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Cognitive consequences of business shut down. The case of Ugandan repeat entrepreneurs

Ugandan repeat entrepreneurs

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Abstract

Purpose – The purpose of this paper is to focus on the cognitive and motivational consequences of a business failure, and their relation with subsequent start up success. The paper hypothesizes that if previous business failure was attributed to an internal and stable cause, subsequent business would be less successful compared to where an entrepreneur attributed business failure to an internal and unstable cause.

Design/methodology/approach – The authors reviewed the literature on attribution theory in an achievement context and derived a hypothesis about the relation between causal thinking and subsequent business success. A survey amongst entrepreneurs in Uganda was carried out to yield insights on how attributions to past performance influence subsequent business performance.

Findings – Entrepreneurs who attributed previous business failure to an internal, stable cause were found to be less successful in subsequent business start up. When repeat entrepreneurs attribute previous shut down to a lack of ability, they are less successful in a subsequent business start up. However, attributing the failure to a lack of effort, does not affect subsequent business success.

Originality/value – The study reaffirms the importance of attributional thinking in entrepreneurship and provides empirical evidence on the relationship between the way entrepreneurs think about their previous performance and subsequent performance. Attributional thinking influences subsequent business actions and outcomes, which offers important practical applications. For instance training to change attributions of entrepreneurs may be used to influence their eventual performance.

Keywords Entrepreneurship, Attribution theory, Business success, Cognitive perspective, Repeat entrepreneurs

Paper type Research paper

1. Introduction

This paper focuses on the consequences of entrepreneurial failure in a developing country. Entrepreneurial failure occurs when an entrepreneurial initiative is terminated as a consequence of actual or anticipated performance below some critical threshold, so entrepreneurial failure occurs when an entrepreneurial initiative falls short of its goals (McGrath, 1999). Entrepreneurial failure is a pervasive and important phenomenon. Many new business organizations fail within a short period of time (Boden and Nucci, 2000). This is particularly the case in Uganda. Available statistics based on the Global Entrepreneurship Monitor (GEM) project, indicate that on average about 30 per cent of the businesses failed in Uganda during the years 2003-2004, this figure was about the same in the period 2009-2010 (Walter *et al.*, 2004; Namatovu *et al.*, 2010). Uganda's business failure rate is more than twice the average of all the factor-driven countries participating in GEM (Namatovu *et al.*, 2010). Of the entrepreneurs who



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discontinued their businesses, 57 per cent of the entrepreneurs that had closed a business in the last 12 months intended to start a new one in the next 36 months, and 37.5 per cent had actually started one (Walter *et al.*, 2004).

A substantial amount of entrepreneurs that failed in a previous endeavour decide to start up a business again. Scholars have recognized that exit from business is an important phenomenon. One relatively often mentioned benefit of entrepreneurial failure is “entrepreneurial learning” (McGrath, 1999; Minniti and Bygrave, 2001). The experience of entrepreneurial failure provides feedback which results into learning, which is expressed in better opportunity recognition and exploitation (Ucbasaran *et al.*, 2009). On the other hand, entrepreneurs often suffer from emotional responses such as grief and regret after entrepreneurial failure. It has been argued that such emotions inhibit learning (Shepherd, 2003).

Systematic empirical evidence on the cognitive and motivational effects of entrepreneurial failure is scarce. There is a clear need for such evidence. As discussed above there are conflicting ideas about the consequences of entrepreneurial failure. In theories relating entrepreneurial failure to opportunity recognition and exploitation, it is assumed that entrepreneurs will compensate the threat to self-identity that is caused by an entrepreneurial failure by becoming more motivated (Ucbasaran *et al.*, 2009, p. 104). However, the validity of this crucial assumption has never been tested.

