Healthcare at your fingertips:

A digital gateway to international markets

Factors affecting the internationalization process of a telehealth company from the perspective of value creation

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Abstract

Background:

There has been a significant development of e-services for day-to-day activities, where digital innovations have created additional value, increasing both accessibility and affordability in various industries. The healthcare industry has for long been both expensive and inaccessible for many people, where e-health applications are meant to improve access and affordability. Telehealth has had the potential of delivering a valuable business model but has not lived up to expectations. Digital innovation has further changed the way firms internationalize, facilitated by the Internet, where Telehealth companies could have possibility for an online health delivery model, with rapid access to international markets.

Purpose:

The purpose of this thesis was to to investigate factors affecting the internationalization process of a telehealth company from the perspective of value creation. This purpose was answered by three research questions: (1) What are the main barriers and driving factors facilitating value creation for Telehealth services? (2) What are the main opportunities and adversities for internationalization of Telehealth services? (3) What are the main factors facilitating telehealth internationalization?

Method:

A theoretical framework generated from hypotheses based on previous literature within relevant field was tested on three different case studies to get in-depth insights on the subject. Primary data was collected through semi-structured interviews with three case companies from Sweden.

Conclusion:

This thesis presents a framework suggesting that the main drivers of telehealth are: consumer preferences, technological capabilities, competitive environment, and value creation for stakeholders. The main barriers are suggested to be the policy and regulatory environment, reimbursement policies, and the level of technological habits. Internationalization opportunities are suggested to be the widespread access, competitive advantage, and the cost-effective business model. Internationalization adversities are suggested to be the lack of government support for telehealth activities, Lack of legal and regulatory systems, and a cultural mindset regarding e-services. Finally, the main factors facilitating telehealth internationalization are suggested to be the legal and regulatory systems and technological maturity.

Keywords: Telehealth, E-health, Value creation, Internationalization strategies, Internationalization framework

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1 Introduction

This chapter introduces the research with a comprehensive background of the topic. The purpose of the thesis and the research questions are presented, as well as the scope of the thesis.

1.1 Background

The past decade has seen a great development of smart devices being a part of everyone's daily lives. People are more and more starting to use their smartphones to manage their daily routines; such as bank activities, shopping, or entertainment ('Surgical intervention', 2018). The development of digitalization is occurring at a fast pace, where mobile users worldwide keep increasing (Kagermann, 2015). The digital complement, or even replacement, of traditional services has made transaction services for people living in remote areas or having busy schedules to be able to do some of these tasks at the comfort of their own home at a time where it suits their own schedule (Markovitch & Willmott, 2014). Digital innovations such as these have created additional value for consumers increasing both accessibility and affordability in various industries, such as retail or manufacturing (Want, 2006; Briggs & Burke, 2010).

The healthcare industry has for long been both expensive and inaccessible for many people around the world (Hwang & Christensen, 2008). The idea behind digitalization in healthcare is to make healthcare more affordable and accessible (Agarwal, Gao, DesRoches, & Jha, 2010). Technology is suggested to improve healthcare industry in many aspects, such as pharmaceuticals, vaccines, and devices, but technology needs to be combined with innovative solutions in processes to have the greatest effect (Howitt et al., 2012). *Telehealth* is further suggested to be a solution for healthcare delivery at a distance, as the technology allows for a healthcare delivery model online, through computers or smart devices (Standing, Standing, McDermott, Gururajan, & Kiani Mavi, 2018). Standing et al. (2018) further suggest that literature around the telehealth phenomenon has grown over the past few years, but even though there has been a decrease in the digital gap within the healthcare industry, there are still difficulties getting value from telehealth related activities and essential issues need to be addressed both in practice and research for the technology to progress.

The development of technology has further transformed and extended the reach of traditional services (Briggs & Burke, 2010). Digitalizing services within, for example the retail industry, has made it possible for consumers to shop online, extending the international market reach for companies

adopting this type of model (Briggs & Burke, 2010). Research on firm internationalization has for long been a topic of interest for researchers, which has developed during the past couple of decades, from earlier research on incremental internationalization to the faster internationalization of *Born Global* firms (Knight & Liesch, 2016). Rapid internationalization research of firms has existed for many decades (e.g. Oviatt & McDougall, 1994; Knight & Cavusgil, 1996). However, research has increasingly emerged, where rapid internationalization has been facilitated by the Internet, other communication innovation technologies, and the increased reach of globalization (Knight & Liesch, 2016). The Internet has facilitated internationalization for e-services such as telehealth through a global online reach (Yamin & Sinkovics, 2006). However, there is a gap in literature regarding the internationalization of e-services within healthcare, where this thesis aims to fill that gap.

1.2 Problem formulation

Technology has not only changed the way a business can reach out to international markets but has also allowed for innovative ways to deliver value to consumers across industries. Despite the many predictions of potential growth and innovative value creation within telehealth, it is not yet viewed as the innovation technology has reached its full potential (e.g. Kayingo, 2012; Klonoff, 2013; Standing et al., 2018). Instead, the dominant business model of patient care is face-to-face (Standing et al., 2018). Standing et al. (2018) further highlight that there is unrealized potential of telehealth, and even though there has been research highlighting some of the issues telehealth is facing, there is still the need for further research to be made into the subject. Additionally, even though there has been a number of researchers linking IT and creating value for the firm (e.g. Zhu, Kreamer, & Dedrick et al., 2004; Devaraj & Kohli, 2003), there is also the argument that IT in itself does not on its own create value but has to be a part of a value process together with other factors to create value (Melville, Kraemer, & Gurbaxani, 2004; Wade & Hulland, 2004). Furthermore, there has been little to no research regarding key factors to take into consideration when seeking international markets of such companies. Thus, in order for this type of healthcare innovation to growth and reach its potential of adding value to the healthcare industry, it is important to acknowledge and understand the factors such a company can encounter in the process and identify where current market environments are lacking in facilitating telehealth to be utilized.

1.3 Purpose and research questions

The purpose of the research is to investigate factors affecting the internationalization process of a telehealth company from the perspective of value creation. This thesis seeks to introduce a new

perspective on internationalization frameworks which takes into consideration how technological solutions such as telehealth creates additional value. In order to understand factors of internationalization of a telehealth company and how the technology can create value for the healthcare industry, it is also important to understand the drives and barriers of the technology itself, and how those could differ in international markets. Thus, the research is split into three research questions, to fully cover the research area:

1. What are the main barriers and driving factors facilitating value creation for telehealth services?

2. What are the main opportunities and adversities for internationalization of telehealth services?

3. What are the main factors facilitating telehealth internationalization?

This thesis attempts to fill a theoretical gap by seeking to identify market factors that are important for a telehealth company to consider when expanding to international markets.

1.4 Scope

The scope of this thesis will focus on Swedish companies, due to accessibility, availability, and the time frame for this thesis. Thus, the thesis will be the most relevant for the Swedish market when it comes to drivers and barriers in the home market. However, since this thesis investigates differences in several European markets it is designed to be applicable for a broader European scope.

1.5 Structure

The thesis is organized as follows: A case introduction chapter is first presented in chapter two, introducing the telehealth phenomenon and the case companies who participated in this thesis. The case introduction is followed by a comprehensive literature review in chapter three, presenting relevant research in the field. Chapter four presents hypotheses based on the findings from the literature review, where a theoretical framework is presented to get an overview of the intended research. A comprehensive overview of the methodology and method is presented in chapter five, arguing for the reasons behind the strategic choices. Chapter six presents the analysis of the findings from the data gathered with reference to the theoretical framework. This is followed by a discussion of the analysis in chapter seven and testing the hypotheses, revising the theoretical framework. The thesis closes with major findings from the research, answering the research questions followed by reflections of the thesis as a whole, as well as consider limitations and implications of this thesis and suggestions for further research.

2 Case Introduction

This chapter introduces the case study for this thesis with an introduction of telehealth and which definition that will be used. The telehealth market is also introduced to get an overview of the commercial market in Europe and the case companies are also presented.

2.1 Telehealth

As technology has been developed over the past decades, so has the different kind of user areas for technologies within healthcare, where definitions of different terms have consequently developed as well. Oderanti and Li (2018) suggest that the term e-health have sub segments which describe some user applications more specifically. The authors further suggest that these different sub segments of the e-health have been either poorly defined, misidentified, or used confusingly in past research papers and misinterpreted for one another. Standing et al. (2018) suggest the definition of the term telehealth has changed during the past few decades. Maheu, Whitten, and Allen (2002) also emphasize the similarities between *Telehealth* and *Telemedicine*, and that they sometimes are used interchangeably, but that telehealth encompasses more than telemedicine. Colucci, Baldo, Baldovin, and Bertoncello (2017) also argues that telemedicine could best be described as a subset set of telehealth. Clarifying the term for this thesis, Standing et al.'s (2018) suggestion of what telehealth encompasses will be used. Thus, telehealth is used to describe a set of technologies used to deliver healthcare services over a distance, rather than face-to-face. In addition, this thesis also separates organizations using telehealth applications in their operations. The term *Telehealth Company* is used to describe companies that solely use telehealth services in their operations, only having an online presence, in contrast to organizations using telehealth applications as a compliment to their physical services.

2.2 The telehealth market

The growth potential suggested by academic literature is also reflected in the market potential. The overall global telehealth medical market is in a growth phase, according to market studies (Research and Markets, 2017). The Frost & Sullivan (2015) European telehealth market report is also in a growth phase, where the revenue forecast is expected to grow at an average of 4.9% per year between, 2015 – 2020 (See Figure 1). The report further suggests that the competitive environment for telehealth vendors in Europe is high, as the competitiveness is strong amongst telehealth companies

but also from other vendors using e-health such as teleconsultation, where there is a strong need for differentiating products and services.

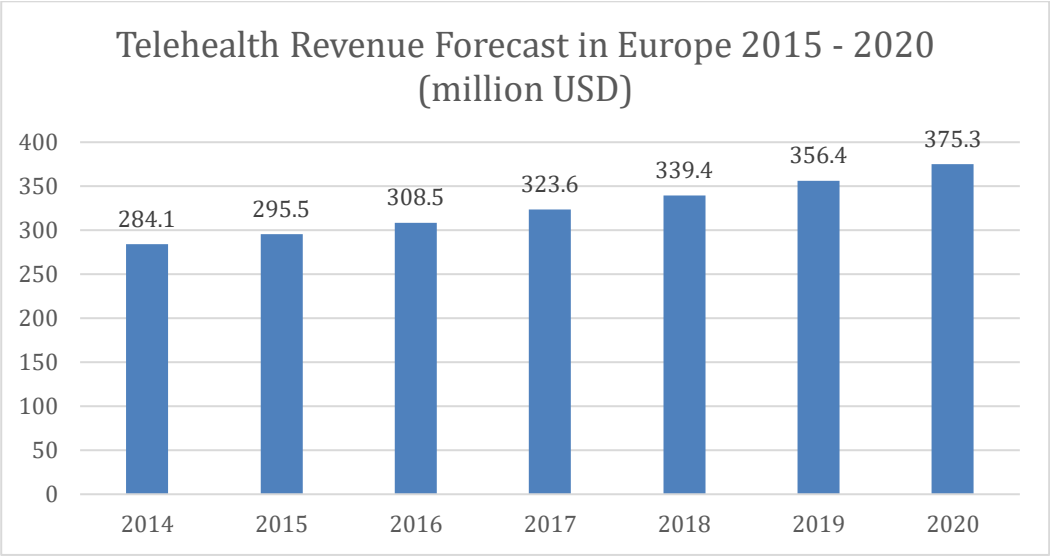

Figure 1 European telehealth revenue forecast 2014 – 2020. Based on data from Frost & Sullivan (2015)

The report suggests that telehealth is expected to assist European healthcare systems to overcome barriers to access of healthcare, specifically in remote geographical areas where there may be a shortage of skilled staff or there is a significant distance to closest care facilities. The report also identifies certain key market drivers that are important for further market growth. The change on the demographics of the ageing population requiring continuous monitoring is also identified as a high impact driver, where the European Commission predicts that the population aged 65 and above will rise from 17% in 2015 to 30% by 2060 while the population aged between 15 - 64 will decline from 67% to 56%. According to the report, elderly care is connected to chronic diseases, which accounts for between 70% - 80% of the total healthcare cost in Europe. One part of the Euro 2020 strategy is to focus on preventative and integrated care for the elder population, where telehealth could have a big part through easily accessible care. Europe is in general facing a shortage of staff and resources within healthcare, where one possible aid to diminish the effect of this may be through delivering healthcare using IT models, such as telehealth. Another important drive for telehealth is the need for a new healthcare delivery model necessary for health providers to deliver a high-quality care, where also taking into consideration budgetary constraints. (Frost & Sullivan, 2015).

Key takeaways of main market restraints from the Frost & Sullivan (2015) report suggest that most telehealth initiatives in Europe are limited to pilot projects, and that there is a need for larger commercial projects in order to enhance the adoption rate for the technology. Most of these pilot projects find it difficult to grow commercially, where another barrier to commercialize these projects

is the investment of time and effort required to train staff of using the technology. Another factor of market restraint is the lack of an overall adequate reimbursement system for telehealth services as well as the concern regarding security and treatment of patient data. The lack of a proper reimbursement landscape has been identified as a major barrier to adoption and there is no general national reimbursement policy of telehealth in Europe as a whole. Instead the reimbursement polices differs significantly across countries within the EU. There is also a need for proven business models that demonstrate a return of investment. The interest from patients to use technology-based healthcare services are high, however, the commercialization and formal use of the application have not been as expected. (Frost & Sullivan, 2015).

2.3 Case companies

2.3.1 Company Alpha

Company Alpha is one of Europe's leading private healthcare companies, operating Sweden, Norway, Denmark, Germany, and France. The company has physical presence in forms of hospitals and care centers in all of their markets, as well as a focus on digital solutions. The main focus on their digital offerings is for it to be a complement to their physical healthcare services, in order for them to offer high quality care. The company use their digital services for diagnosing and treating less severe medical conditions, so doctors and nurses are able to spend valuable time treating more severe and chronic conditions in a physical setting, where it is needed. One of these digital offerings includes telehealth applications, specifically online doctor consultations via video link or via chat. This service is being implemented in all of their care units in Sweden during the beginning of 2018, and this service will also start being introduced in the Norwegian market during the same year (Company Website, 2018; Company Gamma, 21-03-2018).

