



BI Norwegian Business School - campus Oslo

GRA 19502

Master Thesis

Component of continuous assessment: Forprosjekt, Thesis
MSc

Building Effective Networks: A Case Study of Ruter

Navn: Kristine Hageselle Engh, Hanna Marie
Lund

Start: 01.01.2018 09.00

Finish: 15.01.2018 12.00

BI Norwegian Business School
Preliminary Thesis Report

- Building Effective Networks -
A Case Study of Ruter

Supervisor:
Vegard Kolbjørnsrud

Hand-in date:
15.01.2018

Campus:
BI Oslo

Program:
Master of Science in Business, major in Strategy

Table of Contents

EXECUTIVE SUMMARY	II
1.0 INTRODUCTION	1
2.0 THEORETICAL FOUNDATIONS	3
2.1 NETWORK	3
2.2 CONTROL MECHANISMS OF A NETWORK	4
2.2.1 <i>Trust</i>	5
2.3 KNOWLEDGE CREATION AND ORGANISATIONAL LEARNING	6
2.3.1 <i>Exploration and Exploitation in Networks</i>	6
2.3.2 <i>Barriers to Interorganisational Learning</i>	7
3.0 METHOD AND EMPIRICAL CONTEXT	8
3.1 EMPIRICAL CONTEXT	8
3.1.1 <i>The Public Transport Situation in Oslo/Akershus</i>	9
3.2 DESIGN AND METHOD	10
3.2.1 <i>Qualitative Research Method</i>	10
3.2.2 <i>Case Study</i>	11
3.3 DATA COLLECTION	11
3.3.1 <i>Interview</i>	11
3.3.2 <i>Observation</i>	13
3.3.3 <i>Documents</i>	13
3.4 DATA ANALYSIS	14
3.5 QUALITY OF THE RESEARCH	14
3.5.1 <i>Ethical Considerations</i>	15
4.0 THESIS PROGRESSION	16
5.0 REFERENCES.....	17

Executive Summary

This paper is a preliminary master thesis report. The report aims to introduce the research topic we are investigating for our final thesis, and how we are going to conduct the research.

Our master thesis is building on interorganisational theory, and more precisely network theory. The aim of the thesis is to develop an understanding of a network's potential of becoming an innovation network. To do so we are working on a case study of Ruter, and their network of operators and partners, which is one of the largest networks in Norway. We believe that this is an interesting situation as the public transport industry is experiencing great technological changes and is under external pressure to keep up with such changes.

Exploring how a network can advance towards becoming a network of innovation, the thesis will focus on the network as a whole, and analysis will be on network-level. We review literature on network structure, control mechanisms and knowledge sharing across organisational boundaries, to gain insight on the mechanisms that affect how organisations learn and how co creation can be facilitated in networks.

1.0 Introduction

Over the last decades, there has been an emergence of new innovative organisational designs where collaborative behaviour has been a central idea. Researchers has given much attention to inter-firm collaboration and how these new organisational forms can contribute to a positive value creation (Lee, Olson & Trimi, 2012; Bititci, Martinez, Albores & Parung, 2004), knowledge creation (Lee & Cole, 2003) and product development (Snow, Fjeldstad, Lettl & Miles, 2011) to mention some areas. These new designs have their basis in the network form of the organization, a term that adequately encompasses the competitive environment and interaction among actors (Miles & Snow, 1986).

Scholars argue that the network form of organization is especially beneficial when the business environment is dynamic and there is a demand for speed, as a network yields flexibility, responsiveness to changes, and fast access to information (Powell, 1990; Brass, Galaskiewicz, Greve & Tsai, 2004). As the environments are changing, multi-party collaboration becomes more and more important when considering the firm's ability to respond to and cope with complex problems, as well as adapt to the dynamic changes (Fjeldstad, Snow, Miles & Lettl, 2012).

When operating in such dynamic environments with rapid technological development, organizations can respond to such changes by forming networks to gain access to resources and become more innovative (Powell, 1990; Baum, Cowan & Jonard, 2010). Although there seems to be multiple benefits of this form of organization, not all networks are able to efficiently achieve positive network outcomes. While dealing with the complexity of sharing knowledge across firm boundaries networks are also concerned with mitigating the risk of opportunistic behaviour. Structure, development and governance are elements that affects a network's development and outcome (Provan, Fish & Sydow, 2007). In our thesis, we aim to explore how networks can evolve in the direction towards co creation and joint development.

