, 2003). In this paper, we add to this literature by showing the factors that influence the amount of grief felt, thus explaining variance in grief across entrepreneurs. By choosing a research design that allowed us to focus explicitly on entrepreneurs who had recently experienced bankruptcy, we were able to hold the firm-level failure event constant, which enabled us to disentangle personal failure from firm failure and examine variance in grief among entrepreneurs who faced a similar experience. Emotions reveal how individuals think they are managing what is important to them in a particular context (Folkman and Lazarus, 1985) and by conceptualizing loss of self-esteem as an indication of personal failure (Crocker and Wolfe, 2001), we were able to show that variance in grief after firm failure reflects the extent that entrepreneurs associate firm failure with personal failure.

With definitions of entrepreneurship occurring at the nexus of the individual and the opportunity (cf. Shane and Venkataraman, 2000), it has been noted that much research focusing only on the nature of the individual confounds the effects of the individual and the opportunity. Similar observations can be made with regard to entrepreneurial failure. That is, in order to correctly attribute individual differences, we somehow need to take the nature of the firm-level failure into account. We did so by choosing a sample of participants who had experienced a similar failure event, thus controlling for the influence of firm-level failure by means of research design.

One important observation is that there is great variance in the grief entrepreneurs feel after firm failure. This suggests that entrepreneurs who experience firm failure should be considered a heterogeneous group (cf. Ucbasaran et al., 2010). Our findings that some but not all entrepreneurs experienced loss of self-esteem and felt grief thus lends empirical support for Sarasvathy's (2004) premise that failure of the firm does not always imply failure of the entrepreneur. However, it also rejects the rosy notion



Fig. 2. Interaction between prior failure and appraisal of loss of self-esteem.

of failure as a valuable experience found in many textbooks and some research. Our findings show that most entrepreneurs who go through a bankruptcy experience grief and lose money. Although many would agree that facing hardships (e.g., divorce, disease, war, starvation, etc.) can make people stronger, few would recommend that people deliberately put themselves through such experiences. Similarly, although it is likely that operating a firm through the failing process can teach entrepreneurs valuable lessons, for most, it comes at a high emotional and financial cost.

Our research design also allowed us to build on previous research applying appraisal theory to the study of job loss paired with the literature on reasons for becoming an entrepreneur. We identified three specific appraisals particularly relevant to failed entrepreneurs: loss of self-esteem, financial strain, and loss of independence. We found support for appraisals of loss of self-esteem and financial strain having a positive influence on feelings of grief. We did not find support for loss of independence influencing grief. Therefore, it appears that results found in the job loss literature generalize to the entrepreneurship context—that is, the same appraisals that influence grief associated with losing a job also influence grief associated with an entrepreneur going through a bankruptcy.

One explanation for this finding is that loss of self-esteem and financial strain are associated with secondary stressors that can impact a number of different aspects in an entrepreneur's life. For example, loss of self-esteem is associated with a loss of social identity (Shepherd and Haynie, 2011) and a withdrawal from social contacts (Sargent, 2003). Thus, loss of self-esteem impacts not just how entrepreneurs feel about themselves, but it also influences how they interact with others. Financial strain is also associated with a range of secondary stressors that can impact major life goals, such as obtaining a satisfactory standard of living that entails sufficient food and shelter (Price et al., 2002). Loss of independence, on the other hand, does not have the same range of impacts on an entrepreneur's life, and its impact is likely restricted to the work domain. For this reason, feelings of loss of independence may not trigger a strong grief reaction. An alternative explanation for this finding is that entrepreneurs who have independence as an important goal may have already re-entered self-employment and thus no longer associate the failure with loss of independence.

