

# Individual and Collective Entrepreneurial Learning from Business Failures

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**Abstract**

The purpose of this study is to explore the individual and collective experience of different types of small business failures (i.e. not business closure) and, subsequently, to explain how individual and collective learning from failures takes place in the development of new startups. Embedded in the literature on failure and learning, the empirical analysis is based on 20 in-depth interviews with members from two Finnish startups (Tuxera and Bitbar) and it applies the Gioia-method to explore and generalize – individual and collective – patterns of sense-making of, and learning from, entrepreneurial failures. The study’s main findings show that, in startups, other individuals besides the entrepreneur experience entrepreneurial learning, and that this learning process takes place at both individual and collective levels. In addition, the analysis identifies five major learning patterns: (1) learning through doing (key actions: experimenting, failing, and persisting), (2) learning through measuring (key actions: adjusting and balancing), (3) learning through communicating (key actions: understanding, trusting, sharing and encouraging), (4) learning through prioritizing and (5) learning through reflecting. The study concludes that these learning practices help individuals and collectives to grow an entrepreneurial mindset, which play an important role in managing three critical challenges: (1) acquirement of long-term influential customers, (2) continual development of high quality innovative and (3) satisfying a growing number of customers with scarce resource.

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**Keywords:** entrepreneurship, entrepreneurial learning, business failure, entrepreneurial mindset, technology startup, critical challenges

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## 1 INTRODUCTION

Summer 2014, I came across an interesting question on Quora: *What is the difference between a startup and a small business?* Balaji Viswanathan, Product Manager at a VC Funded Startup, answered this question through a beautiful short story:

*“Tom and Tara are neighbors in a hot tropical country. Both folks decided that they needed some shade in their backyard. Tom went ahead and bought a big umbrella. It was a bit expensive, but much less cumbersome. Tara took her friend Tanya went to the nursery and bought a small plant. People thought she was crazy and she really was. She planted it in her backyard and watered it. Unfortunately, it is not easy to grow a plant in that condition and plants often died being unsuited to the place. Other times they grew in random direction. She kept trying different types of plants, until one of them started growing fast. While the plant was growing, it still was not offering any benefit. It was not providing a shade or a fruit or any other benefit. It just sucked a lot of water, manure and time. After years, Tara’s plant grew to become a large tree. It provided shade not just for Tara, but for a large region. It provided fruits and other benefits. The umbrella that Tom brought stayed the same. It didn’t grow. It didn’t provide any fruit.”*

I took this story as valuable learning: the determinant of becoming a successful entrepreneur like Tara is the will to overcome difficulties and failures to grow the “plant” – the startup idea to a large “tree” – a successful business. However, if one does not pursue entrepreneurial orientation, his satisfaction of the unchanged position “umbrella” – the small business does not imply a business failure. Tara’s entrepreneurial success story is a great example for Winston Churchill’s saying: *“Success consists of going from failure to failure without loss of enthusiasm”*. Every time Tara tried a new plan and she failed, she learned to have a better choice of plant in the next time. That is a simple demonstration of entrepreneurial learning – the central focus of this study. I believe the story would be more complete if the author wrote more about the role and learning experience of Tanya (Tara’s friend) in later stages after she went with her to buy the plant, since companions are the most valuable contribution to the success of an entrepreneur.

In entrepreneurship world, the theme learning from failure has been studied extensively in recent years, especially how some entrepreneurs have achieved greater success in their next entrepreneurial activities after the failures (Kawakami, 2007 cited in Yasuhiro, Mike, and David, 2013). It seems apparent that most entrepreneurs who experienced failure tend to have higher level of entrepreneurial preparedness for their subsequent ventures (Cope, 2011). However, this does not promise them predictable future success because entrepreneurs are different in their ability to realize and apply their learning from failure (Peng, Lee, and Hong, 2013 cited in Yasuhiro, Mike and David, 2013). In regard to entrepreneurs' preparation for next entrepreneurial activities after business failure, several scholars (e.g. Baron, 2004; McGrath, 1999; Minniti and Bygrave, 2001; Sitkin, 1992 cited in Yasuhiro, Mike and David, 2013) affirms that failure acts as an important means for entrepreneurs to train their decision making skills, accumulate valuable knowledge and become more confident as they move forward. Failures also "encourage the search for new actions or new business models or routines" (Kim and Miner, 2007; Miner et al., 1999 cited in Shepherd and Cardon, 2009, p. 931). This fundamental learning experience, however, depends on a number of factors such as the scale and objective of the business, different justifications of business failure, causes and scales of the failure, relevant individuals involving in the learning process, the context of learning, and etc.

Learning from failure has been one of the main focuses in entrepreneurship research, of which many other important aspects have been explored such as financial and emotional exposure (Cope, 2003), grief recovery (Shepherd, 2009a), the learning content dimensions (Cope 2011), narrative attributions to failure (Mantere et al., 2013), and etc. The most popular studied subject is the entrepreneur with experience in business loss, both at the startup stage and the mature company stage. These entrepreneurs, by learning from the failures, might either become serial entrepreneurs with new ventures or shift to professional career.

*What about other individuals in the startup, for instance, Tanya in the short story? Would they experience this entrepreneurial learning process? If yes, how and what would*

*they learn and practice individually and collectively? And finally, would this entrepreneurial learning from business failures is the key helping the firm manage critical challenges?*

I believe this "learning journey" (Cardon and McGrath, 1999 cited in Cope, 2011) is experienced by not only the entrepreneur but other individuals in his venture. In spite of the expanding research on entrepreneurs' learning from failure, few studies shift the focus to the learning process of other individuals in the startup rather than the founders. In fact, the entrepreneur does not run a business on his own but with his companions such as the top management team and the employees. For example, he needs to consult members of specialized knowledge or the whole team for reference before making any important decision. In addition, as individuals hold different self-justifications for failure, they experience the learning process differently at individual level. More valuable findings would be collected with the study of different narratives produced by all individuals in small businesses who have gone through business failures or encountered critical challenges. "Narratives are culturally available means for making sense of and dealing with failure" (Brown and Humphreys, 2003; Brown and Jones, 1998; Vaara, 2002 cited in Mantere et al., 2013, p.2). Such differences help to understand deeply the causes of failure and how individuals in the startup perceive it as well as experience the entrepreneurial learning process. Lastly, the study will base on individual learning to explore the collective aspect of entrepreneurial learning that has not been studied thoroughly in past research.

The main purpose of this study is to collect insights about (1) who beside the entrepreneur in a startup might experience entrepreneurial learning from business failure, (2) how and what they learn – learning methods and knowledge and (3) how this learning helps startups manage critical challenges, which cultivates the development and growth of the business. The study was conducted with participation of two similar sized startups in technology industry. Both startups have experienced rapid growth after overcoming several business failures while confronting different critical challenges since early stage. These challenges include developing right business model – defining the core products, target



customer segments, and revenue streams, recruiting customers, managing resources to adapt fast growth, internationalizing, and etc. Further findings from the study could be the role of entrepreneurial learning outside business context such as entrepreneurial practices in mastering one's life.

This study is organized in six chapters. This introductory Chapter 1 has described the specific research concerns that have not been studied in prior literature and opened three connected research questions. Chapter 2 provides the literature review of the research topic, which provides an overview of entrepreneurial learning, business failure, and the psychological process in entrepreneurial learning before, during and after the business failure. In addition, specific studies about how each group of people in a startup: entrepreneurs, top management team and employees experience entrepreneurial learning will be covered in this chapter. Thereafter, Chapter 3 presents the qualitative research method, focusing on case study and inductive analysis. Chapter 4 describes the interview process, and analysis of data with valuable findings. The final chapter returns to the aims of the study, and discusses the findings and their implications.

## 2 LITERATURE REVIEW

### 2.1 Entrepreneurial Learning from Failures

#### *2.1.1 What is Entrepreneurial Learning?*

The answer to the question of “how to be entrepreneurial?” (Minniti and Bygrave, 2001) provides the definition of entrepreneurial learning. First, it is important to understand that entrepreneurs’ personality traits are not only different from non-entrepreneurs’ but varied among themselves. Therefore, the approach to define entrepreneurial learning as the process of identifying “Who is an entrepreneur?” (Gartner, 1989) and developing similar personality or traits might be too cursory. Entrepreneurs, however, share many common behavioral and cognitive characteristics that make them entrepreneurial, such as the way they do, think, feel, and learn via different business activities and related events such as threats and opportunities. Prior literature often conceptualizes entrepreneurial learning by answering the basic question: “How do they learn?” since learning method seems to be the least varied aspect among entrepreneurs.

In early studies about this concept, Gribb’s (1997 cited in Cope, 2005, p.381) research shows that entrepreneurs are “learning from peers; learning by doing; learning from feedback from customers and suppliers; learning by copying, learning by experiment; learning by problem solving and opportunity taking, and learning from making mistakes.” A similar approach is by Cope and Watts (2000) and Smilor (1997 cited in Cope 2005) who emphasize that learning by doing is the popular learning method of entrepreneurs. This indicates a common recognition that entrepreneurs are action-oriented; therefore, their learning is accumulated from experience (Rae and Carswell, 2000 cited in Cope, 2005). The importance of experience has been emphasized prior by Boud et al. (1993 cited in Cope, 2003) as the “central consideration of all learning”. Kolb’s (1984) provides a specific model of experiential learning process with four learning phases: “experiencing, reflecting, thinking, and acting” (Bailey, 1986; Johannisson et al., 1998, cited in Politis, 2005, p.407). Minniti and Bygrave (2001) add the repetition factor to this view by pointing out that entrepreneurial learning can be represented as “a calibrated algorithm of iterated choice

problem” (p.5) where entrepreneurs make decisions either through their knowledge about similar markets or through “learning by doing or by direct observation” (p.6). This repetition-based learning acts as an effective means to build up experience through which entrepreneurs’ confidence and “stock of knowledge” (p.7) are enhanced. Politis (2005), however distinguishes entrepreneurial learning from entrepreneurial knowledge. The scholar proposes the concept of entrepreneurial learning as learning from experience being transformed into entrepreneurial knowledge which consists of “opportunity recognition” and “coping with liabilities of newness” (p.402). Among studies at the same time, Cope (2005) follows the process approach of Kolb (1984) and provides new perspective of entrepreneurial knowledge. The scholar defines entrepreneurial learning as “a dynamic process of awareness, reflection, association, and application”. Entrepreneurial knowledge generated from this process covers five broad important areas of learning: (1) learning about *oneself*, (2) learning about *the business*, (3) learning about *the environment and entrepreneurial networks*, (4) learning about *small business management* and (5) learning about *the nature and management of relationships* (Cope, 2005, p.380).

This study will not attempt to argue which definition, i.e. learning method and process discussed above, is more precise but emphasizes a valuable result of this learning practice – to grow an entrepreneurial mindset. In other word, entrepreneurial mindset can be developed through entrepreneurial learning. According to Ireland et al. (2003), “an entrepreneurial mindset is defined as a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and renewal” (p.968). Shepherd et al. (2010) provide a more complete understanding of entrepreneurial mindset by adding the context of uncertainty where individuals are willing and be able to “rapidly sense, act, and mobilize in response to a judgmental decision about a possible opportunity for gain” (p.62). In my opinion, learning to grow an entrepreneurial mindset does not solely focus on the individual transformation from a non-entrepreneur to an entrepreneur by starting his own venture. It should also refer to the entrepreneurial approach in performing actions. A research by Covin & Slevin (2002, cited in Ireland et al., 2003) found that “an entrepreneurial mindset is both an individualistic and collective phenomenon” (p.967).

Practicing entrepreneurial learning individually and collectively since early startup phase would benefit the firm in both short-term and long-term.

Since the fundamental condition of entrepreneurial learning is experience, through which the entrepreneur sharpens his cognition and takes wiser actions, it is important to understand different sources of knowledge, i.e. types of events entrepreneurs have gone through. This idea has been formulated as entrepreneurial “learning mechanism” (Cope & Watts, 2000, Reuber and Fischer, 1993 cited in Cope, 2005, p.374). This suggests entrepreneurial learning is stimulated by “critical learning events” (Cope, 2001; Deakins and Freel, 1998; Rae and Carswell, 2000 cited in Cope, 2005, p.374) or “discontinuous learning events” (Cope, 2003, p.440), including “transformational” opportunities and challenges (Appelbaum and Goransson, 1997 cited in Cope, 2003, p.431). Entrepreneurial learning starts from venture creation and continues in later stages of the business cycle. When the venture is established, significant incidents play an important role in facilitating entrepreneurial learning process. Entrepreneurs learn “from what works” and “from what doesn’t work” (Smilor, 1997 cited in Cope, 2005, p.383). In other words, entrepreneurs learn from both success and failure (Minniti and Bygrave, 2001). This study, however, will focus on business failure because it seems to be more popular in generating learning than business success. Entrepreneurs learn more from failures than successes (McGrath, 1999 and Sitkin, 1992 cited in Shepherd, 2009a) since “learning from failure represents a dynamic sense-making process” (Cardon and McGrath, 1999 cited in Cope, 2011, p.606). According to Ellis and Davidi (2005 cited in Cope, 2011), entrepreneurs can learn “what works well and why” (p. 606) from success but it is the failure that enables organizations “to create a recognition of risk and a motivation for change” to sustain and grow the business (Sitkin, 1996 cited in Ulmer, Sellnow and Seeger, 2006, p.145). Soichoro Honda, founder of Honda Motors also claims that “success can only be achieved through repeated failure and introspection”, and to him, success contributes to only one percent of the work, the rest 99 percent comes from failure (Peters and Waterman, 1987: 259 cited in McKenzie and Sud, 2008, p.126). This perspective is reaffirmed by Gupta (2005 cited in Cope, 2011) who emphasizes that failure acts as a pedal by which the entrepreneur is able to develop his alertness with new opportunities and operate the business more successful. However, not all

failures are equally valuable in facilitating learning (Sitkin, 1996 cited in Cope, 2011) due to the differences in interpretations of the failure, damaging levels of the failure, the company size and seniority level, etc. Supporting this view, McKenzie and Sud (2008) show that entrepreneurial failure does not always generates learning benefits for the individuals and organizations because in some cases, entrepreneurs are not active in learning, or there are no lessons to be learned often if the failure is caused by “exogenous forces” (p.140). To have better understanding of this aspect, in the next section, I will provide an overview of business failure from prior literature.

### ***2.1.2 Business Failure Overview***

Failure is an unavoidable factor in life, similarly, in entrepreneurship, business failure or entrepreneurial failure exists as an inevitable factor that affects many business activities positively and/or negatively. The popular answer to the question “*what is business failure?*” is business closure due to “bankruptcy, receivership or liquidation” (Ucbasaran et al., 2010, p.543). However, this extreme view of failure tends not to facilitate entrepreneurial learning effectively because many entrepreneurs avoid reviewing their failures and change their career (McKenzie and Sud, 2008). Startups which are born, survive and grow overtime thanks to their innovations may experience entrepreneurial failure within the organization, for instance, a failed initiative as McGrath (1999) defines, “the termination of an initiative that has fallen short of its goals” (p.14). McKenzie and Sud (2008) provides a broader definition, entrepreneurial failure is “a derivation from the entrepreneurs’ desired expectation” because entrepreneurs are individuals who possess the ability to “see what is not there” (p. 123). This helps develop further research about entrepreneurial learning since the entrepreneurs are able to confront and make sense of their entrepreneurial failures (McKenzie and Sud, 2008). Following transformation approach, Cope (2011) gives a different phrase for business failure as “transgenerative failure” (p.618) in encountering with critical events, through which entrepreneurs would have an opportunity to experience valuable entrepreneurial learning process. Especially, in small firms, critical learning events have the role of special catalysts that characterize the learning process (Deakins and Freel, 1998). Saunders, Gray and Goregaokar (2013) share similar

view, small enterprises and their owners often have to suffer from a lasting influence of crisis events but they become “stronger, leaner and fitter” (p.145) in later stages.

Lastly, failure can be considered as a resilience training tool which enables entrepreneurs and individuals in the organization to learn and adapt faster and more effectively. This failure is known as “intelligent failure” (Sitkin, 1996 cited in Ulmer, Sellnow and Seeger, 2006), which has five characteristics: (1) result from thoughtfully *planned actions* that (2) have *uncertain* outcomes, (3) be *modest* in scale, (4) be executed and responded to with *alacrity* (eagerness), and (5) take place in domains that are *familiar* enough to permit effective learning (p.145). A number of scholars have covered this crucial concept in their research about entrepreneurial learning, such as: Politis (2005); McKenzie and Sud (2008); Yamakawa, Peng and Deeds (2013); etc. Although Sitkin (1996 cited in Ulmer, Sellnow and Seeger, 2006) claims that organizations learn best from “intelligent failures”, Cope (2011) argues that in order to create transformations in “the entrepreneur’s attitudes, perceptions and mindset” (Appelbaum and Goransson, 1997; Cope, 2011, p.618), the failure cannot be considered as *modest*. In this study, I will not try to compare learning results from different types of business failures such as which business failure generates better entrepreneurial learning, or at which level learning is, or how valuable the knowledge is, etc. Instead, I divide business failure into two types: *extreme business failure* – business closure, and *business failure* – all the failures that are not in the form of business loss, and generate learning. Based on this classification, the focus is to explore how studied individuals learn from business failures from individual to collective level, especially when they encounter critical challenges, and which entrepreneurial learning practices are formulated.