We are studying this in the context of Ruter, the administrative company responsible for the public transport in Oslo and Akershus, which forms part of one of the largest networks in Norway. Shortly after Ruter was founded, the

establishment of a forum took place, to gather all collaborating actors. All the leaders and decision-makers of Ruter, the partners and operators are invited to participate in the meetings. The forum takes place around four times a year, and the aim is to facilitate interfirm collaboration and discuss challenges and opportunities in the industry.

Preliminary findings indicate that the forum today mainly contains information sharing from Ruter, and we believe that the networks potential is not fully utilized. This leads us to our research question:

How can the forum advance towards becoming a network of innovation?

After having reviewed literature on networks and how it can facilitate interorganisational learning and innovation, we have noticed that little research has been conducted on knowledge sharing in a network as a whole. In the case of Ruter and “*Operator- og partnerforum*”, the actors within the network are both competitors and cooperating firms, an interesting situation when it comes to knowledge sharing. Ruter is playing the role as the lead organisation in this network, coordinating activities and key decision making (Provan & Kenis, 2008). It is also especially interesting to study this in the context of Ruter, as the public transportation industry is facing rapid technological changes.

2.0 Theoretical Foundations

In the following paragraphs, we will review literature on interfirm networks and network properties affecting the development and outcome of such organisational forms.

2.1 Network

A network perspective concerns how actors are embedded within networks of interconnected relationships. We can define a network as “a set of nodes and a set of ties representing some relationship, or no relationship between the nodes” (Brass et al., 2004, p. 795), where the nodes are representing the actors, individuals, units and organizations. Although there exist various definitions of the term interorganisational network, most of them refer to some common elements, such as social interaction, relationship, collaboration, collective action and trust (Provan et al., 2007). A network form of exchange implies “indefinite, sequential transactions within the context of a general pattern of interaction” (Powell, 1990, p. 303).

Prior research in the area of interorganisational relationships has listed several motives for why firms engage in interfirm network arrangements. Networks can “provide a firm with access to information, resources, markets, and technologies; with advantages from learning, scale, and scope economies; and allow firms to achieve strategic objectives, such as sharing risks and outsourcing value-chain stages and organizational functions” (Gulati, Nohria & Zaheer, 2000, p.203). This form of organization facilitates interorganizational learning and impacts how companies innovate (Dhanaraj & Parkhe, 2006).

Networks can be structured in different ways, in terms of density, centralization and existence of cliques within the network, and this may greatly influence the creation of positive outcome. Key actors within the network often play an important role in carrying out norms and practices, and can be significant drivers of development within the network (Provan et al., 2007). Power in the network can be distributed more or less symmetrical, with collective decision making, or it can be more directed towards a “lead organisation”. In such scenarios, most activities are coordinated through the lead organisation (Provan & Kenis, 2008)

mobilizing the network to efficient deployment of its resources in order to achieve network goals.

Organizations join or form networks for various reasons, but in this paper our main focus is on networks aimed at learning and producing new knowledge - also referred to as innovation networks (Dhanaraj & Parkhe, 2006; Baum et al., 2010). Although such collaboration can be an efficient way for firms to acquire new knowledge beyond their boundaries, not all networks manages to efficiently obtain positive network outcomes (Provan & Kenis, 2008). The degree of involvement among the different partners in the forum varies, and this might affect the balance in the network, as reciprocity is an important component of network form of organizing (Powell, 1990). Trust has also been pointed out by researchers as a critical factor for network performance (Powell, 1990; Gulati & Nickerson, 2008), and in the next section we will take a closer look at control mechanism in interorganisational networks, and review literature on the concept of trust as a component of interfirm relations. Secondly, we will examine how how knowledge sharing and organisational learning can be facilitated through networks.

2.2 Control Mechanisms of a Network

In transaction cost economics (e.g. Williamson, 1985) governance forms are seen as mechanisms for resolving exchange problems. Market mode copes with exchange problems by rigid contracts, and on the other end of the continuum we find hierarchy performing economic activities in house (Williamson, 1991). A network form of governance overcomes these problems by using social mechanisms, such as restricted access, macro culture with shared assumptions and values, collective sanctions and reputation (Jones, Hesterly & Borgatti, 1997). Bradach & Eccles (1989) argue that the assumption that the two governance forms - market and hierarchy - are mutually exclusive can be misleading. They propose the control mechanisms, price, authority and trust - which map roughly on to market, hierarchy and relational contracting (Bradach & Eccles, 1989, p. 101). This approach assumes that these mechanisms are independent, and can be combined within the complex social structures. It also emphasises trust as a more general mechanism that often does not work alone, but intertwines with price and authority.