2.3.2 Company Beta

Company Beta is a telehealth company where patients have access to their healthcare services 24/7 through online portals, via chat and/or video links. The company does not have any physical care units or hospitals, but solely operate online. The company further acquires their own patients and employs a network of physicians that can treat patients via the company's online alternative. They are currently operating in the Swedish market but are looking at expanding to international markets. (Company Website, 2018; Company Beta, 22-03-2018).

2.3.3 Company Gamma

Company Gamma is a one of the leading private care provider in the Nordics, focusing on care for the elderly, people with disabilities, as well as individual and family care. The company has expanded their operation beyond the home market, Sweden, and has currently care units in Denmark, Finland and Norway. The company mostly works with digital solutions when it comes to assisting in planning the care that the company provides. However, the company does recognize the potential in expanding the way they work with digital solutions in order to give better care. (Company Website, 2018; Company Gamma, 22-03-2018).

3 Literature Review

This chapter presents frameworks and theories used in this thesis, associated with the research topic. The thought-process behind the literature search is also explained for each section.

In order to write a comprehensive literature covering the research topic, three research areas were identified to be relevant for this thesis; e-health, e-business value creation, and firm internationalization literature. The literature review consists of peer-reviewed articles and literature from databases such as Scopus, Web of Science, EBSCOhost, Google Scholar, and public libraries. Typically, the first 20 articles were reviewed based on relevant search strings, sorted by either relevance or highest number of citations. The most relevant articles for the topic, based on title and abstract, were reviewed in full, where the most relevant literature was finally used. Additionally, some articles used in the literature review were identified through being referenced to in other articles. A concept matrix has been used for each topic, in order to visualize the main research used in the literature review, presenting the overall connection between the literature and the topics.

3.1 E-health

In order to understand telehealth and the drivers and barriers behind the technology, it is beneficial to explore general drivers and barriers for digital implementation in the healthcare industry and how digitalization has been received. Initially, search strings such as "E-health AND Drivers AND Barriers" were used. However, the search result was limited, and in order to include different interchangeable terms of drivers and barriers, other search stings were used such as: "e-health AND Opportunities", and "E-health AND Challenges". Additionally, in order to incorporate the strategic aspect of this thesis, search strings such as "E-health AND Drivers AND Strategy", "E-health AND Barriers AND Strategy" were also used. Different drivers and barriers of e-health from each article chosen were reviewed, and to develop some consistency, definitions of each factors in the articles were modified to an overarching topic in order to eliminate overlap. The e-health concept matrix (See Table 1) gives an overview of the literature used and which topics the articles covered.

		Topic covered within e-health: Drivers and Barriers					
		Consumer Preferences	Technical Capabilities	Economic considerations	Technical Readiness	Regulatory and policy	Social
Article	Ganesh (2004)	✓	✓	✓	✓	✓	✓
	Agarwal et al. (2010)	✓			✓	✓	✓
	Anderson (2007)		✓	✓	✓	✓	
	Howitt et al. (2012)		✓				✓
	Oderanti & Li (2018)			✓		✓	
	Ross et al. (2016)	✓		✓	✓	✓	

Table 1 E-health concept matrix

3.1.1 E-health overview

The term *e-Health* first surfaced in 1999 only to become a buzzword in the beginning of the 21st century. The term joins the ranks of other *e-words*, such as e-business, e-solutions and e-commerce, indicating the technological integration within healthcare (Eysenbach, 2001). The definition of e-health varies somewhat in different literature, where the scope of what is included in the word has variations. Early definitions of e-health include Mitchell (1999) where the author described the term as a combination use of electronic communication and information technology in the health sector. Some definitions have been centered around Internet related activities within healthcare (Wyatt & Liu, 2002; Watson, 2004). Others connected the term more to the use of information and communication technology within healthcare (Brommey, 2011; Ganesh, 2004). Most researchers are in agreement that electronic applications on healthcare have shown to contribute to the industry (e.g. Ganesh, 2004; Howitt et al., 2012; Agarwal, Gao, DesRoches, & Jha, 2010). However, some researchers argue that the technology has not lived up to its potential (e.g. Howitt et al., 2012; Standing et al., 2018; Ross, Stevenson, Lau & Murray, 2016). Thus, there are both drivers and barriers of e-health implementation, affecting widespread adoption by both consumers and healthcare organizations (Ganesh, 2004).

3.1.2 Drivers

Consumer preferences

There has been an overall increase of people using online services in their personal life, where expectations for speed, access, and convenience have increased with technological developments (‘Surgical intervention’, 2018; Angaran, 1999). This consumer preference of wanting access to more

information online has also grown in the healthcare industry. The interest and need for personalized health information and customized care gained through online channels has increased due to the flexibility and convenience of gathering and storing information (Agarwal et al., 2010; Ganesh, 2004). People can have quick access to specialist knowledge and expertise instantly when customizing search online or consulting doctors through online channels remotely (Ganesh, 2004). Most importantly, patients seeking online communication with their healthcare provider are very likely to drive the implementation of further e-health applications (Ganesh, 2004). Additionally, Ross et al. (2016) found that an important factor that influence the implementation and of e-health technologies is for the technology being able to adapt in a local context which can facilitate greater adaption.

Technical capabilities

Seri, Bianchi, and Matteucci (2014) suggest that a country's information technology (IT) infrastructure is one of the main drivers of usage of national e-services. Faster Internet and better connectivity combined with smartphones and tablets allow the usage of technology enables services in healthcare to thrive (Beck, 2016). Anderson (2007) further suggests that health IT were previously mostly available to larger organizations due to high costs, however, advances in technology have made IT applications more available to a larger user group. Howitt et al. (2012) further recognize that mobile phones and the Internet have become important platforms for health delivery in, not only high-income countries, but also low- and middle-income countries. Ganesh (2004) further recognizes the advantages for health practitioners being able to access patient health records through electronic applications. Creating an integrated network amongst healthcare providers can lead to a more optimized use of scarce resources and communications systems also allow for integrated networks amongst healthcare providers (Ganesh, 2004). Sharing data electronically across care units can also lead to improved monitoring, quality control and an enhanced decision-making process regarding patient health when accessing full charts of medical information. This collaboration of networks across the healthcare industry can facilitate a continuous care environment towards patients, which is one major driver of e-health implementation (Ganesh, 2004).

Economic considerations

With e-health and personal health monitoring online, there is the tendency of shifting some care from a hospital setting to a home setting, which could lead to minimized costs (Ganesh, 2004). Ross et al. (2016) further highlight the potential of e-health to be able to deliver cost-effective quality healthcare.

Anderson (2007) found in their research that physicians (in the Unites States (US)) perceived that IT tools could have the potential in help reducing costs within healthcare. Oderanti and Li (2018) argue that the changing in the elder demographics around the world puts pressure on healthcare resources that could be solved through innovations within e-health, which enables a cost-effective solution.

3.1.3 Barriers

Internal and external technical readiness

There can be a number of barriers and issues for companies trying to implement e-health applications to the organization. When newer systems are being suggested for implementation that are interfering with more traditional practices, there tend to be a resistance amongst practitioners to accept and fully intergrade with the new system (Ganesh, 2004; Ross et al., 2016). There is the need to integrate the new systems and practices amongst all the staff, which is sometimes not welcomed in general when it comes to IT implementation (Ganesh, 2004; Orlikowski & Gash, 1993). Anderson (2007) found that physicians perceived a lack of sufficient experience and knowledge within the company as a barrier of IT implementation. Physicians can further perceive the time and effort spend involved learning the technology as a barrier where the complexity of the technology can become a significant barrier to overcome, where Ross et al. (2016) further found that healthcare professionals are sometimes unable to move past some of the complexities when it comes to learning how to use the technology. Agarwal et al. (2010) further suggest physicians receive little guidance regarding healthcare IT applications, leading to difficulties finding the right system to adopt.

Even though technology is advancing rapidly, being integrated across industries, there is still the need for adequate infrastructure support in some areas, as well as universal compatible software, and hardware environment across markets (Ganesh, 2004). Even though technology is getting more and more a part of everyone's daily life ('Surgical intervention', 2018), there may still be a lack of awareness regarding the available health resources online amongst the general population (Ganesh, 2004).

Regulatory and policy

One of the most challenging factors when it comes to e-health is the ethical concern. There is a lack of concrete standards regarding privacy and confidentiality agreements when it comes to medical records, which can affect the concern regarding using digital services within e-health (Ganesh, 2004; Oderanti & Li, 2018; Anderson, 2007). Agarwal et al. (2010) further emphasize the importance of

government regulation and its effect on how hospitals adopt to health technologies. Since the healthcare industry tends to be heavily regulated by the government, how the government promotes or does not promote integrating technology in the healthcare industry is an important factor for adoption (Agarwal et al., 2010). Ross et al. (2016) further highlight that the absence or the inadequacy of legal and policy system may be a barrier of e-health implementation for healthcare professionals and healthcare organization. For example, regulations have been thwarting innovation in commercializing e-health in the UK and there is a lack of clear reimbursement policies for electronic health solutions, that can be a barrier toward e-health adoption (Oderanti & Li, 2018; Ganesh, 2004)

Social

The social factor of healthcare and the relation consumers have to technology are important, where research suggest that online healthcare services could have the perception of dehumanize healthcare delivery, becoming impersonal and lacking of formality compared to meet the practitioner face-to-face (Ganesh, 2004). Agarwal et al. (2010) further highlight that when patients spend more time seeking online health information, it can put a strain on the relationship between the patient and physicians. Furthermore, research indicates in order for technology to be accepted, it has to be aligned with a country's culture climate (Howitt et al., 2012). Howitt et al. (2012) additionally highlight that the acceptance for e-health can vary across areas, dependent on the culture climate regarding technology and that tailor the technology to fit the culture does not always work. The authors suggest however, in order to overcome cultural resistance, it is of more importance to focus on highlighting the benefits of the technology and engage in the concerns regarding it. Ganesh (2004) further emphasizes that technology might not be a fit everywhere due to other factors, such as the type of illness behavior, as well as the language and medical practice that are typical for that area.

3.2 Value creation

Priem (2007) suggests that value creation involves innovation which increases or establishes the consumer's appraisal of the benefit of consumption. Johannessen and Olsen (2010) additionally argue that value creation is enhanced and/or increased by the value the consumer believes to receive of the benefit of consumption. Johannessen and Olsen (2010) further suggest that information and communication technologies (ICT) has enabled companies to increase the value for consumers, who are increasingly expecting individualized feedback. Therefore, looking into what enables value creation where technology meets business strategy was deemed important when assessing the possibilities of the telehealth technology. E-business is referred to companies conducing their

operations over the Internet (Zhu et al., 2004), which became the starting point for combining value creation and telehealth operations. Searching for value creation research within e-business, search strings such as "E-business AND value", "E-business AND 'Value creation'" were first used. In order to focus on the organizational level "E-business AND Value AND Organization" was also used. One of the relevant frameworks identified was Zhu et al.'s (2004) article on value creation of e-business in the financial industry, where the authors presented a model for assessing value at a firm level. This model was further adapted to the retail industry (Zhu & Kraemer, 2005). Since this model has been applied to different industries, adapting it to the healthcare industry could expand research on e-business value creation and shed some new light on the telehealth phenomenon. Other frameworks related to e-business value creation were also used to cross-reference different topics. Table 2 gives an overview of the literature used in this section of the literature review. The value creation in e-business concept matrix (See Table 2) gives an overview of the literature used and which topics the articles covered.

		Topic covered within value creation in e-business					
		Technology Readinies	Firm Size	Global Scope	Financial Readiness	Regulatory Environment	Competition Intensity
Article	Zhu et al. (2004)	✓	✓	✓	✓	✓	✓
	Zhu & Kraemer (2005)	✓			✓	✓	✓
	Amit & Zott (2001)	✓		✓			✓
	Matt et al. (2015)	✓	✓	✓	✓		
	Soto-Acosta & MeroñO-Cerdan (2008)	✓	✓		✓		

Table 2 Value creation in e-business concept matrix

3.2.1 Value creation in e-business

Research on e-business from the beginning of the 21st century highlights the potential of e-business and how it could generate new wealth, especially for entrepreneurs and corporate ventures, by using the Internet as a platform for selling goods and services (Amit & Zott, 2001). Zhu et al. (2004) discussed in their paper different factors that make up e-business value. The authors developed a framework which describes how elements of a firm influence the implementation and adoption of technological innovations. Their model consists of six factors affecting value creation of e-business; *technology readiness, firm size, global scope, financial resources, competition intensity* and *regulatory environment*. Most of these factors have been discussed in some shape or form in other

papers, when it comes to value creation within e-business, especially in the financial and retail industry (Zhu et al., 2004; Zhu & Kraemer, 2005).

Technology readiness

Matt, Hess, and Benlian (2015) suggest that in digital transformation (digitalizing key business processes), regardless of the firm or the industry, the use of technology is one factor that often implies changes in value creation. The use of new technologies for any firm depends greatly on the understanding of the new technologies and the willingness for the company to adapt and exploit it, where the new activities coming from using new technologies offer opportunities to expand and enrich the current offerings of product and services, adding value to the firm (Matt et al., 2015). Zhu et al., (2004) further investigated technological readiness in three different dimensions; technologies in-use (IT infrastructure), website functionalities, as well as front-end (the information that the user interacts with directly) and back-end integration (databases that are connected and integrated within the firm). Technological readiness for a firm appeared to be the strongest factor facilitating e-business value (within the financial sector), suggesting firms with greater technological resources and IT capabilities are more likely to realize e-business value (Zhu et al., 2004). Zhu and Kraemer (2005) additionally found that firms with a high level of technology competence were positively linked to greater benefits from e-business. Amit and Zott (2001) further suggest that one way of creating value is through up-to-date and comprehensive website information, minimizing information irregularity between the company and its consumers. Zhu and Kraemer (2005) also found that front-end functionalities help provide information to consumers; expanding existing communication channels, facilitating personalization and transaction efficiencies. However, the authors also recognize that front-end functionalities, while they do bring value for e-business, are visible to competitors and thus risk of being copied.