Next to the theoretical need to better understand the cognitive and motivational consequences of entrepreneurial failure, there is also a practical need. Understanding how entrepreneurs cope with failure is important for improving entrepreneurial training. This is especially the case in a developing country context. Our research site, Uganda, is characterized by a weak institutional framework, which makes the likelihood of failure greater. Recovery from failure is even more strenuous than in developed countries. In Uganda the majority of the businesses are small and medium owner-managed businesses. In this study we focused on these businesses. Little is known about how Ugandan entrepreneurs react to failure. Given that the few available studies into failure have been performed in advanced economies. In order to improve the performance of Uganda entrepreneurs, it is important to understand the consequences of entrepreneurial failure.

The aim of this paper is to gain a better understanding of the cognitive and motivational consequences of entrepreneurial failure in a developing country context. We contribute to the literature by providing needed empirical evidence about the consequences of entrepreneurial failure. We also contribute to the literature by clarifying the consequences of entrepreneurial failure in Uganda from the entrepreneur’s perspective, which is different from, but complements the strategy and evolutionary perspectives of business failure (Arasti, 2011). Survey data, especially random samples like we present on entrepreneurial failure are difficult to obtain. This is even more so the case in Uganda where no sampling frames of entrepreneurs exists. Second, we contribute to the literature by using attribution theory to derive hypotheses about cognitive and motivational consequences of entrepreneurial failure. A business shut down is most often a bad event; business shut down has been argued to have profound psychological implications for the founder. Searching for reasons to explain the shutdown will be an important part of the exit process. People are more likely to search for reasons to explain negative and unexpected outcomes (Weiner, 1985b). According to attribution theory in an achievement context (Weiner, 1985a), the reasons that people ascribe to failure will be a crucial determinant for later aspirations. This implies that the process of causal attributions may be critical in understanding the cognitive and

motivational consequences of entrepreneurial failure and consequently the achievements of repeat entrepreneurs.

In the remainder of this paper we first review the literature on attribution theory in an achievement context and derive a hypothesis on the relation between causal thinking and subsequent business success. Second, a survey carried out amongst entrepreneurs in Uganda is discussed. We then present the results, and the paper concludes with a discussion and recommendations for further research.

2. Theory and hypotheses

The underlying premise of this research is that cognitions, the way of thinking, of an entrepreneur about past entrepreneurial failure of the start up, will affect later entrepreneurial performance. Entrepreneurial cognition has recently been argued to have a significant influence on entrepreneurial activities (cf. Kreuger, 2003; Baron and Ward, 2004; Baron, 2004; Mitchell *et al.*, 2007). A classical cognitive theory is attribution theory. Attribution theory is concerned with the way people explain their own actions and the actions of others (Heider, 1958; Kelley, 1973; Weiner, 1985a). A pioneering study on the role of attributions in entrepreneurship was conducted by Gatewood *et al.* (1995) who found that attributions play a role in entrepreneurial persistence in business start-up activities.

Entrepreneurial failure is often an emotional event (Shepherd, 2003), that has profound psychological implications for the founder. An entrepreneur will search for reasons to explain these negative and sometimes unexpected outcomes (Weiner, 1985b). According to attribution theory in an achievement context (Weiner, 1985a), the reasons that people ascribe to failure will be a crucial determinant for later aspirations. We suspect that the process of causal attributions is critical in understanding the achievements of repeat entrepreneurs.

Attributional theories have been concerned with causal thinking since the early influential work of Heider (1958). According to Heider, a person can basically make two attributions. The first are internal attributions. This is a causal inference that a person is behaving in a certain way because of something about that person, such as attitude or personality. The second are external attributions. This is a causal inference that a person is behaving in a certain way because of something about the situation he or she is in. According to Gatewood *et al.* (1995) the key internal attributions are the causes, namely; effort and ability, while the key external attributions are the causes, namely; luck and task difficulty. These four key causes can be arranged in a two-by-two table (see Table I) using two of the dimensions that were distinguished by Weiner (1985a). The first dimension was called the locus of explanation. This can be either internal or external. The other dimension is the stability of the cause. This can be either unstable or stable. It is worth noting

Stability of cause	Locus of explanation	
	Internal	External
Stable	I lack the skills and ability to be an entrepreneur (<i>ability</i>)	I don't have enough support of people to sustain a business (<i>difficulty</i>)
Unstable	I was not motivated enough (<i>effort</i>)	Market forces were not right this time (<i>luck</i>)

Source: Adapted from Gatewood *et al.* (1995)

Table I.
Example of causal explanations for a business shut down

that Weiner (1985a) distinguished three other dimensions as well of which controllability is the most important. However, in this study we follow the work of Gatewood *et al.* (1995).

