UNIVERSITY OF GOTHENBURG

SCHOOL OF BUSINESS, ECONOMICS AND LAW

Digitalization of business-to-business relations

An analysis of the state, and future, of international business-to-business relations

Department of Business Administration

International Business & Trade

Spring 2019

Erik Truong - 960612

Henrik Bing - 960928

Supervisor: Richard Nakamura

Abstract

Purpose:

This report focused on companies who are operating in an international context, with knowledge demanding nische products and that solely operates business-to-business. Meaning that their customers are other companies. The purpose of this report is to see how the emergence of new digital technologies can change the way that their international business-to-business relationships is strategically managed. We aim to understand why companies has chosen to digitize certain parts of their business relationships

Method:

Through an abductive research process based on collected semi - structured interviews, the likeliest explanations were then obtained of how the emergence of digital technologies have changed the way of these companies to strategically manage their relationships. Secondary data was also collected as an explanatory guidance from the chosen theoretical framework. The samples were chosen based on their customers being other businesses, not due to their industry.

Results:

Companies digitalization of their B2B-relationships differ based on several factors. Some of these factors include what type of industry the company operates within, what type of customers and which stage of the relationships they are in. The most digitalization is found in internal processes for relationship management and operations. Externally focused are hindered by customers unwillingness or lack of capability to implement the technologies, but some companies work around this through implementation of communication technologies into products or developing their own platforms for information gathering and sharing.

Conclusion:

Different uses and different areas of the B2B-relationships can change with digital technologies, depending on factors such as industry, company views and customer views. Digital technologies can be implemented, where these factors are not as important. The only area where every company agrees on not digitizing, is the early relationship building where it is still important to met face to face in order to create trust.

Key words: internationalization, digitalization, relationships, digital technologies, B2B

Acknowledgement

First and foremost we would like to thank our respondent who offered us time to do interviews. We would like to thank them for offering important insights and professional opinions, which helped us a lot when writing our thesis.

Lastly we would like also like to thank our supervisor R.Nakamura for giving his guidance throughout this thesis.

Table of contents

1 Introduction

The use of digital technology has increased tremendously among businesses, even small and medium sized companies are forced to shift towards more digitized working routines, where they aim to use digital technologies to increase efficiency, solve problems within the company such as handling information and changing working process. Digital innovations are also creating new opportunities everyday and businesses needs to utilize advanced technology, not only in order to develop and expand their business but also to survive (Forbes, 2018). Phenomena such as digital marketing is related to all industries and it is clear that technology is integrated in today's business landscape, as almost everyone is a digital business to some extent. Digitalization affects every industry in some way, and digital maturity and IT applications is now a defining part in company competition (Manyika et al. 2015). A 2018 study of Swedish companies showed that 48 percent of outgoing invoices, 72 percent of invoice certification and 43 percent of delivery payments was digitized (Visma, 2018).

The introduction of digital technology is inevitable since the old systems and process have to be rethought and put in place in order for business to follow up the new trends. The generation Y, and the following generations, that grew up using digital technologies have a completely different views on communication via digital tools, and 98 percent of swedes use the internet every day (Karlsson, 2018). The new way of thinking will lead to new solutions that creates innovative process and work models that help companies stay competitive and survive. Businesses today are operating in a world of complexity, where higher data volumes exists that requires faster business cycles and creates higher demanding customers (Forbes, 2018). A study of 391 large companies across 30 nations found that organisations with a successful digital strategy were 26 percent more profitable than companies in the same industry (Kumar & Parry, 2017). Being in the top quartile in digital maturity among B2B-companies was also found to increase revenue with 3.5 percent (Catlin et al. 2016).

Digital transformation can generate more fluid, responsive and data driven processes that can be a key to success, these are some specific areas where the digital transformation plays a key roll (Digitalmag, 2017). Areas where actors can make smarter use of their time, materials,

assets, and information. The development in information and communication technologies (ICT) have created opportunities for businesses and societies around the world (Ayanso et al., 2014). Companies can become more personalized and offer valued customer service across all channels, so they can easily meet higher expectations for service and order delivery. Created by the internet, and other online technologies, generating more opportunities for users to get access to information and knowledge (Ayanso et al., 2014). Through collaboration companies are able to create shared processes and complement each other with their strengths within their business network (Digitalistmag, 2017). There is an expectancy that the digitalization of B2B transactions will have a more transformational impact on the way that B2B networks works more than any other trend (Basware, 2018).

Digitalization and technological evolution is a current political topic in Sweden. The Swedish government created in 2012 the "Digitaliseringskommissionen", digitalization commission, with the objective of furthering the understanding of its effects on Swedish society. Focus was also put on finding the opportunities that digitalization presented for Swedish trade and industry. The commission concluded that digitalization is relevant and necessary for Sweden's trade and industry, to gain competitive advantages by being the world leader in digitalization of all aspects of companies operations (Digitaliseringskommissionen, 2016). In a 2017 study from Tillväxtverket, the Swedish agency for economic and regional growth, the use of digital technologies in Swedish trade companies is found to be widespread for primary activities. The use of digital technologies in marketing, business relations and sales is now on the rise but is still mainly focused on business to customer activities (Tillväxtverket, 2017). The Confederation of Swedish enterprise made their own report on digitalization in Swedish companies, by order from the Swedish government. They concluded that we are seeing a unprecedented connectivity between businesses worldwide, and to prosper in this environment, companies needs to use new capabilities to challenge business norms and blur organisational boundaries. The digital maturity between sectors differ greatly in Sweden, where large cap firms achieve a much higher level compared to small and medium sized businesses (Tillväxtanalys, 2017).

1.1 Terms and definitions

The concepts of business-to-business relationships, digitization and digitalization needs to be explained in order to avoid confusion. This paper focuses on digitalization of business-to-business relationships. However, the terms digitalization and digitization will both be used. Digitization is the replacement of analog tools with digital ones. Digitalization offers a wider scope and entails the change of processes and they way companies works, because of their digitization (Tillväxtverket, 2017). This means that digitalization can not be achieved without digitization, which requires that both parts are looked at. For example, a company's use of video chat is digitization, while the complete replacement of face-to-face meetings with video chat is digitalization.

The term business-to-business relationships can entail business networks, customers and partners in this paper. We speak specifically of networks in a business-to-business sense, and that all customers are other businesses. When the phrase customer, partner, actor etc. is used, it is always a company. Similarly, the term *Business Relations* is focused on B2B of companies, and the companies we focus on are companies that operate and sell to other businesses. This means that the sample companies used in this paper are selling products or services to other companies. The companies we study operates on a global level and the context of this paper is also an international one. Meaning that the samples companies operations and customers are spread over national boundaries.

Digitalization is a broad term, even in the more focused scope of B2B-relations in specialised companies. There are many different processes that can be digitized, and many different digital tools that can be used. Which of these processes and tools that see change is then deeply dependent on the type of company and the type of relationships. The means of digitizing a business relationship, or a part of it, can offer different opportunities and challenges (Salo, 2006). There are several possible tools for creating and integrating digital infrastructures within business relations. Digital technologies studied can be used internally and externally, for communications between subsidiaries, information about already sold products or creating new relationships. As long as they contribute to customers directly or the companies in managing their business relationships. This is because of the complex nature of the B2B-relationship, compared to a B2C-relationship (Raskovic, 2015).

1.2 Problem discussion

Answering what digitalization of B2B-relationships becomes problematic itself. It could be for internal management with CRM- or EDI-systems, external communication using social medias or websites, or meeting company customers via Skype instead of in person. These are all ways of digitizing, but digitalization can be more. How can an app, computer system or video chat be used by companies towards their company customers?

Although much scientific study and focus has been put on digitalizations impact on B2C-relations, research on B2B-relations has not been as thoroughly conducted (Pagani & Pardo, 2017). As we have already entered the digital age, where digital technologies are well developed and their potential benefits are many, studying the digitalization of B2B-relationships becomes more important from a theoretical viewpoint (Manyika et al. 2015). The types of companies that conduct interorganizational business are a major part of developed economies. Digitalization not only impacts business relationships, but also changes the co-creation of value between B2B-relationships, which is the most important part of a B2B-relationship (Iansiti & Lakhani, 2014). A 2016 survey showed that only 10 percent of B2B-companies viewed digitalization as a top priority (Catlin et al. 2016). This supports the need for this study, that decision makers in B2B-companies can be provided knowledge about digital technologies. In order to identify priorities, the digital technologies important to the company and those that are not.

The digital transformation enables players in many industries to compete in new ways. To do this, companies need to rethink business models and identify new opportunities for creating and capturing value (Iansiti & Lakhani, 2014). The digitalization of transactions, communications and operations impacts access costs between companies. This implies that the integrated firm, with focus on in-house production, may not offer specific benefits. Connectivity between companies, effectively pushed by digitalization, can instead create more value, which furthers the importance of B2B-relationships (Iansiti & Lakhini, 2014).

We see great theoretical importance in further studying this subject because of the current lack of existing research on the subject. Digital maturity among B2B-companies is less than

that of B2C-companies, mainly because of the lack of digital knowledge among business leaders. Research on digitalization and B2B relationships is needed to help companies, leaders and researchers identify the possibilities and tools needed to create value for B2B companies (Catlin et al. 2016).

Despite the increased use of digital technologies and the introduction of new digital solutions, many companies face the challenge of actually starting to use digital technologies. There is a problem for some companies, or a certain resistance, as they do not like the idea to change their working place, routines, and in some cases they are even fearing the new habits and competence that advancing digital technology requires from the user (Kane et al. 2015). The use of digital technologies can also be a costly one, especially if the company makes a large scale change. But studies suggests that companies should use them and empirical evidence shows that digitalization does make companies more efficient, and it can be key towards developing closer and efficient relationships within actor networks and also increase the number of business relationships (Dewan et al., 2007).

Digitalization is likely to impact the level of activities, resources, and relationships shared with other actors. It is important to have in mind that there might be some uncertainties, the introduction to digital technology can be complicated, especially when you lack knowledge or resources (Pagani & Pardo, 2017). It is important to create an effective digital strategy, these strategies are required to be utilized, otherwise there is a risk that the investment can go wasted. A large obstacle to interorganizational technologies is the fact that both partners in a relationship must have it implemented (Mukhopadhyay & Riggins, 1999).

In this rapidly changing world, where technological development and our reliance on it, is ever increasing, the need for companies to adapt and change increases too. The emergence of a working generation that has grown up with computers and digital communications makes this evolvement inevitable (Manyika et al. 2015). Considering this, to what extent companies can, and should, embrace these changes is still not fully understood and the potential that comes with it. Although digitization and digital technologies is something that many companies already use within their business practice, we wish to understand to what degree they can be used within their business to business relationships. .

The research is aimed to explore the broad aspects of B2B-relationships by understanding how companies build up these relationships, how they manage customer relations and how operations and processes can change with digital technologies. The exact impact is currently hard to define due to the vast amount of technologies (Pagani & Pardo, 2017). Because of the political interest and the potential presented by digital tools for companies, we find this an important subject to examine. This further supports our reasoning for studying digitalization of B2B-relationships. This paper will contribute to the science of international business and businesses themselves. By furthering the discussion about digital technologies, helping identify relevant areas of use and build upon the groundwork for future studies about the digitalization of B2B-relationships.

1.3 Purpose

The purpose of this paper is to understand how B2B-relationships can change and be managed, with the emergence of digitalization. To understand this, we will study which parts of the B2B-relationship that companies are implementing digital technologies for, and why they choose to do so. Using the Actor - Resource - Activity model (ARA), we aim to analyse which parts of the relationships are digitized or not. By connecting this model with Rogers' diffusion of innovation (2003) and Salo's article (2006) on digitalization and business relationships, we can understand why these choices were made.

1.4 Research question

How can companies, with the emergence of digital technologies, change the way that their business-to-business relationships are strategically managed?

2 Methodology

With this study we aim to understand how companies can utilize digital technologies for their B2B-relationships and how they are affected by it. To achieve this, primary data will be collected through semi-structured interviews with specialised companies operating solely B2B.

2.1 Research approach

The aim of this paper, due to the complex nature of digitalization, is not to find any definitive answers on which digital technologies are most important or best. Although we study the specific subject of digitalization, it is founded in the study of business relations. In contrast to the realist perspective of nature studies, the subjects and their subjective experience are of great importance and will provide different answers (Justesen & Mik-Meyer, 2012). The research is based on the expected differences between the interview samples. Finding relevant observations on how and why digital technologies may be used in different industries and companies, and their reasonings for using, or not using them(Collis & Hussey, 2014). Within the research of B2B-relations, there are several different realities of how, why and to what extent companies have adopted digital technologies. The digitalization of B2B-relationships is a relatively new phenomena, which is why the research in this paper is exploratory. Exploratory research is fitting for a subject which has not been widely studied (Kumar, 2011). It provides information about the how and why of a phenomena and allows the researcher to gain experience for further investigation.

To be able to understand the nature of digitalization within business relationships, an abductive approach will be used. Abductive research helps explain a phenomena and provide a foundation for future research (Bryman & Bell, 2013). Abduction is therefore used, due to the lack of previous studies on the subject and developed theories, as well as the lack of samples needed to draw a general conclusion. By using an abductive approach, researchers can continuously build on their analysis while collecting empirical data and theoretical data (Bryman & Bell, 2013). As interviews are conducted and data is gathered, our analysis will be simultaneous. As we progress in our gathering of data, our understanding of to what extent companies use digital technologies for their B2B-relations will be furthered discovered.