In order to have deep understanding of the learning from failure process, it is important to uncover the roots of failure. There are uncountable causes of business failure; however, they can be categorized into a few main groups. By interviewing different actors inside and outside organizations, including entrepreneurs, hired executives, staff and the media, Mantere et al. (2013) provide valuable findings of seven generic types of narrative attributions to failure: (1) The “*catharsis*” narrative takes personal responsibility, i.e. the

entrepreneur himself, as the main cause of failure, which allows him to experience entrepreneurial learning process. (2) The “*hubris*” narrative portrays the collective responsibility for the failure, including the entrepreneurs, top management team and employees, while mitigating personal responsibility. It is “a form of socially constructed, collective over-confidence, characteristically exhibited by the founders of the venture” (Hayward, Shepherd and Griffin, 2006 cited in Mantere et al., 2013). As a result, all actors have opportunities to gain knowledge from the failure. (3) The “*zeitgeist*” narrative shows the poor rational ability of individuals in the enterprise at a collective level. The failure usually results from unrealistic aspirations and uncontrolled growth to satisfy all stakeholders and meet the industry-wide requirements. (4) The “*betrayal*” narrative comes from most agents inside the venture, who put the blame on their managers for the failure. According to Mantere et al. (2013), although the entrepreneurs infrequently blame their personnel, they take the responsibility of hiring wrong people. (5) The “*mechanistic*” narrative considers uncontrollable non-human elements within the venture as the cause of failure, for instance, the gradual decrease in the spirit of the whole organization. (6) The “*nemesis*” narrative accuses external agents such as investors and/or partners for killing the company by withdrawing investment or delaying delivering products that play a key role in the development of the venture. (7) The “*fate*” narrative is mostly used by the entrepreneurs, who “blame the weather” (Bowman, 1976 cited in Mantere et al., 2013, p.34). In other words, they believe that uncontrollable non-human elements external to the venture lead to the business failure. (Mantere et al., 2013)

Of the seven narratives, the first three (*catharsis*, *hubris* and *zeitgeist*) show that from their own judgment, the actors of the narrative, either at individual or collective level, accept the responsibility for failure, which stimulates the learning process. In contrast, the last four narratives (*betrayal*, *nemesis*, *mechanistic* and *fate*) deny the responsibility of the narrators, instead, they blame other actors or factors such as bad luck for triggering the business failure in order to avoid negative emotions arising from the grief (Shepherd, 2003) and protect their self-esteem. In this action, the actors do not justify themselves, therefore, learning possibility could hardly be generated. In short, these narrative attributions give a better understanding of the focus subject of responsibility in the failure, from which a key

discovery is that anyone who acknowledges themselves as a part or the main cause of business failure would have the highest possibility to experience the entrepreneurial learning process. In addition, the main function of narrative attributions is to interpret “the emotional process of grief recovery” and “the cognitive process of self-justification” (Mantere et al., 2013, p.3). These two processes are main components of the entrepreneurial learning from business failure process – the central theme of this study. In the next section, emotional and cognitive learning process will be presented with the interlaced description of how entrepreneurs use and be affected by different narratives.

### ***2.1.3 Psychological Process in Entrepreneurial Learning from Failure***

The psychology process when entrepreneurs cope with failure was studied by Shepherd (2003) with a focus on grief and emotions. However, according to the scholar, the worst consequence of the failure (bankruptcy or business loss) is indicated as an important source of learning for entrepreneurs, at the same time, interferes with their ability to learn. In order to have complete understanding of the entrepreneur’s “learning journey” (Cardon and McGrath, 1999 cited in Cope, 2011, p.605) during business failure, I intertwines Cope’s (2011) and Shepherd’s (2003 and 2009) work on the five learning phases of failure: (1) *the descent into failure*, (2) *the experience of managing failure*, (3) *the aftermath of failure*, (4) *recovery from failure*, (5) *re-emergence from failure*; and Mantere et al.’s (2013) findings of narrative attributions to business failure. In each phase of dealing with the failure, entrepreneurs are influenced by their interpretations of the failure, and experience different levels of learning as well as distinctive learning areas. Their psychological process happens before, during and after business failure, which is divided in two stages: emotional stage of grief recovery, and cognitive stage of self-justification (Mantere et al., 2013). The first two phases in Shepherd’s (2003 and 2009) work describe entrepreneurs’ emotional nature in facing with business failure. Scholars such as Mogg et al. (1990 cited in Shepherd, 2009a), Wells and Matthews (1994 cited in Shepherd, 2009a), Shepherd (2003 and 2009a), etc. share the affirmation that this is one of the major problems interfering to entrepreneurial learning process. However, Shepherd (2003) and Mantere et al. (2013) all also predict that this period is not solely a typical emotional experience nor



problem but the strategy to recover from business loss itself is a means of entrepreneurial learning. The starting point of entrepreneurial learning from failure arises from the persistence process or business failure delay in *the descent into failure* phase. This is the common period before entrepreneurs actually accept, go through, and move on from the failure.

### ***Learning in the descent into failure***

There are some main drives leading to the persistence stage. According to Shepherd (2009a), prior traditional economic model of persistence points out that since financial factor is the key consideration in entrepreneurs' decision making process, entrepreneurs choose to persist "until the current losses exceed the present value of expected profit" (Ansic and Pugh, 1999 cited in Shepherd, 2009a). Other roots of business failure delay include the experience of a cognitive bias and an emotional bias. The former mainly lies in the form of "escalation of commitment" (Shepherd 2009a), which refers to (1) the time entrepreneurs may want to spend on justifying previous decisions and actions, or (2) the time of hesitation because they perceive initial resources as being wasted, or (3) the time they accept certain further financial loss with the confidence that it could be paid off with better results. However, the more financial resource investment is, the greater the total losses are in the worst situation. The emotional bias consists of negative emotions such as anxiety and feeling of personal responsibility, which mostly lead to "procrastination" (Shepherd, 2009a). Persistence period caused by all of those above reasons; however, yet results in valuable entrepreneurial learning knowledge.

Since it is still open of what entrepreneurs learn from the persistence period, Shepherd (2009a) adds an explanation of business failure delay decision – the "anticipatory grieving process", namely the emotional preparation of loss that helps firm owners balance the financial and emotional costs of business failure to optimize their recovery from losses and maximize their entrepreneurial learning (Shepherd, 2009a). However, Shepherd (2009a) also points out that the length of this persistence for failure awareness period directly affects the level of entrepreneurs' grief triggered by business failure later on. If it is too short, shocking comes as a natural response to significant loss, which increase the level

of grief. If it lasts too long, entrepreneurs would have to suffer from emotional exhaustion; similarly, this causes a higher level of grief. The ability to recognize where the “critical point” (Shepherd, 2009a) between these two possibilities lies could be considered as the key learning for entrepreneurs from this early stage of business failure. A sufficient period of time for persistence would provide an entrepreneur better emotional preparedness for the grief and move on from the loss more quickly.

### ***Learning in the experience of managing failure***

In the second phase, Shepherd (2003) points out that when entrepreneurs are facing business failure, the negative emotion – “grief”, which has started in previous stage in the form of “anticipatory grief”, interferes in the process of learning and limit entrepreneurs’ ability to learn from the loss of their business. Specifically, there is a negative relationship between levels of grief and learning knowledge. The higher the level of grief is, the less knowledge an entrepreneur learns from feedback information about the event; namely, facts and explanation available about why the business failed. In recovering from the loss, the rate of recovery and information processing is also affected by the approaches entrepreneurs choose to move forward, which are “loss orientation” and/or “restoration orientation” (Shepherd, 2003). Interestingly, Mantere et al.’s (2013) findings of seven narrative attributions (see section 1.2) are very supportive in explaining these two approaches comprehensively.

According to Shepherd (2003), the “loss orientation” slows down recovery process due to mental battle. Entrepreneurs who rely on catharsis narrative usually experience this internal struggle: they acknowledge the responsibility and learn to recognize and moderate over-confidence (Mantere et al., 2013). In contrast, firm owners who use nemesis, mechanistic and fate narratives choose the “restoration orientation” to get over the grief. This approach speeds up the recovery process because entrepreneurs tend to make suppression efforts, for example, blaming on other actors or factors to restore their self-esteem and competence (Mantere et al., 2013), or spending time on therapeutic activities such as playing sports (Cope, 2011). Similarly, hired executives and staff, who draw on

betrayal narrative, use this approach: they deny their responsibility and assume that their managers cause all problems leading to failure.

However, the combination of the two above approaches, “a dual process of grief recovery” (Shepherd, 2003, p.323), is the most effective method to recover from business failure and enhance the ability to learn from the loss. The hubris and zeitgeist narrators (Mantere et al., 2013), including entrepreneurs, hired executives and staffs, who take the responsibility at collective level, employ this method. Shepherd (2003) only describes the dual process from the entrepreneurs’ experience: At first, mentally focus on the loss experience directs entrepreneurs to start processing information; thereby, when they switch to restoration stage, it enables themselves to decrease the feeling of grief and learn more quickly. Learning to recover from grief caused by business failure moves beyond other types of losses, such as the loss of a loved one, the loss of property, etc., as in Shepherd’s (2003) word: it is a more “practical and constructive” learning. The limitation of Shepherd’s (2003) study is that it focuses on the self-employed and individual entrepreneurial learning from the highest level of loss from business failure: “the firm become insolvent and unable to attract new debt or equity funding; consequently, it cannot continue to operate under the current ownership and management” (Shepherd, 2003, p.323). In this study, the collective attributions in explaining business failure from findings of Mantere et al. (2013), i.e. hubris and zeitgeist, suggest the foundation for studying about entrepreneurial learning process at collective level, in relation to individual learning.

### ***Learning in the aftermath of failure***

Business failure causes a wide range of significant costs for entrepreneurs: financial, emotional, physiological, social, professional and entrepreneurial cost (Cope, 2011). The third timeframe of learning, *the aftermath of failure*, describes how entrepreneurs overcome these costs, and key entrepreneurial learning points from each. Emotional costs, which primarily involve “grief” (Shepherd, 2003 and 2009a) has been analyzed in the previous phases; other forms of this cost includes immediate responses such as shock, depression, stress, etc. This also leads to physiological costs or physical exhaustion (Cope, 2011). In regard to financial costs, entrepreneurs experience different

forms of this loss and at different damaging levels because business owners have differences in experience, wealth and business scales. The entrepreneurial learning of how to balance emotional and financial costs has been described in the first learning phase. These two costs both lead to the social costs which is a valuable learning root for entrepreneurs.

For example, in terms of financial cause, entrepreneurs may not be able to return money back to relevant parties and break the relationship with their contributors. Regarding emotional aspect, entrepreneurs may face the social “stigmatisation” (Cope, 2011) and want to isolate themselves from their network. This, as a result, increases social costs. These costs also lead to professional and entrepreneurial costs because it takes time for the entrepreneur to get back to these two communities. Entrepreneurs in Cope’s (2011) study try to overcome all of these losses on their own; therefore, their learning is limited in this phase. When entrepreneurs put themselves in social context, where they can talk to people and receive advices as well as needed supports, they will recover from grief more quickly (Shepherd, 2003) and the learning possibility would increase. The next sections will move from emotional process of grief recovery to cognitive process of self-justification (Mantere et al., 2013). There, the picture the entrepreneurial learning process and outcomes will be completed through the last two richer sources of learning: *recovery from failure and re-emergence from failure* (Shepherd, 2003 and 2009).

### ***Learning in the recovery from failure***

In the fourth phase, Cope (2011) indicates that in order to recover from the failure, entrepreneurs should take three important steps: (1) “an initial hiatus” (Cope, 2011) – the healing period by removing themselves from the failure, (2) “critical self-reflection” (Cope, 2003; Kemmis, 1985 cited in Cope, 2011) – the thoughtful attempts to understand the failure, the “why” of action and gain learning insights, (3) “reflective action” (Cope, 2011) – the efforts to move on from the failure and pursue new business opportunities. In regard to “critical self-reflection”, Mantere et al.’s (2013) study of narrative attributions brings in some noteworthy aspects. Those narrators who accept their responsibility (catharsis, hubris and zeitgeist) have the highest possibility to experience this activity in their self-justification

process. Specifically, entrepreneurs with catharsis narrative reflect the “old me” with all the faults and put the learning knowledge to the “new me” (Mantere et al., 2013). Hubris narrators look at their integral irrational behavior in running the business at collective level as well as the external unusual social context that causes failure (Mantere et al., 2013), and thereby obtain meaningful lessons from this experience.

In addition, Cope (2011, p.614) suggests that firm owners should adopt “a wider perceived attitudes toward failure and prior entrepreneurial success”. This means to accept failure as the companion of entrepreneurship and to take prior entrepreneurial success (if any) as encouragement for future accomplishments. To sum up, the recovery phase engages both avoidance and confrontation of failure, through this process, entrepreneurs are able to shape their perception of failure, rebuild their self-confidence, and renew focus to be ready for new business activities (Cope, 2011). The detail outcomes from the entrepreneurial learning process will be presented in the next section.

#### ***Learning in the re-emergence from failure***

In re-emergence phase, “critical reflection” and “reflective action” play an important role in illustrating entrepreneurial learning based on Cope’s (2005) definition mentioned in the first chapter of the literature review. Entrepreneurs learn about (1) *oneself*, (2) *the venture (and its demise)*, (3 and 4) *networks or relationships* which consist of the environment and entrepreneurial networks and the nature and management of relationships, and (5) *venture management* (Cope, 2011). Through this entrepreneurial learning process, their “stock of experience” (Reuber and Fischer, 1999 cited in Cope, 2011) gradually and significantly increases; and so does their “entrepreneurial preparedness” for future entrepreneurial activities (Cope, 2005a; Harvey and Evans, 1995 cited in Cope, 2011).

Learning about oneself is the “central feature of learning from failure” (Cope, 2011) where entrepreneurs are able to make ultimate changes in their entrepreneurial awareness through confronting, overcoming and reflecting on business losses (Cope, 2003). Failure wakes them up from the overconfidence of their capability and the over-optimism, especially for those first-entry entrepreneurs. Main outcomes from this “transformative learning” concept are awareness of strengths, weaknesses, skills, attitudes, belief, and areas

for development (Mezirow, 1991 cited in Cope, 2003 and 2011). Similarly, a venture has its own strengths and weaknesses which are more clearly displayed through failure than success. To generate these outcomes, including the causes behind failure, entrepreneurs experience “double loop learning” – learning to reframe “theories for action” (Argyris and Schon, 1978 cited in Cope, 2003 and 2011), namely to critically evaluate and challenge current “mental models and frameworks” to make fundamental changes for organizational success (Cope, 2011).

Regarding networks and relationships, entrepreneurs experience “social learning” (Cope, 2011) through which they learn about both internal and external networks and manage social relationships such as how to work more strategically with other entrepreneurs, to deal with venture capitalists, to collaborate with relevant parties instead of confronting the challenge on their own. In this learning area, firm owners practice both transformative and double loop learning as mentioned above, and forming new “social theories for action” (Cope, 2011). Lastly, entrepreneurs, through “generative learning” (Cope 2005a; Gibb, 1997 cited in Cope 2011), earn valuable lessons of how to manage a venture more effectively and efficiently, whether or not they continue with pursuing a new business opportunity. An additional important outcome is that they are able to “proactively” develop a cognitive early alerting system to avoid repeating negative experience (Cope, 2005a cited in Cope, 2011). In short, failure facilitates entrepreneurs not only in the experiencing level of learning as “know-how” but in the conceptual level of learning as “know-why” (Cope, 2003); thereby, advances their critical decision making and action taking skills in all entrepreneurial activities.

## **2.2 The Collective and Individual Entrepreneurial Learning Experience**

Startups and small enterprises have less complex organizational hierarchy systems than large corporations; however, they share the fact that the entrepreneurial learning opportunity varies in different working positions. Depending on the nature of the work, Argyris and Schon (1978 cited in Cope, 2003) divide learning into two levels: The first is lower-level learning when dealing with habitual challenges and problems (Cope, 2003) which is practical, routine, adaptive learning. The second is more fundamental learning,

creating new understanding and cognitive “theories for action”, which is conceptualized as higher-level of learning when facing unusual, critical events (Cope, 2003). Of the two levels, the latter most likely becomes the means of entrepreneurial learning process. The higher the position an employee takes, the higher possibility that he or she deals with non-routine situations or even discontinuous significant events. In contrast, hires at lower posts who usually do simple routine tasks have fewer opportunities to practice “entrepreneurial orientation” (Lumpkin and Dess, 1996, 2001; Covin and Slevin, 1989 cited in McKenzie and Sud, 2008), such as taking risk, being innovative, dealing with competitive aggression and experiencing autonomy.

The small number of employees in startups and small enterprises simplifies the hierarchy and creates excellent communication (Deakins and Freel, 1998). They have more equal opportunity to learn from business failures and critical challenges since they are able to see the big picture, understand the events better as well as involve more deeply in finding the solution. Therefore, in startups and small enterprises, not only entrepreneurs proceed entrepreneurial learning, but other people of the company would have similar experience of a part or the complete learning process. This consists of active learning and inactive learning. The former is by self-discovery and the latter is through sharing of learning knowledge from leaders and colleges, resulting in mutual knowledge and skill improvement (Deakins and Freel, 1998). To explore what all individuals in startups and small entrepreneur learn from business failures and critical challenges, this study investigates the “learning journey” (Cardon and McGrath, 1999 cited in Cope, 2011) of three main working position levels: entrepreneurs, top management team, and employees. Thereafter, findings of collective learning experience in relation to individual learning would be presented. The following section indicates the limitation of past literature that put entrepreneurs as the center of entrepreneurial learning and an overview of how top management team and employees process their learning from critical events.

