

Creativity in crisis: creative climate of failing startups

How does crisis influence the creative climate of failing startups?



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Success is going from failure to failure, without losing enthusiasm.

- Winston Churchill



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ABSTRACT

Entrepreneurship is a bumpy road and 9 out of 10 new ventures fail. At the same time, it has long been understood that creativity is an important determinant of a startup's performance and success. Previous work has looked at the role of the work climate on the creativity of organization but it has remained static and failed to address the specific case of startups. This study focuses on understanding the processes of failure by looking at how crisis influences the creative climate of new venture teams. Using semi-structured interviews, members of a failing startup were asked about their perceptions of their work environment before and during the crisis. From this we could derive the creative climate profile of each phase. In the success phase, the startup showed high intensity of climate factors favorable to creativity and low levels of factors detrimental to creativity. In the failure phase it showed opposite values. In particular, control and time pressure were the most recurring issues expressed by the participants. The results of this research clearly show that climates are dynamic and that crisis induces behaviors detrimental to a climate for creativity. These insights can help founders get awareness of their response to crisis and regain some control over the failure process.

Key words: startups, creativity, teams, climate

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INTRODUCTION

1. Research goal and research question

The topic of team creativity has recently come to the forefront, as organizations and specifically startups inevitably tend to rely on teams to develop their innovative activities (Anderson et al., 2014). Thus, creativity is acknowledged as a necessary trait for startup founders, whether it is used to craft ingenious strategies or recognize opportunities. It is also part of the overall quality of the entrepreneurial team, which is strongly connected to venture success (Chen, 2007). But when being creative in itself is not an easy task, doing so as a group can be even more challenging. In many ways, the team is seen as hindering creativity via social inhibition and cognitive interference (eg: social loafing, production-blocking). On the other hand, it also has potential to increase creative performance given the right social and cognitive stimulation (eg: upward comparison, divergence) (Anderson et al., 2014). Therefore, creating the right climate for creativity is a point of concern for organizations and startups alike.

Although leaders can influence the creative climates of their companies (Shalley & Gilson, 2004), they might need to adapt to circumstances. Thus, climates are not static but evolve with the situation of the venture. When all goes well, it might be easier to engage a creative climate, but what happens when a crisis arises? At the time when the startup needs creativity the most, can entrepreneurs manage to foster it or would they give in to pressure?

The purpose of this study is to investigate the creativity climates of startup teams in failure. It will include a theoretical overview of the topics of creativity climate and startup failure as well as an empirical study to explore the creative climate profiles of those startups in crisis. In its broad context, this study aims at understanding the differences in work environment of once successful and now failing startups and the resulting climate for creativity. The question and sub-questions that will guide this research are as follows:

RQ: How does crisis influence the creative climate of failing startups?

SRQ1: How do teams in failing startups experience their creative climate before the crisis?

SRQ2: How do teams in failing startups experience their creative climate during the crisis?

SRQ3: What was the perceived impact of crisis on the team's creativity?

2. Purpose of research and contribution

Considering the high failure rate of early stage startups, it is important to identify the processes for success or failure. Venture capitalists and founders alike would benefit from a deeper understanding of those mechanisms that support the long-term success of a startup. Even more relevant in the first phase of venture creation is the ability to avoid pitfalls and mistakes that could lead to the firm's downfall.

There is a consensus on the importance of creativity for startup survival and success (Anderson et al., 2014; Van Praag & Versloot, 2008) as well very strong support for the influence of climate and group processes on team innovativeness. For example, a recent meta-analysis validated Anderson & West's (1998) Team Climate Inventory factors: vision, participative safety, task orientation and support for innovation (Hülsheger, Anderson, & Salgado, 2009). But while the current academic literature informs on the factors that foster team creativity, the studies have mostly looked at the link between work environment and creativity at a fixed point in time. They might not be adapted for the specific case of startups evolving through dynamic phases of change. In particular, there is still a gap in understanding the mechanisms through which negative circumstances impact the creative climate and the consequences it might have for furthering or getting out of failure.

This study attempts to contribute to the creativity and entrepreneurship literature by looking at the creative climates of failing startups, that is, how the team members of such companies perceive their work environment and how it influences their creativity (Amabile et al., 1996). More precisely, this research aims to learn about the differences in the creative climate between positive and negative circumstances. Understanding these differences through the perspective of the startup team could inform on the role of circumstances on company creativity.

3. Outline of the thesis

Chapter 1 sets the theoretical background of the study and the resulting framework that will guide the empirical part. The literature review explains the specificities of startups and startup teams and reviews the research on antecedents to creative climates. Additionally, it presents the threat-rigidity theory (Staw, Sandelands, & Dutton, 1981) used to understand the effects of negative circumstances on the work environment. Chapter 2

represents the methodology section, describing the methodology and research design selected to conduct the empirical part of this study. In Chapter 3, the results are presented, including a cross-case analysis. Finally, Chapter 4 concludes the thesis with a discussion of the findings, their implications for research and practice, the limitations of this study as well as avenues for further research.

CHAPTER 1: THEORETICAL BACKGROUND

1. Introduction

Starting from the premise that “most new ventures fail” (Timmons & Spinelli, 1994), this study investigates what happens to the creative climate in startups under pressure. As creativity is a key prerequisite for innovation, the focus of this study is to explore the perceived differences in the work environment between positive and negative circumstances, and the resulting creative climates.

As startups are a specific type of organization, the literature review starts by describing the startup domain, defining the boundaries of failure and discussing the specificities of startup teams. Innovation in itself is the organizational goal, but it always starts with creativity, thus the literature review continues with a difference between the two and their relationship. The sum of individual creativities results in organizational creativity and the aggregation of attitudes and behaviors make up the organizational climate. Several factors in the work environment can serve to support the creative behavior by acting as conducive or obstructive influences. These can be grouped in factors relating to the job characteristics, the startup team as well as the company processes. These are summarized in a list of antecedents including their effect in Table 2.

However, the work environment is also impacted by the current circumstances that the venture is in and some effects can be seen following negative events such as decline or financial stress. The threat-rigidity theory (Staw et al., 1981) is a useful model to understand the organizational response to negative circumstances. It explains the rigidity occurring via a restriction in information processes, a constriction of control and conservation of resources. These are theorized to have effects on the work environment that will negatively impact factors such as idea support, bureaucracy and resources, which is in turn known to hinder creativity. A summarizing framework is presented in Figure 5.

2. Creativity in startup teams

2.1. Building blocks

2.1.1. Systematic literature review

In order to identify the research gap, a systematic literature review has been conducted on the topic of creative climate in startup teams. This method provides the advantage to ensure quality and contributes to offer a transparent and replicable process, hereby minimizing bias (Tranfield, Denyer, & Smart, 2003).

The databases searched in this review were the ones deemed relevant for entrepreneurial, creativity and organizational research: Business Source Elite, EconLit, Emerald Insight, JStor, LexisNexis, Oxford Journals, PsychArticles, Psychology and Behavioral sciences collection, SAGE Journals online, Science Direct, Springer Link, Wiley Online Library. More general databases were searched as well: Web of Science, Scopus and Google Scholar.

The search terms used included words to describe the creative climate in startups (“creative climate*” OR “creativity” OR “innovation*” OR “creative culture”) in conjunction with words to describe startups (AND “startup*” OR “start-up*” OR “new venture*” OR “organization*” OR “organisation*” OR “firm*” OR “team*”). Relevant records were retained from the social science, humanities and business administration areas, with a date between 1980 and 2016. A first screening was made to remove duplicates and select relevant publications by looking at the titles. A second screening included reading the abstracts to ensure that the papers would cover either (1) creativity factors and/or (2) the context of startup teams. A final total of 47 sources have been included in the review on creative climate in startups.

| | | |
|-----------------------|---|-----|
| Identification | Records identified through database searching | 237 |
| Screening | Records after duplicates removed | 189 |
| Eligibility | Full texts assessed for eligibility | 104 |
| Included | Studies included in qualitative synthesis | 47 |

Table 1: Systematic review report, adapted from PRISMA (Moher, Liberati, Tetzlaff, & Altman, 2009)

2.1.2. When is a firm considered a startup?

In the literature, startups often represent a stage along a company’s life cycle: they are understood as young companies evolving in the early phases of their development. The

idea that enterprise growth follows life cycles was laid by the groundwork of Steinmetz (1969) and Griener (1998): a company passes through several identifiable stages as it ages, facing different challenges each time. While there is variation in the number of phases identified across authors, there seems to be a consensus around three main phases: start, growth and maturation. In particular, the starting phase is characterized by few years into business, few employees and limited revenues. Levie & Lichtenstein (2010), who reviewed 104 stage model frameworks and propose a new dynamic vision of SME growth, which, in the case of startups would involve the activities of market introduction, customer acquisition and setting up of organizational procedures.

Therefore, for the purpose of this research, startups will not be defined by conditions of age or size, as these will vary depending on context and industry. Rather, the definition of Klotz, Hmieleski, Bradley, & Busenitz (2013) will be retained, so that a **startup** is understood as “**a firm that is in its early stages of development and growth. In general, such firms are in the process of bringing their initial products/services to market, forming a customer base, and putting into place organizational processes and procedures.**” (p.227).

2.1.3. The specificity of startup teams

Startup teams are not like any teams as they have a deeper impact on the company and its future. They are also referred to in the literature as founding teams, venture teams, or entrepreneurial teams. Kamm, Shuman, Seeger, & Nurick (1990) looked at teams in the process of venture creation and described them as being comprised of two or more people participating actively in the development of the company in which they have invested a significant financial interest.

The criterion of actively contributing to the development of the venture is important, as it would else allow including in the definition individuals like investors. They might likely have high financial stakes in the startup and advise to some extent; however, they have no involvement in the firm's operations (Cooney, 2005). On the other hand, the focus on “financial interest” limits the definition of startup teams, as it excludes team members having an important leadership position, without holding shares (Klotz, Hmieleski, Bradley, & Busenitz, 2013). Klotz et al. therefore advise to define **new venture teams** (NVTs) as “**the group of individuals that is chiefly responsible for the strategic decision making and ongoing operations of a new venture.**” In so doing, NVTs include all

team members that actively participate in both the development and implementation of the evolving strategy of new ventures (e.g., setting the vision and mission, acquiring resources, recruiting employees).” (p.227-228).

Startup teams are unique in the way that they are the ones to drive their company through its development as well as shape the new organization. In particular, although some ventures will have an appointed leader, all members of the team *have to* exert leadership as they have no processes to fall back on (Ensley, Hmieleski, & Pearce, 2006). Thus, they are the ones responsible to create policies, processes and a culture for their new company (Klotz et al., 2013). As such, they enjoy much more discretion in their actions than regular teams (Hambrick & Abrahamson, 1995) and this includes the degree and extent to which the startup will show creativity.

2.2. Creativity in startups

2.2.1. Creativity as a prerequisite to innovation

As the terms innovation and creativity have often been used interchangeably, it is important to clarify the distinction between the two. Amabile (1988) notes that “creativity is the most crucial element of organizational innovation, but it is not, by itself, sufficient” (p.125). Innovation is the outcome of employees’ personal creativity on the workplace, fostered by organizational mechanisms that promote it (Bharadwaj & Menon, 2000). So when creativity will make connections in the new way that transform into new ideas for the workplace, innovation will have to turn those into a business reality, focusing on providing direction and organization (Mauzy, Harriman, & Harriman, 2003). Therefore, a creative idea will only turn into an innovation if the individual or the organization takes concrete steps to make it happen.

The most integrative definition of both terms has been offered by Anderson et al. (2014): **“Creativity and innovation at work are the process, outcomes, and products of attempts to develop and introduce new and improved ways of doing things. The creativity stage of this process refers to idea generation, and innovation refers to the subsequent stage of implementing ideas toward better procedures, practices, or products.”** (p. 1298). This relationship can be visualized in the simple illustration of Figure 1.

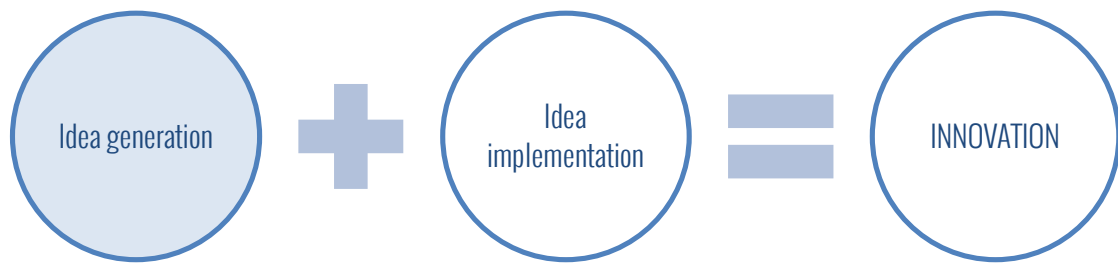


Figure 1: Illustration of the relationship between creativity and innovation based on Anderson et. al (2004)

As innovation is important for startups success, the necessary position of creativity in this process makes it the chosen focus for this study, as highlighted in color above.

2.2.2. Creativity in organizations

Creativity in an organizational context takes into consideration the individual as well as influences from the environment. The research on creativity originally focused on the individual and it is indeed undeniable that ideas originate from people's minds, so that an organization is only as creative as its individuals (Anderson, 1992). While the individuals are at the core of the creative process, the earlier focus on personal characteristics led to the mystification of the lone genius, exceptional thinker divergent from the societal norms (Montuori & Purser, 1995).

As the individuals are embedded in a certain environment, they are also impacted by it, which in turn has an effect on their creative outcome. Several influential models are since then explaining creativity in the context of organizations, taking into consideration both the individual and environmental factors (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Anderson & West, 1998; Ekvall, 1996). The most accepted definition of **creativity** in an organizational context has been given by Amabile et al. (1996): **"a product or response [that] will be judged as creative to the extent that (a) it is both a novel and appropriate, useful, correct or valuable response to the task at hand, and (b) the task is heuristic rather than algorithmic"** (p.35).

2.3. Group creativity

Startup teams are also responsible for their creative output. Particularly in innovative environments, they often have to generate ideas collectively. Group creativity is a complex phenomenon under the influence of several variables: group structure, member individualities, as well as situational variables. They will all interact together to form group creativity as illustrated in Figure 2.

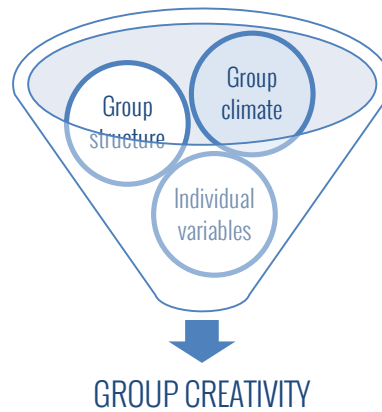


Figure 2: Illustration of the components of group creativity

2.3.1. Individual member variables

Group creativity is influenced by the individual creativity of its members. Thus, not all people are equally creative and their propensity to be is function of several factors. It is at the intersection between personality factors, antecedent conditions, knowledge, cognitive style and abilities, motivation, as well as contextual and social factors (Woodman et al., 1993). Thus, some personality traits have been linked to individual creativity: autonomy, independence of judgment, broad interests and sense of self as creative (Barron & Harrington, 1981; Gough, 1979; Shalley & Gilson, 2004). In her Componential Theory for Creativity in the workplace, Amabile also identifies knowledge (domain-relevant skills), cognitive abilities (creativity-relevant skills) and (intrinsic) motivation as interacting factors leading to creativity (1988).

Domain-relevant skills refer to the factual knowledge and technical skills that an individual has in a particular domain. Those skills depend on people's own innate perceptual, cognitive and motor abilities, which are then influenced by formal and informal education in the domain. "Domain-relevant skills constitute the individual's 'raw material' to productive creativity" (Amabile, 1988, p. 131). But all the factual and technical knowledge will not result in creativity until the individual also has the adequate cognitive style allowing for exploration and out-of-the box thinking. Thus creativity-relevant skills include the capacity to understand complexities and break from mental sets while problem solving. Subsequent research has supported Amabile's original reasoning that creative problem-solving can be trained and she even later renamed this factor creativity-relevant processes (Zhou & Shalley, 2003).

Finally, intrinsic motivation represents the person's own interest and satisfaction in performing a task. It is the most prominent feature in the componential theory of creativity as it implies that even when an individual shows high potential for creativity by disposing of all the necessary skills, there needs to be a willingness to perform the creative task (Zhou & Shalley, 2003).

2.3.2. Group structure

Group structure comprises group diversity and group cohesiveness, whereby diversity refers to the extent to which individuals of the group are similar; and group cohesiveness represents the capacity of the group members to act in a unified way. If the group is composed of rather heterogeneous members, it is supposed to lead to greater group creativity. Thus, the "value in diversity" hypothesis proposes that thanks to members of diverse backgrounds and skills, the group will generate more diverse perspectives and doing so will improve the creative output (Shalley & Gilson, 2004). Groups with heterogeneous members are able to consider more nonobvious alternatives and generate better ideas both in quantity (McLeod & Lobel, 1992) and quality (Watson, Kumar, & Michaelsen, 1993).

On the other hand, group diversity also has its ambivalence. While member heterogeneity clearly lead to higher levels of creativity, they also have more difficulty in developing shared mental models in order to judge the value of the ideas generated (Mumford, Feldman, Hein, & Nagao, 2001). Those shared mental models are best shared among homogeneous groups, where it is easier to develop a group lens between similar individuals. Therefore, diversity can also represent an impediment in creating cohesiveness. In itself, the cohesiveness-creativity relationship is not linear but rather in an inverted U-shape: a certain amount of cohesiveness is necessary for the group to function, although too much will foster the emergence of norms that impede creativity (Woodman et al., 1993).

2.3.3. Group climate

As people in an organization work together, they soon form and share beliefs on how things are being done and what the implicit norms and values of the company are. More specifically, **climate** is "a conglomerate of attitudes, feelings, and behaviors, which characterizes life in the organization, and exists independently of the perceptions and understandings of the members of the organization" (Ekvall, 1996, p. 105). They

are manifestations of a broader company culture. Fortunately for organizations a climate emerges from an organizational context and the latter can be shaped to favor the desired behaviors. Accordingly, this dictates that firms are able to create not any climate but rather a climate “for”: commitment, performance, creativity... according to the goal they want to achieve (Lepak, Liao, Chung, & Harden, 2006).

In the frame of this study, a **creative climate** will depict the **team members’ perceptions of their work environment and how it influences their creativity** (Amabile et al., 1996). It might be only one component for the overall group creative output; however, it is the one that stems from the working environment, whose influence is under study. Several frameworks and measurement tools have been built to assess creative climate in organizations and empirically supported (Amabile et al., 1996; Anderson & West, 1998; Hunter, Bedell, & Mumford, 2007; Isaksen, Lauer, & Ekvall, 1999; Mathisen & Einarsen, 2006). However, these tools were developed for and from more mature organizations with clear hierarchies and processes, which is not the case of startups. For the purpose of this study, they need to be adapted to the particular situation of new ventures.

The following chapter will present the relevant work environment factors for startup teams. From the previous chapter we have seen that leadership is spread among team members: they act as both supervisor and supervised, making supervisory factors redundant. Moreover, the names of the categories and content of the creativity climate frameworks may vary and some factors may not be found across all. After reviewing the main accepted models in the extent literature, the relevant influencing factors on creativity for startups have been divided into three distinct groups: job characteristics, the startup team and company processes.

3. Work environment for a creative climate

3.1. Influence of job characteristics

One level at which a climate can be influenced concerns the characteristics of the jobs that individuals will perform. Although they will impact each team member individually, the tasks performed will affect people’s feelings, attitudes and behaviors. Thus, tasks that generate motivation, autonomy and challenge are environmental factors that will contribute to foster a climate for creativity.

3.1.1. Motivating task

There are two types of motivation: extrinsic and intrinsic. People are extrinsically motivated when the task is only a means to achieve an external goal, for example financial rewards, avoid the threat of a deadline or an evaluation. People are intrinsically motivated when they perform the task for itself and find enjoyment, interest or self-actualization in it (Amabile, 1996). Because it is more tangible, extrinsic motivation can be more easily controlled by organizations, for example by using performance reviews or incentive schemes.

While there is a consensus on the positive effect of intrinsic motivation on creativity, there has been a less clear path regarding the role of extrinsic motivation. Initially, Amabile (1983) articulated her Intrinsic Motivation Hypothesis of Creativity in which she posited that extrinsic motivation would undermine creativity. It was supported empirically in several studies showing the negative effect of expected evaluation on creativity (Amabile & Pillemer, 2012). On the other hand, not all types of extrinsic motivation are equal. For example, controlling evaluation or close supervisor behavior will decrease creativity, whereas informational evaluation and developmental feedback will increase it, both via the mediating role of intrinsic motivation (Shalley, Zhou, & Oldham, 2004; Zhou, 2003). Nevertheless, across all field studies intrinsic motivation was always shown as positively affecting creativity, therefore this is the antecedent that will be retained for the purpose of this study (Amabile & Pillemer, 2012).

3.1.2. Autonomy and freedom

Autonomy and freedom refer to the degree of choice in *how* and *when* people perform their work. When individuals enjoy job autonomy, they “have discretion [...] in scheduling their work, and in determining the procedures to be used in carrying it out” (Hackman & Oldham, 1975, p.162). Freedom on the job refers to the degree of independence in behavior that people can exert, including making judgments and selecting which tasks to work on (Volmer, Spurk, & Niessen, 2012).

Autonomy and freedom support creativity by giving it space. Thus, allowing employees to decide how and when to execute their tasks will provide them with more room to look for new and useful ways to do their work, as well as explore ideas (Volmer et al., 2012). They will therefore get more opportunities to engage in creative action. On the contrary, those who enjoy less job autonomy are likely constrained within prescribed ways of performing tasks, restricting them in the choice of method and potential to find new solutions.

Autonomy and freedom have been strongly empirically supported as an antecedent to creativity (Shalley & Gilson, 2004).