The two perspectives on alliance governance - structural and relational - have been applied by researchers to propose different governing mechanisms for alliances. In the structural perspective, a general assumption is that partners tend to act opportunistically. The risk of such behaviour increases along with the level of certain transaction attributes, such as asset specificity and uncertainty (Faems, Janssens, Madhok & Looy, 2008). The structural perspective presents complex contracts as means for mitigating the risk of opportunistic behaviour (Deeds & Hill, 1999). On the contrary, the relational view rather focus on interfirm relationships as they evolve over time and over transactions, and rely on trust as a safeguarding mechanism. The prevailing view is that with a history of successful collaboration, there is a tendency of trustworthy behaviour (Faems et al., 2008). When entering an exchange relationship, less formal governance is likely when there is trust between the organisations (Gulati & Nickerson, 2008). In addition to this substitution effect, trust can have a complementary effect on any mode of governance, and thus enhance exchange performance.

2.2.1 Trust

Trust has been widely discussed by scholars within the fields of sociology, strategic management and contracting literature among others, and although there exist various definitions, it seems as positive expectations and willingness to be vulnerable are important elements in most definitions (Rousseau, Sitkin, Burt & Camerer, 1998). Lewicki, McAllister & Bies (1998, p. 439) defines trust in terms of “confident positive expectations regarding another’s conduct”. Trust exists at individual, organizational and interorganizational level, but this paper focus on trust on an interorganizational level, as an element in cooperative relationships.

Although the concept of trust is viewed differently across disciplines, trust is often conceptualized as a cause in scenarios when economic outcomes are of interest (Rousseau et al., 1998). Several scholars argue that trust may reduce transaction costs, because it can reduce opportunism and lower the governance costs (Rosseau et al., 1998; Gulati & Nickerson, 2008). Gulati (1995) also argues that prior ties with a partner affect the firms contractual choices, and that repeated ties between firms breed trust, which can sometimes substitute contractual safeguards in repeated alliances.

Lack of trust can inhibit collaboration in a network, as it can affect the partners perceived risk. In interfirm relationships, the actors may be exposed to relational risk, the “probability that the partners may not be fully committed to the relationship” (Das & Teng, 2004, p. 102). There may also exist doubts about the other actors’ necessary skills and qualifications to perform certain actions and obtain desired results, referred to as performance risk (Kee & Knox, 1970). Das & Teng (2004) argues that trust can be understood as the mirror image of risk, implying that in situations with high level of trust there is low perceived risk.

2.3 Knowledge Creation and Organisational Learning

Evolving from the resource based view, the knowledge based theory of the firm describes knowledge as the key resource for firms to achieve competitive advantage (Kogut & Zander, 1992; Grant, 1996; Argote & Ingram, 2000). Studies have aimed attention to the importance of knowledge transfer and knowledge sharing, and found that one main objective for engaging in collaboration and interorganisational relationships is to acquire new knowledge (Dyer & Nobeoka, 2000; Kale, Singh & Perlmutter, 2000; Grant & Baden-Fuller, 2004). Not only does collaboration facilitate the transfer of knowledge between organisations, but it can also generate new knowledge (Lee & Cole, 2003). Powell, Koput and Smith-Doerr (1996) states that “Knowledge creation occurs in the context of a community, one that is fluid and evolving rather than tightly bound or static” (p. 188). The process of knowledge creation is a form of organisational learning, where new knowledge is generated as a result of interaction and collaboration (Hardy, Phillips & Nelson, 2003).

2.3.1 Exploration and Exploitation in Networks

Two concepts of knowledge management are described in the literature; the process of increasing the knowledge base and the process of utilise and improve the existing knowledge. March (1991) refer to these processes as *exploration* and *exploitation*. The returns from exploitation are more certain and remote in time than returns from exploration, but a firm’s survival is dependent on a balance of these activities (Levinthal & March, 1993). Although the results of exploration often come out negatively in a short-term perspective, it might be a good investment in the long term. Exploration has been claimed to be “the only way to

finish first” (Levinthal & March, 1993, p.107), and thus a company can obtain a competitive advantage with an increased knowledge base. March (1991) finds that the trade-off between exploration activities and exploitation activities is affected by costs/benefits valuation. In the context of networks, firms often see the benefit of sharing the cost associated with exploration/exploitation activities, and thus engage in interorganisational relationships (Barringer & Harrison, 2000). How the knowledge is managed can have a significant impact on the interorganisational learning. The next paragraph will present concepts that can inhibit such knowledge creation.