The importance of attributional thinking has been demonstrated in a variety of domains (Weiner, 1985a). For our research the most important is the consistent finding that internal and stable attributions are associated with higher levels of achievement motivation. In an entrepreneurial context, this was confirmed by the finding of Gatewood *et al.* (1995): people with internal and stable reasons for getting into business ("I've always wanted to own my own business") were more likely to start up business that generated sales.

Based on the literature discussed above, we hypothesize that entrepreneurs who explain a business shut down with internal and stable global causes will be less successful in a subsequent business start up. If the shutdown is attributed to causes that are internal and rather stable ("I am lacking the skills and knowledge to be an entrepreneur"), then entrepreneurs will tend to have lower aspiration levels, and less well-defined achievement goals (Peterson, 1990; Schunk, 1983; Gatewood *et al.*, 2002). By the very nature of their activities, entrepreneurs often find themselves in new, unpredictable and complex situations where setbacks are inevitable (Baron, 1998; Covin and Slevin, 1991). If entrepreneurs attribute those setbacks to something about themselves and to factors that are relatively long lasting ("I am a lousy business person"), then they will be less hard working and resolved than entrepreneurs who attribute setbacks to circumstances ("There is just no market for this product at this moment").

- H1.* Entrepreneurs who attribute a business failure to an internal, stable cause, such as low ability, will be less successful in a subsequent business than entrepreneurs who attribute a business failure down to an internal and unstable cause, such as a lack of effort.

3. Method

To test our hypotheses we made use of a recent survey amongst Ugandan entrepreneurs. Uganda is a developing country with a population of about 30 million people, of which 40 per cent is still living in poverty. Uganda is an interesting country to study entrepreneurship, since it has been said to be one of the most entrepreneurial countries in the world. It has a total entrepreneurial average (TEA) index between 28 and 30 per cent of the working population (Walter *et al.*, 2004). About 3.1 million people are estimated to be entrepreneurs, the males accounting for about 65 per cent of the entrepreneurs. The business failure rate is reportedly high. On average, 30 per cent of the entrepreneurs shut down their businesses within 12 months (Walter *et al.*, 2004).

There are no adequate sampling frames of entrepreneurs available in Uganda. We therefore employed a sampling procedure based on the Global Entrepreneurship Survey approach for selecting respondents (see Walter *et al.*, 2004, for more details on the GEM in Uganda). For budgetary reasons, we restricted the sampling area to two districts in central Uganda: Kampala, which is the capital city and leading commercial town of Uganda, and one rural area, namely Mpigi district, which is largely a rural region.

The sample was selected in a number of steps. First, in each district three parishes were randomly selected. In the next step, local officials provided us with lists of households, indicating which households had one (or more) of the members

as an entrepreneur. From these lists, 750 entrepreneurial households were selected. The selection of households and subsequently the respondents within the households was done randomly[1].

Given the low and uneven distribution of telecommunication and other communication services in Uganda, our questionnaires could not be mailed, faxed or couriered to respondents without causing selection bias. As a result, the data had to be gathered via face-to-face interviews (using structured questionnaires with closed questions). The interviews were carried out by a team of ten interviewers. All but one interviewer had extensive previous experience as an interviewer working for the GEM projects. In almost all cases, the selected respondents were willing to participate in the study. In Kampala there were five refusals while in Mpigi two people refused to participate. Hence, we reached an unusually high response percentage of 99.3 per cent. Each interview continued until the informant had completely described the above issues. On average an interview took 45-60 minutes.