### ***2.2.1 Entrepreneurs as Central Subject in Prior Studies***

Owners of a business organization have the highest tendency of following “entrepreneurial orientation” (McKenzie and Sud, 2008), as a result, most of the studies

take them as the main subject of entrepreneurial learning. According to Shaver and Scott (1991 cited in Cope, 2005), they are the accelerators for entrepreneurial actions and embodies the heart of entrepreneurship. Entrepreneurs are the examples of “exceptional learners” (Smilor, 1997 cited in Cope, 2005) from venture formation phase to “once the business is established” (Cope, 2005). Especially, their learning process keeps taking place throughout the life of the enterprise (Reuber and Fischer, 1993 cited in Cope, 2005). However, the limitation of preceding studies about entrepreneurial learning from failure is that entrepreneur himself is the center of the learning process, which includes learning to recover from grief, learning to make critical reflection and improve the self, learning to position himself better in different social networks and relationships, and learning to operate business more successfully. In addition, the case of co-founding group of entrepreneurs and how it affects entrepreneurial learning have yet been explored in entrepreneurship research field.

Regarding research on emotional process of grief recovery, Shepherd (2003) focuses on “the individual entrepreneur in relative isolation from the wider social context in which entrepreneurs are naturally embedded”. (Aldrich and Cliff, 2003 cited in Cope, 2011). The scholar mentions that some individuals may “seek out friends, family or even psychologist to talk about grief” to recover from failure more quickly but does not provide a deeper analysis about the role of social interaction in grief recovering process. Cannon and Edmondson (2001 cited in Cope, 2011) add, “group-level beliefs can mitigate the negative emotions of failure”. The role of social communication in entrepreneurs’ grief recovering process is significantly important to conduct further examination. Moreover, entrepreneurs are not alone in their venture, the questions of whether other essential individuals in the company suffer from the loss and how they recover from that remain unsolved.

In entrepreneurial knowledge accumulating process, Taylor and Thorpe (2004) suggest that reflection and learning can be stimulated by network interactions during discontinuous events. Both novice and serial entrepreneurs live their professional lives with a network of diverse stakeholders, including staff, customers, suppliers, partners, etc. Their



learning, according to social constructionists and activity theory perspectives, occurs within the relationships or networks in which a person is engaged (Holman et al., 1996 cited in Taylor and Thorpe, 2004). In this process, their reflective learning is practiced and enhanced through feedbacks or advice on dealing with critical incidents (Saunders, Gray and Goregaokar, 2013). As a result, observing and listening to different individuals, who directly or indirectly involve in their business, help sharpen firm owners' entrepreneurial learning. This perspective is supported by Cope (2005) that entrepreneur's engagement in social relationships, both inside and outside the venture, generates distinctive forms of learning.

In addition, Sullivan (2000 cited in Cope, 2003) has some record that mentors, who previously were entrepreneurs or are current entrepreneurs, effectively assist higher-level learning from critical incidents. Cope (2011) also acknowledges that there is a "pressing need to examine the influences of "significant others" at various stage of the failure process" (Shepherd 2009; Jennings and Beaver, 1995, cited in Cope 2011). One of the impacts is "collaborative critical reflection and reflective action" through "peer to peer entrepreneurial learning mechanism", which may broaden entrepreneurial learning (Ram and Trehan, 2009; Thorpe et al., 2009 cited in Cope, 2011). Learning from peers remains a valuable form of learning from failure (Coelho and McClure, 2005 cited in Cope, 2011); however, my additions to this learning mechanism are relevant parties, specifically hired executives and employees. Therefore, a deeper investigation of impacts from these influencers would be crucial to understand more deeply and widely entrepreneurial learning from failure.

### ***2.2.2 Top Management Team's Learning from Failure***

The top management team are the closest to the entrepreneurs, they may influence and/or be influenced by the leader of the organization, and have the highest opportunity to experience entrepreneurial learning due to their involvement in making strategic decision – a complex and challenging task (Elbanna and Child, 2007b cited in Carmeli et al., 2011). Their failure in achieving shared choices among themselves and with the CEO may contribute to business failure. This recalls hubris and zeitgeist narrative attributions

(Mantere et al., 2013) where the focus of responsibility for failure is at collective level. Since one objective of this study is to explore the collective aspect of entrepreneurial learning, it is important to have a good understanding of “what is collective learning?” and its relationship with individual learning in presence of disruptive events causing business failure. This section covers the explanation of collective learning in an organization.

The collective learning can be defined as using collaboration in processing information and produce shared knowledge (Anderson and Lewis, 2014). Edmondson (1999 cited in Carmeli et al., 2011) shares this perspective by defining team learning, a typical form of collective learning, as “a process of action and reflection through which knowledge is acquired, shared and combined” (Argote, 1999; Argote et al., 2011 cited in Carmeli et al., 2011, p.33). Carmeli et al. (2011) also point out the major components of team learning process: “critical thinking (Dewey, 1986), encountering problems (Cyert and March, 1963), engaging failures, investigating problems, and using error management programs (Carmeli and Gittell, 2009; Carroll et al., 2006; Keith and Frese, 2005; Weick and Sutcliffe, 2001)”. The outcomes of team learning processes include new forms of action, shared understanding, improved knowledge and professional growth (Leithwood et al., 1997; McCotter, 2001; Plauborge, 2009 cited in Ohlsson, 2012). Therefore, it can be deduced that collective learning from past experience, i.e. team learning among top management team, with entrepreneurs, and other employees would play a crucial role in the development of a venture.

Since the focused experience in this study is failure, I align my research with the findings of Carmeli et al. (2011) on the role of team trust and learning from failure among top management team and its relation with the CEO leadership. According to these scholars, in learning from failure process, team members go through reflection process by critical discussion to find out the central problems and bring in solutions, to improve their decision making skills as well as adjust their behaviors, instead of blaming on each other. An important factor affecting team learning is team trust – “a psychological state in which individuals make themselves vulnerable in a relationship based upon expectations, assumptions or belief that another’s future behaviors will be positive, beneficial, or

favorable” (Deutsch, 1958; Robinson, 1996; Rousseau et al., 1998 cited in Carmeli et al., 2011, p.35). Simons and Peterson (2000 cited in Carmeli et al., 2011) give supplementary discovery that trust helps team members increase tolerance in task conflicts and avoid destructive relationship conflicts; as a result, team learning is improved. One of Carmeli et al.’s (2011) main findings is that there is a positive relationship between top management team trust and CEO relational leadership, which, in turn, leads to the second finding: team learning from failure and quality strategic decisions are also positively related. The literature seems to emphasize the cognitive side of learning from failure; the emotional side, i.e. whether hired executives have to suffer from grief and how they recover from grief (if any), has yet to be explored.

The role of CEO relational leadership brings in the inverse dimension of social interactions discussed in previous section, which is not only entrepreneurs learn from their networks, i.e. the top management team in this case, they also influence their hired executives’ learning process. Entrepreneurs with relational leadership, defined as those who encourage collaboration and open communication and promote trust at the workplace (Carmeli et al., 2009), are able to build and enrich “bonding social capital” (Carmeli et al., 2009) among top management team, thereby motivating and assisting learning from failed experiences. This is an important part of the foundation to study further about entrepreneurial collective learning from failure in startups. The next section will introduce a dynamic learning model from past literature, which is mostly applied to employees, and suggestions of the connection with entrepreneurs and top management team learning.

### ***2.2.3 Individual and Collective Learning by Employees***

Employees, staff or workers are the group with highest population in the company. Compared to managers, they practice individual learning and collective learning in the less complex working nature; therefore, the entrepreneurial factor in their learning process remains hidden. Understanding how employees’ individual learning and collective learning intertwine to each other opens a supplementary door to examine how these two levels of learning are affected in the emergence of disruptive events and business failures, answering the question of whether entrepreneurial learning and practice occur.

Employees might have similar emotional and cognitive responses to failures to their “boss” – the entrepreneur and top managers, and thus, gaining similar learning practices. First, Shepherd and Cardon (2009)’s work on negative emotional reactions to project failures places a foundation to look into emotional aspect. According to these scholars, the employees would experience learning from failures of activities within the organizations such as launching “new ventures, new products, new services, entering new markets, and/or implementing new processes” (p.923). These projects vary in terms of scale and risk level; however, they all might cause various negative emotions by taking away the opportunity to satisfy psychological needs for competence, relatedness and autonomy (p.927). At individual level, these needs create the motivation for higher engagement and personal growth psychologically. Therefore, the way and the amount of time individuals take to overcome their negative emotions affects their learning process, and managing uneasy emotions is an important learning for employees.

Second, regarding cognitive aspect, among previous studies on individual and collective learning, Anderson and Lewis’ (2014) dynamic model of a “learning system” appears to be a profound foundation for the development of this study area. The model is based on transactive memory system theory (Wegner, 1986 cited in Anderson and Lewis, 2014), which explains how the phenomenon that individual learning and collective learning are intertwined, occurs and works in an organization (Lewis et al., 2005; Wegner, 1986 cited in Anderson and Lewis, 2014). In this model, *task completion rate* is the key chain that affects and be affected by *individual learning rate* and *collective learning rate*, as a result, explaining the relationship between these two types of learning.

According to Anderson and Lewis (2014), baseline learning system is the most simple paradigm of how those three factors are interrelated. This system shows a positive relationship among task completion rate, individual and collective learning rates, acquired knowledge, and productivity. For example, learning rate at both individual and collective levels goes up when the task completion rate increases, which enlarges the knowledge stock and thereby increases the productivity. As a result, task completion rate continues to improve. Now let’s imagine this continuous development as a circle arrow process, created

by four arrows moving toward the same direction and connecting four elements: task completion rate, learning rate, knowledge stock, and productivity. If individual learning and collective learning are illustrated by two circle arrow processes, they will intersect at the common point of task completion rate. Anderson and Lewis (2014) add “knowledge depreciation rate”, or “forgetting rate” to the two processes; however, it only links to knowledge stock, provides an important insight that individual knowledge is less likely to depreciate than collective knowledge (p.359). This rate is affected positively by knowledge stock yet affects knowledge stock negatively. In other words, if knowledge stock increases, the forgetting rate goes up; which, however, decreases the amount of knowledge accumulated. Finally, the scholars emphasize that there is a time delay in order for both learning rate and forgetting rate to create material changes in knowledge stock (p.358).

A more complete model developed from the baseline learning system is transactive memory system (Anderson and Lewis, 2014). This model adds “interdependencies” as strong ties between the two levels of learning. This factor is described as following: Group members use their own individual knowledge to collaborate in encoding, interpreting and recalling information; consequently, they create shared knowledge embedded in the collective learning level (Moreland, 1999 cited in Anderson and Lewis, 2014). This collective knowledge provides a better understanding of the tasks and other members, and it is “positively related to the rate of individual learning” (Anderson and Lewis, 2014). The more shared knowledge, the faster individuals learn and the larger individual knowledge is accumulated. It enables individuals to find out their own learning area which need to be more specialized, and know how to collaborate with other individuals in the group to deliver better outcomes. According to some classical economists, this phenomenon is called the division of labor or specialization.

One may question whether specialization has any role in entrepreneurial learning process because from a dynamic perspective, there remains a pressing need in understanding how individuals learn to work in entrepreneurial ways (Rae, 2000 cited in Cope 2005). The answer to this question might be a means to explore the collective experience of entrepreneurial learning. According to Anderson and Lewis (2014), if

individual knowledge becomes too specialized, i.e. overspecialized, it will negatively affect collective learning rate because of two main reasons. First, once a group member achieves a certain level of shared knowledge, he may become over-confident and less likely to search for new information, which in turns reduces new shared understanding of the work. Second, overspecialized knowledge limits communication among members. A highly factual finding given by Fraidin (2004 cited in Anderson and Lewis, 2014) explains that information is encoded into special terminologies that is hardly understood by non-expert (of that knowledge area) members. Individuals in startups show different approaches to specialization. Entrepreneurs seem not to try to specialize in one particular area but look for specialized talents. Top management team members might focus on the area they are in charge, and team management such as guiding employees in their functions. Therefore, specialization may create entrepreneurial learning from failure experience for the staff in different ways.

In Anderson and Lewis's (2014) study, the most concrete dynamic model of individual and collective learning in business context is the disruption model which is created based on transactive memory system. This learning model takes place during disruptions such as changes inside the company (turnover, reorganization, task changes, etc.) and changes in outside environment (technological disruptives, market and industry changes, and extreme events such as economy recession, natural disasters, etc.). As disruption happens, both individual knowledge and collective knowledge have to adapt with the affected environment (Anderson and Lewis, 2014). For the objective of this study, as mentioned earlier, I will focus my discussion in findings of Anderson and Lewis (2004) regarding individual and collective learning process in critical challenges that might cause business failures. The literature shows that individual and collective learning are highly disrupted in these incidents. For example, the value of individual knowledge plummets rapidly because of sudden requirements of new information processing to confront the challenges. Similarly, collective knowledge becomes less relevant due to unexpected chaos in roles and responsibilities, interaction and communication. During this unusual situation, there appear "emergent response groups" whose "task demands are ever-changing" (Anderson and Lewis, 2014) to face with the damaging consequences. However, how these

groups are formed, and how individual learning and collective learning proceed in disruptions have yet been studied. In the discussion chapter of this study, I will provide a suggesting application of the disruption model to entrepreneurial learning from failures to manage critical challenges.

### **2.3 Potential Research Contributions**

Cope (2011) asserts that “failure is a powerful learning experience because of its distinctly personal dimension”. Startups are likely to experience many failures (McGrath, 1999) since they have high tendency to pursue high-variance opportunities to grow fast. While the prior literatures focus on the personal dimension, taking the entrepreneurs as center studied subject, my curiosity is placed on the collective dimension of entrepreneurial learning, which might be as valuable as individual learning. This study, therefore, will extends the existing research on entrepreneurial learning from business failure by exploring both individual and collective learning in startup environment. The studied subject is not limited to the entrepreneurs but also top management team, and the employees. In short, in this study, I will contribute to the research theme by introducing a new dimension of entrepreneurial learning from failure which is created by the combination of individual and collective learning from business failures inside startups. The combined learning knowledge which increases the entrepreneurial mindset of individuals and collectives acts as a valuable toolkit to manage critical challenges.

### **3 RESEARCH METHODOLOGY**

Qualitative research is the popular research method for different studies of entrepreneurship in general and of entrepreneurial learning in particular. I believe qualitative research is the ideal method for this thesis because it allows me to understand how different individuals in a startup enterprise are in interpreting, confronting and learning from business failures. This would lead to a variety of valuable learning practices to help the company manage critical challenges.

#### **3.1 Philosophical Assumptions**

According to Eriksson and Kovalainen (2008), there are five key philosophical concepts in social sciences which can be related to qualitative research: ontology, epistemology, methodology, methods and paradigm. By deciding which ontological and epistemological related positions, and combining with the other concepts, the researcher is able to design the methodology framework. First, ontology refers to the way the researcher views the world (Farquhar, 2012), which can be realism, internal realism, relativism, and nominalism. Easterby-Smith, Thorpe, & Jackson (2012) explain nominalism as non-existence of a single truth, which means people have their own distinct version of truth. This ontological assumption fits the purpose of this study because each individual in the startup has his own perspective about business failure and reacts differently towards it. As a result, he develops different methods of learning, leading to a diverse pool of knowledge. Therefore, I believe entrepreneurial learning from failure is not limited to the experience of the entrepreneur himself but other individuals in a startup.

Second, epistemology is the study of knowledge: the nature, sources and limit of knowledge (Farquhar, 2012), consisting of two main principles: positivist and social constructionism (Eriksson & Kovalainen, 2008; Easterby-Smith, Thorpe, & Jackson, 2012) or interpretivism (Myers, 2013). The epistemological assumption that aligns with nominalism is interpretivism or social constructionism, where the researcher focuses on understanding human sense-making, namely the meaning that an individual or a group give to a situation, a social event, a setting, and etc. Interpretivism is specially designed for researchers who want to understand the context of a phenomenon. According to Myers



(2013, p.39), “context is what defines the situation and makes it what it is”. In this study, I identify the context as (1) the organization where all investigated subjects own, manage or work for, and (2) the critical challenges that they have gone through. As the situation occurs, interpretive research will help to engage the complexity of human sense-making (Kaplan and Maxwell, 1994 cited in Myers, 2013). For instance, when a critical incident emerges, each individual in the startup has different thoughts, attitudes as well as actions toward the problem. As a result, their learning from confronting it varies. Taking this assumption, I will provide my research outcomes starting from how each individual experiences this learning process, and its relation to collective learning, followed by how the collective learning itself takes place.