3.1.3. Challenge

The right amount of challenge on the job can be a strong motivator and foster creativity. The Oxford English Dictionary defines challenge as “a task or situation that tests someone’s ability” (“Challenge,” 2015). In the context of creativity in organizations, a challenging task will be difficult enough to stimulate without discourage the employee (Amabile, 1988). High levels of autonomy, as well as significance, skill variety, identity and feedback characterize them (Oldham, Cummings, Academy, & Jun, 1996). They contribute to increase the excitement and intrinsic motivation about the task, and therefore more likely to foster creativity. Moreover, they are usually more heuristic and require creativity to perform them in comparison to more simple or monotonous jobs. Several empirical studies have supported this relationship, where a sense of urgency inherent to the task, intellectual challenge and job complexity all resulted in increased creativity (Amabile, 1988; Göran Ekvall, 1996; Oldham et al., 1996).

Ironically, the challenge in shaping a challenging task is the fine line that separates it from negative pressure. Excessive workload or time pressure can be counter-productive, especially when they are perceived as a way to control the individual and decrease their autonomy. In that case, it is more likely to negatively influence intrinsic motivation, thus hindering individual creativity (Amabile, 1988).

To summarize, job characteristics will have a positive effect on the creative climate when intrinsic motivation for the task, autonomy and freedom, and challenge are high. The strongest factor at play in this category is intrinsic motivation, whereby employees will exert the highest levels of creativity when they find fulfillment in performing the task itself rather than the rewards accompanying it. Those can support the effect of intrinsic motivation in some boundary conditions, mostly when they are perceived as constructive. Autonomy and freedom play a role in providing enough independence for people to be creative in doing their job. Additionally, if the job offers enough complexity and is challenging, it is more likely to generate excitement for the employee and raise intrinsic motivation, thus also fostering creativity. Altogether, this shows that job characteristics are an environmental factor that influences a person’s perception, feelings and attitude

towards their work. However, employees in firms rarely work on their own and the team also has some effect in creating or hindering a climate for creativity.

3.2. Influence of the startup team

As the creative individual is not acting in isolation but is rather influenced by the surrounding environment, this includes the role played by team members. Thus, the efforts made to foster creative thinking in employees can be canceled if those ideas are never voiced out and discussed. Three important team dynamics will support or hinder their expression: participative safety, conflict and recognition.

3.2.1. Idea support

Across the literature, the construct of idea support has also been referred to participative safety”, “trust and openness”, “psychological safety”. Overall, it refers to the way new ideas are being handled within the team.

In a supportive climate for creativity, team members will actively listen to each other and provide constructive feedback (Göran Ekvall, 1996; Isaksen et al., 1999). This creates a positive atmosphere where there is space to take initiatives and come up with new ideas, therefore exposing employees to more unusual concepts; which has been shown to positively impact creative thinking (Parnes & Noller, 1972). Moreover, constructively challenging ideas can enhance the overall perception of challenge on the job, leading to creativity by increasing intrinsic motivation (Amabile et al., 1996).

On the other hand, when the support for ideas is low, suggestions will be constantly turned down or met with negative responses such as raising obstacles or pointing fingers (Göran Ekvall, 1996; Isaksen et al., 1999). Team members need to feel emotionally safe in their environment in order to express their ideas. When there is a strong level of trust, people perceive their environment as non-threatening and dare put forward their own opinions and ideas feeling that they will not be judged (Anderson & West, 1998; Edmondson, 1999). In essence, the participation of team members to decision-making through exerting influence, interaction and information sharing is more likely to lead to developing new ways of working (Anderson & West, 1998; Shalley & Gilson, 2004).

3.2.2. Recognition

Recognition refers to the expressed appreciation of somebody’s work and can manifest under several forms: (1) rewards and (2) appraisal. Rewards are not necessarily monetary

but could also be promotions, awards... Nevertheless, they often trigger extrinsic motivation in the recipient (Shalley & Gilson, 2004). As discussed in a previous chapter, the extrinsic motivation linked to expecting a reward has a limited impact on the creative performance of an individual (Amabile, 1996; Amabile, 1997). However, other research argues that rewards can be positive for creativity given that they fulfill certain requirements (Eisenberger & Armeli, 1997).

Important is to consider what behaviors are being rewarded and how they are given. Thus, if they are used as a way to inform company members on what is valued, rewards are more likely to trigger intrinsic motivation and as a result creativity. Especially higher levels of creativity occur, when rewards are awarded as a recompense of competence as well as creative accomplishments. This means that distributing rewards needs to be balanced on a fine line between giving too many or too less. When individuals feel that every action they undertake is tied to a reward, they are less likely to take risks and implement new ideas. But they need to see that creative efforts are awarded so that they know that it is valued (Amabile, 1988).

Coming maybe as a precedent to rewards, appraisal is a result of the evaluation of one's work. A lot of studies have investigated the role of valuation and feedback on creativity and the overall consensus is that constructive and informational feedback is beneficial, while controlling of punitive feedback is detrimental (Shalley & Gilson, 2004). Thus, when individuals expect an informational evaluation, both their intrinsic motivation and their creativity showed higher levels (Shalley & Perry-Smith, 2001). This effect is also particularly high when the feedback includes helpful information for the individual to learn and develop themselves on the workplace (Zhou & Shalley, 2003). Thus recognition can be expressed in several ways. Its contribution to fostering a creativity climate in an organization is when the rewards and appraisal are directed to promote creative behavior. Additionally, the feedback should be constructive and informational in order to trigger higher levels of intrinsic motivation and creativity.

3.2.3. Conflict

Once ideas have been expressed and listen to, they can be discussed. In some cases, a – positive– conflict of ideas can occur, which Ekvall & Tångeberg-Andersson (1986) included in their Creative Climate Questionnaire (CCQ) instrument as “debate”. They define it as “the occurrence of encounters and clashes between viewpoints, ideas, and differing

experiences and knowledge” (p.108). They consider this form of conflict as beneficial to creativity in the way it allows for different opinions to be heard and challenged. An organization where a lot of debates happen is a sign that people feel it is possible to challenge the status quo (as opposed to the authoritarian firm).

However, there is a fine line not to cross until the conflict becomes detrimental and that is when it shifts from ideas to person. Interpersonal conflict is often cited in the literature as a negative antecedent to creativity and performance. It is especially because of the emotional nature of conflict between team members that hinders creativity. People then focus on the “warfare” going on, exhibiting behaviors such as plotting, setting up traps and slandering their opponents (Ekvall, 1996). All this contributes to creating a climate of threat and distrust directly damaging participative safety. Consequently, team members will not feel safe expressing and discussing ideas, which is undermining team creativity. In a research on successful and unsuccessful innovation projects, it was found that harmony was experienced in 52% of successful projects and severe disharmony in 68% of unsuccessful ones (Souder, 1988).

This goes to support the fact that team dynamics plays an important role to foster creativity. In groups where there is emotional safety, people feel trusting and safe to express their ideas, which can then be acknowledged and discussed. Moreover, it is positive for creativity when the ideas themselves are being debated, proof that the team is willing to challenge status quo. However, interpersonal conflict comes as a detriment to team creativity by bringing in distrust and a threatening environment, shutting down the possibility of creativity to express.

Participative safety is very important to allow the expression of ideas. Such safe environments are characterized by trust and openness, where ideas are listened to and discussed. Thus, a debate of ideas is beneficial for creativity; however, interpersonal conflict will suppress idea initiation and transfer the energy away from creativity. Lastly, recognition plays a role to promote creative behavior by rewarding it, as well as increases intrinsic motivation.

3.3. Influence of company processes

The last support system to fostering a creative climate is the way the organization acts to promote the expression and implementation of new ideas. The most influencing factors

found in the literature are the presence of resources as well as the degree of bureaucracy experienced in the company.

3.3.1. Resources

As people come up with new ideas, they require having the necessary resources as hand to try them out. These include a broad range of elements: knowledge, network, funding, material, personnel, data or information. In her research on antecedents to creativity among managers, Amabile (1988) found that sufficient resources was ranked as the third most important factor to foster creativity and lack of resources the sixth most important factor to hinder creativity.

Whether some resources should always be kept aside ready to be used by the next innovation project is still subject to discussion. Such resources are called “slack” and can be considered as anything beyond the minimum level of resources allocation for the organization to function (Damanpour, 1991). While some studies have shown the positive effect of having slack resources for organizational innovation (Greve, 2003), others have found evidence that managers would still spend less on innovation in certain circumstances, for example in declining companies (Latham & Braun, 2009).

Nevertheless, it remains clear from the literature that when the organization imposes strict resource restrictions on its teams, it will limit the extent to which employees can accomplish their work, let alone implement creative ideas. Additionally, research has shown that resource allocation is directly related to the levels of creativity expressed in a project (Damanpour, 1991).

3.3.2. Bureaucracy

Another organizational structure that impacts creativity is the degree of bureaucracy experienced in the company. In general, more rigid organizations will not encourage their employees to come up with and try new ideas, whereas more flexible ones will allow more space for creativity (Shalley & Gilson, 2004). Thus, bureaucracy is a way of controlling employees' behavior and is expressed in two dimensions: centralization of decision-making and formalization of processes (Hirst, Van Knippenberg, Chen, & Sacramento, 2011).

Centralization refers to the distribution of the decision-making in the hierarchy and whether employees are involved in the process. In a high centralization setting, decisions

need to be validated by several superiors with low involvement of the employees. This has an impact on creativity in several ways: (1) it reduces individual autonomy and intrinsic motivation (Amabile, 1996) and (2) it impedes commitment to the decision and communication flows that would support the implementation of the idea (Pierce & Delbecq, 1977).

Formalization relates to the standards in place regarding company processes. The more rules in the organization, the less room employees have to test new ways of working. Thus, formalization defines the roles that individuals are supposed to fulfill and the required behaviors. In doing so, it will rigidify those behaviors and suppress more experimental ones (Shepard, 1967). On the other hand, research has also shown that some degree of formalization is beneficial to the adoption and implementation phases of ideas (Pierce & Delbecq, 1977). However, it also confirmed that formalization was detrimental to idea initiation, therefore creativity.

Bureaucracy, through centralization of decision-making and formalization of processes acts as an inhibitor to creativity. By controlling individuals, they decrease intrinsic motivation and autonomy, two factors that support creativity. They also prevent employees from thinking out of the box and getting out of routines, making them less likely to initiate ideas.

Research has shown that the organization can influence creativity through resources and bureaucracy. When empowered in the company, employees will be more motivated and have the ability to test new ways and experiment; using the support of sufficient resources as well as flexible systems to do so. Thus, rather decentralized and deformalized organizations are able to provide enough autonomy and freedom to the individuals for them to be creative.

3.4. Model of creative climate factors

Factors of the work environment influence the creative climate of an organization in three different areas: the job, the team and the company processes. With regards to job characteristics, motivation for the task is a prominent factor, whereby creativity will be most enhanced if the individual finds interest and satisfaction in the task itself. Additionally, the job should provide enough autonomy and freedom for the individual to decide how and when to perform a task, so that there is enough space for creativity to form. Moreover, the task should be challenging enough in order to stimulate creativity but

not too much that pressure would shut down the cognitive processes necessary to creativity.

The team contributes to a creative climate in three ways: by fostering idea support, constructive conflict and recognition. Only if individuals feel safe to voice out their opinions without the fear of being judged will they be able to express the ideas that come to them. Some conflict of ideas is beneficial to creativity as it promotes debate and a diversity of views; however interpersonal conflicts are detrimental to creativity, as they only serve to increase suspicion and threat, conditions that decrease the perception of safety and therefore the potential for individuals to express their ideas. On the opposite, recognition in the form of rewards and appraisal, not only indicate that creativity is desirable in the company but also stimulate intrinsic motivation through informational, constructive feedback.

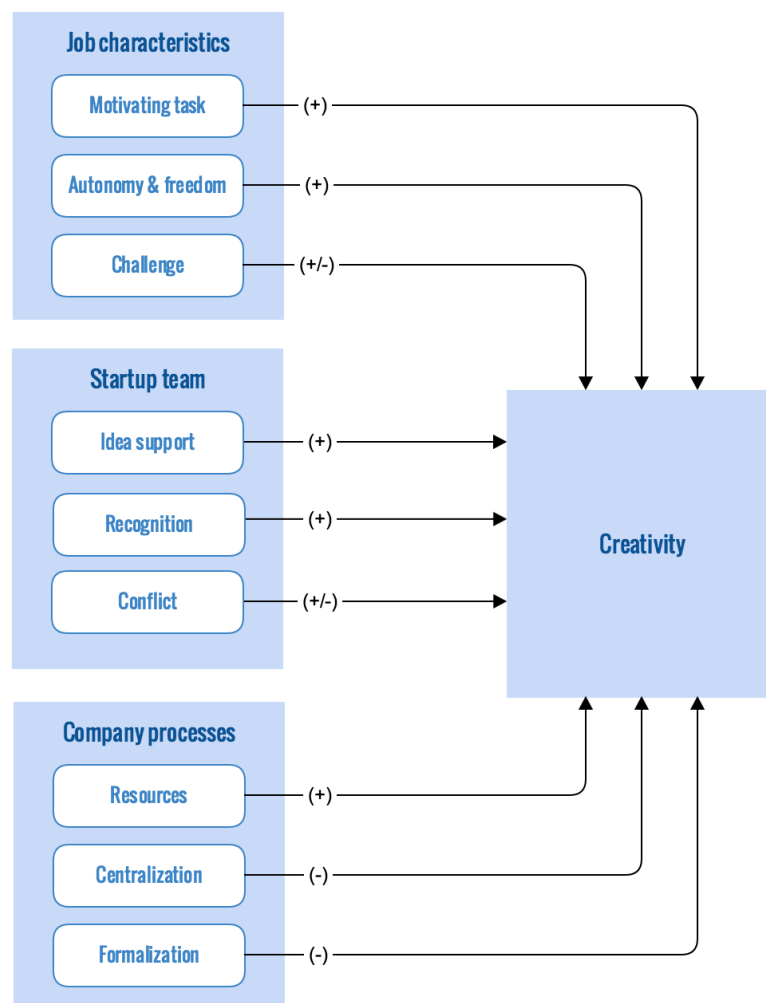


Figure 3: Work environment factors influencing the creative climate

In terms of company processes, the organization needs to function as an enabler of creativity. This is achieved by allocating resources for innovation as well as a flexible structure. Thus, decentralized and deformed organizations can offer enough autonomy and freedom for their members to come up with new ideas.

Altogether these factors on the job, team and company levels will contribute to shape a climate that is able to most foster creativity in the workplace, as summarized in Figure 3.

4. Work environment in failing organizations

Even if the ideal creativity climate can to some extent be influenced by the team (Mathisen & Einarsen, 2006) it is also influenced by the circumstances, positive or negative, that the firm is undergoing. In the case of startups where creativity and innovation are a factor of survival, sustaining a creative climate might be even more critical. However, crisis phases with a pending failure will have an impact on the overall work environment of the venture and affect the very factors that are fostering creativity.

4.1. Failure

A first possible way to consider failure is from an objective standpoint, for example bankruptcy, insolvency, closing or significant decrease of activities (Ooghe & De Prijcker, 2008). In his systematic literature review on venture failure, Pretorius (2009) found that failure has also been understood around two different perspectives: decline and failure. When in decline, the venture's "performance worsens (decreasing resource slack) over consecutive periods and it experiences distress in continuing operations" (p.10). In this state, the firm is at best underperforming, at worst in deep crisis. There is still a possibility to continue its operations, but only given significant changes. Given that decline is a situation where the survival of the company is at stake, it also resonates with the definition of crisis: an "event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly." (Pearson & Clair, 2012, p. 60).

The final point of the decline leads the venture to failure "when it involuntarily becomes unable to attract new debt or equity funding to reverse decline; consequently, it cannot continue to operate under the current ownership and management" (p.10). Many criterion will fit this definition: discontinuance, bankruptcy, low earnings, shareholder loss (Balcaen & Ooghe, 2006; Liao, 2004; Lussier, 1995). Despite the definitive aspect of failure,

the difference to closure should be pointed out. Thus, some closures can happen at times when the owners consider their company successful and under circumstances other than failure (Bates, 2005).

Indeed, failure can also be considered from a subjective standpoint, including instances of failing to achieve an objective, deviation from goals or unacceptable performance (Cannon & Edmondson, 2005; Kow, 2004; McKenzie & Sud, 2008). This subjective definition of failure can be summarized as “the entrepreneurs’ dissatisfaction of the venture’s progression” (Gulst & Maritz, 2011, p.437). Although in itself problematic to define boundaries of venture failure, this understanding is relevant for the scope of this study, since it is looking at the personal experiences and insights of entrepreneurs.

As an umbrella term over decline and failure, the operational definition of crisis that is retained for this study is a contraction of the above. **A crisis is a situation in which the viability of the company is threatened, the performance has worsened, the company is unable to attract funding and it experiences trouble in continuing to operate or cannot continue to operate under the current ownership.**

4.2. The effect of failure on the work environment

While not focused on new ventures, prior research has found some common changes affecting the work environment of organizations undergoing a crisis. Among those can be listed: decrease of communication and trust, increase in fear, rigidity and chaos (Amabile & Conti, 1999). Amabile & Conti (1999) explained these behaviors using the threat-rigidity theory of Staw, Sandelands, & Dutton (1981). This theory looks at the possible changes in the work environments of organizations undergoing a threat. Staw et al. (1981) define it as “an environmental event that has impending negative or harmful consequences for the entity” (p.502). Ventures undergoing a phase of decline or even failure will typically fit in this definition.

The posited thesis is that such a threat will lead to rigidity in the organization. While empirical evidence has been found to the individual effects in isolation (Amabile & Conti, 1999), some studies have also provided some support to the threat-rigidity theory itself (D’Aunno & Sutton, 1992; Harrington, Lemak, & Kendall, 2002). In particular, the study by Harrington et al. (2002) focused on newly formed teams and found that when the level of threat was high and internally attributed, rigidity was more likely to occur.

While exploring the changes in the work environment during downsizing, Amabile & Conti (1999) already used the threat-rigidity theory to explore the effect of downsizing on the aspects of work environments identified as influencing creativity. They found a significant decrease of all environmental stimulants to creativity and an increase of the organizational impediment to creativity. Thus, the behavioral changes induced by a threat to the vital interests of a company involve a restriction in information and a constriction in control known to be at the opposite of factors conducing to creativity (Amabile & Pillemer, 2012; Staw et al., 1981). Following their call for further research on the threat-rigidity effects on the creative climate, this is the main theory that will be used to look at the crisis component of the question under study.

5. Organizational response to crisis

When a company experiences a threatening situation, it will react to the environmental change by adopting certain processes and response (Staw et al., 1981). Figure 4 summarizes the Staw et al. threat-rigidity organizational response model, which is divided into three categories: restriction in the information processing, constriction in control and efforts for greater efficiency.

The first effect described is **restriction in information processing**. The authors argue that the flow of information develops in a wave-like manner. At the onset of a crisis, communication channels are often overflowed as more information is researched in order to confirm the threat. After that point occurs an over simplification and a tendency to restrict alternatives to what is known and heavy reliance on prior knowledge. Search for information will then intensify once again when decisions are confirmed. Characteristic of this phase is the restriction of alternatives that the organization will look at in order to solve the problem: people stick to what they know and try to limit the amount of possibilities when taking a decision.

The second response to threat is **constriction of control**. Thus, in times of crisis, decision-makers will try to increase control, in order to ensure that all members of the organization are aligned and perform the actions necessary to deal with the threat. This is usually expressed by an increased centralization, usually with a lower number of participants to the decision. Formalization and standardization will also increase to improve the coordination of action and attempt at reducing potential execution error. In the context of

a failing startup it might mean that decisions will be performed top-down rather than collegially.

Lastly, the company will work towards **conservation of resources** by having a more intense focus on optimizing its resources. Especially when the crisis involves financial adversity, companies will increase cost cutting, individual accountability and tightening of budgets, resulting in an overall dominance of efficiency concerns.

5.1. Model of organizational response to threat

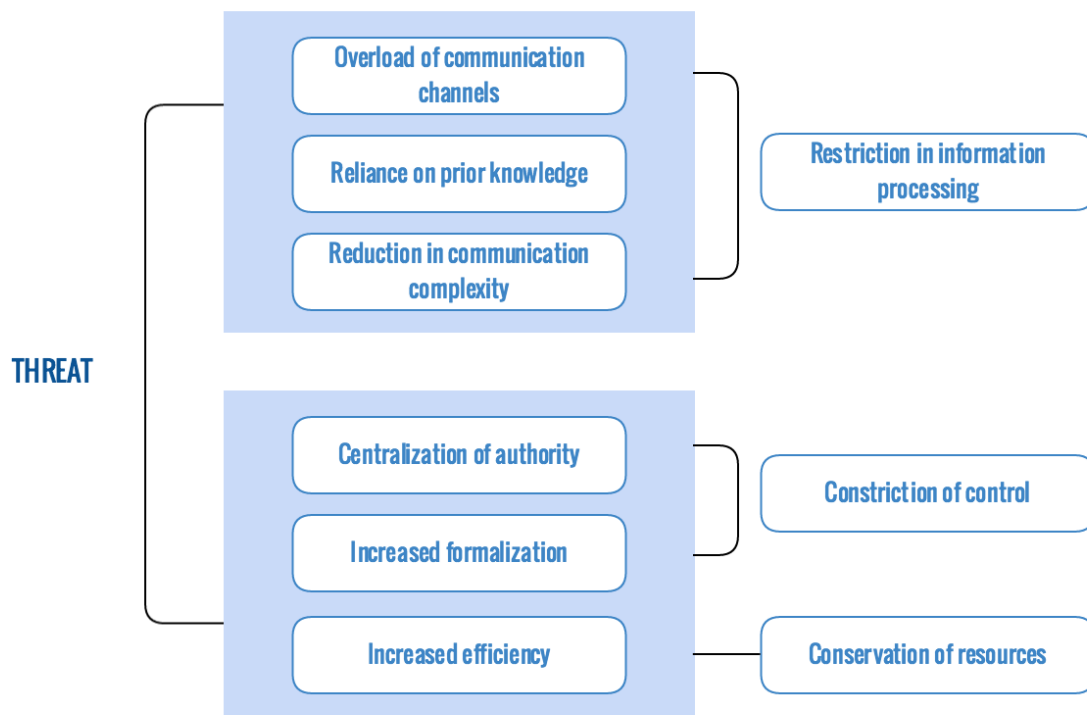


Figure 4: Model of organizational response to threat (Staw, Sanderlands & Dutton, 1981)

6. Summary and conceptual framework

6.1. Threat-rigidity effects on creative climates

The chapter on failure has posited that the organizational response to threat seems to directly affect work environment antecedents also responsible to support or hinder creative climates (Amabile & Conti, 1999). Thus, the restriction in the information flow could lead team members to perceive a reduction in encouragement for creativity. When individuals focus on prior knowledge and communicate less, it might make them less receptive to innovative ideas. Moreover, the increased centralization and formalization

resulting from the organizational response to threat leads to overall stronger bureaucracy. As seen in the paragraph on bureaucracy, this has a tendency to decrease autonomy and motivation as well as idea generation, which overall act to inhibit creativity. Finally, a focus on resources efficiency is likely to induce cost cutting and restrictions. However, we have seen that sufficient and adapted resources are important to enable people to express their creativity and implement their ideas.

