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Creativity in smaller Organizations

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Assignment text

To study creativity in organizations by investigating the differences and similarities in an immature startup, mature startup and an established company.

The following main points will be included: Theory on creativity in organizations, Case study, Analysis of empirical data with the use of a theoretical framework, Discussion and Conclusion.

Preface

This master thesis is written by two master students that are studying at the School of Entrepreneurship at the Norwegian University of Science and Technology. The paper is given as an assignment in the subject TIØ4945 “Innovasjon og entreprenørskap”. The aim of this master thesis is to investigate creativity in Norwegian organizations. The authors have prepared for this thesis in their courses TIØ4530 and TIØ4535 during the fall of 2015.

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Abstract

Creativity is one of the most important factors for success in a company, but the industry in Norway is said to have a frightening low expertise on creativity. Most managers do not know how they can promote organizational creativity, which is a function of creative outputs from individuals within the organization and its work environment. In a literature review, creativity was found to be affected by different levels; individual, organizational and environmental. The authors see a need to understand creativity in smaller organizations and have designed a theoretical framework consisting of three different levels of creativity surrounded by an entrepreneurial context.

The purpose of this master thesis is to investigate how the different levels of creativity are affecting creativity in smaller organizations. In order to fulfill the purpose, three research questions (RQ)s have been designed. Each of the RQs are created to understand the different levels of creativity. The first RQ concerns how the organizational structure are affecting creative individuals. The second RQ examines how constraints affect creativity in an organization. The third RQ addresses how organizations can foster a creative environment.

To solve the research questions, it has been chosen a qualitative approach with case study as research design. Empirical data have been collected by conducting multiple case studies. Three smaller organizations have been investigated; a mature startup, immature startup and a SME company. These are chosen because they are expected to contribute with different knowledge from various point of views. A cross-case analysis has been conducted in order to discover nuances between the different organizations.

Employees are found to be the most important resource in regards of promoting creativity in organizations. The analysis show that there is a connection between steepness of the organizational structure and the individual creativity. A flat structure empowers employees because of increased responsibility, and more self directed employees is found to be producers of more creative output. The level of knowledge within a company is crucial in order to overcome constraints. Constraints might also promote individual motivation, if handled correctly. It is easier to establish closer relationships in smaller organizations, and close relationships contributes to a safe climate. It was also found that the individual motivation among employees is interrelated to the creative work environment.

Creativity in smaller organizations is highly affected by all of the creativity levels. Individual creativity and the creative environment have been found closely tied to each other. In order to have creativity in a smaller organization, one is dependent on having every level present in a positive way. It is also found that a negative environment can ruin the creativity in an entire organization. Smaller organization can not focus on establishing only one of the creativity levels, and yet have creative output from their employees. Organizations need to have three functioning levels of creativity present in order to foster organizational creativity.

Sammendrag

Selv om kreativitet er ansett som en av de viktigste faktorene for å lykkes i en bedrift, har den norske industrien urovekkende lite kunnskap om kreativitet. De fleste bedriftsledere vet ikke hvordan de kan fremme organisasjonell kreativitet. Organisasjonell kreativitet er resultatet av kreative handlinger fra ansatte i en organisasjon og dets arbeidsmiljø. I et litteratursøk ble det avdekket at kreativitet blir påvirket av ulike nivå: individuelt, miljø og organisasjonelt. Forfatterne ser et behov for å forstå kreativitet bedre i mindre organisasjoner og har laget et teoretisk rammeverk bestående av de tre ulike nivåene av kreativitet i en entreprenøriell kontekst.

Formålet i denne masteroppgaven er å undersøke hvordan de ulike nivåene av kreativitet påvirker kreativiteten i mindre organisasjoner. For å oppnå dette formålet er det utformet tre forskningsspørsmål. Hvert av forskningsspørsmålene er laget for å forstå bedre de ulike nivåene av kreativitet. Det første omhandler hvordan organisasjonsstrukturen påvirker kreative ansatte. Det andre tar for seg hvordan begrensninger påvirker kreativitet i en mindre organisasjon. Det siste adresserer hvordan mindre organisasjoner kan fostre et kreativt miljø.

For å løse forskningsspørsmålene har det blitt valgt en kvalitativ tilnærming, med case-studie som forskningsdesign. Den empiriske dataen har blitt samlet inn ved å gjennomføre en studie med flere case. Tre mindre organisasjoner har blitt undersøkt nærmere: en umoden oppstartsbedrift, en moden oppstartsbedrift og en mindre etablert bedrift. Disse ulike typene case ble valgt fordi de forventes å bidra med ulik kunnskap fra sine ulike synspunkter. En kryss caseanalyse har blitt gjennomført for å avdekke nyanser mellom de ulike organisasjonene.

Ansatte er funnet som den viktigste ressursen i henhold til å fremme kreativitet i mindre organisasjoner. Analysen viser at det er en kobling mellom brattheten på den organisasjonelle strukturen og den individuelle kreativiteten. En flat struktur myndiggjør ansatte på grunn av økt ansvar, og mer selvdrevne ansatte er funnet som større produsenter av kreativt arbeid. Kunnskapsnivået i organisasjoner er kritisk i forhold til å overvinne begrensninger. Begrensninger kan også bidra til å øke den individuelle motivasjonen om de behandles på riktig måte. Det er også enklere å etablere nære forbindelser i mindre organisasjoner, og nære forbindelser bidrar til et trygt klima. Individuell motivasjon blant ansatte var også funnet å henge sammen med det kreative arbeidsmiljøet.

Kreativitet i mindre organisasjoner er sterkt påvirket av samtlige kreativitetsnivå. Individuell kreativitet og det kreative miljøet har alle blitt funnet tett knyttet til hverandre. For å ha kreativitet i en mindre organisasjon er man avhengig av å ha alle kreativitetsnivå tilstede på en positiv måte. Et negativt miljø kan imidlertid ødelegge kreativitet i en hel organisasjon. Mindre organisasjoner kan ikke fokusere på kun et av kreativitetsnivåene, og likevel forvente kreativt arbeid fra sine ansatte. De er avhengig av å ha tre funksjonelle nivåer av kreativitet tilstede for å fostre organisasjonell kreativitet.

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1. Introduction

Creativity is vital for businesses to succeed, especially within the high-tech field where knowledge is the key resource (Giroux & Lapierre, 2003). At the same time, managing the creativity for innovation is one of the key challenges in today's economy (Cohendet & Simon, 2015). According to Lerdahl (2015), there is generally a frightening low expertise on creative methods in the Norwegian industry. Newspapers are covering topics on how the present oil crisis is affecting the society, and the need for innovation is crucial (Andersen, 2015; Kongsnes, 2015; Loevaas, 2015).

This introductory chapter contains a motivation and explanation of why creativity is important to foster and promote in organizations. Further, the purpose of the research is presented, followed by the associated research questions. The contribution of this study and structure of the master thesis is presented in the end of the chapter.

1.1 Why creativity?

IBM (2010) interviewed more than 1 500 CEOs around the globe to better understand the challenges and goals of today's CEOs. 60% of the CEO's highlighted creativity as the most important leadership quality, but also recognized that they are not prepared to meet this leadership quality. Agogué et al (2015)'s research confirms this, as it states that organizing a creative environment is one of the recurring challenges in an organization.

Creativity in organizations is often divided into three creativity levels in the literature; individual, environmental and organizational (Amabile, 1988, 1997; Ford, 1996; Woodman et al, 1993). Organizational creativity is a function of creative outputs from individuals within the organization and its work environment (Watt, 2007). The employees are the arsenal of creative thinkers who turn ideas into valuable products or services is an organization's most important asset (Florida & Goodnight, 2005). This underpins that every organization, both in public and private sector, is dependent on the presence and performance of creative employees to have organizational creativity (Egan, 2005). Creativity happens more and more in organizations (Rickards et al, 2009), and according to Giroux & Lapierre (2003), creativity is considered as

one of the most vital attributes of successful companies, especially within the high technology sector.

Keeping an innovative behavior among employees has been claimed as crucial for organizational innovation, competitiveness and long-term success (Cummings & Oldham, 1997; Amabile, 1997). This has led to a wide interest in discovering what factors that influence a creative environment (Egan 2005). Every employee has the ability to be creative, but the level and frequency of this are influenced by the work environment (Amabile et al, 2005; Watt, 2006). However, little is known about which conditions that promotes a creative performance among the individual employees in organizations (Oldham & Cummings, 1996). A good innovative environment has been empirically proven to have a high influence on the employee's intrinsic motivation, and therefore the organizational creativity (Bedell et al, 2007), which emphasize its importance. However, organizations are often creating barriers and add constraints to creative individuals (Amabile et al, 2005; Caniëls & Rietzchel, 2015). This makes it impossible for managers to exploit the organizational creativity from their employees, because of for instance bureaucracy and lack of time and money (ibid; Hlavacek & Thompson, 1973).

1.2 Gap in the literature

The literature regarding organizational creativity is mostly concerning larger organizations. However, studies show that individuals experience a higher degree of creativity in startups, than in more mature organizations (Solomon, 2010). Startups are also recognized as more innovative than mature companies (Christensen, 1997; Solomon, 2010), and recently the CEO of Logitech encouraged larger organizations to work with and learn from startups (Darrell, 2015). We see a gap that is not covered adequately in the existing literature, as the literature regarding organizational creativity is mostly concerning larger organizations. We will therefore investigate the phenomenon of organizational creativity in smaller organizations by looking at it from three different organizations, that provide three different views.

A startup is a young company that brings new ideas in the form of product or service to the market (Leslie & Longenecker, 2012). Entrepreneurs are creators of something new and have to come up with innovative re-combinations of resources (Schumpeter, 1934; Eckhardt & Shane, 2003). This is required in order to make profits and to gain and sustain a strong presence

in the competitive area. Therefore, innovation is not only desired in startups, but actually an integral component of it. Successful startups grow into SMEs, an often used abbreviation for small and medium-sized enterprises. The attribute used most often is number of employees; small businesses has less than 50 employees and midsized companies have less than 250 employees (European Commision, 2015). When a company grows, it increases its regular duties. A need to close sales is important in order to pay their fixed costs. The short term income is important, and reorganizing or changing activities that initially led to success, is likely perceived as more secure than what new and innovative activities can bring. However, it is commonly known that in the long run, companies need to innovate in order to survive (Giroux & Lapierre, 2003; Egan, 2005).

The creativity phenomena will be looked at from three different levels; the individual, the environmental and the organizational creativity. The literature addresses smaller organizations to some degree, but lacks the nuances between the different types of organizations. A startup that is still in the product development phase is expected to be different from a startup that has recently started selling their product. The same goes for a smaller, but well established organization. Even though the number of employees is not as many, the differences from a startup can be significant.

1.3 Purpose of the study

Organizational creativity and creative abilities among employees have never been more important than it is today, and this makes it meaningful to explore this field. The literature regarding organizational creativity is mostly concerning larger organizations, despite that it is found that smaller organizations like startups are better fostering organizational creativity than mature organizations (Amabile, 1998; Christensen, 1997; Solomon, 2010). Within the literature, creativity in organizations are most often separated into three levels; individual, environmental and organizational. Each of these levels will be investigated separately in organizations. By investigating them, we will understand how the different levels are affecting the creativity in smaller organizations. In order to understand the different levels and how they affect creativity, the following purpose has been outlined:

“To investigate how the different levels of creativity are affecting the creativity in smaller organizations”

We will be investigating smaller organizations through three different cases; an immature startup, mature startup and a SME company with less than 50 employees. In regards of the different levels, there are today mainly three dominant theories regarding the levels of creativity in organizations; *the componential theory* (Amabile 1988; 1997), *the interactionist theory* (Woodman et al. 1993) and the *multiple social domains theory* (Ford, 1996). These theories are discussing creativity on different levels in larger organizations, and are all using the same classification of the creativity levels: individual, environmental and organizational. We will be investigating how the levels are affecting each other, in order to discover what role the different levels have in regards of creativity in organizations. Smaller organizations are chosen, as they are considered significantly more innovative than more mature companies (Acs & Audretsch, 1988; Christensen, 1997). Based on this, three research questions in order to fulfill the purpose has been outlined.

1.4 Research questions

This master thesis seeks to understand how different levels of creativity are affecting the creativity in smaller organizations. To be able to understand how the organizational creativity is functioning, it is necessary to understand how creativity functions on a individual level and at an environmental level. Individual creativity is fundamental in all types of creativity, including the organizational (Glynn, 1996). It is also necessary to have a functioning creative environment to lay the premises for organizational creativity. To be able to understand and reach the purpose that has been outlined, the purpose has been segmented into three research questions (RQs). These are formed to cover the most important aspects within the creativity levels and are as follows:

1. How is the organizational structure in smaller organizations affecting creative individuals?

This RQ is formed to mostly concern the individual creativity in organizations. However, the organizational structure is an aspect regarding the creative environment. By investigating the organizational structure, we will know how the creativity among employees are affected by the way an organization is build up. This RQ is important, as employees is considered as a crucial asset in regards of creativity in organizations (Florida & Goodnight, 2007).

2. How are constraints affecting creativity in a small organization?

This RQ is formed to mostly concern constraints that could prevent organizational creativity. Constraints in organizations is found to be influencing all of the creativity levels (Hlavacek and Thompson, 1973). However, it was recently discovered in a study that the relation between constraints and creativity could be both positive and negative, but were still understudied (Caniëls & Rietzschel, 2015). Therefore, studying constraints further was considered as important in order to complement previous research.

3. How can smaller organizations foster a creative environment?

This RQ is formed to mostly concern the creative environment. The creative work environment is defined as a collection of factors that influence the creativity of individuals within the organization (Solomon, 2010). Investigating how smaller organizations can foster a creative environment, contributes to a greater understanding of the creativity in organizations.

The RQs have been formed to understand and investigate every level of creativity. By investigating each of the different levels in three different cases, we are able to grasp how each of them are affecting the creativity organizations. By understanding this, we will be able to fulfill the purpose of this master thesis.

It is expected that the SME company do have more concrete answers to the RQs as they may have conducted more actions to enhance creativity in form of company norms, rules for enhancing creativity and so on. Startups do not have the same structure as established organizations and are often in a busy product or service development phase. It is therefore expected to find fewer stated actions for creativity, but rather a richer, improvised and more diversified form of creativity.

1.5 Contribution

With the collected data, we will be able to understand how the different levels are affecting creativity in smaller organizations, with nuances from the three different cases. We will also see whether the size of the smaller organization is affecting the organizational creativity or not. By knowing more about the nuances and differences in the three chosen organizations, it can help managers in other organizations to know what conditions and circumstances they need to emphasize in order to foster or improve creativity in their organizations.

1.6 Structure of master thesis

In this introductory chapter, there has been revealed that companies need to innovate more than ever before, in order to stay competitive. Innovation is entirely dependent on creativity, which in turn makes an organization entirely dependent on organizational creativity (Amabile, 1996; Egan, 2005). Chapter 2 describes the methodical choices that has been done in order to find answers to the research questions and purpose of the master thesis. Reflections by the authors regarding the information that has been collected and methodological choices are ending the chapter. In chapter 3, the theories regarding the individual, organizational and environmental creativity, in addition to entrepreneurial creativity are presented, which together forms the theoretical framework. Chapter 4 contains case studies of the interviewed organizations, while chapter 5 presents an analysis and findings, and is ended by answering the RQs. Chapter 6 is a discussion of the contribution of key findings to previous literature and a discussion on how the different levels of creativity are affecting the organizational creativity in the different organizations. At the end of the thesis, we do have a conclusion in chapter 7 and further research and implications in chapter 8. In addition, an overview of all the references used in the thesis is presented, as well as an Appendix containing the interview guide that has been used.

The terms “authors” and “researchers” are used interchangeably during this thesis and are referring to the authors of this master thesis.

2. Method

In this chapter, the method for the master thesis will be elaborated. To answer the purpose of the study, it has been conducted a case study research. This kind of research can be seen as a process divided into different steps, and is an iterative process (Yin, 2014). First, the research was planned and the case study design was created. The design is the overarching plan for how the study will be organized (Thagaard, 2013) and a plan on how to solve and answer the research questions. It also involves the guidelines the researchers used during the execution of the master thesis. Next, the data acquisition has been conducted through interviews in three organizations; one immature startup, one mature startup and one SME company. The next step in the process was to analyze the data through case analysis and cross-case analysis. The last part of the study has been to discuss the findings of the analysis in order to answer the purpose of the study. During the research process the researchers have reflected around methodological choices in order to maintain trustworthiness.

The aim of the following sub chapters is to give an overview of the research process that has been conducted and to clarify and justify the methodical choices. The method chapter is ended with a reflection of the method and challenges and limitation related to the method, in addition to an discussion regarding the quality and ethical considerations of the interviews. The participants in the study that has been interviewed is referred to as informants, because they provide information to the study.

2.1 Research design

This sub chapter presents the research design, which involves an explanation of case study research. The research is categorized as social research which demands a certain perspective on the research process, and this perspective will be explained before the case study design.

2.1.1 Qualitative research

The purpose of this master thesis is to understand more of how the different levels of creativity affects creativity in smaller organizations. It has therefore been investigated three smaller organizations, that also ease compared to each other. Since it has been investigated “*how*” something takes place or work, qualitative method was the most suitable choice for this study

(Yin, 2014). It provided the authors with an opportunity to understand instead of generalizing. Qualitative research takes the perspectives and interpretations of participants as starting points (Flick, 2015) and the qualitative method helped the authors to introduce diversity and nuances to their subject of study.

2.1.2 Epistemology, ontology and methodology

The authors have interpretations about the organizational creativity that exists in the different types of organizations within the high tech industry in Trondheim, something that could affect the research direction. Researching the organizational creativity by using own experiences as a basic foundation and a qualitative method implicitly means that a constructivist perspective laid the basic foundation of this study. The constructivism is the study's epistemology, which should provide a fundament for doing and reflecting on social research (Flick, 2015). This is reasoned because constructivism embraces subjectivity as a way deeper into the understanding of individual phenomenon (ibid), and in this case the phenomenon is the organizational creativity. The constructivist (or social constructionist) perspective looks at the social world as socially, politically and psychologically constructed, with human understanding and explanation of the physical world.

The ontology of this paradigm of constructivism is relativism, with local and specific constructed realities (Lincoln and Guba, 1994), and the methodology is classified as hermeneutical as the findings of the research is a result of the researcher's interpretations. In the cases of this study, a CEO and an employee in each organization is interviewed in order to find a more complete understanding of the company. The findings from the organizations has then been compared to each other to see how they differ.

2.1.3 Case study

Since the focus of the research has been to study a delimited phenomenon, case study research was chosen. A case study is a research strategy with focus on understanding the dynamics present within single studies (Eisenhardt, 1989). In this case, it has been interviewed three different organizations; an immature startup, mature startup and a SME company. The analytical advantages will be larger through investigating several cases compared to a single case study, that is why multiple organizations have been studied. In order to secure findings that were representable for smaller organizations in different sizes, the authors created a list of requirements. The requirements were set as follows:

- The interviewed immature startup should be more than 6 months, and not made their first sale. The number of employees had to be a few in order to be classified as a work environment.
- The mature startup should be less than 5 years, but have made their first sale. This was to differ the mature startup from the immature startup.
- The company that was interviewed needed to fit the definition of a small company within the Small Medium Enterprise definition from the European Commission (2015). This requires the company to have less than 50 employees and less than €10M in turnover.

The design of the study is categorized as a multiple-case study, selected among Yin's (2014) basic types of designs. An overview of the case study is illustrated in *Figure 1*. Each of the three organizations represent a case for analysis, within the larger context that is the high tech industry in Trondheim. The single units represent the organizational creativity that is investigated within each organization, which is covered by interviewing both the CEO and one employee in each company. The high tech industry in Trondheim was chosen as context. Trondheim was chosen as location mainly because of its status as the main capital for technology in Norway (Stensvold, 2013), and because it is geographically close to the authors.

