The Impact of Grief on Entrepreneurial Learning

Summary

In this paper, an empirical study of entrepreneurial learning is carried out, with particular focus on critical events, namely failure of the business as defined by the cessation of company due to the company becoming insolvent. Business failure occurs when "*a fall in revenues and/or a rise in expenses are of such a magnitude that the firm becomes insolvent and is unable to attract new debt or equity funding; consequently, it cannot continue to operate under the current ownership and management*" (Shepherd, 2003, p. 318).

We draw upon the theories and hypotheses that have been proposed by the leading authors in the field over the past 15 years, to build a new conceptual model of entrepreneurial learning through failure. The main contribution of the model presented is the identification of grief as a significant influencing factor of learning through failure.

1 A conceptual model of learning from failure

It seems acceptable that entrepreneurs fail, and it also seems expected that entrepreneurs learn from failure. Indeed, Lord Young at a Small Business Charter discussion event stated: "*It's a fact that nobody learns anything from success. We only ever learn something when we fail"* (Lord Young, 14/11/16). This apparently common held view of the experts and support networks of our entrepreneurial society is not in-line with the evidence presented within the literature, nor in this study. Whilst it is possible to learn from failure (as an experience), specific support structures need to be in place in order to facilitate active reflection for recovery from the negative emotions, or grief, which in turn promotes learning and the modification of behaviours (development) for future preparation of any new venture.

It has been suggested in previous studies (Cope, 2011) that by bringing failed entrepreneurs together, that they may be able to learn more from each other, through discussions within action learning sets. In fact, it may be the case that the entrepreneurs have learned from their experiences, yet the support and discussion would help to form firm conceptual ideas surrounding the learning.

As will be discussed in section 5.3 one of the drawbacks of a cross-sectional survey designed study is the lack of longitudinal aspect to the investigation. As such, measuring any improvement in learning on a within-case basis is not possible. This method of investigation only allows for reflections of the individual in estimating the change in one's personal attributes. Previous studies have eluded to the possibility that entrepreneurs overestimate the learning benefits of failure 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 individuals sense of empathy, consideration, and awareness of others – is less likely to be directly associated with the failure in the view of

the entrepreneur, and therefore more likely to elicit reliable results (Politis, 2005). This indirect measure of learning can help to demonstrate the significance of other variables being measured within the study, and as such will help to build a fuller understanding of the entrepreneurial learning concept.

1.1 Critical setbacks & failure

Previous research into entrepreneurial learning has focused on the development of the individual through a process of social reflection on the experience of an event. For the entrepreneur, such events present themselves as critical setbacks (Rae 2000, 2003, 2006, Cope 2003, 2005a, Shepherd 2003, 2009, Pittaway & Cope 2007, Politis & Gabrielsson 2009). For Cope (2005a) and Politis & Gabrielsson (2009), critical setbacks are a constituent part of the construct of entrepreneurial preparedness, for others (Shepherd 2003, Ucbassaran *et al* 2009) however, critical setbacks are the focus of the event which triggers the modification or transformation of behaviour through the process of social reflection (personal development).

Politis & Gabrielsson (2009) asked respondents to rate the extent (1 = very low extent, 5 = very high extent) they have experienced a number of critical setbacks in the new venture creation process. “These critical setbacks were based on prior theoretical work on traditional obstacles and problems that new ventures face when coping with liabilities of newness in their early years of operations (i.e. Stinchcombe, 1965; Singh et al., 1986; Shepherd et al., 2000)” (Politis & Gabrielsson, 2009: 370). Critical setbacks within this study are defined separately to business closure, and despite the focus of the paper being on attitude to failure, the authors do not choose to define a construct of business failure, but also include “personal mishaps and hardships experienced by the entrepreneur in the business venturing process” (Politis & Gabrielson, 2009 p. 365)

In synthesising the arguments made and discussed within this section pertaining to experience,

the following hypothesis is made:

Hypothesis 1: Catastrophic failures with high levels of financial loss will lead to higher levels of negative responses (grief) and thus lower levels of development.

It has been proposed that entrepreneurial preparedness improves the ability of the individual to develop as a result of acquired new knowledge through experience, this leads to the following hypothesis:

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

1.2 Grief

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

The idea that the business is an organic product of the entrepreneur provides a strong link to social and emotional loss. Connecting the contextual elements of the full picture of such a loss would indeed highlight the pain that could be caused by a loss of a business, and subsequently what impact this pain has on the development of an individual. Notwithstanding the associated trauma of loss of income and assets, loss of [self] respect, and the impact of relationships with

friends and family, there is the need to come to terms with the loss of all the effort – physically, mentally, and emotionally (Cope 2005a), that went into creating a business that became an entity in its own right – albeit a corporate one. Such loss, would undoubtedly cause grief and sorrow, a concept that has been considered as a concept by Shepherd (2003) and was explored through case interviews by Cope (2011). In both cases, the authors highlighted the need for further investigation into the impact that grief has on the recovery process of an entrepreneur who has 'lost' a business. Further analysis of grief following failure can be found in the context of project failure in Shepherd *et al* (2011), and through company closure in Jenkins *et al* (2014).

It is proposed that high levels of grief will inhibit the learning process, and could even prevent the entrepreneur from moving on when necessary. When applying the five stages of loss (Kübler-Ross, 2005) to the entrepreneur, we can see that the first stage is denial, followed by anger and then bargaining – where negotiation for extended life [of the business] could result in an administration event whereby the entrepreneur purchases the assets of the business in order to continue operations. Interestingly, Shepherd *et al.* (2000) offer some validation to this process, by suggesting that the notion of discontinuance may be seen "*as a result of its success, not as a result of poor performance*" (Shepherd *et al.* 2000: 396). This is in contrast to Politis & Gabrielsson (2009) who use a definition of failure *"not only encompassing factors requiring a complete termination of a business, such as bankruptcy and insolvency, but also personal mishaps and hardships experienced by the entrepreneur in the business venturing process"* (Politis & Gabrielson, 2009 p. 365).

The following hypotheses are proposed to provide further evidence to support the notion that entrepreneurs demonstrate attributes of grief:

Hypothesis 3a: Entrepreneurs demonstrate characteristics of grief as a result of a critical setback and failure experience.

Hypothesis 3b: Entrepreneurs move through five stages of grief, namely shock, anger, despair, detachment, disorganization, before acceptance and moving on to personal growth.

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

Hypothesis 5: Entrepreneurs with high levels of failure experience will be more negatively impacted by grief than those with low levels of failure experience.

Hypothesis 6: Individuals that are further from the failure event (in terms of time) will demonstrate lower levels of grief.

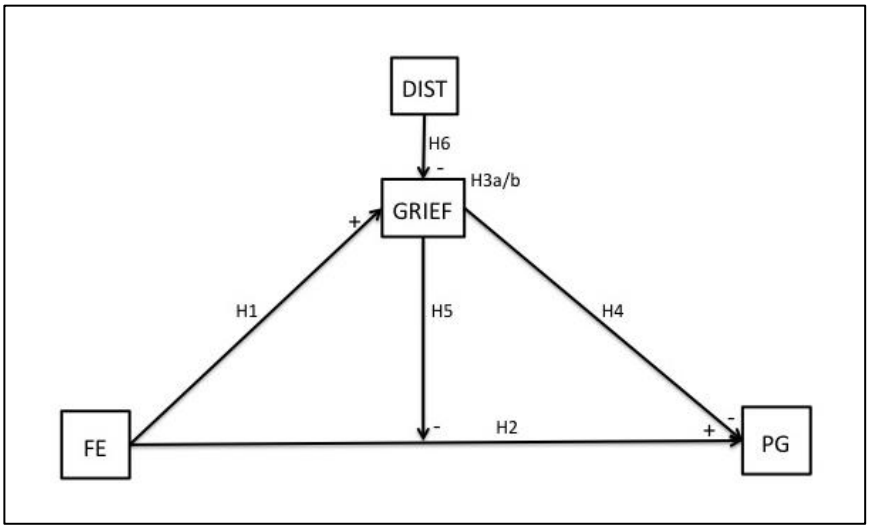

Figure 1: Conceptual model

2 Methodology

2.1 Measures – Development of Key Constructs

Having defined the measures that will be used as the key constructs within the study for testing the hypotheses defined in the previous section, the four main constructs of failure experience

(FE), grief, distance from failure (DIST), and personal growth (PG) were defined in terms of their constituent elements for operationalisation. Each construct has been chosen to work either as a direct measure, as is the case with distance from failure, or through a common five-point Likert scale.