6.2. Conceptual framework

The chapter on creative climate has confirmed the importance of a creative climate for innovation and how it can be supported by factors from the work environment, summarized in the Table 2 below.

| Antecedent | Effect | Level | # Papers dealing with antecedent in lit. review |
|----------------------|----------|--------------|---|
| Intrinsic motivation | Positive | Job | 5 |
| Autonomy and freedom | Positive | Job | 4 |
| Challenge | Mixed | Job | 5 |
| Idea support | Positive | Team | 5 |
| Recognition | Positive | Team | 6 |
| Conflict | Mixed | Team | 3 |
| Resources | Positive | Organization | 4 |
| Bureaucracy | Negative | Organization | 5 |

Table 2: Summary of antecedents of a creative climate

Figure 5 proposes a visualization of the literature covered. From left to right, the behavioral response to crisis will have an effect on the climate factors that are influencing creativity. Motivating task, freedom, reasonable challenge, idea support, recognition, conflict of ideas and resources are all positively affecting the creative outcome, so that when those factors are high, they will promote creativity. On the other hand, centralization and formalization are detrimental factors, so that when they are high, they will hinder creativity. The crisis effects will in turn influence the climate factors. A conservation of resources will decrease the perceived resources available for creativity and constriction of control increase the perceived bureaucracy (centralization and

formalization). Lastly, the restriction in information processing will negatively impact the perceived encouragement for creativity in the team.

As a conclusion, a failure situation is likely to trigger rigidity in the work environment of a startup, which in turns might experience significant changes in the supporting or obstructing factors for creativity. Coming from this assumption, the purpose of this study is to investigate the experienced work environment of failing startups and the resulting creative climate. Thus, while the literature is well documented concerning the creative climate of organizations, it is too often considered as a static manifestation and do not account for changes across time (Amabile & Conti, 1999). This research will attempt to inform on the particular case of failing startups.

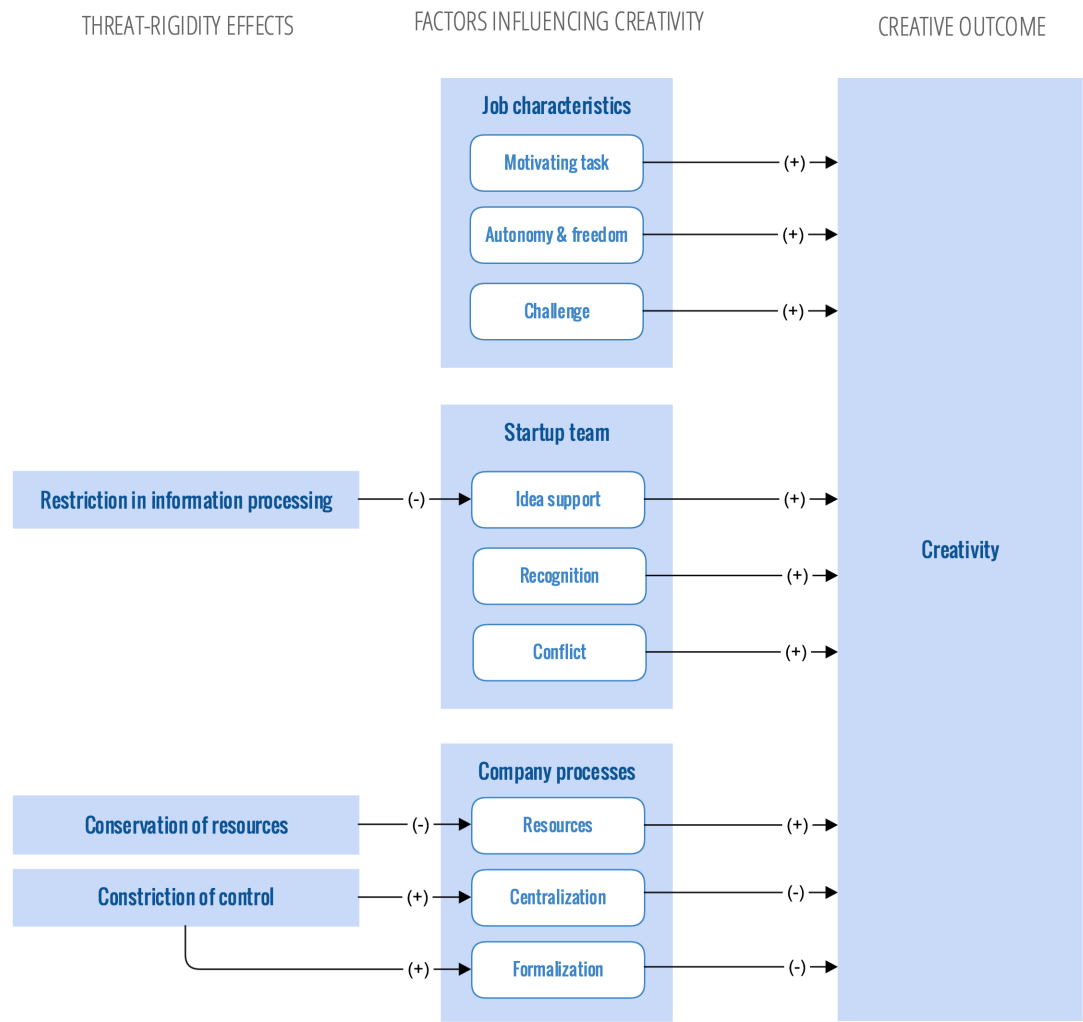


Figure 5: Conceptual framework of the effect of crisis on creative climate

CHAPTER 2: METHODOLOGY

1. Research design

This study aims at exploring entrepreneurs' perceptions of the creative climate around them and the effects of negative circumstances on the work environment. The research questions are as follows:

RQ: How does crisis influence the creative climate of failing startups?

SRQ1: How do teams in failing startups experience their creative climate before the crisis?

SRQ2: How do teams in failing startups experience their creative climate during the crisis?

SRQ3: What was the perceived impact of crisis on the team's creativity?

The choice of method to conduct a study will be informed by three criteria: the researcher's philosophical perspective, the approach taken and the purpose of the study (Saunders, Lewis, & Thornhill, 2009). According to Guba & Lincoln (1994, p.105), "questions of methods are second to questions of paradigm", which they define as the way the research sees the world, their choices being guided by their own ontology, epistemology and axiology.

In this case, the researcher is interested in understanding the subjective perceptions of the entrepreneurial teams. She assumes that the different individuals will make sense of the same situation and environment (failure) in a different way, thus having their own interpretation of reality. In this sense, she acknowledges a subjectivist ontology and an interpretivist epistemology. It encompasses both the views that (1) social phenomena come from the perceptions and resulting actions of individuals and (2) to understand those actions, it is necessary to explore the subjective meanings behind them (Saunders et al., 2009).

The nature of this study is to explore the effects of a negative environment on the creative climates of startups. As a result, it does not try to confirm a relationship but rather understand the meaning that startup teams make of failure and their perception of their creativity as a result. There is already a large body of research informing on creative climates that led to the construction of a guiding framework as seen in Chapter 1; however, the particular context of startups is not well documented and the study is open to see new themes emerge outside of the known framework. It is therefore taking on an inductive approach.

This study is looking into the effects of failure on creative climates in startups with a view to understand “what is happening, to seek new insights; to ask questions and to assess phenomena in a new light” (Robson, 2002, p.59). In this search for understanding, an exploratory research purpose is most useful (Saunders et al., 2009). Additionally, as the expected result of this thesis is to provide a characterization of the creative climates in failing startups, it is also descriptive, for which the object defined by Robson is “to portray an accurate profile of persons, events or situations” (2002, p. 59).

The subjectivist-interpretivist research philosophy combined with an inductive exploratory research call for qualitative methods. The exploration of context in our case makes the case study the most appropriate research strategy. Thus, Robson defines case study as a “strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context” (2002, p. 178). Moreover, case studies are recommended where a rich understanding of context and consequent processes is sought for (Morris, T., & Wood, 1991). Although it is broadly used for theory building (Eisenhardt, 1989), case studies are also worthwhile to explore existing theory (Saunders et al., 2009, p. 147).

2. Interview guide

As they allow understanding personal experiences, in-depth interviews are the method of choice for qualitative research (Rubin & Rubin, 2011). For the purpose of this study, they have been used following the *responsive interviewing* model where “both interviewer and interviewee are treated as people, with feelings, opinions and experiences.” (Rubin & Rubin, 2011, p. 10). This interviewing style emphasizes on the conversational nature of the interview, a friendly tone and flexibility. As the people interviewed in this research are required to talk about a rather stressful experience (decline or failure of an organization that they have contributed to build), such technique was deemed appropriate in order to best gather the narratives and interpretation of the respondents.

2.1. Semi-structured interviews

A semi-structured interview guide was defined to conduct this research. Structured interviews with predefined questions and list of possible answers offer consistency and efficiency in the responses. It would allow covering all creativity climate antecedents identified in the literature. However, by limiting the possibilities of replies, it restricts the

richness and insights of the information gathered, thus not allowing a proper exploration of the particular context of failure. On the other end, while unstructured interviews would support the emergence of new themes, it holds the risk that the respondent would omit to talk about some aspect of the climate without being asked about it. In this case, the semi-structured interview holds the best of both worlds by (1) being open enough to let new themes arise; and at the same time (2) providing a structure to follow so that all important themes are covered.

Flexibility and conversation are an important part of the responsive interview model, in order to achieve deeper insights (Rubin & Rubin, 2011). Therefore, open-ended questions were used to guide the interview. The authors of the responsive interview model recommended that these questions should lead to provide depth, detail, vividness, nuance and richness. Both spontaneous follow-up and probing questions will help in getting deeper understanding, additional details, contextual information and subtleties.

Aligned with the principles of the responsive interview model, the critical incident technique is a powerful tool to “gain understanding of the incident from the perspective of the individual, taking into account cognitive, affective, and behavioral elements.” (Chell & Pittaway, 1998, p. 56). A critical event is one that makes a significant contribution to a situation and is in practice retrieved by asking the respondent to tell a story about a specific experience. Not only does it allow an unrestricted range of answers, but it also lets people describe what is important to them (Gremier, 2004). As such, they can be identified after they happen, as they have had strong personal involvement (Webster & Mertova, 2007). This is particularly helpful in the context of this study, as respondents are also required to remember the climate before the decline of their startup.

2.2. Concerns with validity and reliability

While designing a research approach, attention should be drawn to potential limitations with regards to reliability and validity. The main challenge on reliability is that interviewees are asked to compare their current experience to previous experience. Tapping into respondent’s memories, there is a risk that the study results become flawed by recall bias, including inconsistencies or memory lapses. The memory issue might also lead the responses to represent reinterpretation of past events (Draaisma, 2004; Gremier, 2004). However, the philosophical approach of this study makes the personal experiences and meanings at the center of the research. To understand what entrepreneurs make of

the decline situation, it is interesting to look at how they perceive their current situation compared to what they recall of a different state, including when the responses are a product of their own attitudes and attributes. Moreover, the creative climate in healthy companies is well documented, enabling a comparison of the recalled events to known frameworks. Additionally, sample selection and careful interviewing can be adjusted to minimize the possibility of poor recall by assuring that not too much time has passed since the time of recollection.

The validity challenges of the chosen research method concern the interview language and triangulation. For reasons of access, the interviews have been held in Germany. However, the whole study has been written and performed in English, and language of which neither the interviewees, nor the interviewer are native. As language is the primary vector to express meaning, telling narratives in another language than one's own might restrict the richness and subtleties of the answers as well as influence interpretation. To limit that effect, the interviews have been led with individuals with strong English skills. Moreover, the interviewer is well acquainted with the German culture and language, so that she is able to get a closer understanding to the narratives.

In case study analysis, in-depth interviews are often triangulated with other sources of data like observation or surveys. While multiple data collection methods provide stronger results, it is also possible to use only some of these methods (Eisenhardt, 1989). In this particular case, triangulation is made difficult, as entrepreneurs in crisis are reluctant to let an observer in. Although checking the veracity of the narratives will be done by talking to other team members, the focus of this study is on the individual's own perceptions. Their own interpretation of reality can hardly be crosschecked and are very relevant.

Finally, to ensure that it would yield the most interesting responses possible, the interview guide has been built following an iterative process. A preliminary version has been written and tested with two pilot interviewees. The results judged by the level and completeness of insights that were produced lead to two more iterations, themselves also field tested with one respondent, different each time. The recordings of those pilot sessions were listened to carefully and got preliminary coding. From these experiences, the interview guide was rephrased and reorganized.

3. Data sample

This study aims at exploring the experienced differences in creative climates in failing startup teams before and during a crisis. As argued previously, the research question formulated comes from a subjectivist-interpretivist research philosophy combined with an inductive exploratory research. In order to get informative cases, it is useful to perform purposive sampling (Neuman, 2005). Although the richness of information comes at the extent of the representativeness of the sample, this sampling selection fits the purpose of the study, namely gathering deeper insights into a situation (Patton, 2005). To further this approach, the population was chosen among firms that are homogeneous in their activities, strategy that is likely to provide greater depth in the results (Saunders et al., 2009). It would ensure that the themes emerging are not influenced by differences across industries but reflect common themes within one.

3.1. Sample selection

Thus, the population was identified according to the following criteria and along the constructs defined in CHAPTER 1: THEORETICAL BACKGROUND:

- (1) It concerns **startups**: firms in their early stages of development and growth, generally in the process of bringing their initial products/services to market, forming a customer base, and putting into place organizational processes and procedures
- (2) The startups are undergoing a phase of **crisis, comprising decline or failure**: currently in a situation threatening the viability of the company, including a worsened performance, as well as distress or incapability to continuing operating.
- (3) The startups are active in the digital services industry.

Within the population of startups in crisis, the individuals recruited to be interviewed also were selected to fit the construct of a new venture team:

- (1) The participant has been working at the startup since its early days, so that they have automatically witnessed and contributed to the working climate along the development of the company
- (2) The participant should have experienced both working environments before and during the crisis to ensure appropriate comparison

- (3) The participant should have a contributor function, so that some level of creativity with regards to the service was expected

In practice, recruiting founders of failing firms for an interview represents a significant access challenge. Sources to find potential case studies were threefold: a continuous screening of insolvency news in specialized journals (for example Gründers Szene, Silicon Allee, Berlin Valley), in the Insolvency registry of the German Ministry of Justice (Bundesministerium der Justiz, 2016) and via the researcher's own connections in the industry.

3.2 Sample variability

The sample is constituted of 3 new venture team members belonging to one online platform company based in Berlin. The startup is 2 years old and has managed to successfully raise a double digit investment as well as launch in the US and German markets. Since November 2015, the startup is experiencing financial distress that is posing a threat to the continuity of its operations.

The participants who got interviewed are between 25 and 28 years old and were all working in their startups since its inception. As new venture team members, the roles they hold vary between Design and Marketing. The sample is overwhelmingly female, a factor that was not sought for but imposed itself as the participants were recruited against other criteria. This poses some further limitations to the current study, as it is possible that the perceptions of the working environment vary across gender. As a result, our sample gender structure works in favor for sample homogeneity, while restricting the possible validity of the results to European females.

| Respondent | Age | Gender | Member since | Position | Nationality |
|------------|-----|--------|--------------|-----------|-------------|
| #1 | 25 | F | 2 years | Design | ES |
| #2 | 26 | F | 2 years | Marketing | DE |
| #3 | 28 | F | 2 years | Marketing | DE |

Table 3: Interview participants

4. Data collection

The data was collected by the researcher during face to face interviews. The data aimed to collect concerns the differences between a creative climate of the same team before and during a crisis period. Therefore, the comparison of the two different periods was chosen

as a guiding structure for the interviews. The subjects were asked to share their experience and actively compare the current crisis time to when things were going well. In order to identify a turning point as a frame of reference “before” versus “now”, the interviewees first were asked to describe the present difficult situation.

The interview questions included in the Interview guide were used as a guide throughout the process. However, the researcher asked probing questions to follow up on statements and get a deeper understanding of expressed ideas. Each interview lasted approximately one hour, was recorded and transcribed directly after it was performed.

5. Data analysis

This study aimed at understanding the perceived changes in the creative climate during a crisis and the resulting effect on team creativity. Even if the research is exploratory, it is guided by the theoretical frameworks in Figure 3 and Figure 4.

The data collected was analyzed in three steps. First, it was coded along the creative climate factors: startup characteristics (idea support, conflict, recognition), job characteristics (autonomy, motivation, challenge) and company characteristics (resources, formalization, centralization), as well as perceived creativity. These codes were marked to the factor and the period they refer to, as in “before” or “during” the crisis.

Additionally, participants were asked to judge the intensity of the factors and tell when (if at all) it was stronger: before or during the crisis. The mentions coded under the creative climate themes have been subcategorized into “more intense before the crisis”, “more intense during the crisis” or “unchanged before and during the crisis”, depending on the interviewees answer (see Table 5).

In parallel, the factors corresponding to the threat-rigidity framework were also coded: restriction in information processing (overload of communication channels, reliance on prior knowledge, reduction in communication), constriction of control (centralization of authority, increased formalization) and restriction of resources. They were marked to their perceived impact on the creative climate factors, the creativity output or the team in general.

Of course, this did not limit the content of codes generated so that also additional ideas could emerge and be added to the coding. Indeed, in the course of coding it appeared that the creativity output was evaluated against two properties: quality and quantity.

Additionally, respondents provided a lot of information about the time and pressure dimensions, as well as team dynamics, resulting in a total of 16 factors collected.

Overall, after coding the transcripts and categorizing the codes under themes, the analysis yielded a total of 321 codes grouped into 20 themes. Table 4 below represents the list of themes resulting from the analysis and the amount of codes referring to each theme.

| Theme | Number of code occurrences |
|------------------------|----------------------------|
| Creativity quantity | 10 |
| Creativity quality | 20 |
| Idea support | 19 |
| Conflict | 9 |
| Recognition | 4 |
| Trust | 2 |
| Autonomy | 11 |
| Motivation | 24 |
| Challenge | 12 |
| Resources | 15 |
| Centralization | 15 |
| Formalization | 21 |
| Information processing | 10 |
| Team dynamics | 35 |
| Time | 29 |
| Pressure | 18 |

Table 4: Occurrences of reference to themes during case analysis

| Factor | More before | More during | Unchanged |
|----------------------------|-------------|-------------|-----------|
| Job characteristics | 34 | 5 | 7 |
| Autonomy | 10 | 0 | 1 |
| Motivation | 22 | 1 | 2 |
| Challenge | 4 | 4 | 4 |

| | | | |
|--------------------------|-----------|-----------|----------|
| Startup team | 21 | 2 | 6 |
| Idea support | 14 | 2 | 5 |
| Conflict | 3 | 0 | 1 |
| Recognition | 4 | 0 | 0 |
| Company processes | 18 | 33 | 4 |
| Resources | 13 | 1 | 3 |
| Centralization | 2 | 14 | 0 |
| Formalization | 3 | 18 | 1 |

Table 5: Creative climate factors coded as experienced more before or during the crisis

CHAPTER 3: RESULTS

This study relies on the premise that crisis triggers reactions that are detrimental to the creative climate of startups and posed the following propositions:

- (1) Restriction in information processing will negatively impact perceived idea support*
- (2) Constriction of control will negatively impact perceived bureaucracy*
- (3) Conservation of resources will negatively impact perceived available resources to be creative*
- (4) Negatively impacted idea support, bureaucracy and available resources will act as obstacles to creativity*

From this, the purpose of this research was to explore the perceived differences in the creative climate experienced by new venture team members who have been working on the startup project before and during the crisis occurred. The aim is not to (in)validate the above premises but rather to understand what were the creative climate differences in the two phases and get insights into the role of crisis on these differences.

1. Creative climate before the crisis

The first research sub-question was: *How do teams in failing startups experience their creative climate before the crisis?* In order to answer this question, each creative climate factor is first analyzed as it was reported before the crisis.

1.1. Job characteristics

1.1.1. Motivating task

Participant 1 expressed intrinsic motivation to work in her startup and that her job was making her happy: “I really love this job, I really like to do it and I am happy to get up in the morning to go to work because I am doing what I want to do, it makes me feel good” (P1). She saw team motivation as linked to the ability to bring in ideas benefiting both to the team and the company.

Participant 2 also reported some intrinsic motivation for the job, although it was not linked to the task but rather to the team itself: “For me the motivating variable next to earning money was working with a cool team” (P2).

For Participant 3 the motivation was mostly not expressed in terms of task but rather came from the satisfaction of being part of something bigger: “In the end you like to be part of a big project and you are part of a really small team, part of a creation phase, part of what’s coming out of it in the end. So everyone is motivated to do something great.” (P3).

All participants were intrinsically motivated to do their jobs and at reported high levels, although it emerged from different sources: the tasks, the team and the project.

1.1.2. Autonomy and freedom

Both Participants 1 and 2 found they enjoyed complete autonomy to do their work, including self-direction and decision-making: “I think if you didn’t work autonomously then nothing would happen.” (P2), “I have to do the things by myself and take decision” (P1). Working hours in all three cases were flexible and longer hours spent in the office voluntary because “in a startup you don’t have those working hours so you work when everybody is motivated so in the evenings they spent longer time at the office because they like it” (P3).

1.1.3. Challenge

All respondents reported already a reasonable level of challenge before the crisis. This was mostly linked to the nature of entrepreneurship, working towards a common goal on multiple tasks that were often new. “At the beginning I think it was pretty challenging but on a level that you think you can handle it. So it was very interesting to learn so many new things.” (P3), “Because for us, this startup was a challenge, we had never done it before and we said ok, we will try it” (P1).

