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MASTEROPPGAVE

Rural innovation for SME: Empirical Insights in network dynamics and challenges faced by companies in Vestland.

Rural innovasjon for SMB: Empiriske innsikter i nettverksdynamikk og utfordringer møtt av selskaper i Vestland.

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Abstract

Norway's diverse landscape is characterized by stunning fjords, towering mountains, and numerous rural areas with unique business challenges and opportunities. This master's thesis focuses on the region formerly known as Sogn og Fjordane County, now incorporated into Vestland as of January 1, 2020. The choice of this specific region stems from my firsthand experience with companies in the area during my internship at Sogn og Fjordane Næringsråd. Companies operating in rural areas face several unique challenges every day. Among these challenges are transport problems, which can be caused by poor infrastructure or the complete absence of it. Furthermore, these companies often experience a lack of resources, whether in the form of qualified labor, limited suppliers, or limited raw materials.

The existing literature often separates rural location challenges from network theory discussions. This thesis uncovers new insights by extracting essential factors influencing innovation in rural contexts. This will be achieved by combining networks and rural theory. This approach will shed new light and better understand the challenges and opportunities for innovation for companies in rural areas. Therefore, this thesis explores what companies in the former Sogn og Fjordane region perceive as drivers and barriers to innovation. To shed light on this matter, a qualitative approach and more determined interviews were used. Six companies from various industries based in different parts of former Sogn og Fjordane were interviewed.

Based on the literature and the findings, recruiting qualified labor if the company is located in a rural area is a significant problem. Still, this study also shows that this problem might not only be a problem. While there is trouble getting qualified people, the companies benefit from being rural in the form of employees who stay for a long time. The research also reveals that certain factors are more important than others and affect innovation more. However, there is also a difference between industries.

Keywords: Rural, Network, Organization, Innovation, SME

Sammendrag:

Norges mangfoldige landskap er preget av fantastiske fjorder, ruvende fjell og mange landlige områder med unike næringsutfordringer og muligheter. Denne masteroppgaven fokuserer på regionen tidligere kjent som Sogn og Fjordane fylke, nå innlemmet i Vestland fra 1. januar 2020. Valget av denne spesifikke regionen stammer fra min førstehåndserfaring med bedrifter i området under mitt praksisopphold i Sogn og Fjordane Næringsråd . Bedrifter som opererer på landsbygda møter flere unike utfordringer hver dag. Blant disse utfordringene er transportproblemer, som kan være forårsaket av dårlig infrastruktur eller fullstendig fravær av den. Videre opplever disse selskapene ofte mangel på ressurser, enten det er i form av kvalifisert arbeidskraft, begrensede leverandører eller begrensede råvarer.

Den eksisterende litteraturen skiller ofte landlige lokalisering utfordringer fra nettverksteoretiske diskusjoner. Denne oppgaven avdekker ny innsikt ved å trekke ut essensielle faktorer som påvirker innovasjon i landlige sammenhenger. Dette skal oppnås ved å kombinere nettverk og bygdeteori. Denne tilnærmingen vil kaste nytt lys og bedre forstå utfordringene og mulighetene for innovasjon for bedrifter i distriktene. Derfor utforsker denne oppgaven hva bedrifter i tidligere Sogn og Fjordane-regionen oppfatter som pådrivere og barrierer for innovasjon. For å belyse denne saken ble det brukt en kvalitativ tilnærming og målbevisste intervjuer. Seks bedrifter fra ulike bransjer med base i ulike deler av tidligere Sogn og Fjordane ble intervjuet.

Ut fra litteraturen og funnene er det et betydelig problem å rekruttere kvalifisert arbeidskraft dersom bedriften er lokalisert på landsbygda. Likevel viser denne studien også at dette problemet kanskje ikke bare er et problem. Mens det er problemer med å få tak i kvalifiserte folk, tjener bedriftene på å være landlige i form av ansatte som blir lenge. Forskningen viser også at enkelte faktorer er viktigere enn andre og påvirker innovasjon mer. Det er imidlertid også forskjell mellom bransjer.

Nøkkelord: Rural, Nettverk, Organisasjon, Innovasjon, SME

Preface:

This master's thesis represents the end of my two-year Master of Science in Business program, specializing in marketing and innovation, at the Western Norway University of Applied Sciences, Campus Sogndal. During this thesis, I have had the opportunity to interact with numerous knowledgeable representatives from various companies from former Sogn og Fjordane. Everyone has demonstrated high dedication to their work and takes pride in their respective company.

Since I have been working alone on this thesis, I only had myself to argue with most of the time. It has been an exciting journey that has brought me much joy and some headaches, but most of this spring has been filled with moments of discovery, growth, and accomplishment. I hope this study can shed some new light on how network effects influence innovation work for companies in rural areas.

I want to express my gratitude to my supervisor, Veronika Trengereid, for the good help throughout the process. Through discussions and constructive feedback, I have received valuable academic guidance. At the same time, I would like to thank all the interviewees who have taken the time to contribute to my study.

Table of Content

ABSTRACT	2
SAMMENDRAG:	3
PREFACE:	4
TABLE OF CONTENT	5
LIST OF FIGURES	8
LIST OF TABLES	8
1. INTRODUCTION	9
1.1 BACKGROUND OF THE RESEARCH AREA	9
1.2 PROBLEM DISCUSSION	11
1.2.1 <i>Research Problem</i>	12
1.3 STRUCTURE	14
2. LITERATURE REVIEW	16
2.1 ORGANIZATION	16
2.2 INNOVATION	18
2.2.1 <i>Different innovation in the organization</i>	19
Product innovation	19
Process innovation.	20
Marketing innovation	20
Organizational innovation	21
2.3 RURAL LOCATION	21
2.3.1 <i>Challenges and opportunities in rural areas</i>	22
2.4 NETWORK	24
2.4.1 <i>Local buzz and pipelines</i>	25
3. RESEARCH METHODS	29
3.1 RESEARCH APPROACH	29
3.1.1 <i>Case study</i>	30
3.2 DATA COLLECTION	32
3.2.1 <i>Interview</i>	32
Sample	34
3.2.2 <i>Conducting the interviews</i>	35
3.3 DATA ANALYSIS	36
3.3.1 <i>Coding</i>	37
3.4 RELIABILITY AND VALIDITY	37
3.4.1 <i>Reliability</i>	38

3.4.2 <i>Validity</i>	38
3.5 ETHICAL CONCERNS	39
4. FINDINGS	40
Innovation	40
4.1 ORGANIZATION INTERNAL FORCES	41
4.1.1 <i>Vision</i>	41
4.1.2 <i>Organizational culture</i>	43
4.1.3 <i>Competence enhancement and turnover rate</i>	45
4.2 ORGANIZATION EXTERNAL FORCES	47
4.2.1 <i>Employees</i>	48
4.2.2 <i>Laws and regulations</i>	51
4.2.3 <i>Local affiliation</i>	53
4.3 NETWORK	54
4.3.1 <i>Collaboration</i>	54
4.3.2 <i>Projects</i>	56
4.3.3 <i>Local, National or Global</i>	57
5. DISCUSSION AND IMPLICATIONS	60
5.1 ORGANIZATION INTERNAL FORCES	60
5.1.1 <i>Vision</i>	61
5.1.2 <i>Organizational culture</i>	61
5.1.3 <i>Competence enhancement and turnover rate</i>	62
5.2 ORGANIZATION EXTERNAL FORCES	63
5.2.1 <i>Employees</i>	63
5.2.2 <i>Laws and regulations</i>	64
5.2.3 <i>Local affiliation</i>	65
5.3 NETWORK	65
5.3.1 <i>Collaboration</i>	66
5.3.2 <i>Projects</i>	66
5.3.3 <i>Local, National or Global</i>	67
6. CONCLUSION	69
6.1 CONCLUSION OF THE RESEARCH	69
6.2 THE STUDY'S CONTRIBUTION	70
6.3 LIMITATIONS AND FURTHER RESEARCH	70
7. REFERENCES:	72
8. APPENDIX	78
APPENDIX 1. COMPREHENSIVE OVERVIEW OF INNOVATION BARRIERS AND DRIVERS	78
APPENDIX 2. INFORMATION LETTER (IN NORWEGIAN)	79

APPENDIX 3. GRANTED APPLICATION NSD82
APPENDIX 4. INTERVIEW GUIDE83

List of figures

Figure 1: Map of municipalities in Vestland based on centrality (KDD, 2021).....	11
Figure 2: Structure of the thesis.	15

List of tables

Table 1: A presentation of my collective case study.....	35
Table 2: A presentation of drivers and barriers for innovation.....	60
Table 3: Comprehensive overview of innovation barriers and drivers.....	78

1. Introduction

In this opening chapter, I will introduce the context of the research area, explain the rationale behind choosing this topic, and explain why it is empiric-driven research. Then, I will outline the research objectives, delve into my research problem and questions, and discuss the expected contributions and the structure of my thesis.

1.1 Background of the Research Area

During the Master of Science in Business program, we have internships in the spring of the first year. I interned at the Sogn og Fjordane Næringsråd, a business policy organization representing the business community in Sogn og Fjordane. They have approximately 120 members from various businesses. My work involved assisting in creating a strategic plan, and it was here that I gained insight into the challenges members face daily. This insight was gained from a survey by members and non-members in the spring of 2023. This survey was designed to identify different challenges businesses in former Sogn og Fjordane face due to their location in rural areas. It was from this work that I became interested in the topic of innovation in rural areas. As a result of this work, I gained insight into what inhibits and drives innovation among businesses. Initially, I had an idea that since businesses in rural areas are relatively small, this would also result in imbalance, for example, in the choice of suppliers or partners, and that this would further impact innovation efforts in projects and other collaborations.

In many academic circles, knowledge is increasingly viewed as a crucial resource, and innovation is seen as a significant process for creating economic value and development in the face of globalization and the evolution of the knowledge economy (Gundersen & Onsager, 2011). Innovation work for small and medium-sized enterprises (SMEs) is crucial in several ways (Gamito et al., 2021). First, it is linked to survival and growth since there are often small markets and limited resources in rural areas. Secondly, innovation can improve efficiency, such as production processes. Thirdly, through innovation, SMEs can create value by developing new products and services for their customers, thereby strengthening their brand and customer loyalty. Finally, businesses that demonstrate innovation attract more investors and collaborators than others.

There appears to be limited empirical research. Therefore, it is worth exploring how networks can both hinder and promote innovation, considering known drivers and barriers in rural areas. Networks play a crucial role for businesses in all environments, but in rural areas, their significance may be even more significant due to the limited local market and access to resources. On one hand, a strong network of local businesses and actors can serve as a platform for knowledge sharing, collaboration, and innovation. On the other hand, the lack of a strong network or negative relationships within existing networks can be a significant barrier to innovation. Limited access to knowledge, resources, and expertise can restrict businesses' ability to innovate and adapt. Therefore, it is essential to investigate how network effects affect innovation processes in rural areas and how companies can navigate these dynamics to promote sustainable growth and development.

Conventional theories suggest that innovation activities are better situated in larger cities due to their more favorable environmental conditions. Some recent research, on the other hand, has findings that contradict this view. Their findings show that many countries witness substantial success in innovation activities within rural areas. Furthermore, their research indicates that inventors based in urban areas are not necessarily more productive, measured by the number of inventions, compared to those situated in non-urban areas (Fritsch & Wyrwich, 2021a).

The term 'rurality' and the size of companies can vary significantly, both between different regions and within the same region. I have chosen to focus on the former Sogn og Fjordane, as this is the area I work in, and because I hope that studying networks as facilitators and barriers to innovation among small and medium-sized enterprises in the former Sogn og Fjordane will provide me with additional opportunities to explore this topic more thoroughly. Companies operating in rural areas face challenges different from those in the urban environment. I aim to reveal what factors may hinder or drive innovation by connecting knowledge about companies in rural areas to network relations. Since there is no Sogn og Fjordane today, it is imperative to include a map of Vestland to provide readers with a comprehensive geographical understanding. Such a map will not only aid in visualizing the region under discussion but also serve as a valuable reference point for the geographic features. According to a report by the Norwegian Ministry of Local Government and Modernization, Vestland County's geography is examined in detail (KDD, 2021). The report categorizes the various municipalities in Vestland County based on population density. In the municipality of Sogn, only two have a population of more than 2000. These

two municipalities are Årdal and Sogndal. Årdal, an industrial municipality, has a population of approximately 5,500 and is considered a small center community. Sogndal municipality has a high population count due to its merger with Leikanger and Balestrand on January 1st, 2020. Before the merger, the municipality had around 7,500 residents, but it is now considered a small-town municipality with approximately 12,200 residents (Sogndal Kommune, 2023).

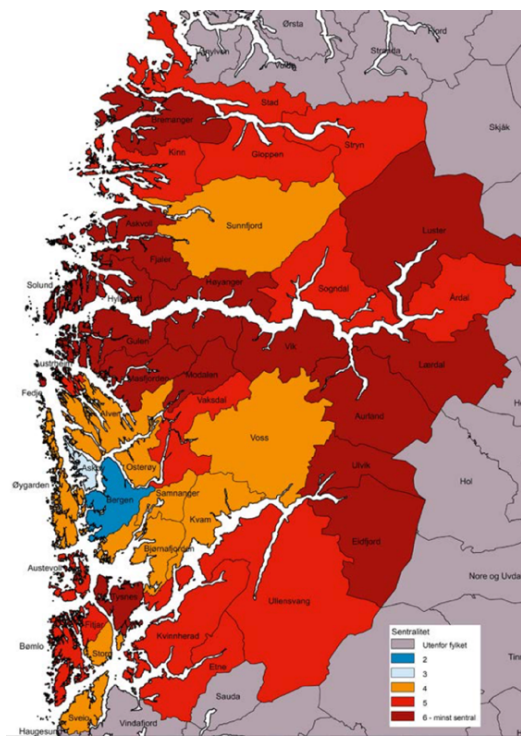


Figure 1: Map of municipalities in Vestland based on centrality (KDD, 2021).

1.2 Problem Discussion

Beyond the tangible challenges of geography, infrastructure, and financing, a network of socio-economic and cultural factors influences the innovation landscape in rural regions like the former Sogn og Fjordane County. The community structures are often tightly and deeply rooted in traditions. These structures can hinder or drive innovation efforts (De Massis et al., 2016). Furthermore, the persistence of operations in rural regions, particularly in areas like the former Sogn og Fjordane County, poses a significant challenge amidst accelerating global urbanization. Moving to a larger urban center may promise better access to resources and a closer connection to the business environment for your company. However, the choice to stay or relocate from rural areas is multifaceted and sometimes not an option since either you are dependent on unique

resources (García-Cortijo et al., 2019), or the company is family-owned and the cornerstone in the community (Wielsma & Brunninge, 2019).

Furthermore, these companies are challenged by younger generations who migrate to urban centers for education and employment. This leads to a deterioration in existing expertise, and as we know, knowledge is one of the drivers of innovation. On the other hand, moving out of the city centers and settling more rurally has become an increasing trend. This trend is most prevalent among families with small children.

To achieve and maintain innovation in the company, it is necessary to have a board with a long-term vision but can also turn around and go the other way or stop if required. It would help if you also had a corporate culture that is experienced in change and understands why we change (Jacobsen, 2018). The corporate culture is often described in how we do things here with us. It is a pattern of actions that the company has built over time, and every company has its own unique culture (Kvålshaugen et al., 2019).

A range of different factors pose a challenge for companies in rural regions. Research and theory have highlighted factors like not getting qualified employees or not enough global pipelines. However, many of the factors companies are struggling with are linked to one theory, and often, the factors within this theory are predetermined. An empirical study can help find the actual factors that make a challenge or a drive for the company in rural areas. Here, the company's voice is the one who decides these factors.

1.2.1 Research Problem

Companies operating in rural areas also rely on innovations to drive economic growth and ensure their survival, as highlighted by Gjelsvik and Isaksen (2016). They also depend heavily on fostering robust networks that provide them access to crucial resources, expertise, and opportunities. While innovation theory and research have been thoroughly explored, the existing literature on the barriers and drivers of innovation in rural areas is primarily derived from commissioned studies conducted by organizations such as Forskningsrådet and By- og regionforskningsinstituttet NIBR (2011), among others. However, a significant limitation of this research is its firm reliance on quantitative data and statistical analysis, often at the expense of qualitative insights. Consequently, there remains a gap in our understanding of how network effects influence innovation processes in rural areas and how companies can navigate these

dynamics to promote sustainable growth and development; it is, therefore, essential to understand this relationship better.