Zhu and Kraemer (2005) instead emphasize that the back-end functionalities are something kept within the firm, where characteristics of the functionalities do not travel easily between firms and that back-end functionalities have a stronger association with value creation than front-end functionalities. MeroñO-Cerdan (2008) also found in their research that IT resources on their own are not necessarily responsible for firm value, with the argument that competitors may easily duplicate this resource. However, they do argue that combination of IT resources and other corporate resources working in synergy does creating e-business capabilities. In this case, the authors define a company's e-capabilities as *"…its ability to mobilize and deploy Internet-based resources, in combination with or*

in the presence of other valued resources." (Soto-Acosta & MeroñO-Cerdan, 2008, p.51), which in turn was found to have a positive link to, and being one of the key drivers for, creating business value.

Firm size

Zhu et al. (2004) found in their study that companies with a higher degree of structural inertia, typically associated with larger firms, are less likely to realize value from e-business on their performance, compared to smaller firms. Matt et al. (2015) additionally suggest that structural changes are often needed when there are new forms of value creation and technology introduced that changes the key operations of the company, where Zhu et al. (2004) suggest that firm size has a negative effect on e-business value creation, due to the transformation often required of the organizational structure. On the other hand, Soto-Acosta and MeroñO-Cerdan (2008) suggest that since Small-Medium Enterprises (SME) are characterized for not having as much technological resources than their larger counterparts, which may affect the level of sophistication regarding their IT systems.

Global scope

Zhu et al. (2004) found in their study that the global scope (which they refer to as the geographical extent to a firm's operation in the global market) of the firm contributed to e-business value. The authors argue that global scope is a critical factor for the e-business phenomenon. The widespread access through the Internet allows firms to reach costumers on a wider scope, being able to operate in more markets (Amit & Zott, 2001; Matt et al., 2015), in particularly for firms that can have their products or services digitized (Zhu et al., 2004). Firms expanding to physical locations at a greater geographical distance (national or global) typically has to form channels of distribution in those regions, which results in higher costs (Lucking-Reiley & Spulber, 2001). Adopting an e-business model can help firms in this case reduce transactions costs, avoid time spend looking for where customers and suppliers are, traveling costs, and renting physical space for offices/operations (Lucking-Reiley & Spulber, 2001). Gabrielsson and Kirpalani (2004) argue that using the Internet to quickly reach a global market is one of the main opportunities for Born Global firms. These companies tend to lack the financial resources from its inception to conquer the global market (compared to more established companies incrementally internationalizing) and using the Internet for marketing purposes or forming networks has shown to be a good strategy to overcome resource difficulties (Moen, 2002).

Financial resources

Research has shown that financial resources are important for technology investment and implementation in a form (Zhu et al., 2004; Zhu & Kraemer, 2005). A firm adopting to an e-business model usually require a substantial investment in new technologies, and the greater the financial resources a firm have to spend on IT, the more likely the technological investment will become fruitful and realize value (Zhu et al., 2004). Matt et al. (2015) further suggest that the financial aspect of a firm is key to consider before a digital implementation can be made and changes in value creation can happen. The authors suggest that the financial aspect is both a driver for, and something required to achieve a successful implementation (Matt et al., 2015)

Blomqvist, Hurmelinna-Laukkanen, Nummela and Saarenketo (2008) recognize that Born Global firms operate in very dynamic and innovative industries, where constant update of technologies requires these companies to adapt quickly to changing environments. Meaning, they need to make significant investments in research and development, thus being considered risky (Lal, 2004). As a result of this, e-firms are usually seen as a risky investment for financial institutions and typically face barriers of obtaining financial resources (Soto & Cabrera, 2010).

Regulatory environment

Creating innovation through innovation has also showed to be dependent on the regulatory environment. Zhu et al. (2004) and Zhu and Kraemer (2005) found in their studies that the impact of government regulation does differ dependent on the economic environment, where in developing countries, regulation played a more significant part than in developed countries. Additionally, industries where transaction of sensitive information is involved, it is imperative that the market the firm operate in has supportive regulatory environment, so that operations can be conducted securely and well (Zhu et al., 2004).

Competition intensity

Competition intensity, the degree that a firm is affected by competitors in the market (Zhu et al., 2004), has previously been studied in relation to adoption strategy literature. Porter and Millar (1985) early on saw the relationship between intense competition and IT-innovations. They suggested that IT was a factor having the possibility to affect the structure of industries, finding new ways of outperform competitors, and altering the competitive environment. Amit and Zott (2001) additionally suggest that e-business, mostly through start-ups corporate ventures, can transform the rules of

competition, highlighting the importance of innovation and value creation for e-business. Zhu et al. (2004) however, found that the competitive pressure in the financial industry was more linked with driving firms to adapt to e-business strategies, but e-business value itself was more connected to technological integration and resources rather than with the competitive factor.

Onetti, Zucchella, Jones, & McDougall-Covin (2012) on the other hand expressed that new technology-based firms, are likely to be impacted by innovation and competition on a global scale. For example, Zhu and Kraemer (2005) mentions in their study regarding e-business in retail, that after facing intense competition from dot-com companies, many large traditional brick-and-mortar retailers began to invest in e-business by integrating Internet-enabled capabilities throughout their organization, reaching international markets. Smaller retailers also adapted to the competition by setting up websites with front-end functionalities. Zhu and Kraemer's (2005) study showed that firms facing intense competition within the retail industry tend to achieve better value from an e-business model.

3.2.2 Criticism

Even though there has been research indicating that IT and Internet resources do have a positive effect on value creation in e-business (e.g. Zhu et al., 2004; Matt et al., 2015; Amit & Zott, 2001), there are some arguments against the value that IT add to a business. Carr (2003) discussed in his article whether IT really did add value to a company's strategic position. Carr (2003) highlights the issue of innovation technology and its replicability. That is, when one company develops a technology that gives them a competitive advantage, other companies could replicate the idea of the new technology and even develop it further than slower-moving competitors. Carr (2003) further highlight the trap that many executives fall in, where they assume that the company could benefit of the advantage from the technology forever, reaching a point where the IT investment would no longer be something that differentiate one company from another, thus not adding any extra value. This kind of perspective on IT and e-business challenges other research regarding e-business value creation, however there are research highlighting that having technology and Internet resources per se does not necessarily have to be positively correlated to e-business value (Soto-Acosta & MeroñO-Cerdan, 2008), but that it is together with the organizational capabilities of the firm to exploit these resources that can add value (Zhu et al., 2004; Wade & Hulland, 2004).

3.3 Firm internationalization

Due to the lack of research on the internationalization process within the e-health field, this section is based on general internationalization processes of firms and the development of the research. This part of the literature review focus on important factors facilitating firm internationalization, rather than the actual process itself, to accommodate for the purpose of this thesis. One of the most studies work in this field is the Uppsala Model by Johanson & Vahlne (1977; 2009) which is investigated rather extensively in this thesis in order to get an overview of the earlier firm internationalization literature. One important factor discussed in their paper is the concept of psychic distance and its link to internationalization, which was also further investigated for the purpose of this thesis. Literature for this section was based on course work, widely used in internationalization studies as well as consulting librarians. Additionally, search strings used were "Psychic Distance" in a business and management context, as well "Digitalization AND Internationalization" to cover research on digitalization development within firm internationalization research. The firm internationalization concept matrix (See Table 3) gives an overview of the literature used and which topics the articles covered.

		Topic covered within firm internationalization		
		Uppsala Model	Psychic Distance	Internationalization in a digital market
Article	Johansson & Vahlne (1977)	✓	✓	
	Johansson & Vahlne (2009)	✓	✓	
	Håkanson & Ambos (2010)		✓	
	Beckerman (1956)		✓	
	Oviat & McDougal (1994)		✓	
	Yamin & Sinkovics (2006)		✓	
	Cavusgil et al. (2014)			✓
	Crick & Spence (2005)			✓
	Soto Cabrera (2010)			✓

Table 3 Firm internationalization concept matrix

3.3.1 The Uppsala model

The Uppsala Model is a classic firm internationalization model which highlights important characteristics and factors of the internationalization process. The model was developed by Johanson and Vahlne (1977) as they were researching the internationalization process of Swedish manufacturing firms. The authors suggest in their research that *"…it is assumed that the firm strives to increase its long-term profit, which is assumed to be equivalent to growth…"* (Johanson & Vahlne, 1977, p.27), where one of the reasons for seeking foreign expansion is the possibility for business opportunities to grow (Johanson & Vahlne, 2009). The model focuses on internationalization with regards to the growth development of the firm and the use of knowledge about foreign markets. The authors argue that the optimal mode of international market expansion is achieved by analyzing costs and risks based on foreign market characteristics as well as taking into consideration the firm's own resource commitment. Thus, foreign markets would be considered to be risky in terms of uncertainty where the firm does not have enough experience and knowledge to successfully enter said market.

According to the model, the process of expanding into international markets only starts after a company has firmly established itself in the home market. The internationalization process then proceeds incrementally according to the level of knowledge acquired by the company (Johanson & Vahlne, 1977). The market knowledge is assumed to set in motion some sort of decision; whether the knowledge is considered good enough for an opportunity to move into a new market, or a problem where lack of knowledge is considered to be too risky to expand to the new market. The authors distinguish between two kinds of knowledge; general knowledge and market specific knowledge. General knowledge includes common types of characteristics of consumers which can be transferred from one country to another. Market-specific knowledge, referring to characteristics about a specific market, such as the business climate, cultural patterns, or specific characteristics of individuals, could mainly be gained through experience in the market itself. This experiential knowledge, rather than objective knowledge, is what enables opportunities for expanding to international markets (Johanson & Vahlne, 1977). The model was revisited by the authors in 2009 to reflect the changes in the business environment over time (Johanson & Vahlne, 2009). The authors wanted to highlight the business environment as a web of network, forming trust and utilize relationship with suppliers and customers in order to retain a strong market position. Suggesting that firms can gather knowledge from their networks which can be used to create opportunities in international markets. (Johanson & Vahlne, 1977; 2009).

3.3.2 Psychic distance

Psychic distance has been discussed in internationalization research where Johanson and Vahlne (1977) define it as: *"…the sum of factors preventing the flow of information from and to the market"* (p.24). These factors include differences in cultures, languages business practice and education between the home country and the potential foreign country market. The concept of psychic distance is argued to play an important role in firm internationalization, where Johanson and Vahlne (1977; 2009) argues that companies tend to first internationalize to markets where the physic distance is small. Beckerman (1956) introduced the concept of psychic distance where the author described it as a factor affecting trade through the notion of whether a country is perceived to feel "nearer" on a psychically level. More recent discussions regarding the concept highlights the negative generalization and argue that it should be viewed on a personal level, rather than on a firm level, pointing out the complexity of the concept (Håkanson & Ambos, 2010). Other research has highlighted the continuous changing business environment seen by improvements from ICT and several logistics systems, where the matter of physic distance between countries matters less in the global business world (e.g. Yamin & Sinkovics, 2006; Oviatt & McDougall, 1994; Zahra, 2005). Yamin and Sinkovics (2006) further found in their research that online internationalization (conduct of business transactions across countries online) has seemed to lead to a reduction in psychic distance.

3.3.3 Criticism towards the Uppsala model

The Uppsala model is one of the most discussed models of internationalization and while Johanson and Vahlne have received substantial recognition for their work within internationalization research, the model has also been criticized. There has been various research showing some firms do not follow the incremental stage theory proposed by the Uppsala model (e.g. Andersen, 1993; Chetty & Campbell-Hunt, 2004). Even though the authors highlight in their research from 1990 that the stage theory model is better applied to the earliest stages in a firm's internationalization process (Johanson & Vahlne, 1990), McDougall, Shane and Oviatt's (1994) research showed otherwise. Evidence from their research showed that the stage theory did not apply for the International New Venture (INV) firms in their research, where many of the INV's showed a heavy presence in abroad markets within the first year. In this case, the Uppsala model failed to explain why INV's compete in international market at an early stage, rather than just in their home markets. McDougal et al. (1994) argue that it is the mindset from the entrepreneur recognizing the opportunities of international expansion of the firm from the start that compels the firm to seek international markets through various business

activities early on in its creation. Johanson and Vahlne (1977;1990) does however recognize that all firms do not necessarily have to go through all stages, where firms that are large or resource heavy enough may skip some stages. Furthermore, Boter and Holmquist (1996) warns about generalizing internationalization processes and suggest that the process should be understood within the context and requirements of the specific industry.

3.3.4 Internationalization in a digital market

Cavusgil, Knight, Riesenberger, Rammal, and Rose (2014) highlight two trends that have altered the business environment; technological advances and the globalization of markets. Technological advances have facilitated quick internationalization processes in early stages for new firms, only have online presence, reaching out to consumers on a global platform This increases firms' globalization prospects by overcoming geographical barriers offering accessibility whenever and wherever online (Cavusgil et al., 2014). Crick and Spence (2005) further suggest that firms operating with an e-business model tend to enter international markets much earlier and they have a different internationalization pattern compared to firm in typically low-tech industries. By offering Internet services, firms are capable of providing real-time information and letting customers having access to products/services online, at their own convenience, adding value for customers. Enhancing market capabilities in this fashion, improving customer relationship management, can lead to a competitive advantage which is critical in foreign markets, where people often prefer their local suppliers (Cavusgil et al., 2014). Soto and Cabrera (2010) further suggest that the development of ICT and the Internet have encouraged change in competitiveness, from traditional channels of commerce to electronic channels of business transactions, across industries.

The impact of ICT development can also make it less costly for firms to operate on an international level (Knight & Cavusgil, 1996; Lal, 2004). The widespread potential of the Internet makes internationalization of companies cost-effective as many services have now become more easily to export (Cavusgil et al., 2014). For countries to take advantage of the potential economic development from the Internet, modern infrastructure in communications that can support the development, such as reliable telephone systems and support for mobile data are important factors to take into consideration (Cavusgil et al., 2014).

4 Theoretical Framework

This chapter presents five hypotheses regarding telehealth internationalization based on the literature review. From the hypotheses, a suggested theoretical framework is presented, later to be applied on the case study.

Johanson and Vahlne (1977) highlight the importance of knowledge when making decision regarding internationalization of the firm. One important factor is knowledge regarding market characteristics as well as a firm's resources, where these internal and external factors effect internationalization decisions. The purpose of this thesis is to investigate factors affecting the internationalization process of telehealth firms, where market specific factors, as well as internationalization factors are central when developing a theoretical framework for this thesis.