Where possible, established scales from the literature were adopted for use within the research instrument. In some cases, such as grief, an established scale had not previously been used within the entrepreneurship field, however the adoption of established scales from other fields will be discussed in these cases.

Following the construction and operationalisation of the validated scales, the survey instrument was created within Qualtrics online survey engine. An online survey has been used in this study for its ability to collect data economically in a short period from temporally scattered diverse sources.

Key informants were identified as either being, or having been a business owner defined as "as someone who holds a significant shareholding and are key decision makers within their organisation." This question was used as a validation question at the beginning of the survey instrument. The identified key informants were contacted via email with an introduction to the purpose of the survey and informing them that I would be sending a link in the next few days. This initial email was used to identify email addresses that were no longer valid, or users that had moved to different jobs or retired.

A follow up email was then sent with a reintroduction to the project and a link to access the web-based instrument via www.qualtrics.com. Participants were given two weeks to complete the survey before being sent a follow-up reminder email, which also notified participants that the research team would contact them following a two-week period to discuss potential participation.

2.2 Sampling

An initial database of business correspondents was gathered using the FAME database. The search criteria from the FAME database looked to export data for companies for which there was a listed individual who was a CEO, MD, or Director. 31,502 cases were retrieved and these were ordered randomly using the built in function within the FAME database. This number was then reduced by selecting companies owned by individuals. From this list the contacts were further filtered by Contact Function to remove irrelevant functions of Admin, PR, Non-Exec, Operations, Risk, Sales, and Finance. The remaining 9,654 were allocated a number and then split into odd and even groups. The even group was chosen as the sample frame and 4,827 contacts were sent the initial introductory email. This email resulted in 667 bounce-backs and these contacts were removed from the sample.

2.3 Data Analysis

Analysis of the data from the survey instrument was carried out at a number of levels. First the data was assessed for its demographics, using simple descriptive statistics within SPSS. In some cases an independent-samples t-test for comparison of means across two defined groups was carried out to allow inference against some of the hypotheses. At a second level, exploratory factor analysis (EFA) was carried out within SPSS through a combined process of dimension reduction factor analysis, utilising maximum likelihood extraction through the correlation matrix with an oblique rotation and reliability analysis of scale utilising Cronbach's Alpha (Cronbach, 1951). In addition to the quantitative data from the survey instrument, such scales are supported and addressed through the qualitative field data collected in phase one and two of the study.

In many studies, this process of EFA is sufficient to accept the inclusion of items for construction of measures. However, in order to understand further from a chi-squared analysis,

how such scales are validated, a process of confirmatory factor analysis was carried out using the software LISREL. Finally, the structural model was assessed through LISREL, and later using PROCESS within SPSS for moderation analysis.

2.3.1 Respondent and firm profile

After a three-wave contact (i.e. two reminders), 570 responses were received from the 4160 valid businesses, representing a total response rate of 13.7% which is in line with other studies following such methods. Of these, 447 respondents reported that they were a business owner as defined by the description given in the question: "***". A further 27 respondents reported to having been a business owner previously and were included in the initial analysis, however many of these latter respondents answered less than 80% of the questionnaire (not including the business failure questions) and as such, were treated as non-respondents.

Demographic Features	**Frequency**	**Percent**
Gender		
Male	369	85.4
Female	63	14.6
Age		
18 – 30	21	4.9
31 – 40	116	26.9
41 - 50	97	22.4
51 – 60	144	33.3
60+	54	12.5
Education Level		
No formal education	5	1.2
Secondary School	61	14.1

College/A-Level	90	20.8
Degree	166	38.4
Masters	82	19.0
Doctoral	21	4.9
Professional Degree	7	1.6
Studied an entrepreneurship course/module?		
Yes	141	32.6
No	291	67.4
Role		
CEO	140	32.4
MD	176	40.7
Director	105	24.3
Non-exec Director	5	1.2
Manager	6	1.4
Time in role		
0 – 2 years	29	6.7
3 – 5 years	53	12.3
6 – 10 years	100	23.1
11 – 19 years	114	26.4
20+ years	136	32.5
Number of employees		
1 – 4	39	9.0
5 - 9	27	6.3

10 - 19	37	8.6
20 - 49	92	21.3
50 - 99	88	20.4
100 - 249	79	18.3
250 - 499	42	9.7
500 or more	25	5.8
0	3	0.7

Following removal of respondents whereby missing data constituted more than 20% of the total response, a total of 432 respondents remained for the final analysis.

Most businesses (65%) employ less than 100 people, with 45% employing less than 50 people. 84% of the businesses within the sample are chategorised as SMEs by the department for national statistics (gov.uk). 59% of entrepreneurs have been in their current role for more than ten years, with 64% being educated to at least degree level. The average (mean) age of respondent is 43.07 years, and 85.4% are male.

Of the 432 respondents included in the analysis, 143 (33%) reported to have closed a business due to insolvency/financial reasons (business failure). The demographics of these individuals and their current businesses are given in table 2.2

Demographic Features	Frequency	Percent
Gender		
Male	130	90.9
Female	13	9.1
Age		
18 – 30	1	0.7
31 – 40	29	20.3
41 - 50	37	25.9
51 – 60	46	32.1
60+	30	21.9
Education Level		
No formal education	1	0.7
Secondary School	18	12.6
College/A-Level	32	22.4
Degree	47	32.8
Masters	36	25.2
Doctoral	7	4.9
Professional Degree	2	1.4
Studied an entrepreneurship course/module?		
Yes	41	32.6
No	102	67.4

Time in role		
0 – 2 years	9	6.3
3 – 5 years	19	13.3
6 – 10 years	27	18.8
11 – 19 years	36	25.1
20+ years	52	36.5
Number of employees		
1 – 4	14	9.8
5 - 9	9	6.3
10 - 19	11	7.7
20 - 49	28	19.6
50 - 99	36	25.1
100 - 249	24	16.8
250 - 499	10	7.0
500 or more	11	7.7

Table 2.1: Demographics of business owners with experience of failure.

78% of entrepreneurs who have failed move on to their next business either before or on the same day of closure of the failed business. Combining this information with the fact that 29% of current businesses purchased the assets of the previous failed business, suggest that there are a high number of 'phoenix' businesses within the data. Entrepreneurs with experience of business failure within the sample are on average 3.5 years older, with an average (mean) age of 46.61 years. Within the sample, fewer females reported experience of business failure, and this difference was found to be significant at the 95% confidence level ($p < 0.05$). It could be suggested that females are less likely to have experienced failure (although the sample size for females is very small (n = 13). The male failure rate is 35% (130/369) and the female failure

rate is 21% (13/63).

Group Statistics

	What is the total number of business closures you have experienced as a business owner?	N	Mean	Std. Deviation	Std. Error Mean
Course/module in entrepreneurship?	>= 1	143	1.71	.454	.038
	< 1	289	1.65	.477	.028
What is your gender?	>= 1	143	1.09	.288	.024
	< 1	289	1.17	.379	.022
What is your age?	>= 1	143	46.61	11.854	.991
	< 1	289	43.07	15.041	.885
Age of business?	>= 1	143	19.09	13.947	1.166
	< 1	289	16.12	9.798	.576

Table 2.2: Independent samples t-test for comparison of means between fail and no-fail groups.

Further analysis of the two groups (Fail versus No-Fail) using an independent-samples t-test of means (see Table 2.2) provides evidence to suggest that entrepreneurs with experience of failure own a business that is on average, three years older than those with no experience of failure.

2.4 Verification of Non-Response Bias

A total of 570 responses were achieved over a three-month period. Following the initial email, the second email was sent two days later, ensuring that those individuals that responded to opt out were removed from the repeat mailing list. To assess non-response bias, independent-samples t-test is used following (REF) to compare the means of two groups of early and late responses. This approach suggests that late respondents – those that do not respond to the initial call, are likely to have similar responses to those that do not respond (REF). As detailed in (REF), a 10% random sample of questions were included in a non-paired means test with those who responded before the second call to action included in the early group (62%) and those

who responded after the second call to action (38%) included in the late group. The results of the independent-samples t-test are shown in Table 2.3 and demonstrate that there is no evidence of late/non-response bias in the data.

