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Factors for maintaining self-efficacy throughout entrepreneurial failure

Authors:

Bianca Becker

Nicole Zimmermann

Supervisor:

Ziad El-Awad

Date:

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Abstract

Failure is the norm in entrepreneurship. This paper tries to fill the research gap on why entrepreneurs stay in an entrepreneurial career, although most have failed before and how they maintained their self-efficacy to do so. One stream of prior research argues that entrepreneurs' self-efficacy is negatively influenced when experiencing failure, and a regrowing process needs to occur. The other states that failure motivates entrepreneurs to move on to their next venture quickly. However, prior research leaves a gap on how some entrepreneurs maintain their self-efficacy during times of failure.

A qualitative approach was chosen to gain insights. Semi-structured interviews helped us learn more about the experiences of eight entrepreneurs in depth. For the data analysis, first—and second-order coding was conducted to find aggregated themes that explain what maintained the self-efficacy of our interviewees.

Those four maintaining factors are *growth mindset*, *resilient*, *explorative*, and *adaptive learner*. Our findings show that entrepreneurs used these factors to maintain their self-efficacy throughout entrepreneurial failure.

Keywords: failure, self-efficacy, entrepreneurship, growth mindset, resilience, explorative behaviour, adaptive learner

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1. Introduction

The entrepreneurial journey is often compared to a rollercoaster ride, marked by exhilarating highs and daunting lows. Despite the appeal of entrepreneurship, failure is a common outcome, with around 90% of start-ups failing within their first year (Howarth, 2023; Kotashev, 2024). Looking at those statistics, failure is rather the norm than an exception (Nobel, 2011; Howarth, 2023). The unpredictability of start-ups makes self-efficacy, which is one's belief to be capable of mastering specific tasks (Laguna, 2013), vital for entrepreneurs as they constantly face uncertainties and must remain confident in their abilities to navigate these challenges (Bellò et al., 2018; Ferreira-Neto et al., 2023; Caliendo, 2023).

There are two significant streams of literature within the domain of self-efficacy in an entrepreneurial context. The first describes how failure negatively affects self-efficacy (Cave et al., 2001; Shepherd, 2003; Cope, 2011) and that entrepreneurs most likely do not start another venture again or at least not immediately after. The second one argues that entrepreneurs are more driven to pursue another venture after they go through failure and that their self-efficacy is not impacted as much as the first stream argues (Hessels et al., 2011; Kahneman & Tversky, 1979; Baron et al., 2006).

However, there is a critical gap in the understanding of how some entrepreneurs seem to be able to maintain their self-efficacy throughout the process of venture failure and, following that, still aim to start a new venture. With our research, we try to fill in this gap and find out what factors help entrepreneurs sustain their self-efficacy during failure. This paper aims to answer the following research question:

What factors help entrepreneurs to maintain their self-efficacy during times of failure?

Existing research suggests investigating entrepreneurs after failure (Espinoza-Benavides & Díaz, 2018) to research differences between successful and failed entrepreneurs. As Hsu et al. (2017) also point out, there is little research on how entrepreneurs' failure in prior businesses influences the fact to stay in an entrepreneurial career and restart with a new venture. Furthermore, the relation between entrepreneurial self-efficacy, which is self-efficacy in an entrepreneurial context, and the failure of a venture, as well as the learning process in relation to self-efficacy, is a topic of recommended further research (Shepherd, 2003).

It is known that self-efficacy positively affects venture performance (Caliendo et al., 2023) and can be seen as a characteristic that makes entrepreneurs different from non-founders (Chen et al., 1998). According to Shepherd (2003), self-efficacy lowers after a business failure. Still, research about the process of maintaining self-efficacy after a business failure is limited. Therefore, this thesis investigates this process and the internal and external factors that influence self-efficacy during failure. By drawing on the experiences of entrepreneurs who failed, this thesis found four factors that help entrepreneurs maintain their self-efficacy throughout failure.

This thesis will continue with the theoretical framework. This section will conceptualise self-efficacy and failure by looking into the existing literature. Furthermore, the relationship between failure and self-efficacy will be investigated. Afterwards, the methodology describes how the research was conducted, what methods were used and what the limitations of our research are. In the subsequent section, the findings of this qualitative study will be presented. Our framework is discussed in the following chapter. The thesis ends with the conclusion and implications of this research.

2. Theoretical framework

This chapter will start by conceptualising self-efficacy and closely examining self-efficacy in an entrepreneurial context. The next section will discuss failure and the possible learning opportunity that failure can provide to the entrepreneur. Lastly, this chapter will look into the relationship between self-efficacy and failure.

2.1. Self-efficacy in an entrepreneurial context

Self-efficacy refers to the belief that one is able to attain specific goals in a concrete field (Bandura, 1997). In contrast to general self-esteem, an individual's self-efficacy is not generally the same or similar in different domains; it depends greatly on the circumstances of a specific task or goal. Self-esteem has already been researched extensively and defines the judgement about an individual's own self-worth (Laguna, 2013). While self-efficacy can differ from context to context, naturally, our focus will be on the entrepreneurial context.

Self-efficacy theory explains that if people do not believe they can achieve a certain result, they will not even try it (Bandura, 1997), which is necessary for founding a business. Self-efficacy reflects the self-belief that one can persistently perform difficult and novel tasks while coping with adversity (Caliendo, 2023). As such beliefs reflect how individuals behave, think, and act, they are key for successful entrepreneurial activities (Caliendo, 2023).

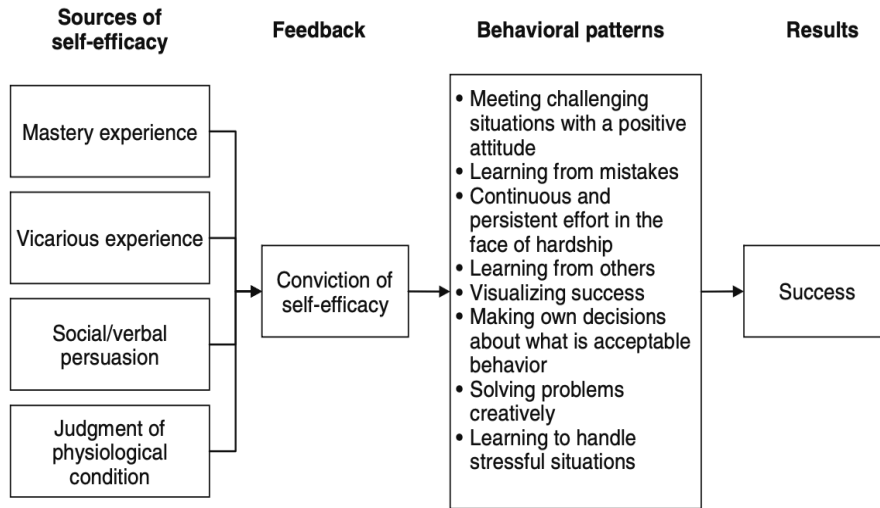


figure 1: Model for successful training of self-efficacy (Bandura, 1997)

Bandura's (1997) model of self-efficacy, shown in *figure 1*, determines four important factors that influence the SE level. The first is *mastery experience*, which means successfully achieving a challenging task. Succeeding will enable and strengthen the person's self-efficacy in that field.

The next one is *vicarious experience*. This occurs if individuals have role models who were successful in a specific domain or your close relationships are achieving something and you can witness that experience (Mauer et al., 2017).

Social persuasion from peers can also help maintain self-efficacy. If individuals have good relations they open up to and who help them maintain self-efficacy through verbal encouragement, it is seen as an important source of self-efficacy (Mauer et al., 2017).

The *judgement of physiological condition* is the last factor that determines how convicted people feel about their self-efficacy. This factor is all about being aware of your mental state and your emotions. It is important to realise what might happen and how it will make you feel, not to let it catch you off guard and overwhelm you, and to know when to stop and not suffer burnout. Burnout is a response to chronic emotional and interpersonal stressors related to the individual's occupation (Maslach & Leiter, 2016). Burnout lowers one's self-efficacy and can discourage entrepreneurs from continuing their ventures (Maslach & Leiter, 2016; Mauer et al., 2017).

Although the last paragraph emphasised the importance of self-efficacy, it cannot be overlooked that there are disadvantages to both too low but also too high levels of self-efficacy. On the one hand, if self-efficacy is too low, it evidently restricts individuals from taking the necessary actions to achieve something, as explained above (Bandura, 1997). On the other hand, if the entrepreneur's level of self-efficacy is too high, the level of business ownership lowers again due to naivety and reluctance to important feedback, according to Gielnik et al. (2019). The inflexion point from self-efficacy coupled with strong entrepreneurial intentions is located at 89.6% confidence; after that, they talk of overshooting and actual business ownership declines (Gielnik et al., 2019).

In general, people with higher entrepreneurial self-efficacy are positively correlated with actual business ownership. In recent studies, researchers have also looked at the correlation between entrepreneurial intentions, self-efficacy, and business ownership. A venture idea can be extremely important for entrepreneurial self-efficacy, as Bandura (1997) pointed out in his work "Self-Efficacy - the exercise of control." A clear goal is crucial to self-efficacy and motivation (Bandura, 1997).