Abduction is associated with deductive and inductive approaches, the risk of using only deductive can be a lack of clarity in terms of how to select the theories to base the research on, which is relevant to us, due to the lack of previous research on the subject (Pagani & Pardo, 2017). Researchers are not always able to gather enough empirical data for the inductive approach (Bryman & Bell, 2013), which is also a delimitation to this paper, due to

the massive amounts of different digital technologies and companies that exists (Manyika et al. 2015).

2.2 Study design

The nature of the problem studied, how specialised companies use digital technologies for their B2B relations, is hard to quantify. Asking how many companies actually utilize digital technologies sets up for complications, since the definition is too broad. Every industry is affected by digital technologies and most people use them every day (Manyika et al. 2015). The question we want answered is to what extent and in which ways they use them specifically for their B2B relations. A quantitative study to see how many companies use digital technologies is therefore not chosen (Bryman & Bell, 2013), since quantitative studies tend to focus more on numbers instead of words. The study design will therefore be qualitative. A qualitative study, which focuses on the description, meaning and characteristics, focuses on how and why a phenomenon occurs instead of how often (Justesen & Mik-Meyer, 2012).

The primary data used is provided from interviews with 9 companies operating solely business-to-business. Information gathered from the interviews is expected to differ, due to the many interpretations and kinds of digitalization and B2B-relationships. One of the strengths for using the qualitative approach, for this study, is to interpret the gathered, relevant information that will be collected from different respondents, from different companies, with different perspective regarding the topic (Bryman & Bell, 2013).

Semi-structured interviews, as recommended for undergraduate business research by Collis and Hussey (2014), will be conducted to gather information about how the sample companies, in different ways, have chosen to utilize digital technologies. For example, how they use digitalization in terms of creating and building relationships, internal relationship management, communication aspects, information gathering regarding their business that they can share with their customers, suppliers and actors within the firm. The broad amount of use of digital technologies and the possibility of them not being used, makes a qualitative research strategy the most fitting. Our study design is not defined by a single approach,

instead semi-structured interviews will be conducted and an observational study based on interpretivism of the phenomena will be used (Justesen & Mik-Meyer, 2013).

2.3 Sampling

The samples used for the study will be specialized companies, meaning that they offer nische products and services to other companies, not to consumers. All the companies are Swedish but this is not a criteria, nor is it important to the study itself. However, it is important that they operate in an international context, since this provides a wider scope to their operations and B2B relations. They are not well known by the public because of their activities only being directed towards other companies. Their focus on B2B is important, since this avoids the possibilities of confusion between digital technologies being connected to B2C, B2B or both. When choosing relevant area for data collection, this study has followed the recommendations described by Bryman and Bell (2013) where it is important for the chosen companies to have some specific criterias.

2.3.1 Choosing companies and respondents

The criterias for choosing companies to interview are not based on their industry, products or headquarters location in Gothenburg. Our interest lies in B2B-relations, which exist within many types of companies. The companies and respondents were chosen based on convenience sampling, to ensure that respondents and companies met certain criterias, while still accounting for certain limitations (Bryman & Bell, 2013). Convenience sampling, also known as availability sampling, is a type of nonrandom sampling where samples are chosen based on their availability and geographical proximity (Etikan et al. 2016). Certain criterias need to be met, ours presented below, but certain freedom were allowed during selection due to time, budgetary and availability constraints (Etikan et al. 2016). This is not deemed to affect the research, since the focus is to explore the digitalization of B2B-relationships in general, not decide what is best or what the sample companies should do.

2.3.2 The criterias for companies:

All of these criterias needed to be met for a company to be used in this study.

- Solely operating business-to-business. None of the companies sell their products to consumers. This avoids misinformation about whether customer focused digital technologies are aimed at consumers or other businesses.
- Long standing relationships with their customer companies. Companies with products and services provided to long-term partners offers greater knowledge about complex relationships and potential impacts of digital tools.
- Global operations. The companies' operations, customers and subsidiaries are found in Sweden and abroad. This is to gain a greater scope of the potential impacts of digital technologies.

2.3.3 The criterias for respondents:

Criteria one and two were not both needed to be fulfilled by respondents. For example, could a CEO, not directly responsible for IT, be interviewed as long as he/she possessed relevant knowledge about the areas studied.

- Responsible for activities relevant to the study. These being IT or communications and business relations related to the company.

or

- Knowledge about the relevant subject areas. These being IT or communications and business relations related to the company.
- Responsible for activities across the entire company. This includes subsidiaries and international activities. Since the sample companies all has operations and customers in several countries could, for example, not the head of IT in Sweden be interviewed. Then it had to be the group IT manager.

2.4 Research Process

The research involves two broad areas, digitalization and B2B-relations, which requires defining and a theoretical groundwork to study. Although the previous research for deductive testing is currently unavailable (Pagani & Pardo, 2017), we will still use scientific literature. The theory collected is used to distinguish different areas of B2B-relations and explain reasonings for digitalization, the how and why. Our empirical data is based on the sample companies, all relevant to the research problem due to their business-to-business operations.

The collection of data and our analysis of it, will be conducted simultaneously in a abductive approach, as explained earlier. After connecting these two elements, our evaluation of the data will provide us with further understanding of our research question (Collis & Hussey, 2014). Our methodological assumption is to study the topic within the context of different companies doing different things, which is not a fault with this study. The differences in answers will provide more information and contribute to a richer study (Davidson & Patel, 2011).

2.5 Data Collection

2.5.1 Primary data

Our primary data is collected through semi-structured interviews with companies. The reasoning for the interviews being semi-structured, is to optimize the validity of the answers provided. As recommended by Justesen and Mik-Meyer (2012), semi-structured interview for a qualitative study is the most viable. Basing the interview on the same open questions means that we get the companies to focus on our specific issue, while still being able to adapt to the companies particular relation to the purpose of the study. By adapting our questions to situations and companies, and not providing all questions in advance, the answers will hopefully be more honest. It is critical to not have unstructured interviews, since we are interested about a specific topic (Bryman & Bell, 2013), which none of the companies actually sells or produce. The interviewees chosen to represent the company will be senior managers or people responsible for our specific subject within the company. To avoid misquotation, every interview is recorded and transcribed, the interview will be in Swedish and translated to English.

2.5.2 Secondary data

Secondary data is collected via electronic media and established scientific literature. To ensure reliability, the data is collected from government departments, organizational records and data collected for other scientific purposes. The reason for collecting the secondary data is to validate our research question and provide a background for our analysis. Furthermore, it will be collected for our theoretical framework and to help analyse it. Bryman and Bell (2013)

has been the guidance of selecting secondary data, who recommends secondary data as a complement to the primary data.

The empirical data collected is only collected through interviews, which means that no secondary data is used for it. The relevant information about companies digitalization of B2B-relationship is their specific views on it and the results of potential digitalization, even though information about companies digitalization can be found on their website. Companies specific secondary data is only collected from their own websites. This is to ensure that company information is taken directly from the source and avoids misrepresentation.

2.5.3 Data Collection Limitations

It is important when obtaining secondary and primary data to understand the certain limitations (Bryman & Bell, 2013). Information from secondary and primary data might be angled. Personal bias is a common limitation of convenience sampling (Etikan et al. 2016). Respondents answers can be affected by their personal opinions, role in the company and the possibility of certain activities being replaced by digital technologies. It has to be taken into account that company representatives wish to paint the company in a positive light. The knowledge about IT might differ greatly between respondents as well, which might affect answers.

Empirical secondary data collected from the internet can complement this by providing additional information about the companies. However, the limitations of bias exists here as well. Using secondary data from company sources only can increase authenticity and decrease the risk of the company being misrepresented by biased sources (Davidson & Patel, 2011). But the companies' sources might be biased as well and it has to be taken into account that their website are often used for PR purposes.

2.6 Analysis

Analysis will not be focused on what levels of digitalization is best or what companies should do. Analysis will focus on what areas digital technologies can be used by companies and why they have chosen to do so.

Because of the complexity of B2B-relationships, differing depending on many factors (Gebert-Persson et al. 2014), and many different uses of digital technologies, a framework is needed to understand what parts of the B2B-relationships are digitized. We will utilize the ARA-model (Pagani & Pardo, 2017) as a part of our analytical model, to distinguish certain areas of complex B2B-relationships and what is affected by digitalization. Out of the four main approaches of analysing qualitative data, we will focus on a comprehending one, meaning that we wish to analyse what areas are affected and why they are (Collis & Hussey, 2014). To understand why, two additional theories will be used. These are Roger's diffusion of innovation (2003) and a collection of literature on digitalization of B2B-relationships, based on a framework by Jari Salo (2006). These three parts allows us to identify which parts of the B2B-relationship where digital technologies are used, and why they are. The potential finding that a company uses less digital technologies than other companies equally relevant.

How companies has changed their processes, thanks to digitalization, is difficult to use as a measurement. The companies interviewed has existed for different amounts of time and may have started with different levels of digital maturity. To determine levels of digitalization and areas of the business relationships affected by them, companies will be compared to each other (Pagani & Pardo, 2017). The semi-structured interviews is important in this aspect, to keep interviews similar enough to reliably compare companies while still account for the different industries that they each operate in (Bryman & Bell, 2013). When doing the interviews with these companies we might also be likely to see similarities with companies, how they approach new technologies and if some of them faces similar challenges.

2.7 Quality of the Study

Although measurements are taken to ensure the validity and reliability of data collected are taken, our results can not be considered conclusive. Despite the differences between samples, every type of company can not be accounted for. Convenience sampling should not be used to represent the entire population (Etikan et al. 2016). This is avoided by not focusing on a specific type of company, insteading choosing to focus on the relationships and digitalization. This is also avoided by not defining the aim of the study to be about making generalizations on the best possible methods or uses of digital technologies (Kumar, 2011). By keeping the research question broad avoids the problem of external validity that qualitative studies often

face. External validity being the ability to draw general conclusions to other social areas (Bryman & Bell, 2013). The research is focused on digital technologies and B2B-relationships, how they can be affected, not how they are for all companies.

When conducting qualitative research is the internal reliability between the researchers of great importance (Bryman & Bell, 2013). This means that the researchers can agree upon which theories to use, empirical data to collect and conclusions drawn from these (Bryman & Bell, 2013). This is achieved by equal participation on all parts of the thesis, discussions between the researchers and extensive gathering of information and data. The thesis has also been read and reviewed by peers and supervisors.

The external reliability is not as defining for a qualitative study, as for a quantitative (Davidson & Patel, 2011). Variation between the respondents or contradictions in answers can be expected. For example, could two companies use different technologies for the same activity. However, these variations in answers can enrich the study and show the many different variations that exist in the subject (Davidson & Patel, 2011).

A necessary delimitation to mention for research on digitalization, as mentioned by Pagani and Pardo (2017) and Salo (2006), is the vast amount of digital technologies that exist. There are many different types of technologies, systems and softwares with many different usages and advantages. To deeply analyse benefits of digital technologies would require extensive knowledge of them, which the writers of this paper does not have. Instead we rely on the companies answers and views on what digital technologies they use, why they use them and how. The research question is phrased - "*how can"* - intentionally. It implies that companies digitalization of their B2B-relationship are based on certain other factors, it also shows that the research is not meant to define digitalization of B2B-relationships.

2.8 Research Ethics

When doing research of any kind, it is important to follow good research practices and that researchers know the ethics and methodologies of their field (ALLEA, 2017). For business research, these include information to participants, consent, confidentiality, deception and misrepresentation (Bryman & Bell, 2013). Each company and respondents were informed

about the subject nature of the study and how the information gathered would be used. This was presented in written form at first contact with potential samples and at the start of the interview. Each interview was recorded and transcribed to avoid misquotation and the respondents consent to this was established at the start of each interview.

The risk of confidential or sensitive information is also needed to be addresses. Researchers should avoid damaging information about a company or the respondent, not get informed consent or make false statements about the companies (Bryman & Bell, 2013). Therefore, each company and respondent is anonymous in this paper. This does not affect the results of research, since the focus is not the companies themselves, but the digitalization of their B2B-relationships. The possibility of the respondent not having enough knowledge to answer all our questions is kept in mind. However, the exploratory nature of this paper, and the anonymity or our samples, avoids misrepresentation and does not affect the research.

3 Theoretical Framework

In order to analyse the digitalization of companies B2B-relations, we must understand what can be digitized and how this differs depending on the companies and the relationships. The first chapter introduces a rework of the ARA-model (Håkansson & Snehota, 1995), developed to specifically analyse which areas digitalization can change in B2B-relationships (Pagani & Pardo, 2017). This model is crucial for us to specify different uses of digital technologies and account for the differences between our sample companies.

The second chapter is based on several articles about digitalization and its effects on relationship building and existent B2B-relationships. The main focus is Jari Salo's article (2006), and three factors presented by him that affect the digitalization of B2B-relationships. The third chapter, Rogers' diffusion of innovation (2003), presents his model of innovation and adoption of innovation. These two chapters are connected to the Why of our analytical model. They will be used to account for the human and financial factors that affect why certain digital technologies are used.