Our use of appraisal theory for understanding emotional responses to firm failure also shows the importance of entrepreneurs' interpretations of failure for their responses to failure. This importance is highlighted when we consider the influence of the antecedents of appraisal – namely, whether the entrepreneur was a portfolio entrepreneur or a hybrid entrepreneur – within the appraisal framework. Appraisals explained an additional 21% of the variance in grief over and above the control variables and the antecedents of appraisals. Further, when the appraisal variables were included in the model, being a portfolio entrepreneur no longer had a negative influence on grief. Similar findings have been found in the job loss literature, where the interpretation of the experience in terms of harm and loss appraisals has been found to have a stronger influence on well-being than the objective situation of the individual (McKee-Ryan et al., 2005). These findings support our use of appraisal theory for understanding emotional reactions to firm failure. It is the appraisal of stressors that is more important for well-being than the existence of stressors when responding to significant life events (Lazarus and Folkman, 1984).

We also consider whether the entrepreneur experienced firm failure previously and suggest that incorporating prior failure experiences into the appraisal–emotion relationship can reduce the impact of harm and loss appraisals on grief. We did this by building on psychological capital, suggesting that entrepreneurs who previously experienced firm failure and re-entered may have done so due to higher levels of resilience. Thus, we tested the steeling effect of prior failure experience. We do not suggest that all entrepreneurs who fail benefit from this effect; however, entrepreneurs who re-enter self-employment after experiencing failure may have done so due to the development of psychological capital. Such capital can act as a buffer in future failure experiences. Hence, we suggest that psychological capital is a mechanism by which prior failure experiences may steel entrepreneurs to continue in the entrepreneurship process. One explanation for why we find a buffering effect in the relationship between loss of self-esteem and grief and not the other appraisal elements is that loss of self-esteem is likely to be a more proximal construct to psychological capital (Arthur et al., 1997), so psychological capital is likely to have a greater influence on appraisals of loss of self-esteem than the other appraisal elements.

Support for psychological capital as a buffer can also be found in the habitual entrepreneurship literature. Ucbasaran et al. (2010) found that serial entrepreneurs who previously experienced failure did not report lower levels of comparative optimism. Resilience and optimism are often outcomes of attributing negative experiences to external, uncontrollable, and variable causes (Luthans and Youssef, 2004). Such attributions can help build resilience and maintain optimism (Luthans and Youssef, 2004) and can thus help entrepreneurs maintain their entrepreneurial motivation after experiencing firm failure.

Apart from enlightening how appraisals influence the grief felt over entrepreneurial failure, we believe that our of prior failure's moderating effect has implications for theories of appraisals and emotion. Prior failure can either steel or sensitize individuals, making them either more or less sensitive to stressful experiences (Beasley et al., 2003; Rutter, 1985). Psychological capital, particularly resilience, could be considered moderators in the relationship between appraisals and emotions in a similar way to personality characteristics, such as locus of control and hardiness (O'Driscoll and Dewe, 2001). There are likely to be other contexts in which psychological capital is also likely to influence the nature of the relationship between harm and loss appraisals and well-being. Bouncing back after failure in elite sports (Jones, 2002) and job loss (Leana and Feldman, 1988) are two such contexts.

### 6.1. Practical implications

Our findings have a number of practical implications. First, our findings suggest loss of self-esteem is a major driver of feelings of grief. This suggests that one way entrepreneurs can overcome emotional loss from firm failure is by re-building their self-esteem. Entrepreneurs' awareness of their own work and non-work domains may help them more realistically appraise their emotional reactions and increase their self-esteem. In particular, research in the field of work–family facilitation shows that

individuals who are able to define for themselves what is included in the respective domains have a higher degree of well-being in stressful situations (Wayne et al., 2007).

Our findings also have relevance for policymakers. Our results show that firm failure can evoke equally strong emotional reactions as job loss. Therefore, this finding stresses the relevance of treating firm failure resulting in self-unemployment equivalent to job loss for the employed. Traditionally, there have been more support activities and compensation for people entering unemployment due to job loss than for entrepreneurs due to firm failure. For example, firm failure can include entrepreneurs in temporary salary schemes that are open to people who become unemployed.