### **3.2 Case Study Research**

I choose case study as the specific research methodology for this study because it emphasizes “the production of detailed and holistic knowledge, which is based on the analysis of multiple empirical sources rich in context” (Tellis, 1997 cited in Myers, 2013, p.81). This characteristic is expressed in many different definitions of case study research. For example, Creswell (1998: 61 cited in Eriksson and Kovalainen, 2008) suggests a general definition that “a case study is an exploration of “a bounded system”, which can be defined in terms of time and place (e.g. an event, an activity, individuals or groups of people) over time and through detailed, in-depth data collection, involving multiple sources of information that are rich in context”. Similarly, Yin (2002 cited in Eriksson and Kovalainen, 2008) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between the phenomenon and the context are not clearly evident, and in which multiple sources of evidence are used”. Myers (2013) however has an organizational focus and more specific about the sources of evidence. The scholar describes the case study research in business as the method of using “empirical evidence from one or more organizations where an attempt is made to study the subject matter in context”, of which the evidence mostly is taken from interviews and documents. Although all the definitions seem to be similar, researchers hold

different preferences on whether a single case study or a multiple case studies is better to achieve rich empirical evidence.

According to Stoecker (1991 cited in Eriksson and Kovalainen, 2008), there are two types of case studies: intensive and extensive case study. The former, i.e. single case study, is supported by Dyer and Wilkins (1991, cited in Eriksson and Kovalainen, 2008), which draws on the qualitative and ethnographic research traditions. It emphasizes interpretation and understanding of the case as well as elaboration of cultural meanings and sense-making processes in specific contexts (Eriksson and Kovalainen, 2008). Meanwhile, the later involves multiple case studies, which relies more on the ideals of quantitative, positivist research, and focuses on mapping common patterns, mechanisms and properties in a chosen context for the purpose of developing, elaborating, or testing theory (Eriksson and Kovalainen, 2008). Several scholars prefer using this type, mainly for theory-building or theory-testing purposes, such as Yin (2002:53), Eisenhardt (1989, 1991), and Leonard-Barton (1990) (Eriksson and Kovalainen, 2008). However, the goal of this study is to discover entrepreneurial learning from business failures in collective level – a new aspect of entrepreneurial learning while there is not much previously published research on this topic (Myers, 2013). It is an exploratory research and requires conducting an in-depth study, which relies on stories from many people in the startup to get diverse perspectives and rich data. This is one of the main challenges of the single case study research; others include finding a suitable company and having good people skills (Myers, 2013). This research takes single case study as the foundation method but not strictly follow the rule of only one individual or company to study. This means that I am open for one or two similar supplementary cases, eliminating the quantitative sense of multiple case studies, with the expectation to get wider and deeper findings.

Main advantages of case study research, according to Myers (2013), include that it “represents a real story”, it allows researchers to “explore the topic within the context of messy real-life situations”, and it enables researchers to “present complex and hard-to-grasp business issues in an accessible, vivid, personal and down-to-earth format”. However, there are some drawbacks relating to costs, value and risks. The startup who agrees to participate

in this research has to decide how much time and human resource they are willing to support, especially this topic requires interviews with most of individuals in the organization. It is therefore understandable if there might be doubts about the quality of my work whether it would provide equally worthy value. In addition, there may arise some risks for both the startup and me as a researcher. Startups could refuse being interviewed if they see the possibility of company image being harmed. To sum up, researchers might face the risk that no company agrees to be the studied subject. However, I believe the possibility that entrepreneurial learning would negatively affect an individual or an organization is extremely low. This is supported by Wiklund and Shepherd (2003, p.1308) that “knowledge has the greatest ability of all resources to serve as a source of sustainable differentiation, because of immobility (McEvily and Chakravarthy, 2002) and general applicability (Miller and Shamsie, 1996). It increases the firm's ability to be entrepreneurial (Galunic and Eisenhardt, 1994), and improve performance (McGrath et al., 1996)”. Therefore, this research area would be even more fascinating for an enterprise that pursues entrepreneurial orientation to be more successful in the long term.

The target company to interview is a startup or a growing small enterprise that has experienced startup stage. The criteria to decide whether the chosen company is a startup is based on two popular definition of startup: “A startup is an organization formed to search for a repeatable and scalable business model.” (Steve Blank, 2010) and “A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty.” (Eric Ries, 2010). The priority industry is technology because entrepreneurship most likely emerges when there are “market inefficiencies (Kirzner, 1979) and technological progress (Schumpeter, 1950; see also Shane, 1996)” (McGrath, 1999, p.14). Technology could generate great innovations; however, there are uncertainties that could kill a product even before it could be launched. For example, there is no “product – market fit”; the startup is not able to survive in this fierce competition; financial resource is used up before the product is properly developed, etc.

Regarding the total headcounts of the studied company, it can vary from 10 to 50 employees with wide age range, all genders, and most of them worked at the time when the

company experience at least one business failures. Ideally, the interview is conducted with the founder or co-founders, top management team and all personnel. However, it is rarely that all people remain after a significant business failure; I aim at interviewing 8-10 key individuals from the highest level to lower organization levels. This number would assure the richness of information with the condition that all participants engage in the research topic and be willing to share their stories honestly.

### **3.3 Data Collection Methods**

As mentioned in previous section, the main data collection method for this research is interviews and observation of the workplace. According to Myers (2013), interview is one of the most common techniques of collecting qualitative data. It is used to record what people have said about a particular topic, as a result, the researchers base on rich data collected to understand people, their motivations and actions, and the broader context within which they work and live. Interviews allow us “to see that which is not ordinarily on view and examine that which is looked at but seldom seen” (Rubin and Rubin, 2005: vii cited in Myers, 2013, p.119). The objective of exploring how individuals experience entrepreneurial learning as a collective experience requires to understand the inside meanings and attitude that the entrepreneur, top management team and employees give to a business failure, which is hardly seen without listening to their stories. The other source of data, observation of the workplace is used to evaluate how the workplace setting affects entrepreneurial learning.

The length of the interview varies among interviewees but it is expected to have a longer interview with the entrepreneur (apx. 80 minutes), top management team (apx. 60 minutes), and shorter with the employees (apx. 40 minutes). There is at least one interview with each individual and one or two more if necessary. The interview questions are semi-structured, defined as “the use of some pre-formulated questions but no strict adherence to them. New questions might emerge during conversation” (Myers, 2013, p.121). This “obtains both retrospective and real-time accounts by those people experiencing the phenomenon of theoretical interest” (Gioia et al, 2012, p.19). In addition, this gives consistency across the interviews, at the same time, creating engagement by allowing the

interviewer to add important insights arising during the conversation for the informants (Myers, 2013).

The interview question set starts from the concept business success and business failure to understand how each individual justifies failure. I will then collect different most memorable failures at organizational level that the interviewees can recall since they started working for the startup, as well as their opinions on the cause and their reactions towards the event. The following questions are mostly open-ended, which enables the interviewees to share their learning experience from that particular business failure. The learning consists of both individual and team learning process. In the end of the interview, I will give them a brief explanation of entrepreneurial learning from failure and the interviewees will provide their own evaluation whether they experience this form of learning. All the interviews are recorded and transcribed with the participant's permission.

### **3.4 Data Analysis Plan**

Following the philosophical assumption, the qualitative data will be interpreted and analyzed for potential findings, thus, there are two possible analysis approaches: hermeneutics and narrative analysis. In business and management, hermeneutics aims at making sense of the whole and the relationship between the people and the company. In this analysis approach, the center of focus is to understand the meaning of a text-analogue, where the researcher can always move from the whole to the part and vice versus (Myers, 2013). For example, the role of the company could be considered as a text-analogue for this study. Hermeneutics is especially useful when the text is confusing because in a company, different stakeholders hold different views which may be clouding, incomplete, contradictory to each other (Myers, 2013).

The narrative analysis is an approach with much similar process to hermeneutics – the interpretation of data. However, in this approach, the means to get to the research outcomes is narratives or stories. Eriksson and Kovalainen (2008) suggest that a narrative is the explanation of the event with a distinct structure as well as a clear plot, and the usage of words is attached to a particular listener at a specific time and context. More specifically, Yiannis Gabriel (2000: 239 cited in Eriksson and Kovalainen, 2008) defines narrative as

story, consisting of a plot and characters. In narrating the event, both narrator and audience experience different types of emotions through “a poetic elaboration of symbolic material” (p.212). Stories make more sense in understanding what people learn from business failure in terms of both emotional and cognitive sides. In addition, this study focuses on investigating the learning process from individual level to collective level; each story tells the relationship among individuals and helps to construct the idea of collective learning. Therefore, the main data analysis approach in this study is narrative research.

In narrative research, researchers will choose a focus among several types of focuses, for example, suggested by Eriksson and Kovalainen (2008): meaning, structure, interaction context, performance or several alternatives by other scholars. This study focuses on the meaning and the content of the narrative. Regarding the focus of meaning, Riessman (1993, 2004 cited in Eriksson and Kovalainen, 2008) provides a technique called “thematic analysis” where “a theme can be defined as a concept, trend, idea, or distinction that emerges from the empirical data” (p.219). The theme of this study is the interconnection of individual and collective aspects of entrepreneurial learning from business failure. Eriksson and Kovalainen’s (2008) findings show that there are at least two ways of using “thematic analysis”, first is to examine any empirical data for themes and then develop a storyline to integrate themes into meaningful stories. Second is to examine the narratives as they are told or written by other actors in order to find patterns of themes, which is the process that will be used in this study. Narratives told by individuals in a startup about the business failure and what they learn from that event allow me to connect the stories, find the elements and relations that formulate the collective level of learning.

The main reasoning method will be inductive. In other words, the analysis of data will be bottom up, which means the concepts or findings will emerge from my interpretation of individuals’ perspectives on a significant event. This study will follow the data analysis guideline in Gioia’s methodology of inductive concept development since it supports the creation of new concepts inductively, at the same time “meeting the high standards for rigor demanded by top journals” (Gioia et al., 2012, p.17). However, there will be a few moderate variations. The general steps of data analysis of this methodology

are: (1) coding the data with the actual terms used by the interviewees, (2) grouping related terms from the first step, (3) developing the themes based on groups of terms and leverage to theoretical and practical findings.

## 4 DATA ANALYSIS & FINDINGS

### 4.1 Introduction of the studied companies

Tuxera and Bitbar are the two startups participating in this study. There were no special criteria for selecting companies because it was based on the belief that all companies, especially startups, during the formation and development, would face with several business failures and critical challenges. Both startups are in technology industry, yet not being direct competitors. From the company’s perspective, Bitbar is a startup, and Tuxera can be classified as a more mature startup or a small enterprise. This study does not provide any comparison between the effects of entrepreneurial learning on two companies; instead, they both help to discover different aspects of the topic. Below is an overview of the two companies in 2014, according to their LinkedIn profiles.

*Table 1: Tuxera and Bitbar company overview*

	<b>Tuxera</b>	<b>Bitbar</b>
Industry	Computer software B2B (mainly) and B2C	Wireless B2B (mainly) and B2C
Founded	2008	2009
Size	11-55	11-55
Market	Global	Global
Turnover (2013)	4336,000 EURO	703,000 EURO
How the company started	Tuxera’s roots are in the open source NTFS file system development in 1990s. Szabolcs Szakacsits founded NTFS-3G project, which incorporated as a Finland based company NTFS-3G Technology in 2008. Meanwhile,	Bitbar was founded by the Kaasila brothers, Joukoo Kaasila and Marko Kaasila, when they saw the ultra fast growth of mobile app market and the developer headaches that the fast evolving ecosystems were introduced.



	Anton Altaparmakov had been developing and maintaining NTFS file system in the Linux kernel. In 2009, the company was renamed to Tuxera Inc. with Mikko Välimäki as CEO, Szabolcs as President and CTO and Anton as the lead file system developer.	At the beginning, they started with developing some software services based on Symbian, however, the market for this platform was too small, so they changed to Android. The startup got investment from Creathor Venture, DFJ Esprit, Finnvera, and Qualcomm Ventures.
Problem solved	Tuxera solves data and device incompatibility challenges so that the content is never lost and always available for editing, playback, storage and sharing no matter how or where.	Bitbar solves the need of accelerating product development, improving quality and lowering development costs of apps and games on mobile platforms, from smartphones to tablet computers and wearables.
Product	<i>File systems solutions for Android, Linux, Mac OS X and other platforms</i> , which allow music, pictures, videos and other content to be ported across mobiles, tablets, home entertainment, consumer, industrial or any other electronics. The company has close collaboration with industry leaders ensures reliable compatibility and helps to set high standard in performance, low power use for embedded and mobile solutions.	<i>Automated software Build and Test environments</i> , consisting of Testdroid Cloud that has been used to make many of the most popular mobile apps and games reliable, highly optimized and compatible across the Android and iOS device ecosystems. The other Testdroid product deployment options include Testdroid Private Cloud (hosted, dedicated devices), Testdroid Enterprise (in-house solution) and Testdroid Recorder.
Specialties	NTFS, exFAT, HFS+, FAT, file system, embedded, software, storage,	Automated test tools, Android, Real devices, iOS, Continuous Integration,

	performance, interoperability, fail-safe, network technology, Linux, Android, QNX, IoT, streaming, Mac OS X	Validation services, Application porting, Smartphone applications, Test tools, Robotium, Customization, Solving mobile fragmentation
Interviews	2 entrepreneurs, 2 member in top management team but not entrepreneur, 8 members of the personnel, including heads of the functions	1 entrepreneur, 7 members of the personnel, including heads of the functions

#### 4.2 Data Analysis & Findings

In total, there are 20 people, including founders, CEOs, managers and employees in two companies participating in the research interview, which lasts from 40 minutes to 60 minutes each. The participants have worked for their company from one to four years since the startups were founded and went through different processes such as discovering customers' needs, developing the products, validating the solutions, testing the business models, etc. They were first asked to provide their perspective on business success and business failure, then to recall some business failures and/or critical challenges the companies had encountered as well as the effects at personal and organizational levels. Thereafter, they named their personal learning and their team learning from those events, and shared their thoughts on leadership, employees' authority, risk preference, and differences between learning in startups and in bigger organizations. In the last question, participants were provided with the definition of entrepreneurial learning from Cope (2005, p.380), based on which they evaluated their own.

The findings and analysis, thereby, are presented in four stages. The first stage presents how varied the definitions of business failure in relation with business success are according to different individuals. In the second stage, data shows the relationship between

business failures and critical challenges and the role of entrepreneurial learning. The third stage is the summary of learning patterns from business failures both on individual and collective levels. In the last stage, I will identify three major critical challenges where entrepreneurial learning acts as an important toolkit to manage these events.

#### ***4.2.1 Perception of Business Success & Business Failure***

The perception of business failures varies from individuals to individuals. As mentioned in Chapter 2, this study will not look at the extreme form of business failure which is business closure or business bankruptcy because this classic view of business failure doesn't always help to provide complete understanding of entrepreneurial learning in small companies. To have a better understanding of business failure, in my research, participants were asked to share their own generic definition of both business success and business failure, which provides conditions to their learning process. The main implication behind these questions is: if there are different ways to conceptualize business success, why business failure has to be limited to business closure? It can be seen in other different forms which generate different learning practices and knowledge.

In most of the cases, the indicators for business failure correspond to what implies a successful business. For example, theoretically, if business failure indicates the situation that the business has to cease its operations, business success could be interpreted as being able to operate or survive in the market regardless of growth factor. This is, in fact, not how entrepreneurs see business success. Both CEOs from Tuxera and Bitbar shared the perspective that strong revenue growth reflects business success. Therefore, "no growth" would refer to a business failure. An indirect sign of failure is losing customers to competitors, which affects the revenue negatively. What about non-entrepreneur participants? A sales manager shared that *"in a startup or small enterprise, success can be really small steps such as getting a new customer, getting the new product launched, seeing new market or segment, etc."* Business failure, similarly, can be interpreted as not being able to sell what was developed or innovated, or couldn't reach the growth that was planned. The summary of different perspectives about "business success" and "business failure", based on the answers provided by all interviewees, is shown in the following table.