3.1 The data

In total the sample consisted of 737 entrepreneurs aged 18-64 years. One section of the questionnaire was about possible previous entrepreneurial activities. One question asked the respondent whether she or he owned a business before the current business. Based on this question we selected a sub-sample of repeat entrepreneurs. In total, 113 entrepreneurs were found to be repeat entrepreneurs (16 per cent).

The repeat entrepreneurs in our sample were on average 31.2 years old, which does not differ from the non-repeat entrepreneurs (31.5 years). Repeat entrepreneurs were more often males (58 per cent) than females (42 per cent). However, this difference was exactly the same in the non-repeat entrepreneur group in our sample. Repeat entrepreneurs had slightly fewer years of education (8.5 years) compared to the on-repeat entrepreneurs (8.9 years); however, this difference is not statistically significant.

Most of the businesses that were shut down were unsuccessful: 69 were rated as (very) unsuccessful, 28 were rated as successful, while 15 were rated as neither unsuccessful nor successful. Respondents that indicated that a business had been successful were very regretful and disappointed as well; in all cases entrepreneurs experienced some kind of failure. All businesses that were sold were ignored and only businesses that were shut downs were considered.

On average the lifespan of the earlier business was 2.9 years. The most short-lived business was about a month, while the most long-lived one was 15 years. The study showed that the more successful businesses were the more long-lived businesses as well. Successful businesses survived for 3.8 years on average, whereas not so successful businesses survived for 2.5 years on average.

Two entrepreneurs who were members of a collective cooperation with many other owners (17 and 37, respectively) were discarded. Three cases with missing values on all attribution questions while there was a business shutdown were deleted.

3.2 Measurements

We used a questionnaire that contained a number of scales that were tested in earlier research in an African setting (Frese *et al.*, 2007; Krauss, 2003). For some scales we could not rely on earlier work on entrepreneurship in Africa so we had to construct some measurements ourselves. To assess the dimensionality of some of the measurement items, we conducted exploratory factor analyses (principal component method). Since we had a rather small sample size we assessed the appropriateness of

the factor analyses. We checked the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1974), which was adequate in all cases. Descriptive statistics and correlations between the scales can be found in Table II. In this section we first discuss the construction of the attribution variables and business success. After that, we discuss five control variables that were included in the analysis.

3.2.1 Ability and effort attributions. The questionnaire contained a list of 12 possible causes of the business shutdown. After the question “What do you think contributed to the shutdown of this business?” the respondent was asked by the interviewer to indicate on a five-point scale whether they agreed with a certain statement. The variable *effort* is a one-item variable based on the statement “You were not motivated enough”. The variable *ability* is a one-item variable based on the statement “You were lacking the know-how and skills to start up a business”. The variables *effort* and *ability* correlate moderately strongly with each other ($r = 0.45$; $p < 0.001$), indicating that they are related but two distinct concepts.

3.2.2 Business success. The dependent variable in this research is the success of the *current* business. Measuring success in micro and small-scale business is difficult in general, and even more problematic in developing countries (Frese *et al.*, 2007; Krauss, 2003, 2005). Business owners hardly keep books. Moreover, because of tax secrecy, business owners are very reluctant to disclose information on sales and profits to strangers. We therefore measured success by employing three (self-developed) items, namely; percentage change in sales, profit and customers. Note that we asked the entrepreneur her/himself to rate the change; hence the measure is inherently limited, and subjective. On average sales grew at a rate of 8 per cent in the year prior to the data collection, profit at the rate grew 7 per cent and there was a 13 per cent rise in customers. Factor analysis indicated one-dimensionality for the three items. The dependent variable *business success* is based on the factor scores of three items: percentage change in sales, percentage change in profit and percentage change in customers. The items form a reliable scale ($\alpha = 0.86$).