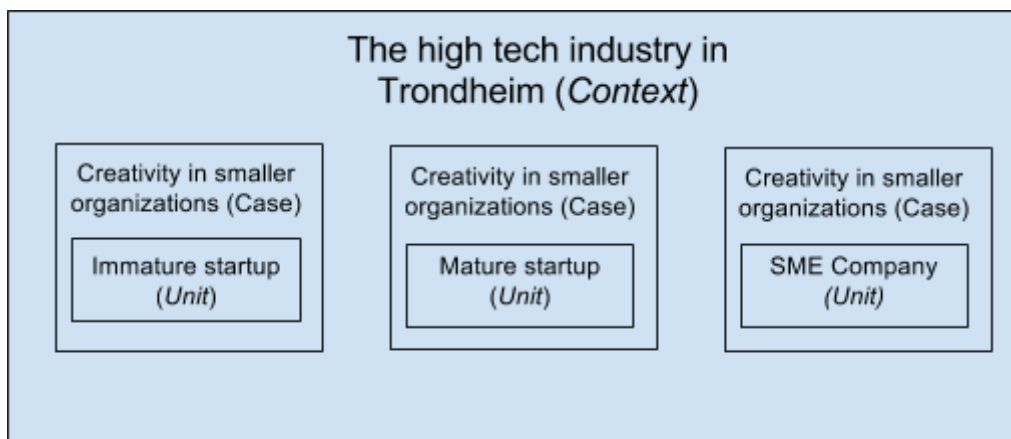


Figure 1: The Case Study Design

2.2 Data acquisition

This study started by finding literature regarding the chosen theme, and how this process was done is explained in the next paragraph, 2.2.1. After finding three organizations that fitted our requirements was selected and approved to participate in the study, the data acquisition was the

next step in the process. All of the case study was conducted consecutively within a short time frame. After each case study, the authors wrote individual case reports. The concrete methods that were used for acquisition of data, was to interview both the CEO and an employee. How the interviews were conducted is elaborated in paragraph 2.2.2. The employee was interviewed in order to get a broader understanding of the creativity within the organization than what only the CEO can provide. It was created a collection protocol that would help preparing for the collection (Yin, 2014), and this included: gaining access to one key informant in each company, having sufficient resources available (like a speech recorder, pen and paper), making a clear schedule of the collection of data-activities and preparing for unanticipated events. Since the collection was conducted by two persons, it gave the process some flexibility. Both of the authors were present during the interviews, except for one of them. The authors informed the participants of the study about the consequences of their participation of the study, and assured them that the data material would be treated confidentially. The organizations were interviewed quite closely, so the timing of visiting them should not have affected the findings. None of the organizations had any extraordinary activities that could have affected the findings as well. The “chain of evidence” has been maintained by keeping and organizing all the collected data, from the case study questions till the finished master thesis (Yin, 1998).

2.2.1 Literature acquisition

The authors have been interviewing key people that has given advice on what the project thesis should focus on. In example Martin Steinert, Professor at Department of Engineering Design and Materials (NTNU), with long experience from design thinking, and Sunneva Minken, former Industrial Design Student (NTNU) that wrote her master thesis about creativity, and Lisa Carlgren, PhD at Center for Business Innovation at Chalmers University. She is researching in the field of innovation management and is currently studying design thinking in developing innovation capabilities in large firms. In the beginning the authors used well known journals and textbooks about creativity in order to find relevant literature within specific areas of creativity. The books that has been used were *The Cambridge Handbook of Creativity*, *The Handbook of Creativity* and *The Routledge Companion to Creativity*. During the semester the authors have also been given advice on relevant journals from their mentor, something Dalland (2007) also recommended. These are the *Creativity and Innovation Management Journal* and *Creativity Research Journal*.

When the topic of study was more concrete, the relevant articles were collected and structured. The majority of the literature used in this study come from articles, and several articles have been found by reading other articles that cited to these. These articles have been found by searching in two different databases: ABI Inform and ISI Web of Knowledge. The authors used keywords like “creativity”, “organization”, “startup”, “environment” and other words tightly linked to the topic. After the researchers discovered a loop in their data acquisition, they started the phase of analyzing the literature. Similar and different views in the literature was compared to each other, and a theoretical framework was shaped, which laid the foundation for the investigation of the firms. After analyzing the empirical data, new literature has been acquired. The amount of new literature is little, but sought up since the authors saw a need for reading more complementary research to what was already found.

2.2.2 Interview

The CEO and an employee in each organization were interviewed in order to strengthen the validation of the findings. It also gave the researchers a chance to broaden their understanding of the organizations. Three different case companies were investigated, and two participants from each company were considered as sufficient. By using interviews as research method, the authors got to know the informants own views. The authors conducted around 1-1,5 hours’ interviews with each of representations from the organizations.

The interviews were conducted in a semi-structural way, which gave room for follow-up questions to interesting topics that occurred. The authors were aware of the importance of asking non-leading and open questions, to not color the findings and because open questions open up for personal reflection (Flick, 2015). These questions used were therefore in beforehand tested on other startup members outside the study in order to verify the questions quality as non-directional. The informants were only interviewed once, and the questions was in regards of how the company and their situation are in the present. The informants were interviewed with questions regarding creativity on an individual-, organizational- and environmental level, with a focus on how the people in the company makes the company entrepreneurial and innovative. In order to do so, questions to reveal the status of the creativity on a individual level (e.g. how are the management exploiting the employees knowledge, how do you stimulate to desire to work) and on the organizational level (e.g. how much resources are available, how is the communication internally, how do the management facilitate for

creativity today) and on the environmental level (e.g. do employees feel free to take risks here, are they free to express own ideas) was asked.

During the interview process, the researchers showed reflexivity through being transparent and aware of their researcher role by being open for questions about their research and being clear about their intentions and methods being used. Before conducting the interview, the researchers spent sufficient time to learn or understand the specific company in each case by reading their web page and look at the products they have produced or were about to produce.

2.3 Analysis of data

The next step in the research process was to analyze the data. For this research, it was concluded that the analytical strategy of relying on theoretical propositions were the most suitable. In other words, a theoretical framework was used to analyze the gathered data. The theoretical framework is elaborated in the next chapter. It has been applied to analyze the organizational creativity in each of the three companies.

After conducting the three case studies, an individual report was written to each case, which means a separate case analysis of each of the companies with a detailed description of the three levels of creativity. In order to secure that all data was included, the case studies was structured in the same way, based on the same themes. Furthermore, it was conducted a cross-case analysis. The cases were first analysed separately on an individual, organizational and environmental level within each of the cases. Afterwards the findings within each of the organizations were compared and relevant literature were linked to the empirical data. This resulted in several findings at each of the levels. Further, these were used to form answers to the research questions.

The study started out with different research questions than those who are present in this thesis. The authors experienced a need to change direction because of findings that did not match the original RQs. As a result of the analysis and the findings, the theory presented in chapter 2 are have been modified. New theory is being included to explain some of the findings in the research. This new literature has been necessary to be included in order to back up and discuss the empirical findings.

2.4 Reflections on the method

There are both positive and negative aspects related to using a specific method to solve the chosen research questions. It will now be looked closer into the advantages and drawbacks of using case study and interview as method in this research, followed by an elaboration of the quality of the study, an assessment of the researcher role and limitations of the study.

By using case study research, the authors got an opportunity to shed light about the differences that might exist in the levels of creativity in smaller organizations, and how it could differ from today's theoretical principles. This method could have given the authors the ability to develop a new theory, but as it is delimited to Trondheim it is not possible to make conclusions on a comprehensive plan or statistically generalize the findings. The cases have been sampling units and too small in number to serve as a sample to represent any larger population (Yin, 2014). However, it has provided a deeper understanding of the creativity in organizations and how it is affected by the different creativity levels, in the context of immature startups, mature startups and SME companies in Trondheim.

Using qualitative method made it possible to look into the phenomena organizational creativity. Using interviews to gather data is suitable in order to understand how persons perceive themselves and their environment (Thaagard, 2013) and in this case it was used to gather information about the creativity in organizations. This follows that the data could be classified as perception rather than objective answers. This is a methodological problem, but this method was still chosen as it is considered the best way to receive answers on the chosen research questions. Regarding the interview setting, it can be challenging if the informant do not cooperate in sticking to the author's line of questions (Yin, 2014). This was solved by using a semi-structured interview. The interview provides insight and was targeted, as it focuses directly on the topic of the case study. At the same time, the interview could have been biased due to poorly articulated questions, or the informant gives answers that he or she thinks the authors want to hear (Yin, 2014). This was taken into account by comprehensive testing of the questions beforehand, to verify the quality of the questions. Before the interviews started, the authors clarified their intentions of getting authentic findings and asked the informant to be sincere.

Yin (2014) is pointing out, that the case study can be used for analytical generalization which may be based either (a) modifying or rejecting theoretical concepts used in the design if the case study or (b) new concepts that arose upon the completion of the case study. The authors goal was to first find out differences and similarities between the cases and find how the different levels of creativity are affecting the creativity in the different organizations.

2.4.1 Quality of the study and ethical considerations

Trustworthiness is central in the evaluation a qualitative research's worth. Lincoln and Guba (1985) posit that trustworthiness involves four concepts: *credibility*, *transferability*, *dependability* and *conformability*. *Credibility* is about showing confidence in the "truth" of the findings. To gain a deeper understanding of the organizations in beforehand, the researchers gathered information about the organizations by reading about them on their web page and look at the results they have produced and published. The researchers did also get a better understanding of the SME company by having a guided tour in the company's' location. This helped the authors when for instance the informants talked about how their office is organized. It did also increases the researcher's ability to detect distortions that might be in the data. By interviewing both the CEO and the employee it broadened the insight of the organizations, as someone in a management position could have a different perception than the other employees. Both of the roles were also decided to interview in order to reinforce the answers and findings, not to control them. Listening to two voices have probably reduced the gap between perceived and actual work environment.

Transferability is about showing that the findings have applicability in other contexts, and was secured by explaining the creativity levels in each companies as detailed as possible, through the data from the interview. This was possible as the informants were willing to share detailed descriptions. From this it can later be evaluated if the conclusions are transferable to other situations or settings. *Conformability* is a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest. To achieve conformability, the authors showed reflexivity by being aware of their researcher role. This means that the authors attended systematically to the context of knowledge construction (Lincoln and Guba, 1985).

Yin (2014) also mentions some concepts to secure the quality of the research design. *Reliability* means the same as *dependability* (can the research be repeated with the same results?). This was secured by using a case study protocol. *Validity* is about the validity of the interpretations researcher arrives at. If the interpretations that will be done is "transferable", which means that they are applicable in other situations, they could be seen as a mark of quality (Thagaard, 2013). This is an important aspect of the validity concept (ibid). In the SME company being investigated, the employee was also a part of the management. This means that the validity of the data found in the SME company is weaker than if we interview an employee that was separated from the management. Belonging to the management, the answers from the informant could be colored and more biased than they should be.

There are some ethical considerations that was important to consider in the qualitative research. The researchers informed the informants about what consequences the participation in this a research project creates for them. The participants were informed consent, which means that they was informed about the research and gave permission to let the researchers use the data collected from them. The researchers did also have confidentiality, which means that the participants in the study were ensured that the data collected from them were kept and stored in a safe way, and that they are deleted after the research process is finished (Thagaard, 2013). All of the participants were informed of this in the beginning of the interview, and had the possibility to abort the interview if they did not agree on the terms.

2.4.2 The researcher role

The authors have looked at this topic through their own lenses, which made the findings subjective. The authors are studying entrepreneurship, and do have a pre-understanding of the topic that is being researched. Both the authors have practice and experience from their own startups, and have finished theoretical and practical courses within entrepreneurship and innovation. This knowledge may have contributed to a deeper understanding of the company cases that has been investigated, and can provide a great insight into the topic. The investigator and the object of investigation are assumed to be interactively linked so that the findings are literally created as the investigation proceeds (Lincoln and Guba, 1994). The pre-understanding of the authors could also control them to interpret the new experiences in one kind of way, their way, which is the consequences of doing a qualitative case study. The researcher is regarded as an active participant in a knowledge development that can never be complete, but that is more about new questions than about universal truths (Flick, 2015). The researchers were also aware

if there is a strong identification to the ones being studied. If the researchers did not do this, it could have created a "biased viewpoint effect", which can detriment for other ways to look at the phenomenon (Ringdal, 2013). When it comes to the literature acquisition it has happened that the authors have recognized some names or have had certain search words in the back of their minds, both consciously and unconsciously. The selection of literature may also have been colored by the articles that themselves have considered as central and most interesting. In this way the thesis might have been influenced by the author's own experience and preconceptions.

2.4.3 Limitations of the study

There have been some limitations in the master thesis. The economy was a limiting factor in order to reach out to the most interesting and relevant companies. Although Trondheim is a perfect place for interviewing relevant high tech companies. Time was also limiting factor for the number of cases the authors could study, analyze and discuss.

By choosing to investigate three organizations, there has not been conducted a deeper analysis into one company, but rather a more superficial analysis of three of them. This made it possible to compare the company cases, in addition to increase the chances of missing interesting discoveries that needs a deeper focus. Ideally, more than two representatives could have been interviewed in each company to secure a more comprehensive answer, although we chose to focus on a few. The context of the companies that is planned to be studied, have likely affected the findings, as well as the type of the companies that will be studied and the people interviewed and observed in the companies. The size and experience of the companies have also likely affected the answers and must be taken into consideration. It is recognized by the researchers that observation would be appropriate for the purpose of the research and to verify the statements from the informants.

In retrospect, we as researchers see that not every topic in the theory chapter, and themes in the case studies, were analysed and discussed later in the thesis. Thus they could have been removed to make the thesis less comprehensive. In example, the sub chapter about communication were not used directly later. However, it is still included as it did serve as indirectly support to other findings. We also see that RQ1, that regards how organizational structure affects individual creativity, is a question on both individual level and environmental level. It could have been more focused on individual matters.

According to Yin (1998) case studies are one of the most challenging research types, as there are no routine based procedures to collect data. Even though the authors prepared well for the case study, it was the first time they were conducting such research, something that were a limiting factor in itself. In the literature review and research conducted, the authors were limited to the databases that belonged to NTNU. This could mean that relevant research and literature has been excluded from this master thesis. On the contrary, using scientific databases have ensured that the literature found only consists of high quality research articles. It is important to be critical when using sources in a literature review (Yin, 2014), and this is something the authors have been aware of by using approved databases from NTNU. Summarized one can say that there are several obstacles which could have affected and hindered the research process, but the awareness the authors have had beforehand have ensured a higher quality and transferability of the study.

This chapter has explained the methodical choices behind the research design, how the acquisition of data and the data analysis have been conducted, as well as reflections on the method, the quality and ethical considerations of the study and the study's limitations. Further follows the chapter of the theory.

3. Theory

This chapter contains a literature review that provides an overview of previous research on creativity in organizations. Creativity is a major field, and there has been a need to refine the focus, thus the authors have been looking into creativity regarding business. As organizational creativity is executed by people, the focus has been concentrated to articles that discuss creativity on a human level. The literature review also contains perspectives and views on entrepreneurial creativity, as the smaller organizations often are in an entrepreneurial context. The theory chapter is highlighting areas of agreement and disagreement and presents a general overview of what the literature says about creativity in organizations.

In the literature review conducted, creativity on an individual, environmental and organizational level has been in focus. To be able to provide a better understanding of these levels of creativity it is chosen to emphasize these levels, and not to include group level in order to narrow the searches. The entrepreneurial creativity is presented first in the literature, as we study creativity in an entrepreneurial context. Entrepreneurship and creativity were also often mentioned together in the initial literature searches. Entrepreneurial creativity and innovation are themes that are relevant within the field of creativity, but neither are crucial. In example, creativity is a necessity in innovation, but innovation is not a necessity in creativity (Amabile, 1996).

Several of the articles found covered more than one of the three levels, which can imply that the levels are closely linked to each other. Amabile is by far the most cited researcher in the literature found but also one of the most known within the field of creativity in the last decades. In the following sub chapters, the entrepreneurial creativity and its link to innovation will be presented. Further, creativity at an individual and environmental level will be presented. Lastly there will be a presentation of the organizational creativity, followed by a summary of the chapter.

3.1 Entrepreneurial creativity

Creativity is the starting point and the main factor for achieving success when creating new companies (Tu & Yang, 2013). According to them, entrepreneurial creativity is defined as entrepreneurs who creates a new firm of their idea, and continue to develop new products and services for the market need. This definition differs from Amabile (1996)'s, where

entrepreneurial creativity is defined as “the implementation of novel, useful ideas to establish a new business or a new program to deliver products and services”. Whereas Amabile focuses on the novel and useful ideas, Tu and Yang focuses on the firm that is established based on an idea, and with a purpose of meeting the market need. The importance of the “entrepreneurial” part is especially highlighted, which requires implementation of the ideas or innovations. Lin and Nabergoj (2014) highlights the entrepreneur as a person, and points out the necessary abilities instead. They define entrepreneurial creativity as the creative ability that is provided and developed in entrepreneurial processes.

The link between entrepreneurship and creativity

Entrepreneurs need to be creative, and creativity is considered so important that it is linked to the very nature of entrepreneurship itself (Manimala, 2009). The link between entrepreneurship and creativity can be dated back to Schumpeter's (1942) definition of the entrepreneur and the “creative destruction”. This is when an entrepreneur combines or recombine important essential resources to meet the market need and in a creative way that destroys the existing economic order. Schumpeter clearly stated creativity as an important driver for entrepreneurs to find new business opportunities. The entrepreneurial creativity has been claimed to be crucial, and Nyström (1993) views entrepreneurial creativity and innovation as so critical that he calls it the “creation of the future”. Despite this, it has according to Sawyer (2006) been done little to educate and train entrepreneurs to be more creative.

According to Sternberg and Lubart (1999), creativity is related to entrepreneurship, as new businesses often are original and useful. A creative person has a higher probability to become an entrepreneur, as they get greater return on their creative abilities and the creative skills are not always desired in established firms with clear ethics, rules and hierarchy (Audretsch & Belitski, 2013). Butler and Ko (2007) disagrees with this view, and argues that entrepreneurial creativity is a desired capability in most firms.

Entrepreneurial innovation

Even though creativity is most often associated with product development (Kratzer et al., 2004), it is also an important aspect of entrepreneurial behavior when identifying new opportunities that can become new firms (Butler & Ko, 2007). According to Lienhard (2006), inventions and innovations will not happen spontaneously. The potential entrepreneurs need to prepare

themselves to be creative and use their work experience and education, acquire information about trends and actively search for new ideas.

Because the business world is seldom static, and because the pace of change appears to be rapidly accelerating, no firm that continue to deliver the same products and services in the same way can long survive. By contrast, firms that prepare for the future by implementing new ideas oriented toward this changing world are likely to thrive (Amabile, 1997, p. 40)

The first step in innovation, is creativity, and innovation is the successful implementation of creative ideas within an organization (Amabile, 1996). These two terms, innovation and creativity, are so closely linked that people often use them interchangeably or view them as other words for new systems, products or technologies (Ford, 1996).

Business theorists have over the past decades defined creativity as the development of ideas about products, practices, services or procedures that are novel and potentially useful to the organization (Amabile, 1996). Although employees might share these ideas with others, it is only when the ideas are successfully implemented at the organization or unit level they would be considered innovation (ibid). A key source of innovation activities for all firms is the creative performance of the people they employ (Cummings & Oldham, 1997). This is underpinned in Baron & Tang's research (2009), where it was discovered a strong link between entrepreneurs and their creativity. The findings highlighted that creativity has a positive relation to innovation and that creativity on individual and organizational levels are affected positively by a dynamic environment.