Therefore, it is imperative to delve deeper into how network effects influence innovation processes in rural areas and how companies can navigate these dynamics to promote sustainable growth and development. This gap in the literature underscores the need for a more nuanced exploration of the interplay between innovation and network development in rural contexts. By examining the qualitative aspects of network dynamics, such as relationships, knowledge sharing, and collaboration, we can gain valuable insights into how networks facilitate or hinder innovation in rural settings. It is also a paradox that in rural areas, where companies often operate with limited resources and access to expertise, networks can play a decisive role in the innovation process (Nesse et al., 2014).

While commissioned studies offer valuable insights into overarching innovation patterns, they often overlook the day-to-day operational realities rural businesses face. Consequently, there is a need for a more empirical exploration of how network actors and organizational factors impact companies' ability in rural areas. Furthermore, there is a need for a more nuanced exploration of these challenges hindering innovation and the opportunities propelling it within the company's rural landscapes. I have chosen just one research question:

What challenges and opportunities do companies in rural areas face, and how do network effects influence their innovation work?

This overall research question of the thesis is very open and extensive but narrowing it down against the factors mentioned by the companies, refining it against relevant theories such as networks, innovation, and organization, and using this against what we know from before are known barriers and drivers for businesses in rural areas. To examine the research question, I use the qualitative research method to provide an in-depth understanding. Furthermore, I am interviewing various companies in former Sogn og Fjordane to get the data I need.

One of the primary areas of focus in my research is examining how companies operating in rural areas manage the various challenges and opportunities they encounter in their day-to-day operations. By unraveling the different factors underpinning these challenges and opportunities, my study aims to provide rural companies with invaluable insights to inform strategic planning and decision-making processes. Additionally, I'm going to analyze how the knowledge possessed by these companies crosses with network relations, exploring whether these connections foster or impede innovation.

There are a few limitations to this study. I am choosing to investigate companies in the former Sogn og Fjordane, I am also choosing to neglect some industries. So, by choosing another selection from another part of the country or another country, the factors can be different.

The purpose of this study is to investigate how network effects influence innovation processes in rural areas and how businesses can navigate these dynamics to promote sustainable growth and development. By highlighting these findings, I hope they can empower business leaders and owners in rural areas. Furthermore, I hope this research can bring new knowledge on network dynamics and how it affects innovation and also identify gaps that can be further explored.

1.3 Structure

Chapter 1 of this thesis is an introductory chapter; here, I explain the context of the research area and the rationale behind choosing this topic. I also highlight the delimitations used in this research and the limitations that can arise. In Chapter 2, I present the review of existing literature. This review is a necessary tool to better understand what challenges and opportunities companies in rural areas face and what factors come into play. Chapter 3 discusses the research methods used, how I got my data, and the thinking behind this selection. Furthermore, chapter 4 contains my findings from the interviews. Chapter 5 contains a discussion of the findings against the theoretical framework. Lastly, chapter 6 forms the basis for the final conclusion to the research question before outlining its limitations and offering recommendations for future research.



Figure 2: Structure of the thesis.

2. Literature Review

In this chapter, I aim to establish a solid theoretical framework by reviewing existing theories to develop a theoretical understanding that is relevant to the phenomena I intend to explore. To provide a framework that can answer my research question, I think it is suitable to start the following chapter with an introduction to what affects a company's relationship with others and how this is a driver or barrier to innovation. Further, I go on to explain how innovation fits into this theory. Then, I will give an overview of the rural perspective before I conclude with an explanation of what lies in the network term for this thesis.

2.1 Organization

An organization in rural areas often faces different challenges and opportunities regarding innovation work than an organization in urban areas (Gjelsvik & Isaksen, 2016). The ability of organizations to innovate is contingent upon socio-cultural factors (Uyarra, 2010) and their capacity to engage and cooperate with other stakeholders, including customers and suppliers (Fitjar & Rodríguez-Pose, 2020).

An organization is a structured group of individuals working together towards common goals or objectives. In other words, to be termed an organization, it must comprise two or more individuals collaborating towards specific objectives or sharing a set of values they aim to achieve (Kvålshaugen, 2012). The term “organization” encompasses other terms, such as enterprises, businesses, governmental entities, voluntary or non-profit organizations, and associations. These different types of organizations have very different goals, ownership forms, values, and ways of organization (Kvålshaugen, 2012).

Within the diverse landscape of rural areas, organizations have various forms and functions, contributing to the structure of their communities. Whether they are agricultural cooperatives, manufacturing companies, or IT businesses, these organizations require a driving force for initiatives and progress (Nesse et al., 2014). Their goals, ownership structures, and operational methods may vary, but they all share a common purpose: to improve their bottom line. In this context, the concepts of vision and strategy play a central role in guiding organizations towards sustainable development and growth. By articulating a clear vision and implementing strategic

initiatives tailored to the company, rural organizations can unlock new opportunities and networks, thereby promoting innovation and positive change.

In rural areas, the concepts of vision and strategy are significant in the case of innovation and networking. Vision represents the aspirational goals and desired outcomes that an organization aims to achieve in the long term (Kvålshaugen, 2012). For rural areas, this vision might encompass objectives such as sustainable production, preservation of natural resources, and improved quality of life in the local community.

Strategy, on the other hand, refers to the planned approach or course of action that an organization adopts to realize its vision (Kvålshaugen, 2012). In rural areas, where unique challenges and opportunities exist, strategies must be tailored to meet specific needs and leverage local strengths. This may involve initiatives such as promoting entrepreneurship and small business development, investing in infrastructure and technology, and promoting tourism and cultural heritage. Contributions to the local community will also provide repayment in the long term in the form of positive relationships.

In this way, the strategic integration of vision and action in the value chain not only enables organizations to thrive but also catalyzes positive changes and growth in rural areas. Such forward-thinking strategies allow rural communities to reach their full potential and build a sustainable future for generations to come. However, this requires policies that facilitate the operation of organizations in rural areas and support this vision.

Although the strategy catalyzes positive changes, it can also be a brake if the company culture is not on board. The famous quote “Culture eats strategy for breakfast” originated from the Austrian management consultant Peter Drucker (1985). The term is used in business to explain how plans on paper often mean less than how things are actually done in practice. Peter Drucker (1985) noted one point that is just as actual today as it was then. Culture goes beyond the observable behaviors or visible artifacts that one might notice when visiting a company. For instance, a culture that is resistant to change or overly hierarchical may prevent employees from embracing new strategies or ideas. A culture that values individualism over collaboration may also hinder the success of a strategy that requires teamwork and cooperation (Jacobsen, 2012).

In order to understand the dynamics behind innovation in an organization, it is essential to analyze the internal forces that either promote or inhibit innovation processes. Innovation is a decisive factor for organizational growth and competitiveness in today's constantly changing business environment (Van de Wetering et al., 2017).

2.2 Innovation

The implementation of innovation can significantly impact businesses if executed correctly. This concept has been present for a significant amount of time. There are several ways to define innovation, and the Organization for Economic Co-operation and Development (OECD, 2009, p. 11) defines it as "Innovation is the implementation of a new or significantly improved product (good or service) or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations."

The term innovation is something everybody is talking about since it is strongly associated with growth (Tidd & Bessant, 2020, p. 2). New businesses emerge through innovative ideas, creating a competitive edge in the company's services. However, according to Tidd and Bessant (2020, p. 2), competitive advantages can be obtained from various factors, such as the size or positioning of assets. Joseph Schumpeter, a prominent figure in economic theory, believed that innovation was the heart of capitalism (Schumpeter & Stiglitz, 2010). He proposed that competition in the market should be replaced with competition for the market. This would allow innovators to claim returns for their innovations, thus fostering economic growth. According to Schumpeter, without innovation, economies would stagnate (Schumpeter, 1934; Schumpeter & Stiglitz, 2010).

To Schumpeter, the innovation process was divided into five types: (1) launch of a new product or a new species of an already known product, (2) application of new methods of production or sales of a product, (3) opening of a new market, (4) obtaining new sources for raw materials or semi-finished goods, (5) the emergence or elimination of a monopoly position leading to a new industry structure (Śledzik, 2013).

According to most literature, innovation tends to thrive in urban settings. It has been widely believed that large cities hold distinct advantages over rural areas, commonly referred to as the agglomeration effect (Fritsch & Wyrwich, 2021b; Gu et al., 2023).

However, based on patent data, recent empirical research challenges the longstanding belief that successful innovation activities only occur in urban areas. Instead, it suggests that successful innovation activities are also prevalent in rural areas across many countries (Fritsch & Wyrwich, 2021a, 2021b). This finding contradicts the established theory that innovation is exclusive to urban areas. Research conducted by Fritsch and Wyrwich in 2021 has highlighted the potential of rural areas to foster innovation and contribute to the growth of various industries. These findings suggest that while urban areas may have certain advantages, like a bigger pool of new knowledge and labor. Rural areas can also significantly drive innovation with distinctive local networks or use technology or industry overlooked by actors in the city (Fritsch & Wyrwich, 2021a, 2021b).

2.2.1 Different innovation in the organization

According to Håkonsen (2018), there are several types of innovation, but four primary types stand out for their significance and widespread applicability across industries. These primary types serve as foundational pillars for understanding how organizations innovate and drive value creation. They include; Product innovation, process innovation, market innovation and organizational innovation. The scope of innovation spans from incremental to radical innovation (Tidd & Bessant, 2020). Incremental innovation involves improving upon existing products or services, while radical innovation involves creating something completely different from what already exists (Tidd & Bessant, 2020). A good example of incremental innovation is the different versions of Apple OS, where each new version introduces new features and improvements over the previous version. The introduction of LED-based lighting is a radical innovation that has completely transformed the lighting industry (Tidd & Bessant, 2020). Radical innovations often require significant investments in research and development, and they can profoundly impact the market and society as a whole.

Product innovation

Product innovation is a central driving force behind growth and competitiveness in business. It refers to the process of developing and introducing new products or improvements to existing products in the market. This process often involves combining technological advances, consumer needs, and market trends to create something new and valuable (Kahn, 2018). Product innovation seems to be a more significant driver for employment, something the rural areas depend on if people are still going to live there

(Gundersen & Onsager, 2011). To be successful with product innovation, companies often have to invest time, resources and expertise in research and development. This may involve collaboration with suppliers, partners and academic institutions to exploit new knowledge and technology (Gundersen & Onsager, 2011).

Norway's wealth of natural resources, particularly in rural areas, has led to a unique dynamic where many companies, especially those in the production sector, operate successfully outside urban centers. This contrasts with the global trend of urbanization, where businesses and populations are typically concentrated in cities. These companies capitalize on their proximity to resources such as oil, gas, minerals, fish, and timber. Nevertheless, these companies can only distribute their products or raw materials if the infrastructure is good. This could be a barrier since the infrastructure, especially the Vestland roads, could be much better.

Process innovation.

Process innovation is the process of improving the way products and services are produced or delivered (Håkonsen, 2018). This can involve automating tasks, streamlining workflows, or making changes to the production process (Tidd & Bessant, 2020). Process innovation can manifest itself at different levels and areas of the company, including production, logistics, sales, marketing, customer service, and administration (Alharbi et al., 2019). Important goals of process innovation include reducing lead time, minimizing errors, optimizing resource use, and improving customer satisfaction. By innovating their processes, organizations can increase their flexibility and ability to adapt to changing market conditions while maintaining or improving their competitive positions (Jin & Cedrola, 2019)

Marketing innovation

As defined by Schumpeter (1983), market innovation refers to a market that has yet to be explored by established companies in the industry, regardless of whether it existed previously. In simpler terms, it is about exploring and exploiting new markets. However, leaving the known and taking the step into a new market can be challenging, especially when there is limited availability of information about demand and the dynamics of the current market (Romijn & Albaladejo, 2002).

Organizational innovation

Organizational innovation refers to organizational changes, such as modifications to the structure, management approaches, or work environment (Kahn, 2018). Furthermore, will this mean, according to OECD (2005), "is the implementation of new organizational methods. These can be changes in business practices, in workplace organization, or in the firm's external relations." It can be challenging to distinguish between process and organizational innovations. However, the OECD has a guideline "If the innovation involves the first use of new organisational methods in the firm's business practices, workplace organisation or external relations, it is an organisational innovation " (OECD, 2005, p. 55).

Understanding these four primary types of innovation is crucial for organizations seeking to enhance their innovation capabilities and achieve sustainable growth and competitive advantage in today's dynamic and rapidly changing business landscape. Each type of innovation plays a unique role in driving organizational success and fostering long-term value creation. However, organizations must also navigate various drivers and barriers influencing their innovation efforts. For instance, technological advancements are a significant driver, enabling organizations to innovate products and processes. Similarly, market demand can drive product innovation, aligning organizational efforts with customer needs. On the other hand, limited resources, cultural resistance to change, and risk aversion can act as barriers, impeding innovation initiatives.

2.3 Rural location

An organization's innovation capacity is influenced by its internal structures and processes, as well as the environment in which it operates. This means that an organization's ability to innovate is not only determined by its internal factors but also by external factors such as the economic, social, and political environment in which it operates (Lewis et al., 2018). Most literature focuses on the role urban areas have on innovation. Currently, there is only a limited amount of research that delves into the connection between innovation and rural regions. In addition, there is a lack of understanding of the various challenges and opportunities that contribute to this relationship.

According to Channer et al., (2020, p. 3), urban is defined as "having a population density of 5000 people per square kilometre or more or population density of 1000–

5000 people per square kilometre and fewer than 60% of population commutes by car". The definition for rural areas is also defined by Channer et al. (2020, p. 3) as "rural is defined as population density less than 400 people per square kilometre. "

The Norwegian Ministry of Local Government and Modernization (KDD, 2021) defines urban areas as "A cluster of houses that should be registered as a built-up area if at least 200 people live there, and the distance between the houses should normally not exceed 50 meters." As of 2021, 80 percent of people in Norway live in urban areas (SSB, 2023). In general, rural areas have a low concentration of institutional density. This means that there are only so many institutions or organizations located close to each other in these areas. These institutions may include schools, healthcare facilities, local authorities, businesses, and other organizations that form the institutional framework of a community. Furthermore, it has been observed that the availability and quality of services provided in rural areas are often limited in comparison to more densely populated and expansive regions. (Medby & Karlstad, 2008).

In addition, it's important to note that rural areas in Norway exhibit significant diversity in terms of geography and natural surroundings. Some of these areas rely heavily on agriculture and fishing as their primary economic activities, while others are dependent on specific industries. Unfortunately, many rural areas are facing a pressing challenge in the form of outmigration, with more people leaving these areas than coming in.

One of the primary concerns for these rural communities is the fact that a substantial proportion of those leaving are young individuals who are departing for educational purposes, and there is a notable lack of return migration (Nesse et al., 2014). This trend poses a significant obstacle to the sustainability and growth of these rural regions (Gundersen & Onsager, 2011), as the loss of young talent and potential future leaders impacts their ability to innovate.

2.3.1 Challenges and opportunities in rural areas

The literature shows that many companies find innovation drivers in large urban cities. However, it is only partially accurate to say that these drivers are unique to urban areas. For example, the high cost of living often found in urban regions is due to the high demand and low supply of housing (Fritsch & Wyrwich, 2021a). Furthermore, urban areas often have better-developed infrastructure. This includes broadband, efficient public transportation, and a more advanced educational/research environment structure (Fritsch & Wyrwich,

2021a). Additionally, knowledge can flow more easily in places with agglomeration advantages; conversely, this can be a disadvantage for firms that want to keep their knowledge a secret (Fritsch & Wyrwich, 2021a).

Another barrier for companies in rural regions is getting access to qualified labor. Gundersen and Onsanger (2011) found that for companies in rural regions, the most significant obstacle and a major hindrance to innovation is obtaining qualified labor and managing to keep it. This can be a challenge since research has shown that production companies with highly educated employees innovate more than those with employees with less education (Gjelsvik & Isaksen, 2016). However, while recruiting qualified labor in rural areas is a challenge, the upside is that companies benefit from having employees who stay for a long time (Interreg Europe, 2019).

The literature often describes education and competence infrastructure as an advantage and a driver in urban regions, but this does not mean that rural regions are without this. Hydro Årdal does a lot of research and development work in the Technology Centre located in Øvre Årdal (Hydro, n.d.). Furthermore, in Sogndal, you have Høgskulen på Vestlandet, one of five campuses (HVL, 2016). In Campus Sogndal, you find research and development companies like Forskningsrådet, Innovasjon Norge, Vestlandsforskning, and so on. At the same time, you find companies like Adecco, Visit Sognefjord AS, etc. (Campus Sogndal, 2022).

The motivations for establishing a business in rural regions often diverge from those in urban areas, with rural regions hosting a higher proportion of "lifestyle" rather than "entrepreneurial" firms (Uvarova & Vitola, 2019). Research suggests that there is a bigger innovation rate in areas where there is a strong industrial specialization, something that can be a driver for companies in rural areas (Gundersen & Onsanger, 2011).