3.2.3 Social capital. To obtain information on social capital we gathered network via a standard ego-centred network approach (Marsden, 1990; Burt, 1984, 1997). In this approach a list of personal and business contacts was generated. The respondent was asked what kind of support he or she could get from the contact in question. This list included material resources like financial support, tools and machinery, premises or

Table II.
Mean, standard deviation and Pearson product-moment correlations between variables used in the regression analysis

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Business success	0.00	1.00										
2. Ability	2.24	1.37	-0.21									
3. Effort	2.41	1.29	-0.06	0.45								
4. Age	31.48	10.85	0.03	0.02	0.05							
5. Gender (0 = male)	0.43	0.50	0.08	0.11	0.03	0.04						
6. Human capital	8.44	3.88	-0.04	0.06	0.06	-0.15	0.01					
7. Social capital	5.67	4.23	-0.02	0.07	0.17	0.09	-0.17	0.11				
8. Manufacturing	0.09	0.29	0.03	0.15	0.20	-0.13	0.04	0.06	0.08			
9. Agriculture	0.18	0.38	0.09	0.07	0.20	0.39	-0.13	0.07	0.24	-0.14		
10. Customer services	0.30	0.46	-0.02	-0.07	-0.14	-0.07	0.17	-0.10	-0.16	-0.20	-0.30	
11. Prior business success	2.48	1.18	-0.07	0.11	-0.12	0.21	-0.02	0.06	0.09	-0.02	0.13	0.00

Note: Correlations > 0.19 are significant

space and free labour. We used these four different types of support. The variable *social capital* is the aggregate of the resources a person can obtain from the persons in his/her network. To keep the interview manageable an entrepreneur could fill in a maximum of 15 contacts in our questionnaire.

3.2.4 Human capital. Respondents were asked to indicate their highest level of education. This variable ranging from no schooling to a masters degree was coded into number of years of education. Human capital influences identification and exploitation of opportunities. In addition the human capital varies in Uganda, with women and rural entrepreneurs reporting lower levels of human capital. In order to assess the distinct contribution of prior business ownership failure relative to other forms skills and knowledge, we controlled for human capital.

3.2.5 Age. Age has been found to be a factor in the probability of the establishing and running of a business. As individuals grow older, they are less likely to invest in the activities necessary to start a new enterprise.

3.2.6 Gender. In most countries gender has been found to be a significant factor that predicts the starting up of a business. To control, this we included a dummy variable *gender* (female = 1).

3.2.7 Type of industry. We constructed three dummies, customer services, agriculture and manufacturing with trade and services as the baseline.

3.3 Statistical analysis

Because business success variable in our sample is a continuous variable, this study used ordinary least squares (OLS) estimation for testing our hypothesis. Regression diagnostics reveal that the business success variable does not suffer from skewness or kurtosis. One potential problem facing our statistical analysis is the fact that our sample of repeat entrepreneurs may not be a random sample (although for the larger sample of entrepreneurs we employed a random sampling procedure). This is because of the fact that becoming a repeat entrepreneur may partly be a choice event. OLS estimation requires that all of the explanatory variables be “random” so that the error terms remain independent. However, our sample may not be random, but one with selection bias, since the shutdown of a business need not be a random process. This can lead to biased estimates of the relation between our independent variables and business success. Hence, the randomness of the explanatory variables needs to be established before interpreting our results. A two-stage Heckman model was conducted to check the randomness of our sample (Heckman, 1979). Results, not tabulated here, indicated that sample selection was not a problem, since the inverse Mill's ratio was insignificant.

4. Results

The results of our statistical analysis can be found in Table III. We present three models. The first model test, the hypothesis; the second and third model include control variables[2]. The hypothesis that entrepreneurs who attribute a business failure to an internal, stable cause, such as low ability, will be less successful in subsequent business is supported by the results. In all models the regression coefficient of the variable *ability* is negative and statistically significant. The regression coefficient of the variable *effort* is not significant.

Entrepreneurs who attribute business failure to their ability have lower subsequent business success, than entrepreneurs who attribute business shut down to effort, an internal and unstable cause.