3.2 Individual creativity

The individual creativity lays more or less the foundation to all creativity theories, as it is impossible for a group or organization to be creative without creative individuals (Glynn, 1996). Amabile (1996) defines creativity as “the production of novel and useful ideas *by an individual or small groups of individuals working together*”.

Amabile (1988) discovered 10 qualities that creative individuals had. These were, with the most current first: various personality traits, self-motivation, special cognitive abilities, risk-orientation, expertise in the area, qualities of the group, diverse experience, social skills,

brilliance and naiveté. Woodman et al. (1993) created a more constricted list of factors. These factors are a part of their *interactionist theory* which will be discussed later. The following factors were included on the individual level: antecedent conditions, cognitive style and ability, personality, relevant knowledge, motivation, social influences and contextual influences. The theories agree in motivation, knowledge, certain personality traits and cognitive abilities being qualities creative individuals has. Based on the number of qualities and factors these theories highlights, one can say that the individual's creative performance is complex and based on several different factors.

One of the most enduring and popular models within the field of individual creativity, has been the *stages model* by Wallas (Moran, 2010; Wallas, 1926). This model was proposed in order to explain the process of how individual creativity occurred (Moran, 2010). There are in total four stages, that happened in a strict linear way. These stages are (1) preparation, (2) incubation, (3) illumination, and (4) verification. Amabile (1983; 1997) disagreed with the strict linearity of this model, and emphasized the fact that creativity more often happened in cycles. She created the *componential model*, where the four stages were replaced with three components: expertise/knowledge, creative-thinking skill and intrinsic task motivation. By replacing the linear stages with components, they can cycle through the same components multiple times in various combinations. Runco and Chand (1995) did also criticize the stages-model by Wallas (1926). They proposed another component model, the *two-tier model*. This model consists of two tiers or levels with components. The primary level consists of problem finding, ideation and evaluation. The second level consists of knowledge and motivation, and are the components Runco and Chand (1995) find less contributing to creativity than the the components in the primary level.

Despite being two models consistent of components, there is a clear difference between the *two-tier model* (Runco & Chand, 1995) and the *componential model* (Amabile, 1983). Amabile highlights motivation and knowledge as some of the key components, whereas Runco and Chand have not given them a primary position. According to Amabile (1983), the creativity will be higher, the higher the level is within the the three components; expertise/knowledge, creative-thinking skill and intrinsic task motivation. These three components are characteristic in several articles about the individual creativity (Amabile, 1996, 1998; Barron & Harrington, 1981; Cummings & Oldham, 1996; Shalley et al. 2004; Woodman et al. 1993). The literature related to these will therefore be elaborated more thoroughly.

Expertise and knowledge

The foundation of all creative work is expertise (Amabile, 1996) and according to Amabile (1998), expertise refers to the technical and intellectual knowledge that an individual possesses, as well as the manner in which that organization manages this collective knowledge. Woodman et al. (1993) referred to the expertise as knowledge, and highlights that the role of knowledge has been so widely recognized for a long time that it sometimes is overlooked. It is also difficult to conceive any kind of creative behavior that is “free of knowledge” (ibid). At the opposite end, Kratzer et al. (2004) see creativity as an individual characteristic and state that certain personal traits are more important than expertise.

Motivation

The employees’ motivation has always been a key factor for managers, as motivated employees are more productive and creative (Amabile, 1993). Motivation is differentiated in the literature by mainly two distinctions: intrinsic and extrinsic motivation (Ryan & Deci, 2000) The intrinsic motivation differs from the extrinsic motivation by focusing on passion, enjoyment and interests rather than receiving rewards or penalties by doing or not doing a task (Amabile, 1996). The intrinsic motivation has been highlighted as a key component of individual creativity by several researchers (Amabile, 1996; Barron & Harrington, 1981; Cummings & Oldham, 1996). According to Amabile (1996), the intrinsic motivation includes two elements: the person's attitude towards the task and the perception of the reasons for undertaking the task. Amabile also highlights the powerful impact the work environment has on the motivation. This is also aligned with the findings from Shalley et al. (2004) research. They argue that the contextual conditions, including the work environment, is the strongest influencer of motivation. This means that the intrinsic motivation of employees is being largely affected in terms of how their work environment are. Intrinsic motivation is also known for resulting in high-quality learning and creativity, which makes it especially important to understand and detail the factors that foster the intrinsic motivation (Ryan & Deci, 2000).

Even though intrinsic motivation is considered as the most efficient motivation, people are mostly motivated extrinsically in their activities (Ryan & Deci, 2000). Extrinsic motivation is triggered when someone does something in order to attain a reward or avoid punishment (ibid).

Creative thinking

This component has mainly been discussed on the basis of personality traits by researchers. According to Amabile (1996) this is the component that provides what she refers to as “the little extra”. It is impossible to produce creative work if this skill is lacking, as it provides the person with the ability to taking new perspectives on problems (ibid). Campbell (1960) highlighted another personality trait as the most important, as one needed to have the ability to concentrate effort for longer periods of time to be able to think creative. Barron and Harrington (1981) did also emphasize the personality traits. They highlighted that one needed in some degree to be independent, self-disciplined, have a relative unconcern for social approval and have a perseverance in the face of frustration to be able to think creative.

3.3 Creative work environments

During the last decades, the research has gone from being a narrow field that focused on the individual, to a broader focus on the environment and its impact (Cabra & Puccio, 2010). If a company want to foster creativity in an organization it is necessary to have a functional creative environment (Amabile et al, 1996). To foster a creative environment is however one of the recurring challenges in an organization (Agogué et al, 2015). The work environment has been considered as a key factor to foster creativity among employees and is highlighted in all of the three major theories of organizational creativity; the componential-, interactionist-, and the multiple social domains theory (Amabile, 1988, 1997; Ford, 1996; Woodman et al., 1993).

The creative work environment is the collection of factors that influence the creativity of individuals within the organization by Solomon (2010). This definition seems to be supported by MacKinnon (1978) who refer to the creative work environment as the “creative situation”. He defines the creative environment as circumstances in the life or social, cultural and work settings that affects the appearance of creative thoughts and actions. There has been identified a clear connection between creativity and its contextual nature (Beghetto et al., 2004; Silvia et al., 2009). People are at their most creative when they are in familiar environments and they consider the environment as a highly important component of creativity. According to Amabile (1997) it is essential to facilitate creativity in the work environment in order to stimulate creativity among employees. Keeping a creative behavior among employees has been claimed crucial for organizational creativity and innovation, competitiveness and long-term success

(Cummings & Oldham, 1997; Amabile, 1997) and this has led to a wide interest in discovering what environments that influence such behavior (Egan, 2005).

Findings in Audretsch and Belitski (2013) highlights the importance of a diverse environment where creative people work when new business opportunities are created, and Kratzer et al. (2004) highlights especially the importance the environment have on creativity in teams. It is found that too frequent communication can form the environment in a way that blocks the employees to be creative (ibid). This is underpinned by Sternberg and Lubart (1996). According to them, individuals may hold a creative behavior, but it is the factors within the work environment that determines if the creative behavior actually is exhibited (ibid).

Amabile's componential theory, that will be elaborated in chapter 3.4, says that the individual needs a creative work environment that nurture the individual's spark of passion and stimulates to creativity (Amabile, 1997). Findings in Amabile's study revealed that downsizing or other significant changes within an organization, can dramatically affect the creativity negatively over a long period of time. Therefore, she encourages managers to create a work environment that lower the obstacles and foster what increases the creativity. Only then will the organization be capable to lead through innovation.

The role of the management

There are many forces that affect the employee's experience of the work environment in their organization. This could be the management practices, leadership behavior, organizational culture, structure or individual skills and abilities (Ekvall, 1996). According to Amabile et al. (2005), leadership is the one that will affect the work environment the most, through the way managers lead and evaluate others work, facilitate or delegate the access to resources and information. On the other hand, Bedell et al. (2007) does not treat leadership as an important influence on creativity in the work environment.

According to Cummings and Oldham (1997), one of the main sources of external and internal innovation in companies is the creativity from their employees. This is mainly in the hands of the managers, as it is they who often think about design and establish the work environment in organizations (Amabile, 1998). Creativity can for instance take place through product development or process improvement, but will not happen unless the managers structure their employees 'environment in order to foster their creative potential. To be able to maximize the

amount of creative contributions from employees and the general creativity of those contributions, Cummings and Oldham (1997) developed a 2-factor approach for managers. The managers have to consider the personal characteristics the employee has to the creativity, and then make sure they are in an environment that maximizes their creative potential.

Climate

There is a variety of variables in the environment that is said to influence creativity and innovation (Bedell et al, 2007). One of the variables a lot of scholars have stressed the importance of, is the climate in an organizational environment (West, 2002). The climate is in general the beliefs or perceptions of the work environment among the people. Typical questions to ask when a particular climate is examined could be “do employees feel free to express ideas to their bosses?” or “are people afraid to take risks around here?” (Giroux & Lapierre, 2003). The societies are rapidly changing, and it is important for organizations to have a good instrument to assess whether their organizational environment are promoting creativity and innovation or not (Einarsen & Mathisen, 2004). In order to understand how creativity is fostered in a work environment, Giroux and Lapierre (2003) divided the psychological literature about creativity into two dimensions: the climate and the individual. The climate concerns autonomy, work ambiance, time resource and dynamism/openness.

Environment and climate tools

Smaller organizations are recognized for being good at fostering a creative environment, and startups have been highlighted as especially competent in this (Solomon, 2010). Findings in the research of Amabile and Gryskiewicz (1987) revealed that lack of operational autonomy or freedom and sufficient resources, such as facilities, equipment and funds inhibited creativity. Amabile et al. (1996) highlights the importance of the work environment within the context of creativity. According to them, two of the most common tools for assessing organizational environments; The Organization Assessment Instrument and the Work Environment Scale did not focus on the environment for creativity (Van de Ven & Ferry 1980; Insel and Moos 1974). This formed the basis for KEYS (Assessing the Climate for Creativity), a conceptual model to assess the underlying perception of the work environment for creativity (Amabile et al, 1996). Cummings and Oldham (1997) have also created a model focusing on the environment. This differs from KEYS by only focusing on three key features: job complexity, supportive and non-controlling supervision and stimulating co-workers. However, their model does not seem to receive much attention in the literature found. Today, the environment in organizations can

mainly be measured and analyzed with Amabile's KEYS; Assessing the Climate for Creativity (Amabile et al, 1996), Ekvall's (1996) Creative Climate Questionnaires (CCQs) and Anderson & West's (1998) Team Climate Inventory (TCI). These three is found to be the most prominent models.

3.4 Organizational creativity

The last decade there has not only been a growth in the research regarding creativity, but it has especially grown within the organizational creativity (Cabra & Puccio, 2010). Hitt (1975) were the first to observe that almost all the literature about creativity related to the individual and little had been done in towards the organizational creativity. Hitt's discoveries happened right before Amabile's first research regarding organizational creativity. According to Drazin et al. (1996) it was Amabile that first broadened the scope of creativity from an individual level to a group level (Amabile, 1983), and then further to the organizational level (Amabile, 1996).

When an organization invent new products, services, processes or strategies based on ideas, it is referred to as *organizational creativity* (Amabile, 1988). Amabile's definition of organizational creativity is quite similar to Woodman et al's (1993) definition: when an organization invent valuable and useful new products, services, processes or strategies. Organizational creativity, as with other important outcomes in organizations, does not only stem from overall firm strategy or access to resources. It also comes from their individual employees, that alone or together produce the work of the organizations (Amabile et al, 2005). To be able to survive and innovate in today's competitive environment, the creative capabilities in an organization are essential. New concepts and ideas requires systems that are capable of developing and holding them together in a creative balance. It can quickly be rushed to premature solutions or fall between the cracks of necessary operations within the organization (Flynn et al, 2003). An organization's ability to grow depends on its ability to generate creative ideas and use them to benefit in the long term ((Flynn et al, 2003).).

Three dominant theories regarding organizational creativity

Among the theories regarding organizational creativity, there are in general three major theories that are highlighted (Amabile & Fischer, 2009; Watt, 2007). The theories are: *the componential theory* (Amabile 1988; 1997), *the interactionist theory* (Woodman et al. 1993) and the *multiple*

social domains theory (Ford, 1996). These theories combine creativity from the individual, organizational and environmental level, and are therefore called multilevel theories. Woodman et al. (1993) was the first to propose a multilevel model. Some years later, Ford (1996) proposed the multiple social domains model and Amabile (1997) with the componential theory followed up with their models, built on the same principles.

The interactionist theory defines creative behavior as a result of the interaction between the individual and context of the situation (Woodman et al., 1993). The model links factors from the individual-, group-, organizational and environmental level, that together are the producers and influencers of the creative outcome in the organizational creativity. The factors within the individual level have been elaborated in the subchapter about individual creativity. The organizational creativity consists of the interaction among the different levels in the organization. In other words, this means that the organizational creativity is a function of creative outputs of individuals within the organization and its work environment (Watt, 2007). As seen, all the different layers are all important to each other, if an organization want to create a creative outcome.

The componential theory includes factors that contribute to creativity, from an individual level to environmental (Amabile et al, 1996). The theory consists of three individual factors, and three organizational factors, that all are needed to be creative (ibid). The individual factors are expertise, intrinsic motivation and creative thinking, as elaborated in the subchapter about individual creativity. The organizational factors are: organizational motivation to innovate, resources and management practices. This theory highlights the importance of individuals in order to create organizational creativity. It states that all employees have the ability to be creative, but the level and frequency of this is influenced by the work environment (Watt, 2007). Organizational creativity is most likely to occur when employees have high levels of each of the three components, and their skills overlap with their intrinsic interest, passion and skills (ibid).

The multiple social domains theory by Ford (1996) suggest that habitual and creative actions compete against each other. Individuals will, according to this theory, choose the habitual actions above creative actions, if they do not have any incentive to act creative (Watt, 2007). Ford (1996) proposes three factors individuals are affected by and four domains that affects the organization. Individuals are affected by (1) sense making, (2) motivation and (3) knowledge,

and the organization creativity are influenced by (1) groups/subunits, (2) organizations, (3) institutional environments and (4) markets. The different domains represent the context that the individual choose to engage in a creative or habitual action. According to this model, any modern organization have creative talent within them, the challenge is just to have managers that are able to empower the employees to creative actions (Ford, 1996).

Summarized, all of these theories suggest that the organizational creativity is influenced by the individual and the work environment. The employees' creativity is crucial to the organizational creativity and innovation in all of the models. The intrinsic motivation has been emphasized in each of the theories, which prove the importance of the employees' motivation. However, it is only the multiple social domains theory that emphasizes the emotional state of the employees (Watt, 2007).

Organizational constraints

Organizations can create barriers and add constraints to creative individuals, which will make it impossible to fully exploit the organizational creativity that is embodied in their employees (Amabile et al., 2005; Caniëls & Rietzchel, 2015). The organizational constraints take place in various forms, such as bureaucracy and limitations regarding time and money (Hlavacek & Thompson, 1973). However, other researchers have found evidence that constraints, especially within design constraints, stimulates to creativity more than it oppress it (Caniëls & Rietzchel, 2015). Their findings showed that constraints stimulated creativity as it reduced the complexity of the task or problem for the employee. It is clear that the findings differ, as Hlavacek & Thompson (1973) sees the constraints exclusively negatively, and Rietzchel on the other hand sees constraints positively as it might reduce the complexity of a task or problem. The literature therefore sees constraints as something that can both stimulate and suppress creativity. Caniëls and Rietzchel (2015) encourages other researchers to explore more within this area, as there is a need with to discover when these effects occur positively or negatively.

Organizational innovation

To be able to serve the continuously changing demands in the business environment, organizations have to be ahead and adjust, re-orientate, innovate and adopt new technologies (Cabra & Puccio 2010; Caniëls & Rietzchel, 2015; Woodman et al. 1993). This is in line with the strong statement from Hitt (1975), where he claimed the only reason organizations exists is to provide the society with solutions for their needs and problems.

Innovation and creativity has often been confused with each other. Woodman et al. (1993) frame organizational creativity as a subset of innovation. Earlier, the innovations happened more by lone creators, than in larger organizations (Amabile & Fischer, 2009). This has taken a shift, as more and more of the important new ideas emerge from organizations instead (ibid). When looking at the last 60 years, there has also been a shift in what the organizations highlights as important (Cabra & Puccio, 2010). In the early 1950s and 1960s it was efficiency that were considered as most important, in the 1970s and 1980s it was quality, in 1980s to 1990s it was flexibility, and today it is innovation (ibid).

As seen in earlier in the literature review, there are close ties between individual and organizational creativity. Bharadwaj and Menon (2000) examined the different types of creativity found in an organization and how they had an impact on innovation. They divided creativity into *individual creativity mechanisms* and *organizational creativity mechanisms*, and discovered that organizations with high levels of both lead to superior innovations. Their findings also showed that it is not enough for companies to hire creative employees, and expect the innovation to be superior. They also need a management that can facilitate the necessary work environment.

3.6 Theoretical framework

Creativity in organizations is a complex phenomenon which is constituted by several levels and environmental factors. If a startup or an organization produce something with a creative outcome, creativity at an individual-, group-, organizational- and environmental level has been included (Amabile et al, 1996; Ford, 1996; Woodman et al, 1993). Based on this, a theoretical framework has been formed and visualized in Figure 2 below. This framework includes three of these levels; the individual, organizational and environmental. The levels are based on each other; a group or organization are unable to be creative without creative individuals (Glynn, 1996) and the organizational creativity is consistent by the individual creativity employees produce, which then again is dependent on an environment and climate that foster creativity (Woodman et al, 1993).

The three creativity levels are situated in an entrepreneurial context, in this study, as the smaller organizations that will be investigated are situated in an entrepreneurial environment and as creativity is linked to the very nature of entrepreneurship itself (Manimala, 2009). The employees in this study are looked at as the most important resource, the same way as Barney (1991) handles resources in his resource based view.

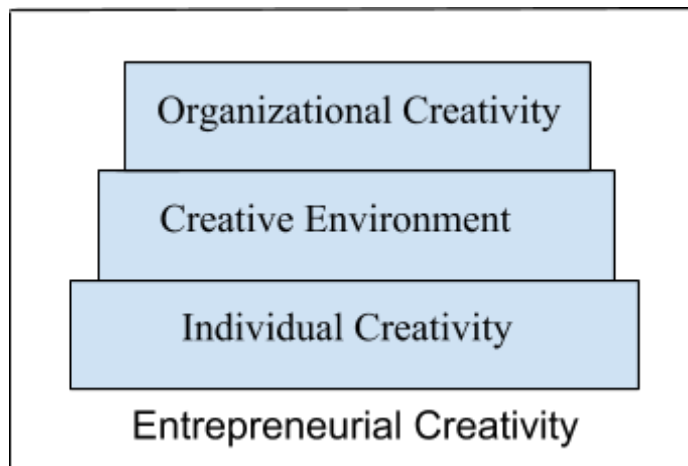


Figure 2: The creativity levels in an entrepreneurial context

This chapter have presented relevant literature for solving the purpose of this study. The purpose of this thesis encompasses to discover how the different levels of creativity is affecting creativity in organizations. A theoretical framework is formed by the basis of the literature found and presented, and this framework is applied in order to analyze the creativity in organizations, with a focus on how the people in the company makes the company entrepreneurial and innovative. In the chapter following, the case studies from the organizations investigated are presented.

4. Case studies

In this chapter, the case studies from the three different organizations investigated is being presented. They are categorized by the same under topics, which makes the case studies easily comparable. Figure 3 shows the different organizations and how they differ in size and age. The cases are presented in an order where the newest organization are presented first, the immature startup, followed by the mature startup. The case study from the SME company are presented lastly. Both the view of the CEO and employee are presented interchangeably.