Rural companies often have strong local networks, which can be leveraged for collaborative innovation. Furthermore, they can create more local buzz in rural areas since there are fewer companies fighting for the market.

2.4 Network

Greve (2004, p. 92) describes a network as "a pattern of connections between actors." This pattern of connections will, in a company, be a part of the social system between leaders and their employees. The network plays a significant role in mobilizing the company's resources and the information flow for solving tasks (Greve, 2004). Furthermore, a company needs information about resources to run a company. Resources can be funding sources, raw materials, or consultation so the company follows laws and regulations (Greve, 2004). The company's position within various networks influences its ability to adapt, mobilize resources, and innovate (Nesse et al., 2014). Furthermore, research has also revealed that complex processes and distributed knowledge networks create innovations. This means that companies learn to innovate in networks with customers, suppliers, users, and other knowledge-creating organizations (Gundersen & Onsager, 2011; Hippel, 1988; Lundvall & Johnson, 1994).

Network theory is a broad field that deals with many different types of networks, but I am focusing on networks affecting small and medium enterprises (SME) innovation work in rural areas. This gives me the opportunity to focus mainly on the collaboration with those actors that have significance for bringing the company forward. Companies in rural areas need networks to access resources, knowledge sharing, collaborative opportunities, market access, and so forth (Najafi-Tavani et al., 2018).

Most research concentrates on networks within large urban areas when discussing innovation (Ning et al., 2016). However, this focus often overlooks the challenges faced by rural areas and the potential advantages companies might have when operating in non-urban areas (Fritsch & Wyrwich, 2021a).

In rural areas, the extent of local network coverage varies, sometimes being limited in scope (Romijn & Albaladejo, 2002). This variability prompts the question of whether narrow local network coverage acts as a hindrance or a driver for innovation. Interestingly, it may serve as both. A narrow local network has the potential to act as a driver by fostering strong collaboration among the local population. This collaboration, facilitated by the close-knit nature of the network, can lead to innovative solutions and initiatives tailored to the specific needs and challenges of the rural community.

In the context of innovation and network dynamics, lock-in can pose significant barriers to the free flow of information, resources, and ideas. Strong ties between actors within a network can lead to insular behavior, where individuals or organizations predominantly interact within their established network, thereby neglecting potential collaborations or insights from external sources. This insularity can limit the diversity of perspectives and expertise available for problem-solving, ultimately impeding the network's capacity to address challenges effectively (Meynard et al., 2018)

Grabher (1993) underscores the importance of understanding the dynamics of network structures and the implications of strong ties within these networks. The concept of lock-in highlights how entrenched relationships and dependencies can restrict actors' ability to explore new opportunities, access diverse knowledge sources, or adapt to changing circumstances. This can result in missed innovation opportunities and impede overall progress within the network.

Finally, defining the local and external network to identify the actors and understand their interconnections is important for SMEs operating in rural areas. By mapping out these actors, companies can identify key collaborators, potential sources of innovation, and areas for improvement.

2.4.1 Local buzz and pipelines

The conceptual framework of local buzz and global pipelines has garnered considerable attention in the research literature. This framework posits that collaboration among firms within the same geographical region, known as local buzz, can lead to technological spillovers and value creation. When these local activities are combined with international collaboration, referred to as global pipelines, the synergistic effect can further enhance innovation and value creation. Conversely, global pipelines can also strengthen local buzz by facilitating the exchange of knowledge, resources, and expertise across geographical boundaries (Aarstad et al., 2016).

Bathelt et al., (2004) introduced the terms local buzz and global pipelines to describe strong and weak ties in a company's network. Later, the concept of local interaction and buzz that arises from closely-knit clusters of economic agents located in the same place has been widely recognized as a potential driver for innovation. According to Esposito and Rigby (2019), participating in such a buzz is relatively inexpensive for the parties

involved, and information sharing tends to happen seamlessly among participants who are located within the same region and clusters. This means that actors in the local buzz receive the information that the surroundings give, rather than what the actors are looking for, like rumors, recommendations, and so on (Bathelt et al., 2004). This approach highlights the information as one channel or type of information but says less about how the actor in a small place is affected by this.

However, while local buzz can provide valuable insights and opportunities for collaboration, it may also present challenges, particularly when it comes to decision-making processes such as selecting local suppliers. Relying solely on the local buzz for supplier selection may lead to biases and overlook essential considerations such as quality, cost-effectiveness, and reliability. While informal information sharing within a local network can offer valuable perspectives, it may not provide the comprehensive and objective evaluation needed to make informed decisions.

While the idea about the local buzz is agents located in the same place and from the same economic cluster, the global pipelines are the channels companies use in distant interaction. Moreover, access to new knowledge often stems not only from local and regional interactions but also from strategic partnerships that extend across inter-regional and international boundaries (Bathelt et al., 2004). When companies are looking for new partners from outside the local area, they must decide how much interaction they want. In contrast to local relationships among cluster firms, there is no shared trust in this situation. Therefore, the establishment of new global pipelines also comes with an additional cost; these costs relate to time and money spent building a relationship. Most of the literature mainly focuses on the opportunity cost of money as a resource and pays less attention to time, although time is investigated in some researchers' work (Okada & Hoch, 2004).

Okada and Hoch (2004) suggest that people in different continents value time differently regarding punctuality, efficiency, and the pace of life. For example, in some cultures, such as those in Western Europe and North America, punctuality is highly prized, and being on time for appointments and meetings is considered a sign of respect and professionalism. On the other hand, in certain parts of Latin America, Africa, and Asia, there may be more flexibility regarding time, with appointments often starting later than scheduled and a greater emphasis placed on building relationships and taking

a relaxed approach to time management. These cultural differences in the perception and utilization of time can have significant implications for business practices and for a partnership with other businesses.

Additionally, the literature emphasizes the advantages of having a network that is both regional and central (Boschma, 2005); a lock-in phenomenon can occur if certain practices or technologies gain dominance within a cluster due to network effects or other dynamics. This can lead to new ideas or approaches being overlooked or neglected, hindering the growth of new ideas and tying up resources in a particular market or technology, preventing their use in other projects (Nesse et al., 2016).

Moreover, what if the situation occurs where there are too many pipelines and not enough local buzz? This can hinder the growth of new ideas and tie up resources in one particular market or technology, preventing their use in other projects. Another concern is when foreign owners purchase Norwegian companies with numerous pipelines. These owners may share different concerns about local investment since they are not part of Norwegian culture. The Norwegian working life is unique and has its own distinct cooperation model (Skjold, 2023). Almost unanimously, existing research concludes that foreign ownership has a negative impact on established forms of collaboration within businesses (Skjold, 2023). Moreover, a foreign takeover can make the company increasingly utilize foreign labor, and this will alter the local buzz.

Considering the economic perspective, relying only on the local buzz is hard. While local buzz may enhance information sharing and collaboration, a comprehensive decision-making process is essential for ensuring the resilience of supply chains, particularly in the face of external suppliers. By diversifying suppliers and considering risk management factors, companies can mitigate vulnerabilities and maintain continuity of operations even in challenging circumstances (Chai et al., 2013).

When choosing between a local or non-local actor, it's essential to consider factors such as sustainability and social responsibility. Nowadays, businesses need to consider more than just economic concerns. In addition, it is imperative for companies to consider the repercussions of their decisions on both the environment and society. By evaluating suppliers according to their environmental initiatives and engagement within communities, companies can make informed choices congruent with their sustainability

objectives, thereby fostering positive contributions to society and the environment (Capdevila, 2018).

3. Research Methods

This chapter introduces the study's methodological framework. The research design elucidates techniques and methodologies across all stages of the research process while providing a rationale for the research question's purpose and the contextual backdrop of the study. Firstly, I will offer an explanation for selecting my research approach. Secondly, I will also detail the methods employed to collect data and choose participants. Finally, I will explain my data analysis procedures, evaluate the quality of the thesis, and handle ethical considerations.

3.1 Research approach

The Research methodology covers the acquisition, analysis, and interpretation of data. Two discrete modes of data collection and examination exist: qualitative and quantitative. While both methodologies offer an analysis of data, they diverge in their approach and the nature of data acquisition. Quantitative research uses numbers and sizes of data to answer a specific research question, while qualitative research involves gathering non-numerical data of a certain kind. This data is gathered through observation, text, or sound (Christensen et al., 2015). Below, you will find a more comprehensive explanation of these two research methods.

Quantitative research collects numerical data to answer a specific research question (Christensen et al., 2015). The apparent advantage of this is that the information is standardized and makes it easy to read with computer help. The cost of running quantitative research is often much lower since the data is often obtained by structured questionnaires that are made to answer a specific problem (Jacobsen, 2005). When considering the primary drawback of quantitative research, it becomes apparent that it often provides only a superficial examination of the research question, offering merely surface-level insights (Jacobsen, 2005).

The qualitative case study methodology is a research design that allows for the in-depth investigation of a phenomenon within its contextual framework. This involves drawing upon a diverse range of data sources, including interviews, observations, and documents, among others. By examining the matter from diverse perspectives, this methodology enables the revelation and comprehension of multiple aspects of the phenomenon rather than through a singular lens (Baxter & Jack, 2008). This approach is

highly relevant to this study, as it allows for comparing findings across multiple cases, thereby enhancing the validity and generalizability of the results.

This empirical study aims to gain knowledge and insight into how innovation is driven or hindered in rural areas and whether there are any special factors. According to Christensen et al. (2015), at least four primary qualitative research methods offer varying methodologies and perspectives. These include ethnography, phenomenology, grounded theory, and case study, each providing unique insights into the phenomenon under study. As part of this research, a case study will be used to explore the complexity of networks and factors that influence innovation in rural settings. By using qualitative methods, this study will seek to uncover factors that companies believe contribute to or hinder innovation work.

3.1.1 Case study

A case refers to a detailed and intensive system, such as a description of a person, a group, or an analysis of an organization. It can also be a situation, activity, process, or event. The term "system" refers to a holistic entity comprising a set of interrelationships among the case elements. The term "bounded" means that all cases have a boundary that identifies what it is and what it is not (Christensen et al., 2015, p. 377). In this study, the case study method has been selected as the preferred approach for several reasons outlined below.

Firstly, case studies offer an unparalleled opportunity for delving into the depths of a specific phenomenon within its real-life context (Christensen et al., 2015). By studying specific cases, we can uncover detailed data that reveals the complexities and underlying mechanisms of innovation processes for companies in rural areas. This methodological choice enables us to examine the intertwined dynamics influencing innovation in these contexts thoroughly.

Secondly, case studies afford the chance to explore a multitude of factors contributing to innovation dynamics, spanning social, economic, and environmental dimensions. This comprehensive perspective is indispensable for grasping the multifaceted interplay of elements that shape innovation processes across diverse rural settings. Through the holistic lens provided by case studies (Christensen et al., 2015), I aim to construct a nuanced understanding of the intricate tapestry of rural innovation.

Thirdly, the contextual specificity afforded by case studies is invaluable for both theory development and practical interventions (Easterby-Smith et al., 2018). By closely examining real-world examples of innovation in rural areas, we can pinpoint unique challenges and opportunities. These insights serve as a compass for strategic decision-making, guiding the development of tailored interventions that address the specific needs of rural communities. The context-rich nature of case studies equips us with the knowledge needed to navigate the complex terrain of rural innovation effectively.

However, there are also some disadvantages to using case studies. The primary limitation for me as a researcher is the lack of generalizability: Due to the focus on individual cases or a limited number of cases, the results of case studies may not necessarily be representative of other situations or populations (Easterby-Smith et al., 2018). And furthermore, it can be challenging to draw overarching conclusions or develop widely applicable strategies based solely on case study findings. Another disadvantage is the question of subjectivity: The researcher's interpretation of the data may be influenced by their own preconceptions and perspectives, leading to subjectivity in the analysis and interpretation of findings (Flyvbjerg, 2006)

Overall, the case study approach aligns well with this study's objectives. It offers a robust framework for investigating the complexities of innovation in rural areas and shedding light on the mechanisms driving or impeding progress in this context. Through a comprehensive examination of real-life cases, this approach empowers us to gain a nuanced understanding of rural innovation dynamics and contribute meaningfully to the advancement of knowledge in this field.

There are three types of case study designs: intrinsic, collective, and instrumental (Christensen et al., 2015). The intrinsic case study is designed to give an in-depth illustration of a particular individual, establishment, or structured event with the goal of gaining a deep understanding of that particular case. An instrumental case study is undertaken to illuminate a specific issue or enhance and adjust an already established theoretical explanation. Furthermore, understanding the phenomenon or event is prioritized over the specific case itself. Lastly, the collective case study, also called a comparative case study, involves a comprehensive examination of two or more individual cases (Christensen et al., 2015)

For this study, I have utilized a collective case study methodology, a methodological approach that entails examining multiple cases to comprehensively understand a specific issue (Christensen et al., 2015). My methodology involved conducting interviews with one individual representative from each entity under study. These individuals were carefully selected based on their expertise in innovation and their direct involvement in innovation processes within their respective companies. The sampling method that was appropriate and feasible in my study was purposive sampling. This sampling method gives me the chance to choose participants that are most informed/most experienced in the field that I am exploring (Christensen et al., 2015)

3.2 Data Collection

The objective of this study is to acquire understanding and insights regarding the facilitators and obstacles to innovation in rural regions while also exploring the presence of any overarching mechanisms that might apply universally. We have already established that a qualitative approach is the most appropriate for this study, as it can delve deeply into the nuanced complexities of rural innovation dynamics. The term "qualitative interview" includes a broad spectrum of interview techniques, ranging from spontaneous, conversational interviews to those where the interviewer follows a pre-prepared list of questions (Easterby-Smith et al., 2018).

3.2.1 Interview

The goal of the interview is for the researcher to mainly create a situation to have a conversation that circles around some specific theme that has been decided in advance. Unlike a survey where the questions are closed and the answers are given in fixed answer options, the interview is open questions that allow the informant to go in-depth. Moreover, it also allows the informant to digress from the main question (Tjora, 2010). The primary goal for choosing an in-depth interview is to allow me as the researcher to comprehend the world from the informant's perspective to bring forth the informant's viewpoint. It also gives me deeper insights and comprehension in a domain where I have limited prior expertise. (Tjora, 2010).

Furthermore, there are several ways to perform an interview. It can be conducted on the phone, in person, or electronically via the Internet (Christensen et al., 2015).

There are different types of interviews and different ways to categorize them. One way is structured interviews, semi-structured interviews, and unstructured or in-depth interviews. Another way to differentiate is between standardized interviews and non-standardized interviews (Saunders et al., 2012).

A semi-structured interview is a good way to find factors that are driving or hindering innovation in rural areas and, at the same time, explore their network. The semi-structured interview is the middle way between structured interviews and unstructured interviews; here, you have key questions prepared. While it provides a structured framework for interview discussions, the goal is not to adhere rigidly to it. The aim is to delve into the research domain by gathering consistent types of information from each participant (Holloway & Wheeler, 2013; Kallio et al., 2016). To effectively conduct semi-structured interviews, it is imperative for the researchers to possess a prior understanding of the research topic. This prior knowledge is essential to devise appropriate questions that align with the research objectives. To creating an interview guide that can yield insightful responses (Kallio et al., 2016).

The interview guide serves as a structured framework for guiding discussions during the interviews, aiming to delve into the research area of barriers and drivers for innovation in rural areas. research suggests that innovating in urban areas poses fewer challenges compared to innovating in rural areas. (Fritsch & Wyrwich, 2021b). Given my focus on understanding the factors influencing innovation in rural areas, it is crucial to consider both drivers and barriers to understanding phenomena. Before I could start with the interviews, I had to organize an interview guide, this has been added as an appendix to this Thesis. The design of an interview guide is a critical component of an effective and structured interview process, as it provides a framework to ensure focus, consistency, and efficacy. The guide serves as a tool for interviewers to follow, guaranteeing vital topics are covered and enabling a clear understanding of objectives. Moreover, it facilitates the gathering of relevant data, which is essential in achieving research goals. Overall, the interview guide plays an indispensable role in guiding the interview process and optimizing the quality of data collected (Kallio et al., 2016).

Nonetheless, it is not intended to be strictly adhered to. Instead, its purpose is to elicit comparable information from each participant while offering guidance on topics of discussion. This approach ensures that diverse perspectives on innovation challenges

and opportunities in rural settings are captured, enriching the understanding of the factors influencing innovation dynamics in these contexts (Kallio et al., 2016).