Table III.
Regression analysis of
business success
(standard errors within
parentheses)

	Model 1	Model 2	Model 3
Ability	-0.17 (0.08)*	-0.22 (0.08)**	-0.21 (0.09)*
Effort	0.03 (0.08)	0.02 (0.09)	0.00 (0.09)
Control variables			
Age		-0.00 (0.01)	-0.00 (-0.01)
Gender		0.41 (0.21)***	0.37 (0.22)
Human capital		-0.01 (-0.03)	-0.01 (0.03)
Social capital		0.02 (0.03)	0.02 (0.03)
Manufacturing		0.32 (0.36)	0.33 (0.37)
Agriculture		0.55 (0.32)	0.56 (0.33)
Customer services		0.09 (0.24)	0.11 (0.25)
Prior business success			-0.05 (0.09)
Constant	0.36 (0.23)	0.24 (0.49)	0.31 (0.53)
$F(df_{\text{model}}, df_{\text{residual}})$	2.64 (2,103)***	1.44 (10,92)	1.22 (10,87)*
R^2	0.05	0.12	0.12
Number of observations	106	102	98

Notes: *, **, ***Significant at 0.05, 0.01 and 0.10 per cent, respectively

One possible alternative explanation for our finding is that business success is explained by the quality of the entrepreneur instead of attributional style (Gatewood *et al.*, 2002). The less successful entrepreneurs in our sample rightfully attributed the shutdown of their business to the fact that they were not really “quality” entrepreneurs. A less successful entrepreneur will likely under-perform again, so it is not the attribution but the quality of the entrepreneur that explains current success. To control this possibility we included prior business success in model 3. If the entrepreneur lacks the skills to be a successful entrepreneur this should be reflected in the success of the earlier business. Including this variable should thus change the relevance and significance of the coefficient of the variable ability. As can be seen in model 3 of Table III this is not the case. Prior business success has no effect on current success; including it in model 3 does not or hardly alters the effect of ability attributions on business success.

According to attribution theory, when failure is attributed to ability, which is an internal and stable cause, this will result in lower aspiration levels. As a consequence of lower levels of aspiration, achievement itself will be lower. According to this reasoning, achievement motivation is a variable that mediates between causal thinking about a prior business shut down and subsequent start up success. We were able to test this idea, since the questionnaire contained four items that measured achievement motivation (an adapted a scale of Hermans, 1970). Unfortunately the scale had a low reliability ($\alpha = 0.53$), hence our test is only tentative. We followed the procedure to detect mediation as outlined by Baron and Kenny (1986). In terms of our variables, we set out to establish that: internal attribution has a significant negative effect on achievement motivation, achievement motivation has a significant positive effect on business success and when achievement motivation is added to a regression containing the effect, causal thinking should become insignificant (or decrease significantly).

Figure 1 shows two path models. As predicted by attribution theory, when a business shut down is attributed to a lack of ability, achievement motivation is lower; however, this effect is only significant at the 10 per cent level. In addition, there is a significant effect of achievement motivation on business success. The effect of

attributional thinking on business success is lower and it has decreased in statistical significance. However, this support for the mediating effect of achievement motivation is statistically very weak. We performed a Wald test using Stata's seemingly unrelated estimation (StataCorp, 2009). The decrease in the coefficient of ability attributions is only significant at the 20 per cent level. We therefore conclude that there is some weak evidence for the existence of a mediating effect of achievement motivation.

5. Conclusion and discussion

The aim of this paper was to gain a better understanding of the cognitive and motivational consequences of entrepreneurial failure in a developing country context. Based on the attribution theory in an achievement context, we hypothesized that entrepreneurs who attribute entrepreneurial failure to an internal, stable cause, such as a lack of ability, will be less successful in a subsequent business than entrepreneurs who attribute a entrepreneurial failure to an internal and unstable cause, such as a lack of effort. We used a recent survey amongst Ugandan entrepreneurs to test this hypothesis. Of the 737 entrepreneurs, 113 were repeat entrepreneurs who had shut down a previous business. Our results support the hypothesis. If repeat entrepreneurs attribute an entrepreneurial failure to a lack of ability, they are less successful in a subsequent business start up. Attributing the shutdown to a lack of effort, does not affect subsequent business success.