			N
Including your main business, how many businesses do you currently own?	Early: N=268 Late: N=164	3.07 3.06	.035 .037
What is the total number of business closures you have experienced as a business owner?	Early: N=268 Late: N=164	1.83 1.70	.834 .980
This final section consists of a list of thoughts and feelings you may have had since your most r...-In my mind, I often go over the events leading up to the project's failure	Early: N=268 Late: N=164 Late: N=164	1.80 1.76 1.62	.157 .175 .646
In some cases, the closure of a business can result in feelings associated with grief. Please rea...-I feel as though I am a better person	Early: N=268 Late: N=164	2.28 2.04	.758 .805
In some cases, the closure of a business can result in feelings associated with grief. Please rea...-I am confused about who I am	Early: N=268 Late: N=164	1.09 1.07	.176 .187
In some cases, the closure of a business can result in feelings associated with grief. Please rea...-I have panic attacks over nothing	Early: N=268 Late: N=164	1.10 1.04	.864 1.164
In some cases, the closure of a business can result in feelings associated with grief. Please rea...-I have difficulty learning new things	Early: N=268 Late: N=164	1.10 1.14	-.466 -.445
In some cases, the closure of a business can result in feelings associated with grief. Please rea...-I reached a turning point where I began to let go of some of my grief	Early: N=268 Late: N=164	1.49 1.59	-.431 -.407
What is the highest level of education you have completed?	Early: N=268 Late: N=164	3.82 3.87	-.282 -.283

Table 2.3: Independent-samples t-test for non-response bias.

2.4.1 Examination of data entry and missing data

Following the removal of cases that had responded as not being a business owner, and having

never been a business owner in the past, 474 respondents remained. Next an analysis of cases was carried out to identify respondents whereby less than 80% of the core questions were completed (Hair *et al.*, 1998). 42 cases were removed due to insufficient data. This resulted in a complete set of 432 cases.

Examination of the data through descriptive statistics and the production of frequency tables was used as an initial analysis of the accuracy of data returned by the respondents. An analysis of range for each variable allowed the identification of any data that may have been incorrectly submitted. This was minimised due to the online method of submission, whereby answers were given a proforma for selection. This was not the case for string variables, however, as has been discussed above, the financial data questions were omitted from analysis due to lack of data, and other text responses were either recoded where necessary, or not used in this quantitative analysis.

2.4.2 Assessment of Normality and outliers

Following the process of multiple imputation, variables were explored once more in order to ascertain that the residual errors of each of the variables were Normally distributed, and that there were no statistical outliers that could not be sufficiently explained through the data as presented. Using the EXPLORE function in SPSS, it was possible to obtain Normal PP-plots as well as histogram plots and indicative statistics, such as skewness and kurtosis, that allowed for assessment of the variables.

Following a series of tests and assessment of plots/data tables, it was concluded that one case would be removed from the analysis due to its extreme value of grief. Removal of the outlier reduced the value of skewness from 2.432 to 1.536 with the same standard error of 0.203. The value of kurtosis reduced from 8.972 to 1.831 with a standard error of 0.404. Removal of this case reduced the number of failed cases to 142.

The residuals of the regression equations were assessed for normality by analysis scatter plots the difference between predicted outcomes from actual, plotted against predicted outcomes. In each case, there was sufficient dispersion within +/- 3 standard deviations. This is within expectations and is acceptable for analysis (Garson, 2012).

3 Results

3.1 Initial measurement, model fit and modification

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

3.1.1 Failure experience

Failure experience was identified to have three dimensions within the exploratory factor analysis. The measurement and fit of the three sub-dimensions of critical setback experience, failure experience, and financial loss are discussed within this section.

Critical setback experience

This variable consists of a six-item, five-point scale developed by Politis and Gabrielsson (2009). To gauge this variable respondents were asked to rate the extent (1 = very low extent, 5 = very high extent) they have experienced a number of critical setbacks in the new venture creation process. These critical setbacks were based on prior theoretical work on traditional obstacles and problems that new ventures face when coping with liabilities of newness in their early years of operations (i.e. Stinchcombe, 1965; Singh et al., 1986; Shepherd et al., 2000).

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)

EP_CSE1	Developing a new product/service	0.49	.441	0.49	0.49
EP_CSE2	Finding competent employees for the new venture	0.19	.232	--	--
EP_CSE3	Communicating with external stakeholders	0.44	.481	0.44	0.42
EP_CSE4	Finding long-term finance for the new venture	0.40	.442	0.39	--
EP_CSE5	Finding a profitable market niche for a product/service	0.86	.607	0.85	0.85
EP_CSE6	Finding a customer base for a product/service.	0.90	.637	0.91	0.92

Achieved Fit Indices

	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	17.36, 5, 0.004	0.766	0.132	0.95	0.072
Final	1.77, 2, 0.414	0.759	0	1.00	0.026

Table 3.1: Summary of initial findings (CFA): critical set-back experience

CSE2 is removed during the EFA phase with a factor loading <0.3 and r = 0.232. Cronbach's alpha is increased from 0.735 to 0.766.

CSE4 might be argued for removal based on the factor loading of 0.390, however r of 0.442 is now the lowest, and removal of the item would reduce the total alpha value. Further analysis during the CFA phase shows that removal of CSE4 reduces the Chi-squared value and as such alters the model fit statistic from p = 0.004 to p = 0.414. The RMSEA statistic is thus reduced below the required 0.1 and both CFI and SRMR are improved.

As such, a 4-item scale is used. Items are combined with the SUM function and the resulting variable is standardized in SPSS.

Financial Closure experience

To distinguish between different kinds of business closure experience Politis & Gabrielsson (2009) asked respondents to rate whether they have experience of closing down a business with respect to a number of reasons for discontinuance identified in prior literature and research on the topic (Watson and Everett, 1993; Stokes and Blackburn, 2002; Bates, 2005). For the purposes of this study, financial (rather than personal) reasons were utilised.

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
EP_FC1	Problems with making the business profitable	0.89	.661	0.86	0.86
EP_FC2	Difficulties in acquiring necessary resources	0.28	.261	--	--
EP_FC3	The business performed under expectations	0.57	.428	0.59	0.59
EP_FC4	Bankruptcy due to insolvency	0.25	.236	--	--
EP_FC5	To prevent further economic losses	0.74	.571	0.76	0.76
Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	0, 0, 1.00	0.779	0.00	N/A	N/A
Final	0, 0, 1.00	0.779	0.00	N/A	N/A

Table 3.2: Summary of initial findings (CFA): financial closure experience

Items FC2 and FC4 are removed with factor loadings <0.3 and r < 0.3. Cronbach's alpha is increased from 0.671 to 0.779.

The CFA process provides no further inference for modification and with three items loading

onto the latent variable, the model is saturated and a perfect fit is achieved.

The three items are combined using the SUM function and the subsequent variable EP2 is standardized within SPSS.

Financial Loss

To account for the size of the financial loss, four questions were used to identify experience and impact such loss may have on the entrepreneur.

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
LOSS_1	Financial loss to creditors	0.55	.424	0.55	0.55
LOSS_2	Financial loss to investors	0.78	.501	0.78	0.78
LOSS_3	Personal financial loss	0.46	.370	0.46	0.46
LOSS_4	Number of people made redundant	--	--	--	--

Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	0, 0, 1.00	0.619	0.00	N/A	N/A
Final	0, 0, 1.00	0.619	0.00	N/A	N/A

Table 3.3: Summary of initial findings (CFA): financial loss experience

Loss_4 was removed due to the low factor loading value and the negative correlation within the scale. This is not unexpected given the difference in measure (the first three items are financial, and the fourth is a count of people). Removal resulted in a Cronbach's alpha score of 0.619. The items were combined with SUM and the resultant variable was standardized within SPSS.