Consumer preferences seem to have been shifted more and more towards an increase preference towards utilizing online alternatives of receiving healthcare information and services (Agarwal et al., 2010). The accessibility of e-health and health information whenever convenient for the user and having an online alternative to communicate with healthcare providers, regardless of geographical location, was identified as one of the major drivers for further implementation of e-health in the industry (Agarwal et al., 2010; Ganesh, 2004). Furthermore, both external technological capabilities (the general publics' level of comfort using technological services in their daily life and an adequate IT infrastructure) and internal technological capabilities (technological readiness in terms of front- and back-end functionalities) are important for creating value (e.g. Ganesh, 2004; Zhu et al., 2004; Matt et al., 2015; Amit & Zott, 2001). Additionally, the existence of a competitive environment is also important to drive further innovative solution for value creation, with the aim of outperforming the competition (Zhu et al., 2004; Zhu and Kraemer, 2005; Amit & Zott) Consequently, the first hypothesis is:

Hypothesis 1: The main drivers for value creation opportunities in telehealth are: to offer remote healthcare services to serve consumer preferences, internal and external technological capabilities, and the competitive environment.

One of the main barriers when it comes to the establishment of e-health is the issue of regulation and policy that can prevent the adaption of technology in healthcare (Agarwal et al., 2010; Oderanti & Li, 2018; Anderson, 2007). Agarwal et al. (2010) underline the importance of government support when it comes to incentives for adaption of technology. Researchers have also highlighted the

importance of an adequate regulatory system for firms dealing with sensitive information, which is a challenging factor when it comes to acceptance of e-health (Zhu et al., 2014; Ganesh, 2004; Oderanti & Li, 2018). Zhu et al. (2014) further found that creating value from IT innovation dependent on the regulatory environment of the market in the firm operates in. Furthermore, the reluctance from the general public to use technological services and instead preferring visits to a physical care unit, as online communication is deemed to impersonal, is identified as a barrier of implementation (Ganesh, 2004; Howitt et al., 2012).

Literature also suggest organizational inertia a barrier of IT implementation in a company, and the bigger the company is, the greater the resistance to change (Ganesh, 2004; Zhu et al., 2004; Matt et al., 2015). Additionally, Soto-Acosta and MeroñO-Cerdan (2008) argued that SME generally do not have as much technological resources as a bigger firm, which may affect them being able a sophisticated technology. Furthermore, even though technology has made it able for companies to minimize cost when internationalizing, these types of companies is still seen as a risky investment for financial institutes (Cavusgil et al., 2014; Soto & Cabrera, 2010;). Consequently, the second hypothesis is:

Hypothesis 2: The main barriers for value creation opportunities for telehealth companies are: external factors such as the policy and regulatory environment, and social attitudes of technological health services, as well as internal factors such as the attitudes against technological implementation within the firm, and the size of the firm.

Operating as an e-business has decreased some of the barriers of internationalization for companies due to the widespread access to global markets through the Internet (Amit & Zott, 2001; Matt et al., 2015). Minimizing costs has also been identified as an important factor within e-health (Ganesh, 2004; Anderson, 2007; Ross et al., 2016) and e-business models in general (Cavusgil et al., 2014). Using the Internet to deliver services online to consumers on a global level, providing consumers to have access to online products and services can lead to a competitive advantage in foreign markets where people tend to prefer familiar local suppliers (Cavusgil et al., 2014). Additionally, the Internet have been argued to diminish the psychic distance between nations, creating more openness and easier access to market information for possible international target markets, which is an important factor for internationalization (Yamin & Sinkovics, 2006; Johanson & Vahlne, 2009). Consequently, the third hypothesis is:

Hypothesis 3: The main opportunities for telehealth companies expanding to international markets are: the widespread access to international markets and achieving a competitive advantage through delivering a cost-effective and accessible business model.

Agarwal et al. (2010) and Ross et al. (2016) highlight the importance of the legal and policy system set by governments, where Ganesh (2004) and Oderanti and Li (2018) also highlight the importance of privacy protection regulation for e-health implementation. Zhu et al. (2004) and Zhu and Kraemer (2005) further found that creating value from IT innovation is dependent on the regulatory environment of the market that the firm operates in. Cavusgil et al. (2014) further highlight the importance for countries to have an infrastructure in place that is supporting the digital development. Furthermore, there have been arguments that the factor of social acceptance of technology, and the idea of digital consultations taking place instead of face-to-face interaction, can act as a barrier to acceptance of the technology in a market, where technology might not be fit due to factors such as the culture of medical practice that are typical for that area (Ganesh, 2004; Howitt et al., 2012). Consequently, the fourth hypothesis is:

Hypothesis 4: The main adversities for telehealth companies expanding to international markets are: the difference in governmental support in regulatory and healthcare systems, difference in IT-infrastructure level across international markets, and the overall social acceptance for using digitalized services as a replacement for traditional ones.

Factors affecting the internationalization process for a telehealth company are likely to be influenced by several barriers and drivers for creating additional value, and opportunities and adversities in international markets. However, the literature review indicates that some of the most important factors for the implementation of digitalized (and e-health) services are that national laws and regulations are allowing and creating incentives for the technology to be adopted (Zhu et al., 2014; Agarwal et al., 2010; Ross et al., 2016).

Additionally, the concept of psychic distance and its effect on internationalization have been discussed by several authors. Johanson and Vahlne (1977) suggest that factors such as differences in cultures, languages and business practice between markets can work as barriers of internationalization. However, there have been several studies pointing out the irrelevance of the theory in the modern global business environment, and that online presence and possibilities of internationalizing though the Internet have decreased psychic distance (Håkanson & Ambos, 2010; Zahra, 2005; Yamin & Sinkovics, 2006). At the same time there are arguments that the factor of

social acceptance of technology in general and the idea of digital consultations taking place instead of face-to-face interaction can act as a barrier to acceptance of the technology in that market (Ganesh, 2004; Howitt et al., 2012). Howitt et al. (2012) further suggest that acceptance of e-health can differ from culture to culture; how used people are with handling e-services in their daily life, which involved sharing private and sensitive information. The barrier of psychic distance seems to have diminished significantly, however, the technological acceptance in a country's overall culture does seem to be an important factor regarding the acceptance of digitalizing services. Therefore, rather suggesting that telehealth companies internationalize to markets where the psychic distance is minimized, one important factor is the general cultural attitudes toward technology. Consequently, the fifth hypothesis is:

Hypothesis 5: It is expected that a telehealth company, other than searching for markets with regulatory and policy environments that facilitate telehealth services, seeks markets where the country's general culture climate and attitudes facilitates for technological readiness.

The hypotheses deducted in this chapter attempts to combine the three perspectives from the literature review in order to derive a framework of factors affecting the internationalization process of a telehealth company through the perspective of value creation, which is visualized in Figure 2.

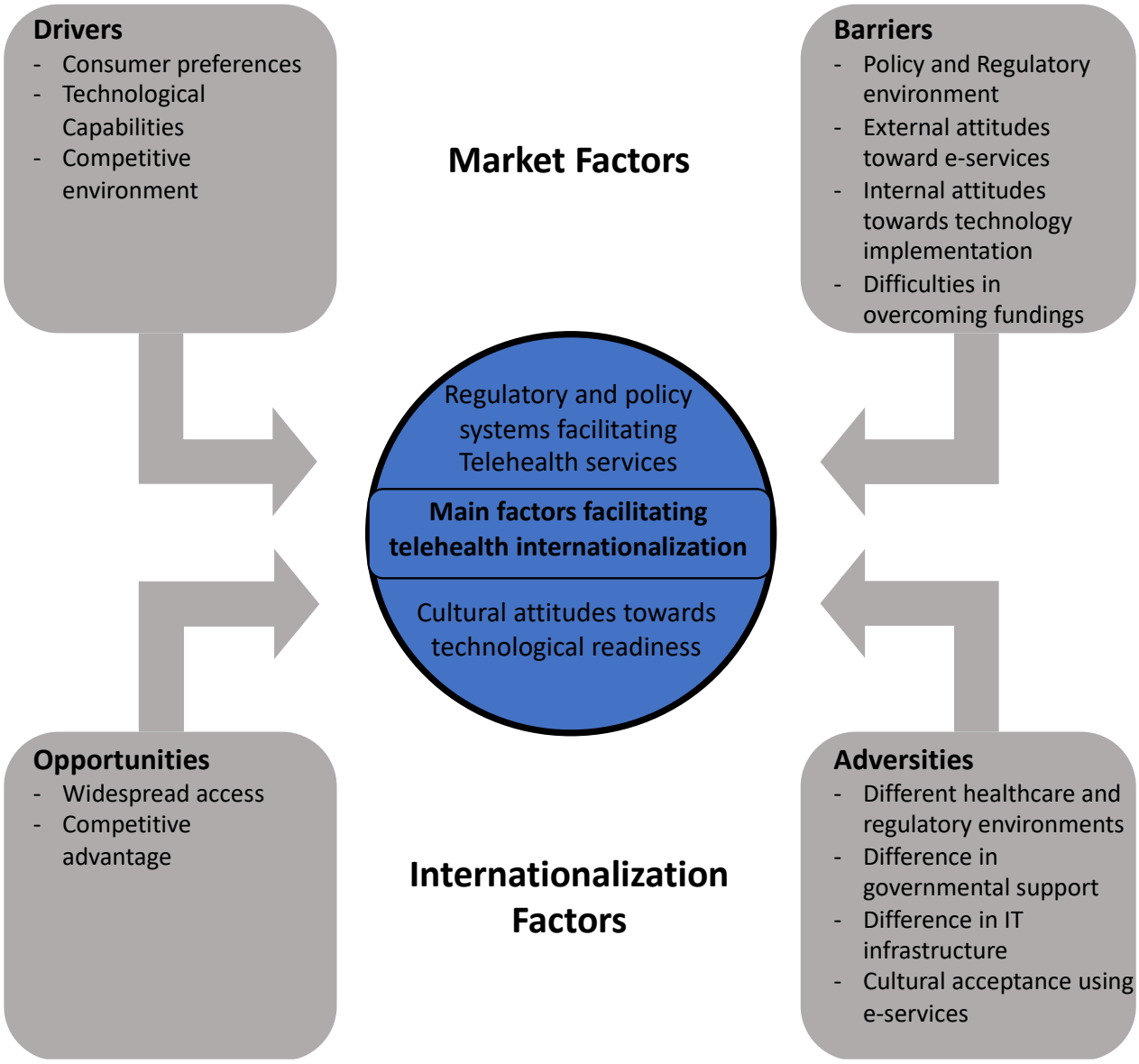

Figure 2 Suggested framework of factors affecting telehealth internationalization

5 Methodology & Method

This chapter presents a comprehensive reasoning behind the strategic choices for the methodology and method. The author also reflects and argues for the validity and the trustworthiness of the thesis.

5.1 Research philosophy

Research philosophy deals with development of knowledge and the nature of that knowledge, and as researchers, the point is to develop knowledge in a certain field. The research philosophy reflects the researcher's assumptions regarding the views of the world and the nature of knowledge. It guides how the research should be conducted, how the researcher thinks about the research process and how it is developed (Saunders, Lewis & Kovalainen, 2007; Collis & Hussey, 2014).

The Epistemology philosophy concerns *"what constitutes acceptable knowledge in a field of study"* (Saunders et al., 2007, p.102), which is in line with the purpose of this thesis as it aims gather knowledge from people working in the relevant field and extract meaning from it, drawing assumptions about the phenomenon. The key feature is whether the approach of the research of the social world (including business and management) can be adapted in the same way as a to study the natural sciences. The principles of positivism research paradigm reflect working with social reality, where the end product can be used to draw generalizations, similar to those produced by the natural sciences (Saunders et al., 2007; Eriksson & Kovalainen, 2015), where knowledge is obtained applying different scientific methods to experiences (Eriksson & Kovalainen, 2015). Eriksson and Kovalainen (2015) further suggest that that the desire for a universal truth that would tie together industries, businesses, countries, and cultures is why the positivist approach in research settings is the mainstream philosophical position of management studies, where managerial implications are seen as important value added. Furthermore, researchers from the positivist paradigm are likely to use existing theory to develop hypotheses, which are to be tested and confirmed to develop theory in the field of study (Saunders et al., 2007). This thesis aims to investigate and find factors affecting the internationalization process of telehealth firms through hypotheses based on previous research, which are to be tested in order to develop theory within the field of telehealth.

5.2 Research approach

The research approach deals with how the researcher involves the theory in the design of the research. There are different kinds of approaches to this where the *deductive* approach concerns with developing theories and hypothesis/-es from existing literature and the research strategy is designed

to test these theories in a new setting (Saunders et al., 2007). The *inductive* approach develops a theory from the collected data as a result of the data analysis (Saunders et al., 2007), the *abductive* approach combines the *inductive* and *deductive* approach (Eriksson & Kovalainen, 2015). Since this thesis develops hypotheses and a framework from previous literature, which is tested in a case study, it is most in line with a deductive approach.

5.2.1 Deductive approach

The deductive approach is more linked to scientific based approach to research (Williamson, 2002), and is characterized for first establishing general theory and knowledge, where specific knowledge gained during the research process is tested against the general (Kothari, 2004). In this thesis, research was retrieved in the form of an extensive literature review covering the most relevant and significant research highlighting the development of theories. The literature review in this case worked as an aid to help identify theories and previous research, which was used to form a theoretical framework, later tested on the data gathered through case studies, in accordance to a deductive approach (Saunders et al., 2007). A strict deductive approach is considered to be most suitable for quantitative studies (Eriksson & Kovalainen, 2015), however, a deductive approach can also be used in a qualitative study (Saunders et al., 2007). Hyde (2000) further argues that a deductive process can represent an important step when it comes to ensuring conviction from findings in qualitative research.

5.2.2 The deductive research process

This thesis takes on a deductive research process following Bryman's (2015) model of deductive research approach (See Figure 3).