Many researchers agree that resilient entrepreneurs do not only improve strategic capabilities but moreover own better mental and emotional features (Stephan, 2018; Weinberger et al., 2018) as well as psychological capital like optimism, hope and self-efficacy according to Luthans et al. (2006) which proves once more that self-efficacy is a beneficial attribute for entrepreneurs. Chen et al. (1998) conclude that entrepreneurs show higher levels of self-efficacy compared to non-founders when it comes to innovation and taking risks. They even suggest that self-efficacy could be seen as a distinguishing feature of entrepreneurs. Other researchers found higher general self-efficacy in entrepreneurs who had already started businesses, implying that higher levels of self-efficacy are an outcome of venture launch success instead of a factor contributing to venture creation beforehand, according to Markman et al. (2005).

Despite Markman et al.'s (2005) study, other studies were conducted that found contradictory to theirs that especially nascent entrepreneurs show a positive relation to the dimensions of entrepreneurial self-efficacy (McGee et al., 2019). Furthermore, researchers found that

entrepreneurs gain their self-efficacy while looking for opportunities and use this to gain confidence in later tasks. This shows the importance of entrepreneurial self-efficacy during the different stages of the entrepreneurial process (Drnovsek et al., 2010).

Caliendo et al. (2023) suggest that self-efficacy is an indicator of good venture performance. This confirms Laguna's (2013) findings, where the opportunity to monetize patented inventions was not exploited if the participants showed lower self-efficacy levels. However, this finding might be limited to predicting entrepreneurial intentions. Still, not everyone with entrepreneurial intentions takes the necessary steps to start a venture (Laguna, 2013).

There has been different research on how to increase entrepreneurial self-efficacy. One main finding is that entrepreneurial education can increase self-efficacy (Mozahem & Adlouni, 2021; Karlsson & Moberg, 2012). However, entrepreneurial education increases the level of self-efficacy differently for people of different social classes, according to Brändle & Kuckertz (2023) and does not necessarily increase the willingness to become an entrepreneur (Borchers, 2012). Bachmann et al. (2020) found that priming as a method in entrepreneurial education positively increases entrepreneurial self-efficacy and the intention to become an entrepreneur.

2.2. Failure

Following Hisrich's (1990) research, managers and entrepreneurs deal differently when faced with difficult situations. Entrepreneurs are open to dealing with failure, while managers try to avoid failure (Hisrich, 1990). Failure is a crucial part of entrepreneurship (Pisoni et al., 2020) and is often seen as a learning opportunity in an entrepreneur's journey (Politis & Gabrielsson, 2009). However, failure can be defined in different ways (Jenkins & McKelvie, 2016).

Jenkins & McKelvie (2016) conceptualised entrepreneurial failure based on the existing literature and created a 2x2 schema in *figure 2*. They used the level of analysis (individual or firm level) and the nature of the criteria (objective or subjective).

The firm/objective category is *bankruptcy/insolvency*. Here, the authors agree with Shepherd (2003), who defines failure as the state of a business that can not continue operating due to

insolvency without being able to gain new funding. Ucbasaran et al. (2013) believe that bankruptcy is a good definition of failure as it is an observable event.

In the second category, the entrepreneur compares the *returns of human capital* with other employment options. They decide to exit the venture when its performance is below that of other alternatives. This decision is very dependent on the entrepreneur's competence level.

The firm-level stands for situations where an entrepreneur can not be separated from the firm in independent businesses. At this level, the following two failure conceptualisations were done by Jenkins & McKelvie (2016):

The firm/subjective category is *poor firm performance*. Here, the entrepreneurs decide to exit the business because they are not satisfied with the firm performance and before they run out of money. This type of failure, therefore, also includes voluntary exits and is a subjective decision made by the entrepreneur.

Lastly, the individual/subjective category is *personal failure*. In this category, the personal impact of failure is the key element. Entrepreneurs suffer from the negative consequences of failure. According to Omorede (2020), failure can be a rollercoaster ride with social, psychological, and economic effects on the entrepreneur. Moreover, business failure can impact an entrepreneur's health (Ucbasaran et al., 2012).

In our research, we define failure as any of the definitions above from Jenkins & McKelvie (2016). Furthermore, we focus more on the entrepreneurs' own definition of failure. Many entrepreneurs experience failing in the very early stages. Entrepreneurs who worked on a business idea for at least a few months and then involuntarily have to let go of that idea due to various reasons experience also a sense of failure. This can lead to a similar feeling of grief and disappointment within the entrepreneur, just as if you have to let go of an already registered start-up (Shepherd, 2003).

To conclude, entrepreneurs face all kinds of failures (Jenkins & McKelvie, 2016), and every individual defines and handles failure differently (Ucbasaran, 2013). Since the effect on self-efficacy can be assumed to be similar from failing in the early stages and never being able to bring a service or product onto the market to the bankruptcy of a start-up, this study examines the definition of failure from entrepreneurs just as much as the effects it has on them.

		Objective	Subjective
Level of analysis	Firm	Bankruptcy/ Insolvency e.g. Jenkins et al., (2014)	Poor Firm Performance e.g. Headd (2003)
	Individual	Return to Human Capital e.g. Gimeno et al., (1997)	Personal Failure e.g. Cope (2012)

figure 2: Classification schema, Jenkins & McKelvie (2016)

After failure, the entrepreneur can quit his entrepreneurial journey for good or restart another venture. Those who start again are known as serial entrepreneurs. The difference between a serial and a portfolio entrepreneur is that the portfolio entrepreneur does have multiple ventures at the same time, while the serial one has one at a time. This makes the psychological costs of failure much more noticeable to serial entrepreneurs as they have to deal with the loss and start from scratch again (Ucbasaran, 2013). Portfolio entrepreneurs do not feel the psychological effects of the failure of one of their ventures as strongly since they can still put all their effort and energy into their remaining one(s) and are not left with nothing (Ucbasaran, 2013). This agrees with Shepherd's (2003) grief coping mechanisms. They argue that grieving entrepreneurs who lost their only business become a serial entrepreneur as soon as possible to fill the hole of the missing venture in their lives (Shepherd, 2003). Furthermore, this argument goes hand in hand with other findings from Ucbasaran et al. (2013), who found that entrepreneurs who experienced business failure develop strong intentions to start again and do so.

2.3. Learning from Failure

According to Lafuente (2013), entrepreneurial failure should be seen as something temporary. It is also not the same as individual failure (Lafuente 2013). It is a difficult and emotional time for the entrepreneur (Shepherd, 2003). However, there is a chance to benefit and learn from the experience (Ucbasaran et al. 2013, Politis & Gabrielsson 2009).

Shepherd's (2003) findings show that entrepreneurs learn better from failure if they have low levels of grief. This mostly happens when self-employment knowledge and information about why the business failed are available (Shepherd, 2003). Lafuente et al. (2013) agree that emotions play an important role in recovering from failure.

According to Rieger et al. (2023), the lessons learned from failed entrepreneurial ventures can benefit entrepreneurs not only when they want to start another venture but also when they are looking to land a corporate job.

However, to learn from this experience, the entrepreneur has to apply this newly gained knowledge - for example, by starting another venture (Ucbasaran et al., 2013). If the cost of failure seems too high and the entrepreneur decides against continuing his entrepreneurial journey, the learning opportunity gets lost (Ucbasaran et al., 2013).

Entrepreneurs who experience business failure develop strong intentions to start again and do so, according to Ucbasaran et al. (2013). However, according to Lafuente et al. (2018), entrepreneurs who consider their past experiences negative are less likely to start another venture in the future, despite their learning experiences.

Shepherd et al. (2011) discussed how an organisation's perception of failure influences how fast its members can recover. Furthermore, they propose that long-term benefits can be accessed through restoration orientation. According to Shepherd et al. (2011), restoration orientation includes avoiding the original stressor, such as a failed venture, and moving one's attention towards something else, such as a new opportunity.

According to Lafuente et al. (2018), entrepreneurs who start another venture after experiencing failure have expanded their cognitive mindset and used their learnings to their advantage. The researchers argue that this differentiates first-time founders from more experienced ones.

Another factor that positively influences an entrepreneur's attitude towards failure is previous experience with business failure (Politis & Gabrielsson, 2009). However, the authors mention that this failure should not have been due to personal reasons. Entrepreneurs can deal with failure better and faster with a more positive attitude towards failure. Furthermore, they can learn from their mistakes better (Politis & Gabrielsson, 2009).