1.2. Startup team

1.2.1. Idea support

Across the three interviewees, idea support seemed strong before the crisis. All team members could freely voice out their ideas and feel listened to: “Before crisis, every idea was happily received and discussed and also you know we took our time for every idea” (P2), “At the beginning everyone was allowed to say something and everyone was allowed to add their point to stuff” (P1). Additionally, ideas that were not implemented were also

taken into consideration and choices explained: “We don’t reject any idea just like that. If so, it is argumented and convincing that it is not good for the company” (P3).

1.2.1. Recognition

There is no recollection of rewards before the crisis. The respondents did not talk about particular incentives for creativity or compensation for their ideas. Appraisal was present: “when we find an idea good we would always say it ‘yes this is good, well done’” (P1). Only P2 stated clearly: “Before crisis the creativity was more recognized and more valued than during the crisis.”

1.2.2. Conflict

Before the crisis, conflict was identified as discussions on topics where people had different opinions. “Before we would just involve many people and discuss things forever.” (P1), “In the beginning there were sometimes not conflicts but big discussions about stuff because people have different opinions and they discuss very long about different aspects.” (P3). Only P2 could not think of any conflict before the crisis started: “I can’t recall a conflict before the crisis... But then there were many during the crisis.”

1.2.3. Team dynamics

Before the crisis, the team seemed very close together on both a professional and personal levels: “we would spend evenings staying together, drinking or having some food and creating new ideas.” (P3), “we were like a lot of people and the ambiance was super good [...] everyone is super tied to each other and we are like a family” (P1).

1.3. Company processes

1.3.1. Bureaucracy: centralization

P1 did not clearly mention how centralization was before the crisis. However, P2 gave a clear statement that hierarchy was rather flat: “Before it was really decentralized, everyone had their topic that they were responsible for.” Consequently, decision-making was experienced as performed as a group: “Before the crisis decision making was more collaborative, we would decide together.” (P2) Additionally, the roles were clear to the team: “In the beginning it was more simple as you knew who is responsible for what.” (P3).

1.3.2. Bureaucracy: formalization

At the beginning the team was small and low formalized. The team members were self-organized, so “There was less formality, like I think we had really no rule at all before. [...] We had some official role assignments and stuff like that but we are not formal.” (P2). P1 felt that this lack of formalization also came with a lack of structure and lost efficiency: “Before maybe we had a lot of ideas but we wouldn’t implement most of them because there were too many people and we were not able to prioritize and decide what to work on.”. For P3, it was simply not there: “nobody was really used to it and it was also not needed in the beginning”.

1.3.3. Resources

Before the crisis started the team invested a lot in physical resources: “And after that when we grew we had to get more equipment, get new offices, we moved 2-3 times. And we got more tables etc. And this is stuff that despite the crisis we still have.” (P1). They also did not hesitate to spend financial resources on creativity: “In the beginning we had a lot of resources, we also spent a lot on creative things” (P3). Overall, all three respondents expressed that the startup was willing to provide all required resources to the team: “When I already saw that the crisis started we were spending a lot of money and resources.” (P2).

1.4. Crisis factors

1.4.1. Restriction in information processing

P1 reported the use of several software as communication channels, namely Skype for overseas conference calls and Slack for day to day chats. Due to the growth in the amount of team members right before the crisis, she felt that “people wouldn’t just speak with each other”. On the contrary, P3 talked about very direct ways of communication before the crisis: “Everyone knew what was going on, everyone could say what he or she wanted to say about it. [...] Everyone knew what was the purpose of the meeting and everyone was informed about everything.”

Before the crisis, ideas were reported as rather novel and “bold”: “we had some really crazy ideas” (P2). P1 also recollected that she would spend time to get new knowledge on topics for which she had to be creative: “there are some times when I would get up at 6 in the morning and research stuff”.

1.4.2. Time pressure

There were very few mentions of pressure before the crisis (3 occurrences). The only pressure felt was the one to perform, especially in a situation where the respondent would not have the skills to do her job, and none of her team members could support her with it: “At the beginning I was doing the stuff and nobody could really tell me this is good or this is bad, you know? So then you have a lot of pressure” (P1).

2. Creative climate during the crisis

The second research sub-question was: *How do teams in failing startups experience their creative climate during the crisis?* In order to answer the sub-research question mentioned above, each creative climate factor is analyzed as it was reported during the crisis. As represented in Table 5, job characteristics and startup team factors were mentioned more often as being experienced more strongly before the crisis, whereas the factors belonging to company processes were more often talked about as being stronger during the crisis.

2.1. Job characteristics

2.1.1. Motivating task

During the crisis, all participants noted that “motivation decreased” (P2), especially P1 repeated it three times. She associated the decrease of motivation to the atmosphere in the team, stating that “people were in a bad mood” (P1). This in turn was for her linked to the repetitive tasks “It is not easy to keep people all the time motivated to try and improve things, especially when we have to redo things ten times.” (P1).

The team atmosphere also impacted P2’s enjoyment on the job as she noted “it was not fun anymore to work with the people because everybody was stressed out”. Feelings of frustration and anger accompany her statements about motivation: “I am pissed”, “It’s more decreased motivation and increased frustration”.

For P3, the decreased motivation was expressed through a dis-involvement: “If you have to, then you are just going to say ok I want to get my stuff done and I am going to go home.” and decreased enthusiasm “it is not something I like to do anymore, to stay that long”. During the crisis she lost the intrinsic energy that she had before.

2.1.2. Autonomy and freedom

All three respondents noticed a significant change once the crisis started although to different levels. P1 experienced a rather low intensity and used according adjectives “I feel

my autonomy is a bit more reduced” or “I cannot really do all that I want”. Restrictions have been felt also by the other participants: “The team was allowed to come and go the way we wanted in the beginning and then later on it was restricted more and more.” (P3) and “she really tried to tell the people ‘ok you only work on this now the whole day or for just 2 hours a day’” (P3). P3 additionally expressed the link between an increased control and her decreased autonomy: “When at the beginning we were totally free and monitoring was little and everybody was working very autonomously... In crisis J. tried to get more control”.

2.1.3. Challenge

During the crisis, the three new venture team members reported a change in the level of challenge; however, one felt that it decreased and the other ones that it increased. The reported decrease in challenge was directly linked to the type of activity on the job and the decrease in autonomy: “In the end we had many positions that were more on a level where you feel like you are just following orders. So as I mentioned before for the design team then it wasn’t a challenge anymore, they had to do the stuff they needed to do.” (P3).

On the other hand, the other two participants felt an increase in challenge due to increased amount of tasks to perform in a short amount of time: “There was the level of frustration that made it more complex and the number of tasks also grew... At a stage it became overwhelming. So I felt more challenged during the crisis than before. But it wasn’t positive, it was just frustrating and depressing.” (P2).

2.2. Startup team

2.2.1. Idea support

Crisis, with its time and performance pressure reduced the support that was felt before. There was overall less space given to idea generation and more shutting down of ideas. As P2 put it: “Everybody was under pressure, under time pressure and so we were much quicker in just making people shut up and not deliver more ideas.” P3 also mentioned a restriction in idea selection: “after it got restricted a bit and only few opinions were being considered in decisions”. On the other hand, P2 had a more nuanced experience of the situation and even if less ideas were considered, she still felt that they were not simply

rejected: “Even if we cannot produce it now that we have more constraints we just keep it for later, we don’t just reject it altogether.”

2.2.2. Recognition

During the crisis no change was mentioned with regards to rewards. P1 expressed that appraisal was as present before than during the crisis. However, P2 mentioned that new ideas were received with annoyance and on the contrary, the team would rather not reward idea generation: “In crisis it was kind of annoying when people came up with more ideas. In general, everyone was annoyed of yet another idea on how to get out of the crisis or do this and that.”

2.2.3. Conflict

During the crisis, conflict took more space in the work of the team: “[...] in the end we had really big meetings just about solving these conflicts because we had fights between teams or different levels” (P3). But also the nature of conflicts changed as they became more personal: “We had private fights where people didn’t like each other, [...] there were personal conflicts in the air” (P2).

Discussions have remained throughout as a way to solve the conflicts: “[...] still we didn’t really change the way we solve problems. We discuss it in the team with everyone and in the end chose the most appropriate decision.” (P1) However, P2 and P3 felt that the solution was rushed top-down instead of being a common outcome: “In the end it was more like different opinions, they come together but there is no real time to discuss them so there is normally one person who is higher than the others and he or she decides.” (P3).

2.2.4. Team dynamics

The crisis made things more difficult for the team members. The change of mood affected people’s behavior and the relationships between colleagues: “It was not fun anymore to work with the people because everybody was stressed out. They would talk a lot about problems and less about solutions... they would be very hysterical.” (P2).

Additionally, because the team members were so close to each other, the firings that happened during the crisis made it difficult to handle emotionally: “when the crisis happened and we have to let people go then some felt bad. Everybody was annoyed, sad and worried.” (P1).

2.3. Company processes

2.3.1. Bureaucracy: centralization

For P2, the organization became more centralized in time of crisis: “the boss becomes more dominant, more hierarchy. You feel that the trust in the team and its capabilities has decreased.” (P2). Not only the hierarchy layers multiplied, but the validation systems too: “For me personally it also meant that I had to go to many different people to get some confirmation for what people did until I could make it public or what I wanted to do with it.” (P3). This seems to derive from the insecurity linked to the crisis situation: “my feeling about this is that everyone realized that something starts to go wrong so everyone wanted to check to make sure that everything went right.” (P3)

2.3.2. Bureaucracy: formalization

During the crisis, the team “tried to get more order into the chaos” (P2) by applying more formalization: “We tried to implement some more rules and regulations, processes during the crisis.” (P2). This was expressed as also being linked to the quick growth in the number of employees in the startup: “Because the structures became more complex, also we tried to create more processes around it which was very difficult because nobody was really used to it.” (P3). Additionally, it was also felt as a direct result of the pressure to perform that came from the crisis: “Now that we have pressure we need to be more efficient so we redesigned the processes and we know exactly how to go about things.” (P1).

2.3.3. Resources

Of course, the physical resources purchased before the crisis remained at disposition of the team during: “this is stuff that despite the crisis we still have. So somehow we have more physical resources in times of crisis now, that when we were just starting.” (P1). P2 mentioned that “since the crisis a lot of things just got cut”. It also came with the pressure to bring back return on investment: “we have that much money we can spend on marketing but this has to bring this and that outcome. Because then resources are definitely limited to what is left.” (P3). However, the team would still not hesitate to spend on important things: “But we would still spend on what we needed.” (P2), “It has never changed in times of crisis or not. If we see that some resource is important then we would get it.” (P1).

2.4. Crisis factors

2.4.1. Restriction in information processing

The crisis brought a lot of communication problems and misunderstandings. People seemed to stop listening to each other and instead go their own individual way. P1 mentions: “we all agree on one idea and actually everybody understands something different.” The information was not flowing seamlessly across all team members, instead a lot of parallel paths were used: “it is a mixture between really communication problems that the people just wouldn’t get the information or didn’t understand the information.” (P3). Additionally, P2 noticed that the type of communication between team members changed: “I think it was more communicating about processes, next step things that have been done or need to be done, that kind of stuff but less of exchanging ideas and talking things through.” She also reported that everybody was trying to bring up solutions to the crisis, leading to an overflow of ideas: “it was more of the problem that too many people had too many ideas on how to do something.”

Because of the crisis, the team members did not take the time to look for new and detailed information: “We have to be faster, more creative, we need to get more things done. And then you don’t have time anymore to think about stuff that detailed.” (P3). P2 reported a similar feeling “you feel that you need to get more stuff done in a shorter period of time so you don’t take the time anymore to think out of the box”.

2.4.2. Time pressure

On the other hand, during the crisis the pressure level rose a lot. P3 noticed a steady growth of pressure leading to a peak in crisis time and P1 stressed a focus on action rather than thinking: “when you are under pressure, then you have to produce”. A major feeling shared by all participants is the lack of time to perform their tasks “you need to get more stuff done in a shorter period of time” (P3), “when you are under pressure you don’t want to lose too much time in deciding” (P2).

3. Experienced impact of crisis on creativity

The third research sub-question was: *What was the perceived impact of crisis on the team’s creativity?* In order to answer this question, each creative climate factor is analyzed looking at the reported impact its change in crisis had on team creativity.

3.1. Job characteristics

3.1.1. Motivating task

For P1, the crisis had a big impact on motivation and in turn she thinks “that motivation is very linked to creativity”. For her, the relationship seems to go both ways, so that “when you like what you do you have more ideas” but also “If you let people bring in their ideas for the product they feel more integrated and it increases motivation”. In her case, the decreased motivation led to a lower quantity of ideas, as reinforced by the quote “we had less ideas, because we were in a bad mood”.

Although P2 says she doesn’t see an impact from decreased motivation on creativity, she states that “it demotivated and distracted. Instead of talking how to solve a problem or focusing on that, some people were more talking about the bad company culture or bad decision.” This indicates that the focus shifted from outward looking problem-solving to inward looking processes.

Similarly, P3 relates decreased motivation to boredom and states that “when you are bored about what you are doing you don’t even try to be creative anymore.”. So in both P2 and P3 cases, the lack of motivation is experienced as leading to the suppression of any creative activity, where creativity is not a required output anymore during crisis.

3.1.2. Autonomy and freedom

The impact on creativity was not expressed directly, rather, the interviewees reported that the decreased autonomy influenced their motivation levels. This was particularly strong for P3: “Whereas when you can decide it for yourself it doesn’t feel like work anymore and you can also sit for long and just be creative because you want to do it that way. But if you have to, then you are just going to say ok I want to get my stuff done and I am going to go home.” Additionally, the restriction of decision-making was identified as an impediment to creativity as P1 notes “When you are exactly told what to do then you don’t feel that much responsible anymore to think about it again or restructure or add things to this. So you lose this feeling that you are also responsible for the outcome.” Where empowerment was missing, creativity was not possible anymore.

3.1.3. Challenge

When asked about the impact of challenge on creativity, the respondents could not express a direct link. They rather talked about how the decreased challenge was linked to increased control and how this control shut down creativity “were more on a level where you feel like you are just following orders” (P3).

3.2. Startup team

3.2.1. Idea support

Accordingly, P1 did not report much changes on creativity as derived from the change in idea support. She felt that the team was supportive throughout: “There was no impact really. Everyone expresses their ideas. [...] So crisis or not we were always supportive to each other”. P2 also did not notice a change in the creativity output: “The level of creativity still didn’t change. People were still every creative and had lots of ideas, during crisis and before crisis... So the impact was more on the selection of ideas and execution.” She however mentions that the focus of the team shifted to restrict the quantity of ideas during the crisis: “And also I think before the crisis there was also that demand for quantity and more ideas higher than during crisis. In the crisis it would have been actually more the goal to focus and you know less is more.” So the team members would be equally creative, despite the restriction in idea support and selection. Only P3 clearly felt a decrease in creativity: “It wasn’t that creative anymore.”

An additional effect mentioned by P2 and P3 was the frustration that this restriction in ideas brought about: “Sometimes [people reacted] of course pissed.” (P2), “And fewer people can participate so it creates some kind of frustration.” (P3).

3.2.2. Recognition

P3 found that the lack of appraisal and incentive for creativity led to a decrease in creativity from the team: “Creativity is not a part of what you are doing anymore, it is not a part of your job to create new stuff.” Ironically, this did not seem to prevent the generation of numerous ideas felt by P2: “It was really like, I go into the office and I know we have this skype call again and 10 people will have again 10 new ideas that really frustrates me!”.

3.2.3. Conflict

When the conflicts arose in time of crisis, the pressure to decide fast prevented a real discussion about ideas and the top-down idea selection once more was felt as a hindrance

to creativity: “for example the designers, they had the impression that they had to follow orders and not be creative anymore, which frustrated them a lot.” (P3). Frustration was an outcome that was also reported by P2; however, she did not see a clear link between the increase in conflict and the creativity of the team: “I don’t think there was an impact on creativity.”

3.2.4. Team dynamics

The change in team dynamics impacted the motivation of the team to be creative. Some team members stopped being creative: “People were more negative; they weren’t bringing in new ideas because they knew they were going to leave.” (P1). And others shifted their focus to processes rather than idea generation: “I think it was more communicating about processes, next step things that have been done or need to be done, that kind of stuff but less of exchanging ideas and talking things through.” (P3)

3.3. Company processes

3.3.1. Bureaucracy: centralization

One effect of the multiple validation levels, was that the execution processes took longer: “Hence more people were involved in the decision... does it make it a better decision or not it is difficult to say but definitely it made everything longer and more complicated.” (P3). It also affected the level of disruption of the ideas to be implemented. Both P2 and P3 felt that very original ideas were stripped down by all the decision-makers to become very consensual and less bold: “if you have one idea and of course one idea you can always discuss about it, but when you change it into one way, another way and a third way, then in the end you have just a tiny piece left of the original idea because everyone took something off that they didn’t like.” (P3), “our creativity is strong before and after... but channeling and using creativity in an efficient way became worse in crisis. Because I think during crisis we are even less brave and more trying to get compromise.” (P2).

3.3.2. Bureaucracy: formalization

The opinions diverge with regards to the impact on creativity, although all respondents mentioned indirect effects of centralization. For P2, it affected motivation within the team, so that people were unhappy about the increased formality and lost focus on creativity: “the attitude towards the organization changed and towards the people within the organization. [...] it demotivated and distracted.” (P2). Additionally, P3 expressed that the

added rules and structure prevented a free flow and exchange of ideas, hence making creativity poorer: “What was definitely way better before is that we had more exchange between people of different mindset and backgrounds so it allowed to be more creative about stuff and consider different aspects and ideas.” (P3). Lastly on the other hand, P1 felt that the added structured allowed the team to focus on selecting and implementing the ideas: “I think it is very good and productive. With clear processes and decision making now it is easier to make decisions.” (P1).

3.3.3. Resources

While P2 stated that a lot of resources enabled the team’s creativity: “when you have a lot of money and you think you are free to do whatever you think is cool to do then you just create stuff”, P1 and P3 spoke about the restrictions in the scope of creativity that come with limited resources: “when you have less money, you are limited in the possibilities to do things” (P1), “So for creativity we didn’t even really try to create great things anymore we tried to use what was left to create some smaller ideas around it. [...] Nothing disruptive.” (P3).

Additionally, the cut in resources also impacted the team mood and motivation: “the crisis had a big impact on motivation because you are able to do less things, because there are less resources available and less people to help you. (P1), “Again it definitely had an impact on motivation but I don’t think it had an impact on creativity. It’s more decreased motivation and increased frustration.” (P2). Although the respondent did not feel that their creativity was impacted, in the context of resources, they stated that their overall decreased motivation had a negative impact on their creativity, hence the potential indirect effect of resources on creativity via motivation.

3.4. Crisis factors

3.4.1. Restriction in information processing

No direct link to creativity was expressed between team communication and creativity. However, the miscommunications experienced in the team brought frustration: “In general, everyone was annoyed of yet another idea on how to get out of the crisis or do this and that.” (P2). And the lack of understanding between the teams added to the frustration: “sometimes they didn’t understand what others do and they got frustrated” (P1).

The limitation of incorporating new information and new concepts into the work, lead the team to create less innovative ideas: “I guess there is still some kind of creativity around it but [...] you just do the standard things the things that probably every company that tries to do the same thing would do.” (P2). Since the focus is on execution, the smaller ideas can pass the conceptual stage and get implemented: “Somehow we develop ideas that are maybe not the most creative but we have pressure to achieve so we achieve them.” (P1)

3.4.2. Time pressure

Time pressure was met with an experienced decrease in creativity. Mainly, the lack of time and the consequences in case of failure led the teams to limit the scope of choice in decision-making: “So you just go for one [solution] quickly and focus on it and do it” (P2). This in turn limited the scope of creativity: “you don’t take the time anymore to think out of the box, do different things, hear different voices.” (P3).

Only P1 felt her team adapted to the pressure and managed to get creative again after some time: “Somehow, I feel that since the crisis started we kind of got used to work under pressure so now it is not that the pressure is gone but you feel it less. Maybe we got used to it and it doesn’t kill our creativity as it did at first.”

CHAPTER 4: CONCLUSION AND DISCUSSION

1. Discussion of the findings

This paper was guided by the question: “How does crisis influence the creative climate of failing startups?”. In order to answer it, this study had a look at the creative climate before the crisis, the creative climate during the crisis and the team members’ perceived impact of crisis on creativity. Table 6 below summarizes the results of the findings.

| Factor intensity | Before | During | Impact on creativity | Summary |
|------------------|--------|--------|----------------------|---|
| Idea support | + | - | - | The team was overall felt as supportive, but showed less support for ideas during the crisis. New ideas were shut down quickly and management performed top-down quick idea selection for execution |
| Conflict | - | + | - via team dynamics | There were more conflicts in time of crisis and also instances of personal conflicts. Discussions remained as a conflict-solving method, although more top-down decisions were imposed during the crisis. Negatively impacted team dynamics. |
| Recognition | + | + | neutral | No rewards per say for creativity but appraisal from the team on good ideas. During the crisis, the team tended to shut down rather than reward idea generation, although appraisal stayed constant throughout. |
| Autonomy | + | - | - via motivation | Restriction of autonomy during the crisis with no direct influence on creativity but decreased motivation, which made people not feel like being creative |
| Motivation | + | - | - | Motivation decreased during the crisis, the induced bad mood produced less ideas and creativity was felt as not required anymore. |
| Challenge | + | +/- | - via time pressure | High level of challenge through time and different experiences in challenge levels during the crisis. However, all experienced it negatively, either via a decreased level of challenge making the job boring or increased challenge making it frustrating. Both changes were thought bad for creativity. |
| Resources | + | - | neutral | Before the crisis the team had a lot of resources available (people, financial, physical) and during the crisis it has been cut down, although the team still spent on important resources. This affected the team’s motivation therefore indirectly creativity. |
| Centralization | - | + | - | Before the hierarchy was flat with clear roles, during crisis hierarchy multiplied and decision-making was more centralized, affecting the boldness of the ideas |

| | | | | |
|------------------------|---|---|------------------|---|
| | | | | implemented. |
| Formalization | - | + | - via motivation | Low to no formalization was reported before the crisis, whereas rules and processes were put in place during the crisis in an attempt to structure the startup team. It helped in the implementation of ideas but led to demotivation and less interesting ideas. |
| Information processing | + | - | - | Straightforward communication channels before the crisis, with a focus on thinking out of the box. During the crisis ideas to solve it overflowed, while the team restricted the scope of creativity. |
| Team dynamics | + | - | - | Before the crisis the team had a very strong bond, so that the effects of crisis brought negativity and stress between team members, with the effect that they lost focus on creativity. |
| Time pressure | - | + | - | Increased levels of pressure during the crisis with no more time to dedicate to creativity on the job, although some acclimation occurred over time. |

Table 6: summary of creative climate factors before/during crisis and their perceived effect on creativity

1.1. Before the crisis

The reports about the time before the crisis indicate a phase where the startup members exhibited strong supporting factors for creativity and also considered themselves as creative. The job characteristics, team characteristics and company processes were consequent with the expected creative climate factors in the Anderson & West (1998) framework that are leading to creativity. Thus, all conducive factors for creativity are high: intrinsic motivation, autonomy and freedom, challenge, idea support, recognition, team dynamics and resources. On the other hand, all factors detrimental to creativity are low: conflict, centralization and formalization. The team also expressed high creativity in both quantity and quality. Figure 6 represents the visualization of the creative climate factors before the crisis, where plus and minus represent high and low, the green, black and red arrows stand for a positive, neutral or negative impact on creativity.