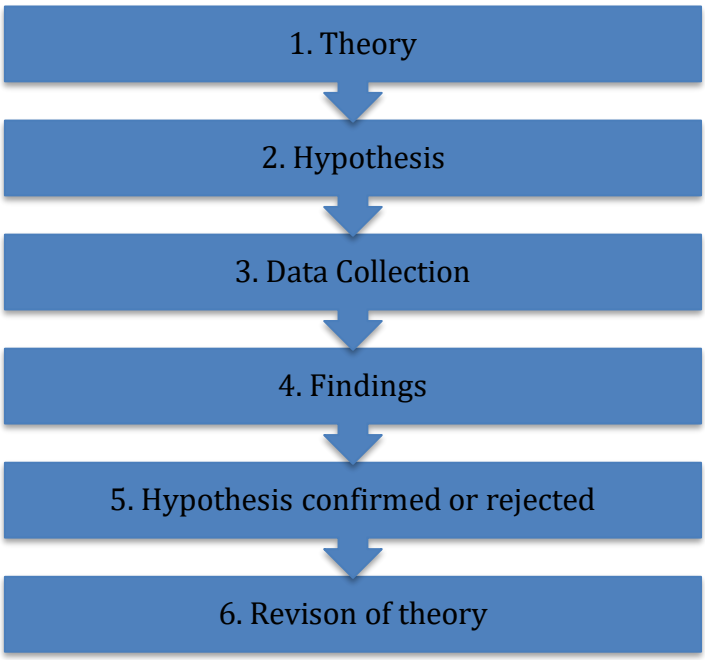

Figure 3 The process of deduction (Bryman, 2015)

In the first step of this deductive approach, the researcher draws from what is known regarding relevant theoretical ideas within the scope of the study (Bryman, 2015). Since the subject of this thesis is a rather new phenomenon, this thesis revise theories based on known literature regarding three different areas; *barriers and drivers of e-health* (in order to understand what drives the underlying technology of telehealth within healthcare), *value creation in e-business* (in order to understand how e-business can add value to healthcare processes through telehealth operations), as well as a review on *internationalization literature* (in order to understand what drives internationalization process of companies). In the second step of the deductive approach, the researcher deduces hypotheses from the literature gathered suitable for the purpose of the thesis and subject for empirical testing (Bryman, 2015). This thesis deducts five hypotheses based on the literature review, laying the foundation for the theoretical framework which was empirically tested. Step three refers to how the data is collected with reference to the different concepts behind the formulated hypotheses (Bryman, 2015). The data collection in this thesis was based on qualitative data through interviews where the interview questions were carefully designed to cover the hypotheses. The fourth step depicts the application of the findings from the data collection and in the fifth step the hypotheses are confirmed or rejected (Bryman, 2015). The findings from the data collection in this thesis was methodically analyzed with reference to the theoretical framework in order to, as confidently as possible, confirm or reject each hypothesis. In the sixth and final step theory is revised where researchers infers the implications from the findings with reference to the theory used in the paper (Bryman, 2015). The findings analyzed

and discussed in this thesis were used to revise the theoretical framework formulated to better represent the case for telehealth. Even though the final step of this deductive research process has elements of an inductive research approach (Bryman, 2015), the approach in this thesis is predominately deductive.

5.3 Research design

5.3.1 Research purpose

The purpose of the research is often linked to the formulation of the research question, thus often thought of early on in the research process (Saunders et al., 2007). There are typically three different classification of research purposes; *exploratory*, *descriptive* and *explanatory*. However, a research project can have more than one purpose, as a research question can be, for example, both descriptive and explanatory (Saunders et al., 2007).

Exploratory studies are often used when clarifying an understanding of a problem and to seek new insights of a phenomenon (Saunders et al., 2007). Exploratory studies further are often qualitative-based providing the basis for quantitative research for future research (Williamson, 2002). Conducting exploratory research usually consists of three principal ways; a search of literature, interviewing experts in the subject, or conducting focus groups interviews (Saunders et al., 2007). This thesis conducted in-depth research, extracting rich data from individuals working in the field in order to extract rich and relevant information to shed new light on telehealth research. Thus, an exploratory approach was chosen in order to deepen the understanding about the research topic.

5.3.2 Research strategy

The research strategy employed by the researcher is often guided by factors such as the research question(s), the extent of existing knowledge about the subject, amount of resources available, and the objectives of the study (Saunders et al., 2007). The research strategy chosen to investigate the subject in this thesis was through case studies. A case study is suitable to use in research when the objective is to develop a rich understanding of a phenomenon in a real-life setting (Saunders et al., 2007; Williamsson, 2002). Williamsson (2002) also highlights that a case study is appropriate to use when the phenomenon itself is in a dynamic stage and not yet in a mature stage or where the terminology and definition of the phenomenon are not clear or widely accepted. Since the topic of internationalization of telehealth companies has not been studied, a case study was seen as the most appropriate strategy in order to obtain rich information about the subject. Telehealth is also very

dynamic and the definition of the term is often mixed-up and misused (Standing et al., 2018; Maheu et al., 2002), thus a case study is appropriate. Typically, in a case study, multiple sources of data are used, where the experience from individuals and the context of their actions are important (Williamsson, 2002). A case study strategy was chosen to acquire information from different individuals having had experience in at least one of the areas under investigation in order to cover the topic in its entirety. Thus, a multiple case study was used. A *multiple case study* is appropriate to use when investigating if occurrences from the first case can be seen in other cases as well, in order to achieve some generalization (Saunders et al., 2007). The main case study in this thesis would be regarded as Company Beta, a telehealth company. However, Company Beta has not yet internationalized their operations, so in order to include the perspective of internationalizing digitalized health services, the perspective of two other companies was included as well (Company Alpha and Company Gamma). These two companies contributed with their knowledge on internationalizing digital services, as well as internationalizing healthcare services, which was corroborated with the perspective of internationalization prospects from Company Beta.

5.3.3 Qualitative approach

A qualitative research approach aims to focus on the phenomenon under investigation in its natural setting, which allows for a complex study of the particular subject (Leedy & Ormrod, 2005). Qualitative data refers to any data collection technique (such as interviews) that uses or generates non-numerical data (Saunders et al., 2007). Researchers using a qualitative approach usually formulate a broad, general question in the beginning of the research, but as more knowledge about the subject is gained, a more specific research question(s) can be established (Leedy & Ormrod, 2005). In order to properly investigate the purpose of this thesis, the author found it important to conduct an in-depth study in order to gain rich data, thus a qualitative approach was deemed appropriate. This method was chosen rather than a quantitative approach, which usually requires a sample size large enough to draw generalization of the population (Saunders et al., 2007), and the limited sample size that was available was more appropriate for a qualitative study. Furthermore, this thesis started out with a general broad research question: *'What are the main factors affecting telehealth internationalization from the perspective of value creation'*, which was set as a reference point to explore the subject. When more knowledge was gained during further research, the broad research question was divided into three research questions, to make the research topic more specific and appropriate to fulfill the purpose of the thesis.

5.3.4 Time horizon

Due to the time constraint of this thesis, it did limit the time frame of collecting empirical data, therefore a cross-sectional study is more appropriate rather than a longitudinal study, which would have required a longer time frame (Saunders et al., 2007). Saunders et al. (2007) further suggest that even though a survey strategy is most commonly employed in a cross-sectional study, qualitative case studies in the form of interviews conducted over a shorter period of time are also used. The empirical data for this thesis was collected during a two-day period with interviews in mid-March, in order to have an appropriate amount of time for a comprehensive analysis of the data gathered.

5.4 Data collection and analysis

There are two main forms of sources of data; primary and secondary (Collis & Hussey, 2014). Both primary and secondary data were used in this thesis in order to get a comprehensive understanding of telehealth and the internationalization process. Primary data was collected through interviews, while secondary data was gathered from previous literature and relevant market studies within telehealth.

5.4.1 Primary data

In order to obtain first-hand information about the telehealth phenomenon and the internationalization process of healthcare services, primary data was collected through interviews with three individuals from different companies, related to the subject. The aim with the interviews was to test the framework which was developed in chapter four and to gain a deeper understanding of telehealth internationalization.

Sample

A sample is a segment which is meant to represent the larger population. A deductive research approach typically requires the sample size to be sufficient enough to statistically represent the population in order to be able to generalize about the outcome. However, sampling in qualitative study tends to be smaller (Saunders et al., 2007), which is the case in this thesis, thus it is important to recognize that the result may be biased and less applicable to the greater mass (Collis & Hussey, 2014). Saunders et al. (2007) suggest several different techniques for selecting sample under two main categories; probability and non-probability sampling. This thesis adapts a non-probability sampling, which is common in business research for a case study approach (Saunders et al., 2007). Since the purpose of the thesis is exploratory and the aim is not to draw a statistical inference nor

does the sample have to be representative, a self-sampling selection technique was adopted (Saunders et al., 2007).

In the first round of sample selection, six telehealth companies in Northern Europe was identified as possible candidates and contacted via email or LinkedIn message, explaining the purpose of the thesis, their possible role in the thesis, and asking them to take part, which is according to Saunders et al.'s (2007) suggested technique. Only one company responded with a 'yes', while two companies declined (due to them not wanting to give out sensitive company information) and three did not respond at all after reminders were sent. In order to obtain richer and more diverse data than from only one company, private healthcare companies with both international experience and/or experience using telehealth applications in their operations were contacted in a second round. Five of these companies were contacted (all from Sweden) via the same procedure where two accepted participation while three did not respond. However, three different case studies were deemed sufficient for comparing and contrasting experience across participants (See Table 4).

Company	Area of Responsibility	Date of interview	Interview Method	Interview Language
Company Alpha	Chief Information Officer	21-03-2018	Telephone	Swedish
Company Beta	Chief Executive Officer	22-03-2018	Skype	English
Company Gamma	Business Developer	22-03-2018	Telephone	Swedish

Table 4 Overview of interviewees

Interviews

Interviews were used as the primary data collection technique which is helpful when wanting to gain reliable data that is relevant to the research questions (Saunders et al., 2007). The agenda for the interviews was to have a semi-structured interview, where the interviewees are encouraged to answer beyond the scope of the question in order to extract as much information as possible (Collis & Hussey, 2014). Easterby-Smith, Thorpe and Jackson (2012) further suggest that a semi-structured interview is appropriate when the aim is to gain an understanding of the interviewee's perspective and experiences, which is relevant to this thesis. What is common when conducting semi-structured interview is a general list of themes and questions that need to be covered, but the questions asked can differ from interview-to-interview (Saunders et al., 2007). The interview questions for this case study were formed in order to test the hypotheses and the theoretical framework with the aim of answering the research questions, but the questions differed somewhat for each company since they are in different stages of the internationalization process and use of digital tools.

Two of the interviews were held over the phone, and one through a video conference (using the Skype platform). Phone interviews are generally more flexible than Face-to-Face interviews (Easterby-Smith et al., 2012), which was the case in this thesis due to the geographical distance in addition to the busy schedule of the participants. However, it is important to recognize that critical information such as body language and facial expressions might be missed out. Thus, when conducting phone interviews, it is important to establish a good relationship between the participants for it to be successful (Easterby-Smith et al., 2012). Therefore, questions were sent in advance with an agenda (adapted to the preferred language) for the interview so that the interviewees had an overview of the questions and had the chance to decline answering questions they were not comfortable with, as well as ask questions beforehand to avoid confusing during the interview itself (See Appendix 1). The interviews were conducted in the language the interviewee felt most comfortable with, where one interview was conducted in English and two in Swedish. The participants were asked in advance if they were comfortable with being recorded, where two were okay with being recorded as long as the recording was not distributed to the public in its entirety, and one participant was not comfortable being recorded at all. This was of course respected, where detailed notes instead were taken during the interview.

5.4.2 Secondary data

Saunders et al. (2007) suggest that for many research projects to produce dependable results, both primary and secondary data needs to be used. Other than the primary data used in this thesis, secondary data in the form of past research as well as relevant market studies were used. The secondary data used for the literature have been explained in more detail for each section in chapter three. In addition to the literature review, secondary data in terms of telehealth market studies were used in order to deepen the understanding of the commercial aspect of telehealth in Europe as well as identified drivers and barriers in the marketplace. Furthermore, data from the different companies' webpages were used to gather company information, and due to the anonymity wishes from the participants, this information has been referred to as 'company website', where applicable.

5.4.3 Method of analysis

In order for the data collected to be useful, it needs to be analyzed and the meaning behind the data has to be understood (Saunders et al., 2007). There are some different techniques that can be used for analyzing qualitative data, dependent on the approach. However, before the data can be analyzed it needs to be processed and prepared for analysis, where transcribing the data is an important step for

researchers in order to get familiarized with the data and make it easier for analysis (Williamsson, 2002), and it is helpful if it is done as soon as possible after the interview, as it is quite a time-consuming task (Saunders et al., 2007). Transcribing the interview as a whole was done from a voice recorder used in two of the interviews conducted. For the interview where the participant did not wish to be recorded, notes were taken under the interview as well as summarizing the interview as soon as possible afterwards, in order to write down as many impressions as possible from the interview. In addition, after the interview with Company Alpha it became apparent that the beginning of one interview was not caught on tape, most likely due to some issues with the recording device. Instead, a summarization was made with the notes taken during the interview as well as the first impression of the interview as soon as it was over. The author recognizes this as a possible limitation, as the words summarized for the first part of the interview is not in the exact words of the interviewee. However, an effort was made to stay as true as possible to the information given during the interview. The same restriction applies to the interview where the participant did not wish to be recorded, where an effort was made to stay as true to the answers from the interview as possible in the summary, in order to respect the participants' wishes and maintain an ethical aspect in the paper.

Since this thesis has taken a deductive research approach, the method of analysis is somewhat adapted to a deductive based analysis procedure. *Pattern matching* is a technique used where the researcher tests the adequacy of a framework on the findings and if patterns recognized from the findings match the framework, an explanation can be identified (Saunders et al., 2007). After transcribing and summarizing the interviews, categories were generated with reference to the framework, and were color coded to highlight the different categories in the transcriptions/summaries text. The next stage of analysis involved highlighting sections and sentences from the findings according to the color-coding schedule. This step made it easier to find where exactly in the interviews the relevant information for each category could be found, which laid a good foundation for the analysis.

5.5 Quality of research

In order to control for credibility in research findings, it is important to have a good research design, helping to decrease the possibility to get the answers wrong, which puts emphasis on two areas; reliability and validity (Saunders et al., 2007).

5.5.1 Validity

Validity in qualitative studies has been described in a variety of different terms and the concept is not fixed or universal (Leedy & Ormrod, 2005; Golafshani, 2003). Validity is rather affected by the researcher's perspective of the term in the context of the study, and thus many researchers have developed their own ideas and other terms of validity, such as quality, rigor or trustworthiness (Golafshani, 2003).