Failure experience - full model

Item code	Question text	Factor loading	Corrected Item-Total Correlation
EP_CSE1	Developing a new product/service	0.49	.400
EP_CSE3	Communicating with external stakeholders	0.42	.297
EP_CSE5	Finding a profitable market niche for a product/service	0.86	.407
EP_CSE6	Finding a customer base for a product/service.	0.91	.420
EP_FC1	Problems with making the business profitable	0.86	.553
EP_FC3	The business performed under expectations	0.58	.286
EP_FC5	To prevent further economic losses	0.77	.542
LOSS_1	Problems with making the business profitable	0.54	.335
LOSS_2	Difficulties in acquiring necessary resources	0.76	.351
LOSS_3	The business performed under expectations	0.50	.199

Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Final	46, 32, 0.052	0.720	0.056	0.97	0.066

Table 3.4: Summary of initial findings (CFA): failure experience

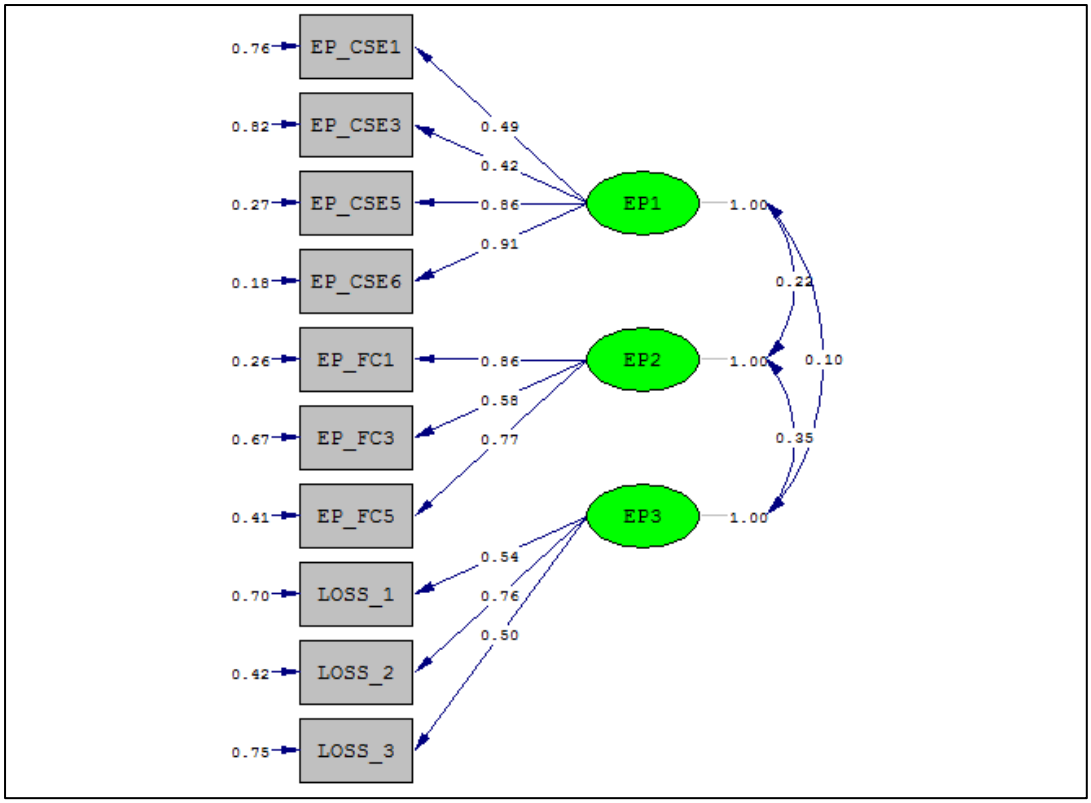

Figure 2: LISREL measurement model for CFA of experience latent variable

Overall there is a good model fit, confirming the items that will be used to create the latent variable experience (EXP).

To combine each of these factors into a single latent variable, each of the standardised dimensions were summed (REFERENCE FOR THIS METHOD?). This process was adopted for all variables to ensure consistency in approach.

3.1.2 Personal growth

As discussed in Shepherd *et al* (2011) and identified by Hogan *et al* (2001), "*the personal growth items reflect bereaved individuals becoming transformed by the grief, experiencing positive changes as an outcome of the bereavement process*" (Hogan et al., 2001: 5). Thus, personal growth was treated as a separate single dimension scale to grief. To assess the unidimensionality and reliability of the scale for personal growth, the 12 items included in the survey from the original HGRC scale were assessed through an exploratory factor analysis

within SPSS. Three items were removed based on low factor loadings. Full details of the output from the EFA and CFA process are given in Table 3.5.

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
G_PG1	I have learned better to cope with life	0.61	.566	0.61	0.57
G_PG2	I feel as though I am a better person	0.55	.530	0.53	0.49
G_PG3	I have a better outlook on life	0.60	.550	0.60	--
G_PG4	I have more compassion for others	0.71	.633	0.70	0.72
G_PG5	I am stronger because of the grief I have experienced	0.57	.521	0.56	0.57
G_PG6	I am a more forgiving person	0.72	.608	0.75	0.76
G_PG7	I am more tolerant of myself	0.53	.470	0.53	0.55
G_PG8	I am more tolerant of others	0.72	.618	0.74	0.76
G_PG9	I have hope for the future	0.47	.466	--	--
G_PG10	I reached a turning point where I began to let go of some of my grief	0.22	.218	--	--
G_PG11	I am having more good days than bad	0.42	.422	--	--
G_PG12	I care more deeply for others	0.59	.553	0.56	0.56

Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	69, 27, 0.000	0.848	0.105	0.947	0.0644
Final	31, 20, 0.055	0.834	0.067	0.979	0.0505

Table 3.5: Summary of initial findings (CFA): personal growth

Through the analysis of standardized residuals within LISREL during the CFA phase, PG3 – I have a better outlook on life, demonstrated high levels of covariance with PG1 - I have learned better to cope with life, and PG2 - I feel as though I am a better person. As such, PG3 was removed from the construct without loss of theoretical meaning within the measure, but with

an improved model fit. This also improved the factor analysis within SPSS providing a single factor measure.

As such an eight-item scale is used with the items combined using the function SUM then standardized in SPSS.

3.1.3 Grief

Three sub-dimensions of the Hogan Grief Reaction Checklist (HGRC) (Hogan *et al.*, 2001) are utilised, resulting in a theoretical grief variable of 27 items.

The following analysis will consider each of the sub-dimensions independently before considering the full single-order latent variable with some discussion focusing on the differences between two possible scales.

Despair

Following EFA using all 12 original items, five items were removed based on factor loadings being less than 0.45 with an Oblimin rotation. The structure matrix suggests that despair is a two-dimensional item, and therefore further analysis of the standardized residuals will be required within the CFA process.

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
G_D1	My hopes are shattered	0.30	.311	--	--
G_D2	I ache with loneliness	0.50	.412	0.48	0.45
G_D3	I agonize over the loss of the business	0.77	.576	0.82	0.82
G_D4	I feel like I'm walking in my sleep	0.28	.263	--	--
G_D5	I frequently cry	0.70	.548	0.70	0.73

G_D6	I feel like I am in shock	0.55	.464	0.51	0.46
G_D7	I have little control over my sadness	0.33	.350	0.30	--
G_D8	I feel a heaviness in my heart	0.68	.529	0.66	--
G_D9	I don't believe I will ever be happy again	0.24	.303	--	--
G_D10	I have difficulty accepting the permanence of the business closure	0.35	.308	--	--
G_D11	I feel hopeless	0.43	.403	0.42	0.45
G_D12	I wish I'd never started a business	0.17	.179	--	--

Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	46, 14, 0.000	0.747	0.127	0.893	0.0803
Final	4.53, 5, 0.475	0.707	0.000	1.00	0.0328

Table 3.6: Summary of initial findings (CFA): despair

The two items that were changed specifically for this questionnaire, D10 and D12 did not contribute to the final confirmed measure. It also seems that the "happiness" items of D7 – D9 were also not strong contributors to the final measure, although D8 did show strong loading, it had high cross-loadings when considering the standardised residual scores. This construct then, is not so concerned with the happiness or regret, but more with the emotional agony and hopelessness.

The SUM function was used within SPSS to combine the final five items. The latent variable was then standardized centrally about zero.