This result is not surprising, considering that we are investigating a startup in early development (first months of official existence). This is a stage where the team is small, all members are driven by the desire to create something. Moreover, they were also still in the process of defining the product and direction of the company, while having a first round of funding to do so. This phase logically calls for challenging tasks and self-directed and intrinsically motivated team members as they do not have guidance from leaders nor salary (short-term extrinsic) motivation (Baron & Hannan, 2002).

Interestingly, the factor “recognition” was only mentioned in the case of appraisal but not rewards. This can be interpreted in two ways. First, as resulted in the job characteristics, the team is strongly intrinsically motivated and doesn’t need extrinsic rewards to get creative. Second, the team is still at a stage where very few processes are in place, including a reward system. Indeed, characteristic of the most common conception of coordination and control in startups, the company under study relied heavily on informal control through peers or culture (Baron & Hannan, 2002). That is, along with low centralization, there were also few formal processes in place.

As a result, the startup started off with a good team climate profile for creativity.

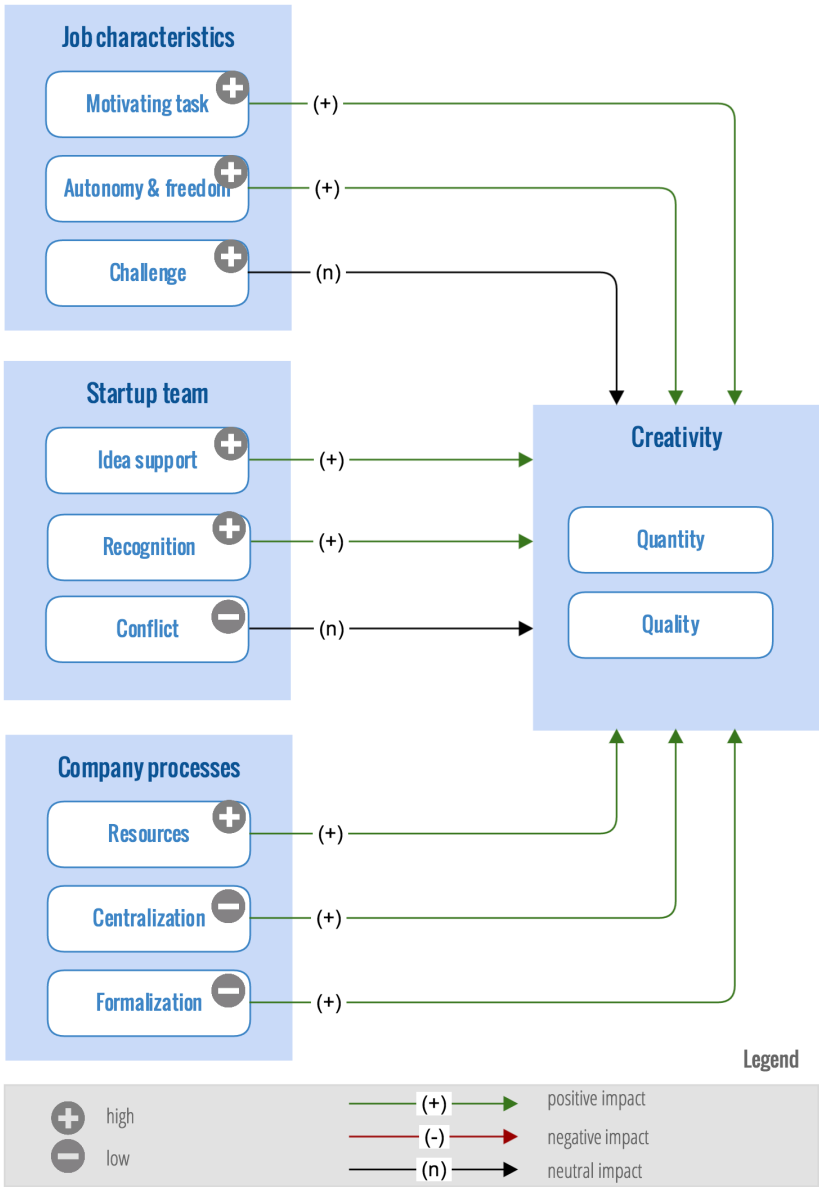


Figure 6: Creative climate before the crisis

1.2. During the crisis

The results of this study suggest that the crisis phase saw a different team climate profile on important factors for creativity as identified by Amabile et al. (1996). Figure 7 represents the visualization of the creative climate during the crisis. First, some of the supporting factors decreased: intrinsic motivation, autonomy and freedom, idea support and resources; while the hindering factors increased: conflict, centralization and formalization. For all but one of those cases, it had the expected effect to negatively impact perceived creativity and this result is consistent with the research from Ekvall (1996).

However, the decrease in resources was not expressed as particularly detrimental to creativity, as participants still felt that despite the limitations they could get the resources they needed to be creative. This resonates with the position of Csikszentmihalyi (1997) who suggests that an abundance of resources might negatively impact creativity, whereas having a reasonable amount of resources but not everything might encourage people to think out of the box. This is exactly the case of the startup under study, where enough resources were left from before and expenses were spent only on the essentials, restricting the superfluous.

Interestingly, the participants often mentioned time pressure when talking about the crisis phase but not when asked about resources. Yet, time is a critical resource for people to be creative (Shalley & Gilson, 2004). The results in this study suggest that time pressure negatively impacted perceived creativity, as the team members did not have time to think creatively. It is also consistent with a more recent study from Amabile who found significant evidence that creative cognitive processing is less likely to happen for individuals under time pressure (Amabile et al., 2003).

Finally, the remaining two factors stayed high during the crisis: challenge and recognition. Thus, the respondents felt a high level of challenge on the job in both phases, even if before the crisis it was related to the task and during the crisis it was induced by the pressure. Those nuances have their importance, as previous research suggest that the type of pressure could impact creativity in different ways: challenging work would have a positive impact and workload pressure a negative one (Amabile et al., 1996). So even if the participants did not express a direct link to creativity, their job became more challenging because of the time pressure induced by the crisis.

As a result, the creative climate profile of the startup team during the crisis is weak, as 4 out of 6 supporting factors are low, the detrimental factors are high and 6 out of 9 factors were felt negatively impacting creativity.

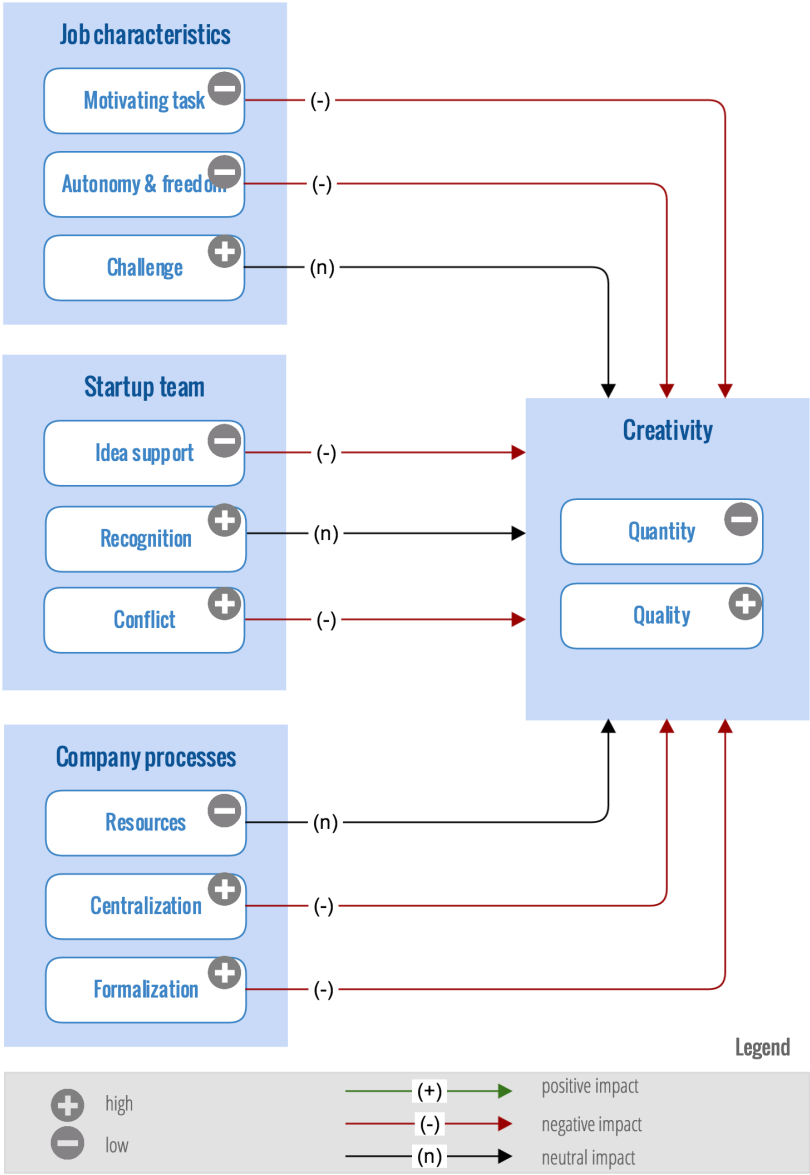


Figure 7: Creative climate during the crisis

2. Review of the framework

2.1. Threat-rigidity effects on creative climates factors

Clearly, the crisis brought about changes in the work environment that led to a deterioration of the creative climate in the startup. In the literature research in CHAPTER

1: THEORETICAL BACKGROUND, this study used threat-rigidity theory to look at the way crisis impacts the creative climate factors as experienced by the respondents.

First, the restriction in information processing negatively impacted the perceived idea support. Thus, the pressure to perform and the lack of time resulted in a reduction of the explored options to solve a problem. Per say, the team members were still as creative, but the ideas were blocked early in any brainstorming or problem-solving process. This resulted in the team feeling still creative qualitatively but restricted quantitatively.

Second, the constriction of control negatively impacted perceived bureaucracy. This behavior was observed during the crisis, when both formalization and centralization increased. However, the interviews could not clearly state if the team members felt a link between the crisis and the constriction of control. Thus, the additional processes and more vertical hierarchy were more often attributed as a “necessary evil” to cope with the quick growth in employee number. Nevertheless, the resulting increase in bureaucracy had a perceivable negative impact on the team’s creativity.

Finally, the anticipated conservation of resources was indeed expressed by the participants; however, a restriction in material resources did not impact creativity as much as the lack of time dedicated to creativity.

2.2. The impact of crisis on the creative climate

The original framework developed from the literature review was presented in Figure 5 and illustrates how a startup team generates ideas, influenced by the organizational environment, itself impacted by a crisis situation. From the findings in

CHAPTER 3: RESULTS, the insights confirmed the framework and called for some refinements.

First, the effects of the climate factors on the creative outcome showed similar results to the original framework and is consistent with the large body of research conducted on the topic. Job characteristics and team dynamics positively impacted perceived creativity, while centralization and formalization negatively impacted it. However, the other factors did not stand against the results of this study. Indeed, “Recognition” and “Challenge” brought about some mixed results with overall a neutral impact on creativity during crisis, they have been taken out. Additionally, material or financial resources did not seem to influence perceived creativity either, whereas time pressure had a considerable effect. Therefore, the factor “Resources” was replaced by the more relevant concept of “Time resources”. During the interviews, the construct of “Team dynamics” emerged, as an understanding of (1) the communication between team members and (2) the atmosphere in the team. Coming out of the narratives of the respondents and because of its perceived influence on creativity, this factor has also been added under the “Startup team” category. Further relationships emerged from the interviews. For example, all respondents expressed that idea support had an effect on the quantity of ideas generated but not the quality. Some internal loops have been identified so that conflict negatively impacted team dynamics and changes in autonomy had an influence on motivation.

Finally, the effects of the threat-rigidity behaviors yielded expected results, the restriction in information processing decreased perceived idea support and conservation of resources applied most strongly to reduce the time available for creativity. Finally, constriction of control not only increased bureaucracy, but it also decreased the perceived autonomy and freedom and deteriorated the team dynamics among team members.

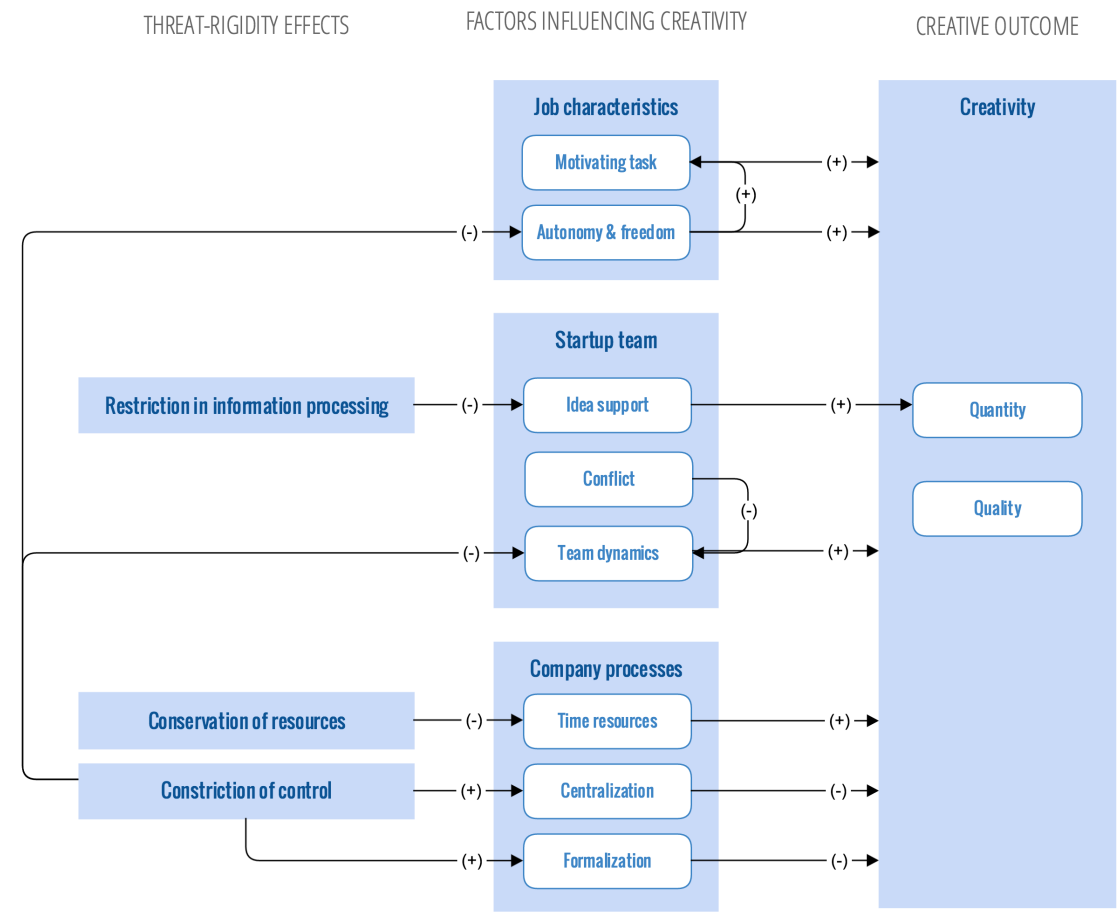


Figure 8: Reviewed framework of the effect of crisis on the creative climate

3. Implications for research and practice

3.1. Implications for research

This study supports the finding of previous research but it also brings them one step further. As seen in CHAPTER 1: THEORETICAL BACKGROUND, the body of research on the creative climate in organizations is large; however, the focus has mostly been on mature and established companies. From the position that startups are innovative at their core, this study provides a baseline profile for a creative climate in the particular conditions of new ventures.

Team creativity assessment models like those of Amabile et al. (1996), Anderson & West (1998) Isaksen et al. (1999) all stem from qualitative research identifying factors that were then confirmed and turned into creativity climate assessment tools, such as KEYS, CCQ, SOQ etc. These are useful to get a picture of the creative climate at a point in time. The current study can contribute to expand them by adding a dynamic perspective to the

factors. By providing two different portraits of the creative climate factors as perceived by the same people in the same company, this research gives insights into the effects of the environment.

Additionally, some divergences emerged from the interviews. First, contrary to previous research (Amabile et al., 1996), the limitation in material resources did not appear to impact the perceived creativity of the participants. Going further, the impact of crisis on some of the factors were not felt to directly influence creativity but rather influence other organizational factors. It is for example the case for conflict impacting team dynamics or autonomy affecting motivation. This points at some further possible extensions to the current models where potential mediation effects happen between the different factors.

3.2. Implications for practice

The current study showed that startup team members start off with high creativity output and a supportive creative climate. The same team members also perceived a depreciated creative climate and resulting creativity in times of crisis. What can startups do to prevent this at a time when they need creativity the most? First, while processes might be necessary, startup founders should refrain from increasing and constricting control in their team. Thus, this behavior affected the most factors conducting to creativity. The participants felt the strongest about it, expressing that it negatively impacted their motivation, autonomy and team dynamics. Therefore, founders could additionally proactively use team building practices in order to keep motivation and team dynamics high even in the face of crisis. More importantly, this study could help new venture teams get aware of the adverse effects of crisis on their behavior and adapt their management style accordingly (Davila, Foster, & Jia, 2010).

4. Limitations and recommendation for future research

4.1. Limitations of the study

The conclusions that can be drawn from this research are obviously limited. By looking at the climate factors and their perceived effect on creativity, we identified relationships. But the underlying causes for these relationships remain unknown. It is a possibility that other events happening at the same time as the crisis might have resulted in the change of creative climate profile that was observed between before and during the crisis. In particular, the role played by the rapid increase in number of employees might have

influenced the perceived climate factors. However, the results are consistent with previous research on creative climates and crisis, making the changes likely attributable to the crisis.

Nevertheless, the scope of this study is a further limitation. It has been conducted within one startup only, so a replication of this research in other similar companies would be necessary before being able to draw strong conclusions. The current number of participants is enough to get a good overview of the climate of one company but increasing the sample size would make these results more generalizable, even though the intent of this study was not generalizability. Lastly, the participants were asked to recall recent but past memories, which always induces a recall bias. However, this should not be of too much concern for this study as we are interested in perceptions rather than facts.

4.2. Recommendation for future research

The limitations have uncovered several paths for further research. For example, this study could be replicated in numerous more startups of a similar industry in order to gather a more reliable picture of the creative climate changes during a crisis. Moreover, further research could deeper explore the effects by which crisis hinders the creative climate of a startup. From this study, we could gather some insights that the threat-rigidity behaviors might impact the encouragement for creativity, bureaucracy, autonomy and time resources. Additional research to test these assumptions and establish solid causality effects could lead researchers to understand the mechanisms by which crisis affects startup creativity.

More broadly, the results of this study contribute to provide first insights into the dynamic dimension of a team creative climate and provides an interesting comparison of the changes before and during a crisis. The current models of creative climates are providing a picture of one moment in time but do not look at how the changes in the environment will affect the different factors. Yet it would be interesting to further explore if some events have an impact on the various climate factors, as this would allow to expand the current models.

5. Conclusion

The purpose of this study was to understand what happens to the creativity of failing startups by looking at the perceived creative climate during a positive phase and

comparing it with the perceived creative climate during a phase of crisis. To guide this thesis, three research sub-questions were posed.

The first question asked: *“How do teams in failing startups experience their creative climate before the crisis?”*. The participants experienced a high level of all factors supporting creativity and a low level of the factors detrimental to creativity, providing a climate prosperous for creativity. The second question looked at *“How do teams in failing startups experience their creative climate during the crisis?”*. The participants experienced lower levels of the supporting factors and higher levels of the detrimental factors resulting in a climate less favorable for creativity. The third question inquired as to *“What is the perceived impact of crisis on the team’s creativity?”*. By comparing the effect of each factor on their team creativity, the respondents felt less creative during the crisis, in particular due to the time pressure and increased control limiting their possibility to generate new ideas.

As this research focused on the differences between the two phases, it also uncovered similarities across phases for factors like appraisal and challenge, for which the levels remain unchanged before or during the crisis. From the outcome of this study we now understand that crisis affected this startup by inducing threat-rigidity behaviors. Those deteriorated team dynamics, encouragement for creativity, autonomy and motivation, as well as increased bureaucracy.

At the time that this conclusion is written, the startup under study no longer exists. It did not survive its financial crisis and had to stop its activities. Does it mean that all hope is lost? Most certainly not. All participants interviewed have already started a new entrepreneurial adventure in other startups, taking with them the learnings from this past failure since *“Only those who dare to fail greatly can ever achieve greatly.”* (Robert F. Kennedy).