2.3.2 Barriers to Interorganisational Learning

Interfirm networks consist of firms with different knowledge base which creates an opportunity of trading knowledge (Grant, 1996). Even though the objective of many collaborations is to acquire new knowledge, the knowledge transfer process can be challenging and not easily accomplished (Szulanski, 2000; Carlile, 2004). Knowledge is a complex resource, and thus the issue of transferability is important. When researchers talk about knowledge, it is common to classify the concept into two categories; tacit and explicit knowledge (Nonaka, 1994; Zander & Kogut, 1995; Grant, 1996). While explicit knowledge is communicable, the tacit knowledge is characterised by a personal quality and rooted in personal experience, and thus more difficult to communicate (Nonaka, 1994). Carlile (2004) developed a framework for how knowledge can be managed across boundaries. He points on the necessity of a common lexicon in order for knowledge to be transferred from one actor to another. Furthermore, Carlile emphasises the importance of being able to manage the knowledge transferred, by translating it and transforming it in order to utilise the new information achieved.

Several barriers are affecting the knowledge transfer process. Szulanski (1996) finds in his study that both characteristics of the knowledge as well as characteristics of the recipient and the context is determining the success of the knowledge transfer. These findings are supported by Simonin (1999) as he in his study found that the knowledge transfer process is affected by both knowledge-specific variables, as well as partner-specific variables. Individuals may interpret information differently and this might result in distant understanding. Especially when the knowledge is tacit and difficult to communicate, the level of causal

ambiguity is high (Simonin, 1999). Regarding the recipient, the ability to absorb the knowledge is necessary for a successful outcome of the knowledge transfer. Absorptive capacity is defined as “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends” (Cohen & Levinthal, 1990, p.128). A firm’s absorptive capacity is affected by its previous experiences, and the better the in-house expertise of a firm, the better the absorptive capacity (Mowery, Oxley & Silverman 1996). Moreover, the arduous relationship between the source and the recipient, characterised by i.e. cultural and organisational distance, are determining the outcome of the knowledge transfer process (Szulanski, 1996; Simonin, 1999).

3.0 Method and Empirical Context

In this section, we introduce the research design and method of the study, as well as the approach we have used to collect the data. Furthermore, a description of how we are planning to analyse the data will be provided. An assessment of the study’s quality, followed up by ethical considerations, is then presented. To begin with we will present the case to provide the reader with an overview of the situation, both in the network and in the industry.

3.1 Empirical Context

Ruter is an administrative company responsible for the public transport in Oslo and Akershus. The company’s main tasks are to plan, coordinate, manage, order and market the public transport network in the region. Its business model is based on contracting with various operating public transport companies to deliver attractive and environmental friendly means of transportation to the region's population.

The network of suppliers is coordinated through several types of contracts, where we find large variation in duration of operations. In the bus segment, the majority of the operating companies are privately owned, and are enrolled in short-term contracts of 2-10 years. There are currently four bus companies enrolled in contracts - Nettbuss, Norgesbuss, Unibuss and Nobina. These companies are direct competitors and this segment is characterized by a low profitability and high competition in price (Spekter, 2014). In addition to regular bus companies,

Konsentra, a subsidiary of Ruter, is delivering personal transportation services for the public sector, and in this way differentiate from the other bus companies. Norled and Oslo-Fergene operates the ferries, with contract duration of around 10 years. Sporveien, the operator of trams and metros, and its infrastructure, is enrolled in long-term contracts and is not exposed to competition at the moment. Actors such as Oslo Vognselskap (OVS) and Akershus Kollektivterminaler (AKT) have a slightly different interest of collaborating with Ruter. OVS purchases and maintains the carriages and material for trams and metros, and AKT is involved in the infrastructure of the buses, and they are both defined as partners.

Cooperating with various actors, that differ in terms of size, scope and interest, can be challenging. To smoothen this process “*Operatør- og partnerforum*” was established, and is today the only forum in which all the existing operators and partners meet. It is hosted by Ruter four times a year, and is exclusively for leaders or decision makers of each operating or partnering firm. As of today, the forum play a well-functioning role as an information sharing platform, where Ruter gives lectures about future outlooks, governmental regulations, expectations and new trends in the public transport industry. However, there is a reason to believe that the forum has unleashed potential, as the degree of involvement among the different companies varies, and we have observed a reluctance among the members to participate in discussions.