When ensuring validity in case studies triangulation can be used, which involves different methods of collecting data from different sources and compare the result, ensuring that the findings indicate roughly the same (Saunders et al., 2007; Williamsson, 2002). Case study researchers often use triangulation in to cross-check the findings, which is considered to form a more accurate, convincing, diverse, and rich case study (Eriksson & Kovalainen, 2015). Multiple case studies were used in this thesis in order to gain information from three different primary sources, as well as a telehealth market study, in order to verify findings and cross-check experiences from the participants. All these different sources of data were used when cross-checking the findings from the interviews in the analysis in order to obtain a higher level of quality of the data collected.

5.5.2 Reliability

Reliability is connected to consistency in the findings from the data collection and analysis (Saunders et al., 2007). Stenbacka (2001) argues that reliability is often concerned with quantitative studies and has no relevance in qualitative studies, however, Golafshani (2003) suggests that validity and reliability is conceptualized trough trustworthiness, rigor, and quality in qualitative studies. Lincoln and Guba (1985) further argue that validity cannot exist without reliability in a qualitative study, where demonstrating validity in a study is sufficient to consider the results reliable. As a strong attempt has been made in establishing validity in this thesis through the means of triangulation, the research can be considered to be reliable to a certain degree. Additionally, even though the author recognizes the possible limitation of not having transcribed one of the interviews, as well as losing a recorded part of one of the interviews, and translating findings to English from Swedish in some cases, continuous examination of the raw data and notes, during the different steps in the research process, adds some level of consistency and credibility of the data collected is achieved (Golafshani, 2003)

In addition, the author recognizes the possible limitation of only having one researcher's perspective when analyzing and discussing the findings. However, discussing general issues with peers and supervisor helped the process of approaching analysis from new perspectives.

6 Analysis

This chapter presents the analysis of the main findings from the interviews and market report with reference to the suggested theoretical framework (See Figure 4).

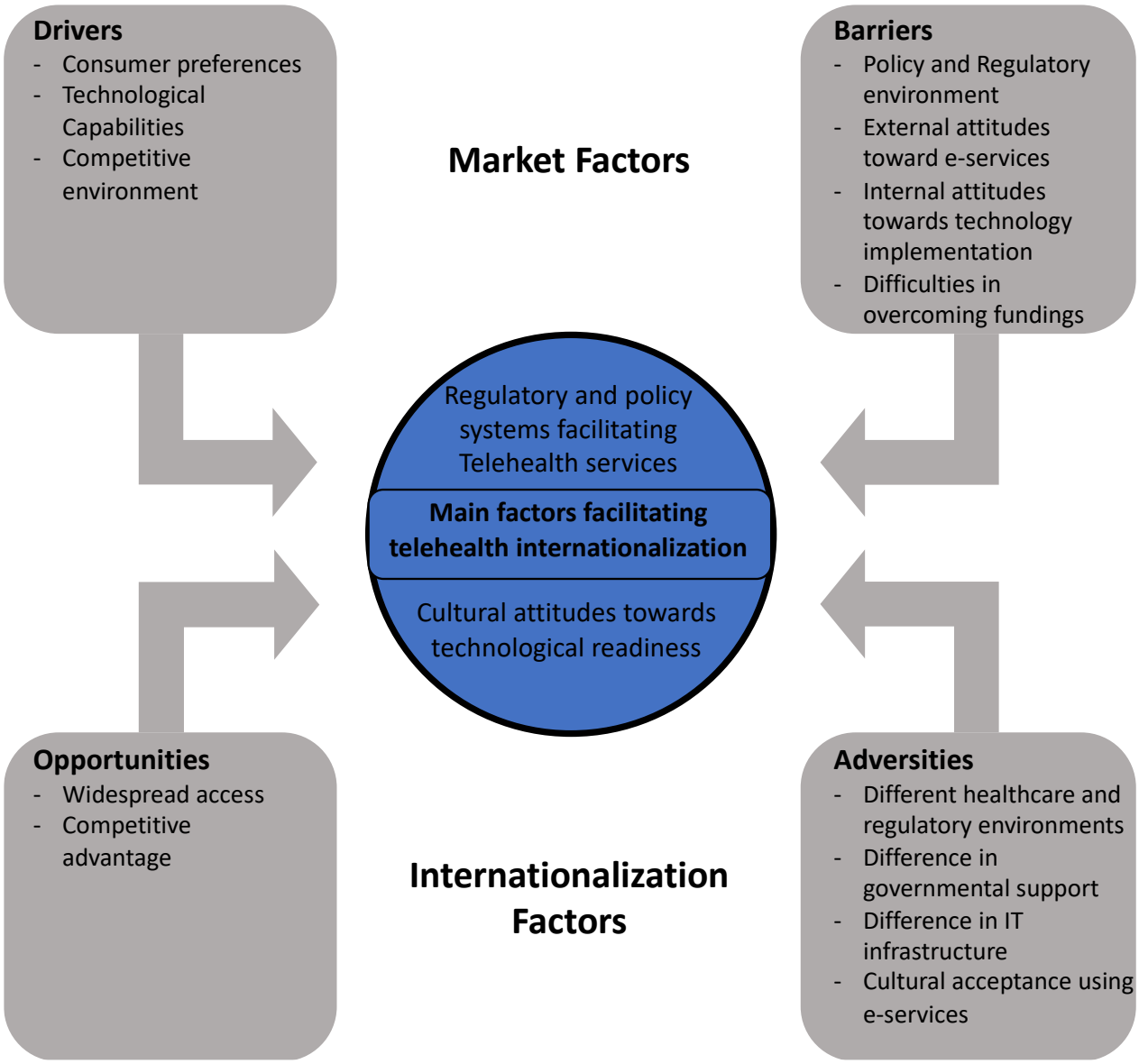

Figure 4 Suggested framework of factors affecting telehealth internationalization

6.1 Drivers of telehealth

One factor that was identified having an important effect on telehealth implementation was the ageing population. This factor differs somewhat compared to the other factors due to the population factor being a driver on a much larger scale, not necessarily specific towards telehealth as the other factors

identified. However, it is still an important influencing factor of telehealth implementation to discuss, since the implications from an ageing population affect the healthcare environment.

The European Commission predicts that the elderly part of the population will increase over the upcoming 50 years, which the Frost and Sullivan (2015) report suggest to increase the diseases for chronic costs, which is account for a large part of the total healthcare cost, where telehealth could be a major key for solving the cost pressure issue. Company Alpha further recognizes the development in the growing elderly demographic to lead to less people working and more people needing healthcare services, where digital services can be helpful: *"So we have to, with the resources we have, be able to treat more of the increasingly growing elderly"* (Company Alpha 21-03-2018). Company Beta additionally recognizes the ageing population to be contributing to a downward cycle of the number of General Practitioners (GP), on countries like UK and France where: *"... at a European level, the biggest driver is a greying population putting a pressure on the cost of primary healthcare, that's the biggest driver"* (Company Beta, 22-03-2018).

The increasing aging population and its effect on cost pressure and decreasing working population demands a new solution where the telehealth delivery model can be a part of the solution. Showcasing key features of the technology and how it could make the healthcare operations more efficient in chronic care as well as more efficient use of staff could be a major driver for a wider implementation of telehealth applications.

6.1.1 Consumer preferences

Company Beta recognizes that consumers indicate they are ready to embrace the telehealth healthcare model, where the company has noticed that when people are using it once, they tend to keep using it. The Frost and Sullivan (2015) telehealth market report suggests further that interest from patients of using digital services is high. Company Alpha further recognizes that digital health solutions allow the patient opportunities to be more involved in their personal health leading to a sense of empowerment for patients; to be stronger and more comfortable with their health. Company Beta also highlights one important supporting driver from users where: *"...users are starting to ask for it or actually willing to pay for it out of pocket"* (Company Beta, 22-03-2018). Company Beta further stresses an important contributing factor from telehealth to be fast access and that one of the main value created for consumers from using their services, where *"...having a GP at your fingertips, right, that's the most attractive part for the consumer"* (Company Beta, 22-03-2018). Company Beta further explains that the biggest user-group of their services is people living in metropolitan areas.

Company Beta gives examples of consumers enjoying the benefit where parents of small children use their services in the morning to get a fast answer if they can send their kids to school or not, or the convenience of having medicine prescribed that can be available for pick-up after work, not having to physically go to a care unit.

The instant access and flexibility of using the telehealth service, and the recognition that more and more people are starting to ask for these types of services, feeling empowered using them, does indicate a strong driver for telehealth adaption. The advantage of having a doctor instantly available becomes even more clear as company Beta mentions that almost 90% of cases that are being noted in their apps are from consumers downloading the app about an hour earlier and starts using it immediately. Additionally, having access to provided healthcare online also remove the geographical barriers is arguably one key advantage that telehealth has over physical care units or hospitals, which is key for driving the acceptance telehealth services.

6.1.2 Technological capabilities

Company Beta and Gamma recognize the need for an adequate IT infrastructure in the market operating with digital services, where currently company Gamma does not recognize the need for improvements in any of the current markets. Company Beta further recognizes that the infrastructure is not on a local level any longer, but the advantages of it being cloud-based, facilitating their services. Company Alpha further recognizes the importance of an adequate IT infrastructure and the access to a decent network and devices such as smartphones to enable digital services in a market: *"Yes, that has to exist if you would want to move forward [with digitalizing services], that is a requirement"* (Company Alpha, 21-03-2018). Company Beta also recognizes that having access to smartphones are becoming more common, where the company's services are mostly used by people that use smartphones in their everyday life for other online services. Company Alpha also recognizes that Sweden has good market conditions for digital healthcare services due to people being: *"…used to dealing with matters … government matters, with insurance matters and tax office and we are used to work digitally"* (Company Alpha, 21-03-2018).

Regarding internal technical capabilities, company Alpha mentions that technical requirements in terms of back-end functionalists, are outsourced to other companies providing this service in the different markets. The main reason for doing so is because of the different need for digital e-health services in the different markets and so the company does not work with specific teams with this, but instead outsource when necessary. Company Alpha sees their digital services more like a supplement

to their physical services as: *"We don't think that we can deliver [digital] services to markets where we are not present physically as well"* (Company Alpha, 22-03-2018), and does not see their technical functionalities as enabling them a competitive edge. Company Beta on the other hand only operates online with telehealth services. The company works with different teams handling different technical functionalities to accommodate the user experience for both customers and practitioners, on both laptops and via the mobile application. Company Beta highlights further that even though both back-end, and front-end functionalities are equally important and has to work in their company:

> *"… what differentiate us, what is our core thing... and the front-end part if most important because it's… that's something that you can't buy off-shelf somewhere while many of the meta and back-office application are actually generic user supported… So our value technology wise is definitely at the front-end"* (Company Beta, 22-03-2018).

All companies agree on the importance of an external IT infrastructure, where current standards facilitate the use of digital services. What should further be highlighted is the importance the increase in the use of e-services, that the more people are being used to deal with online services, especially on their smartphones on a daily basis, the more open people would be to use telehealth services as well. The companies work quite differently with their technological enablers in their companies, but what is apparent is that for company Beta, working with technology in different aspects of their company is an important driver for them to be able to create value, both for their customers, and for the practitioners using their technology. Additionally, since they are only operating online, it would be important for the company that their operations are running smoothly as it is through their online portals they attract consumers; they do not have a physical unit where patients can seek their services, which the two other companies have. Furthermore, company Beta mentions that it is their front-end technologies that create value, highlighting the importance for the company to differentiate themselves from other competitors through user-friendly interfaces, inviting more customers to choose an online option instead of going to a physical care unit.

6.1.3 Competition

According to the Frost and Sullivan (2015) market report, telemedicine and telehealth vendors are facing the highest competition amongst themselves, but also from other vendors using m-Health applications that are using telehealth applications as a compliment to their physical consultancy services, such as company Alpha. Company Beta recognizes that there are not that many telehealth companies in Europe, however company Beta further mentions other types of competitors such as a

digital appointment service for practitioners to find new patients, where it would be easy to add a telehealth service to their current digital services. Company Alpha further suggests that the competition of digital services is high, even though Scandinavia appears to be the market that has developed furthest. Company Beta also recognizes that amongst the telehealth companies, there are a few different business models, which will most likely keep changing over time: *"... everyone's touching the surface for the first time and checking what is working. I think in the end we will probably see a more blended model..."* (Company Beta, 22-03-2018). Company Beta also mentions how the company, as a pioneer of using the technology in Sweden has been associated with the Swedish Association of Local Authorities and Regions, (an organization that represents and advocates for local government in Sweden) as: *"...in many many discussions around innovation and digital healthcare"* (Company Beta, 22-03-2018).

The level of competition within the digital services in Europe is fairly high and that the level of competition within telehealth companies and services does, to some extent, seem to impact the business model for telehealth companies. Especially in, as company Beta mentions, such a young industry where much of the learning comes from trial and error of what is working. Additionally, not only can the level of competition change the way the companies work with digital services, but also effecting the discussion regarding the development of innovative technologies on a regional and governmental level, driving the telehealth technology forward.

Thus far, the three factors identified in the framework, have been analyzed. However, other parameters were observed influencing to drivers of telehealth, which were deemed being influencing factors as to be included as stand-alone factors. These factors will therefore be further analyzed.

6.1.4 Creating value for stakeholders

Company Beta highlights that when asked regarding their value proposition for consumers, that it is also important *"... to find what are your different value drivers and that also means testing out different partnerships"* (Company Beta, 22-03-2018). For example, partnerships with insurance companies presenting company Beta's service to their policy holders, or with pharmacies. In this case, referring to the partner pharmacy if needed and *"...that's creating value for them as a retailer because they create a one-stop-shop concept so they're selling more [...] medication and other pharmacy good because of that"* (Company Beta, 22-03-2018).

Creating value for external stakeholder through partnerships using the telehealth technology by an increase of services that can be delivered to customers or even an increase in sales because of a partnership with a telehealth company could attract more companies wanting to engage in partnerships. This could increase the demand for the service in general, driving the technology to further implementation possibilities.