BIBLIOGRAPHY

- Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), 357–376.
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10(1), 123–167.
- Amabile, T. M. (1996). The motivation for creativity in organizations. *Harvard Business Review*, January, 5(9), 1–14.
- Amabile, T. M. (1997). Entrepreneurial Creativity Through Motivational Synergy. *The Journal of Creative Behavior*, 31(1), 18–26.
- Amabile, T. M., & Conti, R. (1999). Changes in the work environment for creativity during downsizing. *Academy of Management Journal*, 42(6), 630–640. <http://doi.org/10.2307/256984>
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154–1184.
- Amabile, T. M., Mueller, J. S., Simpson, W. B., Hadley, C. N., Kramer, S. J., & Fleming, L. (2003). Time pressure and creativity in organizations: A longitudinal field study. *HBS Working Paper*, 02–73.
- Amabile, T. M., & Pillemer, J. (2012). Perspectives on the social psychology of creativity. *Journal of Creative Behavior*, 46(1), 3–15.
- Anderson, J. V. (1992). Weirder than Fiction: The Reality and Myths of Creativity. *The Executive*, 6(4), 40–47.
- Anderson, N., Potocnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333.
- Anderson, N., & West, M. (1998). Measuring climate for work group innovation: development and validation of the team climate inventory, 19(June 1996).
- Balcaen, S., & Ooghe, H. (2006). 35 years of studies on business failure: an overview of the classic statistical methodologies and their related problems. *The British Accounting Review*, 38(1), 63–93.
- Baron, J. N., & Hannan, M. T. (2002). Organizational blueprints for success in high-tech start-ups: Lessons from the Stanford project on emerging companies. *California Management Review*, 44(3), 8–36.
- Barron, F., & Harrington, D. M. (1981). Creativity, Intelligence, and Personality. *Annual Review of Psychology*, 32(1), 439–476.
- Bates, T. (2005). Analysis of young, small firms that have closed: delineating successful from unsuccessful closures. *Journal of Business Venturing*, 20(3), 343–358.
- Bharadwaj, S., & Menon, A. (2000). Making innovation happen in organizations: Individual creativity mechanisms, organizational creativity mechanisms or both? *Journal of Product Innovation Management*, 17(6), 424–434.
- Bundesministerium der Justiz. (2016). Insolvenzbekanntmachungen.
- Cannon, M. D., & Edmondson, A. C. (2005). Failing to Learn and Learning to Fail (Intelligently). *Long Range Planning*, 38(3), 299–319.
- Challenge. (2015). In *Oxford English Dictionary* (p. 6b).
- Chell, E., & Pittaway, L. (1998). A study of entrepreneurship in the restaurant and café industry: exploratory work using the critical incident technique as a methodology. *International Journal of Hospitality Management*, 17(1), 23–32.
- Chen, M.-H. (2007). Entrepreneurial leadership and new ventures: Creativity in entrepreneurial teams. *Creativity and Innovation Management*, 16(3), 239–249.
- Cooney, T. M. (2005). Editorial: What is an Entrepreneurial Team? *International Small Business Journal*, 23(3), 226–235.
- Csikszentmihalyi, M. (1997). *Flow and the psychology of discovery and invention*. Harper Collins. New York.

- D'Aunno, T., & Sutton, R. I. (1992). The responses of drug abuse treatment organizations to financial adversity: A partial test of the threat-rigidity thesis. *Journal of Management*, 18(1), 117–131.
- Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators. *The Academy of Management Journal*, 34(3), 555–594.
- Davila, A., Foster, G., & Jia, N. (2010). Building sustainable high-growth startup companies: Management systems as an accelerator. *California Management Review*, 52(3), 79–105.
- Draaisma, D. (2004). *Why life speeds up as you get older: How memory shapes our past*. Cambridge University Press.
- Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, 44(2), 350.
- Eisenberger, R., & Armeli, S. (1997). Can salient reward increase creative performance without reducing intrinsic creative interest? *Journal of Personality and Social Psychology*, 72(3), 652–663.
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, 14(4), 532–550.
- Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology*, 5(1), 105–123.
- Ekvall, G., & Tångeberg-Andersson, Y. (1986). Working Climate and Creativity: A Study of an Innovative Newspaper Office. *The Journal of Creative Behavior*, 20(3), 215–225.
- Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *The Leadership Quarterly*, 17(3), 217–231.
- Gough, H. G. (1979). A creative personality scale for the Adjective Check List. *Journal of Personality and Social Psychology*, 37(8), 1398.
- Gremler, D. D. (2004). The Critical Incident Technique in Service Research. *Journal of Service Research*, 7(1), 65–89.
- Greve, H. R. (2003). A Behavioral Theory of R&D Expenditures and Innovations: Evidence from Shipbuilding. *The Academy of Management Journal*, 46(6), 685–702.
- Griener, L. (1998). Evolution and Revolution as Organizations Grow - Harvard Business Review. *Harvard Business Review*, 76(3), 55–68.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of Qualitative Research*, 2, 105–117.
- Gulst, N., & Maritz, A. (2011). The paradoxical nature of venture failure. *Journal of Asia Entrepreneurship and Sustainability*, 7(2), 435–447.
- Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60(2), 159–170.
- Hambrick, D. C., & Abrahamson, E. (1995). Assessing managerial discretion across industries: A multimethod approach. *Academy of Management Journal*, 38(5), 1427–1441.
- Harrington, R., Lemak, D., & Kendall, K. W. (2002). The threat-rigidity thesis in newly formed teams: An empirical test. *Journal of Business and Management*, 8(2), 127.
- Hirst, G., Van Knippenberg, D., Chen, C. H., & Sacramento, C. a. (2011). How does bureaucracy impact individual creativity? A cross-level investigation of team contextual influences on goal orientation-creativity relationships. *Academy of Management Journal*, 54(3), 624–641.
- Hülsheger, U. R., Anderson, N., & Salgado, J. F. (2009). Team-level predictors of innovation at work: a comprehensive meta-analysis spanning three decades of research. *The Journal of Applied Psychology*, 94(5), 1128–1145.
- Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for Creativity: A Quantitative Review.
- Isaksen, S. G., Lauer, K. J., & Ekvall, G. (1999). Situational outlook questionnaire: a measure of the climate for creativity and change. *Psychological Reports*, 85(2), 665–674.

- Kamm, J. B., Shuman, J. C., Seeger, J. A., & Nurick, A. J. (1990). Entrepreneurial teams in new venture creation: A research agenda. *Entrepreneurship Theory and Practice*, 14(4), 7–17.
- Klotz, A. C., Hmieleski, K. M., Bradley, B. H., & Busenitz, L. W. (2013). New Venture Teams: A Review of the Literature and Roadmap for Future Research. *Journal of Management*, 40(1), 226–255.
- Kow, G. (2004). Turning around business performance: Part I. *Journal of Change Management*, 4(3), 229–246.
- Latham, S. F., & Braun, M. (2009). Managerial Risk, Innovation, and Organizational Decline. *Journal of Management*, 35(2), 258–281.
- Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A Conceptual Review of Human Resource Management Systems in Strategic Human Resource Management Research. *Research in Personnel and Human Resources Management*, 25(06), 217–271.
- Levie, J., & Lichtenstein, B. B. (2010). A terminal assessment of stages theory: Introducing a dynamic states approach to entrepreneurship. *Entrepreneurship: Theory and Practice*, 34(2), 317–350.
- Liao, J. (2004). *Entrepreneurship failures: Key challenges and future directions*. (H. P. Welsch, Ed.), *Entrepreneurship: the way ahead* (Routledge). New York.
- Lussier, R. N. (1995). A nonfinancial business success versus failure prediction model. *Journal of Small Business Management*, 33(1), 8.
- Mathisen, G. E., & Einarsen, S. (2006). A review of instruments assessing creative and innovative environments within organizations. *Creativity Research Journal*, 16(1), 119–140.
- Mauzy, J., Harriman, R. A., & Harriman, R. (2003). *Creativity, Inc.* Harvard Business Press.
- McKenzie, B., & Sud, M. (2008). A hermeneutical approach to understanding entrepreneurial failure. *Academy of Entrepreneurship Journal*, 14(2), 123–148.
- McLeod, P. L., & Lobel, S. A. (1992). The Effects of Ethnic Diversity on Idea Generation in Small Groups. *Academy of Management Best Papers Proceedings*, 8(1961), 227–231.
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Physical Therapy*, 89(9), 873–880.
- Montuori, A., & Purser, R. (1995). Deconstructing the lone genius myth: toward a contextual view of creativity. *Journal of Humanistic Psychology*, 35(3), 69–112.
- Morris, T., & Wood, S. (1991). Testing the survey method: continuity and change in British industrial relations. *Work, Employment & Society*, 5(2), 259–282.
- Mumford, M. D., Feldman, J. M., Hein, M. B., & Nagao, D. J. (2001). Tradeoffs between ideas and structure: Individual versus group performance in creative problem solving. *The Journal of Creative Behavior*, 35(1), 1–23.
- Neuman, W. L. (2005). *Social research methods: Quantitative and qualitative approaches* (Vol.13 ed.). Boston: Allyn and Bacon.
- Oldham, G. R., Cummings, A., Academy, T., & Jun, N. (1996). Employee Creativity : Personal and Contextual Factors at Work, 39(3), 607–634.
- Ooghe, H., & De Prijcker, S. (2008). Failure processes and causes of company bankruptcy: a typology. *Management Decision*, 46(1-2), 223–242.
- Parnes, S. J., & Noller, R. B. (1972). Applied creativity: The creative studies project. *The Journal of Creative Behavior*, 6(3), 164–186.
- Patton, M. Q. (2005). *Qualitative research*. John Wiley & Sons, Ltd.
- Pearson, C. M., & Clair, J. a. (2012). Crisis Management Reframing. *Management*, 23(1), 59–76.
- Pierce, J. L., & Delbecq, a. L. (1977). Organization Structure, Individual Attitudes and Innovation. *Academy of Management Review*, 2(1), 27–37.
- Pretorius, M. (2009). Defining business decline , failure and turnaround : a content analysis. *Southern African Journal of Entrepreneurship and Small Business Management*, 2(1), 1–16.

- Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers*. Oxford: Blackwell.
- Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. Sage.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students Fifth Edition*.
- Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *Leadership Quarterly*, 15(1), 33–53.
- Shalley, C. E., & Perry-Smith, J. E. (2001). Effects of social-psychological factors on creative performance: the role of informational and controlling expected evaluation and modeling experience. *Organizational Behavior and Human Decision Processes*, 84(1), 1–22.
- Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management*, 30(6), 933–958.
- Shepard, H. A. (1967). Innovation-resisting and innovation-producing organizations. *Journal of Business*, 470–477.
- Souder, W. E. (1988). Managing Relations Between R&D and Marketing in New Product Development Projects. *Journal of Product Innovation Management*, 5(1), 6–19.
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat Rigidity Effects in Organizational Behavior: A Multilevel Analysis. *Administrative Science Quarterly*, 26(4), 501–524.
- Steinmetz, L. L. (1969). Critical stages of small business growth. *Business Horizons*, 12(1), 29–36.
- Timmons, J. A., & Spinelli, S. (1994). *New venture creation: Entrepreneurship for the 21st century*. McGraw-Hill/Irwin.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207–222. <http://doi.org/10.1111/1467-8551.00375>
- Van Praag, M., & Versloot, P. H. (2008). The Economic Benefits and Costs of Entrepreneurship: A Review of the Research. *Foundations and Trends in Entrepreneurship*, 4(2), 65–154.
- Volmer, J., Spurk, D., & Niessen, C. (2012). Leader-member exchange (LMX), job autonomy, and creative work involvement. *Leadership Quarterly*, 23(3), 456–465.
- Watson, W. E., Kumar, K., & Michaelsen, L. K. (1993). Cultural diversity's impact on interaction process and performance: Comparing homogeneous and diverse task groups. *Academy of Management Journal*, 36(3), 590–602.
- Webster, L., & Mertova, P. (2007). Using Narrative Inquiry as a research method. In *An introduction to using critical events narrative analysis in research on learning and teaching* (Routledge). New York: Taylor & Francis Group.
- Woodman, R. W., Sawyer, J. E., Griffin, R. W., Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a Theory of Creativity. *Academy of Management Review*, 18(2), 293–321.
- Zhou, J. (2003). When the presence of creative coworkers is related to creativity: role of supervisor close monitoring, developmental feedback, and creative personality. *Journal of Applied Psychology*, 88(3), 413.
- Zhou, J., & Shalley, C. E. (2003). Research on Employee Creativity: a Critical Review and Directions for Future Research. *Research in Personnel and Human Resources Management*.

APPENDIX

1. List of definitions

1.1. Startup

A firm that is in its early stages of development and growth. In general, such firms are in the process of bringing their initial products/services to market, forming a customer base, and putting into place organizational processes and procedures. (Klotz et al., 2013, p.227)

1.2. Startup team

The group of individuals that is chiefly responsible for the strategic decision-making and ongoing operations of a new venture. (Klotz et al., 2013, p.227)

1.3. Organizational creativity

A product or response [that] will be judged as creative to the extent that (a) it is both a novel and appropriate, useful, correct or valuable response to the task at hand, and (b) the task is heuristic rather than algorithmic. (Amabile, 1996, p.35)

1.4. Group climate

A conglomerate of attitudes, feelings, and behaviors, which characterizes life in the organization, and exists independently of the perceptions and understandings of the members of the organization. (Ekvall, 1996, p. 105)

1.5. Creative climate

The team members' perceptions of their work environment and how it influences their creativity (Amabile et al., 1996)

1.6. Decline

Phase in which the venture's "performance worsens (decreasing resource slack) over consecutive periods and it experiences distress in continuing operations" (Pretorius, p.10).

1.7. Failure

(1) When the venture involuntarily becomes unable to attract new debt or equity funding to reverse decline; consequently, it cannot continue to operate under the current ownership and management. (Pretorius, 2009, p.10)

(2) The entrepreneurs' dissatisfaction of the venture's progression. (Gulst & Maritz, 2011, p.437)

1.8. Crisis

An “event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly.” (Pearson & Clair, 2012, p. 60).

2. Interview guide

2.1. Introduction

I want to thank you for taking the time to speak with me today. I would like to talk to you about your experience as an entrepreneur. Specifically, in the course of my master thesis at the TU Berlin, I am conducting a study to understand the impact of a crisis on a startup team's creativity. The term crisis is important and understood in this context as a situation where the viability of the startup is threatened.

The interview should take about an hour. I would like to record the session because I don't want to miss any of your comments. Although I will be taking some notes during the session, I can't possibly write fast enough to get it all down. Is it ok with you?

All responses will be kept confidential. This means that any information included in the report does not identify you as the respondent. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time.

Do you have any questions so far? Are you ready to pursue the interview?

2.2. Sample data

| Company | Interviewee |
|-----------------------|-------------|
| Identification: | Gender: |
| Sector of activities: | Age: |
| Amount of founders: | Position: |

2.3. Questions

1. Creating a common understanding of key terms

I would like to talk about your experience with creativity:

- How would you define creativity?
- Do you think your team is being creative in your company?

PROBES

- Can you give me an example of a creative idea you recently had?
- What did you do with your idea?

2. Evaluation of the overall company reaction to crisis and relationship to creativity

I would like to talk about the current situation the company is in:

- Can you tell about the situation of your company as of today?
- Can you identify the turning point?
- Can you tell me what you think has changed in the company since the crisis occurred? What about in your team?
- Do you think your team was more or less creative before the crisis? How so?

PROBES

- How frequently did you get new ideas before the crisis?
- Does anything prevent you from being creative now?

3. Relationship with the startup team

I would like to talk about your relationship with the startup team:

Communication (impacted by restriction in information processing)

- Can you tell me about your startup team members?
- Can you tell me about your relationship with them?
- How would you describe communication in the team before the crisis?
- How would you describe communication in the team now?

Support (impacted by restriction in information processing)

- How would you describe their support regarding your ideas before the crisis?
- How would you describe their support regarding your ideas now?
- When did you feel you had the most support for your ideas? How so? How did it impact your team's creativity?

Recognition

- How would you describe their recognition for your creativity before the crisis?
- How would you describe their recognition for your creativity now?
- When did you feel you had the most recognition for your creativity? How so? How did it impact your team's creativity?

PROBES

- How would you describe the conflicts that you had in the team?
- How about trust in the team?
- How about openness?

4. Perception of the job

I would like to talk about how you perceive your job:

Motivation (impacted by constriction of control)

- What motivates you to do your job?
- How would you compare your motivation before the crisis and now?

Challenge

- How challenging is the project?
- When did you feel most challenged on the job, before the crisis or now? How so?
How did it impact your team's creativity?

Autonomy/freedom (impacted by constriction of control)

- Can you describe the autonomy you had to perform your job before the crisis?
- Can you describe the autonomy you have now?
- How different was it before the crisis and now? How did it impact your team's creativity?

PROBES

- Are you able to decide how to work? How so?
- Are you able to decide when to work? How so?
- What makes the project challenging (or not)?

5. Company processes

I would like to talk about how things work in your company:

Formalization (impacted by constriction of control)

- How would you describe the formality in your company before the crisis?
- How would you describe the formality in your company now?
- How would you compare the formality before the crisis and now? How did it impact your team's creativity?

Centralization (impacted by constriction of control)

- How would you describe the hierarchy in your company before the crisis?
- How would you describe the hierarchy in your company now?
- How would you compare the hierarchy between before the crisis and now? How did it impact your creativity?

Resources (impacted by conservation of resources)

- How were your company's resources managed before the crisis?
- How are your company's resources managed now?
- Does the presence or absence of resources influence your capacity to be creative?

PROBES

- By formality I mean: rules and standards in place
- By hierarchy I mean: the process and the people involved in decision-making
- By resources I mean: financial, human or time / presence or absence
- What processes have an influence on your capacity to be creative?

6. Open question

Is there anything you would like to add? Are there other things that I did not mention and which influence your creativity?

2.4. Closing statement

So we have reached the end of the interview, thank you for all the valuable information. Would you agree that I could contact you again for some precisions or clarifications? If you are interested, I will be happy to send you a copy of this study one I have completed it.

3. Interview descriptions

3.1. Participant 1

| | |
|----------|--------------|
| Age | 25 |
| Gender | Female |
| Role | Design |
| Team | 7 full time |
| Duration | 2015 - today |

1 **(Interviewer) What is creativity for you?**

2 (Respondent) Wow hard question, it is super big. Ahem for me creativity has a super wide
 3 range because it's like, I think it is something super subjective you know? That everyone
 4 has a different point of view, and being creative for me it's just like finding a good solution
 5 to accomplish something. So it's not just creativity applied to arts for example or to
 6 drawing or painting or for example design. I relate creativity to innovation somehow.
 7 Because people will do something creative when other people would do it in other ways
 8 and you say 'wow, I would never have got this idea'.

9 **(I) Ok and how creative do you think your startup team is?**

10 (R) I think our team is creative in that sense. I think that in a startup everyone is kind of
 11 creative and I think that when people hire other employees in startups for example you
 12 would hire them because you think they can bring something innovative to the team, like
 13 do things in another way or bring in something to the product that could be nice for the
 14 idea of what you want to get in the end for your product.

15 **(I) So how does creativity play a role when you hire new people?**

16 (R) Well for example I had to hire some other designers we were interviewing them and I
 17 think that the personal part is very important because we have to work with them so we
 18 have to see that they are nice, they are like open-minded and they would like fit in the
 19 team as well. That they don't just act on their own, you know, because a startup is a team
 20 so the new people have to fit the team because they have to help us achieve something
 21 and we think that... Because look for example our team now is very small, we are just 7
 22 people, so everybody is important there.

23 **(I) How does this relate to team creativity?**

24 (R) It's like I said about creative ideas and this. Like for example we have a girl, she is really
25 UI and UX design, so she brought in creativity in ways on how to solve problems on the
26 website. Like by designing the app she could tell us what could be better or the user and
27 she gave us a point of view that wasn't known before, you know? And also because those
28 new people haven't seen the product like us... So I don't know how exactly it relates to
29 team creativity and all but like I said, you get a new point of view and in the end you get an
30 overall common point of view from which we build our product and it's better because of
31 we have a bit of this a bit of this a bit of this you know? And when we hire someone
32 because we make sure that they really fit then we can also trust them.

33 **(I) Moving on to crisis, could you tell me more about the situation your company is in**
34 **right now?**

35 (R) What do you mean? How the crisis relates to creativity in the team?

36 **(I) Yes, and maybe you can start by describing for me your current crisis?**

37 (R) Well the thing what happened... This crisis happened because we are running out of
38 money. You know in startups you get a certain amount of money for a certain period of
39 time and at the end either you find a new investor or you still have money that you saved
40 from before... So the problem is that when you have less money, you are limited in the
41 possibilities to do things. For example, now we are a really small team. If we had more
42 money now we could hire more people and achieve our objectives faster. We could have
43 more diverse point of views, do more user testing to see what is better and improve more
44 our product, we could develop ideas faster, have more teams involved on the same
45 feature. The crisis happened last November. It was super crazy because we were a team of
46 30 people, with 20-something in Berlin and 9 in the [United] States, so we were like a lot of
47 people and the ambiance was super good, everybody loved to work there and then at
48 some point people started to get stressed because we realized, ok now we will have to fire
49 some people. And it is a super hard time because like everyone is super tied to each other
50 and we are like a family. So if you have to fire someone it is hard for the people, for the
51 ones who are losing their jobs and it brought demotivation for some people. And we had
52 all been working so hard and now we cannot achieve it because it is not possible with less
53 people... It was some hard times. But somehow now [3 months within the crisis] it is
54 better, we regained motivation people are closer to each other so it makes things better.

55 **(I) So can you tell me more about what changed once the crisis started?**

56 (R) Yes so first there was the demotivation, it was really big, people were in a bad mood. In
57 creativity there was less ideas. I think that motivation is very linked to creativity because
58 when you like what you do you have more ideas and you say we can do this or implement
59 that and always want to improve and to make your website the best. But then we had less
60 ideas, because we were in a bad mood and we couldn't do as much, you know? We were
61 more concentrated in how to deal with the situation of the people who have to go but who
62 are still there. Because they are not gone straight away, maybe they go in one month, but
63 they know they have to go... It was like a moment where you could not do much stuff.

64 **(I) What motivates your team to do their job?**

65 (R) Well for me, I really like design, images colors and compositions... So I really love this
66 job, I really like to do it and I am happy to get up in the morning to go to work because I
67 am doing what I want to do, it makes me feel good. And I think we are all like that. You can
68 see the outcome on the product you are creating, you know?