Research suggests that innovating in urban areas poses fewer challenges compared to innovating in rural areas. (Fritsch & Wyrwich, 2021b). Given my focus on understanding the factors influencing innovation in rural areas, it is crucial to consider both drivers and barriers to understanding phenomena. Before I could start with the interviews, I had to organize an interview guide. The design of an interview guide is a critical component of an effective and structured interview process, as it provides a framework to ensure focus, consistency, and efficacy. The guide serves as a tool for interviewers to follow, guaranteeing vital topics are covered and enabling a clear understanding of objectives. Moreover, it facilitates the gathering of relevant data, which is essential in achieving research goals. Overall, the interview guide plays an indispensable role in guiding the interview process and optimizing the quality of data collected (Kallio et al., 2016).

When conducting an interview, it's crucial to ask concise and unambiguous questions that can elicit detailed responses from the interviewee. DeMarrais and Lapan (2003) emphasize that interview questions should be brief and straightforward to ensure clarity and understanding. I have achieved this, as you can see in the interview guide, where the questions are simple, straightforward, and easy to understand for the informant.

Sample

My aim is to identify common elements present across all firms. To gain a comprehensive understanding of this issue, I wanted to conduct interviews with a diverse range of businesses varying in size and different industries. It is important to note that my sampling strategy is designed to reveal information that highlights both similarities and differences. In research, the selection of participants plays a crucial role in the study's outcome. Different research methods require different participant selection approaches. For instance, quantitative studies use random sampling, while qualitative research methods use purposive sampling, which involves selecting participants with specific characteristics relevant to the study. My goal is to interview individuals who possess specific characteristics that are important to my research. To achieve this, I employ purposive sampling, as recommended by Jacobsen (2005). One of the challenges of using purposive sampling is the risk of making erroneous assumptions

about the required traits. Therefore, I am careful in identifying the characteristics required for my research. Firstly, I needed informants who had qualifications and knowledge about innovation and networks. Secondly, they had to have knowledge about the company's network. Based on this, the informants had to qualify following requirements:

1. Holds a central role that works with innovation in the organization.

By having a role in innovation and innovation work, the person has the capability and knowledge to answer inquiries about the subject matter.

2. Have insight into the company's network.

It's beneficial for the informant to have a comprehensive understanding of the company's network.

To identify potential informants, I tapped into my network from my work at Sogn og Fjordane Næringsråd. I chose to reach out to businesses in various industries, each having encountered diverse challenges and successes in their operations in rural locales.

	Industry	Employees	Customers	Suppliers	Innovation
Case A	Production	> 50	National	National/Europa	Product/ Process
Case B	IT	> 20	National	Internationa	Product/ Process/Service
Case C	Production	> 150	National/Europa	National/International	Product/ Process
Case D	IT	> 50	Internatonal	International	Product/ Process/Service
Case E	Energy	> 20	International	National/International	Product/ Process
Case F	Production	> 50	National	National/Europa	Product/ Process

Table 1: A presentation of my collective case study.

3.2.2 Conducting the interviews

The interviews were conducted using audio and video recordings. I had two interviews at the company's locations, but the rest were held over teams. The interviews I conducted ranged from 40 minutes to the longest, which lasted approximately 90

minutes. The interviews were transcribed. When transcribing, Researchers often use special software to facilitate their work (Easterby-Smith et al., 2018). I used software called Autotekst, developed by Universitetet I Oslo. The program converted the audio into textual data so this could be analyzed. I ran into a, I guess, rare problem when using Autotekst, and that is the program did not cope with Nynorsk and dialect, which in my case is Sognemål. So, I controlled the written text from Autotekst by hearing the interviews through one more time and fixing the mistakes in the written text. I set up one interview per day because this gave me time to transcribe and reflect on the interviews I had done. This helped me understand and connect the important things said in the interviews.

3.3 Data analysis

When all the data was collected, I had to find a way to make sense of all the information. Easterby-Smith et al. (2018) emphasizes that before you can analyze the data, you have to organize it, suggesting three phases that I followed analyzing the data. The first phase starts by cleaning and structuring unprocessed data into coherent units of analysis; here, this means transcribing the interviews. The second phase consists of some data reduction. This second phase is divided into two parts. Firstly getting familiar with your data by reading the transcripts several times is necessary to understand it better and easily see the whole picture (Cypress, 2018). Secondly, when the transcripts are read several times, you can begin highlighting in the margins of the transcripts. These can be notes that later can identify or help organize ideas or other analytic meanings. You will also get the data into categories that make sense to you (Cypress, 2018). The third phase is the data interpretation. In this phase, you begin coding the reduced data material. A code refers to a specific combination of letters, numbers, or symbols used to represent information. It serves as a concise and meaningful summary of a chunk of data, allowing for more straightforward interpretation and communication of complex information (Easterby-Smith et al., 2018). The last step of data analysis involves representing the data. This step is done simultaneously with the interpretation and analysis of qualitative data. From this process, the researcher forms his story and reveals his findings. In my research, I have followed the steps above. Further, I will address how I analyzed my content.

3.3.1 Coding

My analyses of the data after the interviews were based on 4 video interviews and 2 audio interviews. I started the process of coding to identify the factors that occupied my informants. For example, vision was one of these factors that many informants highlighted, so it became clear that this had to be a code. Open coding seemed to be the best option for my data material as it is guided by open-ended questions such as, "What are these data about?" and "Whose perspective does the data reflect?" (Easterby-Smith et al., 2018, p. 243). I began grouping various codes into categories, which were then linked to the research questions and problem. To keep track of my codes and categories, I used NVivo. This software enabled the collection of diverse quotations and interpretations relevant to each research question. In the figure below, you can see how the codes are displayed in NVivo. (In Norwegian).

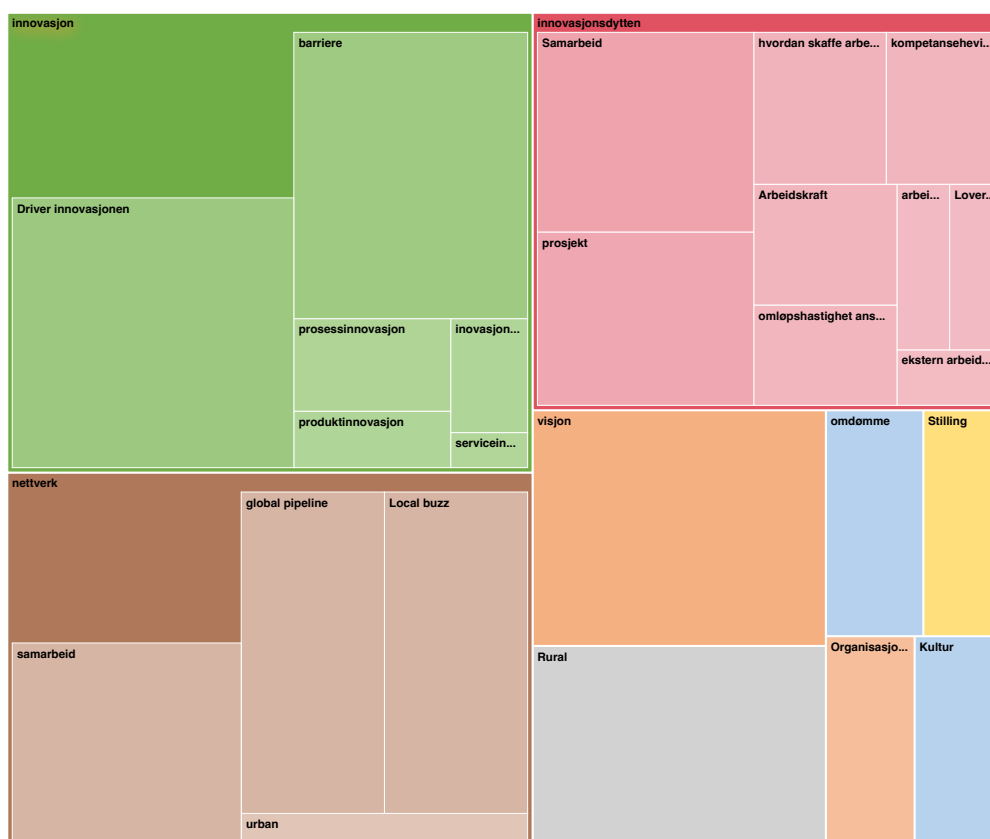


Figure 2, codes from NVivo

3.4 Reliability and validity

Credibility is crucial in research for readers to perceive it as trustworthy. There are three things that is important validity, reliability, and transferability. In this sub-chapter this will be evaluated.

3.4.1 Reliability

A high-quality research paper is often characterized by several key attributes. One of these attributes is a significant level of reliability, meaning that the information presented in the paper is trustworthy, accurate, and backed by credible sources.

Christensen et al., (2015, p. 155) define reliability as “the consistency or stability of scores.”

So, if the procedure is repeated, the new project will get the same or similar results as the old one (Yin, 2018). This project deals with qualitative data that has been gathered, and it should be possible for another researcher to arrive at the same conclusions as this project.

Obtaining a high level of reliability can be challenging when using qualitative methods since it is not easy to reproduce the same conversations and validate them (Yin, 2018). The primary focus is to ensure that no errors or biases could influence the outcome of the task.

First, I developed an interview guide for this research. This guide was based on earlier research in the fields of innovation, networks, and rural areas. Secondly, by having several informants, the perspectives were many, and the information flow was rich. Since the chosen informants had great knowledge about the different categories, the feedback was enlightening and informative.

3.4.2 Validity

Research validity refers to “the correctness or truthfulness of an inference that is made from the results of a research study” (Christensen et al., 2015, p. 179). It also refers to the accuracy and truthfulness of research and data collected. Its purpose is to determine whether the research and data actually measure what they are intended to measure and if the results are honest. However, this can be more difficult to achieve in qualitative research because it does not involve specific quantification and lacks a comparative measure. In qualitative research, you distinguish between internal and external validity. Internal Validity is the extent to which the research findings accurately represent the relationships within the study without interference from extraneous variables (Christensen et al., 2015). In this case, it pertains to the relevance of the companies and individuals interviewed to illuminate the research questions. All respondents work in well-established companies and are individuals with extensive experience in their respective fields. Although the sample is somewhat limited to a few companies, it is perceived as relevant due to the participants' high level of experience, insight, and expertise in the subject matter. On the other hand, there is the fear of coming across as inadequately knowledgeable in the field, thus resorting to primarily quoting theory.

Extern validity is defined as “focuses on whether a researcher can generalize the research findings to other people, settings, treatments, outcomes, and time” (Christensen et al., 2015, p. 195). This sample of informants have their own meaning and way to reflect on things and this will be some different from another sample. But at the same time, it can be assumed that the general attitudes within the industry will somewhat resemble those of the sample in the study. It can be difficult to generalize out from this sample since it contains of only 6 cases. From this, it gets a high extern validity. But I hope it will give a greater insight into the day-to-day factors companies in rural areas face above.

3.5 Ethical concerns

According to Easterby-Smith et al. (2018, p. 157), there are ten key principles of research practice. The principles are split into two groups. Principles one to seven protect the interests of the informant, like number one, “Ensuring that no harm comes to participants” (Easterby-Smith et al. Felt, 2018, p. 157), while principles eight to ten secure, precise research results and ensure that the researcher remains impartial here visible by principle ten “Avoidance of any misleading or false reporting of research findings.” (Easterby-Smith et al., 2018, p. 157).

Before I started the data collection, I submitted an application to SIKT, Ref. nr. 311488, which included an interview guide and the information letter that was going out to the informants (see appendix). I had not made a consent form, so I had to retrieve it before starting the interviews. Furthermore, it is crucial that the information I gather is treated confidentially and that I follow the rules for storing and treating the information according to (Personopplysningsloven, 2021). To ensure that the data, such as the recording and the transcription, are treated confidentially, I have stored it safely and will ensure that everything is deleted after the research period.

4. Findings

In this chapter, I will discuss relevant findings from my data analysis and relate them to the study's theoretical foundation; therefore, the following sub-chapters will present my research findings. In my research, I have explored various companies' innovation approaches, focusing on product and process innovation. Through interviews with various informants, I've gained insight into how these companies handle innovation within their respective industries. Cases A, C, and F belong to the production sector, Cases B and D operate within Information Technology (IT), and Case E operates within the energy sector.

Innovation

Product innovation is a central part of many companies' strategies. Companies A, B, C, D, and F all do some form of product innovation. For example, Informant B described product innovation as creating new or enhanced products and programs tailored to meet consumer needs. Furthermore, Informant C shared how their company formalizes the innovation process, with internal idea generation and gradually improving projects before launch.

“We have formalized it, especially considering that we are developing products. Then, we have some specific thoughts, so you have a kind of funnel that you actually start with. In other words, you start with quite a lot, then you refine the project gradually until you are ready for the launch.” (CaseC)

Informant E is in an entirely different industry; for them, product innovation is all about further developing their existing product. They mainly collaborate with others to make a better and more sustainable product for buyers.

On the other hand, process innovation is also evident among these companies, but the manifestation of process innovation is most accessible to observe in the manufacturing companies despite being universal in all sectors. Informant A described how process innovation involves using new technology to improve production and company operations. Informant C shared success stories of how their company has improved the

production line and stressed the importance of being open to changes to save time and money.

“We did save a couple of million, so it was quantified. We saved by not proceeding with the investment. We saved by not moving forward with version 1. We dissected it and put it back together. We were geared towards running smoothly. We had planned a project, and this was thought out, but there were a lot of things here that were not included and that we hadn't thought of. It was fun to see. Not surprising, but it resulted in such significant changes” (CaseC)

4.1 Organization Internal forces

From the open coding, three factors stood out as the most important to my informants regarding internal forces. These were vision, organizational culture and competence enhancement, and turnover rate. I will present these in the sub-chapters below.

4.1.1 Vision

Vision emerged as a recurring theme among all participants, emphasizing its essential importance. They describe the vision as a barrier to innovation, or to be specific; it is the lack of vision that is the barrier to innovation. The informants describe how the absence of a clear vision means that companies and actors do not see projects in their entirety. It was also highlighted that the inability to oversee a project from inception to completion is one of the shortcomings observed in the suppliers that deliver services to my informants and their organizations. For example, one informant shared his experience of seeking external expertise to improve his production line. They approached several companies, who all came up with their proposals. The informant noticed several shortcomings in the proposals, and it was clear that the companies did not see the big picture.

“But we saw several shortcomings. Many of them were not able to see the overall picture so we ended up using the same company we used in our other companies.” (CaseF)

The project was awarded to a multinational corporation because Norwegian companies seemed unable to provide a comprehensive vision for the entire project and its ultimate outcome. Instead, they only offered fragmented glimpses of the vision.

My informants also highlighted the importance of having a clear and shared vision within the company's board. Several of them highlighted that the board needs to be the driving force behind innovation. However, this can only be achieved if the board members work together towards the same goals, even when conflicting interests arise. Moreover, the board should be willing to trust the visionary in charge of the project and impose only a few guidelines. One of the informants, E, has excellently highlighted the fundamental components a company's board should possess.

“Bring in people who know their limitations and know that I can contribute with this here but should shut up when it comes to other things I can't do so I do not become a brake.” (CaseE)

Informant A, B and E highlights the importance on having a board that is flexible. The board's receptiveness to change often proves to be a formidable challenge, particularly since many of the companies in rural areas are family-owned, and kinship ties dominate the board compositions. However, amidst this landscape of entrenched tradition and familial influence, Informant E highlights a solution for those companies willing and able to embrace change and says that companies that understand the importance of having a diverse and forward-looking board can bring new perspectives and expertise to their governance structures. This involves proactively seeking out individuals from different backgrounds with varying skill sets and industry experience. Doing so can enhance board discussions, stimulate innovation, and facilitate effective strategic decision-making.

“Changing board members for what is the next phase we are going into, then we are back to vision. If they don't have a vision, then they also don't see that we are now entering a new phase of the project and that a completely different competence is required.” (CaseE)

Informant E highlights means this is a good strategy to prevent an innovation barrier if the innovation push is to come from above. Furthermore, he also points out that a frequent hindrance to innovation is the lack of motivation or the presence of misguided motivation. In some cases, companies are not motivated to create new products or services. Instead, they are driven by the desire to secure funds, with little regard for what happens after the funding is obtained. Nowadays, sustainable innovations are in high demand, and projects with environmentally friendly aspects are more likely to secure funding. Unfortunately, this means that a considerable amount of funding is spent on projects that never materialize.

4.1.2 Organizational culture

The organizational culture is diverse in these different companies, and it seems the differences is all to do with what industry you are in. The IT companies have a culture for adapting fast and changing, while the production companies are not so fast. It definitive is a driver for the IT companies and partly Case C, since they have a well incorporated culture of change. The energy company is also used to adapt on contrary to Case A and D where it can be a barrier to change. All companies with employees have an organizational culture. Informant B highlights this by saying it means; how we do things with us. He also goes on to describe organizational culture as the fundamental aspect of any company that shapes its identity. Informant D explains that the most important drivers for innovation are change culture and innovation capacity. Furthermore, he elaborates on what the denominator is for these two.