3.1.1 Public Transport in Oslo and Akershus

An increase in the use of public transport in the region operated by Ruter is observed. In 2016, 350 million public transport journeys were made in Oslo and Akershus, which is an increase of 4,9% from 2015 (Ruter, 2017). This trend has been present ever since the establishment of Ruter in 2008, and future outlooks give no indication for this trend to end. The population in Norway is growing, and we see a higher population density in large cities. Oslo has for the past couple of years been one of the cities in Europe with the fastest growing population, and the growth in the city’s population by 2040 is estimated to be 28% (Oslo Kommune, 2017). Moreover, the increased environmental awareness has accelerated the use of public transport, and a greater focus on global warming and green growth makes stricter demands on the public transportation services and the standards

delivered. In addition, new technologies and the digitalisation of processes associated with public transport are contributing to a more attractive transportation service. By making use of new technology, the solutions delivered to customers can be considered as seamless and more convenient than travelling in a private manner, which makes public transport a clear first choice. However, new technology and new actors are also challenging the traditional forms of public transport, and convenient mobility trends such as car sharing, bicycle sharing and car-pooling are becoming increasingly popular.

In conclusion, the public transport industry is facing major changes driven by new customer needs, technology and governmental regulations. New positions and players are threatening the classic forms of collective communication services. The accelerating pace and combinatory effect of new mobility trends creates a need for Ruter and the operators to both sense and react rapidly in order to maintain their position in the industry.

3.2 Design and Method

The research design can be viewed as a framework for how the data collection and analysis is conducted (Bryman & Bell, 2015). In the following paragraphs, we will discuss the research methodology and design used in the thesis and justify the choices we have made regarding the research approach.

3.2.1 Qualitative Research Method

In our thesis, we are following a qualitative research method. Although there are many rationales for using this research method, one of the most common reasons is to generate a theory (Graebner, Martin & Roundy, 2012). However, we have chosen to use a qualitative method to build on, improve and deepen the understanding of the already existing theory on how networks can evolve in the direction of co creation and joint development. The level of analysis of this study is a complex network consisting of various actors that differ in size, scope and interest, where some members are direct competitors and others are delivering complementary solutions. By using a qualitative approach, we expect to gain an understanding of the social interactions and potential tension among the members, as qualitative research allows the participants to describe experiences and interpretations in their own words (Graebner et al., 2012).

3.2.2 Case Study

The design we have chosen for our thesis is a single case study. As described by Eisenhardt (1989, p. 534) “the case study is a research strategy which focuses on understanding the dynamics present within single settings”. According to Yin (2013) case study is preferred when the research question is a “how”-question, hence a suitable design for our study. The case design is chosen because it allows us to explore complex issues and investigate thoroughly the phenomenon in focus (Zainal, 2007). Moreover, we see the benefits of being “close” to the case as this can generate a more novel and empirical valid theory (Eisenhardt, 1989).

3.3 Data Collection

Nearly all data essential for this study has been collected in the period from September 2017 to December 2017. However, a few interviews are remaining and we are planning to conduct them within the following weeks. In our study, we have combined several types of data, and employed both interviews and observations in addition to other network-specific, company-specific and industry-specific archival data. The next paragraphs will explain the data collection in greater detail.

3.3.1 Interview

Interviews have been the main source of data for this thesis. For these interviews, we have generated two types of interview guides, one aimed for the representatives from Ruter, and one aimed for the representatives of the operating and partnering companies in the network. As the objective for the interviews was to encourage the participants to speak freely, yet stick to the research topic, we found semi-structured interviews to be appropriate. Semi-structured interview is a term used to describe interviews where the interviewer follows a general interview-guide and can ask following up questions if something of particular interest is being addressed by the interviewee (Bryman & Bell, 2015). We believe that this is an adequate approach for our study. By letting the participants speak freely, we can more efficiently capture the individuals’ experiences and reflections with the network (Graebner et al., 2012).

The participants for the interviews are exclusively leaders and/or decision makers in their respective organisation, and have all either participated in the forum or

possess expertise and familiarity with the network. As Ruter is the lead organization and initiator of this network, we have conducted several interviews with key personnel in Ruter. Our ambition was initially to conduct two or more interviews with representatives from each firm in the network. We acknowledge that two interviews with every company might be difficult as some companies are small and key individuals have limited time capacity. However, we believe that it might be sufficient for this thesis with only one participant from some of the smaller companies. What is important to mention is that all actors in the network have been given the invitation to participate with at least one candidate.