Figure 3: The three organizations

4.2 Case 1: An immature startup

The immature startup was started a year ago by the person that still is the CEO. Some months after, two other students joined the startup as co-founders. They all knew each other before they started working together.

The immature startup is operating in a business to business (B2B) market. Today it is still the three co-founders that are involved, and all of them are working part time time in the startup. However, the third person that has not been interviewed works less than the others, and he will not continue with the startup after his studies. The immature startup can still be considered a project, and not an established startup yet. The people involved work every day, from 3 to 12 hours a day, with an average of 30-40 hours a week.

Knowledge and expertise

The CEO of the company highlights IT, data, programming and knowledge about production as the most valued competences in the immature startup. On top of that, sales and customer relations are considered almost equally important. Personal responsibilities and politics will be

more relevant at a later stage. The employee does on the other side emphasize the importance of knowledge about the production. They have to be able to get into a factory, and immediately understand what is going on. Without this knowledge, the immature startup will not be able to provide any value for their potential customers. The employee has a background from IT and programming, and is the only among the founders without knowledge from production.

The CEO underlines; “A lot of different competences are important to us, including HR and other internal competences, but in this phase we need to spend time and money on what gives us income in return”. This is especially linked to their financial status, as they are still in a product development stage without any income, only expenses. Economic knowledge is therefore not critical and valued at this moment either, as it is impossible to know what they are doing the upcoming month. At this stage, they figure out what they will do in the next period of time and how much it will cost, and thereafter get the money that is needed. Because of the uncertainty about their financials, the co-founders are also forced to work in a different way. Similar to what is found in the mature startup, the immature startup always strives to reduce the time spent and the costs to the absolute minimum.

The individuals engaged in the startup work mostly within the areas they do have competence within, respectively IT and production. Since all of them still are students, they are acquiring more competence during their status as students and the following academic workload. But also internally they are developing their knowledge by participating in courses related to their field of work when they do have the chance. Each of them do have a responsibility to learn what is needed of them and take initiative. The CEO also explains that they learn a lot by working with customers. And since the three of them do know very little of what they are doing beforehand, everything they do is learning. The employee underlines that they all have agreed to work in this startup in order to gain more knowledge and competence; “If we compare ourselves with larger corporations, we do not have any competence programs. At the same time, we work mainly because of the learning outcomes. We could have spent our time as students on so many other things, but we prioritize the startup”.

The CEO classifies the learning as “learning by doing”. However, both the CEO and the employee admits that, since no one in the team has experience from what they are doing now, they should have a more experienced person on their team in addition. Today they are mostly relying on people within their network, but they realize that this will not be sustainable so much

longer. They are facing so many different choices, and need this competence in house more than ever before.

Motivation

The three involved in the immature startup have organized regular meetings where they update each other on how things are going, both at a business level and personally. According to the CEO this is an important routine for them, and is executed three times a week. They also focus on giving each other feedback. This happens every other month. The employee also highlights that each of them is largely autonomous and made highly responsible for their work tasks. This is also important for the CEO that says they ensure that the people involved have clear roles with responsibilities for specific parts of the organization. The high level of responsibility was also found in the mature startup, but not in the SME company. The CEO of the mature startup consider autonomous employees crucial in a startup, as they depend on every employee working as hard as they can in order to make progress.

Today no one has shares in the immature startup, as they are not yet registered as a corporation. However, the two people who are mostly involved, the CEO and interviewed employee, has agreed on sharing the ownership of the startup equally. Every person who will be involved in the startup, when it is established, will be offered holdings in the company. The employee takes this for granted, as they are a startup and not getting any salary for their work. As they are recruiting at the moment, they communicate externally that there is possibilities to get ownership in the company.

At this stage, the company does not have any bonuses or any salary. The CEO highlights positive feedback from customers as motivating. “Customer’s willingness to pay is also motivating. The larger willingness the more motivation it creates.”

Organizational innovation

The immature startup does not have any concrete initiatives to foster the organizational innovation, such as a suggestion mailbox, creative rooms and so on. They have had a digital mailbox on their internal communication program, but it has not been used by them. However, as a startup they consider the organizational innovation as something that just happens. They have not yet launched a product they can sell, and are depending on being innovative in order to survive.

According to both the CEO and employee, the organizational creativity occurs most often when they are facing a problem with their product development. Then they set up meetings with only one goal: fixing the problem. The employee highlights that the fundamental things needs to be in place for them to be creative. They both describe the way they are working as problem solvers and explains that creativity only occurs when they have a problem or challenge they need to solve.

If someone comes up with new ideas or try things in a different way, it is well received and responded to by the team, similar to what was found in the mature startup. None of their solutions are considered finished or good enough, but they have come a long way on developing them. Because of this, brainstorming and new ideas are something they often do, according to the CEO: “The only thing we do is to come up with new ideas and solutions all the time. This is completely opposite of what is found in the SME company, where the CEO struggles to get ideas from his employees. In the immature startup, it is often one of them saying: Hey, I’ve thought of something new, why can't we make this or do this in that way?”. Since they are still developing their product, every idea is considered of high value. The employee also emphasizes the importance of new ideas, and underline the difference among them and a larger company: “It is not like we are 40 employees, and ideas from the new employee that are not supposed to say something, are disposed”. However, the employee do question himself on how he would have responded if two programmers joined the team, and suddenly came up with ideas about the hardware, which is a completely outside their area of expertise. However, he both thinks and hopes they have a climate that would encourage employees to come with their opinion, no matter what their tasks are.

Just like the mature startup, the immature startup was created because of the CEO was struggling with a problem. The product development has been characterized by continuous loops and iterations when making the product. They started early meeting potential customers in order to understand the problem and need better, followed by a lot of informal communication and discussion between the team members. According to the team members, this informal discussion have shaped the product largely. In combination with the more formal workshops that they have conducted. As the employee highlighted: “When we know what kind of functions we need, the process is more focused, working with the whiteboard and brainstorming for two hours, in etc.”

It has been important for the immature startup to develop the product in the quickest way possible. To ensure this, they have gotten a pilot customer close to where they have their office where they often spend time to observe or test their prototypes. Even though the pilot customer are not paying them, they get valuable information and can ensure that the product-market fit is as good as possible. By being out there, they have realized that there is a clear need for such a product, but a lot of their hypotheses have also proven to be wrong, according to the CEO. The sensors they were using in the beginning, was far from as accurate as they had been promised. This has however been their way of working: to continuously iterate and improve according to the need from the customer. They recognize a problem or need they want to solve with the customer, then they make that part of the product which can solve it. When they have done that, they go out and test it in order to receive feedback as fast as possible. The lean-strategy of product development characterize the way they are working in a good way, according to the employee. In that way they can “fail fast” and improve as quickly as possible.

Constraints

As an immature startup, time and money are considered as the largest constraints of both the CEO and employee. This is exactly the same constraints the mature startup was struggling with as well. According to the employee; “the lack of money forces us to do the different processes in a linear way and not test the technologies parallelly”. The lack of money steals a lot of time from their product development, and hours spent with writing applications for grants, could have been spent on business development instead. There are technologies that they know will work much better, especially on the paper. They are however, too expensive and are not able test them. In addition, they are in lack of technological competence, something they could have hired students to work in if they have had more money.

The CEO looks at himself as a creative person, regarding the financial constraints. He thinks that having a business with a lot of money is causing more administrative work, but that this does not necessary reduce the creativity. It would rather boost the creativity in a company. “If one gets more employees on the other hand, I would be less creative, as it requires more administrative work”.

The CEO concludes that time is the largest constraint, even more than money. He does also see their constraints as exclusively negative, since they could have done much more in a shorter amount of time with more money. The employee shares the same opinion, and tells that the lack

of time prevents them from doing a wide and thorough rounds in the beginning. Instead they have to do a quick brain storm and pick an idea relatively quickly. He does however acknowledge that “the grass is always greener on the other side”, and admits that more time and money would not be exclusively positive. He is proud of how cheap and quick they have gotten a pilot customer and started developing their product, but is not sure whether it is because of their constraints or their focus on having a rapid development process. However, it is clearly from both of them that they are experiencing a lot of constraints as an immature startup company.

Communication

The communication in the startup is described as informal, concise and efficient. This was described almost identical from the CEO and the employee, and they both highlighted that an efficient communication is highly valued among them. From the beginning they have been consistent of keeping the communication, in example e-mails, short with concrete actions.

The founders have had some bad experiences with “communication overload”, and have been aware of keeping the communication efficient. Even though an efficient communication is easier when they are only three persons, it is one of their key values they want to keep when they are growing. The startup does not have any formal requirements of reporting to the CEO, but they are logging the hours they spend on the different tasks. Since they are using a project management tool, they have some sort of indirect reporting when they complete their tasks.

Both the CEO and employee consider the communication as a positive factor in relation to creativity and productivity. As the employee said: “The information as the time sheet input, the meeting notice etc. can be found on Podio (task management tool). It is available there, but it is not disturbing me unless I want to see it”. They use three different communication channels: text message or Facebook-chat, email and cell phone. Which of the channel they choose is in accordance with the urgency level and how much information it is.

Environment and climate

As the company is a what can be considered a “newborn” or immature startup, they have not been through any structural changes that have affected the company. This has also led to a safe environment, where the employees feel free to bring up thoughts they have or improvements they think should be done. Since they have not completed their product yet, every new thought

is considered of high value. As discussed in the subchapter regarding motivation, the employees do fear a growth phase, but do believe they have a climate where everyone is heard.

Some months ago, the startup was forced to move from their office to a smaller one. Although it was far from ideal, it has according to both of them, not affected them much. The employee thinks the CEO is the only one that has experienced a structural change, that after working alone for some months included two new people. The CEO did however not consider this as a significant change, but as a necessary step in the development.

In order to stimulate job satisfaction and desire to work, the employees try to have fun while working. They try to keep connected even though they do have days they do not work together, by eating lunch together or go out together, in example. As the immature startup only have three employees, traditional appraisals is not seen as a necessity. However, they have what the employee refers to as “check points”. According to the CEO they are giving each other feedback on what they are doing good and what they can improve until next time. The employees do admit that they should have been better to have these meetings, as they tend to slip away.

The role of the management

The immature startup does not have anything that can be considered as a management, according to the CEO. He would never make a decision on behalf of the company without talking to the others. Everyone have as much to say as the rest and it is always the consensus in the group that applies. According to the CEO, the only difference between him and the employees, is that he might be a bit more focused on how much the company is making progress and initiates workshops. Almost the same were found in the mature startup, but their CEO had a bit more prominent role. The employee of the immature startup had almost the same opinion about their CEO, and says that the CEO more often takes initiatives to workshops and social happenings. Otherwise, he sees the management as exclusively positive: “The only form of management we have is the CEO that takes care of the administrative work and organize the formal tasks. It is really nice, because then I know it will be done in a proper way and I can focus on my tasks”. It is clear for both of them that the startup has a flat structure, without any existing hierarchy.

The employee explains that they are usually updating everyone in the startup when things are happening. As they are only three persons involved in the startup, it is easy to keep everyone

included in the things that are happening. They are not forced to write reports, but according to the CEO they are replacing them with task completion. Depending on what they do, they are setting deadlines. When the task is due, they either “report” through their task management program or notifies the other. This is also confirmed by the employee, which takes a lot of pride in how efficient they both work and communicate, and that they do not have any bureaucratic and formal reporting.

4.2 Case 2: A mature startup

The mature startup was established as a company in January 2014 by the person that still is the CEO, and one of the employees. When doing another job, they discovered a need in that market that was not fulfilled. Based on this need, they started a company in order to solve this. However, this mature startup has existed as a project since spring 2012.

The mature startup can be classified as a manufacturing company, and operates in a business to business (B2B) market. The product development is done in-house, and have increased their team thereafter. Today there are four employees working full time in the mature startup, in addition to a. Plus a part time worker and a student writing a thesis for them.

Knowledge and expertise

“Maybe I am too busy using the competence that the employees already have?”, the CEO reflects. He says that he does not have time to send the employees to courses in order to learn more. It is important that the employees grow as individuals in the organization, as it yields the CEO as well. The CEO have have tried to walk the path himself, and he has learnt a lot from it. Just like the immature startup, there are no elderly employees with a lot of experience in the mature startup, thus they need to find the answers they seek by themselves. The CEO says that one of the great reasons for why they succeed is that they turn around and iterate fast. “It is important that we are flexible, and not too comfy. We have to work those 70-80 hours a week that often is needed. There is a lot that needs to be offered in the phase that we are in now.” The people involved in the startup do define their own work tasks.

Competence that is especially important in this company is production and knowledge on how to produce. One needs competence in building products, and also to do the design process in beforehand. That is how the company has made it possible to act cost-effective. “That you can sit by the drawing board, and then go to the workshop and just make it, is important”. The CEO also highlights that it helps a lot that the employees are engineers in the way they work. Skills in documentation, and to gather the information needed in order to follow a set of regulations are important as well.

“You need to be hungry for learning new things, not only say no. That is the most important skill. You can always learn new things, even after graduating. I think the pro’s of not being experienced from the work life is that you’re not used to the strict work routines. Here, it is more important to have broad competence, and not expertise.” The CEO explains further that it has been hard for him to recruit people, as it was impossible to tell the new employees what they were up to doing. This is completely different from the SME company, which have clear work tasks. The CEO of the mature startup values deeply people that manages to take responsibility and see what has to be done and also just do it. The employee says that all the employees work on everything. Everyone works on product development, all are involved in programming, and all have opinions on how it should look like, how the machine should look like and so on. “We think we are good to involve everyone and use the resources we have available here in the organization.”

The employee explains that they do have participated in competitions where the employees get the business perspective. And that everyone has been good at learning new things. “It is we employed who have desires. We come to a point where we only see that we have to learn. So that's how we end up with those courses.”

Motivation

Job satisfaction and desire to work are aspects of the work environment that the CEO claims to think a lot on, but that is hard to practice, according to himself. “People know what they need to do, and one need to give people responsibility and trust that the work is being done. This leads to job satisfaction. At the same time, the employees, including myself, need to know that there is others and demands that you do your job. In this case, it is my biggest fear that if we don’t succeed now, none of us have a job in half a year from now. This makes it worth to work

a little extra, with long days. But there is no laughter and fun regarding this topic. A lot of people think working in a startup is fun, but it is first and foremost hard work.”

The CEO also believes that everyone in the startup is proud of what they have achieved. “Every time we look back on what we have achieved; we get really proud of ourselves. But this is also dangerous, as this easily becomes a pillow”. By this, he means that it is easy to not work hard, if you don’t feel constantly dissatisfied. The CEO says he likes to celebrate once and a while, and boost the employees. “We should have had someone who gave positive feedback to us all the time. The next one that I will hire should have this as his main job task!”

The employees can have ownership in the startup through buying stocks. The immature startup has also conducted a crowdfunding, where family members of the employees has bought stocks. The CEO claims that this have increased the ownership feeling among employees. The CEO has a personal relationship to the employees as well as their families. When he meets family members on exhibitions, like parents or siblings, he talks well about the employees. “I think this increases the ownership feeling, when the employees hear that they are doing a good job, through their friends and family. Also media and public attention is participating in increasing the feeling. The employees are also shown on brochures and pictures on the home page, this is a way of acknowledging the internal resources to the external public.

The employee mentions fast progress as a motivational factor. If the progress was slowed down, it would be demotivating. “I think everyone of us is that type who wants to be finished with things and move on.”. The fast progress was also found in the immature startup, but they struggled more to keep up the speed because of their constraints.

Organizational innovation

The CEO alleges that when one is working with innovation, one is ahead of the market. The company is at the same time operating in a quite traditional industry, with few changes, and the mature startup might therefore present disrupting technology. The business is build around a supposition that the industry is still profitable, without analyzing this any further. The involved persons are young, smart and hard working, according to the CEO.

The CEO explains that the people involved discuss things continuously and in an informal tone. “We do not have creative rooms full of colors, neither a mailbox for new ideas. But we are

discussing things across the table when there is something. We are constantly creative.” The employee says that they do discuss and sketch ideas on papers once there is something to discuss, and that there is no point in saving ideas in a box. Before having a finished product, they are dependent on coming up with new ideas all the time. According to the CEO, a good idea is always well received, and a bad idea might get others to think, which leads to new and better ideas.

The CEO highlights that sometimes it is especially important for them to be creative. This could be when a customer calls to report a problem with the company’s product. In those situations, they are forced to think creative. And these kinds of situations happen often when something is new, rather than well established. “So for our part, we need to think creative all the time, and easier to be creative when you are forced to break out of the routine”. The CEO also adds that sometimes it is better to pause, or remove oneself from the organizational setting for a day or two, to release the pressure, so that one does not feel pressured to find a solution.

The CEO is stating that the company need to be creative in order to not feel satisfied with the current solution. If they do not iterate to find a better version on every aspect of their product, competitors will outcompete them. “We should be able to improve ourselves on every area we work at”. The company is innovating in many areas, including sales technique. “In the beginning, the sales contracts were only one A4 page, and now it is on 7-9 pages + attachments. Everything needs innovation and everything needs to be improved. You cannot think that you have cracked the code at the first attempt”.

Actions that are done in order to keep the working environment creative is to constantly ask critical questions and be carefully aware of not being satisfied with the current solution that they have. “Every stone needs to be turned before we can move on.” When it comes to what promotes creativity among the employees, the CEO believes responsibility is the key. The similar line of reasoning was found in the immature startup, where giving employees responsibilities were considered important. “Knowing that one has responsibility to solve something. I think that is the bottom line for good creativity. A wish to solve a problem or to do it better than others have done it before”, according to the CEO. According to him, more responsible and self-directed employees are a strong promoter of creativity.

Constraints

“I do think that the employees, including myself, gets a little frustrated by the constraints. Because of the broad knowledge we possess internally we have been able to overcome the constraints, but it is time consuming and I am starting to get tired of all the time have factors that work against me. In addition, we cannot afford failing a lot, especially not failures that cost a lot time and money. And when you test something, you usually create 1, instead of 100. This one demo becomes expensive to make. If we order products parts that we have designed, then we need to make sure this one works.”, says the CEO.

According to the CEO, the involved persons in the startup needs to work more than full-time with salaries that are lower than what they get in more mature organizations. Time is a resource the startup can use more of, but costs is kept at a minimum. The CEO exemplifies: “it is more cost-effective for us to build a plastic box yourself, using one or two days, instead of buying one to 13 000 NOK. The employee’s time has low worth in money and value. We use the emergency solutions we can and work a lot. This leads to a work day where we need to spend more time and saving money. It is kind of expensive to be poor”. However, a bad starting point makes it even cooler to succeed, is the CEO’s perception of constraints. “I think that it is a bit of motivation now. That you feel that you have the whole world against you, but you are still more motivated to work for what you believe in.”. They consider it a “victory” every time they overcome a constraint, and have almost developed what they consider a positive attitude towards constraints.

The lack of money has affected the solutions the company has found, according to the employee; “We are forced to find creative, cheap solutions on complicated problems. The whole clue is to make solutions that is both simple, good and cheap. In other words: the simplest. If you can remove some of the parts in our product, it is easier and more secure, and it is cheaper for us. This has led to many solutions that are better than what we could have done without the lack of money. Then we would have solved the same problem, but with a more expensive solution.” The employee has a similar experience and thinks they have benefited from the constraints they have had.

Communication

The internal communication can be described as a bit messy and there is a lot of changes in plans from day to day. The CEO says “it's hard to plan a month ahead, and it is challenging to work with something continuously over days. There are always small interruptions. Because one is unsure of some of the choices one have made.”