Table 2: Success and failure indicators

Success indicators	Failure indicators
Growth	No growth
<p><i>“Strong revenue growth is the main thing.”</i> (Founder)</p> <p><i>“Success is business that is predictable, sustainable that I know we have a good plan and we know how to continue the growth.”</i> (CEO)</p> <p><i>“It’s the probability to grow; I think the growth is the key word here. So you can grow in different dimensions. For me the business success is that you can you can grow your product and actually grow your sales, and I think that’s some kind of, not only the goal itself but this kind of a side effect of doing things right.”</i> (Customer success manager)</p>	<p><i>“Business failure would be that we wouldn’t be able to sell what we are doing and we wouldn’t reach the growth that is planned.”</i> (Manager – Sales)</p> <p><i>“I would not work in a company that has no growth at all because if it doesn’t grow anymore, it will just stay as a small company, it is business failure.”</i> (Personnel – R&amp;D)</p>
Good products	Failed products
<p><i>“A business that solves meaningful problems, which is useful for the people, community and their employees.”</i> (Founder)</p> <p><i>“Business success is definitely, in such companies as ours, it can be really small steps. And the business success for us is</i></p>	<p><i>“You are developing a solution to some nonexistent problems, it is business failure.”</i> (Manager – Marketing &amp; Sales)</p>

<p><i>when we get the new product out or we get a new version launched, or when we have a new market or segment that buys some product.” (Sales Director)</i></p>	
<p>Passionate working team</p>	<p>Low happiness at work</p>
<p><i>“Key factor is people are passionate so they want to go deep into some field and they want to succeed in it.”</i></p> <p>(Personnel – Human Resource)</p> <p><i>“In startup, you get to see much more what happens on the other teams” (Personnel – R&amp;D)</i></p>	<p><i>“Failure is that if things are too regulated, if there’s kind of no freedom for people to do what they are good at.”</i></p> <p>(Personnel – Human Resource)</p> <p><i>“Sometimes you can’t avoid people being upset, you need to explain in logical way that they need to accept that.” (Manager – Business Development)</i></p>
<p>Happy customers</p>	<p>Losing customers</p>
<p><i>“You can do many things but in the end, success is the happiness of customers.”</i></p> <p>(Manager - Operation)</p> <p><i>“Success is the growing trust of the overall market toward the company’s products and services.”</i></p> <p>(Manager – Marketing &amp; Sales)</p>	<p><i>“I like to use Peter Drucker saying that the purpose of the business is to find or define or create customers. If you lose your customers, then that's the ultimate failure.”</i></p> <p>(CEO)</p> <p><i>“Whenever we lose to a company then I see that is a failure.”</i></p> <p>(Founder)</p> <p><i>“I think that the businesses failure would be that we wouldn't be able to sell what we are doing or what we are innovating and developing.” (Sales Director)</i></p> <p><i>“Failure can mean that you lose your</i></p>

	<p><i>customer or you build up something that doesn't have a customer or haven't resonated in the industry so there won't be a cost of in that sort of things.” (Marketing Manager)</i></p>
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In evaluating learning from success and failure, Cyert and March (1963) agree that learning takes place at work, and people learn more from dealing with different incidences such as failures than from gaining achievements. One of the interviewees shares this perspective:

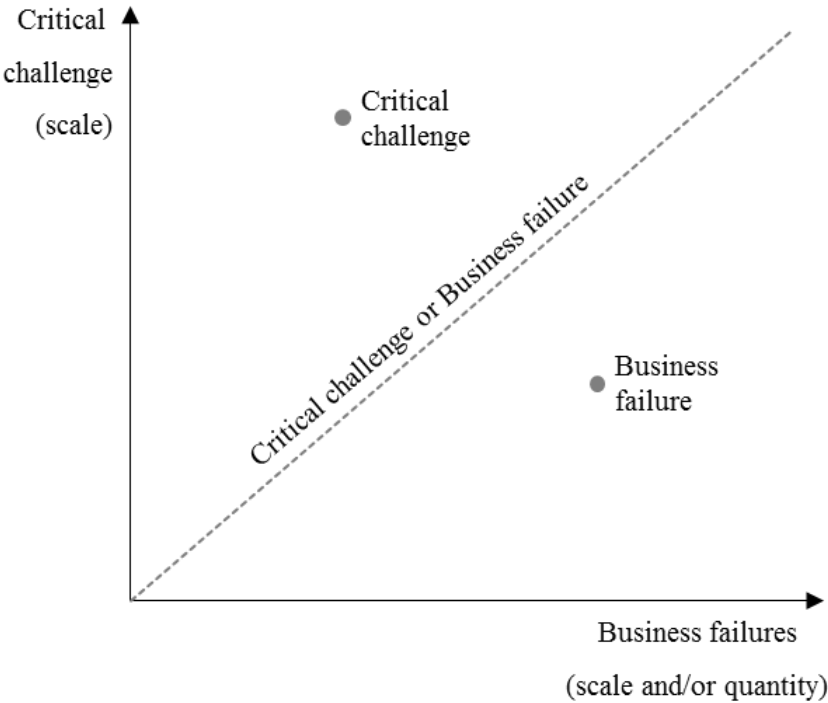
*“Failure hits you harder and faster, and you take more drastic turn while success mainly helps you find new things. When something hits the wall and you fail, you realize that you have to make total change in direction. In that sense, maybe failure is faster, so you learn really quickly and even more while the success comes slowly and if you are successful, you don't easily change to a totally different way of doing things, you try to optimize that.” (Manager – Marketing & Sales)*

**4.2.2 Relationship between Business Failures and Critical Challenges**

The interview continued with a request to recall at least one business failure that the company had gone through since the interviewee worked there, based on the definition he provided earlier. Some could not answer the question because it seemed to them that there was no such kind of business failure or the failure seemed to be too small to be called a failure. Therefore, these interviewees were asked to describe a critical challenge instead and to recall a failure during the time the company confronted the challenge. After the first two interviews, I decided to put both questions as standard questions to have more insight about business failures and critical challenges. The results show that people have different opinions in evaluating a particular incidence, event or matter as a challenge or a failure. However, in some cases, there is a relatively proportional relationship between business failure and critical challenge, which affects how people consider which name is suitable for

what kind of event. The interviews show that there are two common ways to look at this relationship. If there are several but small failures are caused by an event, this is more likely to be perceived as a critical challenge. In the word of an interviewee, “if you want to call it a business failure, it’s ok but I think it’s more of a challenge, it just takes a lot of effort.” In contrast, in confronting with the same event, if there are only one or two but noticeable failures, the whole event is more likely to be considered a business failure. The graph below is a simple illustration of this relationship, which is only applied in the case that people hold different opinions.

Figure 1: Business failure or Critical challenge?



Examples can be found in the interview outcomes below, i.e. a list of business failures and critical challenges the companies have gone through.

Table 3: Examples of business failures and critical challenge

The cases	Business failures	Critical challenges
<p><b><i>Acquire right customers</i></b></p> <p>According to the informants, in B2B business, there are different ways to decide which customer is right for the company, depending on the long-term and short-term objectives. Losing customers might be caused by two main reasons: First, the customer is too big that it would take very long time to persuade, even three to four years and the company could fail many times during that period. The worst case is to completely lose that customer and not have enough of other customers to cover the loss, i.e. the investment to acquire the customer. Second, the product is not good enough to meet the demand of the customer. Competition is a challenge but also an important catalyst for all players in the game regardless of their size to keep on finding new ways to satisfy customers better. The main competing elements are price and quality. For startups with competitive products, sometimes, it is also the lack</p>	<p><i>“In a small level, losing customer is a failure because you did not manage to persuade them to start or keep using your product and service. Of course, there are always reasons for customers to leave such as they do not have that specific need for your product at that moment but when they do, they should come back.”</i> (Director - Sales)</p> <p><i>“It is a failure if you focus on the wrong customers, those who really do not care about performance or quality.”</i> (Personnel – Sales)</p> <p><i>“We have a term call "turn", meaning you lose some of the customers sometimes or they don't continue or they give up the whole using of service. So "turn" is the common business failure.</i></p>	<p><i>“We have to be better, innovative, giving good support and convincing. At the beginning, it was very difficult because everybody saw that we were too small.”</i>(Account Manager – Sales)</p>



<p>of resource to meet customer demand quick enough that makes customer chooses the competitor.</p>	<p><i>In a small level, it's a failure if you did not manage to keep them using. There are always reasons for customers for example they don't have that specific need for your product at that moment but when they do, they come back.</i> (Customer Success Manager – Sales)</p>	
<p><b><i>Failed product or project</i></b></p> <p>There are two types of product or project failed. First, the product was not fully developed or not ready to deliver to customer. Second, there is no demand or market for the product developed, or according to an interviewee, it is to “develop a solution just for yourself to some nonsexist problems”. According to one of the interviewed managers, that kind of failure is kind of small and happens all the time but they need to happen for them to learn and grow the company.</p>	<p><i>“We had a case, a software product that was supposed to be launched but software has lots of bugs and we try to bring it to the market before it was fully developed. And first of all there was not much demand for it, not many people downloaded or purchased and it was quite buggy, we tried to fix but it takes a lot of work to fix the bugs and the customer demand is very poor so that why we call a failed product. We failed to determine beforehand what the</i></p>	<p><i>“There are old player who are in the game for 20 years, if there is no really ordinary alternative, it does not make much sense for the customer to switch to new product.”</i> (Senior Developer – R&amp;D)</p>

	<i>customers demand.”(Manager - Product Marketing)</i>	
<p><b><i>What to focus</i></b></p> <p>Unlike companies who have been in the market long enough to have a strong focus, startups in early stage try to convert many opportunities to get customers to increase revenue, therefore, losing focus occurs more often. Both studied companies not only sell the product, but also work closely with customers to customize the product or provide supporting services. Therefore, it is easy to spot out new business opportunity from customer demand. Since the business is flexible and agile, plans can be changed every day to get more customers.</p>	<p><i>“This is a bit abstract but at some point we were trying to be so fast and nimble that we were rather than focusing on our site next weeks and next month we were staring our toes for certain centimeters, and doing every day. We didn't even know in the evening that what we are going to do next day. We were changing plan frequently, and that cost us some problems on getting strategic and tactical product priorities done. We were doing lots of small things but they were not taking us anywhere. That's kind of the critical thing that we were sometimes not able to deliver on time.” (Customer Success Manager)</i></p>	
<p><b><i>Resource allocation</i></b></p> <p>This is a typical challenge for high tech startups and small enterprise whose products are customized for every customer and/or need constant support after purchase. The popular situation is Therefore, the team analysis, mutual understanding or good flow</p>	<p><i>“IT teams work on certain tasks, they have their own management to priority their things, but when you have 5 salespeople, each one has their own project, there is conflict among</i></p>	<p><i>“When the sales are generated too fast, it is hard for the R&amp;D team to keep up with and meet the deadline of building a framework for one</i></p>

<p>of communication between the teams about which customer, which feature need to work on first is highly important.</p>	<p><i>salespeople on which project is more important, also the salespeople do not always know the status of the product development". (Director – Sales)</i></p>	<p><i>customer when at the same time there are requests from other customers." (Personnel – Sales)</i></p>
<p><b><i>Grow and scale in a sustainable way</i></b></p> <p>Sustainability is the challenge for not only startups and small companies but bigger ones. For the two studied companies, the challenge is to balance between growth and how the company can actually handle, in terms of both financial and human resources. The company needs to have enough resources to meet the demand of the increasing number of customers. Failing to make changes quick enough to adapt with too fast growth is the cause of failure in many businesses, which could be growing slowly or going bankruptcy.</p> <p>Scalability is one of the key success indicators of startups and small enterprises. However, when the company sees the opportunity but they cannot change their operation to keep up with the increase</p>	<p><i>"We failed in when we started to scale sales organization. We had a really good time, last year grew quite heavily and we got quite excited that we thought let's grow the sales organisation but we didn't really analyse, we were maybe a little bit too optimistic and we didn't analyse it to go into depth and think why we were so successful and then we thought that we can be successful during those very a good last months of last year, and we realise that it's not that easy, we scaled too fast." (CEO , Founder)</i></p>	<p><i>"The biggest challenge I think was to balance between growth and how the company can actually handle both from I guess from the financial point of view but also the human scale because when you're growing so fast that means the size of the human is also increase. It is not about to kick people you have and to understand how to grow in a sustainable way because Tuxera started as a startup but then we grew so</i></p>

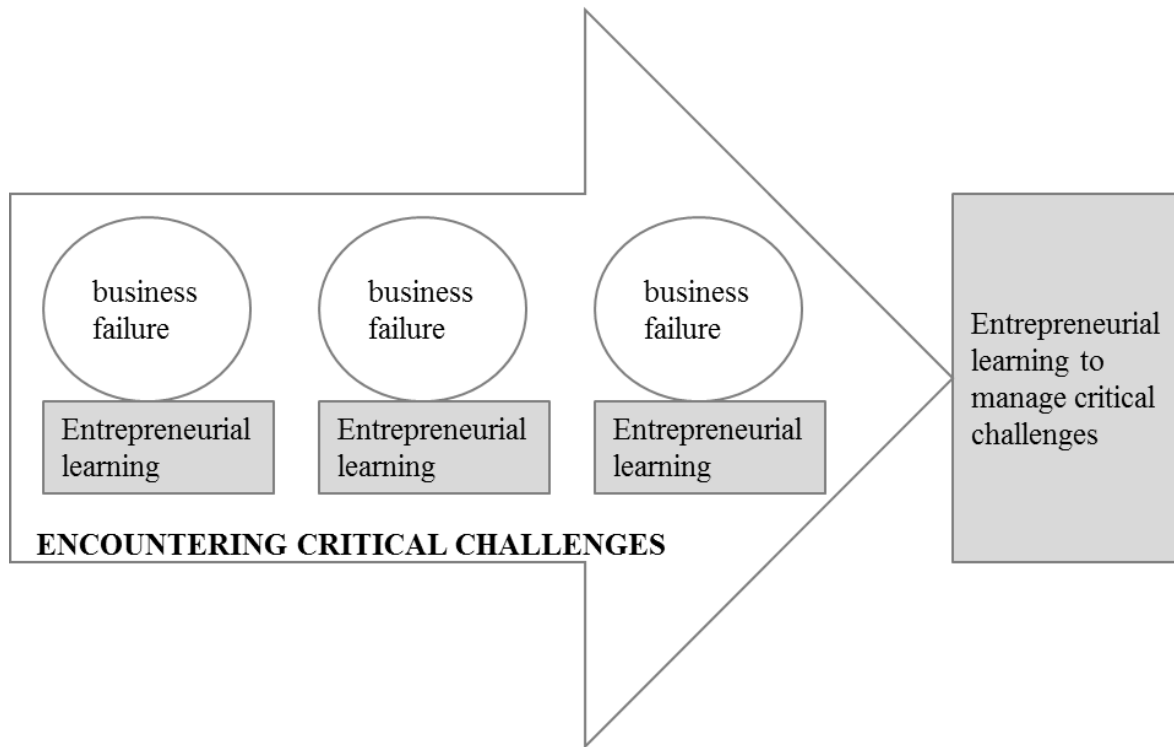
<p>in number of customers, for example, not ready in R&amp;D human resource to meet the demand. Another situation is sales model no longer suitable for market expansion to other cities and other countries.</p>		<p><i>fast that in within a year, we might not be a startup anymore. And it's the challenge of all those new high tech companies as well.”</i> (Manager – Business Development)</p>
<p><b><i>Human management</i></b></p> <p>The right person to hire not only need to have knowledge and skills but to fit the company culture. In “Good to Great” book, Jim Collins and his colleagues found out that “in a good to great transformation, people are not your most important asset, the right people are”. Both companies grows fast and always need more people to transform to a new stage of no longer a startup, and to meet the demand, especially technical resource to build in house competencies, both are service companies.</p> <p>A wrong hire not only costs the company in terms of money but also time and work effectiveness</p>	<p><i>“We had a wrong hire that change the dynamic of sales team in a negative way. He was in the same position as me, he did not do his job, which didn’t affect me but making other people annoyed or disappointed and I could feel it. That one didn’t affect the whole company but sales team which somewhat affected the business performance for a while.”</i>(Developer – R&amp;D)</p> <p><i>“We had an IT manager that acted like he owned the company and his</i></p>	<p><i>“Acquiring new talented engineers is very difficult in this very narrow and specialized field.”</i> (Senior Developer – R&amp;D)</p> <p><i>“There is a lot of unemployment but there is also this kind of gap in the labor market: there are many good people out there but we need to find the right people that are relevant to our</i></p>

because he or she can affect the relationship among people or cause negative atmosphere in the company.	<i>relationship with a lot of people in the company was not good, so it was problematic.</i> ” (Personnel – Sales)	<i>company.</i> ” (Manager – HR)
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The results show that there are critical challenges for the studied companies in almost all areas such as revenue growth, scalability, product development, customer recruitment, competition, human resource, etc. They are all-the-time critical challenges, especially in the beginning years because the business started from the scratch. Overtime, some remain critical challenges, and some of these become smaller challenges which success or small failure in encountering them does not noticeably affect the company. Learning from these business failures help companies to manage critical challenges. For example, when the company tries to scale the business, they realize that they apply the wrong tool to scale the business, which indicates a small business failure, and thus, they need to find a new approach. In this situation, the learning would be learning from trials and errors, responding fast or being agile. In another case, the critical challenge is to hire new people; a small business failure could occur when the company hires a wrong person. They need to replace them by new ones. The learning would be avoiding hiring person with the same characteristics, i.e. learning from experience. Based on different definitions of entrepreneurial learning, we can later evaluate if these learnings are components of entrepreneurial learning.

The chart below shows the process, in which entrepreneurial learning is generated from business failures when startups confront critical challenges. The set of learning experience accumulated over time can be considered as a necessity to manage upcoming critical challenges.

Figure 2: Entrepreneurial learning from business failures to manage critical challenges



According to an informant - the manager of operation, critical challenges help them focus their effort and really understand what they should do or shouldn't do, see what and where they might have done something wrong or made mistake. The most rewarding learning moments are from tough situation. This goes in line with Cyert and March's (1963, cited in McKenzie and Sud, 2008, p.125) finding that "individuals in organizations learn and that this learning occurs mainly from encountering problems rather than by experiencing success". The informant added, there is learning in "calmer time" as well because there will be room for inspiration, new ideas and executing ideas. Especially, this kind of calm moment after overcoming the small business failure allows individuals to process learning by doing thorough reflection on what has been done right or wrong to have better strategy or ways of doing things.

### ***4.2.3 Entrepreneurial Learning from Business Failures***

Answers from participants for the question of how the company overcomes the business failures and what they personally learn from that process show that individuals in both studied startups apply a similar approach to overcome these learning events. Regardless of difference in functions, entrepreneurs, managers and other members of the personnel share a number of learning methods and learning process they develop at individual level.