3.1 ARA

The ARA-model, an acronym for Actors, Resources and Activities, is a model first introduced by Håkansson and Snehota (1995). Earlier research by Håkansson and Johanson (1992) presented essential elements of the model, but it was fully framed in 1995. The model is used for analysing complex B2B-relationships through a network approach, where the companies individual business is affected by other businesses in the network (Gebert-Persson et al. 2014). This model was further developed by Pagani and Pardo (2017), to specifically analyze digitalization of B2B-relationships.

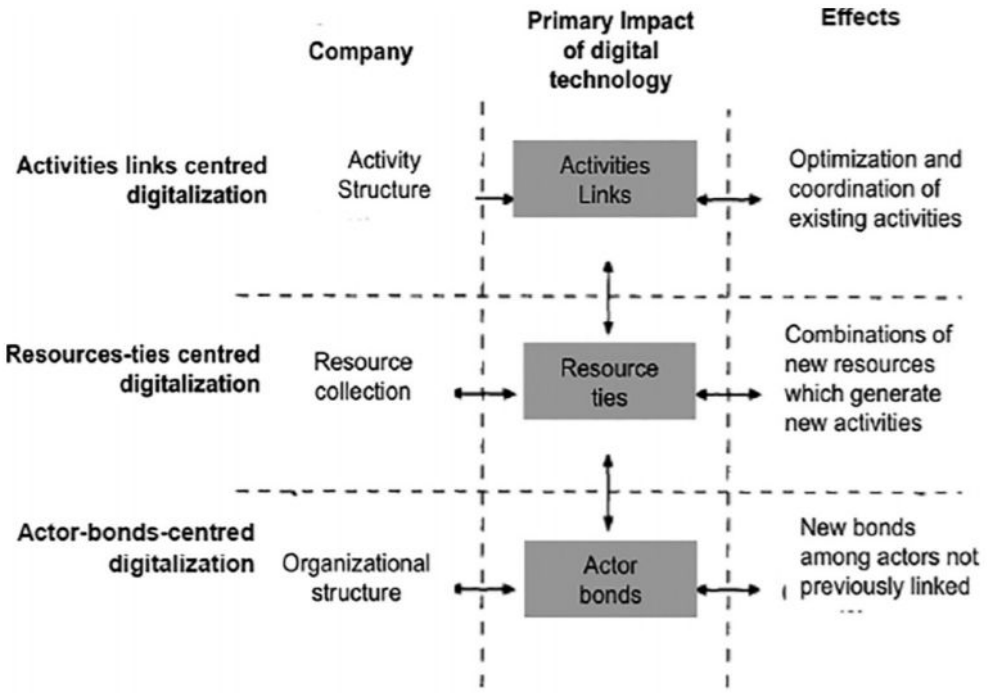
B2B-relationships does not solely revolve around marketing and sales, which is typically the focus on B2C-relationships. B2B-relationships involve a closer relationship where activities, resources and actors all play a part. No two business relationships are alike, with unique features. There are however a similar pattern in the effects that they produce (Håkansson & Snehota, 1995). There are two dimensions of a relationship; Function, who is affected and Substance, what is affected. Since business relationships are not a specific thing, the ARA-model is used to analyse the substance of the relationships. The substance is divided in three parts; activities, resources and actors (Håkansson & Snehota, 1995). By using the ARA-model, it allows researchers to look deeper into B2B-relationships. These do not only exist with the function of achieving a goal, but has substance too. The B2B-relationship changes aspects of activities and resources between the companies and within the companies themselves (Raskovic, 2015). When looking at B2B-relationships in this paper, the researchers will look at internal and external activities, both changed by, and aimed towards the relationships.

To distinguish how B2B-relationships can utilize digital technologies and for what parts they might be used, how these parts are affected and to what degree, an updated version of this model is needed. Pagani and Pardo (2017) created a model to specifically analyse digitalization of B2B-relationships. They used the ARA-model to develop a model for analysing the specific, substantial effects of digitalization.

Activities: Defined as a "*sequence of acts directed towards a purpose*" (Håkansson, Snehota, 1995, p. 52). Activities can be internal, production and administration, or external, purchasing and sales. For the specific companies in this paper, many activities are connected with other companies, both internal and external. This type of digitalization is focused on the optimization of existing activities, both internal and external. This is because even though digitization can change activities, they can not be considered *new* fundamentally different activities. The use of a web service does not change the objective of selling products, but can help make it more effective for customers to buy products (Pagani & Pardo, 2017).

Resources: Resources for B2B-companies are not only their facilities and organizational units, but also their relationships (Håkansson & Snehota, 1995). For this model, when use can be made of something it is to be considered a resource. This type of digitalization is between existing actors, who means to benefit from the digital ecosystem between them. Supplier can offer new ways for customers to optimize the products, teach/train new operators or repairs (Pagani & Pardo, 2017).

Actors: Through interaction with each other, actors link activities and combine resources to create value. Digitalization within this layer is mainly used to create bonds between new actors in the business network to allow connections that was not there before. An example could be a marketplace that uses digital technologies for companies to meet and exchange knowledge and support (Pagani & Pardo 2017).



Source: Pagani, M. & Pardo, C. (2017) *The impact of digital technology on relationships in a business network.* p.190

These three parts are not to be entirely separated, but seen as three layers of B2B-relationships that are all interconnected. The extent of each layer and how/what is digitized depends on the business relationship. Instead of focusing on a specific type of digital technology (social media, apps etc.), the focus is put on what these technologies affect within the company. This motivates our use of this theoretical model. Pagani and Pardo (2017) developed this model, due to the lack of research on digitization of B2B-relationships, as a way of analysing the extent and effects of digitalization of complex business relationships. By studying digital technologies used for B2B-relationships, via the ARA-model, a wider scope within each sample company can be achieved. The ARA-model distinguishes changes within the companies and between them, both because of the B2B-relationship (Raskovic, 2015). This means that digital technologies used by one company internally, can still be connected to their B2B-relationships, such as with a customer relationship management-system or data banks for storing information about customers.

The theory is also relevant because the two main parts of a business model, creating value for customers and capturing that value, are both affected by digitalization (Iansiti & Lakhani,

2014). When looking at the value creating possibilities of digital technologies, we must see B2B-relationships as a value creating network, where digital technologies can affect many different areas (Pagani & Pardo, 2017). Although the goal of this paper is not to find out which way of digitalization is better or valuable, it is still an important aspect to keep in mind due to it being a one of the main arguments towards digitalization (Kumar & Parry, 2017).

There are two major limitations recognised with this model (Pagani & Pardo, 2017). The first one is about the vast amount of digital technologies that exist, and their quick evolution. To analyse them extensively, with their differing advantages based on the type of company would require extensive and expensive research with a large sample. Secondly, the model does not take into account the internal aspects of digitalization. These could include hiring new personnel to manage these new systems or creating new positions such as chief digital officer (Pagani & Pardo, 2017). With these limitations in mind, the model is still needed for the analytical model used in this paper. Because of the large variety in B2B-relationships and digital technologies, a framework is needed to correctly identify which areas of the business relationships are affected and in what ways (Gebert-Persson et al. 2014).

3.2 Digitalization and Business Relationships

Understanding the digitalization of B2B-relationships is not limited to finding out which areas that digital technologies are used for. It is also about understanding why they are used or not. To do this, researchers should understand what factors promotes and impedes digital technologies use in a B2B-relationship (Kääriäinen et al. 2017).

Though the level of digital maturity for a company's business relations plays a part, studies suggest that the effects of information technology on interorganizational relations is determined by the - *emergent properties of the interplay between IT and existing relationships between partners* - according to Chae et al. (2005). They suggest that IT stabilizes and reinforce current relations and that closer relations should be formed before IT-based interorganizational linkage. Similarly, Salo (2006) suggests that digital strategic tools with high complexity should not be bought straight away, based on the difficulty of managing a customer account.

In his article from 2006, Jari Salo maps the factors that influence business relationship digitalization. These factors are:

Antecedents: The trust and relationship that existed before the digitalization. The closeness and trust between the two companies, and their will to adopt digital solutions. Chae et al. (2005) describes the relationship before digitization as the main decider of what the relationship will look like after digitization.

Accelerants: The parts of the business relationship that digitalization helps or develops. These include company specific skills and capabilities and simple adopted technology solutions.

Inhibitors: The parts that works against digitalization or which digitalization hinders. These include missing mutual benefits and lack of trust. A large inhibitor and risk to companies when implementing interorganizational technologies are the requirement of both partners to have the technical capability (Mukhopadhyay & Riggins, 1999).

The implementation and use of digital technologies is affected by these three factors. These three then depends on human factors, such as personal preference and company culture. As well as managerial factors such as the cost of implementation, risk and reward and management's ability to articulate the value of digital technologies. This affects a company's digital maturity and their willingness to use digital technologies (Kane et al. 2015).

The benefits of digitalization depends on the business relationship characteristics and requires different types of business relationships and tools. Digital tools are usually a combination of computers, software and telecommunications that can provide with digital infrastructure, therefore flows and activities are dependent on relationship characteristics (Salo, 2006). Some B2B-relationships can solely consist of product, process and other key contributors that are digital with no need of human intervention. However this is usually very rare and in some extent organizations interactions are still to some extent about physical, human engagement (Mukhopadhyay & Riggins, 1999). The potential benefits of digital technologies to the B2B-relationship can not be utilized before this initial contact, instead a relationship must be built non-digitally before it can be digitized (Chae et al. 2005). The actors involved in a

B2B-relationship needs to have a matching digital infrastructure before using digital technologies. These activities are usually initiated through developed infrastructure together with the counterpart (Mukhopadhyay & Riggins, 1999).

In the existing B2B-relationship, the area of use for digital technologies is also affected by social and organizational contexts. The effects of digital technologies is influenced not only by the technology itself, but also by the organization, institutional properties and the existing relationship between organizations (Chae et al. 2005). This means that which, and why, digital technologies are used is highly dependent on the industry and its properties. Depending on the complexity of products and services, sales, customer specific solutions and the importance of R&D, it might be less suitable to digitize the relationship (Salo, 2006).

The limitations of this theoretical model is found in the lack of empirical data and research made on the subject. Both theoretical and empirical understanding are areas that need further research, in order to develop a framework that explains B2B-relationships and their digitization (Salo, 2006). It must also be kept in mind that the digital evolution, since the two articles used in this model was released 2006 and 2005, has changed considerably and evolved. A lot has changed with digital technologies and the people working for these companies.

These are however needed and used in this study, despite the limitations. This is because of the variations in B2B-relationships and factors that affect digitalization. Complexity of products and services, trust building and industry properties can decide why two companies chose different digital solutions for their B2B-relationships (Salo, 2006). By taking this into account, or analysis of why differences exists in digitalization can be understood.

3.3 Rogers diffusion of innovation

Some companies are adopting technologies more rapidly than others, and some are not even exploiting the digital opportunities at all. To understand the diffusion among groups using or not using technology, we are using Everett Rogers model *Diffusion of Innovation* which is one of the most popular adoption models (Pashaeypoor et al. 2016). The theory distinguish that different personalities, the human factor, influence companies (the adopter) when

accepting a new innovation. There are 5 different main adopters mentioned in the theory, *Innovator, Early Adopters, Early Majority, Late Majority, and Laggards* (Rogers, 2003). Demographics and personalities are the two main things that are differentiating these groups of adopters (Li et al. 2013)

Innovator: This group is the first to adopt a new technology and this group of individuals are willing to take the risk. They are usually the youngest group of people and have a high social class with close contact to different scientific sources and interactions. This group is not afraid of setbacks since they have a stable financial situation where their resources can absorb the failures. Innovators might not be the biggest group but they are certainly an important group since they are launching new ideas and technologies to the social system. They are likely to find new technologies that other groups can adopt and apply to their own organizations (Rogers, 2003).

Early Adopters: This group have the highest degree of opinion leadership with higher social status, which means that they are more forward than the late adopters. They also have a more advanced education. The idea of adopting new innovations is less incentivised compared to innovators. This group is not far ahead of average individuals who are adopting technologies. Potential adopters are usually looking for advice from early adopters when it comes to adopting new innovations. That is why *Early Adopters* have a role in decreasing uncertainty from others to invest in a technology. This group does some general evaluation about the potential technology, before investing (Rogers, 2003).

Early Majority: This group also adopts new technologies and are taking advantage of the possible innovations. However, they adopt innovation after a certain amount of time. They are slower in this process and does not have the same social contacts as the early adopters. They usually have some contact with early adopters, who are likely to give them advice in investing in new ideas. This group is provided with interconnectedness in the system network and they are purposely avoiding the idea of being the leader in new technology and innovation, deliberately being a follower and not the leader. This is a strategy to avoid risk and decrease the level of uncertainty, they are waiting to get persuaded by other groups so they have more knowledge before making a decision (Rogers, 2003).

Late Majority: The persuasion process is an important part when it comes to this group of individuals. They adopt technologies and new innovations but they are very skeptical towards them. There is a high degree of skepticism compared to the majority of society and they have little opinion leadership and are of average social status. They also have little financial lucidity which can be a hurdle when it comes to investing in technology, which means they do not take risks. They are work more with early majority and late majority when it comes to using new technologies (Rogers, 2003).

Laggards: These are the last individuals to adopt new technologies and ideas (Rogers, 2002). They are usually not open about the idea to change and show little interests towards technologies, almost never being opinion leaders. They are focusing more on the traditional ways of working, with low social status, and when it comes to age they are the oldest among the adopters (Rogers, 2003).