The structure is not set yet. The system in the company can be described as quite low, as there are only four employees. If one is sick or not motivated to work, it affects the company. It also affects how fast we can reach a goal. The CEO says it is most important that the employees set goals for themselves and that they feel ownership to these goals. And that this is challenge for the company. “They need to be 100% sure that they will reach these deadlines”. Since the four employees share office and work pretty close, they rarely report to the CEO. He can watch the work effort each of the employees put in. The CEO thinks they can be better at communicating at each other, with a tidier communication style. They could be more professional and less personal. Since they are in a phase where it is important to succeed, they work a lot and demands a lot from each other. When everyone is putting in personal aspects in the job, and want to succeed in what they are working with, the focus can be on to succeed and accomplish something, rather than to look at the bigger picture for the company's best.

The employee says that the employees talk together daily at the office. Often communication happens through mobile, since all of them are different places quite often. Someone at the office, visiting a customer etc. “But we are all dependent on talking together, so I think we have a good internal communication”. When they communicate it is informal things as: “remember to buy this!”, “have you sent this?” and other short messages. There is not many of the deep conversations.” When it comes to reporting, the employee says they are reporting when they have done progress. He says it is natural, since they have short time limits.

Environment and climate

The mature startup has been through major changes on a structural level. They started out working in a garage as a student company. Now they have a product that works, started sales and they are in a phase where they need to plan more and project more. They are scaling, and think of logistics and revenue in a larger degree than before. This has lead the firm from being a cozy place where they can sketch ideas, to be a real firm were routines has been needed to be

found, writing paychecks, and received clear roles. The setting is more formal now. Before there was several students involved in the startup, but the last year there has been four full time employees.

The employees access to resources and equipment is restricted to go through the CEO. Access that cost more is often rejected, and there need to be a certain need before the company uses money. Before, when they had other offices, they had tools and materials available, but now the employees need to discuss in example what kind of software they will use before it is bought.

The CEO experience that the employees are self-directed and responsible. Some employees are more self-directed, and other need to be told what to do. Both personality types are resources, depending on the situation. The CEO thinks that the most important thing they can do in order to promote creativity is to be a fellow human and take care of each other. “Sometimes I work so hard because I am tired and I have so much to do. The best thing to do then is to just rest. But at the same time, things need to be done. Its hard to find an answer to this. I think you just have to try and fail”.

The mature startup conducts appraisals, and the CEO explains that it happens when he feels it is right to talk. Last time the CEO also used a self made questionnaire, inspired by a student organization. He evaluated the appraisals, that they started with quite recently, as very handy. Issues and challenges are being talked through.

The role of the management

The CEO says that he is getting feedback on being good at pushing the employees to work hard. And that they together are good at reaching their goals. He also thinks that he is stressing the employees more than he should. The CEO is aware of that this can also have a demotivating effect, to have a leader that always want something more than what is being done in this moment. He has received feedback on this too. As a leader and employer it is hard to not mix the roles. “The other employees can feel that they can’t talk to me about certain issues, and this can be challenging. Although we need to talk when it is needed.” He says he also need to tell the employees when things aren’t done good enough.

In order to facilitate creative work among employees, they are working in an interdisciplinary team. The guy who is doing something mechanical is working in the same room as the guy who works with the electrical challenges. The CEO works in the same room himself, and is transparent regarding what costs the company has. More interdisciplinary work promotes creativity, and the employees understand the larger picture. “You can be creative alone, but that is often of less value. If you are creative in your field, it does not have any usefulness. If you are creative and know that it is important to keep costs down and lifetime of a product up, and that you can be creative saves time and work operations in the field that is not your field. That is good creativity, if you ask me”, says the CEO. “The more creative the employees are in cutting costs and remove parts from the final product, the less bills need to be paid. We need less providers, and there will be less late deliveries. And so it continues.”

The employee thinks the CEO is a driving force. “We receive a lot of responsibility as employees, since we are so few. And that leads to high working pressure.” But he also says the motivation needs to be found by oneself. Unlike the SME company, the mature startup does not have any bonus systems, but rather ownership in the startups.

4.3 Case 3: A SME company

This SME company is a manufacturing company based in Trondheim. The company has 44 employees. It has grown steadily since its establishment in 1995, with their 20 employees back then. The company was established as a structural change that was quite usual before: the mother company who had their own production, spun off the production into a separate company, to make it less competitive.

The SME company was recently acquired by its sister company, and is now owned by a larger group. They are producing and delivering solutions to their customers on orders from them. This can be both prototyping or the whole process from development till production. These customers are often startups.

Knowledge and expertise

The SME company do have a system with an overview of the expertise within the company in order to secure that there is several that knows critical knowledge, in example programming of

machines. More and more of the employees are being encouraged to try new things, and develop their skills within new areas if they can master it. The employee explains that the SME company has interest in employees that learn new things, and they have a need for a broader competence in case of employees quitting. From the appraisals an important outcome is a development plan for each of the employees.

When it comes to exploiting employees' competence and knowledge, the CEO says that he uses people that he has experienced having competence within that area that is needed for a certain issue. The management tries to use people where they have capabilities, although the CEO admits that it is hard to catch up on every individual's skills and exploit them fully. This is unlike the startups, where the CEOs know all the strengths and weaknesses of their employees.

The HR manager updates himself on aspects that are relevant today. The economy manager is taking courses in accounting. The regular employees do however rarely participate on external courses. Education of employees has been underestimated, but is something that the company tries to change. The management finds it hard to find courses that fit the employees. They have tried to find courses within management, but claims that they are of low quality and too expensive. The CEO says: "I feel almost that the biggest challenge is - to find what is right. You must be willing to choose the wrong course, but it costs a lot for this and in times that are difficult economically, you would like to choose correctly. We do have a pretty clear picture of where we want and what we lack and what we need to refill on. We try to gauge the level of the various elements, whether it is related to a position, role or department, and try to relate it to a gap analysis to see if it needed refills. A lot of this information comes from the appraisal with the employees."

The CEO claims that "everything" is important knowledge and competence in the SME company. "Everyone can produce what we are producing. This makes the frames around the production important." The core competence is according to the CEO and employee, to operate the production. The company also sees opportunities regarding sales of extra services to their customers. This means to gather and structure data and information and offer it as a service. "Competence within purchasing is also important, so you know how to pick the best offers", the CEO says. The employee claims that competence within production, sales and logistics are the most important skills. The company needs skilled workers and sometimes engineer expertise.

People need to be flexible when they work in this SME company, as the customer base and the work force is varying a lot. The SME company hire often people from other countries that do not master Norwegian very well, but do master the the company's core activity in the production. The employee explains: "The code language in production is the core knowledge here, and it is more important than the daily verbal language, as electronics are an international language. "

Motivation

The SME company has conducted appraisals and customer surveys in order to gather opinion and feedback from the people involved. The CEO of the SME company think it is important for many of those working in the production to feel that they can express their opinions regarding what they are not satisfied with. In order to create great products, the company is dependent on employees working well in teams. This leads to a high focus on teamwork. They also want to have a larger focus on how to solve solutions instead of a culture where one tries to find out who did mistakes, as it is today.

In tougher times, the SME company tries to celebrate when an order comes in, in example with a cake that is shared. They also celebrate people's birthdays, gratitude with a bottle of wine or flowers. Christmas and summer parties is also held. They also try to affect employees to act nice and respectfully with each other. There is however a top-down approach in the SME company, as the CEO tries to give employees task that they are capable of mastering in order to stimulate for satisfaction and desire to work.

When it comes to bonuses, the company do have different modules. Employees working in the production do have a bonus system triggered by economic return. On the management side, bonuses are more individually based. The SME company needs to do well before bonuses are shared with employees, as there is a need to be congruent. The CEO says: "If everyone do as expected, everyone will receive a bit of the cake. If things do not go so well, giving out bonuses is not a good idea". Except from this, when a sales deal over 10 MNOK is sealed, it triggers bonuses. The CEO explains that the mechanisms of bonuses is tricky, because sometimes people work very hard, but at the same time, other factors disturb the result so they don't reach the company's objectives. "The alternative is a discretionary evaluation of the employees, but then, the employee does not know what he or she should go after or work for. Bonus programs is simply tricky, as it is not easy to calculate a sensible and fair bonus".

The employees are not able to buy stocks in the SME company. The SME company needs to be listed in order to make it happen, according to the CEO. The affiliation does not happen through ownership. It has been focused a lot on the company's values. The employee states that learning to be good with processes and machines is learnable. But the company values is harder to understand. The CEO sees the focus on values as important in order to create a satisfying work culture. The values of the SME company were made through arranging an event with employees from the SME company and its sister company, which resulted in a common arena that included different people involved in the business.

Organizational innovation

As the SME company is being paid for making products to their customers, they do not use much resources in securing that they are ahead of the market. However, they do have several customers that is interested in a new type of production facilities, so the company need to evaluate if they want to go for an investment. The SME company wants to offer the processes and equipment that the customers is requesting. It has been popular to pick customers from the oil industry, but now there is a period where other industries are more attractive. Then, the SME company need to adjust their equipment to this change. The SME company tries to be updated on the market by going on exhibitions, keep in touch with providers of equipment. and read technical magazines. The employee says: "we are in an industry where we need to be updated, as there is a very high rate of change on the types of components and what's happening in the market. The sizes of the components do significantly decrease as times goes by. He thinks that the company's largest contribute to keeping up to speed in the market is that they are building up the general competence in the production division.

When improvements are suggested, the SME company often reflect on it, but also take into consideration that capital is needed in order to carry the improvement out. The management tries to save creative input for later use. The SME company have tried creative initiatives such as mailboxes for ideas. But now they do not have any mail box, and the management do not receive ideas either. The CEO says: "We had one mailbox for ideas, but it was not used. We rarely received anything. In our company we must be be terribly alike. There are some of us, who are almost a bit aggressive if someone comes with a good idea and are highlighted bit. Our social feeling of being alike is is very strong in some of us. There were even some who experienced it uncomfortable when they were drawn up and highlighted". An earlier CEO in

the SME company tried out “the value carrier of the month”, “the best idea of the month”, but some individuals did not like it, so it ended. Now, they use Office 365, and hope to receive ideas there.

The employee says they have used methods in order to boost creativity or suggestions for new products. “We do have morning meetings and so on”. The management in production often ask, after a product is produced: “Do you have any good ideas?” or “How did yesterday go in the production?”. They have also tried periods where employees can deliver suggestions, but is often results in a focus on what mistakes that are made instead of opportunities. “To bring out good ideas is harder than to highlight concrete mistakes. That’s another mechanism”.

The employee sees teaching new ones as creativity-enhancing, as new people bring new viewpoints. When it comes to producing something new, the company creates a group with different people from production and sales and people that have worked with a similar product before, so new ideas on how the production should be solved can come up. The employee says that the company tries to trigger creative thinking among the employees. But it is hard, since employees often get specialized in how a machine works, and continue doing things as before. He is convinced that need to come up with new solutions, and that the introduction of robots is not stealing people’s job, they are just changing the jobs. If not, competitors will outcompete the SME company. As the employee has a leader function he tries to encourage employees to understand that if they produce more, they will keep their job, and he sees a rapid development of the electronics industry.

According to the CEO, the company have never worked to cultivate creativity. Only suggestions on how to do things better, that is how CEO look at creativity for this company. As they operate in a marginal industry, they are dependent of being able to change the small things. The CEO thinks creativity and improvement are linked together; “By creativity I imagine something bigger, a bigger kind of change. If you find a new way, or a new product to sell, so it is in my eyes a creative cause. But we sell the same in a slightly different way, so it's an improvement, or we manage to produce something a few minutes faster. I think all businesses need to have the “wheel of change” in their company, I am completely convinced of that.”

Constraints

When it comes to constraints, the CEO states that there is a difference between production and office functions. Those who work at the office do have more control over their own day. For production workers, the CEO thinks the employees experience the work day as rigid. For that division, it is more important that what is needed to be done is done, rather than how it was done. “Meanwhile, we work to put in place the lean methodology. Though we have not come far, much of the philosophy is anchored in it that those who are around the place here propose changes and implement changes, so that the suggestions come from the bottom and grows up, instead of being implementing from the top. And changes should be made by those who are closest to the problem. It's probably a culture we are a good distance away to get established, so we envisage in the future.”, says the CEO. He wants the employees to be more involved and do their own thinking. People have worked in the SME company for a long time, and is used to the traditional norm. So it is not easy. “One is probably a little tied with what one has worked with previously.”

When the SME company creates prototypes, they make them by hand. Then it is important to design the solutions in a way that make it possible to automatize the product process. To do a redesign of a product is too expensive, and the company do not have the financials and equipment that is necessary in order to make it. The employee explains that they choose the easiest solutions because when it is too costly to automatize. The employee says “you need to think of the possibilities you have”.

The access to resources and equipment is limited, according to the employee. However, they consult their sister company for help if they do have needs when it comes to software. If the employees need something simple, they receive it easily, as long as the financials are ok. The management tries to see how the employees are coping with their resources. They use lean thinking, and do focus on what's important. It creates many useful discussion, says the employee. The CEO says the employees are following recipes when they are making products in the series production, and that does not give them full permission to use what they want. They are following rigid and fixed patterns. It is differently on the prototype department.

Regarding if constraints is perceived as positive or negative depends on the personalities and where you are, according to the CEO. There is certain type of personalities that applies for a certain job position. He says that in the company there are not so many visionary and creative

people that thinks of new ways of doing things or improvement. The CEO would prefer a more gathered location, instead of using several floors. He would also like more employees consulting him, instead of implementing changes and suggestions in a top-down approach. “I wish people come to me or their leader, and say: “This is what I want to do. Instead of the other way.” It has something to do with growing from the bottom.”

Communication

The communication is satisfying, according to the employee, but some aspects could need improvement. Reporting to management do happen mostly through a data system. There is also reporting in every management meeting. The company's data system is used for employees to message on the status of the product, and they are still learning how to use it.

There are less reporting to the CEO, because of the possibilities within IT, and the systems they do have implemented in the company. The CEO says: “We try to inspire employee to focus on using computer system in the way it should be use. These reporting creates the final report that customers need”. The customers need reports and declarations, which leads is necessary for the company to have routines, but as the CEO say: “we do move ourselves towards to taking the data into consideration instead of producing them. With an exception of the board meetings. We need to report there. We try to spend less time on reporting, but it is a real challenge. On management meetings we try to break down the feedback and work systematically through our challenges. What is interesting, is what lies behind things.”

The CEO also view the communication satisfying, “although things always can get better”. He says it is person dependent. “The need for communication is not so big either. So it is with the customers also. If you can remove a larger part of the problems, then it is not an extremely demand for communication either. You do not have time for anything than communicating when it is troubling.” The different departments of the SME company do have meetings where communication happen, but most of the communication for the departments happen through lists that are being send out and updated by the different ones.

Environment and climate

The employee worked in the SME company 20 years ago also, and tells that back then, the SME company was owned by the employees and a majority owner. The SME company was recently

acquired by its mother company. He says: "It was one of the things I very much appreciated; that we got a new owner who was willing to invest and let us be allowed to spend the money."

Both the CEO and the employee experience the employees as autonomous. The CEO adds that there is important that the employees focus on co-working and team spirit, but that it easily is more focus on who did mistakes or blaming others. Instead of rejoicing over others mistakes, it should be more an environment of helping out to avoid mistakes. Employees do have a high ownership feeling for the product they are making, instead of letting other people into the process. The CEO also raises questions of the low number of women working in the company, and especially in the management.

In order to map the environment, the SME company uses an online questionnaire. One that goes internally and one that goes out to customers. They have used this questionnaire in many years, through their marketing agency. The employees and the customers are asked a lot of the same questions. When the company started out with this scheme, there was a huge gap between how the company perceived their situation and how the customers achieved them. The questions that was more internally directed gave the management a lot to learn from. In recent years, it is quite a good match between what we believe ourselves and what customers think. The first years we overestimated ourselves. Thought we were very good, but customers did not agree. Then we took a larger round with it. The year afterwards, people had such low self-esteem that we underestimated ourselves at all. Now it is a good match between where we are going. So it was a pretty fun dimension to such questions", says the employee. The management also arrange appraisals which is conducted once a year. That is important for the individual to speak out with their leader.

To promote creativity, the employee thinks that one needs a safe workplace. And you need to be heard, at least once and while. "You need someone to talk to, someone to explain things to." Sometimes, the management is giving the feedback that something's costs too much, and one needs to wait to solve the problem. It is being noted. It is mostly solutions that are suggested. They are bottomed out on that someone is struggling with a problem. "Most of creativity is based on that you have a problem you don't want to be bothered more with. You're not creative if you do not solve a problem." The CEO thinks that in order to promote creativity among the employees, the following applies. "First and foremost one need to find a way to solve challenges in by oneself, or in a small group. The road cannot be settled." The employees is needed to be

given trust. They receive a target, and they are responsible for reaching it. That is both exciting and scaring, according to the CEO. “Do not tell people what to do. I like the Steve Jobs quote: You do not hire great people in order to tell them what to do. They should come up with their own plans. I think there is much truth in. I think that makes life more interesting too. That's the tricky matter in relation to creativity and production. “There is at least pretty much that is fixed and rigid that must be done in a certain way. But then there is certainly room within there, where we could have been better. That’s for sure.”

The role of the management

The employee experience that the management affect the work environment in a positive way. Although he thinks it is wished for more meetings and information and more presence from the management by the employees. “We try to seek a best practice-culture. We don’t use Toyota method, where only one solution is right.”, says the employee. The management encourages the employees to work fast but also without mistakes. And if good ideas come up, they try to help out with getting resources needed.

From the employee’s point of view, one can reach out to the management during coordination meetings, by sending mails or establish contact when the management is visiting the employees. The CEO says the employees discuss things with him, or more often their closest leaders in example the group leaders, although it rarely happens that employees bring suggestions or ideas to the management.

From the CEO’s point of view, the management do affect the work environment in a good way. However, the mood in the SME company is affected by the company’s results. What they are working with, and if they are up to speed or not. They are in other words affected by the status in the factory. They are not so big, and people know each other well. The results of the company, affect the management, which again affect the employees. The CEO says: “So we try to be unnecessarily positive when it goes bad, and equivalent to pull down a bit when it goes well. Often it is like that with us service producers, that it does not need to be us who are very good, but that it is our customers who have succeeded. We don’t need to be good. It's a bit like Eggen, the Norwegian football trainer’s philosophy; he scolded never when it had gone badly, but he was pissed off when they won 6-0. In this moment the players could receive the critique, because they had it quite okay.”

For the SME company to facilitate for the individual to work creatively, they work with objectives. The CEO explains that the company is not characterized by large future vision and strategic plans. It is up to the individual to solve the task they have been given. The employees have freedom to choose the method they want to use to reach the target.

4.4 Case studies summarized

The three different cases have now been presented in different sub chapters. In Table 1 below, the case descriptions have been summarized and arranged in the same categories, and provides a structural overview of the cases.

Themes	Immature startup	Mature startup	SME company
Knowledge and expertise	Only core knowledge. Relies on their network. Low budget. High focus on learning.	Young people involved. Only core knowledge. Dependent on the individual's competence. Broad competence, and not expertise. Unclear and undefined job tasks. Go to courses when needed. Employees define their own job tasks.	Rarely participating on courses to increase competence. A need for expertise. Rigid work processes. Education of employees have been underestimated.
Motivation	Social happenings together. Everyone will have shares in the company. Gives each other feedback. Personal relationships. No bonuses, uses positive customer feedback as the motivational factor. Self directed employees.	Employees can buy stocks. CEO knows employees well. Crowdfunding got employees more involved. CEO acknowledge employees externally. Celebrates quite often. High individual responsibility. Self directed employees.	CEO gives employees task that he hopes stimulate job satisfaction. Have bonus systems (but is tricky for the CEO). Focus on values. Celebrate the small things during bad times. The employees do not own stocks.