2.4. The relationship between failure and self-efficacy

Literature suggests that a venture's failure is likely to negatively impact an entrepreneur's self-efficacy (Shepherd, 2003). Since most entrepreneurs operate under the affordable loss principle (Sarasvathy, 2001) and different countries have different bankruptcy laws that are either more or less favourable for entrepreneurs to get started again after failure, this paper aims to add to the present research of the psychological costs of failure and leaves the financial costs of failure to the side. Ucbasaran et al. (2013) differ between emotional and motivational psychological costs. Unsurprisingly, Business failure has a negative impact on the entrepreneur's confidence and self-efficacy (Cave et al., 2001; Shepherd, 2003; Cope, 2011). Next to that, entrepreneurs often experience very negative emotions, like pain, remorse, shame, humiliation, anger, guilt, blame, and the fear of the unknown (Cope, 2011; Shepherd, 2003). Moreover, the individual can develop anxiety, panic attacks or phobias, which all hinder self-efficacy. With little to no entrepreneurial self-efficacy, there is no motivation to start a venture again because some entrepreneurs lose the ability to believe in their capabilities after failure. Sometimes, those feelings can manifest in depression, which leads to a motivational loss in general (Ucbasaran et al., 2013).

Self-efficacy research states that entrepreneurs are less likely to start again as their self-efficacy suffers, and they are more likely to shy away from risks (Shepherd, 2003).

Contrary, prospect theory argues that failure increases the readiness to restart with another venture to offset losses from the prior failure (Kahneman & Tversky, 1979). To achieve that, support from investors is often necessary if those investors are willing to invest in entrepreneurs

who have just failed. Recently failed entrepreneurs are often led by a higher risk tolerance, as prospect theory states (Baron, Zhao, & Miao, 2012), and a stronger feeling of commitment to entrepreneurship after failure, according to Hessels et al. (2011). This being said, the prospect theory gives an explanation for entrepreneurs staying in an entrepreneurial career after business failure although their self-efficacy is lower (Hsu et al., 2017), unlike Bandura's self-efficacy theory.

Not all failed entrepreneurs spiral into negative and hopeless feelings towards entrepreneurship. This can also be due to several factors discussed in the above chapter (2.3. *Learning from Failure*). Moreover, a clear external reason for the failure of the business could explain the event and help the entrepreneur make sense of the failure without experiencing the negative effects of personal failure (Shepherd, 2003). Focusing on self-efficacy in the aspect of business failure is not a widely discussed topic yet. This thesis aims to investigate how failed entrepreneurs maintain their self-efficacy and what factors help them to do so.

Bandura's self-efficacy model (1997) determines four important factors influencing self-efficacy. Those were already explained in the first chapter of this paper. The first is *mastery experience*, which means to successfully achieve a challenging task. Business failure is the opposite; entrepreneurs have to experience a setback instead of succeeding. This leads to self-efficacy taking a hit, according to Bandura (1997). However, research found that if people had a positive entrepreneurial experience before their business failure, the effects of *mastery experience* still hold true to some extent because the entrepreneurs can still find reassurance in their prior success (Cope, 2011).

According to the findings of Heinze (2013) entrepreneurs do not only find reasoning for failure in themselves but also blame third parties as well as outside factors. The result of the study confirms that entrepreneurs experience failure not only economically but also emotionally and socially. This can add to another variable of self-efficacy, *social persuasion*. It might also be hard to achieve a positive outcome on self-efficacy after failure if entrepreneurs are likely to disconnect themselves from social relationships during that process (Cope, 2011). Findings show that entrepreneurs distance themselves from their social connections because of the feeling of being ashamed and embarrassed, and it can be a very isolating process for them (Cope, 2011).

This hinders the rebuilding of self-efficacy because social relations or role models are an important factor in rebuilding self-efficacy (Bandura, 1997). If failed entrepreneurs have good relations or role models who can convince them with a positive vicarious experience, it can strengthen the entrepreneur's lower self-efficacy after failure again (Mauer et al., 2017).

With this theoretical background, we want to highlight even more how important it is to fill the gap in the literature about how entrepreneurs can maintain their self-efficacy throughout failure. As existing literature suggests, self-efficacy is negatively affected when entrepreneurs encounter a failure (Cave et al., 2001; Shepherd, 2003; Cope, 2011), and it is still argued in the literature of Shepherd (2003) that high levels of self-efficacy are needed to start a venture. Another stream of research, prospect theory, argues that failed entrepreneurs want to continue on to the next venture right after the failure without entering into the topic of self-efficacy (Kahneman & Tversky, 1979; Ucbasaran et al., 2013). With our research, we hope to fill in the gaps of how it is that some entrepreneurs can move on quickly to their next venture by maintaining their self-efficacy with the help of certain factors.

3. Methodology

This chapter describes the qualitative approach chosen for this thesis. First, ontology and epistemology are discussed. This is followed by the research design and the discussion of the research methods. Afterwards, the case selection is described, where the decision process of the interviewed entrepreneurs is described. Then, data collection and analysis are discussed, and lastly, the limitations of the methodology are discussed.

3.1. Ontology and Epistemology

According to Scotland (2012), ontology is the study of reality and how it works. Social sciences use interpretivism ontologically as it differentiates from natural science (Husam & Abraham, 2020). Interpretivism considers how humans can see the same thing in different ways and reality therefore being subjective (Husam & Abraham, 2020). Contradicting positivism, interpretivism does not provide a universally applicable definition but focuses more on individual meanings (Husam & Abraham, 2020). Our research goes against the already provided literature (Shepherd, 2003) by stating that not all entrepreneurs lose their self-efficacy during failure. Depending on the individual, failure can impact their self-efficacy differently. Furthermore, failure itself is also subjective. Our interviewees provided us with a variety of different definitions and often opposed the definitions stated by Jenkins & McKelvie (2016).

Epistemology concerns the nature of knowledge and how we, as researchers, discover knowledge that can depict reality (Scotland, 2012; Husam & Abraham, 2020). The interpretive epistemology is subjectivism (Scotland, 2012). Knowledge is not discovered but created by individuals interacting with the world and experiencing it from a subjective point of view, according to Scotland (2012). Failing with one of their entrepreneurial endeavours and being able to maintain their self-efficacy makes our interviewees legitimate sources of knowledge as they experienced our research topic first-hand. To acquire knowledge about their different viewpoints, we used semi-structured interviews.

3.2. Research Design

This thesis aims to contribute to the existing literature about self-efficacy in an entrepreneurial context and the literature covering the effects of failure. Furthermore, the results and findings of this thesis will benefit research about entrepreneurship.

Our research wants to expand knowledge about the existing literature on failure and self-efficacy and their relation. According to Bell et al. (2019), we use inductive research. However, as Bell et al. (2019) suggest, all inductive research also has some elements of deductive research. Therefore, our research builds on qualitative methods, including both deductive and inductive research.

In the previous chapter, we conducted a deductive literature review. We did so by using some concepts and frameworks from the existing literature to explain our findings. This resulted in an overview of the most relevant existing literature and the missing gap covered by this thesis.

This is followed by more inductive research. Semi-structured interviews were chosen to explore entrepreneurs' experiences in-depth (Gioia et al., 2013). Due to the fact that each story of business failure is unique, it was crucial to provide a significant degree of flexibility to accommodate the interviewees' individual narratives and gain the most insights from them. According to Gioia et al. (2013), showing some flexibility with the interviews is important to avoid missing out on crucial information. Still, the interviews need to show adequate levels of the same structure to enable us to use the answers for the analysis and coding. A pre-screening process ensured that the right people were interviewed and that valuable answers could be gained for the research (see 3.3. *Case selection*).

The method used for this study aligned with the qualitative nature of its research question and supported a better understanding of self-efficacy in an entrepreneurial context, with a focus on the factors that help entrepreneurs maintain their self-efficacy during failure.

3.3. Case Selection

Case selection is a crucial part of empirical research and largely determines the extent to which the findings can be generalised to the larger target population. Our thesis relies on pre-screening to ensure that the right cases are selected. The pre-screening included two main criteria. The first is that the entrepreneurs need to have encountered some degree of failure during one of their previous ventures. As Jenkins & McKelvie (2016) suggested, failure can be defined in multiple ways. Failure can be any of the four types from Jenkins & McKelvie's (2016) definitions for this study. Furthermore, as failure differs for everyone, we took cases that stated to have failed on a previous venture and could identify with the notion we presented them as our research topic. If the failure does not happen with a registered company, the business idea must have been at least tested, validated, and worked on intensively for months. The second criterion that needs to be confirmed during the pre-screening is that the entrepreneurs kept their entrepreneurial intention even after experiencing failure. This means they are either still working as an entrepreneur or strongly thinking about becoming one again.

In this thesis, the selected entrepreneurs who were interviewed did not have any personal relationship with the authors. This ensures an unbiased interview and real findings, as the personal factors in interviews might affect the data and results.

3.4. Data collection

The most important part of our research is the semi-structured interviews to get insights into the entrepreneurs' experiences with failure (Gioia et al., 2013). After a successful pre-screening, the chosen entrepreneurs were questioned about their experiences in 1 to 1.5-hour interviews. These were conducted face-to-face or online. Before the interview started, the interviewees signed a consent form (see *Appendix B*) where they agreed that their data would be used anonymously for the purpose of this thesis. Their consent was again additionally confirmed in the audio recording of the interview. The audio recordings of the interviews were first transcribed with the help of *Rev AI* and afterwards manually corrected.