“There is a common denominator that is part of both, and that is culture. Culture for innovation, acceptance from the management, if it is raised and certain, here is what we have done now. And then you have a culture for change. It accepts that changes occur. Because of how you do sales processes and new products that come in. That new technology comes in which means that I have to rewrite the software. Then you have to have the culture to do it. It's one thing not to show resistance, another thing is to accept it and then say I'll do it.”

(CaseD)

All informants express that their company welcomes new ideas from employees, and some of the informants also express a desire for more ideas from their employees. Informant A says, I really wish there were more ideas coming in, honestly. Many get caught up in the daily grind, so they don't really think about it. Informant C brings forward different projects where they use multidisciplinary from all levels and in all departments and try to bring things together. This makes a culture for new ideas he says. Furthermore, he describes the will for change in the company is always big when needed, and the reason for this is the transparency from the leaders and the company.

“We are a very open organization, and we tell you how things are going. When things go well, we want to tell about it. When we are under pressure, we are clear about it.” (CaseC)

Informant B discussed a significant barrier to change within a company: the fear of a shift in power dynamics and the potential loss of established status within the work community. He emphasized the idea that knowledge and competence equate to power and described the situation as follows:

“It is the desire, and desire to change. Not everyone has it. Not everyone wants to drive innovation. You change the balance of power. If you say that knowledge is power. Or competence is power. Then it can change something that a person had and felt was important for the customers or important for the company, but then this changes everything, and then it is not so important anymore. It is the most difficult thing for the person concerned.” (CaseB)

And then you have companies where culture makes strategy happen. Informant B gives such a description of his company. There is almost a demand for new ideas and toughs among the employees. The values that we must be efficient, solution-oriented, and come up with new proposals lie in the culture. Our company, with this special culture, often attracts people who thrive in this kind of culture.

When I spoke with my informants about innovation and where it should come from, all of them seemed to agree that the push should come from the leaders, and as said, the management has to be super keen on innovation.

4.1.3 Competence enhancement and turnover rate

All the companies carry out professional updates on their employees in one way or another. Sometimes, it is the position in the company that determines how much professional updating you get; this preferably applies to the production companies. IT companies are good at letting their employees evolve professionally if they want it. Having educated employees gave the companies a bigger pool of knowledge. What surprised me was the low turnover rate in all the companies. This was seen as a driver since you do not have to train new people all the time, and you can use your money on innovations.

The informants emphasized the importance of innovation for an organization's growth, noting that employees play a significant role in driving it. They also acknowledge that employees need professional development and an environment that is flexible in experimenting with new ideas. A rigid work environment can stifle creativity, making it harder for employees to come up with innovative solutions to the organization's challenges. The companies I interviewed are approaching the issue of keeping their employees professionally updated in different ways, and the timelines for these updates differ significantly among the companies.

Informant B talked about the rapid changes in the industry in which high-tech companies operate. Skill refreshment and renewal are always in the spotlight, and stagnation could lead to their downfall.

“In other places, the employees may have to ask to develop themselves, ask to get courses and everything possible. Here I am the one that push on because I want people to develop.” (CaseB)

Informant D also gives a similar picture of their company.

“I think I have hardly ever heard that you have been denied to take a course. I have studied part-time. Then the employees get free. If you must pay for studies, the company has paid for courses and further education if it is relevant to the company.” (CaseD)

The situation is slightly different for Case A, C, and F. These are the production companies in the sample. My informants tell me it plays a difference in what your work title is. A production employee often does not need as much professional input as a market developer or a packaging developer, for example.

“Otherwise, what you engage in as such a type of further training varies quite a bit from person to person, but it is a good question for what lies in competence development. We have some who travel to suppliers that deliver aromas and colors, and then they delve quite extensively into trends. I would not call it courses because we have plenty of other things going on, but it's competence development and replenishment.” (CaseC)

The production company, where Informant F is a co-owner, is not concerned about money regarding the company, but rather competence. They are lacking the competence to carry out several types of projects. He describes their situation as follows:

“The funny thing is that for the company, money is not what matters. It is as if there is the actual competence to carry out these types of projects, so now we meet a bottleneck in XXX in the form that the person who managed these projects has quit or is about to quit. And he also didn't have much expertise in project management. But he is what we had then. And now he has stopped, and then we are on bare ground. Because who will coordinate this?” (CaseF)

Additionally, informant F are experiencing another challenge of being situated in rural areas. They are willing to bear the cost of sending their employees on courses and other

professional development opportunities, but the travel distance often poses a barrier. Often, half to a whole working day is spent just traveling, and then there is the time spent on knowledge upgrading. Informant A describes it like this:

“Or being able to visit someone, and that barrier becomes a little higher when you spend more than half the working day driving back and forth. You spend a lot of time, then you have to spend the night, and then you have a family at home, so it's kind of like, I am going to spend 3 days on this, right? So, I see that when I propose a number of visits and such, the threshold is a little higher for people to bother to travel.” (CaseA)

The informants describe that some of the workers do not want to be away from their families for an extended period while doing courses or other types of professional development. They wonder if the reason for this the seniority of the employees in their respective companies is.

Furthermore, my interviews reflect one common factor in all the companies. If hired to work in rural areas, they almost always work for an extended period. It is not common to rapidly change jobs. One of the informants, C, told me about over 100 years of experience divided among three people. Informant A told me about the head of production, who has worked in his company since he was 16.

“Most of them have been here a long time, a really long time. The production manager, his job is to be responsible for the machine hall, he has been here since he was 16.” (CaseA)

4.2 Organization External forces

From the coding there were three codes that came through as external forces that the companies were highlighting. Those were employees, laws and regulations and the local affiliation. These are factors that the companies find hinder and drive their innovation work.

4.2.1 Employees

The production companies are all having some problems with getting employees who are qualified for the advertised positions. This becomes a barrier to innovation if you do not get educated people for the job. Case C and D often bypasses the problem of hiring at their branch. But for Case C, who is a production company, this is not always possible. Informant B elaborates on how the situation in rural areas is for them when talking about getting employees at the current time:

“But last time we advertised, that was when we received the most applicants, so it wasn't so difficult. But it would have been challenging if we were looking for programmers right now. They are in short supply.” (CaseB)

The production companies, on the other hand, face more challenging everyday life when they are looking for new employees. They need skilled workers and since there is a shortage of these people, the task of finding them becomes even greater. Informant C blames the Master's disease in Norway; we do not appreciate or value the kind of education that leads to a certificate of apprenticeship. Informant A describes their view on getting employees in their location.

“But managing to catch hold of such people, it's terribly difficult, you know? It's like I have this feeling that every time someone with some form of expertise or another newcomer shows up in the village, people look at me once and try to figure out what that person can be used for, right?” (CaseA)

The most challenging for Informant C and his company is competing with other companies for employees who choose vocational subjects as their career. But he also elaborates that from their programs they get some employees straight from vocational school, the advantage with this is you can shape them as you like, so they get the culture under their skin.

“Yes, that's it, that's what we struggle with like many others do, and it's more in vocational fields where it's hardest to get hold of. We're competing with other strong players here like Hydro Årdal, Nortura, and whatever state enterprises are here.” (CaseC)

The informants were then asked which strategies companies use to meet the challenge in getting qualified labor, and what approaches they use to obtain suitable employees. Informant E shared their problem regarding getting competent employees.

“Competence-wise, it is not easy to build up a large team here. We have been lucky so far, but there are few to choose from here, and it is not easy to convince people to move to a remote area.” (CaseE)

The resources used in employing workers in rural areas are often high since it is not sure you get lucky on your first advertising. Informant F shared his thoughts on employing in rural areas like this:

“It is not easy to know how to attract people to rural areas. I had a vision where the company if we automated enough, could transition from the traditional industrial worker to more high-paying roles like automation engineers. And then, I would attract people because those are well-paid positions. But then I heard rumors that Sognekraft had job openings in the finance department, and despite offering high salaries, they aren't getting any applicants now. So, that breaks down the idea I had about the theory that it is salary that is needed to attract people to rural areas.” (CaseF)

Some companies have devised strategies to circumvent the challenge of acquiring competent employees. They have opted to establish branches in urban areas. According to them, the advantage of this setup lies in the accessibility to a broader pool of prospective employees, extending beyond the confines of the company's original geographic location. Informant C further expounded on the rationale behind establishing a remote company location, particularly concerning the recruitment of employees.

“Otherwise, it depends a bit on what we need; we hired a new CFO. That person is located at our district office in the east country, and the market developers are there too. It is not difficult to sit there, but it can be a challenge to find such people locally here. But then we have the opportunity for them to be based in the east country and work from there.” (CaseC)

For the IT company, it is no problem establishing a branch in an urban area. If they are online, they are connected to the main office. In this way they can get exactly the attributes they want in their new employees. Informant D elaborates on when they are hiring people:

“But if there is labor that we cannot get, then we may have to add them to the office that we have in Vestlandet.” (CaseD)

Informant D highlights that while having external locations in urban areas offers certain advantages, such as access to a larger talent pool, there are notable downsides to consider. One significant drawback is the heightened competition for workers with experience and education compared to rural areas. In urban settings, many companies vie for the same skilled labor force, leading to increased competition and often resulting in a higher employee turnover rate. This dynamic not only intensifies the challenge of attracting and retaining qualified personnel but also contributes to poor organizational stability.

“However, if it is labor that we cannot manage to recruit locally, we might have to employ them at the office we have in Hordaland. The advantage of hiring in our primary location[rural] is that the turnover rate of employees is much lower. So, if you manage to get hold of someone who is very skilled and you have them at the main office, it takes a lot to lose them again. However, as soon as you are in Vestland, it is easy to lose them because they just need to cross the doorstep and then they are in a new workplace. It costs them nothing to switch.” (CaseD)

Informant D talks about which costs are involved when loosing employees to others and you must get new ones and train them. He says, you use resources on training new employees that could be used somewhere else. The cost of sending new employees on course or training gives lost work time, cost on travel and accommodation expenses. These expenses are money that could have been used for innovation work and thus a barrier. And this is in line with what Informant D comments on why hiring in the main office is a good thing.

“The advantage of adding staff at our head office is that the turnover rate of the staff is much lower.” (CaseD)

In the interviews, it was clear that for production companies, the situation differs markedly as they rely on recruiting individuals within the vicinity of their production facilities. Their dependency lies in the willingness of persons to reside in non-urban locales, often characterized by inadequate infrastructure, such as poor roads and a long way to schools for their children. However, I saw another factor from the interviews that was a big advantage. When people choose to settle in non-urban areas, they are also staying longer in these locations than people living in urban areas.

4.2.2 Laws and regulations

Laws and regulations were a code that came from the analyzing. Laws and regulations can be both a driver and a barrier to innovation work. Some of these companies are family-owned, and their owners experience different challenges than those who just own the company for the sake of ownership. Meet regulations can also be a driver for changing existing products or making new service innovation. Informant C says that the increasingly stringent regulations surrounding sustainability, environmental care, tax laws, and other directives from the EU pose significant challenges for businesses operating in rural areas today. The other informants highlighted that companies often consider change because of the emergence of new and often stricter laws and regulations. Below are some of the statements made by the informants:

“Then we are more on the framework conditions and companies in Norway. The huge barrier is our current government's business policy. We put a lot of the money that we could have used in the company, it goes away in taxes before we have even started the plant and to talk about something else. Tax on working capital. Millions are spent in that connection there. We could have modernized much faster, but they put a stick in the wheels with taxes” (CaseC)

“[It's like] We should not really be a family business but owned by foreigners because then we would have escaped many of the taxes. And many of the companies in Norway wonder how you are going to bring about generational change at all.” (CaseC)

“You can probably say then that we work internationally and operate within IT. There is a regulation that affects us, and it is the GDPR to a large extent.” (CaseD)

The companies deal with different laws and regulations, which are sometimes the same. Informant C mentioned in his quote the tax on working capital. He explains that this is a tax paid based on one's net worth. The most important assets are cash, stocks, and real estate. He also describes the difficulty of being a family-owned company in rural areas and that foreign owners are getting off much cheaper by not having to pay all the taxes that Norwegian owners are paying.

While the production company's see some of the laws and regulations as barrier for their innovation work, company E see them as a driver because regulation often gives them more work. The informant elaborates on how they get more work and collaboration when the EU comes with new regulations on sustainability.

“Whereas players such as Equinor have the opportunity to be early adapters and have the resources to do so and at the same time have an authority requirement that means they have to do something. And

then. It is not always that someone who is an innovator or early adapter is there voluntarily. It may be need, it may be a requirement, and it may be other things” (CaseE)

4.2.3 Local affiliation

While some companies are based on their access to resources, others are placed there by convenience. This factor connects most of these companies to their location and is somehow essential in driving the company forward. In my group of companies, only two out of the six locations are based on their resources. But when it comes to the brand, three of the companies have an approach that highlights this. They use marketing techniques that highlight their rural roots and proximity to the district as unique selling points. This strategy sets them apart from the competition and helps establish a strong brand identity. Informant C explains what it means for their company to be located in rural areas.

“It is absolutely essential. We simply couldn't do what we do or appear the way we do elsewhere in the country.” (CaseC)

Informant C's rural surroundings are not just a backdrop but an integral part of their business identity. They shape their operations, their branding, and ultimately their success. The connection to the local community that comes with being in a rural area is difficult to replicate and sets them apart from competitors who lack this real connection to the land.

Informant E's concern is more about the resources they are able to retain because of their rural location.

“It is important, in that way, that here are some of the best resources and a relevant industry and the like, which makes it a relevant area for the development of our innovation.” (CaseE)

Informant E's perspective sheds light on another crucial aspect of rural location: access to vital resources. In rural areas, businesses are often located in close proximity to essential raw materials.

Informants C and E provide valuable insight into the many different advantages of rural surroundings and highlight why these areas are still integral hubs for economic activity and innovation in Norway's diverse business landscape. In essence, the importance of rural locations to businesses extends far beyond mere convenience. It is intertwined with their identity, their operations, and their ability to innovate and thrive in a competitive market landscape.

According to informant B, there is no reason why companies in rural areas are not as innovative as companies in urban areas. The only issue he highlights in his company regarding factors is the lack of participation in unstreamed events.

“If I'm going to say one thing that could be more of, it is that you can take part in some events that do not appear online. There are some events that are not streamed. That is not so good.” (CaseB)

4.3 Network

The informants elaborated on how they create local buzz through involvement in the local community, ranging from using local suppliers to supporting local teams. In addition, they talk about what is needed to expand globally. They also say that the need for strategies that promote sustainable development and increase the company's competitiveness is a significant factor.

4.3.1 Collaboration

Collaborative partnerships have emerged as a crucial tool for companies to foster innovation and propel development, especially in rural areas. It is an important factor and a driver for my informants to be innovative in their respective companies. It is a way of keeping up with the trends in the respective companies as well as getting the best resources from your supplier. While IT companies are relying on information from others as a criterion for choosing a new partner, the production companies are willing to

pay more, just to get a local supplier. Informant B describes collaboration as solving challenges with others. Informant F elaborated on how collaborations could lead to extensive discussions on innovation and new projects.

Informant E shared an intriguing perspective on the process of networking and building collaborations with others:

“Collaboration for me is at least the desire to participate, that I want to. I feel like I want to give more than I get. For me, a network is not what I can exploit. But who can I help who might be useful to me later? So, for me, my value in the network is more important to contribute than to receive and to create myself.” (CaseE)

The informants talk about the valuable knowledge, resources, and skills that a particular type of partner brings can make a partnership very profitable, not just in case of money but also in innovation work. But collaboration is not always an easy matter. Informant E says there is a lot of energy going into making collaboration work, before and under. Informant B collaborated on what is important to them when choosing new collaboration partners:

“But when we do it, we look at what they have done before. What kind of references do they have, and we are concerned with, or it is actually an advantage that they are on this side of the globe.”
(CaseB)

From my interviews, it is evident that many companies prefer working with familiar partners. They emphasize the time-saving aspect, as establishing new relationships can be costly for the company. However, they also acknowledge the risk of limiting innovation by exclusively relying on longstanding collaborators within the industry, potentially missing out on fresh perspectives and approaches.

All of my informants are actively engaged members of various industry associations, where they participate in collaborative efforts aimed at optimizing their operational

strategies. These various associations act as a platform to share insight and practice among industry peers. My informants say that in addition to fostering networking opportunities, these collaborations inspire inspiration and work methods. Through such interactions, participants gather diverse knowledge spanning a broad spectrum of topics, ranging from innovative design concepts to optimizing production processes. These exchanges not only enrich their understanding of industry trends but also empower them to implement new approaches and drive continuous improvement on their product.