In addition, company Alpha suggests that one of the biggest drivers behind digitalizing healthcare is that more patients can receive help with the current resources that exist in the industry, to some extent streamlining operations. It is important because *"... if we don't streamline society, the finance will not simple be enough"* (Company Alpha, 21-03-2018). The Frost and Sullivan (2015) market report further suggests that there is a need for a new healthcare delivery model, generally in Europe in order to cope with the pressure on deliver care despite budget constraint in the industry. Company Beta also recognize the cost pressure the healthcare industry is under where telehealth could act as *"A gatekeeper to specialist care..."* and *"... preventing people from ending up in an emergency unit which is a lot more costly, so I would say efficiency and medical quality going hand in hand"* (Company Beta, 22-03-2018). Essentially, telehealth could help people find the way where they need to be, so they can be cured faster without sacrificing quality. Company Beta also suggests that their technology can also help regions with quality control of behaviors of doctors, for example in the terms of prescription antibiotics, where regions can use the technology so that *"... they [doctors] can see their behaviors against other doctors"* (Company Beta, 22-03-2018) and easier spot trends in behavior that could need improvement.

Indications that the healthcare budgetary factor on a national level is under pressure have been recognized by both company Alpha and Beta, as well as the Frost and Sullivan (2015) market report, where a new health delivery business model, such as telehealth, could be an important key of solving some of the issues. Suggesting that the telehealth technology can create value on a governmental level and to be a useful tool in order to cut down costs and still maintain a quality control can work as a driver for national recognition amongst governments in order for them to control the budget, but still working with the same resources that they currently possess. Company Beta recognizes the sense of urgency for cost control in some countries, where telehealth has seemed to be an interesting solution, company Beta recognizes governmental support as one of the biggest drivers for telehealth.

6.1.5 Creating value for practitioners

Company Beta recognizes the driver behind the value created for practitioners using the telehealth technology in their daily practice *"... we also need a value proposition that's also beneficial for doctors..."* (Company Beta, 22-03-2018), where the main payoff for the doctors using telehealth in their work to be flexibility and more efficiency, and also to be spending time with patients that most need it, further increasing the quality of care. Company Alpha further recognizes the importance of having staff working within healthcare realize the benefits of digitalizing services, facilitating for a more efficient healthcare and being able to treat more patients. Company Beta has additionally recognized the importance for a new generation of doctors to have flexibility in their work, where using telehealth has enabled them to work part time in a clinic with physical cases and then also part time at home, picking up digital cases. This model has been particularly interesting for the new generation of doctors being able to be home with their kids more, which has shown in the interest from doctors wanting to be a part of the telehealth model (Company Beta, 22-03-2018). Company Beta also mentions the economical factor another incentive for doctors to wanting to work with the model and that the economic incentive is *"... very interesting [...] some of these cases they can pick up during their night shift or when they are working in the weekend [...] so it was a very interesting model for them so that is obviously the biggest driver"* (Company Beta, 22-03-2018). Company Beta also highlights the attractiveness for doctors to be part of a doctors' community, with colleagues using the same technology, sharing experiences and asking for a second opinion. Company Beta has experienced the response from doctors have been positive as: *"...it's a positive vibe being part of this community and was actually something extra..."* (Company Beta, 22-03-2018).

Being able to offer practitioners a new interesting model to work with, where the doctors can be more flexible regarding where and when they want to pick up cases, as well as the strong economic incentive of picking up additional cases is a strong driver for implementing telehealth. Especially for a new generation of doctors where there is an interest of having a different working lifestyle from the usually stressful and physical work, working around the clock (Company Beta, 22-03-2018). Being a part of a community is not only a social incentive to an otherwise, sometimes quite lonely profession (Company Beta, 22-03-2018), but also an opportunity to share resources, creating a network amongst healthcare providers further giving an incentive for a universal acceptance of the telehealth model.

6.2 Barriers of telehealth

6.2.1 Policy and regulatory environment

All companies agree that the regulatory and policy environment is important for facilitating technology to be used for their services, where they also agree that there is room for improvement. Company Alpha views the legislative and regulatory as an important factor as: *"Barriers are perhaps something that you [the company] have not set up yourself, and in that case it [barriers] would be laws and rules, and reimbursement systems."* (Company Alpha, 21-03-2018). Company Alpha further recognizes that the regulation system for digital services in all of their market that they operate in can be better, where Sweden is the market with currently the best market conditions. Company Alpha mentions a big issue where they as a private actor cannot take part in some reimbursement policies that are only available for public services, which leads to private actors not having the incentive to partake with digital solutions and continuing using physical treatments. Company Beta further recognizes the importance of a level playing field, where *"…the reimbursement level for digital cases should be the same as for physical cases. Then you would have the economical means to prove this [telehealth] at scale"* (Company Beta, 22-03-2018). Company Beta does however recognize that there is good support from political organizations in Sweden and that telehealth is starting to be more embraced as a healthcare solution.

Company Gamma further highlights the regulatory system as a barrier for them to use digital services to increase the quality of care in their operations as; *"We could benefit even more from digital services, but the regulation system does not allow it"* (Company Gamma, 22-03-2018). Company Gamma further highlights that (most of) the current laws and legislation system within healthcare are from a time where to digital solutions was not as wide as current conditions, but more focused on giving quality care through staff members. Company Beta also recognizes that the healthcare system *"… have been based on just the possibility or a physical delivery model…"* and that *"People tend to protect what they know and not embrace what they don't know yet"* (Company Beta, 22-03-2018).

Additionally, all companies mention the important aspect of telehealth and digitalized service within healthcare is the importance of dealing with very private and personal information. The Frost and Sullivan report (2015) found that one of the main barriers of commercialization of telehealth is the general concern regarding information security and patient data using digitalized solutions. Company Gamma recognizes the importance of a secure system as the private information regarding patients should not be available to outsiders, but this is well covered in the markets that they operate in.

Company Alpha also recognizes the importance of having a well-developed protection for patient information, where Sweden is a good example of having a well-developed system and people are used to use private information in other e-services. Company Beta further underlines that for them as a telehealth company:

> *"For us it's not enough to comply to the regulations and law […] if a doctor is running a practice of 1500 patients is making a mistake or is not ticking the box on privacy regulation, which I'm sure will happen every day. There won't be a lot of feasibility and public turmoil about it, but if it's a mistake in Company Beta, there will be a lot of noise around it which could have an impact on our trust load and branding […] so we have to be extremely careful in this area. But not just oblige to the law and comply to the laws. Do more than that"* (Company Beta, 22-03-2018).

All companies recognize the legislative and regulatory healthcare system as the main barrier for digital healthcare implementation, where one of the most challenging parts of the rules and legislative factor is that it is not something that the companies themselves can change. Even though there seems to be a change of attitude to change some of the regulation policies in some markets, there is still room for improvement in order for companies to be able to get equally compensated for telehealth consultations as for physical ones. Additionally, one significant issue becomes apparent as there is a tendency to want to protect the old system with favorable laws and legislation as the dated healthcare system does fully not accommodate for the new innovative digital solutions, which can be discouraging for practitioners to want to use the telehealth model.

Furthermore, having a well-developed privacy protection system in place is important for digital healthcare services, due to the sensitive nature of the information patients are sharing. Company Beta further recognizes the importance of them not failing to comply, not only to the rules and regulations, but go beyond that in order to remain the trust of their consumer. A significant number of people may still have reservations regarding sharing information through digital solutions, as suggested by the Frost and Sullivan (2015) report. With that being said, all companies did recognize that there is generally a well-developed system in place, but instead the willingness of sharing private information online could have more to do with the level of familiarity people have with handling similar services online.

6.2.2 External attitudes toward e-health services

Company Beta mentions that it has taken around three years for telehealth to become accepted, but as discussed earlier, more and more people are asking for the service and users are coming back, using the service again. Company Alpha further recognizes more acceptance from people using the service: *"It [digital services] is generally met well from patients, when they get the chance [to use it]"* (Company Alpha, 21-03-2018).

There seem to have been positive responses from consumers using the service, and neither company Alpha nor Beta were under the impression that this aspect is a major barrier toward digitalizing healthcare services nor telehealth consultancies. It seems to have been, at least in Sweden, a tipping point where the telehealth service has started to become more and more accepted. As company Beta mentions, it took around three years, but the response received from using the service so far has been positive.

6.2.3 Internal attitudes toward technology implementation

The Frost and Sullivan (2015) market report suggests that one main barrier to commercialization of telehealth projects is the time and effort it takes to train staff using the technology. Company Beta recognizes the potential difficulties with doctors starting using this service because *"... since this is completely new, it's never easy."* (Company Beta, 22-03-2018), however, the company has seen positive result from when a handful influential people in the industry started using it, where after more people got interested. Company Beta further explains that they use a training program where the recruited doctors learn the system, how to use it practically, and also the company's principles and what they believe in. Company Gamma, operating across national markets, also has courses teaching the staff how to use the technology they have in their operations. Company Gamma further does recognize some level of difficulties implementing technology, but that is not related to the size of the company. The issue is rather related to the cross-market geography, different regulations in the markets, as well as the difference in the level of familiarity from the staff members concerning using technology in an industry where the primary operations is not typically related to technology. Company Alpha further recognizes some barriers with technology implementation where *"... it is always difficult with changes and it does not move as fast as we would like sometimes."* (Company Alpha, 21-03-2018). Company Alpha also recognizes the downside of not having tailored training of staff towards their digital services as:

> *"... we have courses each time we change a way of working and not specifically for digital services. But then it may sometimes include digital parts, but we should be better off training our employees in IT and digitalization"* (Company Alpha, 21-03-2018).

Company Alpha further recognizes the need for the company to implement courses tailored to IT and digital solutions in order for the staff to understand exactly the possibilities of the digital solutions and how it can be beneficial.

All companies recognize the challenges that come with changing how people work with technology. The findings from the market report suggest training staff would be a significant barrier to telehealth implementation, where the level of investment in training courses from the companies differed. Since company Beta is a telehealth company it creates an incentive for them to invest in training courses for the staff using their technology, which is also reflected in the level of investment in training courses. Both company Alpha and Gamma (using digital e-health supplement application to their operations) also underline the value of investing in training courses for the staff, to highlight the benefits from digital applications. Furthermore, rather than it would be a matter of the size of the company that makes the implementation of technology an obstacle, it is more related to investing in giving staff members the possibility to learn about opportunities with digital solutions, and the technological readiness from staff to accept working with it.

6.2.4 Difficulties in overcoming funding

The Frost and Sullivan (2015) market report found that telehealth pilot projects find it hard to grow commercially and get past the initial phase. Company Beta did not perceive that obtaining financial funding as a telehealth company was one of the main barriers:

> *"I don't think it was actually. And I don't think there is. I think the natural selection process does its work. If you got a crappy idea, you won't get funding. If your idea make sense, then there will be an informal or formal investor that wants to try it out at a small scale first. We started with just one health case; urinary tract infections which we improved the world of doctors and of patients on just that single thing. Didn't create any money, but it showed that the model could work, then you're moving to the next stage, with slightly more money and bigger context to test. I think that's the only way [...] you have to start lowkey"*. (Company Beta, 22-03-2018).

In this case, being a telehealth company by itself, and the technical nature of the company, does not seem to have been a big impact on getting financial funding. Rather, a telehealth company goes through the same process and any other company, by starting in a small scale and showing the ideas worth in incremental stages.

6.3 Internationalization opportunities

6.3.1 Widespread access

Company Gamma recognizes that the growth opportunities in international markets was the main reason for expanding on an international level, and that expanding further outside the Nordic to the European market is very possible. While company Gamma recognizes that there are differences in their current markets in the Nordics, the market conditions are very similar, where it is easy to assimilate to the differences and adapt to circumstances. Furthermore, company Alpha currently operates physically in markets across Europe with some digital tools present in each market. As a growth company, they are looking at first expanding in the markets they currently operate in, which also does not exclude looking at other markets. Company Alpha mentions that:

> *"… we are developing [digitalized]services in all markets, especially in Sweden, Norway, and France. And further there are some different services in those markets. […] the number of [digital] services we are currently developing are probably more in Sweden. Then we will see which ones we are going to export later."* (Company Alpha, 21-03-2018).

Company Alpha mentions that the services they have in the different market depend on the need for that specific market. It is important for company Alpha to both being able to offer both the digital and physical care solution concept: *"Wherever [which market] we should be in such cases, building on the "Digi-physical" concept will continue"* (Company Alpha, 21-03-2018), but currently they are a European focused company. Company Alpha does however mention the possibilities of digitalized services, in general, on a global scale: *"…big parts of both India and Africa, and China have progressed far with digitalization thanks to smartphones. Where they are skipping this step with access to physical care and has gone directly to digitalization."* (Company Alpha, 21-03-2018).

Furthermore, company Beta, having their operations online, sees the barrier of engaging a business to customer (B2C) model, however, sees other internationalization possibilities:

> *"…what is very feasible is to implement our platform […] obviously to translate it and localize it to other countries and provide this for existing patients and existing doctors so you don't need to do the recruitment and the acquisition [of new customers]"* (Company Alpha, 22-03-2018).

For Company Beta, one important aspect of internationalizing to other markets is the market size as *"… we have been focusing on slightly bigger countries than Sweden…"* (Company Beta, 22-03-2018) and *"…it's important if you want to scale this model having access not just to 8 million Swedes, but a bit more. It's interesting for your business model and that's the way to survive"* (Company Beta, 22-03-2018). Company Beta further highlights that their current scope is Europe but sees the possibilities of their platform working in the US or China, however: *"… you can't do everything at the same time."* (Company Beta, 22-03-2018).

Company Alpha further highlights the importance for them to carry out their business model where digital services work as a compliment to their physical services. What should be noted however, is that company Alpha recognizes the possibilities of digitalization of services replacing physical healthcare solutions completely in other countries, suggesting possibilities for companies with different kinds of business models (from a digital perspective) to find opportunities in international markets. Company Gamma, operating in the Nordic markets, seeing internationalizing their healthcare services as growth opportunities and does not see the differences in European healthcare systems as a significant barrier for further expansion, additionally indicate widespread opportunities for healthcare companies. Company Beta also sees the opportunity of internationalization where they see international expansion as a way to survive as a company. Partially because of the limited population in their current market, and in order to grow, they need a bigger scope of possible users. The company also highlight the benefits of their model as when it is localized and adapted to the market, that it can be adapted by already existing practitioners with an already existing customer base. Meaning that, time and resources usually spent on finding customers and physical locations for care units can be minimized, and resources can be put elsewhere, such as internationalization activities. In this sense, the benefits of operating as an e-business are considerable, since the nature of the business makes it possible to operate remotely with services made so the consumers can enjoy the services online.