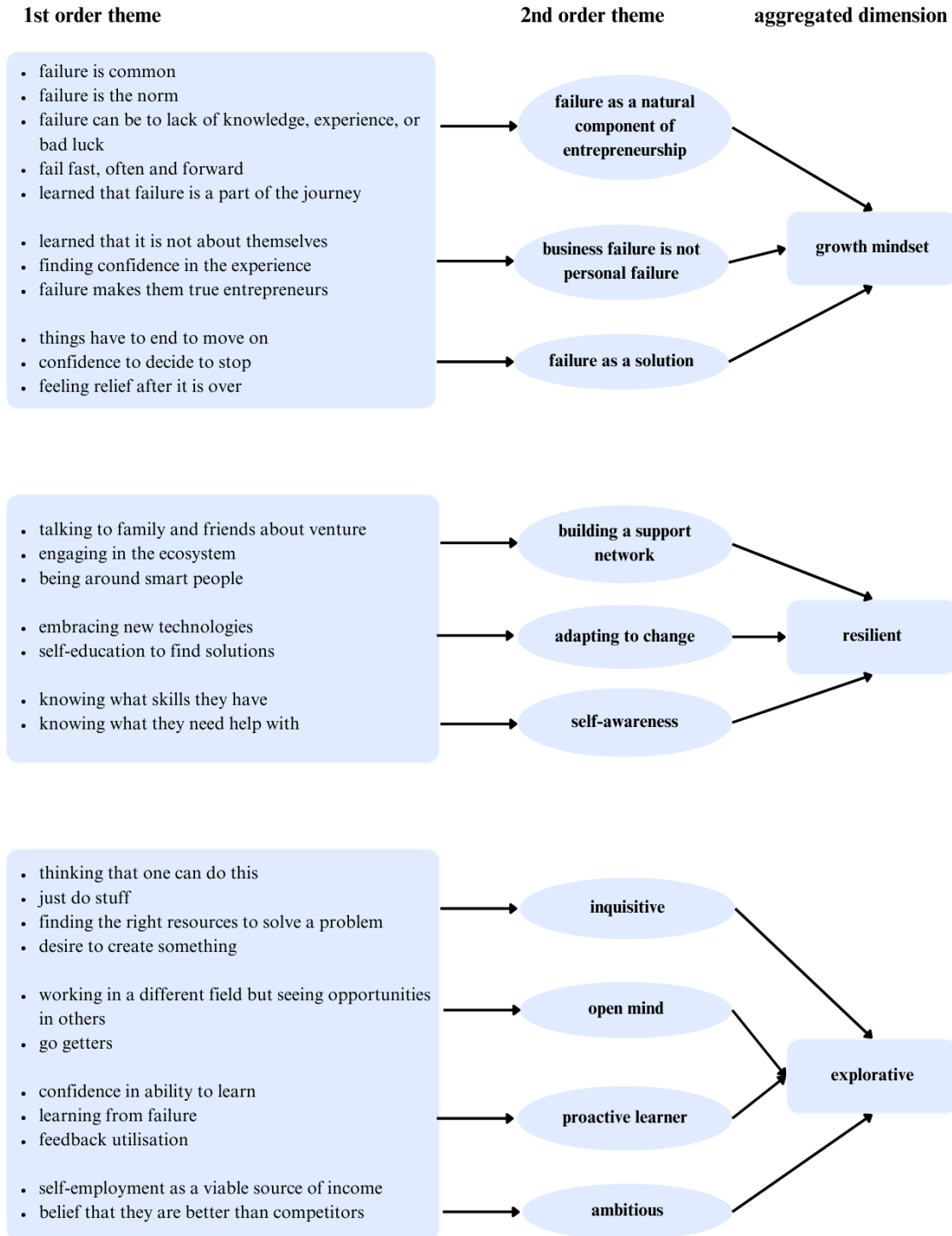
For the interviews, a guideline with our research question in mind was created (see *Appendix A*) (Gioia et al., 2013). The guide was formed with the help of already validated interview questions about self-efficacy from Bandura (1997). This is to ensure that the questions address and explore the right variable. Furthermore, the interviewees were not given specific information about the research variables and were not asked directly about self-efficacy. Moreover, they were asked open questions, allowing them to describe their experiences freely while giving us, as the researchers, enough control to shift back to the main topic if needed (Gioia et al., 2013).

The interviews started with a general introduction to get to know the interviewee and their entrepreneurial journey. This was followed by general questions to determine more about the entrepreneurs' self-efficacy, attitude towards failure, entrepreneurial education, and handling difficult situations. Later, the interview thoroughly investigated what was going on in the failed venture and how the failure impacted the entrepreneur. It is possible that the interviewees had another venture in the past which did not fail, however, this research focused on their first business failure. The failed venture section was split into two categories: founding and failure. Here, especially the timing and realisation of failure, how the entrepreneur felt and how they coped with the failure is in focus. Then, the time after the failure questions internal and external factors that influenced the interviewees. The interview ended with some more general questions about failure and the entrepreneurs' learnings.

3.5. Data analysis and coding

We used first and second-order coding for the data analysis, according to Gioia et al. (2013). First, we started by reading and re-reading the transcripts to (re)familiarise ourselves with the input again. We then used the interview transcripts to collect the relevant information for the first-order codes. We collected 36 first-order statements. After the first-order coding, we broke the codes down into groups where we identified similar themes and continued by putting them into categories, as well as the second-order themes (Gioia et al., 2013). Lastly, we put several

second-order themes into overall aggregate dimensions (Gioia et al., 2013). Our data structure is showcased in *figure 3* below.



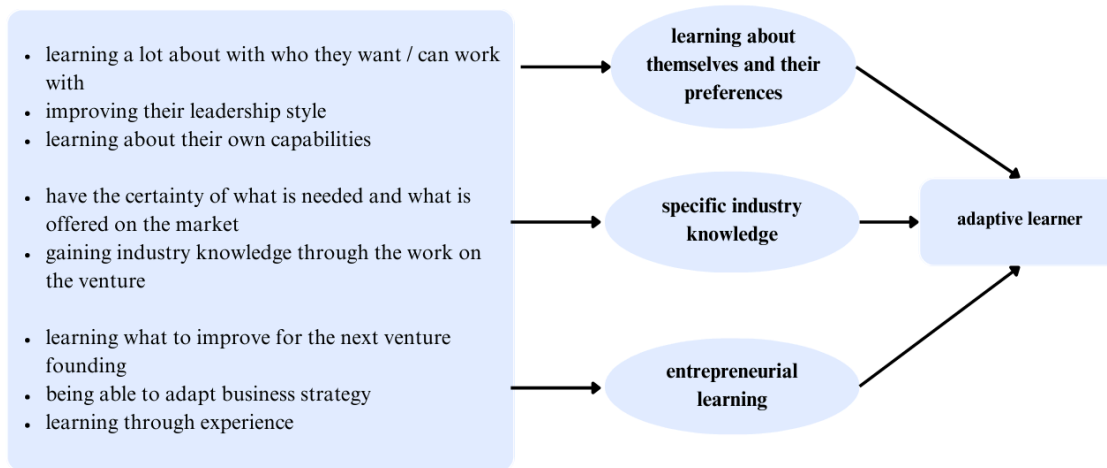


figure 3: Data structure

3.6. Limitations

Lent and Hackett (1987) state that it is difficult to measure self-efficacy correctly. They determine two important measuring points within the Bird Model: one before the development of the entrepreneurial intention and the second before the first entrepreneurial action takes place (Lent & Hackett, 1987). This thesis only examines the interviewees' past experiences and might not showcase self-efficacy in the best possible way.

Furthermore, failed entrepreneurs can be reluctant to talk about their failures and what they say can be biased and self-reporting (Pisoni et al., 2020; Cope, 2011). This is something that is considered during the interviewing and analysing process. While conducting the interviews, failure is not communicated as something bad or shameful but rather as something neutral that happens all the time. So, the interviewees feel more open to telling the truth. Moreover, the interviewees agreed to be interviewed about their failure; thus, they already indicated a willingness to talk about it.

Due to time limitations, this thesis investigates only a small number of cases. Furthermore, the cases are limited to a specific geographical location, as all interviewees were located in Scandinavia while they founded and ran their failed businesses.

3.7. Ethics

As researchers, we are aware that it is important to handle the collected data with the best possible care. Our interviewees trust us enough to share their personal experiences, and we need to ensure that we handle their data with the best care possible (Gioia et al., 2013).

Transparency and discretion are important when it comes to the interviewees' data (Gioia et al., 2013). Therefore, we verbally explained to our interviewees what we planned to do with the collected data and that it be handled confidently and anonymously. Furthermore, we used a consent form (see *Appendix B*) for each interview that clearly stated the same things. This ensures that our participants are fully aware of what we do with their data and feel comfortable speaking openly about their experiences.

For the findings part of the thesis, we used direct quotes from the interviewees but made sure to make them anonymous. We also gave the interviewees different names to protect their identities.

4. Findings

This section presents empirical data about how entrepreneurs maintain their self-efficacy after failure in a previous venture. As mentioned in the methodology section, we will state our findings as described in our data structure to answer how entrepreneurs maintain their self-efficacy during failure with the four factors of *growth mindset*, *resilience*, *explorative behaviour*, and *adaptive learning*.