Innovation occur during 5 different stages: knowledge, persuasion, decision, implementation and confirmation (Doyle et al., 2014). Decision making is the hardest part during the adoption of technology because it is here where they evaluate if they should adopt or reject the technology. When adopters are implementing a new technology, they do it to a varying degree, depending on the situation and possibilities. It can take time and be a difficult process to see the beneficial parts where they might be able to use it (Rogers, 2003).

When it comes to knowledge, some might be lacking compared to others, which makes the investment towards a new technology more unlikely. They might not have come across the right person to inspire these groups yet. Rogers mention that the diffusion innovation, is a "*process by which an innovation is communicated through certain channels over times among members of a social system"* (Li et al. 2013, p.100). Innovation is spread through certain channels and communicated among social systems, it is a process to spread out innovation from discovery and creation to the users and adopters (Dibra, 2015). Establishment of strategic partnership and the right network for innovation adoption can be crucial, as actors within those areas have more knowledge and will decrease the uncertainty for users when they adopt a new technology (J.Wonglimpiyarat, 2005). *Innovators* for

example are working with highly experienced individuals to create desire for an innovation. A key factor for effective adoption of a technology can take place if they are supported by management and leadership teams, that is why the support is important. One of the reason why a project fails is a lack in administrative support. It can also fail due to insufficient funds, human resources or technological support (Doyle et al. 2014).

Through this theory we might be able to understand why some companies are more digitized when compared to other companies and gives us an explanation of companies to what degree they are using or adopting digital technologies and new available innovations. The level of perceived innovation characteristics can have an effect effect on attitude towards innovation (Pashaeypoor et al., 2016). Some are using it to a significantly larger extent, some are using it less or not at all.

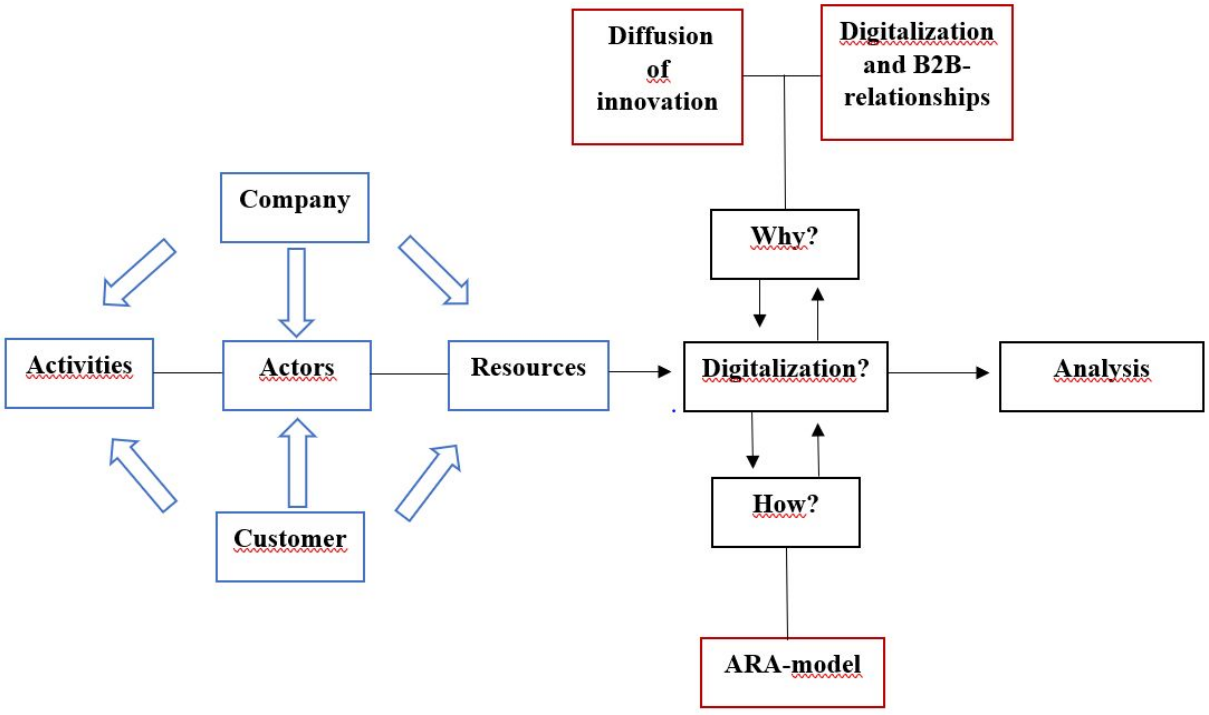
When using this theory it is important to understand the limitations. The theory is often simplified to concentrate solely on a product or innovation. It does not pay attention to the complex cultural, economic, technological and other factors that determine how products are taken into society. There are incentives to increase the quantity of adopters of innovation but the possibility might not always be there. Still, this theory is important to understand how human factors and personal preferences can affect why digital technologies are used in B2B-relationships.

3.4 Analytical model

In order to analyse the digitalization of B2B-relationships we will connect the three chapters presented earlier to each other. The three dimensions of the ARA-model are used to understand what is digitized, since these are the three paradigms that a B2B-relationship consists of and can, in differing ways, be digitized. The second chapter, based on Salo's (2006) framework, of digitalization of existing relationships and the creation of new relationships is connected to the empirical data, to further explain the why digitalization could happen for each part. The creation of new relationships, connected to the actors part of the ARA-model, and digitalization of existing relationships which is more connected to the activities and resources. Antecedents, accelerants and inhibitors differ depending on which dimension of the ARA-model we look at.

Lastly, the diffusion of innovation model (Rogers, 2003) is used in connection to the other theoretical frameworks. It is not expected that every company has chosen the specific areas of digitalization based on pure, logical value creation. A company can chose not to digitize simply because of their, or customers unwillingness to do so, but it may also be because they see the value of it. An example is not using digital technologies when forming new relationships, because the company sees value in face-to-face contact. Then the company is not seen as a laggard in this aspect, but not as an innovator either.

A visualisation of our analytical model is shown below. The company's B2B-relationship, shown in blue, is divided in three parts based on the ARA-model (Pagani & Pardo, 2017) of analysing B2B digitalization. The empirical data on these relationships and their digitalization is gathered, shown in black. This is then connected to the theories, shown in red. By connecting the empirical data and theoretical framework with the research question, we can then proceed with the analysis. The ARA-model, presented in 3.1, is connected to the "How", by dividing the complex B2B-relationship into distinct parts that could be digitized. The theories, presented in 3.2 and 3.3, are connected to the "Why", by providing theoretical data on challenges, limitations and opportunities with digitalization.



A company can use low levels of digitalization in their activities, while another uses high levels because of the value creating benefits. Then the first company can be viewed as a laggard to explain why they have not chosen to also use digital technologies. A company can also be a early/late adopter due to internal or industry related reasons, which is an important aspect to analyse.

4 Empirical data

Empirical primary data is collected through semi-structured interviews with 9 different, specialised Swedish companies. The data presented in chapters .1.2 and .1.3 is only collected from the interviews, while company information presented in chapter .1.1 is also complemented by secondary sources. In chapter 4.10, the empirical data will be summarized, to gain a focus on the data relevant to this subject.

Company	Respondent	Title	Location	Date	Time
Company A	Person A	Chairman of board	Skype	24/4 - 2019	25 Min
Company B	Person B1 & Person B2	Communications specialist & Sales Manager	Company Office in Gothenburg	29/4 -2019	35 Min
Company C	Person C	VP, Business controller & IT	Company Office in Gothenburg	29/4 - 2019	26 Min
Company D	Person D	Group IT manager	Company Office in Gothenburg	2/5 - 2019	33 Min
Company E	Person E	Head of operational intelligence and Business area manager	Company Office in Gothenburg	6/5 - 2019	30 Min
Company F	Person F	Director of integrated therapy solutions	Skype	8/5 - 2019	20 Min
Company G	Person G	Business service manager	Company Office in Gothenburg	9/5 - 2019	30 Min
Company H	Person H	Project manager	Company Office in Gothenburg	13/5 - 2019	36 Min

Company I	Person I	Group IT manager	Company Office in Gothenburg	15/5 - 2019	38 Min

4.1 Company A

4.1.1 Company presentation

The interview was conducted (24/4 - 2019) with Person A, chairman of the board of Company A. Company A operates internationally with subsidiaries in North America and Scandinavia. The company is a specialised health care company, headquartered in Gothenburg, working with 14 producers in 11 countries and distributors in 48 countries (Person A, 2019).

4.1.2 Business relationships

Company A works closely and maintains continuous communication with several companies, professionals, distributors, producers, with health care professionals and organizations.They are also working close with other subsidiaries within the larger organization. The company represents producers of specific health care products and connects them through their own interface to producers worldwide. The company, as described by Person A (2019), maintains "*very, very tight relations with the distributors"*, with quarterly meetings about the reports sent in by them. It is considered by the company important to build a relationship with distributors and customers before selling products, especially since their business strategy is based on adapting to customers needs (Person A, 2019). Person A also mentions that the company works to continuously educate health care professionals, indirectly representing hospitals, and distributors about their products. This is done through seminars and conferences. The company focuses on working internationally and being a global health care network.

4.1.3 Digitalization

Person A describes digitalization as a very important part for their company, he mentions *"As a relative small company it is s question of survival to be able to work digitally. I think we were one of the first company to really start using Skype and then you could see the reduction of cost on our phone bill"* (Person A, 2019). Many aspects of the companies business strategy

and B2B management are dependent on digital technologies. The company has an interface comparable to big pharma (Person A, 2019), which it uses to connect its distributors and producers in one place. Distributors are allowed to connect to Company A's network via their website, where they can collect data and communicate. This provides broad benefits such as communication and knowledge sharing between subsidiaries, market research and product development. Both internal and external activities are done via digital technologies. Mainly used for communication is the software GoToMeeting (GTM), a video and conferencing tool that connects users via the cloud. Most of the meetings between management, producers and education about products are via GTM. An example brought up by Person A was the companies establishment in Australia, where Australian professionals were introduced to the products by lecturers sitting in Liverpool and Stockholm.

Person A notes that, when establishing new relationships personal meetings are more valued to the company. The relationships becomes closer this way and the use digital technology is likely to occur after the relationship is established. It is important to use digital technology since they would not be able afford travel expenses when meeting all their customers, the use of technology is not only cost-saving but also time-saving (Person A, 2019). They also meet with their distributors face-to-face two times a year. Person A explains that the greatest benefit from digitalization for the company to be communication, education and connections, which allows the company to operate on a global scale similarly to the largest pharmaceutical companies in the world.

4.2 Company B

4.2.1 Company presentation

Company B partners with airlines and develops computer software and operations management systems for them. Customers includes airplane operators within commercial aviation, military aviation and business aviation. The company is mainly focused on schedule and flight-planning systems, but work closely with their sister companies for more complete solutions for their over 300 customers. The interview was conducted (29/4 - 2019) with Person B1, communications specialist, and Person B2, Sales manager.

4.2.2 Business relationships

The company works closely with their customers, not only in a relationship building sense, but also because of the complicated nature of their product. When building trust with customers, each customer is connected to their own personal contact in the company. Person B2 mention in the interview "*The sellers own the relationship*" (Person B2, 2019). Creating trust and work close with customer is very important Person B2 mentions that "*the purchase is an emotional decision*" and not just based on facts. The transaction decisions are made as a result of the partners trusting each other (Person B2, 2019). For customers, Person B2 mention it is important that customer can tell the seller *"I trust on you, I can look into your eyes and tell you this is an important decision even if it does not go according to plan I can still be able say I trust you"* (Person B2, 2019). Company B develops a core system for their customers to use, which they then have the opportunity to develop to fit their specific airline via an additional configuration layer. The implementation time for the product is around 30 000 hours, which requires continuous contact between Company B and its customers (Person B2, 2019). Company B has a premium customer support model, which means that customers are connected to a specific service center, typically consisting of three people, which the customer gains a personal relation to. Trust building is an important part of their operations, since their projects are 30 000 hours long, which requires a close knit relationship (Person B2, 2019). In this implementation procedure, Company B also works with education on their systems to customers pilots and workers.

The customers located outside of Sweden are also invited to their office in Gothenburg where they are able to learn and educate themselves. Customers see many benefits of visiting Gothenburg despite having to travel from another country, when customers are in Gothenburg they are able to fully concentrate themselves on the education while also being able to relax. Company B has annual conferences in Gothenburg which they mention that customers sees much value in and are keen towards participating in these annual meetings. They are able to be in Sweden and actually meet Company B face to face which increase the value of the relationship. Another valuable aspect of actually participating in these annual conferences for customers are the possibilities of meeting other airline companies and competitors, it creates an atmosphere of community among the actors (Person B2, 2019)

4.2.3 Digitalization

Company B has parts of their B2B-relationships which are highly digitized and parts that are not, although the parts that are not are still complemented by digital technologies. The company views the relationship building aspect as needed to be less digitized, while operations and product related activities are highly digitized (Person B2, 2019). Because of the customers ability to further develop the company core product, Company B needs continuous updates, information and communication to service each specific customers' system. This is all digitized through the customers connection to Company B's own EDI business system. Customers have availability to a portal, through the website, where they can post questions and see other companies questions. All communications between companies are collected in the company's case management system, ensuring that no important information gets lost. The product that airlines use are connected to Company B' system so that the company can see the changes that customers make, give support, change certain parts and optimize the product (Person B1, 2019)

Meeting the customer, and not have everything digitized, is an important part of the relationship building. Initially the customer needs product information which is available online. Although Company B sees online information as an area of improvement for the company, in the early stages personal customer meetings are important to the B2B-relationship, to build trust (Person B2, 2019). Unlike after the sale has been made, where meetings are more often via digital tools like Webex to save money and time. The company specifies this as an option only because of video being available. Within the company, Company B has developed a specific digital CRM-tool which stores important information for future business possibilities (Person B1, 2019).