In every interview, there has been two interviewers present. As argued by Bechhofer, Elliott and McCrone (1984) it is an advantage of being more than one interviewer, as one can take the active role and one can take a more passive role. During the interviews, one has been in charge of the conversation, and the other have taken notes and observed the interview. We have experienced the advantage of interviewing in pairs, where the more passive interviewer can make sure that all important topics are covered.

Furthermore, the interviews have been recorded and some of the interviews remains to be transcribed. All transcripts will be quality checked to ensure that no important messages is left behind or misinterpreted. Recording and transcribing the interviews allows for a more thorough examination of the data and provides a more reliable material for the analysis (Bryman & Bell, 2015).

As of January 2018, we have conducted in total 23 interviews with an average time of 48:76 minutes. A more detailed overview of the interviews is shown in *table 1*.

Table 1. *Interview*

Company	Role/Business	Number of interviews	Average time min:sec
Ruter		8	50:55
Sporveien	Tram/metro	4	50:20
Konsentra	Bus	2	44:37
Nettbuss	Bus	2	54:19
Norgesbuss	Bus	2	56:46
Unibuss	Bus	1	62:07
Oslo-Fergene	Ferry	1	37:59
OVS	Tram/metro wagon	2	44:95
AKT	Terminals	1	43:48
Norled	Ferry	0	
Nobina	Bus	0	
<i>Totalt</i>		<i>23</i>	<i>48:76</i>

3.3.2 Observation

Since the start of the project in September 2017, we have been present on two “*Operatør & Partnerforum*”. By being present in the forum, we have gained a better insight in the network, and how these meetings are structured and facilitates co creation. Our participation in the forum will continue as long as the project is ongoing, and presumably at least for two more occasions, one in March and one in June. Field notes are taken during the observations, and narratives are developed immediately after the forum.

3.3.3 Documents

In addition to collecting primary data by observing and interviewing, we have also accessed archival secondary data such as reports from previous network meetings, attendance protocols, data from surveys about the network collaboration, and material from the work on creating a common vision. We estimate this to include more than 1000 separate documents, where some are of less relevance than others. All this data has not been thoroughly reviewed yet, but will be systematically examined in the following months. Moreover, we have taken advantage of news reports, industry analysis, academic articles and websites when that have been of relevance.

3.4 Data Analysis

A qualitative method is characterised by a rich, holistic and real database, which makes the method attractive (Miles, 1979). These characteristics are however creating difficulties when it comes to managing the data (Bryman & Bell, 2015). When coding the collected data, we are inspired by grounded theory framework, which is the most utilised framework in coding of qualitative data. What characterise this strategy is that the data is structured and organised soon after it is collected, and the coding is a continuous process emerging along with the data collection (Bryman & Bell, 2015).

After we had conducted the interviews from one organisation, narratives were written, summarising the thoughts about the interviews and the focal organisations perspective on the network. Furthermore, we have used network related documents (i.e. answers from the survey on collaboration) when we constructed the interview guide. When all the interviews are conducted and transcribed we will initiate a process of coding the data. We might utilise a computer based software tool for this part of the data organisation, but this will be further discussed and consulted with our supervisor. In the process of coding the data we will look for categories and concepts, and divide answers in this matter. Subsequently, we will look for relationship between the categories and develop/improve the theory based on what we find.

3.5 Quality of the Research

The value of the research depends on the researches ability to prove that their findings are credible (LeCompte & Goetz, 1982). There are several measures for quality in research, and one approach is to examine the reliability and validity (Bryman & Bell, 2015). As described by LeCompte and Goetz (1982, p. 35) “reliability refers to the extent to which studies can be replicated”. Further they argue that the criteria of external reliability is difficult to meet when conducting qualitative research. This might be due to the unique setting, which is affected by the irreplaceable context of the situation. In our thesis, we aim to describe the methodology and design in detail, so the reader get an understanding of how the study is conducted, and in this way critically revise the findings. Validity, on the

other hand, concern “whether you are observing, identifying or “measuring” what you say you are” (Bryman & Bell, 2015, p. 400¹). As we are conducting a case study, the validity is high because of our familiarity with the case (Eisenhardt, 1989).