4.1. Growth mindset

The first aggregated dimension is about having a *growth mindset* and perceiving failure in a more positive way. A growth mindset means that the person believes intellectual ability can be developed and not be fixed with a belief that they cannot do something if they failed it once (Yeager & Dweck, 2020). The entrepreneurs' growth mindset is shown by their ability to see failure as a natural component of entrepreneurship and not as a reason to give up on entrepreneurship as soon as they encounter the first challenge. The entrepreneurs are aware that business failure is not about them failing as a person, and they can identify failure sometimes even as the solution so that they can move on to different opportunities.

The first second-order theme is that *failure is a natural component of entrepreneurship*. Failure in entrepreneurship is common. One of our interviewees, Manfred, said “*there's a lot of things in life which don't work out the way you want it to work out*”. Ferdinand said, “*nine times outta 10, it doesn't work. You never know what failure or problem you're gonna run into*”. They accepted that this is a natural part of the journey. One of our interviewees, Manfred, even thinks “*that [failing] really is the normal, the abnormal is to succeed*”. Failing can happen due to a lack of experience and skills, or sometimes it is just about luck. During the interview, Manfred mentioned “*things which have been just, you know, lack of knowledge or lack of insight, or bad luck, whatever you want to call it*”.

Not waiting too long to fail and moving on to the next thing is embodied in the saying, “fail fast, fail often, fail forward.” Our interviewee Boris agrees: “I think it's important to be able to fail fast.” This also enables one to move on quicker. Another interviewee, Adam, said during the interview: *“I think it's gonna be important to fail forward so you don't get stuck.”*

However, seeing failure in a different light does not always come from nothing. In an interview, Boris mentioned:

“I did not have that mindset to start out with. That's something I earned through life experience; a hard paid for painful experience in some cases, but it's something that I had to internalise and adapt to.”

The next second-order theme is about *business failure is not personal failure*. Another thing our interviewees have learned is that failing in business does not equal personal failure. In the interview with Alex, he mentioned:

“I don't take it very personally because before it was like, oh, it's me. Like, I just suck, or we're doing it all wrong. But now you take it like ‘uh, okay, there will be more opportunities. So let's learn about this, and let's move on’.”

His mindset has grown to the point where he now knows that he can grow personally from the failure and gain confidence. Iris said, “I would say the more I've done, the more confident I've become,” and that also includes learning to move on from failure.

Our next second-order theme states *failure as a solution*. We found that failure can be the end of a difficult time and can therefore signal that one can move on to a better opportunity. In the interview Iris mentioned that: *“I was actually the one who suggested bankruptcy. I was the one who said, look, we need to shut this down, okay? It's not gonna work.”*

Furthermore, we found out that failure can signal that some things have to stop, and the entrepreneur needs to be confident enough to end things. Iris elaborated on her perspective and said:

“If it's going nowhere, you have to have the confidence to be able to say: ‘Alright, this was a total failure. Let's do something else.’ Because what very often happens is people that get sort of married to an idea, you know, this becomes a relationship for them, and they dream that this relationship is going to go on forever, even though obviously it's not going anywhere.”

Failure can even give the feeling of relief. Boris, one of the entrepreneurs who went through bankruptcy, said that for him, it *“was more a sense of relief “* when they filed for bankruptcy. This signalled the end of the tough times, and they could finally move on to something else.

The mindset of the entrepreneurs has really shifted towards a positive perception. They understand that this is just a temporary setback and that there are often better chances ahead for them. This helps them to maintain their self-efficacy during failure.

4.2. Resilient

The second aggregated dimension is that they learned to be *resilient*. Resilience is shown by their built up support network that helps them in difficult times. Furthermore, entrepreneurs have the ability to adapt themselves to change and use change to find solutions. Lastly, they show high levels of self-awareness when it comes to their strengths and weaknesses.

The first second-order theme is *building a support network*. Here the entrepreneurs who kept their self-efficacy high built a network that they can rely on in difficult times. This consists of their family and their friends. One of the entrepreneurs, Iris, mentioned opening up to her partner: *“I think that we have a very safe space at home that's very nice. Where we can discuss these things.”* Not only family and friends can support entrepreneurs. Another interviewee, Adam, agreed that he talks to some of his friends about the venture, but *“it's more the business network for me”* where he gets his support from and can benefit from experience and knowledge of the same industry. Being around knowledgeable people is something another entrepreneur pointed out as he thinks that being *“surrounded by smart people, which is always good advice”*. Boris believes that support should be seen differently as *“it's not always monetary”*. One

example he gave was the opportunity to *“build your network, and if you manage a network properly, you can survive even a bankruptcy”*. Sandra mentioned that her team found support in the ecosystem at their university: *“We had each month a meeting where we would have people from outside lawyers or people who were already entrepreneurs and people who actually have big companies.”* This opportunity helped them with their venture idea.

The next second-order theme is *adapting to change*. One of our interviewees mentioned that he constantly educates himself. When asked what helps him to overcome challenges, Alex answered: *“Patience and self-learning. There’s a lot of material on YouTube or digital. So the knowledge is there”*. Especially now, where new technologies arise constantly it is important to embrace them. Alex is aware of this, too, as he works a lot with new technologies and emphasises that *“you have to find your ways and try to find solutions like research here and there”*.

Self-awareness also plays into the entrepreneurs' resilience and is the third second-order theme for this aggregated dimension. The entrepreneurs are aware of the skills they have, as one interviewee, Boris, mentioned:

“It’s what I do best because I’m very confident in what my abilities are, and then I can take on parts of projects that are related to my speciality and my skillset, and I know that I can deliver on those”

However, he is not only aware of his strengths but also his weaknesses and knows when to ask for support from others. One entrepreneur, Iris, mentioned that she is open about her weaknesses with her current team: *“I’m like actively telling everyone that, you know, hey, I need help understanding what I can delegate”*.

4.3. Explorative

The third aggregated dimension is called *explorative*. We identified that our interviewees show and engage in very explorative behaviour, which helps them maintain SE. This explorative behaviour was shown in their inquisitiveness, open mind, ambition, and proactive learning. Those were subsequently chosen as our second-order themes.

The first second-order theme *inquisitive* manifests in a willingness to try new things without overthinking them. In the interview Iris mentioned: *“I just do it. And I don't think too much about it. In general, people tell me that I'm a little bit stupid 'cause I just jump into stuff.”* Our interviewees showed repetitively an openness to potential business opportunities, no matter if they had a strong or any industry knowledge in it. According to Boris it is a *“matter of finding the right resource or getting enough money or solving a technical problem”* to solve an appearing problem. This finding shows us that entrepreneurs believe in their ability to find the right resources to solve problems. Some connect their business ideas with their passions or hobbies and just go with the desire to create something.

The next second-order theme, which was identified as a component of our aggregated theme *explorative*, is having an *open mind*. Similarly to inquisitiveness in general, some of our interviewees also showed an extremely open mind in what they were going to do next. So maybe also something completely different than passions or anything they would have ever seen themselves doing. Iris remembers how she stumbled into a job she had never thought of before: *“I listened to some of the stuff on the radio, and I was like, Hey, I can do this. You know, this seems very easy”*. When an unexpected opportunity arises, they show a go-getter mentality and believe nothing can stop them. Iris states her surprise over a family member's entrepreneurial approach: *“‘[company name]? The big charter company? They want a meeting with me?’ And I'm like, how the heck did you manage to get a call with this [company name]?”* Moreover, Boris explains the influence of being abroad for a while helped him to be even more open-minded: *“I think what really changed my mindset was the time in the US, the American mindset of anything is possible, of building the American dream...”*

Furthermore, we found a lot of evidence for *proactive learning*, so this is our next second-order theme. Most importantly, this was represented in a willingness and confidence to be able to learn, Iris states: *“my strength is I can usually learn stuff pretty quickly, and I can usually learn stuff pretty in-depth very quickly.”* This goes hand in hand with thinking that one can do this if one give it a shot. Manfred shows a lot of confidence in just giving it a try: *“I didn't know that it was supposed to be a very difficult repair, but, in my full hardiness, I thought, sure, I'll go have a look”*.

Another first-order theme we identified was feedback utilisation. One of our interviewees sought help from the consulting company *Early Warning* which is an organisation specialised in helping start-ups facing bankruptcy. The entrepreneur was going through a really tough time with his business until he was able to change unfortunate circumstances with investors only by forcing him to close his business down. He said,

“It's the most expensive education I've ever taken, but it's definitely also the most valuable one. Although I invested a bunch of money in it, a bunch of time, that's probably where I've learned the most”

The last second order is called *ambitious*. Our interviewees show strong levels of self-confidence and high ambitions. No matter how hard previous failure experiences were, they stayed rational about it and considered self-employment as a continuous option for their future career. It was often just the most viable source of income due to their experience. Manfred assessed his chances of being an entrepreneur as higher than finding a good paying job in Sweden, where he felt like he did not truly belong after growing up abroad: *“It's difficult to get jobs and, if one doesn't have, the right background, right connections, it's very difficult to set things up here in Sweden.”*

Lastly, we recognized an ambitious conviction that they can do something better than the competitors. Manfred states about one of his first businesses, which he did not perceive as a big challenge: *“I quickly became sort of an expert in the repair of [specific] machines because, apparently, many had tried and they had not been able to do it.”* Furthermore, after all his experience, Boris knows and believes in his worth and what he can offer:

“I’m quite confident because I’ve done it for so many years and in so many shapes and forms, I’ve been in the smallest companies. I’ve been on the boards of major global, you know, listed companies. And so I, I’ve seen a lot of things”.