4.3 Company C

4.3.1 Company presentation

Company C is one of the largest provider of fasteners in the european auto-industry. The company was founded in Gothenburg in 1873 and serves as a subcontractor of customer specific fasteners to over 30 automotive producers, with production in Sweden, Germany, Poland, China, USA and Russia (Person C, 2019). The interview was conducted (29/4 - 2019) with Person C, VP Business controller & IT.

4.3.2 Business relationships

Company C is a full service provider and offers responsibility from product development to logistics, all products are customer specific standard fasteners and specialised, customized fasteners. Building trust in the initial phase of the relationship is important to the company, since fasteners is a high-volume component which requires complex handling in purchasing and logistics (Person C, 2019). Company C provides services within development, documentation, quality assurance and logistics, which means that projects are based on close collaboration with the company engineers and customers. After the initial phase of the relationship and product development, continuous customer contact and meetings are not conducted to the same degree. As a full service provider, if everything goes according to plan, communication between Company C and customers is not expected or needed (Person C, 2019). As Person C mention: *"We are trying to maintain continuous communication and dialogue with our customers, exactly how often we are having physical meetings are hard to tell, it can go up and down depending on our delivery situation, but if everything is according to customer plan without any issue then there is not a huge demand for physical meetings"* (Person C, 2019).

4.3.3 Digitalization

Person C describes the company itself, and the automotive industry, as a more conservative one. Face-to-face meetings are made for relationship building, where communications afterwards are most common via telephone and outlook. An example made of this conservativeness is that the company has an app for providing information and communications, but Person C does not think that many customers use it (Person C, 2019). For operational activities the company has an ERP-system developed where customers can put in orders and find logistical information, this will ease up the planning for both Company C and their customers. Company C does not have a general platform or system where information can be found or shared. This is due to the competitiveness between customers and the customer specific nature of the product (Person C, 2019).

Finally the company mention that they are also using different EDI solutions to ease up daily routines, Company C do their invoice through these solutions. Company C also use EDI solution to help their customer do their planning of purchasing goods, How much quantity of

a certain article? Which articles? As a result of these solutions, customers are able to send their order through an EDI - solution, then the Company C's ERP - system will register the order (Person C, 2019).

4.4 Company D

4.4.1 Company presentation

Company D is a cargo airline which provides aircraft solutions for e-commerce suppliers, national mail organizations and global integrators. The company operates two airlines, in Sweden and the UK, and serves more than 50 destinations worldwide. The interview was conducted (30/4 - 2019) with Person D, group IT manager.

4.4.2 Business relationships

Company D works solely towards B2B and offers their logistical solution to other companies. The company does not hold continuous contact with their customers, nor does information exchange happen during operations. Person D, who has been active within the IT business since 1988, mention that Company D works very little with customer contact compare to other companies (Person D, 2019). Trust is an important aspect during the initiating phase of a partnership, Company D are creating contracts that are usually about 3 - 5 years long and it is important for Company D to follow requirements.

The reason for not holding continuous contact with customer is explained by the nature of the company operations and the products that they deliver. Customers are buying capacities and Company D flies mainly short (1-3 hours) flights within Europe during the night time (Person D, 2019). They mainly deliver packages and letter, up to 10 000 per plane, which means that Company D does not keep track of each package they are delivering. Instead business relationships is mainly about trust building in the early phases, in order for customer companies to entrust their cargo to Company D without continuous updates on the whereabouts of the planes (Person D, 2019).

4.4.3 Digitalization

Company D does not utilize nearly as much digital technologies for their external operations and relations, compared to their internal. Customer communications is mainly via email,

phone or personal meetings. Person D mentions "*There is no IT system in the world that can replace the personal meetings, we use Skype to some extent but still humans purchase from humans, and you want to have that feeling, you are able to feel that when you are having personal meetings"* (Person D, 2019). The optimal way of doing business is between humans and the partners sense the trust when they are able to meet each other and speak face to face. The only clear device Company D are using to exchange information with customers is through email. When mentioning website, the customers are able to see different kind of airplane models used for cargo, but this is not something that is of interest for the customers since they only want their packages transported, it is not important which model they use(Person D, 2019). Since the flights are generally on-time and fly during the night, there is not a demand from customers for information on the whereabouts of the planes, and therefore not for these technologies (Person D, 2019). They are also mostly flying during nights and the probability of a customer checking the airplane whereabouts at night is highly unlikely. Company D has no information shared with customers through digital tools as they do not see the need for it. When looking at digital tools for communication purposes, Person D mentions that meetings are sometimes held via Skype when needed. Even though they might prefer having personal face to face meeting Company D see the benefit of using Skype. For example, they had one partner was located in Memphis then Skype meetings was more held instead of meeting each other face to face as a result of cost and time saving (Person D, 2019).

Other kinds of devices for information exchange are solely used within the company such as crewflying, flight tracking and preflying. The subsidiary companies are using digital technologies between them for flight planning, communications, management etc. They have two airline companies where one is located in England and the other one in Gothenburg, which use the same systems for planning routes and scheduling. The digital tools are mostly used for efficiency aspects within the company. For example, they are currently developing an app for their pilots, where they are able to collect all the important information which is needed for operations (Person D, 2019).

The company has looked into technologies for tracking packages, especially for longer flights from mainly China, where more people are buying from via the internet. The company sees

potential customer value in this type of technology, and has looked into it, but that would mainly be for customer service and not company efficiency (Person D, 2019). Since Company D themselves need to develop a system like this, they do not see the value in it until enough customers asks for it. That is another reason why business relationships is instead focused on trust building, which they do not see any digitalization of. If they would seek a system to integrate with their customers system Company D are likely to encounter additional obstacles since customers are not using the same system and therefore it can be a complicated process to implement these kind of system (Person D, 2019).

4.5 Company E

4.5.1 Company presentation

Company E is a Swedish health care provider, with clinics focusing on special patient groups. The group operates within three parts: autonomous subsidiary companies that operates with clinics in the Nordic region. An international one, which supports partners in the United Arab Emirates (UAE), specifically Ajman, through operational and managerial activities. Lastly the company runs the strategic collaboration with insurance companies to make healthcare more efficient (Person E, 2019). The interview was conducted (6/5 - 2019) with Person E, head of operational intelligence & business area manager.

4.5.2 Business relationships

Company E consist of a decentralized structure, how the company manage their business relations depends on which part of the company they are involved in. The Nordic part runs decentralised clinics with a lot of autonomy from the headquarters in Gothenburg. The clinics, which are subsidiary companies, mainly report on financials and does not receive managerial orders from headquarters, two clinics can choose different strategies. The international one is much more about the business relationship, since Company E is the one selling a service. More specifically, a management contract for 4 hospitals in the UAE (Person E, 2019). This relationship is highly valuable to Company E and requires much trust building and continuous communication. Here Person E also mention that the important aspect of feeling trust towards each other before doing business. They have, despite the possible changes with digitalization, not seen any changes with their ways of communicating or networking (Person E, 2019). Company E still rely on attending conferences where they

are locating their customer in order to educate and connect with doctors and customers. However, they admit this could change in coming years as a result of younger generations eagerness of using digital technology to a larger extent (Person E, 2019).

The company has a strategic partnership with external companies, which also involves developed relationships with lots of integrated solutions between the companies. Most of the companies today are insurance companies and also county legislators. The insurance companies are easier to negotiate with since the counties are tie to legislative requirements (Person E, 2019).

4.5.3 Digitalization

The healthcare business is a complicated one when it comes to collection of data and information exchange. This is not only because the industry, as described by Person E, is an conservative one, but also because of the strict laws relating to patient data. There are rules and laws that are important to follow, restricting how long you are able to store patient data (Person E, 2019). Some health care businesses are able to send remittances through different developed medical journal systems, but it is still praxis to do it via fax machine. Person E mentions that it is safer to send it through fax machines, that is a reason why fax machines are still available in the health care (Person E, 2019). Person E makes a claim that the healthcare business is one of the businesses that are currently lagging behind with digital development.

When it comes to healthcare it is important separate what kind of matters can be done through digitalization and what matters requires the patient to seek out to the doctor (Person E, 2019). Company E has developed an app through a subcontractor which contains different programs for rehabilitation and other tips to increase the patients physical activity. For daily communications Skype is the preferred tool, but if it requires document handling for a customer the company use a safe chat solution. They also provide an app so that patients can estimate their symptoms and this information will be received by the nurse. When meeting the patient the nurse has all important and relevant data before meeting the patient. This will save time and help the nurse to understand the situation better (Person E, 2019). These new possibilities are not likely to replace how the patients approach the health care services, these features are mostly seen as an additional feature. Patients still to a large extent prefers phone

calls or meeting the health care professional (Person E, 2019). The patients could have widely different issues therefore it is not possible to digitalise to an extent that customers do not need to contact the doctor anymore. When it comes to digitalization in general Person E mentions *"For us it is important to see that the the digitalization contribute to something, not that is just digitized, it has to contribute to something"* (Persson E, 2019).

The International one has 10 workers in Ajman and meets with customers there. Personal meetings and contact are very important, both for cultural reasons in the UAE, and Company E themselves do not see the importance of face-to-face meetings changing anytime soon. The most common way of communicating with each other is through emails.

When it comes to digitalization within the firm are companies are working with different systems for schedules, time reports, and other administrative parts. The part of Company E where digitalization is most relevant and prevalent is with their own partner. Besides more common parts like the digitization of invoices, is the most use of digital tools found within the healthcare itself. For the B2B relationships with the insurance companies they do not see wide use of digital technologies, instead it is directed towards service solutions and patient care (Person E, 2019). Information sharing are also used within the company. They can share reports about the economic situation and other related topics (Person E, 2019).

4.6 Company F

4.6.1 Company presentation

Company F is a global company which provides products and systems within healthcare and life sciences. The company focus on quality enhancement and cost efficiency and also offers services like financial solutions and education. The interview was conducted (7/5 - 2019) with Person F, director of integrated therapy solutions.

4.6.2 Business relationships

The company's revenue is mainly from selling products, but because of the complicated nature of the products, continuous contact and information exchange is very important. There is a whole aftermarket for the company involving the service of machines and recycling of disposals such as plastic gloves. Company F obtains information about the products they have

sold to ensure their functionality and optimize services to make them cheaper and efficient (Person F, 2019). Informational data gathered from products is also used to help customers find the best modes or machine uses depending on the patient and their condition. They are using a portal that creates data regarding the machines status, this is another kind of service that Company F offers to their customer and helps them work more closely (Person F, 2019). Company F works closely with healthcare providers and professionals for educational and scientific purposes with research partnerships and it is important for the users to be certified. There are laws requiring Company F to educate customers with their products. Company F has a sector within the firm that are educating their customer with the help of online and digital tools.

Company F also works closely with customers with integrated solutions such as financial services and offers these in many different areas. They are having continuous dialogues regarding services with their customers and receiver of machines. Researcher and doctors are continuing to update them how the machines work (Person F, 2019).

4.6.3 Digitalization

Company F uses digital technologies for many parts of their activities, mainly the aftermarket services and information gathering. They are also using digital tools like Skype and Webex for the purpose of having meetings and videoconferences (Person F, 2019).

Their global status has risen a lot last 15 - 20 years and without the digital tools it would not be possible to handle the business, digital tools have therefore been of significant importance for Company F (Person F, 2019). The company considers themselves, like the entire healthcare industry, to be lagging behind when it comes to digitalization of certain activities. However they see the positive outcomes of other industries digitizing different areas and the company has the incentive to follow the trend of automation and retailing industry (Person F, 2019). Person F mentions that the company is currently working on digitizing their product portfolio and developing a system for closer integration of their customers through a CRM-system, Company F is currently looking for a system with the function to be a communication gateway. There are areas of improvements being standardization of interfaces and products within the industry and a infrastructure between different applications (Person F,

2019). However, this is today non-existent due to the industry and its conservativeness, Person F mention one of the reason that the industry is behind when it comes to digitalization, *"The industry is conservative and there are law restriction that are slowing the process and this kind of business are lead by a more outdated hierarchical leadership structure"*(Person F, 2019) .

The company products are connected to their systems for information gathering. This is a key component according to Person F for their services, the company would not be able to operate without these (Person F, 2019). They are also building a service portal and communications gateway to ease customer contact and services. This is seen by Person F as improvements to cost efficiency, customer service and product optimization. These machines are not storing information regarding the patient itself, it is mainly use to send indications regarding the status of the machine and what the machine is doing (Person F, 2019).

4.7 Company G

4.7.1 Company presentation

Company G is a provider of paper and printing solutions and a major distributor of office paper in Europe, they are currently present in 19 countries. The company work with sales and distribution of printing, writing and copying paper to a wide variety of customer companies. In light of changes in the industry due to the emergence of digital technologies and environmental concerns, the company is also diversifying their business to technical and paper-related services. The interview was conducted (9/5 - 2019) with Person G, business service manager. Person G is responsible for the service the company provides for customers, Person G is also part of the process when the company implement new systems.