3.5.1 Ethical Considerations

Ethical considerations have been taken throughout the whole research process, both in the planning of the research, during interviews, when we have structured and organised the data, and when we have stored the data. In our research, we have followed the ethical principles in business research described by Diener and Chandall (1978): whether there is harm to participants, whether there is lack of informed consent, whether there is an invasion of privacy and whether deception is involved (Bryman & Bell, 2015, p. 134²). The participants have been informed about the research in several occasions, both in the forum, on e-mail and at the beginning of the interview. Whether to participate or not has been completely voluntary, and after having signed up for interviews one is allowed to withdraw. Furthermore, the recordings, transcripts and other data material are made anonymous and stored in a password protected folder. Prior to the data collection, we also reported our study to the Data Protection Official (NSD) which approved the plan and allowed us to conduct the research.

¹ Bryman and Bell (2015) refers to Mason (1996).

² Brymen and Bell (2015) refers to Diener, E., & Crandall, R. (1978). *Ethics in social and behavioral research*.

4.0 Thesis Progression

Even though most of the data collection is conducted, there is indeed a great amount of work remaining to finalise the thesis. As our method will leave us with a rich data material, we are expecting the data analysis to be very time consuming and thus it is important to follow the schedule. We have made a Gantt chart that includes the most essential future steps of our project (see table 2). It is important to emphasise that this plan is tentative, and some changes might occur as the time passes. After we receive feedback on the preliminary thesis, we will revise the plan and finalise the research question and the literature.

In addition to the plan, we will have weekly meetings to ensure progress. We will also consult with our supervisor on regular basis.

Table 2. *Tentative schedule*

	January	February	March	April	May	June	July
Preliminary thesis							
Hand in preliminary thesis							
Data Collection							
Conduct remaining interviews							
Transcribe remaining interviews							
Observations							
Data Analysis							
Coding of data							
Review secondary data							
Summarise findings							
Literature							
Feedback on preliminary thesis							
New revision of literature							
Finalise literature review							
First draft							
Apply findings to theory							
Finalise first draft							
Feedback from supervisor							
Writing the thesis							
Finalise thesis							
Hand in							

5.0 References

- Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational behavior and human decision processes*, 82(1), 150-169.
- Barringer, B. R., & Harrison, J. S. (2000). Walking a tightrope: Creating value through interorganizational relationships. *Journal of management*, 26(3), 367-403.
- Baum, J. A., Cowan, R., & Jonard, N. (2010). Network-independent partner selection and the evolution of innovation networks. *Management Science*, 56(11), 2094-2110
- Bechhofer, F., Elliott, B., & McCrone, D. (1984). Safety in numbers: on the use of multiple interviewers. *Sociology*, 18(1), 97-100.
- Bititci, U. S., Martinez, V., Albores, P., & Parung, J. (2004). Creating and managing value in collaborative networks. *International Journal of Physical Distribution & Logistics Management*, 34(3/4), 251-268.
- Bradach, J. L., & Eccles, R. G. (1989). Price, authority, and trust: From ideal types to plural forms. *Annual review of sociology*, 15(1), 97-118.
- Brass, D. J., Galaskiewicz, J., Greve, H. R., & Tsai, W. (2004). Taking stock of networks and organizations: A multilevel perspective. *Academy of management journal*, 47(6), 795-817.
- Bryman, A. & Bell, E. (2015). *Business Research Methods* (4th ed.). United Kingdom: Oxford University Press.
- Carlile, P. R. (2004). Transferring, translating, and transforming: An integrative framework for managing knowledge across boundaries. *Organization science*, 15(5), 555-568.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 128-152.
- Das, T. K., & Teng, B. S. (2004). The risk-based view of trust: A conceptual framework. *Journal of Business and Psychology*, 19(1), 85-116
- Deeds, D. L., & Hill, C. W. (1999). An examination of opportunistic action within research alliances: evidence from the biotechnology industry. *Journal of Business Venturing*, 14(2), 141-163
- Dhanaraj, C., & Parkhe, A. (2006). Orchestrating innovation networks. *Academy of management review*, 31(3), 659-669
- Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: the Toyota case. *Strategic management journal*, 345-367.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532-550.
- Faems, D., Janssens, M., Madhok, A., & Van Looy, B. (2008). Toward an integrative perspective on alliance governance: connecting contract design, trust dynamics, and contract application. *Academy of Management Journal*. 52(6): 1053-1078
- Fjeldstad, Ø. D., Snow, C. C., Miles, R. E., & Lettl, C. (2012). The architecture of collaboration. *Strategic management journal*, 33(6), 734-750.
- Graebner, M. E., Martin, J. A., & Roundy, P. T. (2012). Qualitative data: Cooking without a recipe. *Strategic Organization*, 10(3), 276-284.