First, regarding the emotional aspect, unlike in extreme case of business loss, there is not much emotional cost involved in the studied business failures. Emotion is justified to be set for few days because of limited time and quick change in startup environment; therefore, emotional learning is not as critical as cognitive learning.

*“You can't run this business based on emotion. If you are emotional, you have hard time to build sustainably successful business; of course you can be emotional for a short time that okay we failed this. You can be emotional for a couple of minutes but you can't be emotional for several hours, you have to start thinking that okay let's start planning again, how come get this customer to us. It's just you know you have to have analytical view, you have to have a professional ethic and attitude so emotion at least for me you know, I'm a normal person about a psychopath I think, I can be emotional but for short time for this kind of business, if you lose some customers, let's plan to start working on it. On the other hand, I can't worry about these things like in advance or afterwards. If this kind of event happens, okay, you can be emotional but forget about it and then start planning how to overcome it, that's at least my approach. I think this is kind of the company's approach as well.” (CEO)*

Many participants have common emotions when facing with these business failures such as stressful, frustrated, unsure about the future of the company, and sometimes they want to give up if there are too many failures in encountering certain critical challenges. These feelings happen more often during early stage of the startup when there are a large number of responsibilities but there are not enough people to take all of them. However, none of the



interviewees had to experience grief emotions like in the case of business closure since most of the failure does not cause heavy financial loss to the companies. In addition, as mentioned in Chapter 2, the business loss is a learning experience for entrepreneurs only; at the same time interfere with the learning process because of the negative emotions. Therefore, the other kinds of emotions experienced by the informants seem to be a better training tool for them to become more tolerant toward failures, accepting the failures, having strong belief in the product/ idea/ customer, being persistent and staying positive to move forward, which are important components of an entrepreneurial mindset. This has been the result of entrepreneurial learn after business failure in Cope's (2011) research: they are able to shape their perception of failure, rebuild their self-confidence, and renew focus to be ready for new business activities.

*“At that time, we were well enough so the failure didn't affect the financial or R&D, it just gave us the learning of different sales models, what is efficient and what is not.”* (CEO & Founder)

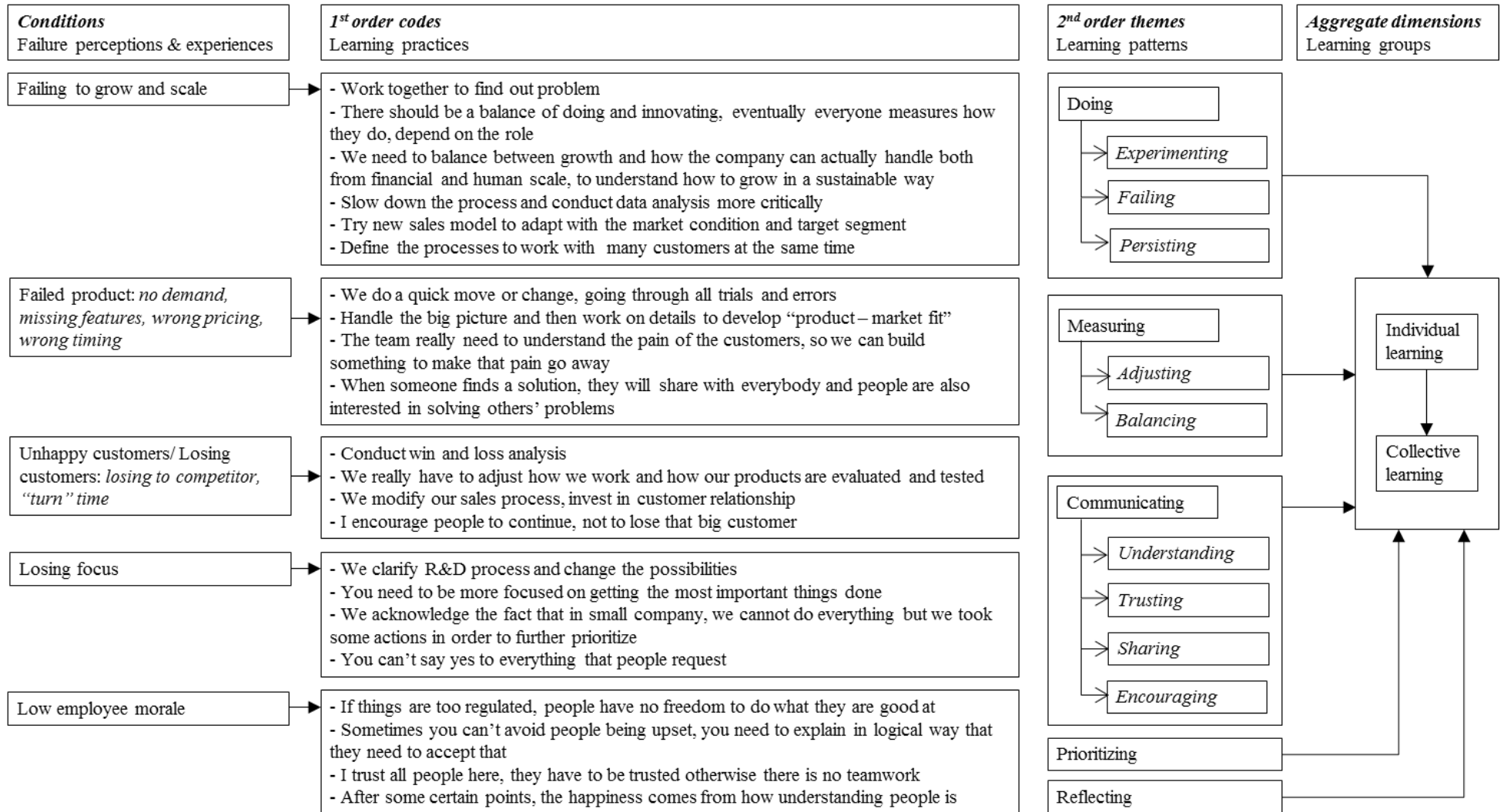
*“Everybody knows what everybody else is doing and how you are performing, therefore if you failed, you are affected emotionally as well, but you learn to evaluate your failure, stay positive and move forward.”*

*“Everybody has to learn and grow, learn to tackle those failures to move on and to develop as a company.”* (Manager – Sales)

Regarding cognitive learning, people learn to advance in their own field and learn new knowledge and skills of colleagues' fields. For instance, marketing and sales learn about the technical skills, understand the product while R&D and HR learn about business related knowledge. For those who previously working for big company with specialized responsibility and limited view of the whole business, it is also an opportunity to learn a new culture, to take wider responsibilities than focused tasks, and to have a big picture of the whole organization. Peters and Waterman (1982, cited in McKenzie and Sud, 2008, p.126) suggested that “one of the keys to achieving and sustaining high performance is a willingness to take risks and the ability to admit to failure and learn from it”. This is especially true with the studied companies where most of managers and employees both are

not risk adverse and be tolerant toward mistakes and failures. The diagram below shows different learning practices created from experiencing different kinds of failures, which helps to understand different learning patterns experience from individual level to collective level.

Figure 3: Individual and collective learning from business failure practices and patterns



The interview results show learning performed by both individuals and collectives (functional teams, cross-functional teams, whole organizational team) consists of five similar patterns such as *doing, measuring, communicating, prioritizing* and *reflecting*. However, in many cases, “I learn” might come earlier than “We learn”. The reason, firstly being that when a business failure occurs, although the whole team is working on finding the solution, it might take some time for an individual to realize which of his learning is shared by other members in the team. Secondly, it could be that the individual works on his own before seeking for teamwork in encountering the business failure; thus, collective learning is generated after his own learning. In short, there could be a time lag between individual and collective learning in the whole learning process. The interconnection between individual and collective learning is analyzed in the next sections where I provide my findings of different learning patterns mentioned above.

Before going further to each learning pattern, in understanding the entrepreneurial learning of different individuals in the two studied startups, it is important to keep in mind that these entrepreneurs are highly experienced; therefore, their entrepreneurial learning from failures in these companies might not be as significant as the personnel because they already learned from their past experience. They all have more than ten years of working experience and leadership; some failed with one startup in the past and experience the entrepreneurial learning from business loss. This is a good start for both startups and also a talent attracting element in recruitment because according to an informant in R&D, young graduates can see their learning possibility from seniors if joining the company. In fact, they influence the entrepreneurial learning of their personnel significantly due to their leadership style, and the flat and transparent characteristics of these two companies.

*“You never get to feel like an employee here. What I really appreciate and learn from the company is that our management board, they are very big guys but very humble even with personal things. In encountering challenges, they create the culture of “doing homework” before asking certain questions, so we learn by solving problem ourselves first and learn from them.”* (Personnel – R&D)

*“Our CEO is very approachable, he is interested in listening to the cases, and people are very eager to explain him how things are going. He has the overview of everything and he explains, summarizes information for us to know about the other functions of the organization. So in fact, when we have to deal with critical challenges or small failures, the younger people get to learn a lot from him.”*  
(Manager – Sales)

### **Learning through doing**

This way of learning is the most popular among answer I receive from the participants, and applied in most business failure cases. It is the process of experimenting, failing and especially persisting in creating value.

*“You have to be really agile and fast to change direction if something is not working.”* (Co-founder, CEO)

*“You are not giving up if you really believe and it really makes sense, you feel that it's right. You really have to push but at some point if you do realize that it's not gonna work, you can stop for other work.”* (Founder)

This pattern also tightly links to findings in previous studies of Cope and Watts (2000) and Smilor (1997 cited in Cope 2005), Politis (2005), Gribb (1997 cited in Cope, 2003 and 2005), namely learning from problem solving, learning by doing, learning from trials and errors, learning from consulting and observing peers and seniors . It can be considered as the foundation for all other types of learning since the persons, who do, would gain knowledge from their particular action.

*“You need to take initiative if you want to get thing done, you have to be active because things will not fall on your desk automatically. If you want to confront the challenge, make difference or make something happen, you have to make effort yourself.”* (Manager – Business Operations)

This learning is mainly performed at individual level first before this knowledge is sharing among the team or the whole organization. Take failure in product development as an example,

*“When I joined in 2011, the company was very new, a lot of things had to be done, we had to grow the company, expand customer base. At that point of time, there were a lot of drawbacks, and we provide product for a big company that was very demanding: they wanted this and that feature, this was not working. So there were a lot of big majors tasks need to be done.”* (Senior Developer – R&D)

In this situation, it is R&D or engineering team as the main learners, developing their own personal skills in IT.

*“Learning is mandatory in the IT field. When you develop some solutions, you start to work and you read the documentation. When there are too much complicating document, you just do it, learn from trials and errors. If there's somebody who knows the subject and is open, you can learn from him as well.”* (Senior Developer – R&D)

*“Engineering-wide, it's the same that you might not familiar with some component we have with the product or some component that we're using or tools that we are using, so when you start using it, you will start learning it and if you don't know, you ask for help or read manuals or reach something so that's learning of course.”*(Manager – Marketing & Product Development)

In the failure of acquiring new customers, similarly, there are lots of rooms for this type of individual learning, for instance.

*“I remember there was a particular company that we lost. We had two weeks to make it clear to them; one of our engineers went there and proved to them that we are not bad. The root of the rejection was they thought we were not as good as our competitor. We were working offshore, trying to figure out why we are bad. We found out some problems and we were able to fix it, did everything from our site here and that guy there was able to prove it and made the particular development to that company. Next year they came back to us.* (Senior Developer)

On the other hand, there are cases that the learning takes place at both individual and collective levels, namely the skills are shared among the team or built by the team and each

individual learns from performing their task. Results show that team learning happens very often, even on a daily basis because although everyone has their own responsibility, they ask for advice from people who know the matter better or share their experience with cases and problems.

*“They are learning by doing as we go along. We have been doing some coaching and we have used some outside help as well to form our sales and how we do our sales, the team has been good in that they have taken on what we have been building together but of course they're always find you when they need all the time on how to develop sales skills.”* (Sales Manager)

In addition, function teams have some working methods that facilitates team interaction and learning. For example, in product development, the R&D team in both companies learn and apply Scrum methodology, “a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value” (Schwaber and Sutherland, 2013). The key success determinant of this methodology is a creative, flexible and productive team which perfectly supports team learning. When there is a small business failure, they learn to have work spirit, to recognize everyone has contributed their best, so that they can continue to work it out together instead of blaming someone.

*“If there is a very difficult problem or critical challenge, we talk about it together for many hours, how to approach it, we figure out among ourselves, we find solutions and alternatives to tackle the problem, and we always act together.”* (Personnel – Sales and Customer Relationship Management)

*“When there is some critical challenges, it is easy to get a lot of attention from people in the company, so if we fail, we all learn from it to continue finding the solution.”* (Personnel – R&D)

### **Learning through measuring**

The nature of startup environment is highly agile, therefore, measuring and making adjustments or balancing the resources, not only to react to business failures but to

be more efficient and effective, is an important learning for success. This learning pattern takes place for example, “*when you tackle a problem as engineer or marketer or whatever position.*”

*“Some challenge, you have the learning experience of that and you see what you did the right, and you might probably think about how to do it differently next time or even more efficient, marketing-wide I've seen a lot of that, it's not always engineers are learners but marketers, it's like you do something, you measure what happened and then next time you try to do it more efficient, we do know all time A-B testing, which tests should that one blue or green, those sort of things are the first things we need to do, next level you think about how you generate traffic, does it work, does it generate your leads, why not, what happened... All that, that's constant learning. (Manager – Marketing & Product Development)*

Similarly, when growth and scaling goals are not achieved and not sustainable, everyone in the organization has the opportunity to learn to measure.

*“We had a few couple of good cases that make everything look quite good but then when we started and more time we realise that we have to go down back to the basics and do the basic stuff, it's not going to be as easy as it as we thought it would be to scale fast”. (Sales Director)*

Failing to recruit new customers also enables learning through measuring based on criteria set initially by the team.

*“We draw our roadmap quite frequently to make sure we build the right thing and the service. Of course, it's very important to listen to customers, why they left us and why basically what we should do to get them back, what should we do to get even larger customer base starting using our service, so it's heavily related to the future driven development of what we are doing.” (Marketing manager)*

### **Learning through communicating**

Learning of how to communicate effectively is an art, this includes learning to understand, trust, share and encourage people in the team or the whole startup organization.



This learning supports all other learning patterns, especially at collective level, and applied in all business failures.

*“When there is a problem or a failure, unlike in big companies that you can always look for someone who was not performing well, in a small startup like this, blaming doesn’t make any different. You have to communicate with each other as a team to solve it and learn from it together. And there are learning by doing as we go along.”* (Manager – Sales)

*“It’s always good to have discussion, we have some ideas, I have some ideas, maybe technical person has some ideas, then we come together to figure out the best possible solution. That’s always going on, that applies to anything like business, entrepreneurial reflection, not just business, mostly how to handle relationships... So basically it’s everything, like a business, a company within a company. We have very autonomous system here.”* (Sales & Marketing)

From the interview results, the popular learning process in team or cross-functional teams when there is business failure mainly is to discuss with each other to investigate the problem, recall past experience or do loss (failure) and win (success) analysis as a reflecting method, and find new solution together to encounter the challenge. After this process, and each individual enhances their shared understanding and knowledge to form new action. For example, one of the reasons leading to unhappy customers is the failure in providing good customer support in product delivery and customer service. The cause might be that there is a conflict between sales team or account management team and technical team.

*“We have open channels like Skype where we discussed with the customers success manager about technical stuff for example. And sometimes technical people and sales people don’t understand each other, salespeople are more optimistic and want to be nice to the customers while the technical people often are very harsh like no this can’t be done, this is not working and you can’t do this while the salespeople is thinking more about, you know, it’s kind of a diplomat, so that there’s a little bit different in cultures but we start to learn about each other*

*and the teams work quite well together. I think we learn from each other, at least I feel it myself, I'm learning every day something new from technical team.”* (Sales Director)

Another finding is the learning through communicating between seniors and other younger team members who have less experience. This takes place within functional team or cross functional team. For young professionals, learning comes from the combination of actively seeking for advice from peers and seniors, and self-learning.

*“For example, if there is some development thing happens, maybe the senior guy will take care of that development. Maybe some development task is to happen, maybe a junior guy design and send it to senior guy and he approves it's ok or he can say this is time-consuming, you cannot do it like this and they give it back and based on that we do the development so they are like the final checkpoint. But they are also flooded with a lot of work, so we have to reduce the traffic as much as possible. The motivation behind that is that I really like doing it, then I can learn from the best.* (Senior Developer)

*“The team is quite young; sometimes we seek advice from experience people. The advantage of being young is that you're going to try thing, you're very fearless and the disadvantage is also that you'll go too fast because you believe that you can control everything. So small failures is something we learn from all the time.”* (Manager – Business Development)

Some seniors participated in the interview also share that they learn from young people. This learning regardless of age and experience represents the beauty of learning through communicating.

*“Every team member, there is something I get inspired about or learn something from them. Positive energies of certain people are good, also the determination to deal with challenges or failures quicker.”* (Senior personnel – Sales).

In addition, in order to work as a team and to be more effective at individual level, it is about giving the right task to the right person, helping and encouraging each other, regardless of being a senior or a young professional.