4.3.2 Projects

Project play crucial roles in innovation work in rural areas in several ways. Networking and collaboration, enhance the access to new services, strengthen the local economic by working with local companies. Informant F tells how projects provide the opportunity to establish robust networks and partnerships among various stakeholders in rural areas. Several of the companies describe who they collaborate with and give some information about this. Informant D stated:

“But we collaborate a lot with customers and get a lot of feedback from customers on products.” (CaseD)

They are not alone in using their customers for collaboration, as informant C also explains:

“We have our own projects that focus on competitiveness, which we do together with some of our customers on some products.” (CaseC)

Informant E from the energy company elaborates they are currently working with a big global company on a project as well as running another project with Innovation Norge. Informant B in the IT industry is currently running a project that aims to change and enhance the business model around our services linked to the search engine. While most of the projects that my case companies are currently involved in involve product innovation, production company F is running a project to improve the factory's automation.

The findings highlight projects' important role in promoting innovation in rural areas. It highlights that these projects not only involve the establishment of robust networks and collaborations but also rely heavily on customer feedback. By engaging with customers, businesses can obtain valuable insights into their needs and preferences and use this knowledge to develop innovative solutions that meet their requirements. Moreover, collaborations with other businesses, institutions, and organizations can lead to the exchange of ideas, resources, and expertise, fostering a culture of innovation in which new ideas are generated, tested, and refined. The collaborations span across various industries, from energy companies working with industry leaders like Equinor, to IT firms aiming to enhance their service-related business models. These projects contribute to innovation in product development and operational improvements such as factory automation.

4.3.3 Local, National or Global

It is evident that all the companies are using their networks to stimulate innovation work. For IT companies the stimulating driver for change is their customers. They are for Case B located nationally, but Case D they have a global location. All the companies have some form of local, national, and global network links. Not all to the same degree, but the interviews show that they all tap into all of these three categories. Most of the informants highlighted the wish to use local companies to perform jobs for them, being suppliers as well as being partners in various projects. Out of all the companies under consideration, Case A, C, E and F have established consistent business relationships with local suppliers. In particular, informant A provided a comprehensive explanation for their decision to opt for a local supplier even when the cost was higher. According to the informant, this preference is due to the excellent payback in terms of faster delivery times. In essence, informant A believes that the convenience of having a local supplier outweighs any potential cost savings that could be obtained from a non-local supplier.

“We are willing to pay a little more [local supplier]. That's because there are a number of effects that you don't usually see in money, and there are, for example, short delivery times and short distances. So it's really easy if you're missing something and just drop by a local

supplier and pick up a delivery online, for example. True, instead of getting them from Italy.” (CaseF)

Based on the responses from the informants, it seems that there is an additional advantage in choosing local retailers. By leveraging contributions from other companies that specialize in specific industries, costs can be reduced. This means that the business can avoid having dedicated departments for specialist fields. By utilizing external expertise, the business can ensure high quality and efficiency in task execution while reducing internal costs and resource use. This also provides the opportunity to focus internally on core competencies and strategic initiatives while entrusting specific tasks to external partners who possess the necessary cutting-edge expertise. They are accessible and close without having to own them.

For three of the companies, their customers were national. And while in many other circumstances, it depends on what industry you are in, here, this had nothing to say. Case A, B, and F have nearly all their customers in Norway. Furthermore, The IT companies are using global companies to help dem with their products and make these better. The energy company have hubs all over the world that is assisting them to make a better and more efficient product. Case A and C are talking about being a part of different boards and associations to keep up with trends and developments in the industry.

Although the informants emphasize using local suppliers and being part of the local buzz, they also admit that this is not enough to make the companies go forward and keep their comparative edge. The result of this study shows that there is a difference between the companies relative to what industry they operate in. The companies with the least attachment to the local place are the technology companies. They already have the equipment and the network to make a partnership work. And often, the companies or partners that they collaborate with are distinguished for them; they have the right attributes.

For the production companies, the story is different. They produce the product on site, so what they are dependent on is mainly resources in the form of raw materials, production lines, and workforce. This does not mean that they are without global suppliers and customers, but when it is possible, they do their business in Norway.

Despite being rich in raw materials, one of the production companies in Norway imports over ninety percent of the raw materials required for its production. This is due to the specific demand for this particular natural resource, which allows suppliers to fetch a higher price if they sell it to another industry for a different purpose.

“We have grown so big over time that what we get hold of [raw materials] is not enough. In some products, maybe we're up to 10% local, the rest we have to get from abroad because there's not enough production in Norway. We're competing for the same raw material that you buy in the store, and it's much better for the supplier to sell them to the store.” (CaseC)

One of the informants mentioned an element I like to highlight regarding global networking. It describes a reason for wanting to go global and big when looking for development partners. Informant B touched on it when talking about references and how they find and evaluate new and potential partners to work with it is most of the time depending on what you have done before and what you or your company have achieved. According to Informant E, replacing prominent, brand-name actors in their network is an incredibly daunting task. He explains that the reason for this is primarily because these actors have a vast network and are well-established within the industry. This makes them also well connected. Also, their status as well-known figures within their respective fields also adds to the challenge of finding suitable replacements. Secondly, the brand name of these prominent actors speaks for itself and is a significant factor that makes them difficult to replace. Their brand has been built over a long time, and it carries a certain level of prestige and recognition. This makes it difficult to find replacements that can match their level of recognition and status. Thirdly, the reputation factor is enormous in replacing these actors. The reputation of prominent actors is built over years of hard work and dedication to their craft, and it is something that cannot be easily replicated. Finally, the interruption of ongoing projects can lead to delays and inefficiencies.

“And then it's kind of like, Bosch, it's not so easy to replace Bosch locally, right? It's either Bosch or ABB or those big giants anyway, which is also good for our reputation that we have big names associated with companies and stuff like that.” (CaseE)

5. Discussion and implications

In this chapter, I will discuss the empirical findings in relation to the theory presented in the thesis. I will discuss the main findings, the most interesting ones, and the most surprising ones in light of previous research and theory. The table below gives an overview on the findings in chapter 4.

	Driver	Barrier	Driver	Barrier	Driver	Barrier	Driver	Barrier	Driver	Barrier	Driver	Barrier
Vision		Lack of a clear vision Case A	How to improve Case B		Employees are included Case C		Diversifying revenue streams. Case D			Not willing to change Case E		Complete picture Case F
Organizational Culture		More ideas from employees Case A	Very flexible Case B		Easy when change Case C		Like to change. Case D		Importance of change. Case E			More ideas Case F
Competence enhancement	Develop professionally Case A		Develop professionally Case B		Position you have Case C		Get education Case D		To be updated. Case E		Developed professionally Case F	
Employees		Not getting competent labour Case A	Competent labour Case B		Branch office Case C		Branch office Case D		We've been lucky Case E			Problem. Case F
Laws and regulation	Tax Case A		GDPR. Case B	GDPR. Case B		Tax Case C	GDPR. Case D	GDPR. Case D				Tax Case F
Local affiliation	Must be here Case A			We can be anywhere. Case B	Not anywhere else Case C		Important to be here. Case D		Necessary partners Case E			Located along a main road. Case F
Collaboration	Local. National. Global Case A.		Global Case B		Local. National. Case C		National Global Case D		Local. National. Global Case E		Local. National. Global Case F	
Project	Global Case A		National Case B		Local. National Case C		Local. Global Case D		Local. Global Case E		Local Case F	
Local. National. Global	Local. National. Global Case A		National Global Case B		Local. National. Global Case C		National Global Case D		Local. National. Global Case E		Local. National. Global Case F	

Table 2: A presentation of drivers and barriers for innovation

5.1 Organization Internal forces

A strong willingness to change is a big instigator of innovation in an organization (Jacobsen, 2018). The companies in my research are addressing their company culture in various ways, primarily influenced by their respective industries. Another significant concern for these companies is the repercussions of not having a clear vision. Not only does the absence of vision pose a challenge, but it also means being entrenched in a singular vision or failing to grasp its full scope. The last factor in internal forces is competent enhancement; as the findings suggest that employees have low turnover in rural areas, and the need for new knowledge regarding innovation work is highlighted.

5.1.1 Vision

A visionary and supportive management that anchors the vision in the organization's culture and strategy can be a powerful driver of innovation. The findings shows that the lack of vision is not only evident by the boards but also in the case of suppliers.

The lack of vision from the company's board can diffuse the company's culture and cause employees trouble understanding and seeing the company's long-term goal (Jacobsen, 2018). Furthermore, the company's structure can contribute to the lack of vision or not having a clear one (Lewis & Clark, 2020). Regarding suppliers, I use the same theory, i.e. organizational theory. For suppliers who are to deliver projects to other companies, the lack of vision according to their own company will create uncertainty as to whether they can actually carry out projects (Lewis & Clark, 2020) and, furthermore, have employees who can plan an entire project from A to Z.

The findings show the importance of a clear vision, whether it is among your company or the ones you are dealing with daily. The research shows that a lack of vision in the form of not having a board that is able to turn around in crises or when problems occur is a barrier to innovative work for companies. This is something that is consistent with existing theory. My research also finds some trouble with getting suppliers that can carry out a project from start to finish. Since you can see this in light of organizational theory, are my findings just partly supported or even dealt with regarding companies in rural areas. This is an important factor as there is not the largest pool of providers in rural areas, and they occasionally have to go out of the country to find the expertise they need. These added costs in finding the right resources go on the bottom line, and if the company has small funding, they will be taken from another post on the budget. The posts that are often cut in our innovation work posts since they can be perceived as unnecessary. This can be a barrier for innovation, especially for smaller firms.

5.1.2 Organizational culture

The term "willingness to change" refers to the organization's capacity and readiness to accept, adapt to, or initiate changes in its operations, strategies, or structures (Jacobsen, 2012). My research findings indicate that companies are using different ways to handle this capacity. Furthermore, IT companies in my sample have a high ability to adapt when changes are needed. From the theory, it emerges that every organization has its own unique culture that guides how it does things (Kvålshaugen, 2012). The results I got cohere with this view. I have companies that are crystal clear on what they want to

achieve, and this is how we are going to do this. The IT companies have a creative and innovative culture, while some of the production companies have a culture of this is how we do things here but not all of them.

If there is one barrier that hinders innovation and renewal in an organization, it is the fear of losing power. The theory of power has a central place in organization and management theories. Power and power relations work in all kinds of collaboration inside the organization (Kvålshaugen, 2012). While organization and management theories do not elaborate much on how this plays out in rural areas, I see it plays a factor in my research and can be a barrier to innovation. In small places, you tend to know not just your neighbors but also the rest of the village. Workwise, maybe the company is the cornerstone company of the village, and almost everyone is working there. Then, culture and power relations will be important for the workers. A shift in this by implementing new ideas or new projects will be unpleasant for those who lose their power and their known place in the hierarchy of the company culture.

5.1.3 Competence enhancement and turnover rate

The theory states that knowledge is a fundamental driver of innovation, playing a crucial role in the development of new ideas, products, and processes (Nonaka, 1995). Knowledge and skills give a firm a competitive advantage because they are able to innovate new products, services, or processes, so my research also focused on how the conditions were out in the companies. Here, the findings show the differences between the different industries. IT companies depend on executing competence development for all their employees, while in production companies, the story is different; your job title is decisive for how many professional updates you are getting. This can be a barrier to innovation if you compare it to recent research from Gjelsvik & Isaksen (2016) that shows companies with high education levels had a higher product launch or implementation of new processes than those with lower education levels. It also played a significant role in what industry you were operating in. In addition to having competent employees, the turnover rate also is a factor in the organization's culture. Research by Hom et al. (2017) suggests that high employee turnover rates directly impact organizational culture, creating more stress on the workers and negatively impacting productivity. In my research, I found that employees in rural areas stay at their jobs longer than urban workers do. Saving money in not having to train new

employees all the time, since employees are staying longer. Projects within the company can start and finish with the same employees. Furthermore, by having a low turnover rate the knowledge pool is consistent.

5.2 Organization external forces

One of the recurring factors for companies that are hiring in old Sogn og Fjordane has been the shortage of competent workforce (Gundersen & Onsager, 2011). Some of the companies have found a way around this problem by having locations in one of the bigger cities, but for the production companies that need employees for their production the recruitment factor is still a problem. The impact of laws and regulations is also affecting these companies to varying degrees. Lastly, since we are investigating rural areas, the local affiliation is something my informants talk about, and elaborate on what it means to them and their innovation work.

5.2.1 Employees

According to research, working remotely gives companies access to a broader pool of employees (Althoff et al., 2022). This is a good thing for companies in rural areas, and some companies in this research already have branch offices in a big city. However, the advantage of having a larger talent pool to select from is frequently undermined by the challenge of retaining these employees, as there are always new job opportunities around the corner in urban areas. Furthermore, organizational factors such as a lack of resources, including human resources with necessary skills and financial constraints, can pose significant barriers to innovation (Tidd & Bessant, 2020). If the necessary departments are not gathered under one roof, the risk of fragmentation and communication breakdown increases, hindering collaboration and innovation. The research findings align with the theory that establishing a secondary location in urban areas gives companies access to a larger pool of potential employees. Consequently, this makes acquiring skilled and experienced workers essential for the company's operations easier.

The theory emphasizes how companies in rural regions find that obtaining qualified labor is the most significant obstacle to innovation (Gundersen & Onsager, 2011). The findings partially support this notion. While some companies benefit from having a branch office in an urban area, IT companies suggest that this is not the deciding factor. Instead, they emphasize that the key consideration when hiring is the qualifications and

expertise of the prospective employee rather than their geographical location. Moreover, my research findings indicate that in industries with a greater concentration of medium-sized companies in the same industry, the competition for new employees gets bigger naturally. This is why some production companies have experienced this and find it a barrier to their company and innovation work.

5.2.2 Laws and regulations

The informants elaborate that new laws and regulations have been both a barrier and a driver to innovation. The drive to change for IT companies came with the EU's General Data Protection Regulation (GDPR) incorporated as Norwegian law in Lov om behandling av personopplysninger (Personopplysningsloven, 2021). My findings show that this law pushed IT companies to find new ways and processes for handling personal data from persons. This was a driver for innovation at these two companies. This was a driver for innovation at these two companies. These findings are supported in theory, where new regulations or the anticipating of it might encourage companies to enhance their innovation efforts to secure a competitive edge (Doran & Ryan, 2012)

For the production companies in my research, taxes are a barrier to innovation. They point out that the tax on working capital is one of two influential taxes. In December 2022, the Torvik committee delivered a report on the Norwegian tax system (NOU 2022:20, 2022). This report points out that you cannot split this tax in two, and even if it turns out skewed sometimes, this one is fair. These taxes influence how much money the company is able to spend on Research and development work. Furthermore, high taxes on working capital may hinder companies from engaging in collaborative innovation efforts. If companies are already struggling to allocate funds internally due to tax burdens, they may be less willing to invest in joint projects with other network partners. Lastly, innovation often involves taking risks and experimenting with new ideas. Taxes limiting available capital can constrain companies' ability to take these risks, as they may be more inclined to prioritize safer, incremental improvements over radical innovations.

The other tax hindering innovation is the tax on wealth, and the companies that are family-owned feel the effect of this. Considering that the breadth of Norwegian business largely comprises small and medium-sized enterprises, often owned by families with the majority of their wealth invested in the family business, it should come as no surprise

that over time, a wealth tax on business investments must be largely financed by the returns the company generates (Vinje, 2013).

5.2.3 Local affiliation

Local affiliation can give the company a unique insight in the local community's needs, resources, and culture. This knowledge can be valuable for developing innovative solutions tailored to local conditions. Local affiliation can facilitate closer collaboration and networking with other actors in the local community, including other businesses, research institutions, and public bodies. This can promote knowledge sharing, idea exchange, and partnerships that contribute to innovation (Etzkowitz & Leydesdorff, 2000). On the other side, research has shown that Companies in rural areas strongly tied to local networks risk becoming "locked in" to outdated practices or technologies (Grabher, 1993). My research is partly supported by theory. The IT companies in not so much affected by this as their network is more global than rural. I found support in networking on a local level is important for companies in rural areas. The other thing I found was the connection between rural and brand. Some of my informants are determined that the company could not be located anywhere else than exactly where they are. Firstly, it has a local connection, but the most important of all is the brand name, which is associated with the rural idea. For these companies, it also is a big advantage in being rural; it gives them a competitive advantage. Secondly, they also emphasize the connection to the local community as a resource in the sense that they can use this resource to obtain workers, suppliers and resources.

5.3 Network

After analyzing the company's network, it became clear that there were changes occurring relative to the industry they were in. Specifically, the location of the actors they interacted with seemed to be a significant factor. Production companies were generating most of the local buzz, while IT companies were not a part of this local buzz. When it came to collaboration, all the companies had global suppliers of some kind. For the projects, the production companies kept it local and national, while the IT companies were global. The company that had the most widespread network regarding projects was Case E.