Disorganisation

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
G_DG1	I forget things easily, e.g. names, phone numbers	0.61	.530	0.60	0.63
G_DG2	I have difficulty remembering things from the past	0.83	.681	0.84	0.84
G_DG3	I have difficulty concentrating	0.55	.510	0.52	0.51
G_DG4	I have difficulty learning new things	0.56	.483	0.56	0.52
G_DG5	I have difficulty with abstract thinking	0.32	.325	--	--
G_DG6	I have difficulty remembering new information	0.69	.605	0.69	0.71
G_DG7	Tasks seem insurmountable	0.57	.489	0.57	--

Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	21.4, 9, 0.011	0.772	0.099	0.968	0.0542
Final	7.57, 5, 0.182	0.752	0.060	0.990	0.0341

Table 3.7: Summary of initial findings (CFA): disorganisation

A single factor was extracted through the exploratory factor analysis. One item was removed, DG5, with a factor loading of 0.301 and r = 0.318 – removal of the item from the scale had no effect on the Cronbach's alpha value. Further analysis through the CFA process identified DG7 as having a strong cross-loading effect. Removal of this item improved the overall model fit, whilst maintaining sufficient scale reliability.

As with despair, items were combined using the SUM function and then standardized within SPSS.

Detachment

Item code	Question text	Factor loading	Corrected Item-Total Correlation	Initial loading (EFA)	Final loading (CFA)
G_DT1	I am preoccupied with feeling worthless	0.40	.281	--	--
G_DT2	I feel unable to cope	0.58	.455	0.53	--
G_DT3	I am confused about who I am	0.84	.622	0.64	0.57
G_DT4	I have lost my confidence	0.31	.287	--	--
G_DT5	I avoid tenderness	0.53	.463	0.59	0.59
G_DT6	I feel like I don't know myself	0.32	.327	0.39	0.39
G_DT7	I am afraid that I will lose control	0.55	.475	0.62	0.66
G_DT8	I feel detached from others	0.70	.690	0.78	0.81

Achieved Fit Indices					
	χ^2, DF, p	α	RMSEA	CFI	SRMR
Initial	25, 5, 0.0001	0.761	0.168	0.920	0.0673
Final	5.03, 5, 0.409	0.742	0.009	0.998	0.0291

Table 3.8: Summary of initial findings (CFA): detachment

Following an initial exploratory factor analysis, DT4 was removed with the lowest factor loading. Further analysis of the scale reliability identified that DT1 had a total correlation

contribution r < 0.3 and that removal of the item would improve the Chronbach's alpha value. With only six items entered into the analysis, a single dimension scale was identified.

Further analysis through the CFA process identified DT2 as having a high level of cross-factor loading across the standardised residuals. Removal of this item demonstrated a much-improved model fit, whilst retaining scale reliability.

The four items are combined using the SUM function and standardized in SPSS

Grief - full model

Item code	Question text	Initial factor loading	Corrected Item-Total Correlation	Final factor loading
G_D2	I ache with loneliness	0.45	.413	0.49
G_D3	I agonize over the loss of the business	0.73	.410	0.78
G_D5	I frequently cry	0.71	.426	0.73
G_D6	I feel like I am in shock	0.56	.425	--
G_D11	I feel hopeless	0.50	.440	0.49
G_DG1	I forget things easily, e.g. names, phone numbers	0.64	.442	0.65
G_DG2	I have difficulty remembering things from the past	0.77	.494	0.80
G_DG3	I have difficulty concentrating	0.59	.598	--
G_DG4	I have difficulty learning new things	0.53	.417	0.52
G_DG6	I have difficulty remembering new information	0.71	.478	0.74
G_DT3	I feel unable to cope	0.65	.600	--
G_DT5	I avoid tenderness	0.57	.478	0.57

G_DT6	I feel like I don't know myself	0.37	.314	0.39
G_DT7	I am afraid that I will lose control	0.62	.537	0.65
G_DT8	I feel detached from others	0.80	.699	0.83

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

Table 3.9: Summary of initial findings (CFA): grief

Finally, the scale was then tested within LISREL in order to confirm the measurement structure through CFA. D6 was removed from the despair dimension, DG3 was removed from the disorganization dimension, and DT3 was removed from the distraction dimension all due to cross loading onto other factors. This resulted in a 12-item scale demonstrating discriminant validity between each of the sub-dimensions, with a high level model fit, whilst retaining a good scale reliability ($\alpha > 0.8$).

The three sub-dimensions are combined by summing the non-standardised variables to create a total latent variable for grief. This variable is then stanadardised for the regression analysis and structural modelling process.

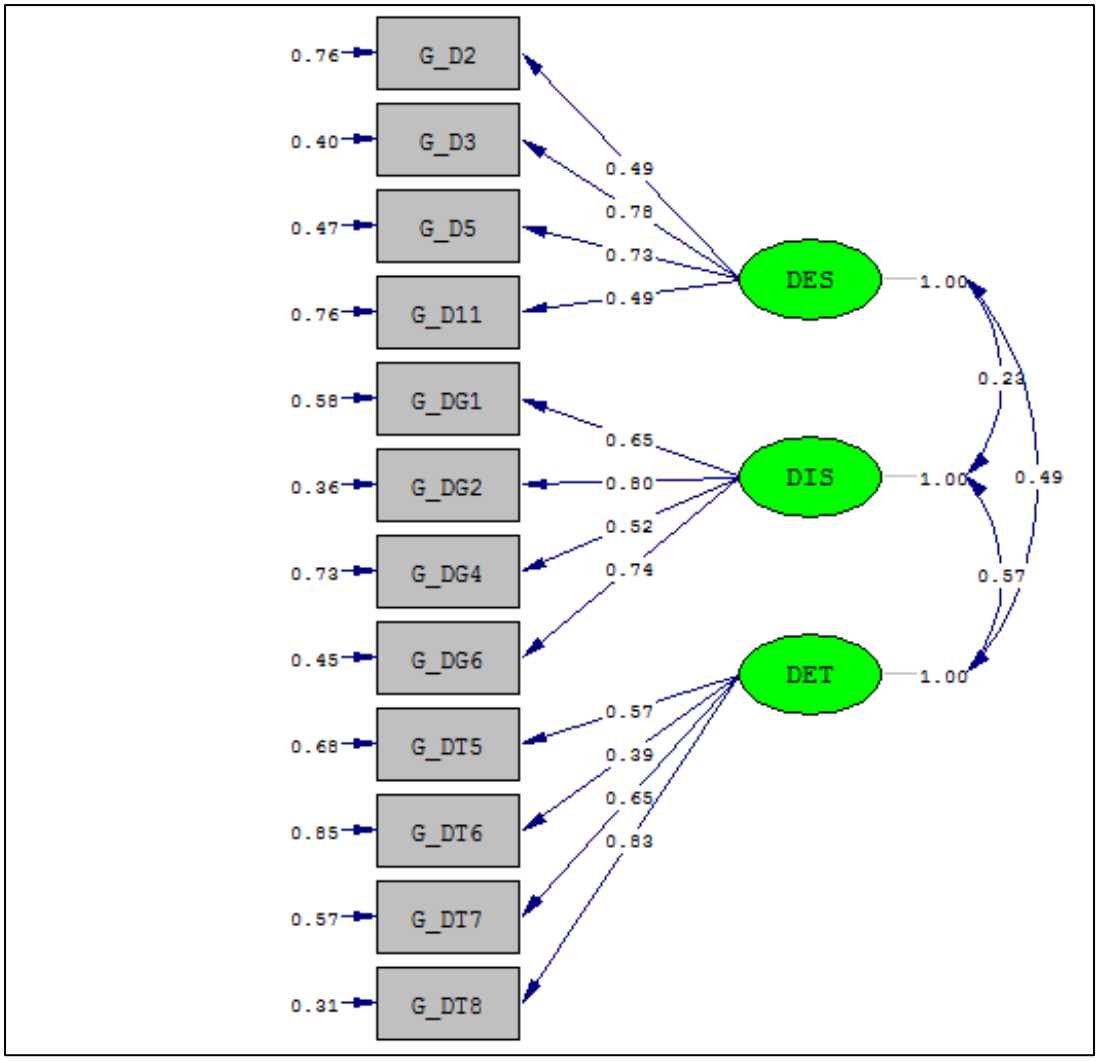

Figure 3: LISREL CFA model of grief

Analysis of this variable showed a relatively high level of skewness, and various transformations were considered such as a log-transform, and inverse-transform and a square root-transform. Exploration of PP-plots showed little improvement in the Normality of the residuals, despite a reduction of skewness. As such, it was decided that the 'raw' data would be kept. Analysis of the residuals within the regression analysis demonstrated sufficient Normality within acceptable limits, thus confirming the acceptability of the variable as used.