*“I think you learn to give away some of your responsibilities so that you can focus and also teach each other people work with too if they need help. This business is very complicated, I even don't know myself, when you're fresh unless you're an engineer, you don't know too much, you don't understand anything, you need a lot of help in the beginning, maybe in the first six to twelve months, you just do it but you don't know anything so there's a lot of mentoring that's needed. Learn to respect and encourage, give complement sometimes, it's good in teamwork.”*  
(Account Manager)

*“I think that the feedback is one of the key things, in the learning process, you try something then you will find out what was the impact. In a small company you can see pretty much immediately what happened.”* (Customer Success Manager)

### **Learning through prioritizing**

This learning pattern is generated mostly when startup loses its focus; for example, focus on the wrong business model, wrong product, low revenue generating customers, etc.

*“Critical challenges help us focus our effort and really understand what we should do or shouldn't do. And maybe see what and where we might have done something wrong, or made a mistake or something else. But I think the most rewarding learning moments, of course some best learning experience is from some tough cases, but also in the calmer phases where we don't have urgent big critical things going on. In those moments, there's room (space and time) for inspiration, new ideas and executing ideas. I think those are as important as the tough time.”*

Not knowing how to prioritizing is in many cases the main cause for business failures. It is the key for productivity that both individuals and collectives should master.

*“We shift our attention to sell solutions that do not need so much right key support. And focus on them. And the ones which are support intensive or that*

*might need to be updated all the time we try to reduce our sales offering for that part, then revenues from most of the other customers compensates for the loss.”*

(Sales personnel)

*You have to prioritize between clients that somebody might say they are very interested.* (Sales personnel)

### **Learning through reflecting**

Similar to learning through communicating, reflecting places the foundation to other learning patterns. By reflecting, individuals and collectives understand the root of business failures, as well as recognize important learning to overcome these tough events. This learning at collective level aligns with the approach of Kolb (1984, cited in Politis, 2005) and Cope (2005) about team learning which is doing analysis of the failure and the relevant success, reflecting on past experience, sharing understanding knowledge and solving problem. For example, according to an informant, reflecting the loss of a major customer, understanding the customer need is not enough, right timing decide the success of the business case.

*“In the X case, we didn't have a software development, product development in the ready phase, we cannot perfect something and it's too late, so we had to sell when it's still in the working phase and as we went, we improved, we customized according to customers' requirements. It's very custom work even though is a product; still there is a lot of custom development in the software. This case was a failure from maybe from timing perspective, there are many factors involved but basically we went there with the product which was not complete or kind of in the halfway in development, and they also was doing their own. So, we had the opportunity in the beginning, very early, many years ago, but our product was not ready, somehow we did not communicate well maybe, so that was kind of failure. And then once they closed, it's very hard to get it. We just lost them; otherwise we can grow so much more.”* (Account Manager)

In addition, strengths and weaknesses of individuals and the team can be recognized through reflection so that new good skills are gained and people can specialize in what they are good at to accelerate the productivity.

*“I think that I have developed the personal level in that sense that I tend to be calmer now than before and not letting emotions take over. Especially when I compared to the bigger companies where I was working for something was not working, you could always look at some other teams, they are not performing but here in a small company, you have to realise that it doesn't make any difference. You can be negative wives, it only gets things worse. Now I'm calmer, not that easy to go out and try to find who is to blame, it doesn't make sense anymore. I think that where I have involved, especially to communicate with my team members as well that in this sort of difficult situations. (Sales Manager)*

To summarize, entrepreneurial learning as a combination of individual and collective experience is shown in all learning patterns: *doing, measuring, communicating, prioritizing* and *reflecting*. In most of the cases, collective learning is leveraged from individual entrepreneurial learning; at the same time, increase the individual learning. If we go back to Cope's (2005) research about five areas of entrepreneurial learning, all of the participants agree that they learn more about themselves, i.e. their strengths, weaknesses, the way they work and their personal growth. They learn about the startup and business management as well as relationship management. The only learning area that not many individuals in the companies have chance to experience is learning about the environment and entrepreneurial networks. However, if entrepreneurial networks cover a broader meaning than the network of entrepreneurs, namely this is networks of individuals with an entrepreneurial mindset; I believe those managers and employees in the two studied startups have experienced this kind of learning area. In short, the combination of two learning levels would grow the entrepreneurial mindset for both individuals and collectives, which becomes an important toolkit for personal development and for startup to manage some main critical challenges. In the next section, I will provide further analysis of this finding.

#### ***4.2.4 Entrepreneurial Learning from Failure to Manage Critical Challenges***

Managing critical challenges involving in the development of a startup requires the effort of all individuals. Thanks to the learning from business failures when encountering these challenges as well as the opportunity to involve in solving some strategic related problems in startup environment, individuals grow an entrepreneurial mindset naturally.

*“I think it (entrepreneurial mindset) does catch on, it's contagious. If you think about if I feel like I've become an entrepreneur if I get like an entrepreneurial mindset in this company, yes I do you know I start thinking the same way, like in how to do a specific strategic initiative or some kind of marketing effort or some kind of thing. I started thinking the same way how do I make it the leanest, the easiest possible way. We can't spend a lot money, we can't do this and that and of course I started to think with the same kind of context and the same kind of limiting factors that entrepreneurs in general consider but you ask me if I feel like I'm an entrepreneur, I don't but the working process that I utilize in my work, I think they certainly influence. I think for a lot of people here, it is contagious, people get enthusiastic, get excited and they want execute, they want to do new things, they want to create new stuff. And I think it is contagious. I don't know if I call it learning but I would call it spreading, it's growing.”* (Manager, Operations)

Especially, most of informants shared that they feel more confidence if they start their own business because they have had opportunity to see the big picture of the business when it faces with the failures and gain more experience with complex responsibilities. According to an informant, although the managers and employees may not always have an entire overview and the history of what entrepreneurs have, their “entrepreneurial preparedness” (Cope, 2005a; Harvey and Evans, 1995 cited in Cope, 2011) for future entrepreneurial activities increases over the “learning journey” at the startup.

*“Most people in our company like to say their mind; they are open to changes and failures. They like to work hard for what they like, not just come to work for their nine to five job, because they take it seriously and excited about it. People grow*

*their entrepreneurial mindset, it is contagious and it is a driving force within themselves.” (Manager – Business Operation)*

*“Without working in this startup, I would never think of setting up my own company in future because I’m afraid of the risk of failure. Here is a very good learning experience for me; I’ve got to see what it takes to run a business, tackle different kinds of challenges to grow it.” (Manager – Customer Relationship Management)*

How does this entrepreneurial mindset help with managing critical challenges? According to (Shepherd, McMullen & Jennings, 2007; Covin & Slevin, 1991; Zahra, 1993, cited in Shepherd, Patzelt & Haynie, 2009), in order to adapt to changing conditions or emerging threats, rapidly realize business opportunities, and survive or stay ahead in highly competitive environment, organizations need to become more entrepreneurial. This is the collection of entrepreneurial mindsets of individuals in the organization, combining with the collective entrepreneurial mindsets of different teams, which leads the entrepreneurial orientation of the startup as a whole. There are a number of attributes of entrepreneurial mindset, of which the learning patterns found earlier are among the core ones. In addition, it is the research by Ireland et al. (2003) and Shepherd et al. (2010) emphasize that individuals with an entrepreneurial mindset possess a number of growing important skills that can help the organization to confront critical challenges, which are “flexibility, creativity, continuous innovation, and renewal” (p.968), “rapidly sense, act, and mobilize” (p.62) under uncertainty or changing conditions. The interview results show the application of these skills in managing some major critical challenges that these two startups have been facing with, which will be presented in the following paragraphs.

From the interviews, there are two main elements that the participants choose to describe their perspectives on business success, business failure, and critical challenges, which are **customer** (customer acquirement and customer management) and **product** (new product development and IT support during customer is using the product). *Acquirement of long-term influential customers* and *continual development of high quality innovative products* themselves are all-the-time critical challenges for businesses. The products of

these two startups both require partial or special customizing services before and constant support after sales, therefore, the customer management and IT support are interrelated and affected by the critical challenge of *satisfying a growing number of customers with scarce resource*. This study will provide main entrepreneurial learning practices to encounter these three critical challenges in startups.

### ***Acquirement of long-term influential customers***

Although both startups have individual and business customer, their main revenues come from business customers, i.e. companies that need their products. In answering interview questions, the participants focus on business customer, therefore, influential customers means big companies and organizations. These customers give the startups benefits in terms of both financial value and branding value. The financial value can be seen in the number of projects the customer buys from the startup and/or the repeatability of the product to the rest of customers. The branding value is not only in the form public testimonials when companies show the customer list on their website and other channels, but the worthier is the customer's credibility and direct recommendation to new customers. This critical challenge requires not only the individual who work directly with the customer to take initiative in the sales process, but a special cross-functional team spirit to believe in the quality of the product and to be persistent in order to feel the pain of the customer and meet their expectations. This can only be achieved through excellent communication among individuals and teams.

*“Customers don't come like you knock on their door today, then the next week you have them as your customers. You need to understand that with very big customers, sometimes the buying cycles will be very long, and it can take you several years of hard work as you will fail many times. This is a crucial factor and a learning process for everyone.”* (CEO – Entrepreneur)

In addition, it is important to understand that failing to get a particular customer does not mean that the company loses this customer forever. Recognition of the importance of this customer and having continuous innovation creation will be the driven factors for the startup to do their best to win them back from the competitor.



### ***Continual development of high quality innovative product***

High quality innovative product is the foundation for a startup in technology to be established, survive and grow in this highly competitive market. The product should be developed from deep user understanding: what they do, how they feel, and what are their needs (Frazer, 2009, cited in Serrat, 2010). Therefore, although the R&D team is people who experience learning the most from failures when confronting this critical challenge, sales and marketing team also learn to better identify the pain of the customer to help their technical partners in developing future products. Learning from trials and errors and being open to failure are the key learning to overcome this critical challenge.

*“There are many experiments, if we fail something, we didn’t try to say “what if or we should have done this and that”, we just move on with new things.” (CTO)*

This learning reminds us about the story at the beginning of this study, Tara tried different plants and failed many times before she got the plant that even gave unexpected benefits to the region. It is entrepreneurial learning practice that is not only valuable in business context but several other aspects of life.

### ***Satisfying a growing number of customers under resource scarcity***

Successful start-ups are those with capabilities to persist and thrive in resource scarcity environment and entrepreneurs even enjoy constraints since they increase challenge and excitement. For the two studied startups, the main constraint is the lack of R&D human resources to provide support to customers in time. To manage this challenge, it is not simply by recruiting new personnel because recruitment of matching talents is always a challenge which takes a lot of time while the whole organization cannot wait for it. The key learning is the ability to see the big picture and effective communication externally and internally. What does it mean by seeing the big picture? Individuals regardless of which functional team in the organization should not only focus on their own important customer or project, which easily leads to the conflicts in setting priorities of where to put more resource. When they are able to evaluate at broader level of which customer and/or project is bring more value to pursue the company objective, their thinking and behavior will be adjusted from competitive to supportive to each other. They can even

work together to practice Lévi-Strauss's (1967, cited in Baker and Nelson, 2005) concept of *bricolage*, making do by applying combinations of the resources at hand to new problems and opportunities, to overcome resources constrained, which is a tool most entrepreneurs used.

At the same time, communication matters to help with decision making process and the flow of work, especially where their personnel and/or customers have different culture backgrounds, as shared by a participant:

*"I try to be a filter that somehow make them understand, try to minimize the misunderstanding. I learn more of how to care for other people, more responsible, learn the importance of communication and manage all the relationship between different cultures."* (Personnel – Sales and Customer Management)

This is a valuable learning for a salesperson when he believes a certain company could be a potential influential customer for the startup, he needs to make effort to communicate that persuasively to other people within the organization and know how to listen to reevaluate the case.

*"You are not giving up if you really believe in it and it really makes sense, you feel that it's right. You really have to push but at some point, then if you do realize that it's not going to work, you should stop for another one. It's quite tricky."* (CTO)

Another finding from the interviews is, sometimes in order to overcome this cultural difference, a local salesperson with strong personality and more experience decides to take the full responsibility if there is any financial loss. In an external communication case, once the priorities are set based on the mutual agreement, the salesperson whose customer is at lower priority need to learn to communicate with them for an extension of product delivery time. This seems to be a normal skill that all working people need to learn, however, in a startup scale, it is more stressful because interview results show that for many people, losing one customer is already considered a business failure. At a higher level, this skill directly facilitates relationship and network management to develop strategic partnerships with both internal and external individuals, which helps with reducing uncertainties and minimizing the loss (Saras, 2001).

## 5 DISCUSSION

The findings from interviews with 20 participants from two startups in technology industry provide several insights to help with addressing three connected questions raised at the beginning of this study. By taking the view of business failure as any form of consequences rather than business closure or business loss, the study opens broader understanding of entrepreneurial learning, both in emotional and cognitive aspects.

The first is a YES/NO question: *would the other individuals beside in a startup experience entrepreneurial learning from business failures?* The answer for this question depends on which definition of entrepreneurial learning and business failure we choose as the foundation. Therefore, there are two scenarios: (1) Entrepreneurial learning means learning performed by entrepreneurs to “facilitate the development of necessary knowledge for being effective in starting up and managing new ventures” (Politis, 2005). This perspective indicates the answer NO regardless of what business failure is defined. (2) Entrepreneurial learning is conceptualized from learning methods or learning process, which helps an individual to become entrepreneurial or to grow an entrepreneurial mindset. The answer is YES in this particular case study where the participants have different backgrounds, past experiences, perspectives about business failure (even among entrepreneurs), and only one of them considers it as business closure or bankruptcy. I had the fortune to interview three entrepreneurs from the two startup cases: a founder/CTO, a CEO and a co-founder/CEO who provided different definitions for business failure. One emphasized a business that did not solve meaningful problems, namely it was not useful for the people and community, for instance causing people not to have a meaningful work life. The two others saw business failure every time the company lost a customer to the competitor because it affected the growth of the business. The learning varies accordingly. Regarding non-entrepreneur individuals, their experience of business failure might be similar to entrepreneurs’ at similar or different scales, or completely different. Thus, this shapes their distinct sense making of business failures. In addition, individuals from different functions have different perspectives about failures since they tend to relate the contribution of their team to the performance of the whole organization. For example, an

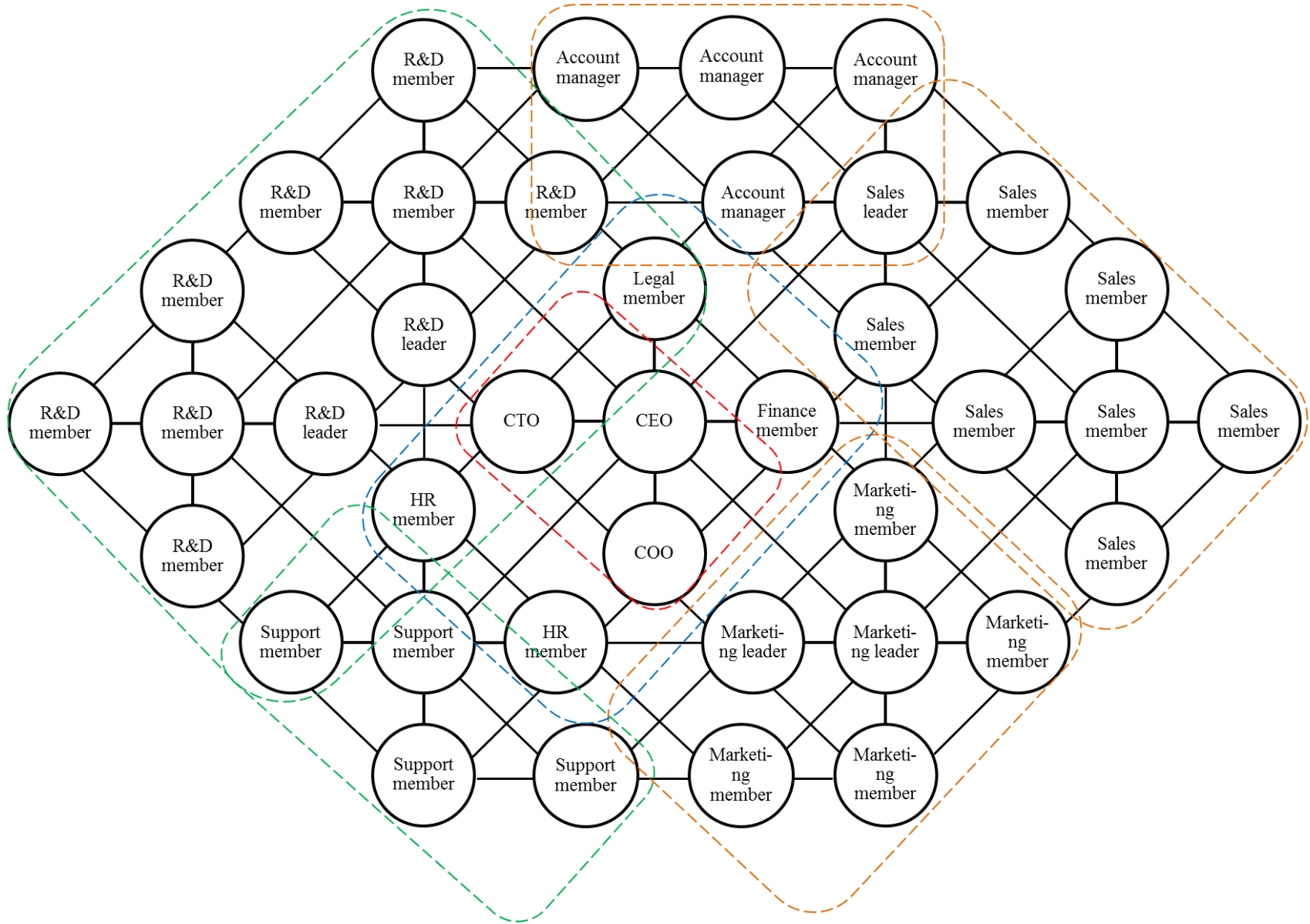
engineer considered a failed product as a failure because it wastes the company's resources. A salesperson saw losing a customer as a failure since it affected directly the revenue growth; at the small scale of startup, this was similar to the view of the entrepreneurs mentioned above. A marketing person shared that if the solution solves no problem in the market, it was a business failure. All of these different perspectives lead to different learning experiences.