5.3.1 Collaboration

The theory states that innovation is a knowledge-driven process and relies on both the internal capabilities of firms and their access to external knowledge sources (Bathelt et al., 2004). Grillitsch & Nilsson argue that companies with limited access to local knowledge spillovers often demonstrate a greater tendency to engage in collaborative efforts with companies outside their geographic location, it also depends on what size the company is. My research corroborates their findings, indicating that some of the companies I have studied are characterized by limited collaboration with local actors, may have weak in-house capabilities, and tend to seek cooperation with non-local actors to offset the absence of knowledge spillovers. For the IT Companies, the in-house capabilities are quite strong, but there is not much collaboration with the local actors. These findings are consistent with what Grillitsch & Nilsson (2015) found. They found that companies have high technological competencies if located in the rural knowledge periphery.

The theory argues that every company needs global pipelines to survive, grow and get/create new knowledge (Esposito & Rigby, 2019). My findings agree with this. All of the companies have global pipelines. The ones that are embracing this are the IT companies. They have global suppliers, Case D has global customers. The production companies have all global suppliers, but when it comes to marked-for-sale, only Case C is global, while Case A and F are national.

Moreover, my findings suggest that collaboration with local actors is most important for production companies. It exists theories on how too much local buzz can hinder growth in small and medium companies (Bathelt et al., 2004). However, there is a lack of information on data regarding which entities are generating the most buzz while concurrently driving innovation and economic growth.

5.3.2 Projects

The theory argues that going beyond local actors and using global actors is a more risky affair than (Bathelt et al., 2004). My findings seem to support this view since almost all the companies are having projects with local actors. Just Case B refrains from participating in local interactions, and it is the only one that does not engage with local actors in any capacity whatsoever. My findings almost seem to be consistent with the

theory regarding not using global pipelines when having projects with others, that small and medium companies often use locals since the expense of using global pipelines is too high (Trippel et al., 2009). I found that this does not apply to Case E, that are in a special industry. They have almost all their projects with national actors. This will say that sometimes you have to pay the expense of using global pipelines just because you are in the wrong industry.

5.3.3 Local, National or Global

According to the literature, the cheapest thing to participate in is the local buzz since sharing in these networks often goes seamlessly (Esposito & Rigby, 2019). This study's findings show that the production companies have the most local buzz. Their network consists of local suppliers, craftsmen, and customers. The challenge lies for production companies that are not making money in their respective markets and, furthermore, are small companies that make no or little profit (Fitjar & Rodríguez-Pose, 2020).

Nevertheless, the findings suggest that they are doing it not just for convenience but also as a strategy to support the development of the local environment. This is a strategy that has not been much elucidated by theory in the past (Capdevila, 2018).

The theory claims that the pool of potential actors to interact with is smaller and, hence, a barrier to innovation (Kingsley & Malecki, 2004). My findings partly agree with this because even if the pool of potential actors is small in rural areas, they seem to have found those who work best for them and with them. One of the production companies has various projects with local actors that give them new ideas and drive innovation. They also tell me about saving money sometimes, but they primarily emphasize the time saved by engaging local actors, which they can then invest in enhancing their production processes.

Engaging in a national network for the company is often more expensive than local participation, as it requires more resources and administration to coordinate activities at a national level. To some extent, every company included in this research operates at a national level. Trippel et al. (2009) highlights that an orientation towards just local and national customers will give the organization a worse innovation performance than those organizations that lead towards an international market (Romijn & Albaladejo, 2002). My research does not support this theory; the companies in the research that

explicitly have customers from the national pool have the same number of projects and innovations as those that do not.

Companies' interaction with other actors globally is often referred to as global pipelines (Bathelt et al., 2004). In the case of innovation, global pipelines play a role in bridging structures that give companies access to information that can spur innovation (Bathelt et al., 2004). In the case of innovation, the global pipelines play a role as bridging structures that give access to the companies to information that can spur innovation (Aarstad et al., 2016). Here, my research confirms this theory. Company A shares insights regarding the inspiration derived from their Danish supplier, while Company B emphasizes their close collaboration with an Irish supplier, from whom they get fresh ideas for new and upcoming projects.

Lastly, working with actors with a familiar name is highlighted as a driver for others to a driver for others to want to work with you. Partnerships with an established company can also provide access to resources, expertise, and networks and foster innovation for companies in rural areas.

6. Conclusion

This section comprises the research conclusion and limitations and a recommendation for future research.

6.1 Conclusion of the research

The study's started with the research question “What challenges and opportunities do companies in rural areas face, and how do network effects influence their innovation work?” The research questions were investigated through a quantitative survey where 6 Companies was interviewed.

The study has shown that some of the companies are struggling with suppliers that are lacking vision, or the ability to see the whole project and how the outcome is going to be. This is something that should be researched more, because it is an interesting phenomenon. The board's vision is also mentioned as a barrier for the company and its innovation work; this also is aligned with existing theory. When it comes to the willingness to change factor, IT companies are surfing this right home, and for them, this is a driver for innovation. Some of the production companies have a stagnating culture, but one of them is different. They are crystal clear on how things are going and have a culture where change is accepted. The factor that surprised me the most was the low turnover rate. All the companies have employees that have been there for a long time, and people almost not leaving. This saves money for the companies, money they can use on projects. Furthermore, the employees are staying and the companies are happy to let their employees get further development in the form of courses and school if they need this. And literature embraces knowledge as an innovation driver.

The curing factor for companies hiring in rural areas has been the shortage of skilled labor. This issue two of the companies have solved by having an external department in rural areas. However, for production companies that need employees for their production, the recruitment factor is still a problem. Several of the companies mention laws and regulations as a barrier for them; it is particularly the production companies that feel this. An interesting finding is that IT companies see this regulation as a driver for their innovation work. The companies that create the most local buzz and have the strongest ties to the local community are the production companies. They have built

their brand name on being rural and local. And for them it gives a competent advantage. Furthermore, getting these ties to the local community is giving them access to resources like workers, suppliers, and other resources.

Upon exploring the company's network, it became evident that there was a shift corresponding to their respective industries. Notably, the geographical location of the actors with whom they interacted emerged as a significant factor. Production companies dominated the local attachment, whereas IT companies remained almost absent from this local buzz. For the production companies, it is a driver since it is time-saving using local actors. Theory has been concentrating on the fact that too much local buzz and few global pipelines are not good, but it has not figured out which entities are generating the most buzz and, at the same time, driving innovation and economic expansion. Almost all of the companies are engaging in local projects; it is only Case B that is absent. When it comes to global pipelines, all the companies are engaged in this kind of networking.

6.2 The study's contribution

This study's contribution lies in its examination of the network dynamics and innovation challenges encountered by rural companies in Vestland. Using empirical data from these enterprises and innovation network theory, the study offers valuable insights into the factors driving innovation in rural contexts. It reveals factors that can contribute to innovation work for companies in rural areas. Furthermore, the factors that are revealed in this research are factors that worry the companies and not what the theory says should concern them.

6.3 Limitations and further research

One of the limitations with this thesis is the short time frame on just above four months, to carry out and complete the thesis. Furthermore, it could have given me even deeper insight into the problem if more companies had been interviewed.

Another possible limitation of this research is the codes. These are generated from my research since these were the ones that worried my sample. Another sample may be worried about other things related to their company.

Further research should focus on the supplier company's lack of vision. Another topic is production companies, their ability to create local buzz, and their importance for rural communities.

7. References:

- Aarstad, J., Kvitastein, O. A., & Jakobsen, S.-E. (2016). Local buzz, global pipelines, or simply too much buzz? A critical study. *Geoforum*, 75, 129–133. <https://doi.org/10.1016/j.geoforum.2016.07.009>
- Alharbi, I. B. A., Jamil, R., Mahmood, N. H. N., & Shaharoun, A. M. (2019). Organizational Innovation: A Review Paper. *Open Journal of Business and Management*, 07(03), 1196–1206. <https://doi.org/10.4236/ojbm.2019.73084>
- Althoff, L., Eckert, F., Ganapati, S., & Walsh, C. (2022). The Geography of Remote Work. *Regional Science and Urban Economics*, 93, 103770. <https://doi.org/10.1016/j.regsciurbeco.2022.103770>
- Bathelt, H., Malmberg, A., & Maskell, P. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. In *Progress in Human Geography*. <https://doi.org/10.1191/0309132504ph469oa>
- Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *Qualitative Report*, 13(4), 544–559.
- Campus Sogndal. (2022, September 9). *Finn verksemder*. Campus Sogndal. <https://www.campussogndal.no/verksemder>
- Capdevila, I. (2018). The Local and Global Knowledge Dynamics through Communities. The Case of Communities of Makers and Social Entrepreneurs in Barcelona. *Management International*, 21(3), 59–70. <https://doi.org/10.7202/1052765ar>
- Chai, J., Liu, J. N. K., & Ngai, E. W. T. (2013). Application of decision-making techniques in supplier selection: A systematic review of literature. *Expert Systems with Applications*, 40(10), 3872–3885. <https://doi.org/10.1016/j.eswa.2012.12.040>
- Channer, N. S., Hartt, M., & Biglieri, S. (2020). Aging-in-place and the spatial distribution of older adult vulnerability in Canada. *Applied Geography*, 125, 102357. <https://doi.org/10.1016/j.apgeog.2020.102357>
- Christensen, L. B., Johnson, R. B., & Turner, L. A. (2015). *Research methods, design, and analysis* (12th ed, global ed). Pearson.
- Cypress, B. (2018). Qualitative Research Methods: A Phenomenological Focus. *Dimensions of Critical Care Nursing*, 37(6), 302–309. <https://doi.org/10.1097/DCC.0000000000000322>
- De Massis, A., Frattini, F., Kotlar, J., Petruzzelli, A. M., & Wright, M. (2016). Innovation Through Tradition: Lessons From Innovative Family Businesses and Directions for Future Research. *Academy of Management Perspectives*, 30(1), 93–116. <https://doi.org/10.5465/amp.2015.0017>
- deMarrais, K. B., & Lapan, S. D. (2003). Qualitative interview studies: Learning through experience. In *Foundations for research* (pp. 67–84). Routledge. van

- Doran, J., & Ryan, G. (2012). Regulation and firm perception, eco-innovation and firm performance. *European Journal of Innovation Management*, 15(4), 421–441. <https://doi.org/10.1108/14601061211272367>
- Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. Heinemann.
- Easterby-Smith, M., Thorpe, R., Jackson, P. R., & Jaspersen, L. J. (2018). *Management and business research* (6th ed.). SAGE.
- Esposito, C. R., & Rigby, D. L. (2019). Buzz and pipelines: The costs and benefits of local and nonlocal interaction. *Journal of Economic Geography*, 19(3), 753–773. <https://doi.org/10.1093/jeg/lby039>
- Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: From National Systems and “Mode 2” to a Triple Helix of university–industry–government relations. *Research Policy*, 29(2), 109–123. [https://doi.org/10.1016/S0048-7333\(99\)00055-4](https://doi.org/10.1016/S0048-7333(99)00055-4)
- Fitjar, R. D., & Rodríguez-Pose, A. (2020). Where cities fail to triumph: The impact of urban location and local collaboration on innovation in Norway. *Journal of Regional Science*, 60(1), 5–32. <https://doi.org/10.1111/jors.12461>
- Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219–245. <https://doi.org/10.1177/1077800405284363>
- Fritsch, M., & Wyrwich, M. (2021a). Does Successful Innovation Require Large Urban Areas? Germany as a Counterexample. *Economic Geography*, 97(3), 284–308. <https://doi.org/10.1080/00130095.2021.1920391>
- Fritsch, M., & Wyrwich, M. (2021b). Is innovation (increasingly) concentrated in large cities? An international comparison. *Research Policy*, 50(6), 104237. <https://doi.org/10.1016/j.respol.2021.104237>
- Gamito, T. M., Madureira, L., & Lima Santos, J. M. (2021). Unveiling and typifying rural resources underpinned by innovation dynamics in rural areas. *Regional Science Policy & Practice*, 13(3), 457–477. <https://doi.org/10.1111/rsp3.12228>
- García-Cortijo, M. C., Castillo-Valero, J. S., & Carrasco, I. (2019). Innovation in rural Spain. What drives innovation in the rural-peripheral areas of southern Europe? *Journal of Rural Studies*, 71, 114–124. <https://doi.org/10.1016/j.jrurstud.2019.02.027>
- Gjelsvik, M., & Isaksen, A. (2016). *Regionale innovasjons- og utviklingsprosesser*. Norges forskningsråd. <https://www.forskningsradet.no/siteassets/publikasjoner/1254022026284.pdf>
- Grabher, G. (1993). The Weakness of Strong Ties: The Lock-in of Regional Development in the Ruhr Area. In *The Weakness of Strong Ties. The Lock-in of Regional Development in the Ruhr Area. In the Embedded Firm* (pp. 255–277).

- Greve, A. (2004). *Organisasjonsteori: Nyere perspektiver* (Faksimileutg.). Pensumtjeneste. https://urn.nb.no/URN:NBN:no-nb_digibok_2011100406089
- Grillitsch, M., & Nilsson, M. (2015). Innovation in peripheral regions: Do collaborations compensate for a lack of local knowledge spillovers? *The Annals of Regional Science*, 54(1), 299–321. <https://doi.org/10.1007/s00168-014-0655-8>
- Gu, R., Li, C., Yang, Y., & Zhang, J. (2023). The impact of industrial digital transformation on green development efficiency considering the threshold effect of regional collaborative innovation: Evidence from the Beijing-Tianjin-Hebei urban agglomeration in China. *Journal of Cleaner Production*, 420, 138345. <https://doi.org/10.1016/j.jclepro.2023.138345>
- Gundersen, F., & Onsager, K. (2011). Regional innovasjon og næringsutvikling. In *Norbok*. Norsk institutt for by- og regionforskning. https://urn.nb.no/URN:NBN:no-nb_digibok_2018020748188
- Håkonsen, K. (2018). *Vekst: Entreprenørskap og bedriftsutvikling 2* (Nynorsk[utg.]). Fagbokforl. https://urn.nb.no/URN:NBN:no-nb_digibok_2021102548066
- Hippel, E. von. (1988). *The sources of innovation*. Oxford University Press. <http://web.mit.edu/evhippel/www/sources.htm>
- Holloway, I., & Wheeler, S. (2013). *Qualitative research in nursing and healthcare, third edition* (3rd ed.). Wiley.
- Hom, P., Lee, T., Shaw, J., & Hausknecht, J. (2017). One Hundred Years of Employee Turnover Theory and Research. *Journal of Applied Psychology*, 102. <https://doi.org/10.1037/apl0000103>
- HVL. (2016, December 6). *Om Høgskulen på Vestlandet*. <https://www.hvl.no/om/>
- Hydro. (n.d.). *Hydro Aluminium Technology Centre*. Herøya Industrial Park. Retrieved January 25, 2024, from <https://www.heroya-industripark.no/en/about-us/companies-and-businesses-in-the-industrial-park/hydro-aluminium-technology-centre>
- Interreg Europe. (2019). *The challenges and necessity of rural innovation | Interreg Europe—Sharing solutions for better policy* (p. 13). Interreg Europe. <https://www.interregeurope.eu/sites/default/files/2021-12/Policy%20brief%20on%20the%20challenges%20and%20necessity%20of%20rural%20innovation.pdf>
- Jacobsen, D. I. (2005). *Hvordan gjennomføre undersøkelser?: Innføring i samfunnsvitenskapelig metode* (2. utg.). Høyskoleforl. https://urn.nb.no/URN:NBN:no-nb_digibok_2011102506008
- Jacobsen, D. I. (2012). *Organisasjonsendringer og endringsledelse* (2. utg.). Fagbokforl. https://urn.nb.no/URN:NBN:no-nb_digibok_2021020207695
- Jacobsen, D. I. (2018). *Organisasjonsendringer og endringsledelse* (3. utgave.). Fagbokforlaget.