4.4. Adaptive learner

Lastly, the fourth aggregated dimension is being an *adaptive learner*. While working on their entrepreneurial endeavours, they learned a lot about themselves and their preferences and gained insights into the industry and their entrepreneurial strategies.

The first second-order theme is *learning about themselves and their preferences*. The entrepreneurs who worked in teams could learn if this is something that strengthens them or holds them back. Some of the entrepreneurs had bad experiences while working in teams and even came to the conclusion that they preferred to work alone. Boris mentioned: *“I learnt that I don’t want to carry the responsibilities for staff and I rather work by myself”*. As well as Boris emphasised: *“I was a specialist rather than a leader of a company.”* Learning and realising that about himself, he could then move forward without staff responsibility for continuous entrepreneurial activities and stay more true to himself and not put extra pressure on his mental health. Also, Ferdinand mentioned that his *“leadership style is different”*, and that his is more open after experiences working on his previous ventures. He learned to let go of some of the control and give some control to other people on his team.

Otherwise, interviewees naturally also discovered very positive qualities about themselves. Pierre for example, has a really confident mindset: *“I have the mindset that you can overcome anything”* and mentioned that this also comes from his sports background. However, when his first founding team brought him into serious financial trouble, he noticed that: *“if I’m going to work with someone on, on something as big as a venture, then it should be the right people with the right skills and the right mindset”*, because you cannot overcome anything with the rest of your team working against you. Not only did he learn more about how and with whom he wanted to work to achieve the best results. They learned more about their own capabilities. Iris learned that sometimes she takes on too much and *“needs to bring it down”*. She is now taking her well-being more seriously and says, *“I need to be mindful of that”*.

The next second order we elaborated on was gaining *specific industry knowledge*. Working in a specific industry for some time helped our interviewees to gain specific insights and experience. Boris was very aware of his knowledge and told us:

“I knew the industry very well 'cause I had been working in it earlier in my career, and so I knew I had the skills I needed. I knew I had the capacity, I knew I had knowledge that they didn't have”.

Iris summarises her experience working in a field in which she had no prior education or experience: *“I know everything, all the machines, I know how to do all the analysis, and everything. I'm not a technician.”*

The last second-order theme of the adaptive learner is *entrepreneurial learning*. Our interviewees took their experience as a learning and improvement opportunity and made out of entrepreneurial failure a newly gained knowledge. Alex, one of our interviewees, mentioned: *“I failed because I didn't offer this thing, or because I didn't have this solution. So you start trying to solve this, and then you get better”*. He realised that certain changes are necessary and *“there will be more opportunities, so let's learn about this and let's move on”*. Pierre learned a lot through the failure of one of his ventures and considers himself now an expert in his field. He mentioned: *“I would definitely say that without the failure of [company name], I would not be in a position where I could do what I can do today.”* Furthermore, the entrepreneurs learn that they might need to adapt their business strategy or their business model for the next opportunity. Adam said, *“I'm gonna make sure that we hit revenues very early on”*. This learning came from his previous venture, and he is currently implementing his learning in his current one. In the interview with Boris, he mentioned:

“It's hard to prepare for some situations. I think you can learn all you want, whether it's theoretical knowledge or obtained through interactions with others, but some things you have to really go through to learn.”

Furthermore, we found that their attitude about the whole entrepreneurial approach and a new venture is just seen as mostly positive entrepreneurial learning in the end. Learning by doing, even if you fail, and taking the learnings from a failure to the next opportunity.

Putting oneself out there in the entrepreneurial world is a must to gain credibility, especially for younger women. Women still need to work a little harder to get taken seriously, at least, that is how one of our interviewees feels. She is grateful for all the learnings she has made along the way, also through her negative experiences, as she told us:

“mindset, and that knowledge has come to me through experience. It wouldn't have come to me otherwise. And so I feel like my confidence level in running a business and making those choices and understanding how to select opportunities in people has definitely changed. After these experiences.”

Although they experienced failure differently, they all agreed that they gained valuable entrepreneurial knowledge by experiencing it firsthand.

5. Discussion

In this section, we discuss our empirical findings, interpreting the results described in the previous chapter and connecting them to existing literature and our research question. Prior research, such as Shepherd (2003), suggested that entrepreneurs' self-efficacy diminishes following failure. However, our findings contradict this view, showing that many entrepreneurs sustain their self-efficacy despite failure. This raised the question of how they managed to maintain it, leading us to develop a framework identifying four factors that help entrepreneurs preserve their self-efficacy: having a growth mindset, being resilient, being explorative, and being adaptive learners. This is illustrated in the framework below (*figure 4*).

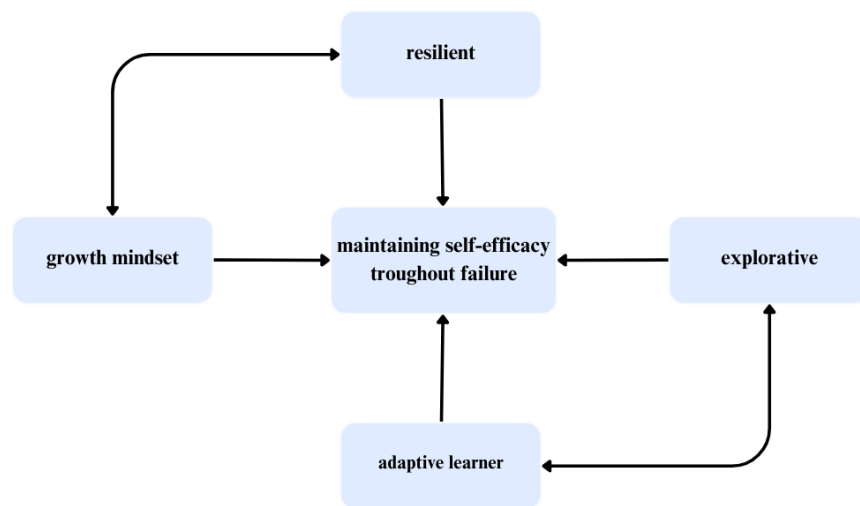


figure 4: Maintaining factors framework

Furthermore, we ensured that the easier sustaining of self-efficacy after failure does not come from a broader acceptance or positive perception of failure by society by asking the interviewees if they felt that way. Nevertheless, they assured that despite the frequent occurrence of failure, it is underrepresented on social media, where successes are more commonly showcased. Although some entrepreneurs acknowledge that failure has been discussed more openly in recent years, all

agree that it is still insufficient. Successes are still the main thing shared in the ecosystem, even though failure is much more common.

Nonetheless, the entrepreneurs we interviewed positively perceived failure, recognising it as a normal part of the entrepreneurial journey and demonstrating a growth mindset. This positive outlook aligns with the concept of self-efficacy, which reflects the belief in one's ability to perform challenging tasks and cope with adversity. According to Caliendo (2023), such beliefs are crucial for successful entrepreneurial activities, highlighting the importance of a *growth mindset* for self-efficacy.

The second factor that helps entrepreneurs maintain their self-efficacy during failure is *resilience*. Unlike managers who avoid failure (Hisrich, 1990), entrepreneurs are often open to dealing with it. This openness to accept failure is, for example, exemplified by Iris, who was willing to close her business, unlike her co-founders. This experience taught her valuable lessons about choosing the right business partners. Resilience enables entrepreneurs to not only endure setbacks but also to improve their strategic capabilities and enhance their mental and emotional resilience, as noted by Stephan (2018) and Weinberger et al. (2018).

The aggregated theme of resilience is interrelated with a growth mindset. If one is more resilient, one is more likely to be open to trying again, not take failure personally, and just see it as a natural step along the way. However, the same goes for having a growth mindset. It makes you more resilient, adapting to change instead of giving up.

The third factor is being *explorative*. While literature suggests that no specific personality traits are unique to entrepreneurs, having explorative behaviour and curiosity is essential. New research emphasises that curiosity is a critical trait in entrepreneurship, leading to opportunity recognition and the willingness to act on these opportunities (Hsieh & Pittaway, 2024; Baron, 2006). Without curiosity, individuals may miss the chance to become entrepreneurs, as they would not engage with diverse topics and recognise potential opportunities.