Second, *if answer for question 1 is yes, what would they learn at individual and collective levels?* Popular learning individuals share at personal level include learning through *doing* (experimenting, failing, persisting), *measuring* (adjusting, balancing), *communicating* (understanding, trusting, sharing, encouraging), *prioritizing* and *reflecting*. These learning methods align with prior research on entrepreneurial learning in general such as Rae and Carswell (2000 cited in Cope, 2005), Cope and Watts (2000) and Smilor (1997 cited in Cope 2005), Gribb (1997 cited in Cope, 2003 and 2005). The learning knowledge by individuals supports or even being the condition for the learning patterns performed by collectives and vice versus. These together enhance the overall knowledge as well as grow entrepreneurial mindset individually and collectively. Take learning through doing as an example, this is majorly the foundation for other learning patterns. Individuals perform the action of doing, and they learn how experimenting, failing and persisting in what they are doing will in the end lead to valuable outcomes. For instance, in R&D team, the engineers experience this learning in many stages of the product development as well as support services. They understand that there is no such "one shot" to create an ideal product that meet the customer need perfectly; in fact, the product is fully developed through many trials and errors. This process involves individual learning to measure to make right changes for each steps or tasks they perform. In addition, learning to communicate effectively would help the learning knowledge to be shared among team members; in other words, the individual learning is moving toward the intersection with collective learning. At the same time, collective learning through team-required performing actions such as team ideation, discussion, problem solving, reflection, will add knowledge to individuals. This drives collective learning to merge with individual learning. As a result, the whole process of realizing, acquiring, storing, giving and taking knowledge between individual learning

and collective learning will enhance the organization stock of knowledge, and increase high performance collaboration. Recall the work of Anderson and Lewis (2004) from chapter one, this is also an example of the positive relation between collective learning and individual learning rates and knowledge. Similar to R&D, other functional teams experience this learning process and knowledge will also be shared across the teams.

The diagram below shows an illustration of the dynamic learning network in the interviewed startups, where the connected “keychains” (circles) are individuals of different roles, and the rectangles created by dashed lines represent different teams such as management team, R&D, sales, marketing, HR, support, finance, legal, etc. The overlapping areas of rectangles indicate the cross-functional team interactions and knowledge exchange. Through teamwork and communication, each member experience entrepreneurial learning within their team individually or collectively. The individual and/or collective learning knowledge can be shared within one team and with other teams. This sharing action is performed by either an individual or the whole team.

Figure 4: The dynamic learning network inside startups



It is important to consider that beside the basic functional teams, there can be some other possible ways to form the teams (rectangles) where the team members (“keychains”) are from different basic functional teams. These teams might be delegated for regular responsibilities or in response to critical events, which is similar to the “emergent response groups” in the research of Anderson and Lewis (2004). In addition, these scholars discover that “knowledge depreciation” and “forgetting” participate in the whole learning process of both individuals and collective. Therefore, the more “keychains” are added, the larger the network, the harder it might be that the knowledge can be transmitted completely or the less chance of interaction between distant “keychains”. As a result, the more possible shared learning knowledge might be lost from individual to individual, and/or from collective to collective. In other words, small startup environment might preserve the knowledge better than in bigger organization.

Third, another YES/NO question, *would this entrepreneurial learning is the key to manage critical challenges?* Before answering this question, based on the information provided by the participants; there is a link between business failures and critical challenges: most of business failures occur when the startups are encountering critical challenges. Therefore, the more startup learns from failures, the lower the possibility of facing with another failure or the less critical the challenge becomes. It is the combination of learning about specialized knowledge such as technical, marketing, sales, etc. skills, soft skills and entrepreneurial learning that arises in the whole learning process. By interpreting this fact, the answer for the third question seems to be ambiguous because managing critical challenges would require different tools, including industry specialized tool, professional tool, and technical tool, etc.; hence, entrepreneurial learning is only one of them. On the surface, the importance level of entrepreneurial leaning tool has yet to be discovered in this research either. However, if we take a deeper look at the findings, entrepreneurial learning plays the role of learning technique to accelerate the learning of different tools listed above. The learning practices identified in the data analysis section are across all roles although the level of application might vary. For example, in the cases, engineers learn the best from doing, not only by reading the document and strictly follow the instructions. Their product development process involves continuous experimenting,

failing and persisting to deliver the desired outcomes. At the same time, communicating within their R&D team and with other teams brings in valuable inputs for their work. A marketing officer shared that he joined the startup since its early days, everything he has learnt about marketing is by trying different tools and methods, observing other teams and seniors to learn about other aspects of the business and he feels more prepared when thinking about pursuing entrepreneurial path. An account manager learns by recalling her experience when working in previous companies and taking initiative when applying to the new context under resource constraints of the startup.

In fact, most participants do not realize that they have been walking on their entrepreneurial learning journey at different stages because their perception of entrepreneurial learning is learning to become an entrepreneur who has vision, enjoys taking risk and be able to cope with complex uncertainties to turn his idea into a venture. Understanding entrepreneurial learning is a learning method to shape an entrepreneurial mindset which would boost the confidence of individuals in a startup since they know this is the way entrepreneurs learn and develop the business. The flat characteristic of the startup, therefore, not only reflects a non-hierarchy organization structure but implies that everyone can experience entrepreneurial learning. Later, some of them may pursue entrepreneurial activities, i.e. setting up new venture, some may not, instead, they continue their professional path with an entrepreneurial mindset which is a set of attitudes such as not being afraid of challenges, embracing failures as learning experience, being active in taking initiative, learning from experimentation to “search for new possibilities as a coping strategy to reduce uncertainties” (March, 1991; McGrath, 1999; Minniti & Bygrave, 2001; Sarasvathy, 2001, cited in Politis, 2005) in their working field.



## 6 CONCLUSION

### 6.1 Research Summary

The purpose of this study is to explore the role of entrepreneurial learning from failures in confronting critical challenges in startup context. It emphasizes that in order to understand learning and the management of failure events, it is important to understand how individual learning and collective learning in the creation of venture take place and interconnect with each other. The study focuses on answering three questions. First, *who experiences entrepreneurial learning from failures?* This implies both individual and collective learning levels. Second, *what are the learning methods and knowledge?* This is answered by four main learning patterns: learning by doing, learning through measuring, learning through communicating, learning through prioritizing and learning through reflecting. In addition, the study identifies different types of critical challenges and corresponding failures, which different learning practices are generated and applied. Last, *how does the entrepreneurial learning help to manage critical challenges?* It was found that growing entrepreneurial mindset as the final outcome of the learning process is the key to manage critical challenges. The findings and discussion of this study contribute to the research in entrepreneurial learning from failures in startup context. To address these questions, the study was initially planned to investigate a single startup (single case study) who experience failures from encountering critical challenge. Later on, the single case study was enriched with the participation of a younger startup as a supplement. The research was conducted through interviews with 20 participants who are founders, CEOs, managers and employees and observation of the workplace.

The findings show that not only the entrepreneurs but other individuals in the two startups, the managers and the employees, experience entrepreneurial learning from failure. This learning includes overcoming negative emotions such as stressful, frustrated and uncertainty of the future of the startup. In fact, this learning does not occur only when they experience the failure but throughout the time they encounter challenges. Working in a startup, especially in early stage, usually requires individuals to be in charge of different responsibilities; therefore, failures will trigger the negative emotions. The ability to include

possible failures as a part of any project is a valuable learning for them. Regarding cognitive learning, different learning methods, which are in line with prior research about entrepreneurial learning from failure, are applied by interviewees. Typically, it is learning from experience. All participating individuals in the two startups learn by doing, trials and errors or learn from peers and seniors. With the opportunity to work closely with the entrepreneurs in encountering critical challenges and experience different kinds of failures, the employees build up their ability to have an overview of the business activities as well as an eye for detail of their tasks, practice similar ways of learning and gradually develop an entrepreneurial mindset. Therefore, they might have better entrepreneurial preparedness for their possible venture in the future.

## **6.2 Practical Implications**

According to Covin & Slevin (2002, cited in Ireland et al., 2003), “an entrepreneurial mindset is important to individual entrepreneurs as well as to managers and employees in established firms to think and act entrepreneurially” (p.967). The study suggests three main learning practices for startups with similar business model to overcome three main critical challenges. Each learning practice at the same time helps with nurturing entrepreneurial thinking and behavior for each individual in the startup. First, long-term influential clients are the valuable pedals for new customer recruitment, therefore, acquiring these influencers is a challenge that many startups fail to encounter or have to go through several failures to be successful. Key learning from this failure includes persistency and taking initiative in both product development and sales process. Second, startups in technology are born and develop thanks to their innovations, to identify the innovative products that have high value, and to create new high quality product is the next critical challenge. Being open to failures and learning from trials and errors prove to be effective tools to overcome this challenge. Last, under the resource scarcity in startup, satisfying a growing number of customers and develop their loyalty is a big challenge. To maintain efficiency, it is recommended to develop the ability to see big picture and improve communication within team and among cross-functional teams. The three learning practices are especially suitable for startups at early stages because of their small and flat

characteristics. In short, entrepreneurs and managers of the startup should always consider developing learning from failure culture since the beginning to leverage the success of a venture in long-term.

### **6.3 Limitations of the study**

The first limitation of the study is that I could not have interviews with all individuals in the startups, in fact, only representatives from three levels: founders, top management team and employees participated in the interview. In addition, the study lacks input from former managers and employees who went through main critical challenges since early stage of the startups. Nevertheless, it was possible to get rich data for the study since there were two startups participating and all of the interviewees had worked for the startups for an enough period of time to experience major challenges and failures. The supplementary startup proved to be very beneficial for the study since there is a lot of information from people who have worked there since early stage.

Second, the two startups have not experienced failures that lead to heavy financial loss, which is the main cause of grief emotions. Therefore, the emotional aspect of the learning has not been evaluated thoroughly. However, it shows the fact that other types of negative emotions from failures are able to generate entrepreneurial learning, which is persistency and positivity. It especially implies one of the key characteristics of individuals with an entrepreneurial mindset: tolerant attitude toward failures.

### **6.4 Suggestions for Further Research**

The main aim of the study is to understand the role of individual and collective learning in the process of developing a business, focusing on learning from business failure in encountering critical challenges. It provides the first step to explore these learning dimensions in startup, specifically Tuxera and Bitbar. There are four areas of further studies that I would suggest. First, since both startups participating in this research are in technology industry, conducting similar studies in different industries would provide a broader view of the research topic and discover which elements that encourage or discourage entrepreneurial learning. Second, one of the learning patterns found in this

research is learning through measuring; however, it does not include the measurement of collective experience of failure and collective learning from failure. Therefore, a measurement method would bring in high value for both research and practice, since it might help startups to develop a process of how to develop positive learning outcomes and entrepreneurial mindsets. Third, the learning network in discussion shows basic functional teams, and the possibility to form new teams whose members are from different existing teams to meet emerging needs in the organization. That how these “emergent response groups” (Anderson and Lewis, 2004) are formed and what value this organizational flexibility might bring in have not been found out, thus, this could be a relevant room for research. Finally, while conducting the interviews, I noticed that there were a number of employee interviewees who do not realize the learning experience which helps them develop a learning process to shape an entrepreneurial mindset in performing tasks and prepare for their possible entrepreneurial activities. This conscious and unconscious learning from failure raise a need for in deep study to build an entrepreneurial learning model for non-entrepreneur individuals.

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# APPENDIX

## Interview Questions

### 1. Introduction

Thanks very much for letting me come to speak to you as part of my study.

**Introduction to my person and the study:** I am student at the Aalto School of Business, and in the course of my master thesis, I am studying the entrepreneurial learning from key challenges involved in the development of small and medium businesses. These challenges will help to spot new opportunities and improve business processes.

This kind of learning takes place through different type of events, for example: “learn from what works” and “from what doesn’t work”. However, my research focuses on learning from business failures when your company encounters critical challenges. The entrepreneurial learning here can be understood as: *learning from experience, learning from peers; learning by doing; learning from feedback from customers and suppliers; learning by copying, learning by experiment; learning by problem solving and opportunity taking, learning and from making mistakes.*

### 2. Entrepreneur/Firm owner

**2.1** Can I start by asking you about your background and jobs you have held before you actually decided to start your current business?

**2.2** How did your business get started, and develop until do date?

*Probe:* Brief story about how the business has been developing so far

**2.3 a)** How you define business success? **b)** And how you define business failure?

**2.4** *If we would agree that business failure means the termination of an initiative that has fallen short of its goals. It can be project failure within entrepreneurial organizations where projects can be new ventures, new products, new services, entering new markets, and/or implementing new processes.*

**a)** What do you think was the biggest failure your company went through? Are there any losses?

**b)** How did it affect the company, and how did you react to the challenge? Can you describe the general steps that you and the company use to face with the challenge? You may want to give some example of big challenge that your company has successfully gone through?

*Probes:* e.g. any changes in your employees' roles and responsibilities, your networks and social relationship, etc.

**c)** What about the impact in terms of **emotional aspect**? If there is any loss, how did it affect you?

**d)** What you think were the main reasons for the failure?

**2.5** As the founder, what did you learn from that experience? And how did you learn?

- *Awareness of strengths, weaknesses, skills, attitudes, belief, and areas for development.*

- *Entrepreneurs are able to shape their perception of failure, rebuild their self-confidence, and renew focus to be ready for new business activities.*

**2.6.** Do you think it encouraged entrepreneurial learning in your company? and how?

*Probes:* Definition of entrepreneurial learning - a dynamic process of awareness, reflection, association, and application. Learning areas include: (1) learning about oneself, (2) learning about the business, (3) learning about the environment and entrepreneurial networks, (4) learning about small business management and (5) learning about the nature and management of relationships.

### **3. Management team/Hire executives**

**3.1.** *Can I start by asking you about your professional background, and a brief description of your current role in this company?*

**3.2 a)** How long have you been working here? **b)** What do you think was the biggest failure your company went through?

**3.3 a)** How you define business success? **b)** And how you define business failure?

**3.4** *If we would agree that business failure means the termination of an initiative that has fallen short of its goals. It can be project failure within entrepreneurial organizations*

*where projects can be new ventures, new products, new services, entering new markets, and/or implementing new processes.*

**a)** What do you think was the biggest failure your company went through?

**b)** How did it affect the company, and how did you react to the challenge?

*Probes:* e.g. any changes in your employees' roles and responsibilities; impact in terms of emotional aspect, your networks and social relationship, etc.

**c)** What you think were the main reasons for the failure?

**3.5** What did you learn from that experience? And how did you learn?

*Probes:* any reflection, evaluation and so on

**3.6.** Do you think the whole company has learned from the challenge? And how?

**3.7 a)** Which colleagues were particular important in the learning process? **b)** And who did influence you most in this process? And how?

#### **4. Employees**

**4.1** Can I start by asking you about your professional background, and a brief description of your current role in this company?

**4.2 a)** How long have you been working here? **b)** What do you think was the biggest failure your company went through?

**4.3 a)** How you define business success? **b)** And how you define business failure?

**4.4** *If we would agree that business failure means the termination of an initiative that has fallen short of its goals. It can be project failure within entrepreneurial organizations where projects can be new ventures, new products, new services, entering new markets, and/or implementing new processes.*

**a)** What do you think was the biggest failure your company went through?

**b)** How did it affect the company, and how did you react to the challenge?

*Probes:* e.g. any changes in your employees' roles and responsibilities; impact in terms of emotional aspect, your networks and social relationship, etc.

**c)** What you think were the main reasons for the failure?

**4.5** What did you learn from that experience? And how did you learn?

*Probes:* any reflection, evaluation and so on

**4.6.** Do you think the whole company has learned from the challenge? and how?

**4.7 a)** Which colleagues were particular important in the learning process? **b)** And who did influence you most in this process? And how?

**5. Additional questions during the interviews**

**5.1** Please evaluate your leadership. Do you think you are a micro-manager? i.e. how much do you want to involve deeply in detail of what and how your employees are working to make sure that they are doing right from your perspective, you want to be noticed frequently about the task process?

**5.2** How often do you empower your employees, encourage them to taking risk, being innovative, dealing with competitive aggression and experiencing autonomy? Do you encourage collaboration and open communication and promote trust at the workplace?

**5.3** Do you think in a small company, most employees have the opportunity to work on complex responsibilities, have the autonomy and have a clear relationship between effort and reward? Please explain.