<p>Organizational innovation</p>	<p>No concrete initiatives. Without a finished product innovation is the only thing they do. Customer-driven innovation in focus.</p>	<p>Constantly creative. Discuss and sketch the ideas immediately. Asks critical questions. Innovating in every aspect of the company. Responsible and self-directed employees. Everyone involved.</p>	<p>Offers products that customers are requesting. CEO wants more suggestions from employees. Employees focus on others mistakes rather than opportunities.</p>
<p>Constraints</p>	<p>Time and money is the largest constraints. The lack of money slows down the product development. They are not considered solely negative, as this has forced them to minimize their costs.</p>	<p>Cannot afford failing a lot. The lack of money force them to spend more time on solutions, in order to cut the costs. See constraints as positive also, as they have been forced to find creative, cheap solutions. Gets motivated by overcoming constraints.</p>	<p>Hard times because of the oil price. They are using several floors today, something the CEO looks upon as a constraint. Bad environment considered a constraint.</p>
<p>Communication</p>	<p>Informal, concise and efficient is how they describe their communication. Efficient communication is one of their core values.</p>	<p>Internal communication is messy. Always small interruptions. Change of plans from day to day. Not structured and no system is set. Employees including CEO work close and rarely reports to CEO. Wish to be less personal and more professional.</p>	<p>Implemented reporting systems in the company, but struggles to get the employees to use it correctly. Reporting in every management meeting. Focus on producing things correctly, as it minimizes communication with the customers.</p>

<p>Environment and climate</p>	<p>Have not experienced any structural change. Highly satisfied with their environment and climate now. A climate where everyone is heard.</p>	<p>From informal student company to formal company with employees. CEO wants to talk about issues when they occur. Appraisals and questionnaires used.</p>	<p>Different owners has both been positive and negative. Use questionnaires internal and external to validate how they think they perform versus the customer perceived. Rejoice of other mistakes “pollutes” the environment.</p>
<p>The role of the management</p>	<p>Does not have a management, nor a formal reporting system. CEO is often the initiator and the one who takes care of the administrative work. Everyone is updated at the same time, when things are happening.</p>	<p>The CEO is good at pushing the employees to work hard and reach their goals, something that has been perceived as both positive and negative. CEO find it difficult to both be the leader and “at the floor”.</p>	<p>Top-down approach, but management is considered positive among the employee. Gives positive feedback when things are going bad, and saves the negative until it is going good.</p>

Table 1: Case studies summarized

In the following chapter 5, findings that emerged from these three case studies are being presented.

5. Findings and analysis

This chapter presents the findings that emerged from the data that was acquired from three different organizations; the immature startup, mature startup and the SME company. The SME company will interchangeably be referred to as “the company” and “SME company”. The findings in the different organizations are being compared to each other, and also analyses in the light of the theoretical framework presented in chapter 3. The findings are presented in each of the different levels of creativity; individual, organizational and environmental. At the end of the chapter a table is presented with an overview of the findings, and the RQs are being answered to.

5.1 Findings regarding individual creativity

5.1.1 Ownership through shares promotes extrinsic and intrinsic motivation

In both of the startups, the employees are given the opportunity to either buy or being paid for their work in shares. By offering employees shares in the mature startup if they perform well, the CEO triggers the employees’ extrinsic motivation. Extrinsic motivation appears when people are doing something in order to attain a reward or avoid a punishment (Ryan & Deci, 2000; Amabile, 1996). On the contrary, the SME company uses a bonus system, instead of offering shares to the employees, which is also characterized as extrinsic motivation.

When giving the employees shares in the mature startup, the employees will benefit from it economically if the organization increases in value, and if it fails, they will be punished by losing their invested time and money. In regards of the punishment, the employees and CEOs in both the immature and mature startup knows that they have to perform their best and contribute to achieve progress in their companies. If not, they will be left without a job. The risk of losing their job is more distanced among the employees in the SME company, as the company has existed for almost three decades. The SME company use a bonus system in order to motivate their employees to perform better. By excelling a task, they will be awarded. This is according to Ryan & Deci (2000) and Amabile (1996), referred to as extrinsic motivation. However, the CEO admits that they struggle to provide fair bonuses. Both the CEO and employee in the SME company admits that their reward system does not have the desired effect,

as there are external factors they can not control: “If the purchasing department does a really good job one year and saves 15%, the employees there could still risk to not get a bonus as the currency had increased with 20%”.

It is important for everyone running a business with employees, to uncover what motivates their employees. According to Amabile (1983; 1997), motivation is one of three components that has to be present to achieve individual creativity. It is crucial for organizations to have motivated employees, as it is impossible for a company to be creative without creative individuals (Glynn, 1996). Both the startups are successfully using ownership as a strong factor to promote their employees’ extrinsic motivation, as it creates a commitment among the employees. Ownership through shares proved to be a strong promoter of motivation, which in turn is essential for the individual creativity (Amabile, 1996; Barron & Harrington, 1981; Cummings & Oldham, 1996). Extrinsic motivation is often used in larger companies, but almost only in terms of bonuses and never ownership. It can even turn out more negative than positive if it is done wrong or unfair, according to the CEO of the SME company. According to Amabile (1996), the intrinsic motivation differs from the extrinsic, by focusing on passion, enjoyment or interests rather than rewards or penalties, and the SME company seem to trigger only the extrinsic motivation among their employees.

Although owning stocks in a company can be seen as extrinsic motivation, it is evident that it creates a nerve among the employees in startups that can not be found among the employees in the SME company, as there are more risk and more rewards attached through ownership by shares. As there is a reason why the employees invested their own money in shares, they must first have an intention of succeeding with their startup, as well as a strong belief in what they are doing. Their motivation came therefore likely internally in the first place, which means it is also intrinsic motivation tied to the ownership for those involved in the startups. A motivation that cannot be found among employees in the SME company.

5.1.2 Commitment increase involvement in the organization

Owning shares in a business can be seen as a way into creating involvement among the employees, as explained in the previous paragraph. Because when employees are owning shares, they become more committed to the startups, which makes them more contributing. In addition to this, the mature startup has a unique factor, as they have been through a

crowdfunding where, among others, friends and families of the employees bought stocks. This has increased the involvement of the employees in the startup, as the employees are more responsible for the outcome of the business. It is triggering both their intrinsic and extrinsic motivation. As they are administering money from friends and family that believe in them, they now have a deeper commitment to undertake the most important task: to succeed with their startup in order to increase the value of the invested money. In other words, they do have an external factor that keep their employees more committed and involved in the company, as there is more risk involved. On the other hand, the SME company does not operate with ownership, shares or crowdfunding. The employees there are committed to the job in terms of being a regular employee.

Crowdfunding is one of the more important success factors for the mature startup, as it appears to trigger the intrinsic motivation as well, which is further considered as one of the most important aspects of individual creativity. It is considered as more important than extrinsic motivation (Amabile, 1996; Barron & Harrington, 1981; Cummings & Oldham, 1996). The employees in the mature startup believe in the product they are developing, and invite external people to join them in their aim towards success. If they did not believe in themselves and what they are doing, they would probably rather have aimed for a permanent and safe job position. According to Amabile (1996), intrinsic motivation includes two elements: the employees' attitude towards the tasks and their perception of why they are doing the task. The employees in the mature startup know why they are doing what they are doing; they think they are covering a need in the market with their product and they can potentially create success. And they know that they are the only one who ensures that the product will function well and be ready for mass production, which makes their attitude positive and solution-oriented.

The SME company does not create the ownership feeling in the same way as startups. The company had an intention of creating involvement when creating the core values and vision of the company. All of the employees did participate on equal terms as the management. This did according to the CEO and employee trigger an ownership feeling among them all. By involving the employees, the SME company could have triggered the intrinsic motivation, as they work accordingly to their vision. However, as neither the CEO or employee remembered the different core values during the interview, the effect of them is under doubt.

Involvement in a business can be created in different ways, in example through ownership, including friends and family, letting employees participate in creating core values for the company, asking employees for suggestions or delegating responsibility to the employees. The commitment of the employees to the organization are making them more involved, which again likely get employees to contribute more. Because whenever the organization meets a challenge, the involved employees know that no one else is going to find solutions to the problems they are facing, which almost force them to be creative in order to solve the problems.

5.1.3 The frequency of new ideas varies widely in the different companies

The immature and mature startup is characterized by employees and CEOs that continually comes up with new ideas. This is sort of behavior is almost entirely absent in the SME company, but the management wants their employees to be more self directed.

When a new idea is proposed in the mature startup, it is discussed and sketched immediately. If it is not evaluated further, the employees store it mentally for possibly later use. The mature startup does have self-motivated employees, because they are suggesting ideas and solutions without being asked for it, as well as working long days with lower salaries than similar job positions in more established firms. Self-motivation is one of the qualities Amabile (1988) discovered that creative individuals has, thus the employees in the mature startup do have qualities that qualify for calling them creative.

The SME company's employees do on the other hand have rigid work tasks and they do basically work after recipes. The products they are making need to be made in specific way and have a defined result. This does not open up for suggestions regarding new ways to make products or new creative solutions to the product. Not coming up with new ideas is not sustainable in the longer run, as the only reason organizations exist is to provide the society with solutions for their needs and problems (Hitt, 1975). This work practice does not promote an interest for thinking new, as there are nothing to achieve by presenting new ideas or suggestions. Barron and Harrington (1981) highlighted that one need in some degree to be independent and self-disciplined to think creative. But creative thinking is not necessary for excelling the work tasks in the SME company, thus not highly valued by the management. The curious questions is rather asked by the management towards the employees. This stands in

contrast to the mature startup, where the employees ask critical questions towards what they are working with.

5.1.4 Startups seems to attract more self directed employees

The need for self-directed and responsible employees are qualities every organization need, but were found mainly at the startup companies. According to the CEO of the SME company, most of their employees were characterized by being satisfied if things stayed the way they always had been.

Every company, no matter the size, exists in order to serve continuously changing demands in one or several markets (Cabra & Puccio 2010; Caniëls & Rietzchel, 2015; Woodman et al. 1993). To be able to achieve this, companies need to stay ahead, adjust, re-orientate and innovate (ibid). The management in the SME company seems too distanced from the production or product development, and the employees do not seem to appreciate initiatives from other employees. Innovation is difficult without the presence of independent and self-directed employees, especially when the management is distanced from the production. In the immature and mature startup, the management often works together with the other employees “on the floor”, and the employees are in general characterized by responsible and self-directed employees.

The management in the SME company do wish for more suggestions from their employees. They try to use people where they have capabilities, although the CEO admits that it is hard to catch up on every individual's skills and fully exploit them. This appears to be much easier in the startups, as the employees takes initiatives themselves. The CEO of the company does admit that it is a certain type of people that applies for the jobs they are offering: “I don't think those who work in the production are especially visionary, or creative for that matter. The average age is also quite high, so there will come a generational change in some years”. Amabile (1988) discovered 10 qualities creative individuals had. Among them, it is especially interesting to highlight: self-motivation, diverse experience, special cognitive abilities and risk orientation. All of these, appeared during the interviews to be highly present in the startups, but almost absent among the employees in the SME company. However, expertise in the area were also one of the 10, which the employees in the company clearly had the most of.

It is clear from the findings that startups attract or hire more self-driven employees than more established organizations. More established and traditional organizations can seem to be more appealing for a type of people that values job safety higher than autonomy.

5.1.5 Knowledge forms the basis of creative work

The startups do not express a need for expertise, in contrast to the SME company. The SME company, however, do need products that has an already defined results, and are dependent on expertise. According to our findings, expertise is not needed to produce creative work. The importance of interdisciplinary is larger in startups, where a combination of the knowledge that the different employees holds create a result where the sum is greater than the parts.

The employees in the immature startup has been absolutely certain that they are working in a startup to learn and to acquire knowledge. The employees in the mature startup participates at courses whenever they experience a need for it. They are also learning new things all the time, according to themselves, as they are inventing a new type of machine with little experience from similar processes. Everyone needs to contribute with their skills, as well as solving problems outside their original area of competence. In the company, the employees are rarely participating at courses to increase their competence and the education of employees has not been prioritized. However, as the employees have specific and narrow areas of responsibilities and they do become experts within their area.

Amabile (1996; 1998) claims that all creative work needs expertise, in the matter of technical and intellectual knowledge, as a foundation. However, in the empirical data, there are some differences regarding the employee's competence. The immature startup do have basic knowledge, and no expertise, but do creative work all the time when they are inventing a new type of product. Although, they are looking for a new employee with more knowledge to help them with the product development, as they do not have the needed knowledge themselves. This need for competence and knowledge is underpinned by Woodman et al. (1993), as he claims no creative behavior can be conceived that is "free of knowledge". The involved in the immature startup are quite inexperienced, compared to employees in the mature startup and SME company that has existed for a while. The mature startup does also lack expertise, but has a broad knowledge within their areas of responsibility instead. This finding is more aligned

with Woodman et al. (1993), as he highlighted the importance of knowledge more than expertise.

In order to achieve a organizational creativity, it has to be valuable and useful new products or services (Woodman et al, 1993). Without some sort of knowledge or experience it is more difficult, if not impossible, to create something valuable and useful. The younger the company is in this study, the less knowledge or expertise they have internally. However, the sample of cases is too small to generalize. The mature startup does not consider themselves as experts, but they have significantly more knowledge than the immature startup. The SME company has clearly the most expertise of the interviewed companies, but are the same time the one that struggles the most with their creative work.

The immature startup experience problems with the lack of employees with relevant work experience. However, neither them or the mature startup wants employees that are experts within specific fields. For them it is more important with broad knowledge than with experts. It can therefore appear that companies need some level of knowledge, as the outcome of their work has to be useful for their customers, but they do not necessarily need experts. In a startup, lots of different problems need to be solved, which makes it necessary with flexible and broad knowledge among employees. According to Amabile (1996), all creative work needs expertise, but Kratzer et al. (2004) does not agree with Amabile, and states that certain personality traits are more important than expertise, as he see creativity as an individual characteristic.

5.1.6 Summary of the individual creativity

Both of the startups have done several actions, consciously and unconsciously, in order to increase the individual creativity among their employees. The mature startup increased their commitment among their employees through a crowdfunding, where their friends and families could buy shares in the company. This did especially affect the employee's intrinsic motivation - the most efficient type of motivation that few companies manage to foster.

Both of the startups were characterized by a frequent idea generation from their employees, and by having self directed employees. This was almost completely absent in the SME company, mostly linked to their rigid work tasks and the clear outcome that is expected. The SME company did also lack self directed employees, which the employees' startups were

characterized by. Furthermore, the SME company were the only one amongst the three that had expertise. However, the mature startup has employees with more broad knowledge, something the immature startup were looking for in a new employee. Neither of the startups wanted experts within some fields, as broad knowledge was considered more valuable.

5.2 Findings regarding the creative environment

5.2.1 Hierarchy prevents employee-driven creativity

The hierarchy within the different organizations vary from a relatively flat structure to a relatively steep structure. Both of the startups can be seen as relatively flat structures with employee-driven innovation, whereas the company is characterized by a top-down approach with little or no initiatives from the employees.

In the immature startup, the structure is relatively flat and consensus determines final decisions. The mature startup does also have a relatively flat structure, but their CEO have a bit more extensive responsibility than the CEO of the immature startup as he is both the leader with responsibility for acquiring capital and an employee that work together with the other employees with the product development. However, this does not apply to the SME company. As it is the CEO or the management that makes the decisions, their structure is quite steep. The employees do defined tasks when developing new products, working towards clearly defined results. This is according to the employee, necessary in order to make the products that customers are requesting. According to Amabile et al. (2005), leadership is the one factor that will affect the work environment the most, through the way managers lead and evaluate others work, facilitate or delegate the access to resources and information. The CEO in the company wishes for a more bottom-up approach, as he wants more suggestions from the employees. However, he has not succeeded in doing so; “The management are doing too much of the thinking. It is not a good business model to pay for 50 employees, but only 15 get the minds of 15 employees. Most of the employees have been around here for a long time, and it takes time get rid of the traditions that has been here”.

The CEO of the SME company consider it his responsibility to make the employees more creative. This is aligned with Amabile (1998) and Cummings and Oldham (1997), as they highlight managers as those who design and establish a creative environment that best fits the

employees. On the other hand, the immature startup does not see the importance of a clear leader, and are more aligned with Bedell et al. (2007) theory, that does not consider leadership as an important influence on creativity in the work environment. This theory leaves it up to the employees to be creative, similar to what has been found in both of the startups.

The two startups have a relatively flat structure, compared with the SME company. This appears to have a high impact on their employees and their eagerness to continuously innovate and be creative on their own initiative. The company has a top-down approach, which seems to have had a negative impact on the employee's autonomy.

5.2.2 Close relationship evolves to personal relationship within the startup

The immature startup has three people involved, and the three of them have developed close relationships during the time they have spend together. They also knew each other from before they started the startup. In the mature startup, they are only four people involved, who works at the same product, located in the same office. Thus the conditions are adapted for personal relationships between the employees. The CEO in the mature startup describes the communication between employees as personal.

All of the involved in both of the startups do know each other on a personal level and both of the startups are characterized by having just a small number of people involved. The company lacks this kind of close relations between the employees. They are many employees, around 50, and not very close to each other. However, it is not as easy to create personal relationships among employees in a company with 50 employees compared with a startup with significantly fewer employees.

5.2.3 Personal relationships between employees creates a safe climate

It is found a negative climate in the SME company, that especially affects “new-thinkers”. People who comes up with new ideas receives positive attention from the management, but negative reactions from the other employees, which is uncomfortable for the persons with new ideas. The relationship between the employees are not very close, and they do not seem to have a safe environment where one feels free to express ideas or take risks. The number of employees might be preventing the development of close relationships among the employees.

In the immature startup they have had a focus on having fun while working, in addition to give each other feedback occasionally. Giving each other feedback may contribute to creating the startup to be a safer environment to be and work in, because they get to know each other on a deeper level. The mature startup does also have what can be considered a safe environment, as all of the employees comes up with suggestions, where every new idea is being considered.

The climate in the company stands in contrast to the climate in the two startups. Because in the SME company there is not found a safe climate based on personal relationships where the employees trust in each other, and have courage to share own ideas. The smaller businesses make it possible for the people involved to get to know each other on a personal level, which contributes to creating a climate of trust where one can express ideas without receiving sanctions from the others. An advantage of working as close as they do in the startups is that the employees do know each other strengths and weaknesses.

5.2.4 An experience of a safe workplace contributes to a creative environment

There is a variety of variables in the environment that is said to influence creativity and innovation, according to Bedell et al. (2007) and the climate in an organizational environment is stressed by a lot of scholars (West, 2002). The climate in the two startups can be characterized as safe and trustful. Giroux and Lapierre (2003) highlights the importance of climate in the matter of how free employees feel to express ideas or take risks. This is especially prominent in the immature startup, where the internal climate is described as a place where they dare to suggest new “idiotic” things. The SME company is considered to not have a safe climate within the organization.

The safe climate in the two startups seem to foster a creative environment. In the mature and immature startup, it is often suggested new ideas and solutions, which possible will turn out to something good after a while. If the employees do not trust their colleagues to come up with such ideas, the creative processes will never start, and new inventions will not take place. This is the case in the SME company. Both the employee and CEO acknowledged that their climate has evolved more around the rejoice of others failure, rather than doing it best together. There is a focus on mistakes rather than opportunities among the employees. This implies that few of the employees not bother trying new things with potential, as it also involves a high risk of

failing. The SME company struggles with both of the core questions Giroux and Lapierre (2003) asks about the climate: “do employees feel free to express ideas to their bosses?” and “are people afraid to take risks around here?”.

It is necessary for an organization to have a creative environment, in order to foster creativity (Amabile et al, 1996), thus the importance of having a creative environment is prominent. Smaller organizations, especially startups, are known for being good at fostering a creative environment (Solomon, 2010), which corresponds to the findings in the gathered empirical data.