69 **(I) So how was your motivation different before and during the crisis?**

70 (R) Well the crisis had a big impact on motivation because you are able to do less things,
71 because there are less resources available and less people to help you. It is super hard to
72 be the only one designer because you have to do a lot of stuff and then you cannot do
73 everything as good as you would do it with more people and you don't have more time for
74 all of it. So sometimes you are not 100% happy with the final product but you have to
75 balance time and resources and you say, ok this is 80% good and it's good enough. But if
76 you would have plenty of time and more people you could really get creative and do
77 something that you are completely happy with. And now it is like ok, I don't have to be
78 fully happy with what I do but ok we need to move on. Like also when I design something
79 then it is to be programmed and not everything is possible, you know? Actually this is also
80 good for creativity. Because when they tell you 'ok, I cannot do like this', like imagine a
81 circle. So then you have to think 'ok how can I do the same thing but it shouldn't be a
82 circle?'. So either I find a new design, you really need to be creative and find ways to
83 overcome the limitation like maybe I can export it as a square but it still can look like a
84 circle... Or, like I think this is also part of creativity. Not only producing something nice but
85 it is also how do you solve this problem.

86 **(I) How how did the time pressure impact your team creativity?**

(R) The problem is that for example when you work under pressure it is very hard to be creative. Because you know, people who work in creative jobs are not creative all the time. Some days they are creative and some not. Like sometime you will come up with an idea in 5 minutes and that is great, amazing but the next day you need to find another idea and you can spend two days and not come up with anything. But in crisis you don't have the three days to think about something. You have to find a solution straight away, see what fits and how to do it. So maybe the result of this is that you will get the finish product that is not 100% that you are happy with. It is still good but you are not happy with it. But actually I think now is my most creative moment because this is also a bit personal. At the beginning I was afraid, I never worked by myself and was always mentored but in our startup I have to do the things by myself and take decision on things where I have no idea what the best solution is and the other co-founders are not designers, they cannot help me. So in this time I learned a lot also. Like at the beginning I was doing the stuff and nobody could really tell me this is good or this is bad, you know? So then you have a lot of pressure. But now I am getting more confident. Also we defined the value of the company and branding so it is easier to design because we have this manual to support decision-making. So it helps to produce something that fits and is easier. Because for us, this startup was a challenge, we had never done it before and we said ok, we will try it and at some point if we cannot do it, then we will see. And we all worked really hard, really, really hard. There are some times when I would get up at 6 in the morning and research stuff, because somehow I had no time to do it in the office because there I had to produce and it was very hard. But we learned so much, it was positive.

(I) When did you feel most challenged as a team, before or during?

(R) I would say now during the crisis. Because when we started nobody really knew what we were doing, we were trying and everything was accepted. And everything was working. But after a while things are not working and you don't know why. So you have to try and find new solutions but you are under the pressure that investors really need to like our product to invest. So the pressure had a negative impact and didn't help at all. We constantly got this feedback 'oh this is bad, this is bad, this is bad.' So ok, let's do things good, you know, but it is then super hard to get all motivated again, to fight for the same thing. It is not easy to keep people all the time motivated to try and improve things, especially when we have to redo things ten times. For example, we had team meetings and it was hard to motivate people throughout. As a designer I am in the middle of the

marketing people and the developers so I know what they are going to talk about but they don't know what the other ones will talk about. And sometimes they didn't understand what others do and they got frustrated. With a bigger team we had miscommunications because some didn't go into the area of the others. So when we were more people communication was super hard, because we also didn't decide who had the final decision on things. Like you should define everyone's responsibilities and it is important that everyone knows what to do and have people who take the decision, because when a conflict arises then you lose a lot of time and you can't afford to lose time.

(I) So if I understand correctly, you mean that under pressure you cannot afford to lose time to make decisions?

(R) Yeah, it is very important that when you are under pressure, then you have to produce. You need efficient people who are focused on what they do and take decisions. A good decision is not the one that gave you the best outcome but that was taken timely to react.

(I) So how was the hierarchy before and during the crisis?

(R) So the developers were well organized by expertise and it was easy to know who was doing what. But marketing was more of chaos because half the team was in San Francisco. So we also had communication and language problems and then you don't understand well what the other one is doing, maybe I said something and they took it wrong. For example, we all agree on one idea and actually everybody understands something different. So this brought crisis and in the end no one is happy. So we had a bit more hierarchy but still decision-making was not clear and lots of misunderstanding. Because of our financial problems, we had to let go many people so we are much less now and this means that whenever you have to take a decision it will be done fast because you are the only 'expert' able to do so, or at least you have less people to involve in the decision.

(I) How did this impact creativity in your team?

(R) Well it had pros and cons. When we were more people we could have a lot of different ideas and get more juice of the same thing. So you can develop faster nicer things. But on the other hand, now that we are less people to discuss things we come more to the point. So I would say that in the end we are creative now. Somehow we develop ideas that are maybe not the most creative but we have pressure to achieve so we achieve them. Before maybe we had a lot of ideas but we wouldn't implement most of them because there were too many people and we were not able to prioritize and decide what to work on. It is more

efficient now. We improved on our processes a lot actually. Now that we have pressure we need to be more efficient so we redesigned the processes and we know exactly how to go about things. Like the CMO tells me what she needs, then I send it back to her, then we agree, then we send it to our developers who code it and they sit together with the CMO to improve. And when we were more people we made the mistake to be less organized and had lots of communication problems. Now with less people you exactly know who does what, which are the responsibilities across the team and who you have to approach for what.

(I) How do you think this was influenced by the crisis?

(R) Well actually I cannot tell you if this happened because of the crisis or because we are working longer on the project so we learned from experience.

(I) How do you feel these processes impact your team's creativity?

(R) I think it is very good and productive. Because creativity is very subjective and everyone has different views or tastes and what someone likes the other one doesn't. So if you have many marketing people in the team, they all have a say and maybe they have different views so how do you know which one to pick? With clear processes and decision making now it is easier to make decisions. But also with less people you have shorter ways of communications so when one person delivers, the others are happy because we spoke a lot already about this. Somehow, I feel that since the crisis started we kind of got used to work under pressure so now it is not that the pressure is gone but you feel it less. Maybe we got used to it and it doesn't kill our creativity as it did at first. I feel we became more efficient.

(I) Can you tell me more about your team members and the relationships in the team?

(R) Yes so now we have three marketing people and they do all sorts of campaigns for us, how to promote the company. And with them I work closely together because they ask me for designs for the promotions and stuff. So we speak a lot together about the product. Then there is also M. [CEO] who looks for investment all the time. He is most of the time in the States and does all the finance stuff. Then there are the developers and I also work with them, so when we approved a design with Marketing, I give it to the programmers so we work a lot together too. Actually I work close with everyone in the team.

(I) How would you describe communication in your team before and during the crisis?

(R) Well actually that is one thing that got better. Before when we were more people we were using a lot Slack [group chat software] and writing to each other and now as we are less people we speak more face to face and this is good because you can explain yourself better, whereas in the chat you can miss things. Especially for creative activities, I think that it is not very good to use a chat to communicate because a lot of things are visual, it is better to show than to describe. Subjective things can be explained very well while talking and if you have to explain it with chat is much more difficult. So it is better for creativity. We have better discussions; we are more free to give our input. We know better how to fit our ideas in the team. We can implement things faster as well.

(I) How are ideas received in the team?

(R) We are very open people, we accept every idea, like if the idea is not too bad we evaluate it, check how it takes for us to implement it. And everyone takes part you know, saying 'I will do this, and I will do this'. So also now that people take more responsibility now it works. And we were always open about this. We don't reject any idea just like that. If so, it is argumented and convincing that it is not good for the company. If you let people bring in their ideas for the product they feel more integrated and it increase motivation so it is better for the people and for the product.

(I) How different was it before and during the crisis?

(R) There was no impact really. Everyone expresses their ideas. Even if we cannot produce it now that we have more constraints we just keep it for later, we don't just reject it altogether. So crisis or not we were always supportive to each other. What I really like is that the team is very honest and will say 'I like this' or 'I don't like this' straight away, so nobody loses time with things unsaid. Then we can discuss 'we do that' or 'we don't do that'. And when we find an idea good we would always say it 'yes this is good, well done', even when we have pressure or a crisis we still do that.

(I) Talking about how things work within the team, how did you feel autonomy on the job before and during the crisis?

(R) Well the thing is that our jobs changed a bit. When we were more people we had more management to do because we had to manage a team and organize what people should work on. And this now has changed. It has also pros and cons. I am really a creative person

214 and this is what I like to do. I don't like to plan so much. So if I have to spend some of my
 215 day just telling people what to do and worry that they will deliver it is more pressure in
 216 itself and you have less time to create and need more time to organize.

217 **(I) So how does this relate to autonomy?**

218 (R) Yes of course. Well, we all have autonomy, like our company is very open. You can
 219 come in at any time and leave at any time as long as you do your hours, or work from
 220 home. And we each manage our time. We have to do our tasks and when there is extra
 221 time we can work on whatever we want. But for example I see that now that I don't have a
 222 team to manage I feel even more free to do what I want and work on what I want. Of
 223 course when I was in charge of people I would decide what they would work on and they
 224 could do it however they want. Although now that we have more processes I feel my
 225 autonomy is a bit more reduced. Because now there is stuff that we cannot do, so I cannot
 226 really do all that I want and I also we have less time and more pressure. We have investors
 227 to satisfy and they tell us now you have to work on this, so we just have to do it. So I can
 228 still decide on the how and when but not as much on the what. Before we had more time
 229 so we could decide what to work on a given day. And I think this is the same for all of us in
 230 the team. Everyone can do the things as they want, as long as the outcome is what was
 231 supposed to be.

232 **(I) Lastly, you mentioned earlier resources. How were they managed before and how**
 233 **is it now?**

234 (R) Well I think this didn't change so much because when we started, we all worked using
 235 our private laptops. And after that when we grew we had to get more equipment, get new
 236 offices, we moved 2-3 times. And we got more tables etc. And this is stuff that despite the
 237 crisis we still have. So somehow we have more physical resources in times of crisis now,
 238 that when we were just starting. So this still has a positive effect because I can still use
 239 them, I don't have to use my private laptop anymore. And even if we are more careful with
 240 expenses, we all agree to invest in the product, so if we need a new software to develop
 241 something then we would just get it. It has never changed in times of crisis or not. If we see
 242 that some resource is important then we would get it. And with the right resources you can
 243 work better and if you don't have the trouble you can be more creative. Because trouble is
 244 a bit like pressure you know. If I have a program that doesn't work so well then I cannot
 245 focus on being creative, I have to make do, try open it again and again or download some

free software that doesn't work too well... And I have to check if the trial is over, and then I have incompatibilities with programs... All this would kill creativity. Of course resources are not unlimited and we have less people. But if we need some tools we would get it and this really supports our creativity.

(I) How was the atmosphere before the crisis compared to now?

(R) Yeah before the crisis we were like a family, doing all sorts of activities together. But not only company organized activities but people were getting along very well with each other and we would go together for lunch or do something together after work, just because we are happy to be together... That means that your work colleagues are also your friends and that is great for communication, confidence, to feel better at work... So it was a great feeling when things were good. So of course when the crisis happened and we have to let people go then some felt bad. Everybody was annoyed, sad and worried. People were more negative; they weren't bringing in new ideas because they knew they were going to leave. They wouldn't go out for lunch together anymore but keep talking about how shitty the situation was for them and brought a negative ambiance. Now it is back to good again. After the rough time of having to let go many of our team members, we are a smaller team but still good together. The pressure and the risk to fail are still there but somehow we are back like before, we do stuff together. Everybody in the team is very nice and that makes it easy to work together.

(I) And how were conflicts managed before the crisis compare to now?

(R) Well actually before as we had so many people and not so many processes, it was more difficult to handle because people wouldn't just speak with each other, they had to escalate it and bring someone to moderate. And I think it is not necessary, we would be able to communicate with each other. We took too long to solve problems and it is not efficient. You lose time just discussing things. And in the end things can be either black or white. It is just a matter of taking a decision faster. So if you chose straight away white and see after two days that it doesn't work, then you can still do black. But if you spend 5 days discussing then it is too late for either black or white. Now I think we resolve conflict faster because we are less people. So it is less conflict, it usually gets resolved faster and directly. Before we would just involve many people and discuss things forever. Now we don't have this now so it is better. But still we didn't really change the way we solve problems. We discuss it in the team with everyone and in the end chose the most appropriate decision.

278 Just now that we have clear roles and responsibilities we have someone to take the final
279 decision. So it goes faster. And we don't ban things, even if we take a decision that is not
280 fun we always give and understand the reason so it is not so bad. Of course when there
281 was no crisis we had more free room to do everything. Now we have to care for the
282 investors so we cannot solve problems exactly how we want to we also have to do what
283 they want us to do. We don't have much chance to go to the investors and give them 20
284 ideas.

285 **(I) So we are reaching the end of the interview. Is there anything that you would like**
286 **to add?**

287 (R) Well from what I saw crisis is not so bad for creativity. People can get really creative
288 under pressure because somehow there is no other choice. On the other hand, I think the
289 quality of the outcome is sometimes not as good because you make do and you don't
290 have time to perfect or improve. Also a good ambiance is very important to go through the
291 crisis. If people have a good relationship with each other, even through hardships you can
292 continue to function and produce good output. We are like a family together so we get
293 through thick and thin.

3.2. Participant 2

| | |
|----------|--------------|
| Age | 26 |
| Gender | Female |
| Role | Marketing |
| Team | 7 full time |
| Duration | 2015 - today |

1 **(I) What is creativity for you?**

2 (R) Hmmm I think it is doing something new that nobody has done before. In the broader
3 artistic sense I guess I would say it is the unexpected also. Maybe more related to
4 entrepreneurship I would say creativity is thinking out of the box, coming up with
5 solutions to complex problems and also putting them into action.

6 **(I) Can you identify a turning point when the crisis started?**

7 (R) Ok I think the crisis started... when did it start? When we moved...? Ok honestly saying
8 for me the crisis started when we moved from the first office to the second office. So that
9 was actually when we grew so much. One week we were 9 people and then I was on
10 holidays for one week and when I returned we were 25 people! And in a new office. That
11 was for me the turning point really. Before that I was motivated and thought everything
12 was going well and when I returned I thought this is not going in the right direction.

13 **(I) What made you think that?**

14 (R) I think that is when the chaos started. We had communication problems and people
15 didn't know what other people were doing, we were doing double work. We had no proper
16 goal setting, no proper guidance and processes, things like that.

17 **(I) How creative do you feel the team was before and during the crisis?**

18 (R) I would say we have a creative team and I think it was... hmmm I would say it didn't
19 change. I think we were creative before and we are creative also during the crisis, just that
20 we don't manage to channel the creativity in an efficient way. What happened was that
21 people had lots of cool creative ideas and then we had two problems. One problem was
22 that we were just not brave to do some of the crazy stuff we had in mind and that made us
23 then not interesting enough I think. And the other thing was that we compromised too

24 much. So we probably had two great creative ideas and then we tried to have a
 25 compromise and the compromise was just not the most creative. I think if you ask me I
 26 would say that this became worse in the crisis. Then our creativity is strong before and
 27 after... but channeling and using creativity in an efficient way became worse in crisis.
 28 Because I think during crisis we are even less brave and more trying to get compromise.

29 **(I) Can you elaborate on what you mean with “brave”?**

30 (R) For example... We made a video spot and we had some really crazy ideas, for example
 31 with a fish. But we were not brave enough to just do it, because there could be this law or
 32 that law and we were too afraid that we would be sued. And when it came to
 33 communication about the content on the website we thought about you know Facebook
 34 posts or texts for the website, we thought we could be catchy and provoking and in the
 35 end we were like “ok but if we say this then somebody could be offended or annoyed and
 36 then people might not like us”. Instead of saying well fuck it it’s funny and some people
 37 won’t get it and it won’t kill us. But then we create interested funny content, you know?

38 **(I) So how was it different when you were more people?**

39 (R) It just became more complicated because even more creative ideas were on the table.
 40 You know before that it was maybe four people brainstorming and having good ideas, and
 41 then we decided on a few of them and maybe made compromises. And after that we were
 42 10 people on the table having ideas and then you know, lots of good ideas were just
 43 rejected because people didn’t feel like fighting for them and others disappeared into
 44 compromises that didn’t polarize anything. So just more people made it more
 45 complicated.

46 **(I) How was this process of idea expression and selection in the team and how was it
 47 different before and after the crisis?**

48 (R) So for example for two months we were pretty busy with this video production and we
 49 discussed almost every day about it so... Everybody shouted ideas at each other and we
 50 were developing on top of ideas, writing them down. Then we decided on the storylines
 51 that we wanted to follow and build on top of them. And we would do that again and again
 52 and again. Before my definition of crisis, ideas were received openly, every idea was
 53 appreciated... we had a lot of fun you know. We enjoyed and had a lot of fun and were
 54 funny. And after the crisis it became a it more impatient at some step you know.
 55 Everybody was under pressure, under time pressure and so we were much quicker in just

56 making people shut up and not deliver more ideas. During crisis it was more about just
 57 deciding and doing and focusing on something than delivering more and more ideas on
 58 how to approach some problems that we had. In the end you have a problem A and you
 59 can think of 5 ideas on how to solve the problem and you cannot know which one will be
 60 the best solution. And you have to take one road and do it. And when you are under
 61 pressure you don't want to lose too much time in deciding on which one when you are
 62 already aware that you cannot know which one is the correct one. So you just go for one
 63 quickly and focus on it and do it. So I think this has been derived the approach. So then it
 64 was more of the problem that too many people had too many ideas on how to do
 65 something.

66 **(I) How would team members react when their ideas were shut down?**

67 (R) Sometimes of course pissed. I think that a lot of us just didn't listen then you know...
 68 still keeping our own ideas in our heads. Instead that every one of us agree on an idea and
 69 take this road and just focusing on that, people were still just following their own ideas
 70 you know?

71 **(I) Could you clarify? Do you mean that when a decision was taking people would still**
 72 **go their own way disregarding?**

73 (R) Yes exactly. For some people it was on purpose but also just communication problems.
 74 For example, what was a special case for us was that we worked over two continents so we
 75 had the German team and the US team. Then we had regular skype sessions. Things were
 76 discussed and decided during this skype session. We decide for a certain way to go and
 77 that means that we also won't do other things. And that means that we would decide on
 78 things during the skype meeting but not everybody got it, either because they were not
 79 there during the meeting and nobody told them or because they just didn't want to hear it
 80 or they just didn't want to listen you know on both sides. Then a lot of things were done
 81 but not properly!

82 **(I) Was this different before and during the crisis?**

83 (R) Yes of course because we were less people so it was before easier. And also I think
 84 before the crisis there was also that demand for quantity and more ideas higher than
 85 during crisis. In the crisis it would have been actually more the goal to focus and you know
 86 less is more. Before crisis quality was more demanded somehow.

87 **(I) How did this change of focus impact the creativity in the team?**

88 (R) The level of creativity still didn't change. People were still every creative and had lots
89 of ideas, during crisis and before crisis... So the impact was more on the selection of ideas
90 and execution.

91 **(I) How was the recognition for creativity in the team before and during the crisis?**

92 (R) Before crisis the creativity was more recognized and more valued than during the
93 crisis. In my opinion this is really what was the problem. In crisis we didn't need that much
94 creativity, we needed decisions and execution and "verzicht"... to drop things you know.
95 And work. And before the crisis it was more about being a little crazy, having lots of ideas
96 and painting the picture of how we would like our product to be and how we would like to
97 communicate. Before crisis, every idea was happily received and discussed and also you
98 know we took our time for every idea. In crisis it was kind of annoying when people came
99 up with more ideas. In general, everyone was annoyed of yet another idea on how to get
100 out of the crisis or do this and that. You have to imagine, we had the problem that we
101 wanted more people to use our website. And there are million ways on how to do that. You
102 can go to universities and distribute flyers. You can do online marketing, SEO, Facebook
103 marketing, you can use banners, bus advertisement, television advertisement. There are a
104 million ways. Or you can do growth hacking of course. So every time you would go to the
105 office, there would be a new idea of how to do it that we had to discuss, instead of saying
106 "ok these are the three things that we will do and we focus and don't waste our times on
107 checking everything else". There are million ways and you don't know which one is right.
108 At some stage during crisis you cannot have the luxury to try all of them. You have to
109 decide for a few, execute them, do your homework, check the matrix and react. You will
110 not know which one is the best one and you just... it doesn't make sense to discuss it
111 endlessly and makes even less sense at this stage to brainstorm new ideas of how to solve
112 the problem. If you haven't even taken the old ideas seriously and you know start working
113 with them properly. It was really like, I go into the office and I know we have this skype call
114 again and 10 people will have again 10 new ideas that really frustrates me! I also have
115 twenty thousand million ideas but let's just focus on few of them and do them right.

116 **(I) Who would decide what idea to work on?**

117 (R) It would be J. our CMO. But well as I said before we had some communication trouble
118 so even though somebody decides on what to do or not to do, not everybody would get it

and follow that rule. I think it is a mixture between really communication problems that the people just wouldn't get the information or didn't understand the information. The other thing is that some people just want to follow their own ideas and try something out themselves... Before the crisis decision making was more collaborative, we would decide together. We would you know take our time and discuss. Of course if there was a point where we couldn't find a compromise then J. would take a decision.

(I) How was formality in your team before and during the crisis?

(R) We had some official role assignments and stuff like that but we are not formal. I think we tried to impose more rules and processes during the crisis. Because I think we tried to get more order into the chaos, starting with work hours and meetings and how to communicate and who communicates with whom. So we tried to implement some more rules and regulations, processes during the crisis. I think for the culture some decisions were very negative. For example with the working hours... that we had to stay longer at night because of the US time zone. I guess that in some things like this for example they were implemented top down and not communicated well and that was the problem. So this was then taken, not very nicely taken and people were pissed.

(I) How did it impact the creativity in the team?

(R) I think in a sense that some people got distracted you know? Because the attitude towards the organization changed and towards the people within the organization. From "hey it is so cool and so funny and we love working here and we want to make it rock" to "hey I am pissed because of this and this. Because they implemented this new regulation and new process". I guess it distracted some people... it demotivated and distracted. Instead of talking how to solve a problem or focusing on that, some people were more talking about the bad company culture or bad decision. Whereas before the crisis there was less distraction concerning this. There was less formality, like I think we had really no rule at all before. People had their contracts with their hours but nobody was tracking them or telling anyone when to come or when to go...

(I) So how was autonomy in the team to do the work?