## 7. Limitations and future research

In this paper, we limited our focus to harm and loss appraisals and their influence on grief, an evaluative emotion (Liu and Perrewé, 2005) or past-oriented emotion (Ortony et al., 1988). It is likely, however, that appraisals of threat and challenge are also relevant after firm failure. Threat appraisals are associated with anticipatory emotions, such as worry and fear about what will happen in the future (cf. Liu and Perrewé, 2005). To illustrate, harm and loss appraisals are associated with financial strain related to one's ability to pay current bills while threat appraisals are associated with future-oriented worries, such as the ability to pay next year's college fees (Latack et al., 1995). Threat appraisals could therefore also be relevant to study in the context of firm failure (cf. Latack et al., 1995). Challenge appraisals could also be used to identify entrepreneurs who view failure as a possibility to learn. For example, challenge appraisals could be related to a mastery learning goal orientation.

To further understand the complexity of emotional responses to firm failure, appraisal theory could be extended to a more fine-grained analysis of the emotions felt during the failure process. For example, there could be a time lag between realizing the firm will fail and the actual failure of the firm (Shepherd et al., 2009). As a result, the time leading up to the failure could be particularly stressful. The failure may be a negative experience, but its consequences may not necessarily be negative if it has solved an otherwise intractable problem (e.g., the inability to turn around a failing business) (Thoits, 1995). In situations like this, relief is often felt (Wheaton, 1990). That is, relief is felt when a stressful (Pekrun et al., 2004) or painful (Roseman et al., 1996) experience is over.

We limited our focus to initial reactions to firm failure; however, as emotions are likely to change over time in response to stressful events (Liu and Perrewé, 2005), an extension of this study could look at how entrepreneurs' reactions evolve over time and could examine the role coping plays in this process. Further, our results regarding the relationship between antecedents of appraisal and appraisal itself were relatively weak. Future research could investigate the role of personality resources (e.g., locus of control) in shaping how stressful the failure experience is appraised (cf. Major et al., 1998).

We proposed that individuals with prior failure experience who have re-entered may have done so due to higher levels of psychological capital, particularly resilience. Although our approach and findings are in line with other studies, which indirectly measure resilience, there is the risk that our small sample size may cause unstable results (Luthar and Cushing, 1999). This suggests that future research should replicate our findings in a larger sample and should also consider directly measuring psychological capital. Further, all respondents in our sample had experienced one prior failure. Future research could consider multiple prior failure experiences to see if similar relationships are found.

Due to the potentially sensitive nature of the research, we also used parsimonious operationalizations of appraisal and grief. However, both constructs are quite complex in nature. For example, grief can involve psychological as well as behavioral implications, such as restlessness, loss of appetite, and difficulties sleeping (Archer and Rhodes, 1993). We did not include these aspects of grief. Thus, while our findings show initial support for the idea that some entrepreneurs are likely to feel grief when their firms fail, future research could focus on additional aspects of grief.

We also investigated grief after firm failure in Sweden—a country where there is substantial stigma associated with failure. While this may limit the generalizability of our findings to other contexts in which there is higher tolerance for failure, recent case study research suggests that these findings are likely to also be relevant in these contexts. For example, Cope (2011) found that entrepreneurs who experienced failure in the Silicon Valley – where tolerance of failure is high (Landier, 2005) – also felt emotional and financial loss as a result of failure. Cope also found that these entrepreneurs were able to move on to new ventures or employment more easily than their counterparts in the United Kingdom. In another study, Simmons and Wiklund (2011) found that in high-stigma countries, entrepreneurs are less likely to re-enter self-employment after experiencing failure. Taken together, these two studies (Cope, 2011; Simmons and Wiklund, 2011) suggest that in countries where there is lower stigma associated with failure, entrepreneurs may find it easier to recover from the emotional and financial loss associated with firm failure.

## 8. Conclusions

Firm failure is an experience that can serve as an important stepping stone to future entrepreneurial success or a devastating life event from which it is difficult to recover. We used appraisal theory to develop a set of testable hypotheses to argue that how the entrepreneur interprets failure can account for this variance in response to firm failure. Using a unique sample of 120 entrepreneurs who recently experienced firm bankruptcy, we found support for our hypotheses that how failure is interpreted in terms of loss of self-esteem and financial loss has important implications for how entrepreneurs feel after experiencing firm failure. Thus, our findings help to determine when firm failure is also experienced as personal failure. We also suggest that psychological capital can play an important role in helping entrepreneurs to rebound after firm failure.

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