Our findings have important implications for theories about the effects of entrepreneurial failure on entrepreneurial learning. These theories postulate that entrepreneurial failure provides feedback to an entrepreneur whose knowledge stock will increase as a result of learning. The assumption is made that entrepreneurs will compensate the threat to self-identity caused by an entrepreneurial failure by becoming more motivated. We show that this depends on the attribution that is made. If an entrepreneur attributes failure to an internal stable cause, such as a lack of skills to be an entrepreneur, then learning may be prohibited. In this case we assume that attributions of failure to internal stable causes, will lead to a threat to self-identity ("I failed because I lack the capacities, I will never be able to acquire those capacities, therefore I am a failure"). Note that in attribution theory itself there is no clear link between attributions and self-identity. In other cases if an entrepreneur (perhaps self-servingly) attributes the reason for failure to external circumstance, learning will be less prohibited, since external attribution will lead to a lesser threat to self-identity. Hence our results show that the feedback may have motivational consequences as well, which probably interfere with learning.

Our results also demonstrate that there is more to entrepreneurial failure than grief (Shepherd, 2003; Shepherd *et al.*, 2009). Whereas theories of grief recovery narrowly focus on relatively short-term consequences (Shepherd, 2003), our findings suggest that failure has longer-term consequences as well. Grief is not only the motive for diverse short-term coping mechanisms. It will also lead to attributional thinking. So, grief is a motivator for the prolongation of a business, to cope with emotional costs, but also a motivator to cognitively make sense of the pending business failure



Figure 1. Path diagrams with achievement motivation as a mediating variable

(Shepherd *et al.*, 2009). We do not rule out the possibility that the postponement of business failure can be a way to attenuate attributional thinking. By gradually realizing that the business is to fail, instead of a sudden exit, the entrepreneur can (self-servingly) look for external reasons to attribute the failure to. In this way postponing failure may have positive motivational long-term consequences as well, since external instead of internal attribution will not be associated with a loss of achievement motivation, and consequently perhaps a complete exit from entrepreneurship.

Our findings are also important since they reaffirm the importance of attributional thinking in entrepreneurship. The way entrepreneurs think about their failures and successes will influence how successful they are in their subsequent business undertaking. Our findings thus provide further support for the recent notion that cognitions are an important factor in (the success) entrepreneurship. Baron (2004) suggests that entrepreneurial success depends on three cognitive factors and processes: the proficiency of decision makers to assess risks accurately; the tendency to imagine “what might have been”, i.e. counterfactual thinking, which enables entrepreneurs to improve task strategies; and improved decision making, on the one hand because of flexible switching between analytical thinking and decision making via simple heuristics, and on the other hand through reduced susceptibility to cognitive bias. This study suggests that success depends on attributional processes as well. This need not only be the case for repeat entrepreneurs. Starting up a new venture is a process that often entails many setbacks, which will trigger a search for reasons. Our study predicts that entrepreneurs who attribute such setbacks to internal, stable causes such as a lack of ability will be less persistent and successful. Entrepreneurs who attribute business failure to external and unstable causes, such as the market (for instance lack of demand at that time), are more persistent and successful.

Our findings offer an explanation for the differences Van Gelder *et al.* (2007) found in their comparison of failed and successful business owners. Van Gelder *et al.* (2007) compared 71 successful with 20 failed business owners, and found that failed business owners were less goal oriented and did not try to influence situations. Our explanation is that those failed business owners on average will have attributed their failure to a lack of ability, which as a consequence will have motivational consequences. The fact that those business owners did not try to influence situations is akin to learned helplessness and feelings of hopelessness that can result from attribution of causes to internal and stable causes.

5.1 Limitations and future research

The finding that attributional thinking affects subsequent business actions and outcomes offers some obvious but important practical applications. It has already been shown that enterprise education influences perceptions of desirability and feasibility of starting up a business (Peterman and Kennedy, 2003). Psychologists, especially educational psychologists, have carried out a wealth of successful training studies to change attributions (see Försterling, 1985). Attributional training consists primarily of teaching participants that their failures are a result of a lack of effort, which is an internal, unstable and controllable cause.