3.2 Overall measurement and model fit

In the previous section, the individual measurement model fit has been tested for all the dependent and independent variables in the proposed model depicted in Figure 1. In total 12 items were removed from the model to improve the model fit, whilst retaining scale reliability and validity from a content point of view. In this section, all items are included into a single model to measure the fit of the latent variables together. In this process, the covariance structures are examined to assess an overall model fit. Initially this produced the results in the second row Table 3.10. Subsequent review, suggested that removal of D2 - I ache with loneliness would improve the overall model fit due to a reduction in cross-factor loadings. The model fit statistics of the final overall measurement model test are presented in Table 3.10.

Achieved Fit Indices					
Model	Items	χ^2, DF, p	RMSEA	CFI	SRMR
Initial	42	1834, 1174, 0.00	0.042	0.85	0.078
Proposed	30	927, 846, 0.034	0.026	0.90	0.071
Final	29	832, 787, 0.054	0.020	0.91	0.068

Table 3.10: Summary of the fit of overall measurement model

Given the above statistics, it was evident that all items in the final model loaded satisfactorily on their respective factors and that no cross-loading of items occurred. Thus, there is sufficient evidence to confirm the discriminant factor analysis and validity of the overall model and latent variables.

3.3 Bivariate correlations of latent variables

In order to assess fundamental theoretical precision from the data, it is necessary to examine the correlation matrix for the latent variables and the other contributing factors (control variables) that are added to the regression model. Two tables are presented here: the first shows

only the latent variables that are of the main interest for the model being tested. The second includes the contributing factors that demonstrate a significant contributory effect within the structural equation model. The model will be discussed further within the next section.

Exploration of the correlation matrix in table 3.11 shows that there is significant correlation between experience and growth, and experience and recovery, however, there is little correlation between experience and grief. Further analysis of the correlations with grief reveal that age, and the purchasing of assets have a negative and positive relationship respectively. This suggests that age may have a positive impact on reducing grief, whereas the purchasing of assets may act as an indicator of individuals that are more likely to report higher levels of grief. Of note, was the lack of correlation between size of loss, or any of the other failure experience indicators. This may suggest that other than the two factors identified, grief is experienced differently by different people, and it should be assumed that any experience of failure may result in some level of grief.

	G	PG	Exp	D_B	D_S	Emp	Hrs	N_B	N_C	Edu	Mod	Sex	Ind	Reg	Type	Age	Yr_E	Att
Grief	1																	
P_Growth	.239**	1																
Experience	.145	.169*	1															
Dist_Btw	-.042	.128	-.082	1														
Dist_S	.010	.190*	-.151	.158	1													
Employees	-.021	-.049	.224**	-.256*	.019	1												
Hours	-.044	-.062	-.136	.048	-.054	.068	1											
Num_Biz	-.044	-.180*	.106	-.119	.027	.290**	.231**	1										
Num_Cls	.009	-.003	.162	.030	-.035	.101	.017	.138	1									
Education	-.052	.040	.110	-.034	-.095	.005	-.059	.069	.016	1								
EntMod	-.004	-.107	-.046	.052	.009	-.106	.023	.052	-.078	.059	1							
Sex	-.008	-.089	-.153	.019	.091	-.039	-.021	-.118	-.076	.035	-.004	1						
Industry	-.061	-.042	-.078	.072	-.001	-.146	-.029	-.138	.008	-.063	.126	.291**	1					
Region	-.018	.053	.041	-.026	-.065	-.128	.061	.033	.035	-.117	.067	.129	-.021	1				
Type	.147	.152	.163	-.220*	-.132	.167*	.002	-.054	.046	.064	-.078	-.141	-.175*	.066	1			
Age	-.186*	-.036	-.067	-.045	.419**	.183*	-.049	.151	.119	.000	-.032	-.038	-.240*	-.152	-.005	1		
Yrs_Exp	-.037	-.053	-.138	.070	-.046	-.141	.140	.002	.067	-.034	.090	.049	.008	.069	.076	.154	1	
Attitude	-.058	.144	.000	.166*	.028	.048	.119	.004	.156	-.042	.091	-.004	.222**	-.044	-.091	-.038	.019	1

Table 3.11: Correlation matrix

Exploration of the correlation matrix with control variables included revealed the following significant ($p < 0.05$) relationships: age is negatively associated with the ability to recover. Number of businesses and time since failure are both correlated with personal growth. Size of firm is correlated with experience.

It appears that there is no gender effect, no industry effect (other than on gender), education or location also suggest no significant effect to the main effects.

3.4 Validity of the constructs

Prior to a pilot test of the survey instrument, five experts were asked to consider the constructs – a Professor of Entrepreneurship, three lecturers and practitioners working with small to medium-sized enterprises on projects relating to innovation and leadership, and an insolvency practitioner. The items detailed above, and analysed in the preceding sections are part of the iterative process of item selection for the final survey instrument.

Convergent validity refers to the extent to which two measures should relate. This is confirmed within the factor and scale analysis within the sections above whereby related sub dimensions (such as despair, detachment, and disorganisation) are positively correlated, with moderate to high coefficients. Discriminant validity refers to the extent to which two measures that are theoretically unrelated should demonstrate this non-relation. In order to test the discriminant validity, the factor analysis groups constructs that are not theoretically related and demonstrates item level discriminant validity.

	Chi-Sq	DF	P
h_0	330	90	0.000
h_1	83	69	0.122
Difference	247	21	0.000

Table 3.12: Discriminant validity test for unidimensionality of the full model.

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

3.5 Overall results of measurement development

As a result of the CFA process, the three measurement models exhibited a sufficient level of fit and reliability across a number of defined indicators. These results are summarised in Table 3.13.

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

Table 3.13: Summary fit statistics of the measurement models

Finally, as a check of the dimensionality of the measures, the initial model with 42 items, and the proposed model with 30 items were tested. This test resulted in a further item being excluded from the final 29-item measurement model to ensure discriminant validity of each of the constructs used. The composite reliability scores (C.R) for each measure was recorded as moderate to high with the lowest score being 0.837 on the personal growth scale. The average

variance extracted (AVE) was found to be above the acceptable threshold of 0.6 for all measurement models.

4 Discussion

4.1 Learning from experience

The fundamental concept of this study is that entrepreneurs learn from experience. A more focused definition of experience was described throughout the paper, as the experience of business failure. The verified measure of failure experience presented above, was analysed against a measure of learning; specifically, a least squares regression analysis of failure experience on personal growth shows a significant positive relationship with a total effect size of 0.213 at the 95% confidence level. This evidence supports hypothesis 2: There will be a positive relationship between the individual's level of failure experience and the level of personal development.

4.2 Grief as a barrier to learning

Shepherd (2003) proposed that the failure of a business could have similar physiological and psychological effects on the owner as the death of a significant other. As was discussed earlier, and is shown in the data presented in section 3, there is evidence to suggest that this proposition holds true and that there is support for hypothesis 3a: Entrepreneurs demonstrate characteristics of grief as a result of a critical setback and failure experience.

A factor analysis of the HRGC produced four significant scales apparent in the sample data of the 142 failed entrepreneurs. This is consistent with the findings of Hogan and Schmidt (2002) and provides partial support for hypothesis 3b: entrepreneurs move through five stages of grief, namely shock, anger, despair, detachment, disorganization, before acceptance and moving on to personal growth. It would suggest that on the evidence of this study and others, that the

theory of "5-stages of grief" perhaps be updated to better reflect the evidence, and I propose that a theory of 3-dimensions of grief is a more accurate conceptualization. Whilst each of the scales may be described as discrete stages, as with the Kolb (1984) experiential learning cycle, such 'stages' are only described to allow visual clarity of a psychological phenomenon. In reality, each of the scales may operate simultaneously to different degrees.

What is important to note within the overall grief scale, is that the participants of this study, who had experienced failure, demonstrated three negative subscales, and one positive. Despair, detachment, and disorganisation were each negatively correlated with the subscale of personal growth, demonstrating divergent validity. Similarly to Shepherd *et al* (2011), the three subscales of negative emotions associated with grief were grouped together, and it is these three sub-scales that have been classed as a hindrance or barrier to learning. As such, rather than describing a model of five-stages of grief, the evidence appears to support a notion of grief traits, whereby entrepreneurs exhibit three traits associated with grief, following critical set-backs and failure.