4.7.2 Business relationships

Person G describes the company, and the industry as a whole, as traditional. Company G is changing more and more from selling paper to becoming a service company. The company relies heavily on physical meetings with customers, building the relationship through trust and maintaining long standing relationships. Through new systems they are allow to increase their bound and the value of the relationships (Person G, 2019). There is not many new printing industry that will appear and that is a important reason for Company G to work

closely with their customers and creating trust. Since being traditional there are still certain activities that take place in the company such as personal meeting, meeting customers face to face and presenting products. When it comes to support each customer have their own responsible salesperson. Company G works with customer-specific solutions and services, which also includes logistics and storage in their warehouses (Person G, 2019). For their business partners, Company G offers free services such as technical customer service, on-site advice, customer events and more. The company has subsidiaries in 19 countries which all work closely together for integrated solutions, and the Company G themselves is a subsidiary to another company (Person G, 2019).

4.7.3 Digitalization

Company G is a company which is undergoing large changes due to digitalization, and there are other industries who are currently ahead. The company previously used a common email-based system for relationship management, but the mail had some setbacks, since it was not as efficient as they wished. For example, they did not know who had (or if someone) responded to customers emails. Two months prior to our interview Company G launched their new CRM system, which they use to compile all customer data from all their communication channels (Person G, 2019). Person G sees new possibilities with the system such as being able to collect all customers emails and filter the customer to specific categories, this will help the company to send out suitable news to the right customer. CRM is also used with their case management systems as a way to ensure that no information gets lost, sellers can easily find customer specific, agreed prices, find relevant information and for customers to take pictures of faulty products and send directly into the company's system. The advantage of having this system is evident and the company is looking for the possibility of improving the system with additional features, such as having sections with questions and answers (Person G, 2019), this does not currently exist at the moment. Company G has developed their own website which is connected to their e-shop, so that customers can log in and find their specific prices and products, customers can directly make new orders, see the current quantity of certain articles, and also do the production planning flexible. The e-shop does not offer any price or product portfolio on their website for potential customers, instead the company is working with social medias like Instagram and Facebook to increase their marketing and reaching out to new

potential partners (Person G, 2019). The website is currently more for existing customers, but this can change in the future so that it can be suitable for potential customers.

They do not currently have an app since they are still in the starting phase with other tools such as social media and the e - shop, but Person G wish that they had an app for internal purposes where they can share and send information with their sellers (Person G, 2019). The actual CRM - system is currently available on the phone when sellers are out to met the customers, where they have access to important information. Another tool that was also mentioned in the interview was EDI, which the company uses to connect their subsidiaries and sister companies into an integrated system. This is to optimize customer solutions internationally and help global customers.

A reason for the company not being as digitalise, as they wish, is because of the conservativeness of the industry, which makes this a challenge. People within the printing industry are usually around the age of 50 - 60 and this group of people are not used to new digital trends (Person G, 2019). The digital change as a whole has had a positive effect on company, they are able to be more concrete during decisions making because of the systems, Person G mentions "*The digitization has definitely helped us and it can help us even more if we dare to take the last steps*" (Person G, 2019). Person G sees that there might be a decline in the future of personal meetings, with more meetings via the use of video conferences. The use of video conferences will likely reduce the amount travels which will save time and money (Person G, 2019). They are more likely to send out news and other notes to their customer through a server where the new CRM system will play a pivotal role. The CRM system will have important functions such as filtering customers so they can send out suitable mail for customers, etc.

4.8 Company H

4.8.1 Company presentation

Company H is a company specialised within the oil, gas, hydrography, renewable energy and marine cable sectors. This interview was conducted 13/5 - 2019 with Person H who is the company project manager. Person H has been with the company since 2005 and been active within different sectors such as sales, areas of implementation of new technology, etc.

4.8.2 Business relationships

According to Person H, the company works with customers whom they aim to have long term relationships with. When they have finished a project the customers are likely to return and create new projects (Person H, 2019). Person H mention that there are also customers who are just interested in buying different cables for projects of smaller magnitude.

Company H works closely with a business partner in Norway and apart from being located in Sweden they have an office in England. To extend their global presence, they are also establishing an office in Trinidad. The reason for Trinidad is because of their geographical location and access to oil and gas (Person H, 2019). They have two salespersons, where one is in Sweden and the other one is in England, who are meeting their customers on a regular basis. In the company there are also tender managers who are working with the projects. As a result of having very tight cooperation with their customers, there can be representatives from the customers who are in the boat. Customers can participate in the project work which means that the customers have a lot of influence in the project (Person H, 2019).

4.8.3 Digitalization

The company is currently implementing a new CRM - system which is called “Sugar”. They previously used another system called Salesforce. This new CRM system will manage some of their daily work differently and more efficient compared to the previous one. Here the events, conversations, and mails will be documented in a way that will create easier access for users (Person H, 2019). The previous system “Sale force” was mainly used by the company’s active sales personnel. Sale Force is an established system which was mainly used for communication aspects between the sellers and customers. Compared to the new CRM - system, Sale Force is rather expensive, which was one of the reasons that Company H changed to the CRM-system named Sugar. Instead of having two users they are aiming to extend user possibility to around 15 users. However it is not 15 sellers, these 15 users are also active in different areas such as working with offers, handling meetings, and negotiation processes. Therefore it is important for them to have access to this system containing important information. The new system is mainly supposed to be utilized as a “handover” for the project teams (Person H, 2019).

Apart from those systems they are also using systems that have eased up the communication routines, such as Skype For Business and Lynch. The company sees many benefits with video chat and meetings online, but sees problems externally and internally against implementing these. This attributes Company H mainly to a general conservativeness within the industry and lack of knowledge about these tools. Person H mentions that *"The industry is old and the people who are active in the industry are around 50 - 60 years old and will soon retire. Many who have been active 30 years thinks that the technologies and meetings on Skype does not always work well"* (Person H, 2019).

The company is aware of new sharepoint possibilities and understands the benefit of having these. But Person H mention that this system has previously caused some issues for Company H. Sharing documents itself was never the problem but reviewing specific documents had some limitations due to the lack of interface, and when downloading documents from the boat the connection was easily disrupted due to the weak internet connection (Person H, 2019). Company H has a system that is able to generate reports everyday regarding the boats whereabouts, what assignments the boat is doing and all this information is going to the customer through an internal system. The company is aiming to develop log system on their boats that is intended to gather information and send them out, regardless of the issue of bad internet connection. There are both advantages and disadvantages with implementing this kind of system, when it comes to the customer service aspect customer will have more access to information and this might lead to more questions and reflections, which takes up time to the office personal. On the other hand information gathering can solve other problems that would not be possible without these kind of systems, if the customers would have some specific questions they might not need to ask them anymore since the answers are already generated from the system (Person H, 2019). As Person H mention *"We have different opinions regarding that, in some cases it might cause some more work for us, the customers gain more access and ask more questions but at the same time it might be fewer questions, in those cases everything works well, it is easy to follow up but it will be very obvious when it does not work"* (Person H, 2019).

4.9 Company I

4.9.1 Company presentation

Company I is a leading freight company offering different logistic solutions within areas trams, air and transport on the boat. This interview was conducted 15/5 - 2019 with group IT - manager Person I. As an IT - manager Person I is active within areas such as having responsibility for IT, infrastructures and other business applications connected to the services.

4.9.2 Business relationships

Company I is currently active in 11 different countries, apart from Sweden they are also established in England, Poland, the baltic countries and they have 7 offices in China. The company is also working with the confectionery industry in China where they have their own staff. The company has also a partnership with a Taiwanese company where they handle the shipping for all the containers that are transported to the North (Person I, 2019).

Company I is constantly active with their customers with different project assignments, and the company is targeting specific customer segments. They are aiming to work with customers who they are able to create trust and long term relationships with. It is important to do a good planning, finding correct arrangement, and finding the right business area (Person I, 2019).

Person I mention that the company is active within areas such as social media for marketing purposes so that they can attract new customers and build on the relationships. They are still attending to different meetings and conferences. They see the value and purpose of participating in those kind of events. Through these events they are able to meet new people and attract new potential customers (Person I, 2019). The company still recognize itself as being traditional, it is important to still have these personal relations and contacts especially when implementing complex arrangements and solutions. Another aspect that Person I mention is that they have a local presence which is advantageous for the customers, that they can visit the company (Person I, 2019).

4.9.3 Digitalization

The company is active in the social media area which they use for marketing purposes. In the company they have sectors where there are workers who are taking care of certain digital applications such Instagram and Facebook channels. Social media can increase the possibility for the company to meet the right partner and has a pivotal role of reaching out and "*create the network effec*t" (Person I, 2019). Social media is also a way to share articles and news for the current customers to follow up. Person I mention that they are still participating in different events and meetings for similar purpose, but they are also aware of the potential of social media, where it has almost replaced those kind of activities instead of just being a complement (Person I, 2019).

In addition to being active on social media, they are also using other common digital tools for daily routines with B2B-relationships. Company I has invested in a video conference system that can be utilized well internally, but also externally. The system is able to provide a wide range of important functions, the company is able to connect their customers in the system and communicate with them. It is flexible not only for communication but also for sharing different business events. When doing this kind of implementation of new digital systems, it is important to have deep knowledge of customers demand. If the company, initiate these kind of systems and connect with their customers then they would still need to have personal meeting. The preferred way of having meetings for these kind of arrangements is by doing it face to face (Person I, 2019). One of the benefits of having long term relationship with customer is that Company I sees the benefit of establishing new digital tools for routine communication. They have invested in sharing-point solutions, to share internal information about in the projects and to the customers. The company has also invested in a collaboration platform which is convenient when they are handling customer projects, so suppliers and customers can follow up (Person I, 2019).

Company I has created a function called "Greenroom". The purpose with this system is to make some of daily routines more efficient. Greenroom contains information about employees, video, links, collaboration sites. One function connected to Greenroom is "Yammer", Yammer is a chat solution function with the purpose of making conversations among different teams more relevant and useful. The purpose is also to obtain answers more directly, instead of having to wait for someone to respond. As a result of having this function

it has reduced the use of mails. For communication they are also using Lynch, this application is able to share information, documents and pictures. As a result of using Lynch they rarely uses telephone when communicating with each other within the company. Company I has a specific application area where a CRM - system is implemented and the purpose of this is to make the communication with customer more efficient and to be able to work more concrete with customers (Person I, 2019). EDI is another system which contributes to daily routines, when doing business with customers, Company I have access to around 20 integration systems that are connected to their system, this is to ease up the communication with their main customers. EDI contribute to specific solutions, meaning that they are able to receive requests and also send back order confirmations. As a result of seeing advantages with these kind of systems they are continuing to work with different portal solutions so they are able to integrate with more actors (Person I, 2019).

Person I mentions "*The transport logistic industry is traditionally a conservative industry, but it is a industry where there is pressure to change and seeking efficiency improvements in large quantity with small margins, it is hard competition, a lot of things occurs the whole time and that is why the industry is so interesting. A lot has to do with the topic Digitalization with the aim to create efficiency both internally and with the communication with customers"* (Person I, 2019). There is pressure to change since the competition is hard and it is therefore important not to fall behind. It is important to find solutions for both external and internal purposes (Person I, 2019). Person I mention that the digitalization has been a decisive factor for their current situation and the companies who are not following the trend and not able adopt new technologies will likely find it difficult in the business.

4.10 Summary of empirics

4.10.1 Meetings and relationship building

The main finding is that digital technologies are used in all companies to communicate with customers. This is to varying degrees and the only two technologies mentioned by every company, that is used today, is video chat (mainly skype) and email. The use of Skype, or other video chat tools, is a newer concept than email and offers more uses. However, the companies use, and views, of video chat differ greatly. Different factors of this includes what type of industry the company operates within, what type of customer and which stage of the

relationship video chat is used. Companies like Company G, Company E, Company I and Company H see many opportunities and positives with the use of online meetings and expects a move in this direction further in the future. Mentioning both the new generation of workers which has grown up in a world based on online chats and social medias, and the cost and time effectiveness of them. How they have chosen to do this differs as well. The company can use existing services like Skype or GoToMeeting, or develop their own video call system like Company A and Company I have. On the other side of the spectrum are companies such as Company E and Company C which sees the value of continued personal meetings and does not seem as interested in holding them online.

A point made by every company is that initial contact and meetings with customer companies are important to be held face-to-face, due to trust building and learning about customers is not possible without it. Also noted is that online meetings can not entirely replace personal meetings, but instead lower the amount to maybe once per year. In fact, this is the only part that every company considers non-replaceable by digital technologies, the human contact and initial trust building.

For marketing purposes we find that many different strategies are used. The only companies that uses social medias are Company G and Company I, who sees it as an alternative to providing information on their website and reaching out to new potential customers (Person G, 2019) (Person I, 2019). The website as a first provider of information about the company is looked at by some companies, while others sees the website as a portal for their existing customers for example Company G. Company I has also a sector within the company who are constantly working with this topic as they understand the importance of following the social media potential and see the value in putting resources to improve in this area (Person I, 2019).