- Jin, B. E., & Cedrola, E. (2019). Process Innovation: Hidden Secret to Success and Efficiency. In *Palgrave Studies in Practice: Global Fashion Brand Management* (pp. 1–23). Palgrave Macmillan. https://doi.org/10.1057/978-1-137-52352-5_1
- Kahn, K. B. (2018). Understanding innovation. *Business Horizons*, 61(3), 453–460. <https://doi.org/10.1016/j.bushor.2018.01.011>
- Kallio, H., Pietilä, A.-M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954–2965. <https://doi.org/10.1111/jan.13031>
- KDD, K. (2021, May 5). *Regionale utviklingstrekk 2021* [Rapport]. Regjeringen.no; regjeringen.no. <https://www.regjeringen.no/no/dokumenter/regionale-utviklingstrekk-2021/id2847260/>
- Kingsley, G., & Malecki, E. J. (2004). Networking for Competitiveness. *Small Business Economics*, 23(1), 71–84. <https://doi.org/10.1023/B:SBEJ.0000026022.08180.b7>
- Kvålshaugen, R. (2012). *Organisere og lede: Dilemmaer i praksis*. Fagbokforl. https://urn.nb.no/URN:NBN:no-nb_digibok_2020090707615
- Kvålshaugen, R., Wennes, G., & Nesse, J. G. (2019). *Organisere og lede: Dilemmaer i praksis* (2. utgave.). Fagbokforlaget.
- Lewis, A., & Clark, J. (2020). Dreams within a dream: Multiple visions and organizational structure. *Journal of Organizational Behavior*, 41(1), 50–76. <https://doi.org/10.1002/job.2419>
- Lewis, Ricard, L. M., & Klijn, E. H. (2018). How innovation drivers, networking and leadership shape public sector innovation capacity. *International Review of Administrative Sciences*, 84(2), 288–307. <https://doi.org/10.1177/0020852317694085>
- Lundvall, B.-äke, & Johnson, B. (1994). The Learning Economy. *Journal of Industry Studies*, 1(2), 23–42. <https://doi.org/10.1080/13662719400000002>
- Medby, P., & Karlstad, S. (2008). *Driftskostnader og skattegrunnlag* [Report]. Oslo: Norsk institutt for by- og regionforskning. <https://oda.oslomet.no/oda-xmlui/handle/20.500.12199/5688>
- Meynard, J.-M., Charrier, F., Fares, M., Le Bail, M., Magrini, M.-B., Charlier, A., & Messéan, A. (2018). Socio-technical lock-in hinders crop diversification in France. *Agronomy for Sustainable Development*, 38(5), 54. <https://doi.org/10.1007/s13593-018-0535-1>
- Najafi-Tavani, S., Najafi-Tavani, Z., Naudé, P., Oghazi, P., & Zeynaloo, E. (2018). How collaborative innovation networks affect new product performance: Product innovation capability, process innovation capability, and absorptive capacity. *Industrial Marketing Management*, 73, 193–205. <https://doi.org/10.1016/j.indmarman.2018.02.009>

- Nesse, J. G., Årethun, T., & Håvold, J. I. (2016). Entreprenørskapslyst blant unge i rurale område. In *Innovasjon og entreprenørskap* (p. 287). Universitetsforlaget. <https://doi.org/10.18261/9788215027623-2016>
- Nesse, J. G., Skogseid, I., Skarbø, K., & Larsen, Ø. H. (2014). *Innovasjon i Sogn og Fjordane vilkår og barrierer*.
- Ning, L., Wang, F., & Li, J. (2016). Urban innovation, regional externalities of foreign direct investment and industrial agglomeration: Evidence from Chinese cities. *Research Policy*, 45(4), 830–843. <https://doi.org/10.1016/j.respol.2016.01.014>
- Nonaka, I. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press.
- NOU 2022:20. (2022). *NOU 2022: 20*. regjeringen.no. <https://www.regjeringen.no/no/dokumenter/nou-2022-20/id2951826/>
- OECD. (2005). *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition*. Organisation for Economic Co-operation and Development. https://www.oecd-ilibrary.org/science-and-technology/oslo-manual_9789264013100-en
- OECD (Ed.). (2009). *Innovation in firms: A microeconomic perspective*. OECD.
- Okada, E. M., & Hoch, S. J. (2004). Spending Time versus Spending Money. *Journal of Consumer Research*, 31(2), 313–323. <https://doi.org/10.1086/422110>
- Personopplysningsloven. (2021). *Lov om behandling av personopplysninger (LOV-2021-06-18-124)*. Lovdata. <https://lovdata.no/dokument/NL/lov/2018-06-15-38>
- Romijn, H., & Albaladejo, M. (2002). Determinants of innovation capability in small electronics and software firms in southeast England. *Research Policy*, 31(7), 1053–1067. [https://doi.org/10.1016/S0048-7333\(01\)00176-7](https://doi.org/10.1016/S0048-7333(01)00176-7)
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2012). *Research methods for business students* (6th ed.). Pearson.
- Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle* (Vol. 46). Harvard University Press.
- Schumpeter, J. A., & Stiglitz, J. E. (2010). *Capitalism, Socialism and Democracy*. Taylor & Francis Group. <http://ebookcentral.proquest.com/lib/hogskbergen-ebooks/detail.action?docID=515353>
- Skjold, D. O. (2023). *Hvilke konsekvenser har utenlandsk eierskap for den norske samarbeidsmodellen? En case-studie fra norsk prosessindustri*. <https://doi.org/10.18261/tfs.64.1.1>
- Śledzik, K. (2013). Schumpeter's View on Innovation and Entrepreneurship. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2257783>

- Sogndal Kommune. (2023). *Om Sogndal kommune—SOGNDAL KOMMUNE*.
<https://www.sogndal.kommune.no/om-sogndal.514668.nn.html>
- SSB. (2023). *SSB*. SSB. <https://www.ssb.no/befolkning/folketall/statistikk/tettsteders-befolkning-og-areal>
- Tidd, J., & Bessant, J. R. (2020). *Managing innovation: Integrating technological, market and organizational change* (Seventh Edition). Wiley.
- Tjora, A. (2010). *Kvalitative forskningsmetoder i praksis*. Gyldendal akademisk.
https://www.nb.no/items/URN:NBN:no-nb_digibok_2016012006008
- Tripl, M., Tödting, F., & Lengauer, L. (2009). Knowledge Sourcing Beyond Buzz and Pipelines: Evidence from the Vienna Software Sector. *Economic Geography*, 85(4), 443–462. <https://doi.org/10.1111/j.1944-8287.2009.01047.x>
- Uvarova, I., & Vitola, A. (2019). Innovation Challenges and Opportunities in European Rural SMEs. *Public Policy And Administration*, 18(1), 152–166.
<https://doi.org/10.5755/j01.ppa.18.1.23134>
- Uyarra, E. (2010). What is evolutionary about ‘regional systems of innovation’? Implications for regional policy. *Journal of Evolutionary Economics*, 20(1), 115–137. <https://doi.org/10.1007/s00191-009-0135-y>
- Van de Wetering, R., Mikalef, P., & Helms, R. (2017). Driving organizational sustainability-oriented innovation capabilities: A complex adaptive systems perspective. *Current Opinion in Environmental Sustainability*, 28, 71–79.
<https://doi.org/10.1016/j.cosust.2017.08.006>
- Wielsma, A. J., & Brunninge, O. (2019). “Who am I? Who are we?” Understanding the impact of family business identity on the development of individual and family identity in business families. *Journal of Family Business Strategy*, 10(1), 38–48. <https://doi.org/10.1016/j.jfbs.2019.01.006>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (Sixth edition.). SAGE.

8. Appendix

Appendix 1. Comprehensive overview of innovation barriers and drivers

		Vision	Organizational Culture	Competence enhancement	Employees	Laws and regulation	Local affiliation	Local. National. Global	Collaboration	Project
Case A	Driver			I am all for sending my employees so they develop professionally.			We couldn't be anywhere else	Local. National. Global	Local. National. Global	Local
	Barrier	Lack of a clear vision from external project leaders	I wish there were more ideas from the employees on how to change		We have problems getting competent labour	Tax on working capital				
Case B	Driver	Thinking about how to improve all the time	Our employees are very flexible	We in the leadership are pushing for them to develop professionally.	We do not have a problem with competent labour	GDPR		National Global	Global	National
	Barrier					GDPR	Doesn't really matter where we are located			
Case C	Driver	All the employees in the company is included in how things are going	It is easy to get people in on new ideas	It depends on what position you have	We have a branch office in the city where employees can work from		We couldn't be anywhere else	Local. National. Global	Local. National.	Local. National
	Barrier					Wealth tax. Tax on working capital				
Case D	Driver	Making another foot to stand on, not just have 1 cash cow.	We like to change and develop	if the education is relevant to our company, we cover it	We have a branch office in the city where employees can work from	GDPR	For us, it is important to be here. This is where we were founded, our brand	National Global	National Global	Local. Global
	Barrier					GDPR				
Case E	Driver		we understand the importance of change	It is important to be updated	We've been lucky so far, but there are very few who are educated for what we need		Here are the necessary partners	Local. National. Global	Local. National. Global	Local. Global
	Barrier	Having a board that is not willing to change direction if needed								
Case F	Driver			We are sending all employees on a course if they want to be developed professionally.				Local. National. Global	Local. National. Global	Local.
	Barrier	Suppliers are struggling to grasp the complete picture	I wish there were more ideas from the employees on how to change		We have problems getting competent labour	Tax on working capital	For us it would have been better to be located along a main road			

Table 3: Comprehensive overview of innovation barriers and drivers.

Vil du delta i forskningsprosjektet:

Drivere og barriere til innovasjon i rurale områder

Formål

Formålet med dette forskningsprosjektet er å utforske drivkreftene og barrierer for innovasjon blant bedrifter i rurale strøk i gamle Sogn og Fjordane.

Forskningsprosjektet vil inngå i masteroppgaven til Elin Berg Midtun.

Min overordna problemstilling er å få et innblikk i kva drivkrefter eller barrierer som gjør at bedrifter kan innoverer i rurale strøk. I gamle Sogn og Fjordane er geografi, infrastruktur og finansiering en av mange utfordringer. Videre sier en rapport fra Forskningsrådet at regionen har lav FoU-aktivitet, men en høyere finansiering fra næringslivet enn andre regioner. Her utgjør finansieringen over 70 prosent av hovedfinansieringskilden. Gjør dette at innovasjonskraften er sterkere eller svakere? Vil dette stimulere eller stoppe innovasjonene?

Så, selv om både geografi, infrastruktur og høyere finansiering kan påvirke innovasjonskraften, er det vanskelig å si definitivt om de gjør den sterkere eller svakere uten en mer detaljert analyse av bedrifter i rurale regioner.

Hvem er ansvarlig for forskningsprosjektet:

Ansvarlig for forskningsprosjektet er Høgskulen på Vestlandet (HVL) og Veronika Trengereid er veileder for prosjektet.

Hvorfor får du spørsmål om å delta?

Studien inkluderer de som har kunnskap om innovasjon og innovasjonsprosesser i bedrifter som opererer i rurale regioner, enten gjennom sitt yrke eller posisjon i selskapet.

Hva innebærer det for deg å delta?

Deltakelsen i denne studien innebær å svare på spørsmål som relaterer seg til innovasjon i bedriften. Det vil også bli spørsmål om geografi og nettverk som bedriften er i.

Metoden som benyttes er personlig intervju. Ved ditt samtykke vil jeg benytte meg av en enhet som kan ta opp intervjuet. Deretter vil intervjuet transkriberes. Du vil kunne få innsyn i transkripsjonen og eventuelle sitater som publiseres i oppgaven, og din identitet vil anonymiseres.

Det er frivillig å delta

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet.

Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Du kan når som helst sende e-post til meg: Elin Berg Midtun, og gi beskjed om at du trekker deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger

Jeg vil bare bruke opplysningene om deg og ditt selskap til formålene jeg har fortalt om i dette skrivet. Jeg behandler opplysningene konfidensielt og i samsvar med personvernregelverket.

Andre opplysninger som kommer frem, men som er irrelevant for formålet vil bli behandlet konfidensielt. Med dette menes at din identitet vil ikke kunne gjenkjennes i datamaterialet. Det er kun jeg som er masterstudent Elin Berg Midtun og min veileder Veronika Trengereid som kommer til å ha tilgang til disse opplysningene. Opplysningene vil bli beskyttet mot innsyn fra uvedkommende ved at disse blir oppbevart på min personlige datamaskin, der kun jeg har passordet.

Hva skjer med opplysningene dine når vi avslutter forskingsprosjektet?

Opplysningene blir anonymisert/slettet når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er juni 2024.

Hva gir oss rett til å behandle personopplysninger om deg?

Studien behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Høgskulen på Vestlandet vil Sikt – Kunnskapssektorens tjenesteleverandør vurdere at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med følgende personer:

Masterstudent:

Elin Berg Midtun

tlf. 40870691

Elinb.midtun@gmail.com/ 242357@stud.hvl.no

Personvernombud ved Høgskulen på Vestlandet:

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Veileder:

Veronika Trengereid

Veronika.Trengereid@hvl.no

Tel. 57676160



Vurdering av behandling av personopplysninger

Referansenummer
311488

Vurderingstype
Standard

Dato
06.03.2024

Tittel
Masteroppgåve: Drivere og barriere til innovasjon i rurale områder

Behandlingsansvarlig institusjon
Høgskulen på Vestlandet / Fakultet for økonomi og samfunnsvitenskap / Institutt for økonomi og administrasjon

Prosjektansvarlig
Veronika Trengereid

Student
Elin Berg Midtun

Prosjektperiode
19.02.2024 - 30.06.2024

Kategorier personopplysninger
Alminnelige

Lovlig grunnlag
Samtykke (Personvernforordningen art. 6 nr. 1 bokstav a)

Behandlingen av personopplysningene er lovlig så fremt den gjennomføres som oppgitt i meldeskjemaet. Det lovlige grunnlaget gjelder til 30.06.2024.

[Meldeskjema](#)

Kommentar
OM VURDERINGEN
Sikt har en avtale med institusjonen du forsker eller studerer ved. Denne avtalen innebærer at vi skal gi deg råd slik at behandlingen av personopplysninger i prosjektet ditt er lovlig etter personvernregelverket. Vi har nå vurdert at du har lovlig grunnlag til å behandle personopplysningene.

FØLG DIN INSTITUSJONS RETNINGSLINJER

Det er institusjonen du er ansatt/student ved som avgjør hvordan du må lagre og sikre data i ditt prosjekt og hvilke databehandlere du kan bruke. Husk å bruke leverandører som din institusjon har avtale med (f.eks. ved skylagring, nettspørreskjema, videosamtale el.).

Personverntjenester legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til oss ved å oppdatere meldeskjemaet. Se våre nettsider om hvilke endringer du må melde: <https://sikt.no/melde-endringer-i-meldeskjema>

OPPFØLGING AV PROSJEKTET

Vi vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

Interview guide

Information

As part of our Master's program, Master of Science in Business at Høgskulen på Vestlandet in Sogndal, I am conducting a research study for my master's thesis. The aim is to get a better understanding of drivers and barriers in the rural regions in the old Sogn og Fjordane. To retrieve this information and get a better understanding of what challenges your company is facing, I like to interview your company to find out. Kindly be aware that any information you share will be treated with confidentiality, exclusively utilized for research purposes, and your identity will remain anonymous in our report.

Firstly, I am required to obtain your consent. Are you willing to participate in this study?

Introduction

1. What is the respondent's position and education?

- a. Where do you work?
- b. What are your responsibilities in this organization?
- c. What is your education

Main Section

2. Question about innovation?

- a. What do you associate with innovation?
- b. How does the company work with innovation, and how important is this work?
- c. Who are the primary participants in driving the innovation process within the organization, and what do they contribute with.
- d. Who are the primary participants in driving the innovation process from outside the organization, and what do they contribute with
- e. Is there room for proposals for change, ideas, and innovation suggestions from employees?
 - If so, can you give examples of previous proposals for change or innovation from employees that have been implemented?
- f. What makes the company decide to invest in innovation?
- g. Which drivers to innovation are there for your company?
- h. Which barriers to innovation are there for your company?
- i. Is the company currently involved in any types of projects or activities you can talk about?

3. Questions about rural geography?

- a. What significance has it had for you to be in Vestland?
- b. What is the most challenging thing about running a company in rural areas?
- c. How do you perceive the impact of your company's rural location on its innovation rate?

4. Questions about competence and getting qualified labor

- a. How difficult is it to get qualified labor for your company?
 - If it's hard, do you want to speculate on why?
 - Are the company using people in permanent jobs, or are there many on contract?
- b. What is the turnover rate of employees in the company?
- c. How does the organization support the continuous development of skills and competence among its employees to meet the needs of the business?

5. Question about network and collaboration?

- a. What is collaboration to you?
- b. Could you please elaborate on the collaborative partnerships your company engages in and provide insights into the nature of these collaborations? This could include projects, suppliers, recruitment, marketing, or any other relevant areas of cooperation?
- c. Where are the actors in your network located? Regionally, nationally, internationally?
 - What significance does this have for the company?
- d. When you are considering local suppliers, on what foundation do you choose?
 - On others recommendation
 - Previous work
- e. When considering international suppliers, do you use the same criteria as you use for choosing local suppliers
- f. Who are your customers, and where are they located?
 - Local, regional, the Nordics, Europa, or the rest of the World

Closing

6. What do you consider to be the most important factors for maintaining an innovative company?"
7. Before we end this interview, would you like to add something?

Thank you very much for your time! I really appreciate your help.