4.3 The impact of grief on entrepreneurial learning

It has been suggested that entrepreneurs learn from failure, and there is evidence in the data to support this proposition. In particular, a least squares regression analysis of failure experience on personal growth shows a significant positive relationship with a total effect size of 0.213 at the 95% confidence level. This evidence supports hypothesis 2: There will be a positive relationship between the individual's level of failure experience and the level of personal development.

Further investigation of this relationship shows that there is a moderation factor that affects how well entrepreneurs learn.

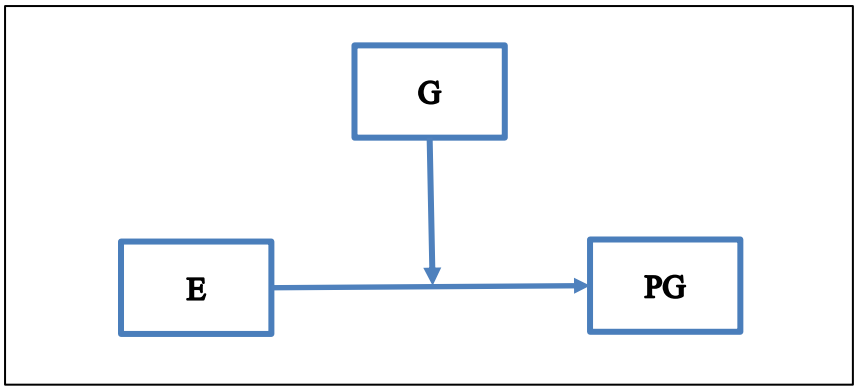

Figure 4: Moderation of relationship between experience and personal growth

In Figure 4 the moderation of grief on the relationship between experience and personal growth is shown.

An entrepreneur exhibits signs of grief as a likely outcome of thoughts and feelings brought about by the realisation that they have failed. There appears to be no statistical relationship towards the size of failure and the level of grief. Similarly, there appears to be no statistical relationship between distance from failure and level of grief. It was expected that in both cases, there would be a strong relationship: hypothesis 1: catastrophic failures with high levels of financial loss will lead to higher levels of negative responses (grief) and thus lower levels of development; hypothesis 6: individuals that are further from the failure event (in terms of time) will demonstrate lower levels of grief. There was no evidence to support either hypothesis, indicating that grief is a very individual characteristic. Different people may respond differently for different reasons.

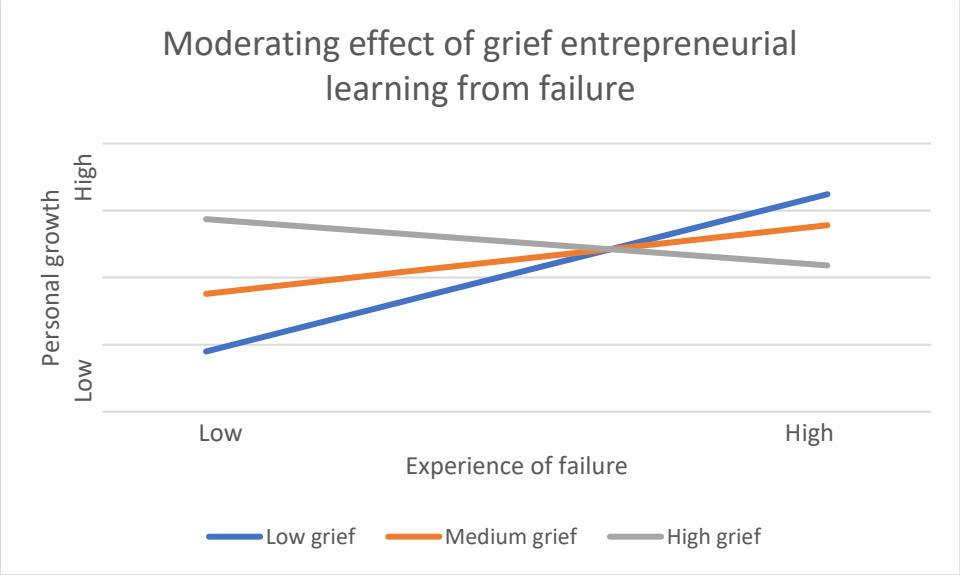

Figure 5: Moderation effect of grief on entrepreneurial learning

Examination of the data, represented in Figure 5, suggests that grief has the greatest impact on learning at either end of the experience scale. Indeed, the results would suggest that at low levels of failure experience – situations where there may have been some small critical set-backs, but perhaps not a catastrophic failure resulting in financial loss – grief helps to promote learning. In other words, it might be said that some emotional pain is required in order to promote learning. This evidence provides support to hypothesis 4: entrepreneurs with high levels of grief will demonstrate lower levels of learning as a result of their failure experience.

At high levels of experience though – situations where the failure has been catastrophic, resulting in high financial loss, perhaps – grief has a negative effect on learning, thus supporting hypothesis 5: entrepreneurs with high levels of failure experience will be more negatively impacted by grief than those with low levels of failure experience.

This provides an insight into the contextual element of learning – not from the external contextual factors usually listed as control variables in most of the literature (Shore, 2016), but in terms of the precise context of the failure. Furthermore, this is very much individualised due to the nature of grief, and thus cannot necessarily be predicted.

Consideration of the conditional effect of experience on personal growth, accounting for grief, demonstrates that in general, higher levels of failure experience result in higher levels of personal growth, however this is only significant for low to medium levels of grief. This means that as grief increases, the ability to learn from the failure experience is supressed, thus acting as a barrier to learning.

5 Conclusion

5.1 Implications for future research

The research presented within this thesis demonstrates the significant negative impact that grief can have on learning from business failure. This study has highlighted that critical setbacks are central to the learning process, and as such, studies of concepts such as opportunity recognition, or firm growth, should not be undertaken without considering this pivotal construct. Cope (2011) highlights the seminal work of Shepherd (2003) and the need for future research into failure as a pivotal construct in entrepreneurial learning and the experiential learning cycle. Indeed, focus needs to be applied to these nuances of the individual and the process of dealing with critical set-backs, sense making, and reflection, in order to understand the complex personal, and social, development of the individual.

5.2 Implications for practice

The contributions to theory present a view that there is much opportunity to learn valuable information from the failure of a business venture and that it is likely that entrepreneurs who

have failed are likely to take fewer risks due to a more moderate level of comparative optimism (Ucbasaran *et al.,* 2010) perhaps resulting in a business with a longer life expectancy.

This study has demonstrated that learning from failure is conditional on grief. Grief has an adverse effect on the entrepreneur being able to recover from the failure event, perhaps hindering the process of reflection and examination of crucial information. It may be assumed that all entrepreneurs consider "what went wrong", yet the evidence provided, suggests that this process is hindered by increasing levels of grief. Furthermore, the evidence suggests that individuals continue to demonstrate attributes of grief long after the failure experience, and this would suggest that the 'pain' of losing a business never goes away for some individuals.

Failed entrepreneurs represent an under-utilised and under-supported source of potential economic asset that should be given more attention within policy and practice. As educators and trainers, more should be done to build resilience and awareness of the impact that high levels of grief may have on the ability of the entrepreneur to recover and subsequently learn from failure. Furthermore, post failure support groups would aid the reduction of the effect of grief in the initial aftermath of failure (Cope, 2011) and then promote the sharing and discussion of experience through social facilitation. Further still, by integrating failed entrepreneurs with current or nascent entrepreneurs, the opportunity to learn vicariously, through the experience of others, offers greater opportunities for future entrepreneurs to avoid making similar mistakes..

It is recommended that failure and grief become embedded into current provision of curricula and training, and moreover that specific support groups be created to facilitate the recovery from failure and maximise the learning opportunity.

5.3 Summary

In summary, it has been shown that failure is not necessarily the good thing that it is purported to be. With critical setbacks and failure, often comes grief, and this offsets the potential learning opportunities that may be available from any single failure event. This paper has highlighted the key contributions to theory of this study, based around the concepts of critical setback experience (failure), grief, and personal growth. In presenting a conceptual model of learning it was hypothesised that entrepreneurs would demonstrate levels of grief, perhaps in five stages, as described by Kubler-Ross (1996). This two-part hypothesis was not fully supported: H3a was supported by the evidence in the quantitative study; entrepreneurs exhibit behaviours that are commonly referred to as grief, as defined by the Hogan Grief Reaction Check List (2001). H3b was not suported by the data; entrepreneurs did not exhibit five-stages of grief, but instead evidence supports the idea that grief in this context is demonstrated through three traits of despair, detachment, and disorganisation. There was a lack of evidence to support the proposition that each stage occurs in successive time periods. What is evident though, is that grief can have an adverse effect on the ability of the entrepreneur to learn from failure and that further research in this area is necessary.