4.10.2 Managing relationships

Every company interviewed, no matter if they offer a product or a service, holds long standing relationships with their customers. Managing relationships is mainly about internal processes that facilitates the companies many different relationships and eases information and communications between them.

Three of the companies interviewed, Company B, Company I and Company F, are using an already implemented CRM-system to collect and organise customer communications data (Person B1, 2019) (Person I, 2019) (Person F, 2019). Company H and Company G are in the process of developing and implementing new CRM-systems, having previously used ones only for sales personnel and Outlook respectively (Person H, 2019) (Person G, 2019).

Company C uses a different solution via their EDI-system, connected to an ERP-system, which they and customers can use for purchase planning, communications and organise their customer specific purchases (Person C, 2019). EDI-systems is also something that each company interviewed uses for quick communications within the company and between overseas subsidiaries for better planning of solutions for customers. Company I mention also that they are using system providing EDI - solutions, they have connected their EDI - system to enable integration with other systems.

Company D and Company E are two companies that does not mention a specific CRM-system, but this is also dependent on their customers. For example, Company D business of short distance flights and specific contracts based on capability does not require changing their processes due to new information from customers. Certain parts of the relationships are managed online, such as invoices, but these can be considered a result of digitalization of the financial sector and not something specifically developed by the company.

4.10.3 Processes and operations

Of the companies interviewed Company D is the only company not to offer additional services beyond the product/service sold. The companies that do, offers services such as technical support about products, optimization and so on. However, it does not mean that Company D does this without reason, since they have looked into different digitalization options, but chooses to not pursue them. Company C is an outlier in this regard as well, in that they offer technical support from their engineers when developing products, but not so much afterwards. Their customers also have availability to company resources such as their app, but this is not widely used due to the customers unwillingness (Person C, 2019).

When it comes to operations and processes, in which the companies interviewed connects their resources to customers, above the main product/service sold, we can see a few companies widely using digital technologies compared to others. Company D, even though they looked into it, does not offer their customers any additional services such as information updates or package tracking systems. Their relationships are based on trust that they complete the service in a correct way (Person D, 2019). Similarly Company E does not either do this, explained by the regulations on the industry they operate within.

Company B and Company F are companies that uses digital technologies to receive data from the products they have sold, in order to quickly update themselves about problem solutions, optimization and updates that their customers could find advantageous. This kind of service is however not always entirely digitized. Some services are also extended non-digitally by companies through specialists being on location. Company H has also a similar system that deliver reports regarding the boats whereabout and documenting what the boat has done, this creates additional data for customers (Person H, 2019). Company I has sharepoint solutions for information to their project group and customers, and also a collaboration platform mainly use to help the customer to follow the progress of projects (Person I, 2019). Companies offering education via video conferences can also be considered partially digitized, since the video tools are used to eliminate distance issues, but this information is still provided by people and not via any website or portal. One of those company that is currently doing that is Company A, who has previously also held conferences through videos (Person A, 2019).

5 Analysis

5.1 Actors

All of the companies interviewed stresses trust as the most important factor when connecting new actors to their business networks. With this in mind all of them disregard digital technologies as a tool to use in early relationship building. Chae et al. (2005) supports this claim, that IT should be used to reinforce existing relationships and not be used to create new ones. In order to build a relationship that will be digitized, Salo's (2006) two dimensions of antecedents and inhibitors connects well to this as well. Antecedents is the foundation that the digitized relationship will be built upon, based on the existing relationship that was before.

This is hindered by inhibitors which is mainly the lack of trust that existed between the two companies in their relationship. Human engagement is according to Salo required in the initial phase (Salo, 2006).

The differing views between the companies comes after this initial phase, which affects the digitalization of the B2B-relationship. Although a business relationship can solely rely on products and processes with little human intervention, it is considered as very rare (Mukhopadhyay & Riggins, 1999). All of the companies interviewed meet with their customers and has continuous communications with them. Digital technologies such as video calls, specifically mentioned by companies such as Company H, Company A, Company G and Company B, is used because it saves both time and money. This is especially relevant to these companies as they all operate on a international scale with customers and offices in many different countries. Company A describes this specific point as creating such value for the company that it is crucial for their continued survival (Person A, 2019). Why then some of the companies interviewed does not use these as much is explained by internal and external opposition. Both of the communicating partners, in a B2B-relationship, needs to have the developed infrastructure and willingness to use digital technologies (Salo, 2006). A company must also have a company culture where the use of digital communication technologies are accepted and widely used (Kane et al. 2015). When interviewed, Company H mentions how well video conferences has worked when communicating with a partnering company, based in Norway (Person H, 2019). However, there are workers within the company itself that, as well as customers, that are unwilling to use video chat and instead rather relies on telephone or personal meetings. This contributes Person H to "*conservativeness*", as well as a lack of knowledge, within the industry. Chae et al. (2005) and Salo (2006) both mentions these as inhibitors, as well as the respondents, based on our data in this paper.

The sample companies find the most value, the main accelerant (Iansiti & Lakhani, 2014), using time/space shrinking technologies in the later phases of relationships, where meeting customers worldwide has been a costly operation. The actors aspect of our model is highly affected by the people working for both companies in a B2B-relationship. Through our data we can find a potential contradiction between Pagani and Pardo (2017) and Chae et al. (2005) and Salo (2006). In the ARA-model, actors are most impacted by digital technologies in how

new actors can be found and connected to the business network (Pagani & Pardo, 2017), but a personal connection must also be built before digital technologies can become involved (Chae et al. 2005). These are both truths expressed by our respondents. Digital technologies is used to provide information to potential actors, via social medias and websites (Company I & G, 2019). But when this initial information has been supplied, must personal meetings follow in order for the relationship to continue or even begin. All the respondents mention the important aspects of meeting up at the start of the relationship and having conversations face to face and there is no IT-system or digital tool that can entirely replace face to face meeting (Person D, 2019). Our empirical data shows that meetings plays a pivotal role at the beginning of the B2B relationship, it is this phase where the trust is created.

5.2 Resources

The companies that utilize digital technologies which extends their resources to their customers find uses both for them and their customers. Company B and Company F both have systems developed to directly receive information from their products sold, while their customers uses them. This allows them to monitor them for continuous improvement for their customers and products sold in the future. In this regard we can see the opportunities that digitalization presents for companies with complicated products and complicated relationships. Company B, Company F and Company A also all use digital technologies to educate their customers, or potential customers about their products. This is both for marketing purposes, but also for helping their customers find the most value out of the products. The main effects of resources, is the creation of new activities (Håkansson & Snehota, 1995). This seems like a possibility for digitized resources, considering that companies mainly uses digital resources to create services and aftermarket services. It is an area where some companies are not affected by their customers being laggards and therefore unwilling to implement their own digital systems (Rogers, 2003), since the companies can implement resources directly into the products sold. This allows the companies to avoid the biggest risk with digitalization (Mukhopadhyay & Riggins, 1999).

Resources is an area that is most dependent on the industry and products sold. For companies with less knowledge demanding products like Company G, is the current need for externally focused digital technologies not as high. Digitalization and digital technologies is however,

externally affecting the company's industry as a whole, which is forcing them to diversify their products and enable them to offer more services and free aftermarket services for customer companies to use (Person G, 2019). This is currently not implemented, but the company is looking into both non-digitized and digitized solutions for this. Another example of external forces that affects a company's digitalization is Company E, which operates with healthcare services. Here it is instead regulations and national laws that limits digital technologies uses. Many of these laws are also newly implemented as a response to digital technologies and the risk/fear of leaking patient data (Person E, 2019). Therefore an old technology such as fax has been preferred over the new technologies. Resources such as education about knowledge heavy products could be considered partly digitized, because they might be via digital tools, but still by people. This shows how digital resources can complement activities but not entirely replace them (Pagani & Pardo, 2017). No company interviewed entirely provides services or knowledge via websites, portals or other medias.

Some companies sees potential value in extending digital resources to customers but has not experienced this value in practice, which is why they chose to implement it (Iansiti & Lakhani, 2014). As mentioned is Company C's app, a prime example of this. This brings up the question if value actually ever existed for this specific technology, for this company. Although a digital platform for customers to easier access product data could help customers in buying Company C's products and make sales for Company C more effective, its lack of value is still the end result, since customers does not use it. Being an innovator might not always be positive, if the surrounding industry is considerably late in their adoption (Rogers, 2003). Company C's creation of an app, that is not used by customers, shows the risks of developing a digital technology used by other companies (Mukhopadhyay & Riggins, 1999).

It is implied by our data that the potential uses of digital technologies within resource sharing is great. But it is highly affected by the industry and external forces outside of the B2B-relationship, if they can be implemented, even though they in theory brings value to the company. When speaking of digitalization of resources, the ARA-model empathizes connecting two actors digital resources (Pagani & Pardo, 2017). However, we see that digital resources such as product updates and aftermarket services can be implemented directly into products, which here shows that change within the selling company is more important than

between the two (Raskovic, 2015). Such is the case for Company B and Company F, where customers purchase of products connects them to the companies systems. The customers did not possess the digital infrastructure before, which Salo (2006) emphasizes in the actors part, but this does not prohibit the connection of this digital resource. Also, for Company D where their customers already possess the digital infrastructure for package tracking, is the demand non-existent for Company D's implementation and connection for this type of technology.

5.3 Activities

The main ways that digitalization has affected the company's activities are seen internally. This does however not mean that it is not connected to their customer relationships and has effects on the B2B relationship (Raskovic, 2015).

All of the companies operate internationally, with customers doing the same. Using digital technologies, every company except Company E has developed EDI-systems to more efficiently cooperate between subsidiaries to solve customers needs. However, Company E does focus greatly on digitizing activities towards patients, but their company structure does not bring a high demand for internal communication system (Person E, 2019). The ability to not only connect the subsidiaries activities for solutions aimed at customers, but also connect their customers via a CRM-system are examples internally used digital technologies that affects the B2B-relationship (Pagani & Pardo, 2017).

Companies can extend their activities to customers with EDI-systems as well. This is often done by giving their customers information about the current activities, with progress updates. Companies extending their activities through digitalization does have potential issues. Company H sees potential benefits and problems with giving their customers additional information. When allowing the customers more information during the work process, it could lead to them asking more questions and taking up more time from Company H. The complicated nature of their service could mean more information leads to more questions, which reduces the effectiveness of Company H's work process. Instead some within the company argued that trust building is more important, to allow the company to work without interruptions from customers (Person H, 2019). Activities will be optimized by digital technologies (Pagani & Pardo, 2017), but Company H's situation could contradict this. It

explains why Company H's has not chosen to implement this technology and their uncertainty. The digitalization of these activities becomes dependent on customers willingness to trust information provided digitally and adopt the technology (Rogers, 2003). It is not enough that Company H's could be considered innovators in their industry. It is also dependent on their customers being laggards or not. The EDI-system is meant to provide information, which provides answers. But customers might not be willing to be provided answers via this medium, instead wanting them directly from the company via personal contact.

External activities between actors are not entirely replaced by digital technologies. Instead they are used to complement, and activities such as aftermarket services are made more efficient by them (Pagani & Pardo, 2017). Activities is the aspect with the least risk of implementation. It might not be the area where most theoretical value could be created, but the lack of external forces affecting the usage of digitization means that it is the easiest to implement (Mukhopadhyay & Riggins, 1999). Company specific skills and attitude towards digitalization can be seen as the main accelerants to the digitalization of activities (Kane et al. 2015). Implementing an EDI-system to connect products to the company might not be simple, and the complexity of the technology can be an inhibitor (Salo, 2006), but the companies that fully utilize this technology already develops complicated products.

5.4 Laggards or not?

All of the companies interviewed describes their industry as a conservative one. Understood as lagging behind in digital maturity due to unwillingness to adopt digital technologies, despite its apparent uses (Rogers, 2003). This could have implications about the companies, industries or the entire market. Seeing as the companies are self described as conservative or in a conservative industry, one could assume that they see the potentials of digital technologies, but industry forces work against them. It could also mean that they are conservative in a sense that they do not see the value of digitization and choose to keep processes non-digitized. A clear example of the company seeing value in digital technologies, but the industries unwillingness to use them is Company C's case. The company has put down resources to develop an app, clearly seeing some value in it, but customers does not use it. Another example is Company D, one of the least digitized companies, they have been

looking into potential uses of digital technologies but the lack of demand from customers simply does not justify putting resources into it. These are examples of the customers, or industry, being the laggards.

Being an innovator could be interpreted as always being a positive thing (Rogers, 2003), but the empirical data shows differing views about this, especially dependent on the digitalization of external or internal activities. Some companies views it as important to digitize to gain a competitive advantage and implement these before their current or potential customers. Others sees value in following the trends and prefered activities of their customers. It is apparent that the digitalization of external activities are split, by some companies highly dependent on their customers and others valued to be innovators despite their customers late adoption. The internal activities are more successible to digitalization, due to the lack of risk (Mukhopadhyay & Riggins, 1999), and is catalyzed by the companies conservativeness or willingness to adopt digital technologies (Kane et al. 2015).