The fourth factor is being an *adaptive learner*. Many entrepreneurs view failure as a learning experience, a perspective supported by Politis and Gabrielson (2009). The entrepreneurs we

interviewed often mentioned things they would do differently if they started again, indicating that they gained valuable experiences and insights from their failures. Boris, for example, adapts to his preferences and stays true to himself by thoroughly assessing situations, conducting business intelligence, and researching potential ventures. He stated that he is only engaging in work or ventures he enjoys doing and where he sees potential at this point in life. This careful consideration and willingness to pivot before committing to a goal demonstrate the adaptive learning approach.

Entrepreneurial learning involves setting achievable goals based on thorough research and pivoting readiness. One entrepreneur mentioned the learning and interplay of their explorative behaviour while adapting entrepreneurial learnings. So now, after failure and some years of experience, he does not jump into new projects as quickly. Although he is confident in achieving goals, he also sets reachable goals and pivots a few times mentally before starting. While this example seems to show less explorative behaviour with that adaptation, in general, we think that the urge to explore links closely with entrepreneurs' high level of adaptability.

In conclusion, our framework highlights the significance of a *growth mindset*, *resilience*, *explorative behaviour*, and *adaptive learning* in maintaining self-efficacy among entrepreneurs during times of failure. These factors collectively contribute to their ability to persist and succeed in entrepreneurship's challenging and often unpredictable landscape.

5.1. Relating the maintaining factors with Bandura's theory (1997) of self-efficacy

Bandura's theory of self-efficacy (1997) states that self-efficacy develops from *mastery experience*, *vicarious experience*, *social persuasion*, and *judgement of physiological condition*. In this chapter, we will analyse our findings to see if our interviewees experienced those four columns of self-efficacy.

Firstly, the *mastery experience* mostly holds true as they succeeded in certain steps along the way or with businesses before their failed ones, strengthening their self-efficacy.

As one of our interviewees, Manfred admits, although there were some failures along the way, many projects also turned out to be very successful and lucky for him. This presents a good example of prior mastery experiences, which make it easier to maintain one's self-efficacy in a period of failure (Cope, 2011).

The same is true for *vicarious experience*, which is also relevant in some of our respondents' cases. Some have entrepreneurial family members and grew up witnessing their careers and everything it entails. Bandura's (1997) *vicarious experience* as a source of self-efficacy agrees with the literature that states if your close relationships can serve as successful role models, they help rebuild self-efficacy (Mauer et al., 2017). One of our interviewees bridged that observation by saying that she might have gotten her entrepreneurial streak from her dad. It was just as clear and normal for her that failure was a natural part of entrepreneurship from her childhood on as seeing her dad being very successful with multiple projects.

The next source of self-efficacy is called *social persuasion*, according to Bandura (1997). We also have one unambiguous example of Iris' dad trying to persuade her to work with him on a new opportunity that Iris did not see as successful immediately. For Boris, his employer strongly encouraged their employees to think entrepreneurially and start a side business, which inspired him to start his entrepreneurial career. Other interviewees were not persuaded but found general support in their social circles, which matches our second-order theme *support system*.

Our findings disagree with those of Heinze (2013) and Shepherd (2003), as our interviewees do not blame third parties for their business failure, even in instances where this is strongly the case. Neither did they try to find and hold on to any external reason to overcome any grief, contrary to Shepherd's (2003) suggestions.

The result of our study confirms that entrepreneurs experience the emotional and social effects of failure worse than purely economic ones, which agrees with Heinze (2013). Prior literature emphasises the social withdrawal that often happens when people feel ashamed and embarrassed, which naturally makes social persuasion harder if entrepreneurs isolate themselves after failure and feel deeply ashamed (Cope, 2011). Not many interviewees touched upon a strong feeling of shame in our research. Only one of our interviewees, Saskia, mentions a feeling of isolation right after the deciding defeat of an important investment in their venture. Next to not talking to

co-founders, she also lost the support of her remaining support network because she just graduated from university. Her case also clearly proves that this hinders the rebuilding of self-efficacy because she unmistakably states that she is missing teammates and the motivation that arises from weekly meetings and social exchanges. Besides, this supports that social relations are an important factor in rebuilding self-efficacy, but she also lacks the other three sources of self-efficacy, as cited by Bandura (1997).

The last source of self-efficacy based on Bandura's framework (1997) is the *judgement of physiological condition* which closely connects to our second-order theme of self-awareness from our aggregated dimension *resilient*. Our interviewees show a higher level of self-awareness after experiencing failure. Some state that they are doing things differently in their entrepreneurial career right now to care for their mental health. Even for those where the implementation of more downtime or self-care might be lacking, awareness as a first step is there.

5.2. Conceptualisation of failure

Our findings agree with Pisoni et al. (2020) about failure being a crucial part of entrepreneurship. Most of them have (developed) the mentality to face challenges that come their way and differ in that way from managers, as Hisrich (1990) proposed.

Failure can be defined in a variety of ways (Jenkins & McKelvie, 2016). We can see some overlapping when we look at the four definitions by Jenkins & McKelvie (2016) and try to combine them with our empirical findings. Some of our interviewees experienced failure, which is defined by Jenkins & McKelvie (2016) as the firm/objective category *bankruptcy/insolvency*. However, the entrepreneurs who went for bankruptcy do not necessarily consider this a failure - at least not in retrospect. *Returns of human capital* were experienced in the form that other team members left because they preferred to get a job rather than work in a venture. Leaving a company due to *poor firm performance* was the reason some of our interviewees decided to end the business. Our findings did not overlap with the last definition of *personal failure* by Jenkins

& McKelvie (2016). Our findings show that this is something that our interviewees do not agree with, even if it was something that they had to learn over time. Lafuente (2013) proposed that entrepreneurial failure is not the same as personal failure; our findings agree with this.

However, our interviews showed that the entrepreneurs we interviewed define failure in more ways. They see it as a situation where they let others (e.g., employees, investors) down or were not true to themselves. Financial aspects of failure were not their main focus, and with their growth mindset, they perceived failure as a normal part of the journey and an opportunity to learn and improve.

5.3. Failure as a learning opportunity

Our findings reveal a consistent theme: the ability of our interviewees to identify and leverage learning opportunities even when facing failure. This finding aligns with existing literature, which suggests that failure can provide valuable learning experiences (Ucbasaran et al., 2013). Reflecting on and analysing failures enables entrepreneurs to gain insights and develop resilience, which are crucial for their future endeavours.

Entrepreneurial education enhances self-efficacy among individuals (Mozahem & Adlouni, 2021; Karlsson & Moberg, 2012). However, it does not necessarily translate into an increased intention to establish another venture (Borchers, 2012). This nuanced impact of entrepreneurial education is reflected in our interviewees' experiences. They reported that their educational background provided a framework to approach entrepreneurship methodically and perceive failures as part of the learning process.

Politis and Gabrielsson (2009) highlight that entrepreneurial education encourages individuals to view failures as learning opportunities. Our interviewees' accounts corroborate this perspective, demonstrating that education equips them with technical knowledge and fosters a mindset geared towards continuous learning and adaptation.

Another crucial aspect is the emotional aspect of how to deal with entrepreneurial failure. Shepherd (2003) suggests that entrepreneurs learn more effectively from failure when they experience low levels of grief, which is facilitated by having sufficient knowledge about self-employment and the reasons behind their business failure. Similarly, Lafuente et al. (2013) emphasise the importance of managing emotions in recovery. Our findings support these assertions, as interviewees with a clear understanding of their failure and a balanced emotional response were better able to extract valuable lessons and move forward.

Rieger et al. (2023) argue that the learnings gained from entrepreneurial failure are also beneficial when entrepreneurs transition to corporate roles. This transferability of skills and knowledge was evident in our interviews, where several participants highlighted how their entrepreneurial experiences had enhanced their problem-solving abilities, adaptability, and resilience in corporate settings.

It is crucial, however, that the insights gained from failure are applied in practice to fully capitalise on the learning opportunity (Ucbasaran et al., 2013). Our findings indicate that those interviewees who actively applied what they had learned in subsequent ventures or roles benefited most from their experiences. This application can take various forms, such as refining business strategies, improving operational processes, or developing more robust financial management practices.

5.4. Relationship between self-efficacy and entrepreneurial intention

The relationship between entrepreneurial failure and subsequent entrepreneurial intention has been explored extensively, with mixed findings. Some research suggests that perceiving failure negatively can reduce the likelihood of starting another venture. For instance, Lafuente et al. (2018) argue that entrepreneurs who see their failure negatively are less likely to embark on new ventures. In contrast, Ucbasaran et al. (2013) contend that experiencing failure can increase the intention to start anew, positing that failure can be a motivational factor. While many of our interviewees did not see failure negatively in retrospect, it still did not deter them from

immediately acting for the next venture idea when they were still feeling negative about their previous venture loss, except Saskia, who was one of our younger interviewed entrepreneurs and still did not find her way back into entrepreneurship although the intention is there. At the same time, none of our interviewees mentioned that the business failure played a tremendous role in the motivation to start another venture. Only Iris expressed feeling a relief when starting another venture next to the one going bankrupt at the same time. Still if there had not been this great opportunity and social persuasion from her co-founder, she would probably not have sought another venture idea herself at this point. Naturally, it made her happy to have something new and positive going instead of all the fights, drama, and pain of letting the other venture go.