This research is limited in various ways. First the well-known limitations of cross-sectional research apply in this research as well. Respondents had to recall how they thought about a business shutdown that could have happened as long as three years ago (this was the maximum). Although a longitudinal approach is preferable, such an approach is very demanding. We suspect that the deleterious consequences of

the cross-sectional approach in this research are limited by the fact that attributional or explanatory style is not situation or time dependent, but a cognitive personality variable. It is a tendency to explain bad events involving the self with causes that are internal to the self and stable across time, such as a lack of ability (Jackson *et al.*, 2002).

Furthermore, we did not explore the timing and sequence of the respective entrepreneurs' business failure. It has been argued that the timing of the business failure may influence how an entrepreneur reacts (Ucbasaran *et al.*, 2010). For instance strong emotions and interpretations are common immediately after failure, but these reduce in magnitude over time. Therefore there is need to explore the timing of business failure and the influence of the timing on cognitive and motivations of repeat entrepreneurs.

We did not include the institutional environment in our study. It would be very interesting to see, let us say, the importance of institutional environment on business success. Enterprises may not grow or succeed because of the quality of the institutional environment. Countries with weakly installed institutional environments are associated with market failures which in turn may produce success or failure not based on efficient market mechanism. Entrepreneurs in such a weak institutional environment might shut down or succeed not because of their ability but because of the unfair business environment[3]. Future research should therefore incorporate the (perceived) institutional environment.

Another potential limitation of this study is the focus on business failure to examine the cognitive benefits of failure. Entrepreneurs who have experienced failure may have different motivations in their subsequent business undertaking (Arasti, 2011). This makes success/failure comparison between the past and present businesses problematic. For instance as a result of past failure, an entrepreneur may adopt a more conservative approach to business growth in the subsequent business. While the subsequent business undertaking may not be associated with high growth, the entrepreneur may be satisfied with survival rather than growth of the new business. Hence comparison of the two businesses is problematic.

Success/failure was measured using growth as a dimension of profits and customers. It is hard to measure the economic performance of micro enterprises in a developing country. Often, business owners tend not to think in terms of economic concepts such as annual sales, turnover or profit. Even if they have an idea of their sales, they are very unwilling to provide such data to the interviewers, due to their fear of tax collecting authorities. One of the measures of firm dynamism is employment growth, which is used as a proxy to measure firm size. However, this measure is also greatly limited when applied to small-scale enterprises in developing countries, many of which start without the aim or plan to provide employment.

We found that attributional thinking about a business shut down has performance consequences. What we do not know is whether attributional thinking about setbacks during a business start up is important as well. Based on this research we would expect that causal thinking is an important determinant of persistence. Another unanswered question is what mechanisms are underlying the relation between causal thinking and business success. We presented some rather weak evidence that achievement motivation may be a mediating variable; however, other more affective factors such as lack of self-esteem, shame and feelings of hopelessness might play a role as well.

Lastly, there have been many (mostly unsuccessful see Rauch and Frese, 2007) attempts to describe entrepreneurs, and to differentiate them from non-entrepreneurs. As far as we know no studies have investigated whether entrepreneurs differ from

non-entrepreneurs in explanatory style. Explanatory style is a cognitive personality variable that reflects the tendency to explain bad events involving the self with causes that are internal to the self (“it’s me”), stable across time (“it’s going to last forever”) and global in effect (“it’s going to undercut everything”) (Peterson and Seligman, 1984; Seligman and Schulman, 1986). The obvious prediction is that entrepreneurs will have more optimistic explanatory styles than non-entrepreneurs.

Notes

1. If there were multiple entrepreneurs within one household, the adult entrepreneurial family members were numbered according to their age, assigning number one to the oldest and the highest number to the youngest household member. The respondent was selected according to a random number chosen from a random number table: the second oldest person was selected if the random number chosen was a two, the fifth oldest if the random number was a five, etc.
2. Number of observations is slightly different between the models, because of missing cases on the control variables.
3. We thank an anonymous reviewer for this suggestion.

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