5.5 Discussion of findings

We look at three dimensions of the B2B-relationships to see how digital technologies can be used and what parts are affected; actors, activities and resources. The emergence of digital technologies can change how companies manage their business relationships, both through technologies used internally, or externally by both partners. The most common change is seen internally, when companies does not have to rely on their customers digital infrastructure or willingness to implement it, while still using digital technologies for their relationships (Raskovic, 2015). Why this is, can be explained by looking at the theoretical background. The biggest inhibitor to digitalization is the need for two partners to adopt the same technology, which is prevalent for externally focused technologies (Mukhopadhyay & Riggins, 1999). Digital technologies used internally are mostly CRM-systems for managing information and communication between the companies and their customers, creating value through not losing any data and strategically manage their relationships. Companies also uses EDI-systems to easier connect and cooperate with their international subsidiaries to better find solutions for their internationally operating customers. These are technologies internally used by one part of the B2B-relationship, while still being connected to it (Raskovic, 2015). Because of their international operations, companies has also found time and money saving advantages with

video chat, although this is a technology which has seen resistance based on individuals preferences.

The use of externally focused digital technologies, used by both parts in the B2B-relationship, is to a higher degree differing between companies, due to customers, products and preferences. The reason for this is, as mentioned earlier, is the inhibitor of both partners to adopt technologies (Mukhopadhyay & Riggins, 1999). This is however worked around by some companies. One of the main accelerants is the company's technical capabilities (Salo, 2006). The areas where digitalization has developed the furthest externally can be seen where the need for customers to adopt technologies themselves is non-existent. Companies like Company B and Company F implements EDI-connected system into the products, which means that customers adopts these additionally to the products sold. An example of resources creating new activities (Pagani & Pardo, 2017). Externally focused technologies that are less complicated for both partners to adopt, like video chat, is not as inhibited by companies being laggards or not. These offer great value for international companies in their existing relationships. These are instead inhibited, as expressed by the companies by the human factor of creating trust in early relationship building (Chae et al. 2005).

6 Conclusion

The aim of this study was to explore and understand which parts of B2B-relationships can be digitized, with the additional purpose of understanding why some things had been digitized and others not. Based on this, our research question was formulated as: How can companies, with the emergence of digital technologies, change the way that their business-to-business relationships are strategically managed? The answer is that digitalization can in many different ways change business-to-business relationships, depending on which area of the relationship they are used for, which industry companies belong to and the complexity of the products or service.

B2B-relationships are more complex and long-standing than B2C, which involves internal activities such as customer management and specific solutions, and external activities such as communication, relationship building and services (Raskovic, 2015). The biggest change is

seen in internal activities, through the use of CRM-systems, EDI-systems and communication tools used between subsidiaries and international offices. These are all connected to the B2B-relationship, but used only by the selling company to strategically manage information, customer specific products and international operations. These tools are not affected by the need for two parties to implement technologies, which is the main risk and inhibitor towards digitalization and could explain their greater implementation (Mukhopadhyay & Riggins, 1999).

External activities, and digital technologies used by two companies in a B2B-relationship, faces larger challenges. These are to a larger extent dependent on the industry and products/services sold, which could explain their lesser extent. Companies work around the inhibitor of customers needing to adopt technologies by implementing them directly into products, which connects to their own systems. The potential uses of digital technologies is different between companies, depending on their industry, company views and customer views, which differ their uses strategically. Some companies choose to be innovators, while others want to wait for the entire industry to change before they do. The only area where digital technologies use is not possible, is the early relationship building because of the human factor involved in trust building. Technologies can however be used to provide potential customers with information, and replace personal meetings with existing partners.

6.1 Implications, limitations and further research.

This study contributes to further understanding of how companies can use digital technologies for their B2B-relationships, the challenges and opportunities connected to to them. The main risk with digitalization, that companies needs to rely on their customers digitalization, which prohibits their own, is shown to not be true entirely. Many digital technologies can be adopted for internal processes and implemented into products, which avoids the stated dilemma. This should encourage companies to change company culture and enforcing a company wide digitalization, where their effectiveness is prevalent.

The main delimitation in this study is its scope, with the companies interviewed not capturing how every type of company, industry or relationship could be digitized. For further research, we recommend a larger sample size or focus on a specific industry. We do not recommend

focusing on one specific technology for this kind of research, since several factors can change which technology fits a specific company or relationship. The possibilities of a specific technology and digitalizations change on relationships are both two areas that need further studying. Instead we recommend separating studies on digitalization of B2B-relationships and one specific technology. These can then be used as a theoretical framework for each other, when both areas has been researched, to create a study where these are put into relation to each other.

7 Appendix

Preliminary interview questions

1. Please present yourself and the company.
2. Explain in short your business relationships. Do you have continuous contact with the companies customers?
3. Do you personally meet the customer companies on a regular basis, is there a difference between new and established customers?

4. Is the company moving towards a more digitialized business relationship and customer contact? What is the company view on digitalization?
5. How does the company use digital technologies towards their business relationships? Websites, apps, information sharing, CRM - system?
6. What kind of digital tools do you use in your business relationships?
7. Do you use digital tools for continuous contact with companies customers? Is there a difference between international and local customers?
8. Has the development of business relationships changed for the company?
9. Does the company use digital technologies to connect international subsidiaries activities?
10. Is it possible for the companies customer to connect to a portal or system for additional information?
11. Do you use digital technologies for connecting companies and customer for sharing information, support and development?
12. Does customers have access to your resources such as specialized personnel, product update, and support?
13. Which part of the companies external process has changed most because of digital technologies? Sales, marketing, delivery, sharing information, support, etc
14. Has the company seen a change when it comes to developing relationship processes as a result of using digital technology?

8 References

Interviews

Person A; *Chairperson, Company A.* Interview 24th of April

Person B1, Person B2; *Communication specialist & Sales manager, Company B.* Interview 29th of April

Person C; *VP, Business controller & IT, Company C.* Interview 29th of April

Person D; *Group IT manager, Company D.* Interview 2nd of May

Person E; *Head of operational Intelligence and Business area manager*, *Company E.* Interview 6th of May

Person F; *Director of integrated therapy solutions, Company F.* Interview 8th of May

Person G; *Business service manager, Company G.* Interview 9th of May

Person H; *Project Manager, Company H.* Interview 13th of May

Person I; *Group IT Manager, Company I.* Interview 15th of May

Literature

ALLEA. (2017). *The European Code of Conduct for Research Integrity Revised Edition.* All European Academies. Berlin

Ayanso, A., Cho, D., & Lertwachara (2014). *Information and Communications Technology Development and the Digital Divide: A Global and Regional Assessment*. Information Technology for Development Vol.20, No. 1, p.60-77

Borgatti, S. & Halgin, D. (2011). *On network theory.* Organization Science, Vol. 22. Informs.

Bryman, A. & Bell, E. (2013). *Business research methods.* Oxford: Oxford University Press

Chae, B., Yen, H.J.R. & Sheu, C. (2005). *Information Technology and Supply Chain Collaboration: Mediating Effects of Existing Relationships between Partners.* Taiwan, Australia: Institute of Electrical and Electronics Engineers

Collis, J. & Hussey. R. (2014). *Business Research: a practical guide for undergraduate and postgraduate students.* Fourth ed. Palgrave Macmillian.

Catlin, T. Harrison, L. Lun Plotkin, C. Stanley, J. (2016). *How B2B digital leaders drive five times more revenue growth than their peers.* mckinsey.com. McKinsey&Company. October

Davidson, B. Patel, R. (2011). *Forskningsmetodikens grunder.* 4th ed. Studentlitteratur AB. Lund

Dewan, S. Shi, C. Gurbaxani,V. (2007). *Investigating the Risk–Return Relationship of Information Technology Investment: Firm-Level Empirical Analysis.* Management Science, Vol. 53, No. 12. December. p.1829-1842.

Dibra,M. (2015)*, Rogers Theory on Diffusion of Innovation - The Most Appropriate Theoretical Model in the Study of Factors Influencing the Integration of Sustainability in Tourism Businesses.* Procedia - Social and Behavioral Sciences p.1453 - 1462

Doyle, G. Garrett, B. Currie, L. (2014). *Integrating mobile devices into nursing curricula: Opportunities for implementation using Rogers "Diffusion of Innovation model"* Nurse Education Today. p.775 - 782

Etikan, I. Musa, S. Alkassim, R. (2016). *Comparison of Convenience Sampling and Purposive Sampling.* American Journal of Theoretical and Applied Statistics. Vol. 5, No. 1, p. 1-4.

European Commission. (2017). *Sweden - 2017 SBA Fact Sheet*.

Fong, A. (2018). *How B2B Networks Enable Digital Transformation.* The Hackett Group. Basware.com. October 9. (Accessed 9 April, 2019)

Gebert-Persson, S. Mattson, L-G. Öberg, C. (2014). *The network approach - a theoretical discussion.* IMP Conference 2014. IMP Group.

Håkansson. H. & Snehota. I. (1995). *Developing relationships in business networks.* Routledge. University of Uppsala.

Håkansson, H. & Johanson, J. (1992). *Industrial Networks: a new view of reality.* Routledge. London.

Iansiti, M. & Lakhani, K. (2014). *Digital Ubiquity: How Connections, Sensors, and Data Are Revolutionizing Business.* Harvard Business Review. November 2014. p. 1-11.

Jonason, A. & Simon, H. (2013). *Hidden Champions - Framgångsstrategier hos dolda världsledande företag*. 1st ed. Lund: Studentlitteratur AB.

Justesen, L. & Mik-Meyer, N. (2012) *Qualitative research methods in organisation studies.* 1st ed. Hans Reitzels Forlag.

Karlsson, M. (2018). *Svenskarna och internet 2018 – Här är hela rapporten.* Dagens Analys.

Kumar, R. (2011). *Research Methodology: a step-by-step guide for beginners.* 3rd ed. Sage Publications.

Li, S-C S,. Ku,L,. Liu,Y.(2013). *Using Roger`s Diffusion of Innovation Model to Examine the Willingness to Pay for Public Television in Taiwan.* International in Media Management p.99-118

Manyika, J. Ramaswamy, S. Khanna, S. Sarrazin, H. Pinkus, G. Sethupathy, G. and Yaffe, A. (2015). *DIGITAL AMERICA: A TALE OF THE HAVES AND HAVE-MORES.* McKinsey Global Institute. McKinsey & Company.

MIT Technology Review Insights. (2018). *Digital transformation sparks innovation in networking.* Technology Review. November 13. (Accessed 9 April, 2019)

Mukhopadhyay, T. & Riggins, F. (1999). *Overcoming EDI Adoption and Implementation Risks*. International Journal of Electronic Commerce, 3:4, p.103-123.

Pagani, M. & Pardo, G. (2017). *The impact of digital technology on relationships in a business network.* Industrial Marketing Management. EMLYON Business School.

Pagani, M. & Pardo, G. (2017). *Why digital transformation is the key to healthier (and more numerous) business relationships.* Knowledge.em-lyon.com. EMLYON Business School. (Accessed 1 April, 2019)

Pashaeypoor, S., Ashtorab, T., Rassouli, M., & Alavimajd, H. (2016). *Predicting the adoption of evidence - based practice using "Rogers diffusion of innovation model".* Contemporary Nurse, No:1, p.85 - 94

Pedielento, G & Salo, J. 2015. *Managing digital bonds in the buyer-supplier relationships.* IGI Digital. University of Bergamo. University of Oulu.

Rogers,E.M., 2002. *Diffusion of preventive innovations. Addictive Behaviors.* Elsevier Science Ltd. p.989 - 993

Rogers, E.M., Diffusion of innovations. Fifth Edition ed2003, New York: The Free Press

Salo, J. (2006). *Business relationship digitization: What do we need to know before embarking on such activities?* Journal of Electronic Commerce in Organizations, Vol. 4. University of Oulu

Shimp, Ginger. (2017). *Digital Transformation's Impact On Business Processes And Work.* Digitalistmag.com. Digitalist Magazine. 26 April (Accessed 2 April, 2019)

Tillväxtanalys. (2017). *Digital mognad i svenskt näringsliv*. Myndigheten för tillväxtpolitiska utvärderingar och analyser

Tillväxtverket. (2017). *Digitalisering av företag: En förstudie om digitaliseringsstrategier baserad på intervjuer i tre branscher*. Rapport 0220

Visma. (2018). *Digitaliseringsindex 2018.* Visma Software AB.

Wertz, Jia. (2018). *Digital Transformation Is Critical For Business Development.* Forbes.com. Forbes Media LLC. May 16.

Wonglimpiyarat, Jarunee. (2005). *In support of innovation management and Roger`s Innovation Diffusion theory.* Science direct. Government Information Quarterly 22 (2005) p.411 - 422

Websites

Forbes (2018)
https://www.forbes.com/sites/jiawertz/2018/05/16/digital-transformation-is-critical-for-business-development
(Accessed 4 April, 2019)

Digitalistmag (2018)
https://www.digitalistmag.com/technologies/cloud-computing/2017/04/26/digital-transformations-impact-on-business-processes-work-05055205

(Accessed 9 April, 2019)

Basware (2018)
https://www.basware.com/en-us/blog/october-2018/how-b2b-networks-enable-digital-transformation
(Accessed 9 April, 2019)

Technologyreview (2018)

https://www.technologyreview.com/s/612364/digital-transformation-sparks-innovation-in-networking/
(Accessed 9 April, 2019)

Figures

Figure 1: *The impact of digital technology on relationship in a business networks*
Pagani, M. & Pardo, G. (2017). *The impact of digital technology on relationships in a business network.* Industrial Marketing Management. EMLYON Business School.

Figure 2: *Conceptual analysis model, B2B relationship theoretical framework*