-
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, 17(S2), 109-122.
- Grant, R. M., & Baden-Fuller, C. (2004). A knowledge accessing theory of strategic alliances. *Journal of management studies*, 41(1), 61-84.
- Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of management journal*, 38(1), 85-112
- Gulati, R., & Nickerson, J. A. (2008). Interorganizational trust, governance choice, and exchange performance. *Organization Science*, 19(5), 688-708.
- Gulati, R., Nohria, N., & Zaheer, A. (2000). Strategic networks. *Strategic management journal*, 203-215.
- Hardy, C., Phillips, N., & Lawrence, T. B. (2003). Resources, knowledge and influence: The organizational effects of interorganizational collaboration. *Journal of management studies*, 40(2), 321-347.
- Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A general theory of network governance: Exchange conditions and social mechanisms. *Academy of management review*, 22(4), 911-945
- Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic management journal*, 217-237.
- Kee, H. W., & Knox, R. E. (1970). Conceptual and methodological considerations in the study of trust and suspicion. *Journal of conflict resolution*, 14(3), 357-366
- Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization science*, 3(3), 383-397.
- LeCompte, M. D., & Goetz, J. P. (1982). Problems of reliability and validity in ethnographic research. *Review of educational research*, 52(1), 31-60.
- Lee, G. K., & Cole, R. E. (2003). From a firm-based to a community-based model of knowledge creation: The case of the Linux kernel development. *Organization science*, 14(6), 633-649.
- Lee, S. M., Olson, D. L., & Trimi, S. (2012). Innovative collaboration for value creation. *Organizational Dynamics*, 41(1), 7-12.
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic management journal*, 14(S2), 95-112.
- Lewicki, R. J., McAllister, D. J., & Bies, R. J. (1998). Trust and distrust: New relationships and realities. *Academy of management Review*, 23(3), 438-458.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization science*, 2(1), 71-87.
- Miles, M. B. (1979). Qualitative data as an attractive nuisance: The problem of analysis. *Administrative science quarterly*, 24(4), 590-601.
- Miles, R. E., & Snow, C. C. (1986). Organizations: New concepts for new forms. *California management review*, 28(3), 62-73.
- Mowery, D. C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic management journal*, 17(S2), 77-91.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1), 14-37.
- Oslo Kommune. (2017) Statistikkbanken. Befolkningsframskrivninger etter alternative, år og alder (Oslo). Retrieved from:
-

-
- <http://statistikkbanken.oslo.kommune.no/webview/index.jsp?catalog=http%3A%2F%2Fstatistikkbanken.oslo.kommune.no%3A80%2Fobj%2FfCatalog%2FCatalog52&submode=catalog&mode=documentation&top=yes>
- Powell, W. W. (1990) 'Neither market nor hierarchy: Network forms of organization'. In Staw, B., Cummings, L.L. (Eds.), *Research in organizational behavior*, Vol. 12: 295-336. Greenwich, CT: JAI Press
- Powell, W. W., Koput, K. W., & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. *Administrative science quarterly*, 116-145.
- Provan, K. G., Fish, A., & Sydow, J. (2007). Interorganizational networks at the network level: A review of the empirical literature on whole networks. *Journal of management*, 33(3), 479-516.
- Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of public administration research and theory*, 18(2), 229-252
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of management review*, 23(3), 393-404
- Ruter AS. (2017). Ruters årsrapport 2016. Retrieved from: <http://presse.ruter.no/documents/ruters-aarsrapport-for-2016-71112>
- Simonin, B. L. (1999). Ambiguity and the process of knowledge transfer in strategic alliances. *Strategic management journal*, 595-623.
- Snow, C. C., Fjeldstad, Ø. D., Lettl, C., & Miles, R. E. (2011). Organizing continuous product development and commercialization: the collaborative community of firms model. *Journal of Product Innovation Management*, 28(1), 3-16.
- Spekter (2014) Markedsvurdering for bussbransjen: hva konkurreres det om? Utarbeidet av Oslo Economics. Retrieved from: http://www.spekter.no/Global/Rapporter/Egne_rapporter/Markedsvurdering%20for%20bussbransjen.pdf
- Szulanski, G. (2000). The process of knowledge transfer: A diachronic analysis of stickiness. *Organizational behavior and human decision processes*, 82(1), 9-27.
- Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative science quarterly*, 269-296
- Williamson, O. E. (1985). *The economic institutions of capitalism*. Simon and Schuster
- Yin, R. K. (2013). *Case study research: Design and methods*. Sage publications.
- Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, 5(1).
- Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization science*, 6(1), 76-92.