(R) There used to be a lot. I think if you didn't work autonomously then nothing would happen. You had to structure yourself, you had to find yourself the tasks you want to do, you had to prioritize yourself how to do things... And this changed a lot during high time of the crisis. When at the beginning we were totally free and monitoring was little and

everybody was working very autonomously... In crisis J. tried to get more control and she really tried to tell the people “ok you only work on this now the whole day or for just 2 hours a day”. So during crisis, the autonomy decreased a lot, may it be what to work on, how to work or when to work on it.

(I) How do you think this impacted creativity in the team?

(R) I don't think it impacted creativity. Rather motivation decreased. Before what was motivating us was the cool team we had at work. Just you know, work with a cool team on a cool idea. Actually to be honest, for me the idea or product itself was not as motivating as the team. For me the motivating variable next to earning money was working with a cool team and that was what I was looking for. And learning. During crisis, working with a cool team was really gone for me. It was not fun anymore to work with the people because everybody was stressed out. They would talk a lot about problems and less about solutions... they would be very hysterical. We also had some fights then in the team. The boss becomes more dominant, more hierarchy. You feel that the trust in the team and its capabilities has decreased. And you feel that you trust other people less. So I just lost trust in the team and including myself during this process.

(I) Why did you lose trust?

(R) Just nothing worked! Nothing was a success, everything we did was chaotic. There was not one thing that worked smoothly and was a success. So I lost trust in our capabilities. I think that this is a high level strategic thing why we had the crisis you now. Starting from going there without knowing the market in detail, without knowing the problem in detail, without knowing the customer group in detail... it's just stupid. Then the team grew too fast. And if the team grows so fast you don't get really good people and so we had just too many unskilled people... I think the team is not good enough in that constellation, the individual team members because of their skills and the group cannot work together properly because it grew too fast.

(I) According to you what is the impact of growing the team fast on the way you work together?

(R) I mean a team to work properly it needs time. You have to go through different team phases until you reach the efficient level. And we got stuck somewhere in the storming phase I think. We never reached the performing phase. So the team didn't get that time to really get into the performing stage that's the one thing and we had too less experienced

and brilliant people. How can you get 25 brilliant people within two weeks? Good startups take months before they hire their first employee...

(I) How would you describe the centralization in the team before and during the crisis?

(R) Before it was really decentralized, everyone had their topic that they were responsible for. During the crisis it became much more centralized, having one person deciding on what is going on.

(I) How were resources managed in the team before and during the crisis?

(R) Ultimately, when we ran out of money of course thing got cut down and people were fired... Where I see the crisis is right before in the growing phase. When I already saw that the crisis started we were spending a lot of money and resources. Then we saw we were running out of money and this became less of course. But we would still spend on what we needed. So expenses would be discussed at some stage with management but often team members would just buy things with their credit card and give the bill to the accountant. Since the crisis a lot of things just got cut. For example I lately I prepared a big campaign with flyers and stickers and everything was prepared and then at the last minute it got cancelled and we didn't print. Because we were short of money. And it happened often especially during the high peak crisis.

(I) How do you think this impacted creativity in the team?

(R) Again it definitely had an impact on motivation but I don't think it had an impact on creativity. It's more decreased motivation and increased frustration. You know if you worked a lot to make a certain campaign happen and stressed out a lot of people to make it happen on a particular day and then at the last minute it gets cut off because of budget it's frustrating. Because it was work for the trash, right? And you stressed out the other people and it wasn't necessary. Then they are also frustrated... I know that some people complained. Our CEO then tried to talk to people individually. For example, somebody from design would complain about marketing and then our CEO would talk to marketing and ask about the problem and how we see it. I know about a case where I was not involved and there was an escalation meeting where people met to discuss the problem that they had with each other. I think it helped to make people talk and resolve the problem.

214 **(I) How would conflict resolution happen before the crisis? Maybe you have another**
 215 **example.**

216 (R) I can't recall a conflict before the crisis... But then there were many during the crisis.
 217 This was due to the frustration that everyone had to deal with because of the many
 218 problems within the company. We had private fights where people didn't like each other,
 219 we had fights where people disagreed about special decisions, everything.

220 **(I) Did this have an impact on the creativity of the team?**

221 (R) I don't think there was an impact on creativity.

222 **(I) How challenging is the project for you and how was it impacted by the crisis?**

223 (R) The project has always been challenging. And during crisis it got more challenging with
 224 all the people. Everything became more complex. There were more people, there were
 225 personal conflicts in the air, there were professional conflicts in the air... There was the
 226 level of frustration that made it more complex and the number of tasks also grew... At a
 227 stage it became overwhelming. So I felt more challenged during the crisis than before. But
 228 it wasn't positive, it was just frustrating and depressing. Nothing succeeded, there was no
 229 success story, it is just not nice.

230 **(I) Thank you for your participation, is there anything you want to add?**

231 (R) Well I hope I said stuff that makes sense and that you can use. Just I think, I really... I
 232 think people don't get more or less creative during crisis or before, it is more the execution
 233 that changes. On the other side you have different kind of pressure. In some teams you
 234 have the pressure that you have to prove yourself, I want to perform good so people can
 235 see how great I am. In this startup team I feel confident of who I am and what I can do and
 236 that positively impacts my creativity. Else I have the feeling that my brain doesn't really
 237 work if I feel the pressure that I have to show my skills and I don't personally feel
 238 confident. At least here I know that the others just cook with lukewarm water... We are all
 239 young people, I know I am not stupid, I know I deliver good work especially compared to
 240 the others. I am one of the first employees and I know the company and the other
 241 founders very well. So I feel very confident in my position. Whereas feeling less personally
 242 confident it has an effect on my creativity. So if in crisis you feel more or less confident
 243 then you get more or less creative. Especially if you make yourself responsible for failure
 244 and you feel less confident and are less creative. For me lack of personal confidence is a

245 blocker for my creativity, like someone puts a barrier on my ability to be creative, it
246 doesn't work.

3.3. Participant 3

| | |
|----------|--------------|
| Age | 28 |
| Gender | Female |
| Role | Marketing |
| Team | 7 full time |
| Duration | 2015 - today |

1 **(I) Can you identify a turning point when you would say the crisis started?**

2 (R) I think it was somewhere end of summer, when we realized that what we tried to do in
 3 marketing somehow didn't really pay off. We had put everything into marketing and on
 4 the IT side to program the features and then we realized that ok it doesn't really work out.
 5 WE had some KPIs and we didn't meet them at all. For the marketing team we would move
 6 a lot of responsibility to the US team, like ok we are a German team with a German
 7 mindset and we have to move it to there.

8 **(I) Why do you consider it a crisis?**

9 (R) Our startup depends a lot on the money that we got from our investors and this money
 10 has gotten to a limit when you need to see some good changes in the numbers... And then
 11 you would get some additional investments otherwise you would run out of money and
 12 then, well you are done.

13 **(I) Can you define creativity?**

14 (R) It is when you can think out of the box in different directions, you can think and add
 15 different points of views to one target or object and create something new out of it.

16 **(I) And would you consider that your team is creative?**

17 (R) It is very creative. I mean especially in that one phase where it felt like everyone was
 18 very enthusiastic about the idea, everyone was motivated and excited to be in the best
 19 startup in the world. So we would spend evenings staying together, drinking or having
 20 some food and creating new ideas. Around marketing stuff especially. That was a very
 21 creative phase. We felt like we had the time to think about stuff. Like you would have the
 22 feeling you need to create a big campaign and you need some time and we had all the

resources to do it. We had a big team, we could all sit together we could all take the time and do this. And also I mean in a startup you don't have those working hours so you work when everybody is motivated so in the evenings they spent longer time at the office because they like it and saw the way things would go on. So they were motivated to spend their time and do it. It's not like you look at the watch and say I am tired and think I really want to go home and not care that much.

(I) So what motivated you as a team?

(R) They liked to be part of the idea. In the end you like to be part of a big project and you are part of a really small team, part of a creation phase, part of what's coming out of it in the end. So everyone is motivated to do something great.

(I) How do you think it changed between before and during the crisis?

(R) I think there was a change. First you create something and you think it's great and then you realize step by step that it is not as good as you expected it to be. Maybe you see that the outcome isn't as you would have expected it. So you realize it but it's not that you see immediately some negative outcome out of this. That's something that you start realizing before the crisis actually and then people sit together and talking about it and thinking ok, I am not really satisfied with what we created.

(I) So now that you are in crisis and running out of money, is the situation having an impact on how you are creative together?

(R) Yes because the pressure grows. There is no fix day when you say "now is crisis", right? It happens slowly. But the pressure grows also with this. We have to be faster, more creative, we need to get more things done. And then you don't have time anymore to think about stuff that detailed. For us I think what was one point for me was also that I felt at the beginning everyone was allowed to say something and everyone was allowed to add their point to stuff.

But after it got restricted a bit and only few opinions were being considered in decisions. Because time is not there anymore during crisis so you have to make decisions and you don't think that much anymore.

(I) How is it decided whose voice is heard?

(R) Always the higher levels then of course.

(I) How does this impact the creativity in the team?

54 (R) It wasn't that creative anymore. One thing was that the projects were a bit smaller, so
 55 you wouldn't create a big campaign anymore but you just create smaller things step by
 56 step. And fewer people can participate so it creates some kind of frustration. People feel
 57 that they started to work in a team where they have some responsibilities and stuff to say
 58 and now they are just the ones implementing at operational level. In general, compared to
 59 before people's ideas are either not heard at all or it is being put down on a paper or in a
 60 pool of ideas but we know that in the end it is not going to be taken.

61 **(I) How was the recognition of ideas between before and during the crisis?**

62 (R) I think in the crisis it is even more than before the crisis started. Creativity is not a part
 63 of what you are doing anymore, it is not a part of your job to create new stuff. It is more
 64 operating things and doing the stuff that was already decided, like I don't know... creating
 65 pictures where it was already defined before what should be on these pictures. So then it's
 66 not anymore that you sit together and discuss ideas and compile them but sometimes I
 67 feel we were sitting together and discussing thing but you are not really allowed to say
 68 something. It was supposed to be a discussion about how we continue but you could see it
 69 was decided upfront what should be the outcome of the discussion. To keep it shorter or
 70 lean, I don't know.

71 **(I) How did the team react to that change?**

72 (R) It's a bit of a process but in the end it changes the way that people... in a way they just
 73 stop thinking about it. When you are exactly told what to do then you don't feel that much
 74 responsible anymore to think about it again or restructure or add things to this. So you
 75 lose this feeling that you are also responsible for the outcome.

76 **(I) How was this feeling of responsibility in the team before the crisis?**

77 (R) It depends on the person obviously but for many it's like you still think you can change
 78 something about it so you try to talk about it to others and discuss what is going on and if
 79 you are on the wrong train and if this is the right way to go... But that fades a bit the closer
 80 you come to the crisis time.

81 **(I) How was autonomy in the team before and during the crisis?**

82 (R) Before it was pretty open, maybe because it was a smaller team. Maybe a practical
 83 example. The team was allowed to come and go the way we wanted in the beginning and
 84 then later on it was restricted more and more. So we had fixed office hours after some

time. Or some people like to go and do some sports in between. In the beginning it was not a problem but after the crisis then it was not seen well anymore. Because then you would miss some discussions that might have popped up or something. So there was more and more restrictions on the way you worked. Whereas at the beginning it was people sitting on the balcony outside in the sun to work and now we wouldn't feel this is accepted anymore. It's these tiny things that changed over time.

(I) What made you feel it was not accepted anymore?

(R) It's a mix of the atmosphere in the team and when I refer to creativity it was not really a very big part of your work anymore then you don't feel that you can take your time to be creative. I would say before it was very, people were talking about everything, private stuff as well, how their weekend went... So it didn't feel like we had the pressure to work every single minute but we could take the time to chat for 5 minutes and then continue working again. And in the end it's more silent in the office, so if you start talking then everybody would hear. And it doesn't feel anymore like it's a normal thing to do. The atmosphere becomes more... I would say... professional. It feels more like a job where you have these fixed rules that you have to follow.

(I) How do you think these rules came about?

(R) Time pressure I think. It is a big issue in this because you feel that you need to get more stuff done in a shorter period of time so you don't take the time anymore to think out of the box, do different things, hear different voices. And people are really concentrated then. Well in our case I also think it changed because we shifted more the focus from the creative part of the IT... So more creating stuff that you can see maybe. Like feature for product, while marketing is something you cannot much make tangible.

(I) How do you think this impacted creativity?

(R) In a way that for me personally for example I didn't mind at all staying late in the office because I wanted to be there. But in crisis I just feel that I have to do these office hours and it is not something I like to do anymore, to stay that long. And maybe it is that I have a lot to do but that I don't want to stay that long today and I would have stayed the next day even, I don't know 4 hours longer. Whereas when you can decide it for yourself it doesn't feel like work anymore and you can also sit for long and just be creative because you want to do it that way. But if you have to, then you are just going to say ok I want to get my stuff done and I am going to go home.

(I) How is centralization in the team between before and during the crisis?

(R) Hierarchy became more complicated because we had these two offices. In the beginning it was more simple as you knew who is responsible for what and actually we had like three levels probably but that was pretty clear to everyone. Later on many things changed and nobody knew anymore who was responsible for what. For me personally it also meant that I had to go to many different people to get some confirmation for what people did until I could make it public or what I wanted to do with it. But the different decision had to go through different steps and it was not always clear who has to accept it. So the structures became more complicated. My feeling about this is that everyone realized that something starts to go wrong so everyone wanted to check to make sure that everything went right. Hence more people were involved in the decision... does it make it a better decision or not it is difficult to say but definitely it made everything longer and more complicated.

(I) How did this impact creativity in your team?

(R) Very negative in our case because if you are always... if you have one idea and of course one idea you can always discuss about it, but when you change it into one way, another way and a third way, then in the end you have just a tiny piece left of the original idea because everyone took something off that they didn't like. Before it was very different because we had our marketing team and we were just our team and we had a similar mindset as one person to decide in the end so the ideas that came out of it didn't have to go through many steps and were cut off. So it was more... maybe also more risky ideas but they were bigger in the beginning. For example, you create a marketing advertising. And in the beginning it's more like a Sixt advertising, it's really provocative and some people like it some people don't like it but it's somehow, how to put it. Some people think it's great and some people think it's not. But after the crisis somebody would come and say ok I don't like this part so you take it out and you take this out and in the end you have like some advertising that everyone thinks it's, it's fine but nobody thinks it's very great and nobody thinks it's very bad. That's what is left in the end. So in the end we had lots of advertising that didn't really work out. It looks ok and nobody can tell what is wrong about it but it just doesn't perform.

(I) How can you describe formalization in the team before and during the crisis?

(R) Because the structures became more complex, also we tried to create more processes around it which was very difficult because nobody was really used to it and it was also not needed in the beginning but then when they were created... we had to try a lot. We tried to formalize processes on who had to take a decision, all of sudden meetings were structured to keep them shorted... which didn't really make them shorted in the end! They were still pretty long but we produced structured agendas and then we realized it doesn't make meetings shorter. So we had these agendas where each one has this much and this much minutes to talk and then I don't know it's kind of strange to sit in such a meeting then. But I didn't feel like it helps.

(I) How did that impact creativity in the team?

(R) There is no creativity in such meetings! For example, an update meeting and everyone has some kind of time pressure where everybody has to tell what was the progress but nobody had the opportunity to comment on it because we didn't have time anymore... But some would still start commenting on it and others would get angry because we would not fit the schedule anymore. Whereas before things were way less structured. Everyone knew what was going on, everyone could say what he or she wanted to say about it. It's not always the most efficient way definitely, I mean it takes quite some time and probably I mean the crisis also appeared because we did some stuff wrong and maybe our meetings were too long for example or too many people involved in different meetings. But everyone knew what was the purpose of the meeting and everyone was informed about everything and everyone could say what he or she thought was important to consider. That was the case anymore afterwards. What was definitely way better before is that we had more exchange between people of different mindset and backgrounds so it allowed to be more creative about stuff and consider different aspects and ideas.

(I) How were conflicts resolved in the team (if any) before and during the crisis?

(R) In the beginning there were sometimes not conflicts but big discussions about stuff because people have different opinions and they discuss very long about different aspects but it didn't really feel like a conflict but rather different opinions coming together and then you decide for something. In the end it was more like different opinions, they come together but there is no real time to discuss them so there is normally one person who is higher than the others and he or she decides. And then it creates a lot of frustration of course so discussions or conflicts are pretty quickly blocked. So it creates a huge

frustration, especially for those who are not on a position... for example the designers they had the impression that they had to follow orders and not be creative anymore, which frustrated them a lot. So in the end we had really big meetings just about solving these conflicts because we had fights between teams or different levels and then somebody has to come and to sit together with them and solve it somehow. For example, we had a really strange fight about some flyers which had to be created for a specific event, I think it was for Halloween. And the marketing team wanted the flyers to be orange to the color of their city but the design team didn't want to do it because it didn't fit our corporate identity. So there were a lot of emailing back and forth and calls... And in the end the designers refused to talk to them anymore because they said it doesn't really help and they don't listen and I don't know... So we had a meeting on this where everybody had to sit together and they had to find a solution and in the end our CTO had to make a decision even if he was in the IT team and didn't really know anything about marketing or design but he had to decide because the others couldn't solve it anyhow.

(I) So how was the level of challenge on the job for the team before and during the crisis?

(R) It depends probably on the person. But at the beginning I think it was pretty challenging but on a level that you think you can handle it. So it was very interesting to learn so many new things. Sometimes you think ok this is a little bit too much but you manage it somehow and then it's nice, it's even better. In the end we had many positions that were more on a level where you feel like you are just following orders. So as I mentioned before for the design team then it wasn't a challenge anymore, they had to do the stuff they needed to do. So I guess for them it was more boring in the end. But then also because some people had to leave the company and the team got smaller and some responsibilities had to be gathered on one same position. For me for example I had things to do that I didn't think I could actually do in the end, I had to work on google analytics and decide about it. I didn't think that I was the one who could really do it. So I tried, did everything I could do and in the end we realized that it was a bit too much for me to do that and actually the topic what somewhat just left.

(I) How do you think this impacted the creativity of the team?

(R) Well I mean when you are bored about what you are doing you don't even try to be creative anymore. Before they also gave some ideas and said how they would do stuff, in

the end because when you have such an experience of conflict as I described, then you think ok I don't want to try and change things anymore, I just do whatever I am told to do. But this is not at all helping for creativity because you are just doing well, what you are said to do.

(I) How were resources managed before and during the crisis?

(R) In the beginning we had a lot of resources, we also spent a lot on creative things, especially in marketing there was a lot of money going into this stuff. There was nobody really checking on how fast does it pay off, there was no limitation set to it. Probably somewhere there was some but you wouldn't really feel it, you would feel unlimited in what you can do. But during the crisis you could definitely see that ok, we were even told that money can last until X and we have that much money we can spend on marketing but this has to bring this and that outcome. Because then resources are definitely limited to what is left. So for creativity we didn't even really try to create great things anymore we tried to use what was left to create some smaller ideas around it. I guess there is still some kind of creativity around it but it's not anymore that you are trying to think out of the box and create something really new that you think will bring you from here to a higher level but you just do the standard things the things that probably every company that tries to do the same thing would do. Nothing disruptive.

(I) How is the communication in the team before and during the crisis?

(R) It was less of a communication... I think it was more communicating about processes, next step things that have been done or need to be done, that kind of stuff but less of exchanging ideas and talking things through. In the beginning it was more one union, one direction and everyone was of the same opinion and this drifted with the crisis. The founding team was not from one area but IT, Marketing etc.... So different departments were involved and then the perspectives changed a bit. IT thought that IT should become more important because they thought from IT side things are not perfect yet. But Marketing thought ok I need more marketing because the platform is out and we need to advertise for it... and then you have the CEO who thinks I need to talk to the investors and I need this and this to be fulfilled. So everyone grew a different view on this and it grew where the more the startup develops, you see more different things develop through time and because the pressure grows you think we don't have time to waste on XYZ

(I) How does time pressure impact the team?

(R) At the beginning you think you have time to try out things but then you need to find this point where you know it is the right direction. And if this doesn't come early enough then you have the pressure to make the right decision and you don't have time for mistakes anymore at least it feels like it. So then you are more, you don't feel like ok maybe he is of this opinion and I am of that opinion let's try out both first one and then the other one. And in crisis you say ok one of them is right and we need to go for the right one because else we run out of money.

(I) How does this influence creativity?

(R) It creates more conflicts and it makes creativity more difficult. People are more easily to become angry when they don't have the same opinion on stuff. When you take the time to discuss things, you have different opinions and you come to one conclusion that's fine and you don't have conflicts normally. But when you don't have the time anymore you feel like that you need the other one to have the same opinion as you do and the sooner the better. So trying to talk about one thing and having different opinions in this context creates more conflict. So then it's not that easy to really discuss it until the end before it explodes.

(I) Ok we are reaching the end of the interview, thank you for your participation. Is there anything you want to add?

(R) What I had in mind is like what is similar in the crisis of a startup such as (Platform) and a startup that doesn't have a big budget anyways is that from the very first day on you think in different categories. You always think about if I follow this idea it will cost me this and this money and it will give this and this outcome. Whereas when you have a lot of money and you think you are free to do whatever you think is cool to do then you just create stuff that you think is cool but you don't think about the consequences that much because you have the money to just be free in whatever you do. While when you are limited in the money and this is also what happens in the crisis then you think you have to do something that creates some value, that you invest one and you get two out of it. This kind of thinking you have more in a phase where you are limited on budget. It is helpful or not it depends on the phase you are in. I think it's still pretty creative but it is not in an artistic way, because it is some kind of limitation definitely. You are limited in how cool your idea can be, you are limited in the materials you can use, how broad you can make it or something. But you are getting creative in how you can use the best of what you have.

276 In crisis everyone has the pressure and feeling things might not work out and at a high
277 level, maybe compared to a small startup with limited money. In crisis you had a high level
278 of confidence then something happens and everyone is afraid. So it makes it difficult to
279 deal with a situation of limited budget, you have to change structures around it.
280 Everything changes with the crisis. You change the way you are working, colleagues leave
281 and responsibilities change. Of course it has an impact on you and how you think about
282 your job. You feel like you could be the next one, that you have to do stuff that normally
283 your colleague would have done and of course you don't like that to do what the
284 colleague used to do before. It's strange. Adding a layer of stress.