6 References

Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business venturing*, *18*(1), 105-123

Argyris, C., & Schon, D.A. (1978). *Organizational learning: A theory of action perspective.* Reading, MA: Addison-Wesley Publishing Co.

Bandura, A. (1994). *Self- efficacy*. John Wiley & Sons, Inc.

Baron, R. A., Mueller, B. A., & Wolfe, M. T. (2016). Self-efficacy and entrepreneurs' adoption of unattainable goals: The restraining effects of self-control. *Journal of Business Venturing*, *31*(1), 55-71.

Baron, R. A., & Tang, J. (2008). Entrepreneurs Social Skills and New Venture Performance: Mediating Mechanisms and Cultural Generality. *Journal of Management*.

Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of applied psychology*, 89(4), 587.

Bruneel, J., Ratinho, T., Clarysse, B., & Groen, A. (2012). The Evolution of Business Incubators: Comparing demand and supply of business incubation services across different incubator generations. *Technovation*, *32*(2), 110-121.

Cope, J. (2003). Entrepreneurial learning and critical reflection: Discontinuous events as triggers for 'higher-level' learning. *Management Learning*, 34(4), 429–50.

Cope, J. (2005a). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory and Practice* 29(4), 373–97.

Cope, J. (2005b). Researching entrepreneurship through phenomenological inquiry: Philosophical and methodological issues. *International Small Business Journal* 23(2), 159–83.

Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing* 26(6), 604–23.

Cope, J., Cave, F., & Eccles, S. (2004). Attitudes of venture capital investors towards entrepreneurs with previous business failure. *Venture Capital*, *6*(2-3), 147-172.

Cope, J., & Watts, G. (2000). Learning by doing: An exploration of experience, critical incidents and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behaviour and Research,* 6(3), 104–24.

Corbett, A. C. (2007). Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of Business Venturing*, 22(1), 97-118.

Deakins, D., & Freel, M. (1998). Entrepreneurial learning and the growth process in SMEs. *The Learning Organization*, *5*(3), 144-155.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process.* Boston: D.C. Heath and Company.

Drnovšek, M., Wincent, J., & Cardon, M. S. (2010). Entrepreneurial self-efficacy and business start-up: developing a multi-dimensional definition. *International journal of entrepreneurial behavior & research*, *16*(4), 329-348.

Dutta, D. K., & Crossan, M. M. (2005). The nature of entrepreneurial opportunities: understanding the process using the 4I organizational learning framework. *Entrepreneurship Theory and Practice*, *29*(4), 425-449.

Gibb, A. A. (1997). Small firms' training and competitiveness. Building upon the small business as a learning organisation. *International small business journal*, *15*(3), 13-29.

Harrison, R. T., & Leitch, C. M. (2005). Entrepreneurial learning: Researching the interface between learning and the entrepreneurial context. *Entrepreneurship Theory and Practice*, *29*(4), 351-371.

Hmieleski, K. M., & Baron, R. A. (2009). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of management Journal*, *52*(3), 473-488.

Hmieleski, K. M., & Corbett, A. C. (2008). The contrasting interaction effects of improvisational behavior with entrepreneurial self-efficacy on new venture performance and entrepreneur work satisfaction. *Journal of business venturing*, *23*(4), 482-496.

Jones, O., Macpherson, A., & Thorpe, R. (2010). Learning in owner-managed small firms: Mediating artefacts and strategic space. *Entrepreneurship and Regional Development*, *22*(7-8), 649-673.

Karataş-Özkan, M. (2011). Understanding relational qualities of entrepreneurial learning: Towards a multi-layered approach. *Entrepreneurship & Regional Development*, *23*(9/10), 877-906.

Kolb, D. (1984). *Experiential learning*. Englewood Cliffs, NJ: Prentice-Hall.

Lewin, K. (1946). Action research and minority problems. *Journal of social issues*, *2*(4), 34-46.

Macpherson, A., Kofinas, A., Jones, O., & Thorpe, R. (2010). Making sense of mediated learning: Cases from small firms. *Management Learning*.

Markman, G. D., Baron, R. A., & Balkin, D. B. (2005). Are perseverance and self- efficacy costless? Assessing entrepreneurs' regretful thinking. *Journal of Organizational Behavior*, *26*(1), 1-19.

McGee, J. E., Peterson, M., Mueller, S. L., & Sequeira, J. M. (2009). Entrepreneurial self-efficacy: refining the measure. *Entrepreneurship theory and Practice*, *33*(4), 965-988.

Mezirow, J. (1990). *Fostering critical reflection in adulthood*. San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Minniti, M., and W. Bygrave. 2001. A dynamic model of entrepreneurial learning. *Entrepreneurship Theory and Practice*, 25, 5–17.

Mole, K. F., Baldock, R., & North, D. (2015, January). Informality, Advice and Concerns: Business Advice as an Uncertainty Reduction Strategy. In *Academy of Management Proceedings* (Vol. 2015, No. 1, p. 13548). Academy of Management.

Mullins, J. W. (1996). Early growth decisions of entrepreneurs: the influence of competency and prior performance under changing market conditions. *Journal of Business Venturing*, *11*(2), 89-105.

Parker, S. C. (2006). Learning about the unknown: How fast do entrepreneurs adjust their beliefs?. *Journal of Business Venturing*, *21*(1), 1-26.

Pittaway, L., & Cope, J. (2007). Simulating entrepreneurial learning integrating experiential and collaborative approaches to learning. *Management Learning*, *38*(2), 211-233.

Pittaway, L., & Thorpe, R. (2012). A framework for entrepreneurial learning: A tribute to Jason Cope. *Entrepreneurship & Regional Development*, *24*(9-10), 837-859.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework. *Entrepreneurship theory and practice*, *29*(4), 399-424.

Politis, D., & Gabrielsson, J. (2009). Entrepreneurs' attitudes towards failure: An experiential learning approach. *International Journal of Entrepreneurial Behavior & Research*, *15*(4), 364-383.

Rae, D. (2000). Understanding entrepreneurial learning: a question of how?. *International Journal of Entrepreneurial Behavior & Research*, *6*(3), 145-159.

Rae, D. (2004). Entrepreneurial learning: a practical model from the creative industries. *Education+ training*, *46*(8/9), 492-500.

Rae, D. (2006). Entrepreneurial learning: A conceptual framework for technology-based enterprise. *Technology Analysis & Strategic Management*, *18*(1), 39-56.

Rae, D., & Carswell, M. (2000). Using a life-story approach in researching entrepreneurial learning: the development of a conceptual model and its implications in the design of learning experiences. *Education+ Training*, *42*(4/5), 220-228.

Rerup, C. (2005). Learning from past experience: Footnotes on mindfulness and habitual entrepreneurship. *Scandinavian Journal of Management*, *21*(4), 451-472.

Shane, S., (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science,* 11(4), 448 – 469.

Shepherd, D. A. (2003). Learning from business failure: Propositions of grief recovery for the self-employed. *Academy of management Review*, *28*(2), 318-328.

Shore, A. (2016). Entrepreneurial Learning from Failure. Presented at British Academy of Management conference.

Stoltz, P. G. (1997). *Adversity quotient: Turning obstacles into opportunities*. John Wiley & Sons.

Tseng, C. C. (2013). Connecting self-directed learning with entrepreneurial learning to entrepreneurial performance. *International Journal of Entrepreneurial Behavior & Research*, *19*(4), 425-446.

Ucbasaran, D., Westhead, P., Wright, M., & Flores, M. (2010). The nature of entrepreneurial experience, business failure and comparative optimism. *Journal of Business Venturing*, *25*(6), 541-555.

Ucbasaran, D., Shepherd, D. A., Lockett, A., & Lyon, S. J. (2013). Life after business failure the process and consequences of business failure for entrepreneurs. *Journal of Management*, *39*(1), 163-202.

Wang, C. L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship theory and practice*, *32*(4), 635-657.

Wing Yan Man, T. (2006). Exploring the behavioural patterns of entrepreneurial learning: A competency approach. *Education+ Training*, *48*(5), 309-321.