5.2.5 Summary of environmental creativity

The flat structure in the two startups appear to have a high impact on their employees and their eagerness to continuously innovate and be creative on their own initiative. In contrast, the company has a top-down approach, which seems to have had a negative impact on the employee's autonomy. The climate in the two startups can be characterized as safe and trustful. The smaller organizations make it possible for the people involved to get to know each other on a personal level. This contributes to a climate of trust where one can express ideas without receiving sanctions, which leads to more creativity. The climate in the SME company stands in contrast to the climate in the two startups, as there is a focus on mistakes rather than cooperating towards success.

5.3 Findings regarding organizational creativity

5.3.1 Constraints can stimulate creativity if they are dealt with in the right way

It seems difficult to avoid constraints in a company no matter the size and age, as all of the interviewed companies are facing constraints. However, none of the organizations struggles with the same constraints, and the mature startup has even turned them into something positive.

Constraints can create barriers and make it impossible to fully exploit the organizational creativity that their employees possess (Amabile et al., 2005; Caniëls & Rietzchel, 2015). Constraints can take shape in example lack of money, restricted time or lack of right competence. The immature startup struggles with the lack of funding. This leads to processes

that are taking a long time, as they cannot test different solutions at the same time due to the costs. And the employees are prevented from exploiting their own creativity as they lack some of the knowledge that needs to be in place to fully develop their product. According to Hlavacek and Thompson (1973), time and money is one of the most common forms the organizational constraints takes place in.

The mature startup has some of the similar constraints, as they have not sold any large number of their products yet. They are getting a little frustrated by the constraints, as time and money are their largest enemies, according to the CEO. However, they have a broad knowledge and a positive attitude towards the constraints. Because of the knowledge and attitude, they are able to find cheap and creative solutions to complex problems. A bad starting point makes it even cooler to reach success, is the CEO's perception of constraints; "I think that it is a bit of motivation. That you feel that you have the whole world against you, but you are still more motivated to work for what you believe in." This is highly aligned with the recent research from Caniëls and Rietzchel (2015), as they have found evidence that constraints reduced the complexity of the task or problem for the employee. Further, they found evidence that constraints stimulate creativity more than it oppress it (ibid). The mature startup has in fact started to use the constraints as motivation, as it is a victory every time they overcome a problem with the product.

The SME company does not admit to have any larger constraints in their company. However, it can seem that their working environment is a large constraint, as it is not "accepted" among the employees if one of them comes up with a suggestion or a new idea. This has enforced their existing top-down approach, as few of the employees comes up with suggestions to changes. The bureaucracy, that is present in the SME company, has been highlighted as one of the constraints that suppresses the organizational creativity (Hlavacek & Thompson, 1973). Another minor constraint that is found is how they have structured their location. The management is located on the second floor, and the employees on the first floor. This can higher the barrier for communication between the different departments.

The literature sees constraints as something that can both stimulate and suppress creativity. Caniëls and Rietzchel (2015) have found that constraints can stimulate creativity, and Hlavacek & Thompson (1973) sees it exclusively negatively. The mature startup is an example of an organization that uses the constraints for their own advantage, by using them as

motivational factors. The possibility of seeing constraints as positive can be seen in the light of the type of the business. Caniëls and Rietzschel (2015) found that especially design constraints can be seen taken positively, which shows that different constraints accommodate different possibilities. The findings show that the internal knowledge and the way constraints are seen and dealt with, affects how an organization are affected by the constraints. This will also influence whether the organization see the constraints exclusively as problems or also as possibilities.

5.3.2 Creativity is the first step towards new innovations

In the mature startup, the employees are “constantly creative”, as they are inventing something completely new. They are also characterized by being eager to find new solutions whenever needed, despite their constraints in regards of money and time. Both of the startups have employees that works continuously together towards inventing new solutions. The SME company does not have the same eagerness to continuously innovate and be “constantly creative” as the two startups.

The employees in the immature startup are often testing the product with pilot customers to ensure their product fits their needs. This is highlighted by Woodman et al. (1993)’s in his definition of organizational creativity; “when an organization invent valuable products”, which again comes not only from overall firm strategy, but also from the individual employees, that alone or together produce the work of the organizations (Amabile et al, 2005). The mature startup has employees working together towards inventing new solutions, thus fits well into the definition of organizational creativity. There is a high level of responsibility for all the employees, and all of them are dedicated workers, and quite equally involved in the company. The employees’ motivation has always been a key factor for managers, as motivated employees are more productive and creative (Amabile, 1993). In the immature startup there is an eagerness from the employees and CEO to innovate and solve problems. The innovation they are doing is customer-driven, as they consult the company’s that are potential customers and identify the needs which they use as input in their product development.

The SME company have existed for a long time, and have become specialists at what they are doing. However, if they are not innovating or improving over time, they will not survive in today's competitive environment (Flynn et al, 2003). An organization's ability to grow depends

on their ability to generate creative ideas and use them to benefit in the long term (ibid). The SME company will therefore not face problems with their lacking innovation with this right away, but in the long term the consequences will be current. The management agreed with this, they need to keep up with the market, and do necessary internal changes to stay profitable. The employee was very positive towards the advent of robots in the production area.

The immature startup will struggle almost immediately if they are not “constantly creative”, as they do not have any solution they can sell. This is slightly different in the mature startup, as they are now selling their product. However, they are still improving the product, so the need for creativity is still present. The CEO underlined that he feels they were creative besides the product development also. Every part of the business needs to develop for the startup to survive, he says. “In example the sales contract has evolved from 1 page to 12 pages, as they need to be smarter when they sell.”

5.3.3 Summary of organizational creativity

Within the organizational creativity, there has mainly been two findings; constraints can be both negative and positive as found in the literature, and the need and eagerness to be “constantly creative” varies much in the different companies. The literature was looking upon constraints as something exclusively negative (Amabile et al. 2005; Hlavacek & Thompson, 1973) or positive (Caniëls & Rietzchel, 2015). This inequality is also reflected in the interviewed companies, as the mature startup used constraints to foster motivation, but the immature startup and the SME company considered their constraints as exclusively negative. The eagerness to continuously innovate was clearly the highest in the immature startup, mostly because they do not have a finished product they can sell yet. The continuous innovation is important, as every organization's ability to survive and improve over time, stems from the organizational creativity that leads to new innovations (Flynn et al, 2003). The mature company keeps on innovating, but they have become more selective in which ideas they are implementing immediately. Apart from what the management comes up with, the SME company does not have any ideas from their employees.

5.4 Overview of findings

The following Table 2 presents an overview of the initial findings that emerged from the case studies. The findings are presented in the column to the left. Further there is a column for each of the organizations that describes how the findings are current in each of them.

	Findings	Immature startup	Mature startup	SME Company
I N D I V I D U A L C R E A T I V I T Y	Ownership through shares promotes extrinsic and intrinsic motivation	Shared ownership between employees and new team members.	Employees owns shares.	Employees do not own shares, but can be rewarded with bonuses.
	Commitment increase involvement in the organization	Employees will own shares when the company is established. Committed by interest.	Family and friends involved through shares in the company. Employees highly involved. High commitment	None of the employees own shares in the company. Commitment in terms of being a regular employee.
	The frequency of new ideas varies widely in the different companies	Employees continuously suggest ideas.	New ideas are highly valued and taken into consideration.	Negative culture towards proposing ideas and suggestions. Few suggestions from the employees. Employees have rigid work tasks.
	Startups seems to attract more self directed employees	Self-directed employees that often take initiatives.	Responsible and self-directed employees. Self-motivated.	Not self directed employees. Have clear work tasks.

	Knowledge forms the basis of creative work	Employees do not have expertise, but some relevant experience. Learning focus.	Employees do not have expertise, but a broad competence.	Small responsible areas with high expertise.
E N V I R O N M E N T A L	Hierarchy prevents employee-driven creativity	Completely flat structure. Consensus determines decisions.	Relatively flat structure. Difficult for CEO, as the roles can be mixed.	Relatively steep structure. Top-down approach between management and employees. The management do not get new ideas from their employees.
	Close relationship evolves to personal relationship within the startup	Employees know each other on a personal level, and know what their strengths are.	Personal communication. Employees know each other quite well. Are working close to each other.	Employees does not appear to be especially very close to each other.
	Personal relationships between employees creates a safe climate	Gives each other feedback. Fun while working. Safe climate.	All suggestions are welcome, and every new idea is considered. Safe climate.	A negative culture towards "new-thinkers". Employees not free to express ideas. Not safe climate.

	An experience of a safe workplace contributes to a creative environment	Employees dare to suggest new “idiotic” things”, which can lead to new solutions.	Ideas that are expressed often contribute to new solutions.	Tendency to focus on mistakes rather than opportunities among employees. Few initiatives from employees.
O R G A N I Z A T I O N A L	Constraints can stimulate creativity if they are used right	Constrained by time and money. Consider them mostly as negative.	Use constraints as motivation. Forced to find creative solutions to complex problems.	Their lack of a working environment appear to be a large constraint.
	Creativity is the first step towards new innovations	Constantly coming up with new ideas, as their product is not finished.	Constantly creative. More and more ideas needs to be put aside temporarily.	The management do not see the employees as creative.

Table 2: Overview of findings

5.5 Answers to RQ’s

In the following sub chapters, the three RQ’s are answered based on the initial findings recently presented.

5.5.1 How is the organizational structure affecting creative individuals?

Based on the cross-section of organizations that this study has examined, the findings may indicate that the steeper organizational structure, the less creativity in the organization. The relatively flat structure that is found in the two startups gives each employee more responsibility. This responsibility makes the employees more self-directed, and it appear to affect the individual employees to be more creative, as well as a hierarchy in the company is

preventing the employees to perform creatively. A flat organizational structure promotes individual motivation which is a premise for individual creativity.

The employees in both of the startups are characterized by having a lot of responsibility within their respective fields of the company. The CEOs in the startups, consider themselves not able to know the best solution in the different areas of the company, except on a strategic level. They are therefore empowering their employees by giving them more responsibility, to both increase the employees' motivation and ensure that the best decisions are taken. The relatively flat structure has given the employees more responsibility and made them more self-directed. Both of the startups let their employees own shares in the company, which has made them more committed in their work. Self directed and committed employees are important, as a company's most important asset is creative capital: the arsenal of creative thinkers who turns ideas into valuable products or services (Florida & Goodnight, 2007). Employees in both of the startups are characterized as "doers", and consider themselves as "constantly creative". They are not waiting for someone to tell them what to do. If they see problems, they fix them immediately, unlike what is found in the SME company.

The SME company has a relatively steep structure between employees and the management. This hierarchy has led to employees with rigid work tasks, that are awaiting new orders when finished with one task. Most of the management in the company are also having their offices in another floor, something the CEO in the SME company fears enforcing the perception of a steep hierarchy. The management in the SME company have tried different actions, but employees only ended up with negative attention from their colleagues. This is quite critical for the company, as organizational creativity happens when they invent valuable products, which again comes not only from overall firm strategy, but also from the individual employees, that alone or together produce the work of the organizations (Amabile et al, 2005; Woodman et al., 1993).

The situation in the two startups is completely different. Their relatively flat structure, appears to have fostered an eagerness among the employees to continuously innovate and be creative on their own initiative. Another finding, is that the CEOs in the startups are physically working "among" the employees, often with the same type of working tasks as the other. This happens often in startups, as they cannot afford having a CEO that only works with administrative work. However, the consequence of this is that the employees will perceive a lower threshold to

suggest new things for the CEO, as he is often working “beside” them on the same things. The CEO will also understand more what is happening “on the floor”, and can therefore make better decisions on an overarching strategic level.

It appears that the flat organizational structure that is found in both of the startups, gives their employees more responsibility. By empowering their employees, they have become more self directed, which lead to more initiative and suggestions by them. The SME company struggles with a steep hierarchy, in addition to a lack of self directed employees. This has deeply affected the organizational creativity in the company. However, it is not believed that the employees in the SME company will start being self directed and creative by giving them more responsibilities. There need to be a motivation among each employee to be creative as well, in order for a company to exploit the creativity among employees. An organizational structure that are promoting inner motivation is rather flat, than steep. This is mostly because when employees get empowered, they become more self directed and led by their own motivation, which is a premise for individual creativity.

5.5.2 How are constraints affecting creativity in an organization?

The findings show that the level of knowledge among the employees in an organization seem to be crucial when it comes to how one can handle the constraints that the organization are facing. Constraints can slow down processes significantly if an organization are not able to overcome the constraints, in example in an early stage startup with inexperienced employees. On the contrary, constraints can cause better and more cost efficient products for an organization, as the they force employees to find simple solutions on complex problems. However, being able to handle the constraints are dependent on the organization having enough resources in the form of knowledge and competence, like people with various background, so that complex solutions can be found by interdisciplinary cooperation. When being able to overcome constraints, it is found to be motivating for employees. This is further fostering their individual creativity.

The immature startup is struggling with the progress in their product development, because they are lacking the knowledge to test their solutions fully. They are dependent on buying knowledge and expertise externally, and are therefore restricted by both money and their own capacities. The lack of knowledge makes it more difficult, if not impossible, to overcome their constraints. They consider their constraints as exclusively negative, mostly because it is slowing down their

development considerably. Constraints can often be created by the companies themselves, in terms of bureaucracy or hierarchy, but it can also be other factors as time and money (Hlavacek & Thompson, 1973). Their constraints dampen their individual creativity significantly, as the employees do not have the necessary knowledge or competence to overcome them.

On the contrary, constraints have also been found as a promoter of individual creativity. The mature startup does have a certain level of knowledge that makes them capable of overcoming the constraints they meet. By having constraints on an organizational level, the employees are forced to find simple solutions to complex problems. All of the employees do have their own specialization by education, but are at the same time skilled enough to take on a wide range of tasks. The result for the mature startup is that they are producing simpler, but still functional solutions because of their constraints. The mature startup has managed to turn the constraints into something positive. The handling of constraints in itself is serving as a motivational factor in the mature startup, as the employees consider every obstacle they have overcome as a victory, according to the CEO. Motivation has been an important factor for managers for a long time, as motivated employees are more productive and creative in their work (Amabile, 1993).

The literature disagreed whether constraints in an organization were exclusively negative (Hlavacek and Thompson, 1973) or if they could be positive as well (Caniëls and Rietzschel, 2015). The empirical data showed that the mature startups are the only business that manage to handle their constraints as something positive. In the company, the situation is different; many of the employees might have the expertise, but do not have any personal motives or interest to make an extra effort in order to overcome an eventual constraint. They are lacking individual motivation.

5.5.3 How can organizations foster a creative environment?

It is found that a safe climate is the most prominent factor an organization has to focus on, in order to foster a creative environment. The smallest organization in the study seems to have more personal relationships which are contributing to a safe and trustful climate in the organization. This climate opens the window for employees to participate and share opinions, suggestions and new solutions, which is a necessary contribution from employees in order to produce organizational creativity.

The two startups consist of employees that are close to each other. This leads to personal relationships where there is room for discussing things that comes up, whether it is personal matters or business related. An advantage of knowing each other among the employees in the startups is that they do know each other strengths. The personal relationships that can be found in the startups contribute to creating a safe climate at the workplace. The employees in the immature startup have a focus on having fun while working together, and they give each other constructive feedback on their work, which likely increases trust and honesty among the employees. This safe climate is also described as highly motivating by the employees in the immature startup. Both of the startups are considered as having a safe climate.

A safe climate lowers the barriers between the employees, when it comes to suggesting new ideas or solutions to problems. The safe climate is further a highly important factor in order to maintain a creative environment (West, 2002). The internal climate in the immature startup is in example described as a place where they dare to suggest new “idiotic” things. In the mature and immature startup, it is often the “idiotic” ideas turn into great ideas once they work a bit with it. At the same time, it is found a negative climate in the SME company towards “new-thinkers”. People who comes up with new ideas receives positive attention from the management, but negative reactions from the other employees.

The suggestions and ideas from the employees are necessary for organizations to find more solutions to the problems that they meet. This climate for promoting ideas are promoting creativity. The mature startup had a profound motivation to create a new product. This motivation was a contributor to establish their creative environment. The creative environment contributes to utilizing the potential for creativity inside individual employees. This is crucial, as no organization can be creative without creative individuals (Glynn, 1996). The creative work environment that is found in the immature startup has also been a promoter of individual motivation. This connection between motivation and creative work environment is also found in Shalley et al. (2004) study, as they highlighted the work environment to be the strongest influencer of employees’ intrinsic motivation.

The current climate in the SME company is preventing creativity rather than promoting is, as it does not open up or stimulate employees to express ideas. If the employees do not trust their colleagues to come up with new ideas, the creativity will seldom occur. At the same time it

appears that the management in the SME company in the study were more or less unconscious whether their actions contributed to a positive environment or not.

In the immature startup, the creative work environment is found to be a promoter of individual motivation. The connection between motivation and creative work environment is also highlighted in the literature, as the work environment were proven to be the strongest influencer of employees' intrinsic motivation by Shalley et al. (2004).

This chapter have contained the initial findings from the case studies, as well as answers to the research questions that was introduced in the introductory chapter. In the next chapter, chapter 6, follows a discussion.

6. Discussion

This chapter contains an overview of contribution of key findings to previous literature. Further, it is discussed how the different levels of creativity are affecting the organizational creativity in the immature startup, the mature startup and the SME company.

6.1 The contribution of key findings to previous literature

In the following sub chapter, six contributions that have emerged from the research questions is elaborated.

6.1.1 Empowered employees are more creative

The organizational structure plays a central role in the organizational creativity and RQ1 is addressing what characterizes an organizational structure that promote creative individuals. A flat organizational structure, that is more common in startups, is found to empower employees. In our study, this empowerment is found to affect employees to contribute more and the motivation this is causing is contributing to employees' individual creativity. In the literature found regarding organizational structures, organizational structure and its affection on creativity has not received much focus.

According to the multiple social domain theory, any modern organization have creative talent within them, the challenge is just to have managers that are able to empower the employees to creative actions (Ford, 1996). Startups and smaller organizations are known for being more innovative than larger organizations (Acs & Audretsch, 1988; Christensen, 1997), and in this study, the smaller organizations do have an organizational structure that empowers their employees more.

One must, however, take into consideration that the interviewed SME company is a production company that need stable, routine working employees, and it needs to a certain degree a clear management practice and a strict structure to reach their deadlines. Still, the SME company need creativity and innovation to maintain competitiveness and have long-term success (Cummings & Oldham, 1997; Amabile, 1997). This means that fostering creative employees is needed, which can be done by lowering the organizational structure and empower the

employees, which likely will increase the generating of new creative ideas and more self directed employees.

6.1.2 Knowledge can be a necessity to handle constraints

RQ2 addresses how constraints are affecting creativity in organizations. The literature found previously handles internal constraints mostly in regards of bureaucracy and the lack of time and money (Amabile et al., 2005; Caniels & Rietzchel, 2015; Hlavacek & Thompson, 1973). In this study, knowledge as a resource has been found as a key contributor for organizations in order to overcome their constraints. Seeing knowledge as key contributor to overcoming constraints is not found in the literature. In the literature knowledge's role is tied to other factors.

The finding of knowledge's importance is different from the findings by Runco and Chand (1995), where their two-tier model found knowledge and motivation as less contributing to creativity, than problem finding, ideation and evaluation. However, the combination of knowledge and motivation found among employees in the mature startup fits well to Watts (2007) criteria for organizational creativity; it is most likely to occur when employees have high levels of each of the three components, knowledge, intrinsic motivation and creative thinking, and their skills overlap with their intrinsic interest, passion and skills.

Being able to overcome constraints have become especially important lately, as organizations are facing more constraints lately. An ongoing oil crisis and unfortunate currencies are just some of the changes on a macro level that creates more constraints for organizations currently (Andersen, 2015; Kongsnes, 2015; Loevaas, 2015). Organizations are however likely struggling with different types of constraints. Larger organizations are likely to have and recruit employees with high knowledge level and the right competences, but are still facing constraints that cannot be overcome by increasing in-house knowledge.

6.1.3 Constraints can increase individual motivation

RQ2 addresses how constraints are affecting creativity in organizations. One of the organizations investigated have been able to overcome constraints other organizations are struggling with. The employees in this organization, the mature startup, has earned a positive attitude towards the constraints, and a feeling of victory when they overcome constraints, which are causing an intrinsic motivation to master the constraints. Constraints can therefore play a

positive role in a startup and lead to creativity, if one has sufficient resources in terms of knowledge and competence, and the right mindset towards constraints. The importance of motivation in order to perform creative is previously highlighted by Watts (2007). The finding that constrain can serve as a motivational factor, which can be seen positively in this study, is aligned with Caniëls and Rietzschels (2015) research.

6.1.4 Constraints simplifies the end product

RQ2 concerns how constraints are affecting creativity in organizations. The mature startup are facing constraints mainly in regards of lack of money. This has in general made their solutions simpler and made them more creative in their problem solving. The lack of money force them to come up with more creative and less complicated solutions, even to the most complex problems. Caniëls and Rietzchel (2015) found in their recent study that constraints could also stimulate to creativity, not only oppress it. Their study showed that constraints reduced the complexity of the task or problem for the employee (ibid). This is highly aligned with the findings from the mature startup, as they admitted that more money would have led to more expensive solutions.

6.1.5 The size of the organization affects the creative environment

RQ3 asks how a company can foster a creative environment. The finding in RQ3 highlights the safe climate as a huge contributor to a creative work environment. This finding does match the literature that was found before the study was conducted, as a lot of scholars have stressed the importance of the climate in an organizational environment (West, 2002). It does also appear to be more difficult to create a safe climate, the more employees that are involved in a organization. The largest organization studied, struggles to foster a creative environment It appears from this study that the larger an organization is, the more difficult can it be to foster a creative environment. Not having a creative work environment appears to be a pervasive problem, because organizing for a creative work environment is considered as one of the most recurring challenges in organizations (Agogué et al, 2015).

Startups do often have to develop a new product or service without any income (Leslie & Longenecker, 2012), in contrast to larger organizations which often have a basis of products they sell. Thus startups feel the instant urge and need to act creative unlike larger organizations.

This may lead larger organizations to not work on fostering and also maintaining creative work environments as they are not experiencing a need for this in order to survive as a company. They will likely not experience the lack of a creative environment impact immediately. However, in the longer run, creativity is essential for organizations to survive (Egan, 2005; Giroux & Lapierre, 2003). Larger production companies, as the SME company interviewed in this study, may not experience that they do have creative employees, thus they settle with this truth. Although all employees have the ability to be creative, but the level and frequency of this is influenced by the work environment (Watt, 2007).

6.1.6 Individual motivation is interrelated to the creative work environment

The third RQ concerns how organizations can foster a creative work environment. In the immature startup, the creative work environment is found to be a promoter of individual motivation. The connection between motivation and creative work environment is also highlighted in the literature, as the work environment were proven to be the strongest influencer of employees' intrinsic motivation by Shalley et al. (2004). However, it was also discovered in the findings, that it could be the other way around as well. In the mature startup, the individual motivation was found to be a strong promoter of the creative work environment in the mature startup. The fact that the individual motivation and a creative work environment can mutually be affecting each other, is not discussed in the existing literature and unique for this master thesis.

6.2 How the different levels of creativity are affecting the organizational creativity

The following sub chapters discuss how the different levels of creativity are affecting the organizational creativity in each of the three organizations.

6.2.1 Immature startup

The immature startup has had a focus from the beginning to have personal relationships and do things that are not job related together. By having fun while working and knowing each other on a personal level, they have created a safe climate. Paragraph 5.2.3 and 5.2.4 highlight that a way to creating a safe climate is through personal relationships at the workplace. Having a

climate where everyone feels free to express their ideas and thoughts, no matter how “stupid” they are, are expressed as highly motivating by the startup. Motivation is again a central component of individual creativity (Amabile, 1983). This means that their safe climate has increased the employee’s individual motivation which again are fostering the employees’ individual creativity in the immature startup, as illustrated in Figure 3 below.

The immature startup started by focusing on a safe climate, which laid the foundation for the individual creativity among the employees. This individual level of creativity combined with a safe climate forms a creative work environment in the startup. In this way, the immature startup has overcome one of most recurring challenges in an organization; to organize for an creative environment (Agogu e et al., 2015). The immature startup managed to foster a functional creative work environment in addition to individual creativity, and therefore laid the foundation for organizational creativity, which is the result of creative outputs from individuals (Watt, 2007).

The safe climate in the immature startup has laid the foundation for a creative work environment. This is shown in arrow nr. 1. This has further promoted the employees’ individual creativity, as shown in arrow nr. 2 in the figure below, where the green color of the arrow reflects the positive impact the climate has on the individual creativity. Two of the arrows are marked as nr. 3. This shows that the immature startup has both the individual creativity and the creative work environment in place, and by this they have been able to foster creativity on an organizational level.

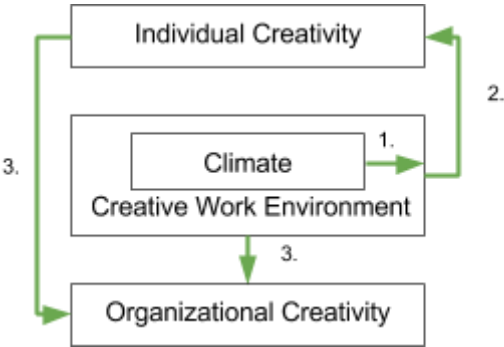


Figure 3: Creativity levels in the immature startup

6.2.2 Mature startup

Everyone in the mature startup has a clear understanding of why they are undertaking the tasks in the startup and they do have a positive attitude towards undertaking their tasks. This is two of the main components Amabile (1996) highlights as important for creating intrinsic motivation. In order to get the product finished, the employees in the mature startup have all been given a lot of responsibility from the CEO. The relatively flat organizational structure is empowering the employees, as elaborated in paragraph 5.5.1. A low organizational structure does also appear to have fostered the individual creativity among the employees, as they are able to be self directed.

The close cooperation during the product development has also led to deeper personal relationships, where everyone knows each other well. As it was discussed in paragraph 5.2.3 and 5.2.4, the personal relationships have led to a creative work environment through a safe climate that welcomes new ideas and suggestions. This is important for the mature startup, as organizational creativity stems from the creative outputs from individuals in the organization and its work environment (Watt, 2007). By having a shared motivation for developing the product, they have managed to organize a creative work environment, something that only a minority of organizations have managed (Agogu e et al, 2015).

The knowledge provides the mature startup with the possibility to overcome their constraints, as elaborated in Paragraph 5.3.1. The same paragraph does also discuss how the employees in the mature startup are able to not only overcome their constraints, but use them to enforce their individual motivation. The strong individual motivation in the mature startup has overall been a strong promoter of the individual creativity, as every employee are self directed and keep innovating on their initiative. It is the employees that invents a new product together, and the mature startup is therefore creative on an organizational level (Amabile et al. 2005; Woodman et al. 1993).

Everyone in the mature startup have a profound motivation that have affected the creative work environment positively, as seen in arrow nr. 1. Also, the employees do know each other well after cooperating closely. This has created a safe climate in the mature startup, as seen in arrow nr. 2 in Figure 4 below, which again has affects the creative environment. The green color indicates that the individual motivation affects the creative work environment positive. Since

the mature startup have created a creative work environment and have the individual creativity from the profound motivation, it has together made them highly creative on a organizational level, as seen in the two arrow nr. 3.

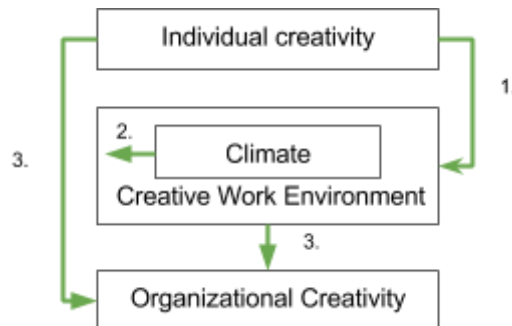


Figure 4: Creativity levels in the mature startup

6.2.3 SME company

The employees of the SME company receive a lot of negative attention from their colleagues when suggesting new ideas, or take risks by experimenting on new things. This sort of uncertainty for suggesting new ideas, contributes to form an unsafe or negative climate (Giroux & Lapierre, 2003). As discussed in paragraph 5.2.3, personal relationships can be necessary when creating a climate of trust. However, in this organization, the negative climate affects the different levels negatively and hinders individual creativity, as the employees seldom propose ideas, and individual creativity is “the proposal of novel and useful ideas”.

Steep organizational structures, as found in the SME company, seem to hinder the individual creativity among employees, as discussed in 5.2.1. To not exploit their most important asset; their employees, is not sustainable for an organization (Florida & Goodnight, 2007). Chances are that there are employees in the SME company who are unable to exploit their creative potential, which can be backed up by knowing that the level and frequency of the creative outputs are influenced by the creative work environment, which is almost non existing in the SME company (ibid). It is, however, not only the SME company that struggles to foster a creative work environment. This appears to be a pervasive problem, as organizing for an creative work environment is considered one of the most recurring challenges in an organization (Agogu e et al, 2015).

The SME company has what can be considered an unsafe climate. As seen in arrow nr. 1 in the figure below, the color is red and dotted. This is to highlight how the unsafe climate has almost eliminated the creative work environment. Further the negative creative environment has influenced the individual creativity negatively in the SME company, as shown in arrow nr. 2. As organizational creativity are dependent on creative individuals and a creative work environment (Watt, 2007), the company does not hold an organizational creativity, as illustrated in the two arrows nr. 3. When seeing how much the negative climate affects the other levels, it is necessary for the company to initiate actions to improve their climate in order to lay a foundation for organizational creativity.

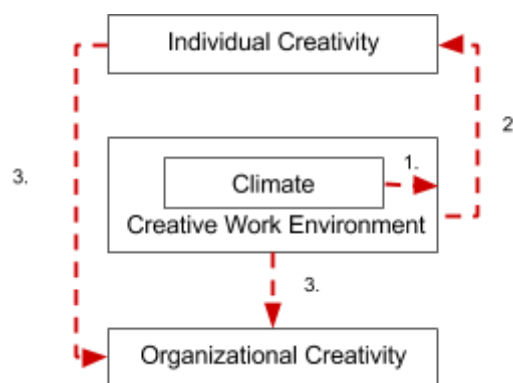


Figure 5: Creativity levels in the SME company

6.2.4 Output from the discussion

The three different organizations have been discussed in regards of three creativity levels; Individual, environmental and organizational. Even though the levels are the same, the organizations have had three different approaches towards them. This shows how different each organization is, and how they are affected differently in regards of the creativity. From Figure 3 and Figure 4, one can see that an organization can have a positive creative work environment and it will affect the individual creativity positively. The same goes for individual creativity, that is affecting the work environment positively. This is also found to be current when an organization struggles with a negative environment, the two levels are tightly affecting each other. As shown in Figure 5, the negative environment influences the individual creativity negatively. This proves how closely the three creativity levels are interrelating, especially the individual creativity and the creative environment, and how much they influence each other both positively and negatively.

The role of motivation was prominent in the findings, and therefore employees' motivation seems to be a crucial factor in regards of fostering organizational creativity. The intrinsic motivation has already been emphasized in each of the main organizational theories (Amabile et al, 1996; Ford, 1996; Woodman et al, 1993), thus we have confirmed previous research.

This chapter have shown the contribution of key findings to previous literature. It has also discussed how the different levels of creativity are affecting the creativity in the three different organizations investigated. Now follows a conclusion of the study.

7. Conclusion

The authors of this master thesis have investigated how the different levels of creativity affects the creativity in smaller organizations. The literature found in beforehand of the study discussed creativity in larger organizations, and many of these theories are found to be aligned with findings in this study. However, there has also been discovered findings through this study that has showed us that aspects in the creativity in smaller organizations are differentiating from the larger organizations.

The creativity in smaller organizations have been found to be highly affected by all of the creativity levels. Individual creativity and the creative environment have been found closely tied to each other, and they affect each other both positively and negatively. In order to have creativity in a smaller organization, one is dependent on having every level present in a positive way. On the contrary, it is also found that a negative environment can ruin the creativity in an entire organization.

Within the individual level of creativity, employees are the most important resource in regards of promoting creativity in an organization. In retrospect we see that employees have had an important role during the entire master thesis, mostly because they are the producers of individual creativity in an organization. Empowered employees with more responsibility were found to be more self directed and more often as producers of creative output, thus empowering employees is one of the most efficient actions the management can do in order to foster individual creativity.

Within the environmental level, personal relationships were found to be a strong promoter of a safe climate. It was further also current in the findings that the safe climate was important in order to foster a creative environment, something that were highlighted in the literature as well. This can imply that a smaller organization where it is possible to establish close relationships and a safe climate will easier be able to create a positive creative environment. A safe climate leads further to more suggestions to new ideas from employees, which basically are individual creativity.

Within the organizational level of creativity, broad knowledge was found as important in regards of overcoming constraints in the organization. As startups are often in lack of money,

they are forced to create simple solutions to complex problems. This makes broad knowledge one of the most important resources for them to possess internally. Further, overcoming constraints are found to be motivating and something that leads to individual creativity.

Highly motivated employees are found to affect every level of the creativity positively, but mostly the individual creativity. The commitment and creative output from intrinsically motivated employees have been found stronger, as aligned with the existing literature.

It is not possible for smaller organization to focus all their effort on one level, and still hoping to have employees producing creative output. One need to have three positive, or at least functioning levels of creativity present. Only then it is possible to foster organizational creativity.

8. Further studies and implications

For further studies regarding the levels of organizational creativity in smaller organization, we have three suggestions. Firstly, it should be conducted a more extensive quantitative research to see if there are correlations in the findings that has been presented in this master thesis. By conducting a quantitative research, the findings will be possible to generalize.

Secondly, there should be conducted a qualitative study with more similar organizations, as none of the interviewed organization were similar in this study. This will make it possible to understand more of what promotes organizational creativity in specific types of companies.

Lastly, it should also be conducted a similar qualitative study in other types of industries. This would reveal whether the different levels of creativity differentiate in how they affect creativity in organizations other industries. All of the interviewed organizations have been operating in the B2B market, and are manufacturing hardware products. It is questioned by the authors whether the findings are applicable for organizations operating in B2C market as well, or in example providing services.

Regarding the theoretical implications, empowerment of employees was found as one of the most prominent factor that promoted creativity in an organization. A further study should therefore include an observation and interviews in a SME organization that gave their employees more responsibility, and see whether this increased the creative output from the employees or not. This will reveal whether the empowerment was a startup phenomena or if it applicable in larger organizations as well. An observation can also reveal any dissonance from what the informants tells and what is actually observed in the organizations. Further, constraints were found as both positive and negative. Constraints as a positive phenomenon is in general understudied (Caniëls and Rietzchel, 2015), and a new study regarding how constraints are perceived in other organizations is found necessary. Lastly, the creative environment was found as easier to foster, the smaller an organization is. A further study comparing creative environments in startups and more mature organizations is also recommended.

Regarding the practical implications, managers should organize their organization in a non-hierarchical way, if possible, as this promotes employees to be more responsible and self-directed. Managers should also identify which of their employees that wants more

responsibility, and empower these individuals. Knowing that empowerment of employees can contribute to more individual creativity, will help to increase suggestions, initiatives and other positive contributions that come from employees.

For managers in the smallest organizations and startups, it is important to hire employees with broad knowledge, in order to be able to overcome constraints. Especially startups can not afford hiring many people, and can benefit more on having employees with broad knowledge instead of expertise. Motivation is something managers should look for when employing people, because motivation is found to affect creativity in many ways.

Understanding how the different levels of creativity works helps managers to focus their effort where it is needed. A manager can in example not only focus on extrinsic motivation in terms of bonuses, if there is a lack of a creative environment. Mapping out the condition of the different levels of the creativity might be a time consuming and challenging task for managers, but also a necessary action.

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Appendix

INTRODUCTION

We want to thank you for taking the time to meet with us today. We would like to talk to you about your experiences about how you perceive creativity in your company.

The interview should take less than an hour. We will be taping the session because we don't want to miss any of your comments. Although we will be taking some notes during the session. Because we're on tape, please be sure to speak up so that we don't miss your comments.

All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our 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. Are there any questions about what I have just explained? Are you willing to participate in this interview?

INTRO QUESTIONS

Tell us about yourself

- a. What are your background?
- b. How long have you worked here?

QUESTIONS

Organizational creativity

- a. How is new products created? Tell us about the process. Do you have an example from last time you developed a new product? **(stages model/comp.theory/two-tier)**
(produkt/service/prosess/strategi)
- b. It is a fact that one succeeds sometimes, and sometimes one fail in developing new products. Have you been developing anything that was not completed or did not get the result you wanted? Why do you think it happened?
- c. How do you make sure your business is at the forefront of changes in the market?

(Organizational Innovation)

Now we are moving focus from product to employees in your organization

- d. How do the employees experience that restrictions affect their creativity? This may for example be shortened time to complete a project or budget cuts. **(Exploiting the org. creativity)**
- e. In what way can constraints in your organization be perceived as positive or negative? **(Exploiting the org. creativity)**
- f. Some companies have initiatives such as idea mailboxes, or creative rooms. Does your company have any of this? **(Organizational innovation)**

2. Individual creativity

- a) How do now that you can utilize the expertise / knowledge of the staff ? **(Knowledge/expertise)**
 - i) Do you have an awareness of raising expertise internally? **(Knowledge/expertise)**
 - ii) How valued knowledge and expertise with you? **(Knowledge/expertise)**
 - iii) What knowledge / skills considered important ? **(Knowledge/expertise)**
 - iiii) What skills are considered less important? **(Knowledge/expertise)**
- b) How stimulates you to enjoyment and desire to work among employees? **(Intrinsic motivation)**
- c) How you create / attempting to create own sense of the company among its employees? Can the items. buy holdings? **(Extrinsic motivation)**
- d) If an employee are coming up with new ideas, ways to solve things differently (in a positive way) etc. How is this perceived by the management, and are this behavior rewarded in some way? **(extrinsic motivation) (creative thinking)**
- e) How does bonus schemes theirs? If they do not have it: Why not? If they have it: Why? **(Extrinsic motivation)**

3. Creative environment

- a. How have structural changes affected the organization? **(environment)**
 - i. What changes have you experienced?
 - ii. Why did they happen?
 - iii. When did they happen?
- b. How would you describe the communication internally in the organization? Focus on how and how often. **(communication)**
- c. How often do you have to report to the management and what do you/they have to report? **(communication)**
- d. How can employees express their ideas to the management? Do you have any examples? **(climate)**
- e. What actions are done in order to keep the work environment creative?

- f. What is your perception of the management in regards of the work environment? Do you have any examples? This can be both positive and negative. **(the role of management)**
- g. How does your organization facilitate so that each employee can work creative? Do you have any examples of this? **(the role of management)**
- h. How is the access to resources for employees? Can they easily get parts to prototyping, software etc?
- i. How do you experience that the employees are autonomous and self directed? **(environment and climate)**
- j. Has there been conducted any surveys or tests to map out the creative environment? If so, which ones? **(climate tools)**
- k. What factors do you think promote creativity among employees in your organization?
- l. What we have been talking about in this interview, would you say that it is applicable for many years back in time? Do you think it will remain the same in the upcoming years?

CLOSING KEY COMPONENTS

We have now been talking about creativity on different levels: organizational, individual and environmental. Is there anything more you would like to add? Do you think of anyone we should talk with?

If there turns up something, is it okay if we call you? And if you think of anything else, you are more than welcome to call and inform us.

We'll be analyzing the information you and others gave us and we will be happy to send you a copy to review at that time, if you are interested.

Thank you for your time.