Politis and Gabrielsson (2009) highlight the importance of attitude, noting that entrepreneurs with a positive attitude towards failure can cope with it more effectively and quickly. This suggests that mindset plays a crucial role in how failure impacts future entrepreneurial activities. Moreover, Shepherd (2003) states that entrepreneurs' self-efficacy is often diminished by failure, leading them to avoid the risks associated with starting another venture. This aligns with research on self-efficacy, which indicates that decreased self-efficacy can hinder entrepreneurial action (Shepherd, 2003).

However, prospect theory offers a contrasting view. Kahneman & Tversky (1979) propose that failure can actually increase the readiness to start another venture, driven by the desire to offset previous losses. This theory is supported by findings from Baron et al. (2012), who argue that recently failed entrepreneurs exhibit higher risk tolerance, and Hessels et al. (2011), who report a stronger commitment to entrepreneurship following failure.

Despite the varied findings, not all individuals with entrepreneurial intentions proceed to start a venture. Laguna (2013) points out that many aspiring entrepreneurs do not take the necessary steps towards actualizing their business ideas. For example, an entrepreneur like Saskia, who lacks all four components of self-efficacy, was clearly hindered from initiating a new venture in our findings.

Shepherd's (2003) grief coping mechanisms provide additional insights, suggesting that entrepreneurs who have lost their only business may quickly start another venture to fill the void

left by their failure. This aligns with Ucbasaran et al. (2013), who found that entrepreneurs often develop strong intentions to start again after failure.

Our research contributes to this body of knowledge by examining how a maintained high level of self-efficacy can influence the learning experience and immediate entrepreneurial intention post-failure. We observe that a higher level of self-efficacy facilitates learning from failure and helps mitigate grief, thereby fostering a quicker and positive re-engagement with entrepreneurial activities. This finding underscores the importance of self-efficacy in the entrepreneurial process, particularly in the context of overcoming failure and pursuing new ventures.

6. Conclusion and implications

After precisely discussing our findings in connection with what prior literature suggested, we will conclude and present our findings, including implications for academia and practising entrepreneurs. Furthermore, we offer our recommendations for future research in this last chapter.

6.1. Aim of the study and research findings

This thesis aimed to explore how entrepreneurs maintain their self-efficacy during entrepreneurial failure. We built a framework of four factors that answer our research question:

What factors help entrepreneurs to maintain their self-efficacy during times of failure?

First, they developed a *growth mindset* and adapted to perceive failure more positively. For them, failure is a natural part of life in general and entrepreneurship. They learned that business failure does not equal personal failure, even if it was tough for them to learn. Furthermore, failure can even be the solution, giving them a sense of relief that they can now move on to better things.

Second, entrepreneurs benefit from being *resilient* during difficult times. They built up a support network consisting of family and friends as well as some professional network that gives them support and listens to them and their concerns. Furthermore, they are aware that surrounding themselves with smart people benefits them. Their resilience also comes from adapting to change by educating themselves about new technologies or finding solutions. Moreover, their self-awareness is high, and they know where their strengths and weaknesses lie.

Third, they are *explorative*. This means that they are inquisitive, keep an open mind, are proactive learners and are ambitious. This means that they are interested in many different things and take on opportunities even in areas that they have no prior knowledge about. They stay open minded and try to learn proactively. Furthermore, they are ambitious players in the market and know how to use their skills.

Lastly, the fourth factor is that they are *adaptive learners*. Their experiences working on their venture (idea) and failing did leave some learning and improvement opportunities behind.

Entrepreneurs can learn more about themselves and their preferences. This is especially true for working team constellations and whether they benefit from working with others or not. Moreover, the learnings about their industry led them to be experts in their field. All of their learnings help them improve on their next ventures.

6.2. Implications for academia

Our research adds to the already existing literature about self-efficacy and failure and tries to fill the gap of how entrepreneurs maintain their self-efficacy during failure despite prior research suggesting that their self-efficacy will take a hit (Shepherd, 2003). Furthermore, we tried to provide the bridge to prospect theory, stating that entrepreneurs are more willing to start a new venture after failure by researching how they, in the first place, keep their self-efficacy high enough to be willing to start again (Kahneman & Tversky, 1979).

Moreover, our research contributes to the understanding of defining failure. Despite Jenkins & McKelvie (2016) suggesting that it is mainly about the financial aspects of self-employment, our findings show that entrepreneurs define failure differently for themselves and emphasise non-financial aspects.

Our main findings are the four factors that help entrepreneurs maintain their self-efficacy during business failure. These factors can also help others regrow their self-efficacy.

6.3. Implications for practice

The four factors of our framework help entrepreneurs maintain their self-efficacy during times of failure. We hope entrepreneurs can benefit from and use these four factors to keep their self-efficacy high during times of failure. This would ensure they can continue their entrepreneurial journey without taking time to regain their self-efficacy.

Furthermore, we hope that our findings influence the perception of failure more positively by highlighting its positive aspects for entrepreneurs' learning and development.

6.4. Recommendations for future research

This thesis recommends future research to examine the impact of failure on the self-efficacy of a larger group of entrepreneurs and whether geographical location has an impact. As mentioned in the limitations (chapter 3.6), our study is limited in sample size and focuses on entrepreneurs in Scandinavia.

Future research should also consider studying entrepreneurs who experience failure to gain more insights. Our study only used past experiences and was limited as we could not identify the two crucial points for self-efficacy, according to Lent & Hackett (1987).

Furthermore, we suggest looking into failure culture and finding out why failure is not talked about enough, even though most start-ups fail, as this could improve the perception of failure as something more positive and an opportunity to learn and improve.

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Appendix A - Initial Interview Guide

Introduction:

- Can you please give us a short introduction about yourself and your background?

General questions

a. About self-efficacy:

- How confident are you in your ability to achieve the goals you set for yourself? Can you give us an example?
- How confident are you to accomplish difficult tasks? /What makes you believe that?
- How confident are you that you can still perform well when things are tough?
- How do you handle difficult challenges, and how do you feel during the process?
- How strong was your interest in starting/ owning your own business? (entrepreneurial intentions) before your first venture?

b. About failure:

- How would you define failure for yourself?
- Do you consider failure a positive or negative thing, and can you explain why you think so?
- How did you see failure before you started your first venture, and how did your opinion change over time/with more experience?
- Did you know how likely failure is for start-ups before starting?
 - Where did you hear about it?
 - How did you feel when you heard the chances for the first time?
- What made you think that you would be “good enough” to make it? Or did you not think about the outcome when starting?

Failed entrepreneurial endeavour:

a. Founding

- Why did you start your first venture?
- How confident were you about your idea?
- Did you consider failure as an option from the beginning?
- How did your support network look during the founding process?
- Did you found in a team? If yes, how did that help/influence you?
- Were you in an incubation program during your first start-up? How did that help/influence your founding process?

b. Failing

- Could you talk us through the process of what happened to your venture? (Note if they put it on external or internal factors) When did you know/accept/decide that it is failing/has failed?
- How strongly would you say the situation affected your mental health or your general well-being?
- How did you cope with this situation (trying to ask about a specific situation from the previous answers)?
- How did your support network support you during this time? (considering asking about professional help in the form of a therapist or a coach)
- If they are in a team: how did the members of the team react to the situation? When did everyone accept it? How did it influence interpersonal dynamics?
- Was something else in your life during that time that influenced the situation/process/how you coped with it?
- What tips would you give your “younger” self when it comes to “overcoming” entrepreneurial failure/tough times during founding?
- Is there something you would do differently/earlier,...?
- (if they had entrepreneurial education) Did you think that your entrepreneurial education helped with your mindset when it came to failing/knowing what to expect/how to handle failure,...? (can be re-asked throughout the interview)

After the failure:

- Can you talk us through what happened after the failure?
- How much time was in between the two ventures?
- What did you do since the failure happened?
- How confident were/are you that you are able to start another venture?
- How did your attitude towards failure change?
- Can/could you say something positive about the failure?

End of interview:

- Do you think that failure is discussed openly and enough in the entrepreneurial ecosystem?
- Is there anything else you want to tell us/that you want us to know?
- Do you have any tips for us for our next interviews?
- Do you know anyone else who could be interviewed by us?

Appendix B - Interview Consent Form

Interview Consent Form

Authors: Bianca Becker & Nicole Zimmermann

I have been given information about the thesis and discussed the research project with Bianca Becker and/or Nicole Zimmermann who is/are conducting this research as a part of a Master's in Entrepreneurship & Innovation supervised by Ziad El-Awad.

I understand that, if I consent to participate in this project I will be asked to give the researcher a duration of approximately 1,5 hours of my time to participate in the process. I understand that my participation in this research is voluntary, I am free to refuse to participate and I am free to withdraw from the research at any time.

By signing below I am indicating my consent to participate in the research (anonymously) as it has been described to me. I understand that the data collected from my participation will be used for this thesis anonymously and I consent for it to be used in that manner.

Name:

Date:

E-Mail:

Signatur: