

# Exploring Diversity and Innovation:

## Patterns in Small and Medium Technology Enterprises in Scania

by

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**Abstract** 

**Purpose:** In this study, we investigate the perceptions of diversity and innovation in Small and

Medium Enterprises (SMEs). Our research is targeted to technology SMEs in the Scania region of

Sweden. Applying the qualitative method, we analyze, through interviews, how SMEs view

diversity and innovation potential from the perspective of the founders or top managers of the firm.

**Findings:** Our findings show varied definitions of diversity and innovation among our population.

Additionally, several drivers of diversity and innovation cultures were noted: Founders/managers

as drivers for diversity and innovation, the small business stages of development, the advantages

and disadvantages of diversity, and the context of Sweden. Secondary findings related to

profitability as a driver for diversity and a perceived relationship between diversity and innovation

were noted.

Value: Given the global economy and the likelihood that innovation and diversity are linked, this

research is relevant to the current environment in Sweden. Additionally, for policymakers, issues

related to the bureaucracy of immigration procedures and the lack of females in the technology

industry should be addressed.

**Limitations:** The limitations of this study are linked to the method used. The nature of the

qualitative approach is subjective and it can lead to bias on the part of the authors and the

participants regarding the subject of study. This means the findings are linked directly to the

perceptions of the interviewees. Additional limitations of the study include the regional nature

(Scania) and the similar industries (technology) of the subjects.

Keywords: diversity, innovation, founders, life cycle, Sweden, entrepreneurship, motivation

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## 1. Introduction

In the context of this study, the Scania region of Sweden, equality is at the forefront of Swedish culture. Governmental policies supporting both men and women as caregivers and an overall culture of equality in the workplace is the predominant norm. The government has appointed a Minister of Gender Equality who is responsible for gender equality issues (Swedish Institute 2018a) and an "Equality Ombudsman" whom is appointed at the organizational level to protect the equal rights of the employees and to verify that the law regarding parental leave is followed (Swedish Institute 2018a). Equality of gender is supported; however, less attention is given to the diversity of nationality or background. As a study by Gray (2018) shows, although Sweden is in the top ten in the world for attracting talent and ranks very highly for social mobility and gender issues, the country lags in attracting foreign talent and establishing multicultural societies.

Although the benefits and importance of diversity have been researched, most studies focus on large firms in the private sector. As Bridgestock et al. (2010) states, there is a lack of DM (diversity management) related to small firms. Smaller firms often lack the resources and structure of larger corporations. For example, a small and medium organization (SME) may not have a formal human resources department to control hiring practices. Hiring may be at the discretion of the hiring manager or partner which allows for the hiring partners' values to influence the composition of their team. Additionally, recruitment may be focused on "friends and family" (Carroll et al. 1999). Firms recruit from within their network and hire individuals to whom they have direct access without advertising for a position externally. For these reasons, it is not reasonable to rely on the research related to larger firms. Aspects of the SME should be considered in research related to diversity.

As popular as diversity management has been for recent studies, innovation is another critical success factor that is applied to both the corporate and small business environments. Innovation has been studied in small businesses in Sweden as it relates to food innovation, eco-innovation and the call for innovation from the Swedish government's perspective (Beckerman, Bourlakis & Olsson 2013; Halila & Rundquist, 2011; Palm, Lilja & Wiklund 2015). Additionally, research suggesting a relationship between diversity and innovation has been completed as it relates to

teams. The findings indicate a correlation between diversity in teams and innovation potential and outcomes (in Bridgstock et al. 2010). However, there is still a lack of literature exploring the innovative nature of the firm from the perspective of the founders/employees.

## 1.1. Research Purpose

Sweden, as a country, supports the diversity of gender; however, diversity in a broader sense is not given the same degree of attention. For this reason, this factor is not included to the same degree in the oversight functions of many Swedish organizations. This has been observed by the authors in their difficulty to find a position in Sweden, even when qualified, and in discussions with other business professionals, as an observation. In a global economy, diversity has become an essential factor. Working with individuals and organizations across cultures is becoming the standard. Additionally, a culture of innovation is another critical success factor for survival in today's economy. In this study, we will research how firms in the Scania region perceive diversity and innovation factors. In this way, we would like to understand if small and medium enterprises place a value on these factors. The research questions for this study are as follows:

- i. How do SMEs perceive diversity and innovation?
- ii. What influences diversity and innovation factors in the same SMEs?

### 1.2. Outline of the Thesis

The structure of this thesis is as follows. After the introduction, the authors will define what diversity and innovation mean in the theoretical context. They will then describe why these factors are important in the organizational context. The context of Sweden as it relates to diversity and innovation is also discussed. Next, the writers discuss the methodology for selecting the project sample and the process for analyzing the results. Finally, the researchers will present the analysis of the interview data to identify relevant themes, discuss those themes, and summarize the study results. Implications for future research are discussed in the conclusion.

## 2. Theoretical Review

## 2.1. Small and Medium Enterprises (SMEs)

The term SME has been consistently used by policymakers and practitioners to differentiate big corporations from other types of companies. In that sense, this chapter aims to explain the meaning of SME as discussed in the academic and empirical world and also explain the general characteristics of an SME in comparison to larger firms. Finally, we define the current parameters used by the European Commission to classify companies that are SMEs.

#### 2.1.1. Importance and Characteristics of SMEs

Before defining an SME, we will discuss the impact of these types of companies on the business world. An example is provided by Loecher (2000), who argues that almost 99 percent of the companies in Europe fall into this category. Moreover, European SMEs employ a large percentage of the European workforce - approximately 50 percent in manufacturing industries and almost 60 percent in services (Mulhern, 1995). Finally, the International Council for Small Business states that, in the world, Micro, Small and Medium-sized Enterprises (MSMEs) make up more than 90% of all companies and on average account for 60-70% of employment and 50% of Gross Domestic Product (United Nations, 2018). To sum up, the SMEs are the drivers for the growth of these nations. However, we need to explore further what characteristics practitioners and academics used to classify and characterize which companies are designated as SMEs.

The literature gives us many examples of definitions for an SME (Nieschlag 1981 in Loecher 2000). For example, some authors state that one characteristic of an SME is the difference in financial and human capital as compared to larger companies. It also describes that the organizational structure and governance of an SME is usually very different from that of a large business (Hausman 2005). Smaller organizations may not be as structured as a corporation due to fewer oversight functions and more streamlined business processes. Another characteristic that we can distinguish in the literature is the ability of an SME to create and innovate quickly and a simplified ability to introduce new processes and products (Bruque and Moyano, 2007).

Furthermore, the SMEs "enjoy a comparative advantage in innovation as compared with larger firms, due to their flexibility and ability to provide more rapid responses with a customer-oriented focus" (Baldwin, 2000 in Bommer and Jalas 2002 p. 380). The innovation ratio per employee in an SME is six times greater than the ratio of larger companies (Acs & Audretsch, 1988). To summarize, it can be said that the SMEs share the following common characteristics: they have a lack of resources, are flexible because of their small size, are less formal and have a low rate of turnover (Cerchione et al. 2016).

For this paper, we are going to use a quantitative approach to define an SME based on the criteria stated by the European Commission (2017). The definition focuses on three parameters: staff headcount, annual turnover and annual balance sheet total. We will focus on staff headcount and select firms with equal or less than 250 employees. The authors have chosen this approach because of the practical definition and classification made by the European Commission that allows future readers to understand precisely how the cases of this study were selected.

#### 2.1.2. SME Stages of Growth

SMEs in various stages of development have multiple needs. As outlined by Churchill and Lewis (1983), the small business development stages are as follows:

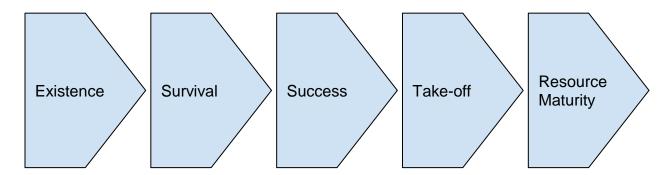


Table 1 - The categories are defined in the table below (Churchill and Lewis, 1983):

Stage	Definition
Existence	The company's strategy at this stage is to remain in existence with the owner performing most functions and a few adequate employees. There are minimal or no systems in place.
Survival	The company has a few employees and some supervisors who are now allowed to make decisions independently. These employees still refer to the owner.
Success	The company is successful and profitable. Independent functions are making daily decisions. The focus is on expansion or exploitation of the company's products or services.
Take-off  The company is decentralized with managers who are competent and handle daily decisions and a complex environment.	
Resource Maturity	The company is adequately staffed and has financial resources. Looking to the future is about remaining innovative and competitive in their chosen industry.

In the early stages of development, a company is likely to need employees who are risk takers (Milliman et al., 1991). As companies grow in size and complexity, managers face new challenges that require more sophisticated skills and competencies (Danvila-del-Valle et al., 2018). These needs influence the diversity and innovation requirements of the firm. In the analysis section of this paper, we will use the above small business stages of development to discuss why diversity and innovation needs differ at various stages of growth.

## 2.2. Innovation

In the following chapters, we will define innovation and support why innovation is essential for firms. In a continually changing world and dynamic marketplace, interest in the processes and management of innovation has escalated (Baregheh et al. 2009). An innovative culture has become an important success factor.

#### 2.2.1. What is Innovation?

We often hear the word innovation in our daily conversations, but defining the term is challenging. The meaning of innovation has been discussed in the academic world in a comprehensive way and there is an abundance of literature and models that attempt to create a single definition (Lee et al. 2010). One of the first authors that discussed this concept was the Austrian economist Joseph Schumpeter at the beginnings of the 20th century. He goes on to explain that the growth in economies is not based only on the accumulation in capital but from innovations that create an imbalance in the marketplace (Schumpeter 1912, 1934 in Landstrom et al. 2012).

There are other definitions of innovation like the one explained by West and Farr (1990) who state that innovation is the introduction and application, in an intentional way, of new ideas, products and processes inside an organization with the goal of benefiting the receivers of these changes. Similarly, Dobni (2008) defines innovation as the ability to introduce a new product, service, or idea including the introduction of new processes and systems that enhance performance. Damanpour (1991) argues that firms use innovation as a tool to influence an environment or because of changing environments, both internal and external. Finally, in their study that grouped 60 definitions about innovation between 1934 and 2007, Baregheh et al. (2009) sums up innovation as a "multi-stage process whereby organizations transform ideas into new/improved products, services or processes, in order to advance, compete and differentiate themselves successfully in their marketplace" (p. 1334). These definitions attempt to explain innovation with one process in mind, and that is change. Whether it be new products and services, new processes or business structures, new innovative developments fall into this category.

For this research study, we have decided to use the definition of innovation given by the Organization for Economic Co-operation and Development or OECD (2005) in their Oslo Manual.

This definition is going to support our empirical study, will help to elaborate the interview guide, and is going to assist us in classifying the types of innovations that the companies in our research are experiencing currently. The OECD (2011) defined and classified innovation into four categories:

Table 2 - Definitions of Innovation

Type of Innovation	Definition
Product innovation:	"The introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses." (OECD 2011 p. 140)
Process innovation	"The implementation of a new or significantly improved production or delivery method." (OECD 2011 p. 140)
Marketing innovation:	"The implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing." (OECD 2011 p. 140)
Organizational innovation	"The implementation of a new organizational method in the firm's business practices, workplace organization or external relations." (OECD 2011 p. 140)

<sup>\*</sup>These definitions will allow us to discuss innovation types with the companies we research.

## 2.2.2. Why is innovation important?

Now that we have defined the concept of innovation, another question appears: what is the importance of innovation in organizations? Many authors have talked about the benefits of innovation in both the short and long term and how this concept can enhance the performance of a business's success (Chatzoglou & Chatzoudes, 2018). Some authors, like Baregheh et al. (2009),

argue that organizations innovate in response to customer demands and to profit from opportunities offered by changing market dynamics and structures. Other authors state that innovation is the differentiator that will give a competitive advantage that allows the companies to go to the next level (Prahalad & Hamel, 1990). Moreover, other studies have discovered a relationship between the process of innovation and the performance of the firm that can be traced to financial performance (Kostopoulos et al. 2011).

The many advantages that innovation provides to firms have been noted. This is likely because companies that create a culture of innovation can respond to disruptions in the environment, adapt to the changes, and originate better competitive advantages in comparison to their competitors (Calantone et al., 2002). Dynamic firms with innovative cultures survive in the marketplace.

## 2.3. Diversity

This chapter is going to describe the importance of the term diversity and how this concept has evolved from a general perspective to a managerial perspective. Then, it will explain the importance of embracing this topic in companies and the potential impact of having a culture of diversity.

## 2.3.1. What is Diversity?

For scholars and individuals alike, the definition of diversity is often different. Some people talk about gender matters while others talk about groups of people with different traits that interact in the same environment. It is difficult to compose a standard definition of precisely what the term diversity means. For that reason, we can find different meanings in the academic world concerning diversity (Herring 2009). For example, Kossek & Lobel (1996) state that diversity includes a range of "differences in ethnicity/nationality, gender, function, ability, language, religion, lifestyle or tenure" (in Bassett-Jones 2005 p.169). In the same line, Herring (2009) defines diversity as a concept that goes beyond gender or race, as usually stated, and also includes other kinds of differences like age, ethnicity, religion, and sexual preferences among others. In short, these definitions show us the big picture of what the term diversity can include. Now, we need to define how this concept can be used in an organizational context.

Before all else, why does the term diversity apply to the corporate world? It can be argued that in our current context, for example, the boundaries between nations are breaking, millennials and baby boomers are coexisting in the same working atmosphere and new movements in support of gender equality and diversity are expanding around the world. This means that firms should pay attention to this concept. More so, companies are losing the homogeneity of their beginnings and internal dynamics are changing. In that sense, we have authors like Nishii & Rice (2014) who state that, with the growing size of organizations and the diversity of the employees, it is critical that the management team stay more aware of the importance of having inclusive environments in their organizations. Something similar is argued by Bassett-Jones (2005) who says that diversity should include more than employees with different demographic backgrounds. It should consist of cultural differences and differences in intellectual capability (Bassett-Jones, 2005).

This new environment forces managers to know how to manage diversity within their companies. For that reason, the next chapter is going to discuss how diversity is managed in business environments.

#### 2.3.2. Diversity Management

The term Diversity Management (DM) was created during the 1990's in the United States of America; and, it has expanded to become a global term. This term usually includes the creation of management procedures, policies and processes in an organization to improve the diversity environment with the aim of creating a culture of diversity. Bridgstock et al. (2010) states that diversity management is a managerial idea that supposes that differences in an organization and can boost organizational performance. In the same way, Shore et al. (2018) argue that diversity management has focused on bringing women and minority groups into the workplace. Also, Basset-Jones (2005) expresses that DM is "the systematic and planned commitment on the part of organizations to recruit and retain employees with diverse backgrounds and abilities" (p.170).

In summary, it can be stated that the concept of diversity is shifting to a field related to policies and practices in companies that wish to include people considered different from current employees (Herring 2009).

#### 2.3.3. Benefits of Diversity in Organizations

The goal of this chapter is to present the benefits of diversity inside the culture of a company. However, it is also good to know that some authors describe the benefits of diversity using special lenses - for example, talking about only gender or racial diversity - while other authors broadly talk about diversity (embracing gender, race, age, etc.).

Arzubiaga et al. (2008) argue that the benefits of gender diversity are reflected in the generated creativity, the improved quality of the decisions made and finally the contributions to the innovative nature of the company. Similarly, while talking about diversity as a broad term, Herring (2009) argued that diversity contributes to the enhancement of outcomes of the firm in comparison to a homogeneous environment because innovation depends less on highly intelligent individuals and more on diverse groups working together and exploiting their individuality. Finally, concerning the benefits to the performance of the company, Herring (2009) argues that diversity can be associated with an increase in consumers, a positive impact in the sales and market share and a rise in the profits and earnings of the firm.

#### 2.4. The Context of Sweden

#### 2.4.1. SMEs in Sweden

Almost 99.9% of the companies in Sweden are cataloged as SMEs. These firms employ nearly 66% of the workforce (European Commission 2016). According to the European Commission (2016), SMEs employment growth was 8% during 2015.

#### 2.4.2. Innovation in Sweden

Another characteristic that is part of the business environment of Sweden is its focus on investing in innovation, research and development. Sweden is recognized globally as a country where creativity is embedded. Examples of their contributions and inventions are the pacemaker, the three-point seat belt and the heart ultrasound (Swedish Institute 2018b).

Statistics from the World Bank (2015) show that "Sweden has one of the highest rates of research and development investment globally and its firms are among the most innovative and export-

oriented in a wide range of industries" (pp viii). In the same report, the World Bank (2015) indicates that Sweden, per capita, generates a large number of scientific publications and patents and many companies are members of the OECD.

Finally, how does innovation occur in Sweden? Principally, from the close collaboration between three actors: the private sector, the public sector and the research institutes (Swedish Institute 2018c). Additionally, Sweden is one of the top countries in research and development spending, investing approximately 3.3 percent of Gross Domestic Product (GDP) in that sector during 2015 (Swedish Institute 2018c).

#### 2.4.3. Diversity in Sweden

Other traits that characterize Sweden are their efforts to create a diverse and egalitarian society concerning gender. The World Bank (2015) states that Sweden is one of the most gender-egalitarian countries in the world. Part of that is because during the 1960s and 1970s the state created welfare policies - like parental leave, child care, and paid sick leave days for childcare - that contribute to the benefit of family and consequently allowed women to have a significant role in the workforce (Ahl et al., 2015).

#### 2.4.4. Regional Context

Sweden is divided into eight national regions. The southern region of Sweden includes two main counties: Scania County and Blekinge County (European Commission 2018). This region has 1.4 million inhabitants and has produced 12.6% of the total GDP of Sweden during the period of 2007 - 2013 (European Commission 2018).

One of the strongest qualities of the southern region of Sweden is the high-profile universities and institutes - like Lund University - that invest in research studies in many fields. Similarly, the business scene is very diversified. We can find many established clusters like food, technology and life sciences (European Commission 2018).

# 3. Methodology

The objective of this chapter is to present the methodological approach that was used in this research and justify the methods for the collection of data. We will present how we choose the sample and how we analyze the data. Finally, we will talk about the limitations of the study.

## 3.1. Research Approach

The research approach adopted in this study is qualitative. We decided to use this approach because it allows us to have close involvement with the participants and also understand how they interpret their world (Bryman & Bell 2011). In our case, the interviewees explained how they perceive the topics of diversity and innovation. Then they described the diversity of employees in their firms and the innovation culture of the same. Using a qualitative strategy helps us to seek and understand the behavior, value and belief of the interviewees concerning the context in which they are living (Bryman & Bell 2011). In our study, we seek to understand why the employees and the firms behave in a particular manner about diversity and the innovation process. Also, we will investigate how the context where these SMEs are located - Scania - impacts their interpretation of the research topics.

Finally, this qualitative study uses an inductive approach in which the researcher first explores and describes the world in which the participants coexist and then he/she applies theoretical perspectives to that environment (Hernandez et al. 2014). Likewise, Bryman & Bell (2011) states that an inductive approach "involves drawing generalizable inferences out of observations" (p. 13). In that sense, we are going to explore and describe each of the findings that we gather concerning diversity and innovation in the SMEs. Then, we are going to discuss and generalize the contributions for the academic world and practitioners.

## 3.2. Research Design

To answer the research question, the authors used an exploratory and descriptive approach. This is used with the objective of examining a topic that has been studied little or is a new subject (Hernandez et al., 2014). In our case, we will seek to explore the perception of the participants in the SMEs of the Scania region of Sweden concerning diversity and innovation. The latter aims to specify important characteristics of any phenomenon that is analyzed by describing the meaning of diversity and innovation using the lenses of the interviewees (Hernandez et al., 2014).

Similarly, the research design will be the case study. First, we are going to use multiple cases with the goal of exploring and studying a general phenomenon (Stake 1995 in Bryman & Bell 2011). Thus, the collective cases approach allows us to compare the perceptions and opinions of different participants concerning diversity and innovation in SMEs. Secondly, using case studies enables us to "create theoretical constructs, propositions and/or midrange theory from case-based, empirical evidence" (Eisenhardt & Graebner 2007, p. 25).

## 3.3. Data Collection Method

#### 3.3.1. Research Instrument

This study used qualitative interviews to gather data in the SME's industry to inquire about the perception that the owners or top managers have concerning the topics of diversity and innovation in their firms. Moreover, we used semi-structured interviews because this methodology allows us to have a clear focus on the topics that we want to study in this field (Bryman & Bell 2011). This makes the interview process more fluent.

For that reason, we created an interview guide which has been structured using the theoretical literature review that was discussed in the previous chapter. Also, the interview guide gives us the opportunity to create a framework to perform the interviews in an orderly way. For more details, see Appendix A which depicts all the elaborated questions for the interview guide.

#### 3.3.2. Sample Selection

For this study, we worked with four SMEs in Scania. We used two criteria for the selection of these companies:

- About the size of the company: We used the standard proposed by the European Commission (2017) to classify SMEs. In that case, we chose companies with equal to or less than 250 employees.
- About the innovation factor: We selected companies that contribute to innovation concerning the creation of new ideas for products and services or the creation of new processes inside their organization. In that sense, we classified the companies using the criteria proposed by the OECD (2011).

After that, we stated a goal to interview one co-founder/top manager and one employee of each company. This lead to a total of 7 interviews for this study. One company refused a second interview after two additional requests. We used additional criteria to select the kind of employees we were going to interview:

• The employee should be a founder or a top manager in the firm. We believed that the information provided by those individuals was more aligned with our research question. These employees have participated in the creation of the company or are leading the innovation culture inside their firms. Additionally, these employees have other persons under their command and lead teams, so they are available to share with us their first-hand experience in the role of innovation and diversity.

To summarize, the next table shows the firms that we sampled for our study. Additional information regarding the employees selected for the interview process is included in the discussion section of this paper:

Table 3 - Company Information

Company	Number of Employees	Start Date	Industry	Type of Innovation
Forbytes, AB	30	2011	Technology	Process Innovation
Arctic, AB	250	2002	Technology	Product Innovation
Beta, AB	25	2012	Technology	Product Innovation
Nattaro Labs, AB	8	2011	Extermination/ Technology	Product Innovation

<sup>\*</sup>Some names have been changed to protect the confidentiality of the firms.

#### 3.3.3. Procedure

This section will describe the steps that the authors took to select the sample, contact the companies and finally perform the interviews.

First, the authors decided to select companies with less than or equal to 250 employees and therefore cataloged as SMEs using the criteria of the European Commission (2017). We selected firms that are based in the Malmö, Helsingborg and Lund areas of Scania. These areas were chosen due to their proximity to the researchers who had limited time and mobility to perform this study. We contacted many types of companies; however, the respondents that we interviewed were firms from within the technology industry.

We researched each company via a search engine to determine their appropriateness based on the company's website, the number of listed employees, and the years in existence (greater than three years). After we finished gathering the information of each company, we started to contact the selected SMEs via phone calls and emails explaining the reason for our research and asking if the company would like to participate in the study. In parallel, we use our network contacts within the SME's industries to sponsor us with firms that met our criteria. This network also provided contacts and companies that would participate in this study.

For the interview process, we coordinated with the interviewees to select a place and time that was convenient for their schedule. In some cases, the interviewee requested an advanced copy of the interview guide. In those cases, we provided a summary of the document.

At the time of the interview, the average time of the exercise was one and a half hours. However, in some cases, the interview extended for approximately two hours. We requested permission from the interviewees to record the meeting for academic purposes. Only one interviewee refused to allow recording and manual paper notes were taken. Finally, we offered the participants the option to remain anonymous. When requested, we did not use the name of the company or the name of the individual in this document.

We used multiple interviewers to perform the interviews. Bechhofer, Elliott, and McCrone (1984) state that using multiple interviewers allows for an informal atmosphere more like an open discussion between three people rather than a direct exchange between two individuals. This allowed the interviewees to relax and provide honest and forthright answers.

## 3.4. Data Analysis

The authors used three stages to analyze the interview data collected. In the first stage, each interview was transcribed to better process and interpret the results. To do that, the authors divided the process of transcribing the interviews between them. Each transcript created was then reviewed by the other author to verify the quality of the work.

In the second stage, the authors introduced the narratives of each of the four companies that participated in the research. The use of a narrative approach allows the authors to understand the succession of events, situations and processes that are connected with feelings, emotions and interactions through the experiences of the people who lived them (Hernandez et al., 2014). In this case, the authors of the study had the goal to describe and present the perception of the co-founders and employees of the SMEs in Scania concerning their own experiences with the topics of diversity and innovation. For this process, the authors elaborated the narratives jointly for a better understanding and to avoid missed information with the idea of being as descriptive as possible.

Finally, for the last stage in the data analysis, the authors used a thematic analysis approach to identify common themes that emerged from the narrative. A thematic analysis is defined as "a method for identifying, analyzing and reporting patterns (themes) within data" (Braun & Clarke, 2007 in Vaismoradi et al., 2013). This process allowed the authors to find emergent principles about diversity and innovation for SMEs. For the analysis, the authors created a chart where they could classify and categorize the findings in principal and secondary themes. This was again joint work between the authors to structure the discussion of the results with the goal to make it more understandable to the reader.

### 3.5. Limitations

In this study, there are limitations concerning the method used. The nature of the qualitative approach is subjective and it can lead to bias on the part of the authors and the participants regarding the subject of study. For example, the perceptions of the interviewees about diversity depend on their gender, nationality, age, etc. A similar issue exists with the topic of innovation as the industry in which the SMEs participates influences the innovation culture.

Another limitation faced during the elaboration of this research was the lack of participation by the companies we contacted which impacted the size of our sample. This scenario occurred due to two factors: the sensitivity of the topic and time restriction for the study. We contacted a total of 37 companies during March and April of 2018, only four of which responded positively. The topic of diversity is sensitive for some individuals and many small companies that have not implemented or developed these attributes in their firms. So, it was challenging to confirm interviewees. In that sense, our sample of companies was small for lack of participation. It can be viewed as a restriction that limits our ability to generalize our findings to all SMEs of Sweden. To counter this fact, we have chosen to restrict our subject of study to SMEs in the technology industry. This allows us to analyze the perceptions of this topic in a broader way in this sector.

Finally, in our study, the possibility of encountering with a social desirability bias on the part of the founders and top management of the SMEs interviewed exists. Social desirability means that "the probability of endorsement of an item increases with the judged desirability of the item" (Edwards, 1953, p. 92). This situation can occur because of the sensitive topic of diversity.

Diversity is perceived as desirable to our interviewees because of social norms. For this reason, this topic can originate a positive response from some of the interviewees stating that their firms are diverse in gender, age, nationality, etc. because society views diversity as a positive attribute as a whole. In the same line, with the topic of innovation, the founders and top managers could have positive responses stating that their companies breathe a culture of innovation. To solve this situation, we implemented two strategies. The first was to elaborate in the interview guide by using indirect questions to neutralize this bias. The second was that we interviewed both the founders and an additional direct report from each of the firms. This helped validate the responses by comparing the responses of the employees and their leaders regarding diversity and innovation in their companies.

# 4. Empirical Data

## 4.1. Overview

This section includes narrative descriptions of the four companies included in this study. The narratives include some details from the interview with the entrepreneur or top manager describing their thoughts on innovation and diversity in the workplace. In the following section, we will analyze the results and discuss our findings.

The interviews of this study are as follows. Details about the interviewee, their workplace, their position in the firm and their country of origin were included.

Table 4 - Interviewee Information

Name	Hours	Company	Position	Country of Origin
Don	2	Forbytes	CEO and Founder	Zimbabwe
Matt	1	Arctic	Team Leader	Canada
Sam	1	Arctic	Product Owner	India
Mark	1.5	Beta	COO and Founder	Sweden
John	1.5	Beta	Head of Project Mgmt.	Sweden
Christine	1.5	Nattaro Labs	VP of Sales	Sweden
Zainab	1.5	Nattaro Labs	Lab Scientist	Pakistan

<sup>\*</sup>Some names have been changed to protect the confidentiality of the firms and participants.

## 4.2. Narrative and Background of the Companies

#### Forbytes, AB

Forbytes, AB is a technology development and consulting firm located in Helsingborg, Sweden. The firm was started in 2011 by Don and his two partners, Taras and Orest, who are located in Lviv, Ukraine. The firm was started shortly after the founders' previous employment with a large consulting firm ended. Taras and Orest contacted Don about starting a company, and the first programmer in Lviv was hired at that time. Today, Forbytes has 44 employees in Edinburgh, Helsingborg and Lviv. The company is still formalizing its human resources function. This process began shortly after the company's numbers exceeded 30 employees. The company works with many types of firms, doing process improvement, technology development, systems implementation and more.

Forbytes is diverse by design, with employees in three locations, the United Kingdom, Ukraine, and Sweden. When speaking to the owner, Don, about company diversity, he states that his most important aspect is to "put the right person in the right position." He also believes that a "common goal" is necessary to keep a diverse group of people on task and moving forward. Staff are supported in difficult situations, instilling a level of trust that is necessary to function in a diverse environment. This is especially important since his employees reside offsite.

For Forbytes and Don, a diverse environment leads to innovation when trust and a common goal are present and can lead to roadblocks when they are not. Innovation is a critical success factor; however, creating a corporate structure designed to be followed easily is necessary for innovation and diversity to thrive.

#### Arctic, AB

Arctic is a technology development and software engineering company located in Malmo. The company has gone from public to private and back again. Arctic is currently in the process of merging with another firm. The firm had approximately 250 employees before the merger and has been in operation since 2002. Even with this higher number of employees, the company is mostly functioning in silos as an SME. Corporate functions like human resources and formalized

employee review practices are not present. The company has developed a technology product for monitoring and has software and network engineers who either implement or maintain their customers' products.

Matt is a Team Leader at Arctic. He has been with the firm for five years, three of which were in Sweden. He immigrated from North America. Matt has been through multiple changes at the firm including going from public to private and back again. Matt supervises three teams, each with different make-ups. One team is entirely Swedish, another group is mixed and the third team is from Pakistan. As a manager, Matt values diversity and believes it is essential for idea generation. He mentioned that the firm was originally mostly Swedish, but "that ideas from the core Swedish team were running out in the 2010 to 2014 era. They'd just exhausted their creativity, as it were, and there weren't really fresh ideas coming in. There wasn't a lot of movement on the product until they started going really international." This was when the company expanded its employee base into other markets. There was also a need for expansion because they could not find engineers locally.

Even though diversity is more of a business decision than a value for his company, Matt still values his diverse teams because the various ideas generated by his multinational teams lead to innovative client solutions. As he states, "It's actually a good combination because we get this tremendous variety of ideas." He also believes that diversity has to be managed and it is his job as the supervisor to be the go-between for his employees to help maintain personalities and cultural differences; however, the results far outweigh the issues that arise.

#### Beta, AB

Beta, AB was started by Mark who is the Chief Operations Officer (COO) and his co-founder, the company's Chief Technology Officer (CTO). Beta is a technology components firm that started in 2012 based on the research Mark and his CTO performed during their Ph.D. program at Lund University. The study produced the first iteration of their product. The prototype was further developed between 2012 and 2015 and is currently sold on the open market. The research was intended for industrial customers but was later designed for the consumer market. The device is a low power consumption radar device that can be added to many other products including drones, mobile devices, power tools, automobiles and healthcare and fitness technology. The company is

in the process of choosing its market and also performs service functions like software development. The software is designed to use the product in the customer's required capacity.

Mark and his co-founder are both Swedish. They are both residents of Lund and met during their doctorate program at Lund University. Their Chief Executive Officer (CEO), also Swedish, joined the firm in 2015. Further executives joined in 2016/2017 with a background from Ericsson, all male. The firm currently has 25 employees, all engineers, only two of which are female, with about three employees originating from outside of Sweden.

The firm is not very diverse as it relates to nationality; however, diversity of age and background is important because "a semiconductor business is not something you start from out of school. You need a lot of experience." The company is now focusing on hiring more females because "diversity is important when building a team or organization" so that "everyone feels welcome." Their two female employees were hired recently, so Mark feels this is a new initiative.

Now that the product has been released into the market, Mark and Beta have refocused their attention on innovation. Understanding that it is a critical success factor, the company has implemented innovation days where the employees are required to put aside their assigned projects and focus on new ideas. This is a new initiative since the first stages of the firm were about "delivering and producing and producing and delivering is a bit in contrast to innovation." Regardless of the lack of cultural diversity, Mark does feel that diversity, in general, affects innovation because, at the start of the company, he and his co-founder often "drafted the same ideas because they (we) are quite similar." Without some differences, innovation can be a challenge.

#### Nattaro Labs, AB

Nattaro Labs is a pest control technology company that was founded in 2011 by Dr. Camilla Ryne, Magnus Bäckmark, Carl-Magnus Hansson and Christine Dahlman Jacobsen. Camilla was a researcher at Lund University and Magnus, Carl-Magnus and Christine have business and telecommunication backgrounds. The four met in an entrepreneurship program at the Mobile Heights Business Center and started the company shortly afterward based on Camilla's research on bedbugs from her time at the university. Although Magnus, Carl-Magnus and Christine did not

have a science background, they brought complimentary business skills to the table. The owners shared the company equally at the start, each owning 25%. The company currently has one patent and another pending. All four members are from Scandinavia. In 2015, a CEO was hired, Carl-Johan Gustafson, also from Scandinavia. He has a background in sales, marketing and distribution from TePe. Nattaro Labs now has eight employees, one of which is from outside of Sweden.

Christine and the other founders of Nattaro Labs believed from the beginning that diversity was important. They went as far as to make diversity of background a critical value for the company from its inception. As Christine said, "That's part of being non-discriminating. To realize the benefits of having different backgrounds and having different experiences, we do feel that it's enriching." As it relates to innovation, Christine feels this is easy with such a small group of employees because with such a small organization, you can easily share ideas. The group sits together in their offices at Medicon Village in Lund. Additionally, Christine mentioned that "We (Nattaro) have this idea bank that all new ideas are included in the idea bank and then one of my colleagues, he is responsible for administering it." A centralized and formalized process is in place to share new product or process ideas. Nattaro Labs is still small, and hiring practices are focused on the network her and the other founders have developed. Sitting at Medicon Village in Lund allowed Nattaro to recruit from Lund University. At this time, the focus of Nattaro is on qualifications and diversity of background and not necessarily on diversity of nationality.

# 5. Discussion and Analysis

### 5.1. Overview

This chapter is the presentation of our findings on how SMEs perceive diversity and innovation. We perform a thematic analysis and apply theory to support our conclusions. We used direct quotations from the interviews to support our analysis and secondary theoretical references to strengthen the argumentation further. The chapter is organized into subcategories, beginning with defining the phenomenon and followed by founders/managers as drivers, stages of development, the advantages and disadvantages of diversity and the context of Sweden. Secondary findings discussing profitability as a driver for diversity and the relationship between diversity and innovation follow.

## 5.2. Defining the Phenomenon

### 5.2.1. Diversity

It has been said that diversity is an abstract concept that is "fuzzy in meaning, and vari(es) depending on the geographical, cultural, political, and organizational context' (Nkomo & Hoobler, 2014, p.248). When asked to define diversity, our respondents each had a different definition of diversity based on their background, values and/or sometimes context.

The founder of Forbytes, Don, is a firm believer in diversity, having grown up in a diverse environment. He was a farmer in Zimbabwe.

Personally, I believe diversity is a very good thing in a business, but maybe that's because I've always worked with many different cultures, so I enjoy doing it.

Don values a multicultural environment and therefore implements as such in his own company. Multicultural diversity is important to him. Forbytes is diverse by design, as most of Don's team resides outside of Sweden in Ukraine and the United Kingdom. As Fish (1999) states, firms with culturally diverse management teams are often successful in performing cross-border business.

Forbytes supports diversity and is successful in their business model. Lauring and Selmer (2013) define diversity as the existence of a number of nationalities. One of the top managers at Arctic, Matt, also sees diversity as a factor of nationality. When discussing diversity, he speaks about it from a nationalistic perspective, saying, "I would say we're a fairly international team, even in Sweden. Maybe 60% Swedish, 40% others." Both of these individuals are immigrants themselves, and that fact has an impact on their views of diversity. The first responses were that diversity is related to nationality. Additionally, these firms have a diverse workforce that could also impact the interviewees views.

Arguments for a broader definition of diversity that does not only reflect the cultural or racial aspect, have been made in recent years. A definition that is relevant to the workplace and includes education, work experience, learning style and personality has been suggested (Jones, 1999; Kennedy, 2009; Schmidt, 2009). The two remaining firms have a similar view of diversity. When asked about the diversity of his team, the co-founder of Beta, Mark, states,

I mean we, are very diverse. We have different things that drive us, different goals. I mean, more like personal goals; but, we have the same view about where we want to be with the company.

Mark and his co-founder are from Sweden and most of his employees are local and engineers. His focus is more on background than on nationality. Finally, the co-founder of Nattaro Labs, Christine, has a similar view, defining diversity as a factor of background or competencies:

Background and experience and your competencies. I would also include this aspect which I think is very important for a successful company, that you are not all engineers. You could be different sexes and you can be from different countries, but you're all engineers. That's not diversity.

She is also from a firm with mostly Swedish employees; however, her founding team has a diverse set of backgrounds including a scientist and three business professionals. Diversity was also established as a value by the founding members. From Nattaro's perspective, having "all engineers" is not diversity, and in that way, their values differ from that of Beta.

The definition of diversity varies based on the background of the individual. Additionally, the context effects the definition of diversity in that a culturally diverse environment seems to lead to diversity based on nationality and a culturally similar environment leads to a definition of diversity related to background in our sample.

#### 5.2.2. Innovation

Early researchers, such as Rogers (1983), defined innovation as "an idea, practice, or object that is perceived as new by an individual." Later descriptions were expanded. Rujirawanich, Addison and Smallman (2011) stated that innovation is the process of introducing and implementing many things including ideas, products, services, procedures and more. We had varied definitions of innovation from the SMEs in the institutional context. Each actor had a personal definition of innovation, described in the following paragraphs. Don, when asked about innovation as a method of change, said,

Every company has to be prepared to change. In our business strategy, we actually highly use the term innovation in that context. We have to constantly look at the services we are supplying. On the assumption we have the right people, how do we use those people to do what they do best? In that sense, you're innovating.

Don defines innovation from a service-oriented perspective. Bessant et al. (2005) similarly view innovation as a core process of renewal. Further stating that unless the organization changes its offerings, it risks survival and growth (Bessant et al., 2005). For Forbytes, new service offerings are important for successful growth. For Matt, innovation is a thought process. He says,

I guess innovation would be approaching a problem from a totally new angle, with a fresh perspective. This usually comes from someone who hasn't already worked with the product or the problem before.

Matt defines innovation as a mindset and believes that new ideas are often generated by individuals who work outside the everyday environment of a product or service. Sam agrees adding that "diversity of thinking leads to problem-solving." For them, diversity leads to innovation. For Mark, it is all about the development stage of the product or service of your firm.

To do innovation, you can't ..... It is hard to do innovation while you have a deadline because you focus on the deadline.

Mark's company spent the last several years developing new technology. His business was more about delivery. He goes on to say; however, that now that the product is in the marketplace, the time for innovation will be more formalized. For Mark and John, innovation is not just a process but a function of idea generation. For Christine, innovation is a function of her company's sector. Nattaro Labs does environmentally friendly pest control in an environment where the big players are chemical based. She goes on to state that innovation is a group effort.

I also think it's really important to have everyone involved in the innovation or the innovative processes of the company.

"Organizations need to innovate in response to changing customer demands and lifestyles and in order to capitalize on opportunities offered by technology and changing marketplaces, structures and dynamics" (Baregheh, Rowley & Sambrook, 2009, pp. 1323). Innovation was identified as a necessary function; however, the definition has many factors. Innovation was described as a core value, a method, and a set of ideas. These definitions include a key factor, which involves change. When innovation occurs, change is present.

# 5.3. Founders/Managers as Drivers for Diversity and Innovation

The founders or managers of the company were the drivers for the diversity and innovation cultures of their firms. Although many of these firms were founded based on the circumstances of the founder, the continued culture of the firm was driven by the founders' ongoing influence. As Schein (1984) states, the assumptions of culture of the founders of an organization determine to a large extent the initial core values of the company. For Don at Forbytes, the initial creation of the company was due to circumstances; however, his ongoing hiring practices are value based. For example:

We employ people who are proactive. There are various principles like honesty, being candid, being trustworthy, these are things that we actively look for. By employing the right people, that's the first step.

He feels he is the driver of his teams' culture, and a culture of openness allows for a diverse team and leads to unique idea generation. Matt looks at diversity as an idea generation process and has seen it work as such in his own company, so he looked for diversity when hiring his own team. He says, "I define it (culture) to my teams. We have, actually, extremely open innovation channels." Matt also sees himself as setting the direction of his team, and a culture of openness allows for the management of any differences arising from the teams' diversity. This allows for innovation channels to be "open." Mark admits that diversity was not a priority at the beginning of Beta and that most hires were made from within the founders' own networks. Additionally, the focus of the firm was on the development of their core radar product, and not on innovation or new product development. Mark says:

To do innovation, you can't ..... It is hard to do innovation while you have a deadline because you focus on the deadline.

Going forward, he hopes to foster a diverse environment because he sees it as a value-adding function. Additionally, with their first prototype ready the company has turned to innovative markets and solutions for the use of the product in their customers chosen environments. Finally, Christine from Nattaro Labs states that the core values of the company were established at the onset of the firm, written down, and signed by each of the founding members. From the beginning:

We (the founders) talked actually a lot about the importance of having all these various experiences and that should be important. We should not have a group that only consists of one type of people. We need to have a variety of people and that's important for us when we start to grow.

Nattaro included diversity as a key value from the beginning since the founding team had a diverse set of business backgrounds and values. Christine and the other founders saw diversity as a competitive advantage in the global marketplace. This also stems from the fact that three of the founders worked for international corporations before starting Nattaro Labs.

The background of the founder/manager had an influence on the desire for diversity of background or culture in these firms. Additionally, the innovation nature, whether formal or informal, was decided by leadership. In this way, the founders' belief systems and/or the manager's values from the start of the venture drove diversity and innovation in these SMEs.

## 5.4. SME Stages of Development

Where the company falls in the small business's stages of development is relevant to our firms in terms of including diversity and innovation initiatives. At the initial stages, the founders grouped together because of proximity and similar goals. As the firms grow, diversity and innovation initiatives become more critical success factors. For some of our firms, these factors are present starting in the survival stage, but most prevalent in the success stage when survival is possible and the focus turns to internal structure and process. We have classified the firms as follows based on the above definitions of Churchill and Lewis (1983) outlined in the theory section of this paper.

Table 5 - SME Stages

Company	Stage of Development
Forbytes, AB	Success
Arctic	Take-Off
Beta	Survival
Nattaro Labs	Survival

#### 5.4.1. Diversity

For Don and Forbytes, existence was a function of circumstances. The firm was started when two former colleagues were let go from their positions at another firm. Having had previous contact with Don, both reached out and a new company, Forbytes, was formed. During the survival stages, the focus was on hiring the right people to do their jobs well. Now that Forbytes is in the success

stage, the focus has become formalization of internal functions. Forbytes is currently writing HR practices and is focusing on hiring more female employees because, as Don says, "My initial thing is to try and get a balance within the organization. I know it's not going to happen straight away. It's an ideal target." For Matt, whose firm is in the take-off stage, the company was originally all Swedish but became more diverse when it was difficult to hire the right competencies within Sweden.

I think the preference is to hire local Swedes. That's the trend I see. Again, the problem is there's just not enough of them to go around. We are forced to hire overseas.

Sam also indicated that the firm's diversity can be linked to the search for talent, stating, "Right now in Sweden, in the space we are in, it is very hard to find good talent." For Mark, whose firm is in the survival stage, it was easiest to have a very like-minded group of employees in the beginning, all located in one place, to get the product to market quickly and efficiently. Now, with the prototype functional, other factors become more important. He says,

Yes because we are now creating a mini-society. In the beginning, it was a lot based just on (my COO) and I and our dynamic in way; but, now, we are relying more and more on people. It is more important for the group, as a whole; and, that is where I think diversity is the most important really.

As Beta adds more and more employees, Mark feels that their environment should reflect normal society. Specifically, he plans to focus on hiring more women in the future. Finally, Nattaro Labs, with eight employees, is a bit smaller than the other three firms. They established a culture of diversity starting with the founders who were a diverse team whose backgrounds in both science and business differed. For Nattaro, also in the survival stage, it's more about maintaining diversity as a core value. They did so when they started hiring lab technicians.

Our first lab assistant, she was doing her Masters in Biology. She was from Spain, Anna, and Zainab who is from Pakistan.

With so few employees, diversity of nationality is difficult to maintain; however, diversity of background is still a core value.

The stage of development of the firm affects hiring practices. In the existence phase, entrepreneurs rely mainly on their personal networks to recruit core team members (Leung, 2003). At this time, the focus is less on diversity and more about access to high-quality employees who fit into the small or medium size team. When the firm begins to grow, attention turns to developing an inclusive environment for the employees.

#### 5.4.2. Innovation

A study by Danvila-del-Valle et al. (2018) showed that companies in the first stages of the corporate lifecycle could be linked to a flexible environment with open innovation channels. For our smaller firms who are still in the survival stage, innovation was an informal but present process. As John from Beta states:

In this company, we work with innovation every day because we have the world smallest radar; and, we are trying to find our market, our pitch. So, we are working with a lot of challenging use cases that do not exist by other sensors that you have on the market. We are trying to create added value with our sensor.

Although the radar device has been developed, the firm is constantly applying its initiative to determining the best market for the device. Innovation now occurs in response to the requirements of each new customer. Zainab from Nattaro notes that the idea sharing process in her company is open as well:

It's quite open in the company, is not like they are having a higher rank or lower rank. They are quite open to ideas. Whenever I have an idea, they obviously hear and they appreciate them.

Nattaro Labs has a very open innovation and idea generation process.

Alternatively, a study by Huergo and Jaumandreu (2004) shows that the likelihood of innovation changes over the life of the firm. New firms have a high probability of innovating, with that likelihood decreasing along with the age of the firm (Huergo and Jaumandreu, 2004). For our service-oriented firm, Forbytes, a formal management review of the current service offerings has been created; however, this process is quarterly rather than daily. Don states,

We talk about it a lot and I'm constantly thinking about it. I would say we most probably, my partners and I; we discuss these things regularly. Probably every quarter.

At Arctic, our firm in the take-off phase, Matt mentioned that there is a centralized process for submitting innovative ideas and each idea is equally considered. He states:

Anyone in the company can create a request for a feature. It is considered and balanced along every other request from every customer or every CEO or anything. They're all treated the same.

However, he also notes that new development is not in process at the moment as their focus is on their main three revenue streams and a future acquisition.

That said, all firms had some level of innovation at each stage. Whether it was continuous development, such as in the case of Beta and Nattaro Labs, or new processes as it relates to Arctic and Forbytes, innovation was present.

# 5.5. The Advantages and Disadvantages of Diversity

### 5.5.1. Advantages

Our interviewees suggested several advantages of having a diverse workforce. Many of these companies suggested that diversity helps with idea generation. Others suggested that a diverse or balanced workforce makes employees "happy." Specific examples of the advantages of diversity are listed here. Matt from Arctic states that having a diverse group helps him with idea generation in his team.

The pros are, I have a huge number of ideas. That team does not suffer. That group does not suffer from groupthink at all.

This is in line with Govendo (2005) who argued that the more diverse the experiences, perspectives and world views, the greater the likelihood that a creative mix of ideas will develop an innovative

solution. Zainab from Nattaro Labs made a similar statement. She argues that the diversity in her company is related to the generation of ideas and the ability to share those ideas with the group.

I would say that diversity there (in Nattaro) is the ideas as well because everyone has quite different ideas and perspectives as well; and, when you present an idea in the fika meeting as well, you can see the perception of different people of the same idea is quite different from each other.

Holtzman and Anderberg (2011) explain that a diverse team with a diverse set of backgrounds and skill sets has an even higher level of performance and the likelihood of breakthrough innovations increases. John from Beta agrees. He thinks that the mix of culture and experience helps in the expansion of the knowledge sharing and different points of view.

If you mix people and mix culture and experience and knowledge, you can, actually, is more fun to work at work at least I think that, because you always want to expand your knowledge.

Finally, Pitts (2006) states that diversity helps a group avoid groupthink and generate creative and effective solutions. Groupthink is possible when a group makes an irrational decision to avoid conflict. This is less likely with a diverse workforce. Diversity is seen as an advantage for these firms, regardless of a few of the disadvantages noted below.

### 5.5.2. Disadvantages

Kochan et al. (2003) showed that diversity could have both positive and negative effects on group processes. For this reason, diversity has to be managed by recognizing and valuing individual differences (Leopold & Harris, 2009). Although a diversity of background was considered a positive trait, several of the interviewees discussed the negatives of a culture of diversity. For Don, lack of a common goal and a formal business structure make diversity a negative attribute.

If you don't have a common goal, diversity is a bad thing because if you have a group of people who are working together; and, they don't have a common goal, they're all (over the place).

Also, a lack of trust can cause issues. As Don states, "Trust is crucial. If you don't have trust, you don't have anything." Don believes that his open culture allows for differences in cultural background, but also fosters an environment where new ideas can be easily and readily shared. Matt has fostered a similar environment of trust where he "mostly plays the marriage counselor" for his teams. He is the go-between when differences become issues, managing personality types and differences of opinion. Both Don and Matt understand that there is a "possibility that diversity might lead to lower firm performance if decision making becomes more time-consuming because of diversity," and both firms manage for this possibility (Solakoglu and Demir, 2016, p. 1408). For Mark, diversity is something that is necessary for the later stages, but not always important.

In the beginning, it was a lot based just on the COO and I and our dynamic in a way; but, now we are relying more and more on people....and that's where I think diversity is the most important really.

He goes on to say that in the beginning, it was most important that he and his COO got along. Having similar backgrounds, both being engineers, was the priority. However, now that the company is expanding and hiring more people, the focus has changed.

Although some definition of diversity was valued, issues related to diversity management were noted. Diversity without a purpose or lack of structure was considered counterproductive or challenging.

### 5.6. The Context

Cox (1994) states that differences in group and individual identities interact with many organizational factors to determine the impact on individual and organization diversity outcomes. Joshi and Roh (2015) build on this saying that societal history and culture, as well as organizational processes, affect group diversity dynamics. Our analysis noted that the context of Sweden and the technology industry affects the diversity dynamics of our firms.

### 5.6.1. The Diversity Context of Sweden

Although Sweden has come a long way in the last decade, with immigration numbers increasing, diversity, as it relates to nationality, is still a challenge for Swedish firms (Statista 2018). Our interviewees see this from several perspectives. These perspectives vary depending on the nationality and immigration status of the entrepreneur. For Don, in his experience, Sweden does not do racial diversity well. He states:

If we're talking about diversity in the sense of racial diversity, Sweden's still got a long way to go.

He goes on to say,

There's still racism, but it's a different kind of racism because it's on the surface. People will not say to you openly because they don't want to break-- You see the Swedes are very conditioned by law. They won't say it openly, but that will be in their hearts.

Don outlined several scenarios where his acquaintances were open to diversity in public, but privately made anti-immigration comments. He also mentioned scenarios where his customer base refused to work with him because his employees were outside of Sweden. Don felt that social desirability caused people to say positive things in public and negative in private. Matt at Arctic has had a similar experience. Matt moved to Sweden three years ago with his current firm. He states:

To me, they really talk it out, but talk is cheap. I hear a lot of grand gesturing, but it always feels like, Sweden number one. Maybe you can find that in most countries, but whereas Sweden will say they're better than that, I really disagree. I don't think they're better than anyone else. There's a bit of a two-faced thing going on here.

Both interviewees feel that diversity is not appreciated by many firms because it is not yet appreciated by Sweden as a whole. Although many Swedes represent equality in the news or in public, in private their views are less positive. Given that the founders and managers influence the perspectives of their firms, this could have a lasting impact on the diversity initiative of SMEs.

Alternatively, Mark from Beta, whose firm is mostly Swedish, sees immigration from another perspective. He feels that hiring outside of Sweden is very challenging.

One of our employees, he didn't have a residence permit and that was quite a lot of work and quite hard to get that in place. I wouldn't say that we avoid that; but, it took quite some time with the immigration agency to get that to work...but it was too slow.

He claims that the bureaucracy of the migration agency prevents his company from hiring outside of Sweden. The risk that the individual is not approved is a big risk for a small company to take. He mentions that it is important for his employees to be local for his business to work. As a small firm, they cannot take the risk that a new employee will not make it through the immigration process. Finally, Christine says the following when discussing Swedish culture.

It's so difficult to say like on a general term because when you talk to people, the majority would recognize that this (diversity) is important. They're not against it, but if it comes down to deciding-- in Sweden, it's always very important that you're qualified. If you're qualified, that's much more important. It's never top priority (diversity).

Her viewpoint is that diversity is more about qualifications and less about nationality from a Swedish perspective.

Both Don and Matt had a negative view of the Swedish diversity context. Perhaps, as immigrants themselves, they were subject to some of the limitations they outlined above. The two Swedish nationals; however, described why diversity is sometimes difficult from the Swedish standpoint. Both of these views, though valid, differ because of the background of the individual making the statement.

# 5.6.2. The Technology Industry Diversity Context

Several of our interviewees suggested that the technology industry was lacking in qualified or interested females and this was a core reason for the lack of gender diversity in their firms. A study by Fouad et al. (2017) shows that the underrepresentation of women in Science, Technology,

Engineering and Math has been noted by many leaders. Additionally, research shows that even if women finish the rigorous training program to become engineers, they never enter the field or leave the workforce quickly (Fouad et al., 2017). Don noticed this most in the programming department, saying that he thinks the field is still male-dominated. His focus now is balancing the male and females in his business as a whole; however, he is still searching for the best fit for his company. Matt at Arctic feels the same about his industry. He says,

There's just not a lot of women engineers. You can see that in school. I remember going to school; we must have been like 95% male. If those are going to be the people who eventually become directors of engineering, that's just statistics for you.

Matt feels that this trend starts in the college programs leading to an imbalance in the industry. Mark at Beta has a similar view. He also believes that the lack of females starts with the education programs, saying:

There is a quite a lot of specialist positions that are fewer females than males with those backgrounds definitely. That's the fact. Then you see that already at education as well, like computer science and electronics. That's a very low percentage of women.

John, who works with Mark, feels the same. "I think that is the business we are in. To find females that are interested is not so easy." He goes on to say,

If you want to get an algorithm expert or software development expert, those are very embedded systems. It is much easier to find a man compared to female.

Although her firm is more balanced in its ratio of male to female employees, Christine sees this issue at the board level saying that, "the majority of boards are 90% male." She feels that the technology industry as a whole is still male-dominated.

Balancing employee's genders at an SME in the technology industry can be challenging because the number of females in the industry is not balanced. Blickenstaff (2005) suggested changes to science education could assist with this problem and the same issues can be resolved in the field of engineering. For SMEs and other firms who strive for a balanced environment and for the

females already in the industry, attention should be paid to the education programs supplying that talent.

# 5.7. Secondary Findings

### 5.7.1. Profitability as a Driver for Diversity

Decisions about diversity are often taken from a profitability perspective (Woodhams & Lupton, 2009). Partners in other countries are sometimes hired because the cost of labor is less expensive than in Sweden. Also, a lack of qualified parties in Sweden can drive hiring practices. Diversity is not a factor of design, but a business practice to be managed. Don hired outside of the country for two reasons. First, the cost of labor in Sweden is more expensive. As he states, I'll start employing Swedish people to go out as we can afford it." Secondly, hiring is a function of need. He goes on to say that there is "a shortage of software developers in Europe and America" so he hired his development team outside of his home country. Matt had a similar view, saying:

Diversity is not intentional; it's purely out of need. That wasn't; we need some Polish ideas. It was, Poles are cheap compared to Swedes. It was a necessity driven thing. I honestly think the Swedish company was forced into diversity just because they couldn't find the engineers locally.

Mark concurs, saying that the large companies that Beta hires from, "have quite a hard to find the right competence locally, they need to go abroad to find that" thus making the workforce of the larger firms more diverse. Finally, Christine sees uniformity as a barrier to profitability. She states,

We said we need to get some new energy and we want the organization to be... We don't want to be prevented from growing because sometimes founders they hug their company to death. They are really protective.

She believes that diversity in an organization prevents the founders from over controlling their firms and preventing the true innovation processes from occurring. We have stated that there are many definitions and many drivers of diversity. Profitability is a driver for the company, so it follows that it is also a driver of diversity culture.

### 5.7.2. Does Diversity Lead to Innovation as Perceived by the Interviewees

At this start of this study, the authors were mostly curious about the relationship between diversity as a broad term and the innovation potential of that same firm. For this reason, the author's queried our interviewees about whether diversity, as it exists in a firm, affects the innovation culture of the same firm. We based this discussion on our theoretical research that showed that previous studies had linked diversity in teams to innovation potential or ideas generated (Bridgstock et al. 2010). Additional studies discussed gender diversity as a trigger and facilitator of innovation (Eriksson, 2014). The interviewees had a positive view of the relationship between these two factors, stating that they felt a relationship existed. Don said:

My assumption is if you've got different ideas, you've got people using their brains, but you're working towards a common goal. It just seems logical. You must have a more successful business. For some reason, you may not, but as a general rule, my assumption is you must have a better business.

Don sees diversity as a positive measure for idea generation. He again mentions that a common goal is necessary to maintain quality; however, with this in mind, he believes that a diverse workforce has innovation potential. Matt felt positive as well, stating:

I would argue that it's for the best. What your customers are going to end up seeing is the result of that innovation. The net benefit of that cultural intermingling in a company is definitely positive, in my view.

Matt also felt that the innovation potential of a diverse workforce outweighs the issues that arise from the differences in working styles and Sam agrees, saying that, "Diversity allows us to build better solutions and test eachothers' ideas better." Thereby bringing value to Arctic's customers. Mark, who admittedly didn't have a centralized process to collect new ideas until recently sees the importance of having different perspectives.

Right now, with the number of people we are. Yes, I think that's good because now there are more contact points. There are more people that can talk each other and now I think it's really important for us to get these different perspectives that you get from diversity. Right now since we are going to innovate, it's important for us.

Christine said the following when asked about a relationship between diversity and innovation:

(If) the thing I said before that you had this different industry backgrounds and things like that (applies), then I'm convinced about it.

Although a direct relationship could not be validated within the parameters and design of this study, actors still saw a relationship between diversity and innovation as it relates to the context of their environments and this study.

# 6. Conclusion

In this study, we investigated how SMEs in the Scania region of Sweden perceive diversity and innovation while determining the drivers for these factors. We interviewed the members of four firms in the technology industry and analyzed their responses to determine what drives diversity and innovation tendencies. We have shown that along with varying definitions of innovation and diversity, drivers of these factors have some commonality in our sample.

Varied definitions of diversity and innovation were noted, and the fact that these terms are so broad is consistent with previous research. Furthermore, drivers of diversity were identified, starting with the founders/managers influence on the culture of the firm. What we found is that the founder's values or directives determine the diverse nature of some firms, while environmental or governmental factors and networks determine the diversity of others. For innovation, the importance of the founder drives the cross-organizational innovation culture.

Many of the interviewees saw some advantages and disadvantages of diversity. Diversity allows for idea generation and avoidance of groupthink. Though they often stated that the positives outweigh the negatives, diversity required some level of management or structure for a business. From goal setting to "playing the marriage counselor," our interviewees mentioned scenarios where intervention was necessary.

Additionally, multiple examples from the Swedish context were noted. Some participants felt that Swedes were prejudiced while others believe the Swedish government made it difficult for small firms to recruit outside the country. Both the management of diversity within the firm and the management of immigration by the Swedish people and government were influencing factors in the diverse nature of the firms we selected.

Two secondary themes were discovered during the empirical analysis: Profitability as a driver for diversity and the relationship between diversity and innovation. Some interviewees believe that diversity in their firms was driven by profit or the need to look outside of Sweden for talent. Finally, our interviewees saw a relationship between diversity and innovation as it relates to idea generation, corporate culture, varied perspectives and problem-solving.

Our study shows that diversity and innovation are perceived differently based on context and background. Innovation is required for competitive advantage and diversity was seen as an advantage in the firms selected for our study regardless of the potential issues it creates. For this reason, diversity and innovation should be managed similarly to other corporate functions to assure that these desirable traits are incorporated proactively into new firms.

# 6.1. Implications of the Study

#### 6.1.1. For Researchers

This study has attempted to explore and describe the perception of diversity and innovation in the SMEs from the Technology Industry in Scania. Given the nature of this research, we understand there are limitations regarding the methodological approach used that restrict the generalization of our findings to the rest of SMEs in Sweden. For that reason, we believe that future researchers who use quantitative methods can improve the findings of this study with a larger sample of participant companies. Additionally, the potential link and impact of having a diverse team on the innovation process of a company could be investigated further. Future research should focus on proving this finding that is in nascent stages in the academic world.

Another recommendation for future research could be performing a narrow study of the variables of diversity, like gender, nationality, age, background, and how SMEs behave in detail in response to each variable. A similar recommendation can be made with the variable of innovation. For example, performing a study that only focuses on idea generation and how the context (demographic or industry) impacts this topic.

Finally, one future implication is the creation of a model or tool to assess how well the culture of diversity within an organization is implemented regarding a particular dimension, for example gender, age, nationality, etc.

#### 6.1.2. For Practitioners

This study contributes to a better understanding of the current problems faced by some SMEs in the recruitment of the right foreign talent. In that sense, the Swedish policy maker should be aware of the current bureaucratic barriers that impede or slow down the process of hiring foreign talent in an efficient way. Also, policymakers should attempt to improve the attraction of high-quality foreign talent to the Swedish workforce, promoting a diverse cultural environment.

Another concern for policymakers is the lack of gender diversity, specifically the lack of females, in the technology industry. The four participant companies have stated that gender diversity is a priority; however, finding qualified women in the workforce is difficult because the number of women in the industry is smaller than the number of men. In that sense, policymakers and universities should start thinking of new ways to attract females to study these fields due to the industry needs.

Finally, this study will help managers of SMEs pay attention to human resources practices within their firms regarding diversity. Many of our interviewees agree that a diverse culture contributes to the generation of new ideas and improves the environment of the company. In that sense, the founders should review this research and start to analyze the current reality in their businesses in an effort to create a diverse environment.

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# Appendix A - Interview Guide

#### **Part 1: General information**

- 1. Name of the interviewee
- 2. Job position
- 3. Time working in the company
- 4. Nationality
- 5. Industry of the company
- 6. Years of founded the company
- 7. Number of employees

#### **Part 2: Innovation:**

- 1. Can you explain me how you get the idea of creating this service/product?
- 2. What is the value proposition of your company?
- 3. How can you differentiate to the rest of competitors?
- 4. Do you think that your product/service is innovative?
- 5. What is innovation for you or for your company? (innovate in process or in products/services)
- 6. Do you think that innovation is a competitive advantage for your company in comparison to other competitors?
- 7. What are the benefits of the innovation in general?
- 8. Do you think that innovation breaths in your company? (Can you give me an example?)
- 9. Can you explain me how is the process to generate new products or services in your company? Do your employees participate in this part or is more a discussion between the founders/top management?
- 10. If an employee has a new idea, how can he/she get in contact with you (top management) to be listen?

#### Part 3: Diversity:

- 1. At the time of the creation of your first business idea, how many members were part of the creation team? How was your team composed?
- 2. How did you choose those team members? They were former classmates or friends?
- 3. How was the relation with your team members? Do you have some differences during the development of the first product? Which were the differences?
- 4. How is compose your top management team? And in relation to your employees, approx. what is the percentage of men/female and nationality?
- 5. What does diversity mean to you?
- 6. Do you think that the diversity of your team members (founders or top management) helps you in the development of the business?
- 7. What are the pros and cons of having a diversity company?
- 8. Do you consider that you have a culture of diversity in your company?
- 9. How does your company encourage the diversity? Do you have policies or procedures about it?

#### **Part 4: Context questions:**

- 1. Do you think that the IT/agricultural/food/etc industry is diverse?
  - a. What is your opinion about gender/nationality/age diversity? Do you think that the IT industry is diverse in this topic?
  - b. Do you think that the SMEss in Scania are diverse?
- 2. Do you think that the policies of the Swedish government support diversity in business? (gender, nationality, age, etc)
- 3. Do you think that having a culture of diversity boost the innovation inside the business?