6.3.2 Competitive advantage

Company Beta mentions that one of the main benefits with their telehealth model is the increase in the number of patients that can be treated compared only physical medical consults, which: *"... and this is also very interesting for the government in France and in the UK where there is a shortage of GP's."* (Company Beta, 22-03-2018). Company beta further mentions that *"France is now and in the UK is very much open because they have big issues with the NHS […], the sense of urgency is kicking in there."* (Company Beta, 22-03-2018). The market report from Frost and Sullivan (2015) further identifies that Europe in general are facing a shortage of healthcare staff where telehealth is predicted to be a possible aid to minimize the effects of these shortages trough delivering case using IT models.

In terms of competitive advantage through using a telehealth model, this can be connected to factors that have been analyzed earlier, where being able to have the service of a medical consultant available whenever or the ability to have more choices of medical delivery, considering issues with current options. Additionally, there is a recognized competitive advantage of the telehealth model across markets in terms of the general shortage of staff within healthcare across the European market. The shortage of staff and the pressure it seems to put on healthcare budget across Europe can be traced back to one of the most important drivers for telehealth; the ageing population. Company Alpha and Beta recognized that the ageing population contributing to a shortage in staff cause an increase in cost-pressure where the effects of this have started to become apparent. Company Alpha and Beta further recognized the opportunities of e-health and the telehealth model to be a cost-effective solution to use in order to treat more patients with the current resources, and governments are also starting to realize these opportunities.

6.4 Internationalization adversities

6.4.1 Different healthcare and regulatory environments

The Frost and Sullivan (2015) market report suggests that one of the most pressing restriction in the telehealth market is the lack of an adequate reimbursement system for the telehealth services in Europe as a whole, where the reimbursement system differs significantly across the European countries. Company Beta also recognizes the difference in the reimbursement for their telehealth model in the different European countries, and while doing market research found:

> *"So what I learn from that research is that it will be very difficult in other European countries to engage in a B2C model […], too expensive, and to acquire new patients in the new model"* (Company Beta, 22-03-2018).

Company Alpha also recognizes the differences in the reimbursement levels across market, where in some markets, there are additional differences with the reimbursement policies for public and private healthcare services, where private healthcare companies do not get the same reimbursement as the public ones. For example:

> *"In Denmark, there are a lot of digital services for public healthcare, but we are a private actor and private actors are not allowed in the public services in Denmark"* (Company Alpha, 21-03-2018).

Company Alpha further separates between legislation and reimbursement policies where: *"In some countries in Europe, it is illegal do digitalize some parts of the healthcare, so that is a barrier [for entering the market]."* (Company Alpha, 21-03-2018). When asked regarding the importance of an adequate regulation system *"[That is] very important, very important, sometimes it's a differentiator if the law says that some digital services are not allowed, then it is not possible to implement it there"* (Company Alpha, 21-03-2018). Company Beta have also encountered differences in the legislative markets:

> *"Huge, yeah. Germany does not even allow it, legislation wise […]. So far it has been forbidden, now it [telehealth] starts in some of the Bundesländer, it is now starting to be embraced and tested."* (Company Beta, 22-03-2018).

Additionally, Company Gamma also acknowledges that there are legislative differences between nations when it comes to their care operations as the company, to some extent, has to adapt their operations according to some laws in the different markets. However, company Gamma does not find these differences to be a crucial factor more something that has to be taken into consideration and learn how to adapt their operations to cater the differences in the markets.

All companies emphasize the differences in the legislative and regulatory policies on the different international markets in Europe, highlighting the need for improvement in laws regarding digital solutions. Company Gamma did not see the differences as a barrier of internationalization for them as a physical healthcare company, but that it is rather a question of adapting. However, as both company Alpha and Beta recognize and emphasize the importance of legislative and regulatory

policies when it sometimes comes to even allowing digital solutions, the legislative and regulatory policies can be considered to be differentiator when it comes to digital services within healthcare. Company Beta has mentioned before that "*…this [telehealth] is a very young industry…"* (Company Beta, 22-03-2018) where, the dynamics of the telehealth industry have been changing in countries in Europe, where it is starting to be more embraced, but still the systems are barriers when it comes to internationalization.

Company Beta also recognizes that there are some differences when it comes to privacy protection in the European markets; for example, France and the UK being very strict compared to the Swedish, however the current state of the privacy protection systems are adequate for their operations. Company Alpha mentions some differences with the privacy protection systems in the European markets. However, with the European General Data Protection Regulation (GDPR) that is about to be introduced in spring 2018, could make the process somewhat easier in some countries. Company Gamma further recognizes that the GDPR would merge the protection regulations in the European markets, but that it will not make such an impact on their operations, neither positively nor negatively. Company Beta further comments on the GDPR:

> *"It's a hygiene factor, you need to comply with it, do it's not differentiating. If your question is does it help? No, absolutely not, because it is slowing down the development cycles because you need to tick a lot more boxes, strict documentation, some parts of the server need to be behind a Chinese wall […] it's definitely not something that we would fancy but … so it's a hygiene factor, but not a differentiation"* (Company Beta, 22-03-2018).

All companies recognize that there are currently some differences when it comes to privacy protection regulations in the European markets, however, the differences do not seem to affect any of the companies' operations, nor does it stop any internationalization activities. What could merge the privacy regulations in Europe is the GDPR which, even though it would require more documentation and more work as company Beta mentions, it could also make privacy regulations more homogeneous and as company Alpha mentions, make the process easier. Additionally, even though company Beta does recognize the negative aspect of such a regulation program, it is something to comply with, and not something that would be a barrier to internationalization.

6.4.2 Difference in governmental support

In terms of governmental support, company Gamma mentions that any form of governmental support is not anything they would expect to receive, but instead highlights the importance of a service to stand on its own, without any governmental financial support. Company Beta further mentions that governmental support for telehealth differs in the European markets, where telehealth companies in the UK have received funding from the NHS to explore the technology but: *"I'd love to have it […] I don't think that's the real differentiator"*. (Company Beta, 22-03-2018). Furthermore, company Alpha mentions that: *"Sweden is not as much as other countries […] on things like that. That's relatively underdeveloped I would say. […] I think I'm not a strong believer in that anyway."* (Company Beta, 22-03-2018). Additionally, Company Beta highlights another important issue when it comes to governmental support: *"I think it's more that we're having these discussions with governments who are constantly looking at innovation and things like that. […] I think it's more being aware that the closer you can get to a level playing field…"* (Company Beta, 22-03-2018).

In terms of governmental support, it does seem to vary across the European markets. However, the financial aspect seems to be something that is not expected, nor is not receiving any financial support from the government any barrier to internationalization. On the other hand, what should be noted is rather the importance of the ongoing discussions with governments and their support and willingness to change the reimbursement policies to create a better competitive market environment for telehealth companies.

6.4.3 Difference in IT infrastructure

Company Beta recognizes the importance of there being an adequate IT infrastructure in the markets they would operate in, where in generally in Europe there is a good system:

> *"For us that's relevant because for example in some countries like France for instance require that patient information is based in France itself" […] "The infrastructure is not local, […] [it] is all in the cloud and it's not local anymore so in that sense that's not a differentiator and also not a road block, so that's fine."* (Company Beta, 22-03-2018).

Company Alpha further comments that the IT-infrastructure is an important aspect when entering a new market, that it is a requirement where: *"Yes, that [adequate IT infrastructure] has to be in place if you were to go forward [to new markets], that is a requirement"* (Company Alpha, 21-03-2018). Company Alpha further comments on the IT infrastructure differences between markets in Europe:

"*… I think it's pretty similar actually, so it is well developed in all countries."* (Company Alpha, 21-03-2018). Company Gamma mentions, that even though it is not an important factor for them to take into consideration when expanding to new markets, that they cannot see any significant improvements needed.

All companies have recognized the importance of an IT infrastructure in place in order to operate with digital services, and further recognize that there are differences in the European markets. However, as company Beta mentions, the systems are not really dependent on the local market situation as it is moving towards being more and more cloud based. Additionally, meanwhile both company Alpha and Beta see the IT infrastructure factor as more or less a requirement, it is well-developed enough that it is not a differentiator when looking at international expansion, in the European markets at least.

6.4.4 Cultural acceptance using e-health

Company Alpha mentions that overall in Europe, there is a general acceptance of using e-health, but there are some differences that are important to acknowledge, that it is not specific use of e-health services, but e-services in general. For example:

> *"Germany has… it's not only in this sector and branch where there are rules and regulations of what you can do, that's generally in Germany. German citizens don't do their bank errands to the same extent that we [in Sweden] do, but they still have the concept of the physical bank."* (Company Alpha, 21-03-2018).

Company Beta also recognizes the differences in the European market, where:

> *"… strangely enough as a modern society like Germany is not there yet. There is always a lot of history, not only regulation, it's also like (that) in the Netherlands, everything is being executed by insurance companies […] so it's a different set up as well."* (Company Beta 22-03-2018).

Company Beta further acknowledges that the debate on creating a level playing field: *"… sticking to one model only while the capabilities have increased quite a lot, then you are not moving the needle and that's more [of a] mindset, a cultural thing."* (Company Beta, 22-03-2018).

Even though there are no greater differences in using e-health services, and the implementation of telehealth are assumed to be generally accepted in all markets, company Alpha and Beta recognize

that there can be some impact in implementation possibilities in markets such as the German market. It was acknowledged that, e-services are not as commonly used, which can have an impact on how well telehealth services would be received. Additionally, one of the difficulties in implementing telehealth services has previously been discussed as to be differences in regulatory policies and the slow pace in changing the market to a level playing field, catering different kinds of healthcare business models. Company Beta relates this to be a mindset, that the pace of changing something can be deeply rooted in a cultural mindset where changing the ways it has usually been operated can come with an unwillingness to change. This aspect, the unfamiliarity with using telehealth applications on medical consultancies, and the unfamiliarity with using e-services in general in different could have an impact on the internationalization process as to which market is more suitable.

6.5 Main factors facilitating telehealth internationalization

6.5.1 Regulatory and policy system supporting telehealth implementation

What has become evident throughout this thesis when it comes to the implementation of telehealth and factors that will help facilitating internationalization opportunities, is the importance of the governmental support through legal and regulatory policies in place, creating a competitive environment for telehealth companies. Company Beta highlights that:

> *"But the most important I think is the political discussion needs to be ready for it. So there needs to be enough of a sense of urgency to change the existing model […] That's where we are starting to move."* (Company Beta, 22-03-2018).

Company Beta further highlights that there are some factors that affect the urgency for a new model in a government:

> *"… the appetite for efficiency is just bigger. In the public healthcare systems there is no incentive to improve because there's […] there is no incentive to improve the model in many cases."* (Company Beta, 22-03-2018).

In addition, company Beta confirms that governmental pressure on changing or enabling digital services in a market is a very important factor. Company Alpha further highlights the importance of a legal and regulatory system in place facilitating for digital services, as it can be a deciding factor if it is even possible to operate with certain kind of digital services in the market due to legal restrictions.

> *"…the regulatory framework must first and foremost allow digital services. Laws and regulations, and the next step is that there has to be a reimbursement system that make it [operating] okay. No one wants to work as a digital online doctor if they won't get any compensation. Then you will just continue to work as a physical doctor instead. The prerequisites must exist in these markets. They need to be better in Sweden too, but the development is further along."* (Company Alpha, 21-03-2018).

Company Gamma also highlights that one of the main barriers they have encountered when internationalizing is the legal framework as there are differences between nations. However, in some aspects, the legal framework for them is mainly an issue of learning how to deal with circumstances. However, company Gamma does mention one importance factor where copy/paste a solution is usually not applicable, but there must be a certain level of adaption.

Company Beta also recognizes that it can take time for a new technology like this to be an acceptable form of telehealth solution, however:

> *"There is lots of need but I strongly believe there will be a tipping point where in this two or three bigger countries in Europe is we succeed […] it will be very difficult for [other] government […] to ignore that there is a much more efficient route"* (Company Beta, 22-03-2018).

The findings throughout this thesis all indicate the importance of a legal system and regulatory policies in place to support the drivers of telehealth services. Support from the government is important in the form of being willing for the discussion to open more digital possibilities within healthcare must exist to change current legal and regulatory framework, facilitating Telehealth services. There must be an incentive to adapt this new model in order to facilitate for one of the important drivers for telehealth, which is a motivation for practitioners to want to use the model to for example being able to treat more patients or treating the same number of patients and work less (accommodating the lifestyle of the practitioner) (Company Beta, 22-03-2018). What should also be recognized is that, as company Alpha puts it: *"Change is always difficult"* (Company Alpha, 21-03-2018) and that it does take time to change laws and regulations in healthcare, however, what is important is that governments are willing to open up for discussion regarding telehealth and the possibilities for improvement, facilitating the implementation of the technology.

6.5.2 Cultural attitudes towards technological readiness

Company Beta recognizes the importance of smartphone users when it comes to adaption of their services and address one critical factor for further expansion to new markets:

> *"... so it's more that the differentiator is the early adopters will be the people that are using their smartphone for everyday things anyway. Which is mostly the new generation, but also my parents are using their smartphones to book things."* (Company Beta, 22-03-2018).

Company Beta additionally mentions that the smartphone penetration itself is high across Europe but that the population and the number of early adopters is an important factor in order to have access to a high number of potential users. Company Beta further recognizes that there is a difference in cultural acceptance towards technology across the European markets, and that there are many stakeholders to take into account in this sense from regulatory boards, to GP unions, and quality boards where reluctance of changing market conditions: *"... sticking to one model only while the capabilities have increased quite a lot, then you are not moving the needle and that's more mindset, a cultural thing."* (Company Beta, 22-03-2018).

Company Alpha highlights the most important factors to consider when looking at expanding to new potential markets:

> *"... there has to be the fundamental factors in place, such as the confidence from the public to use digital services, that they are used to act digitally as a citizen, that they dare to act digitally even when they are sick."* (Company Alpha, 21-03-2018).

Company Alpha further highlights that the public being used to deal digitally with services as an important factor for adaption of digital healthcare services, whereas this is highlighted in the German case, where the public is not as used to deal with other services digitally:

> *"You can say that the maturity level [of using technology] is not as high as it is in Sweden and the other markets that we are currently in. […] it concerns e-services in general, where sensitive information is involved, so to speak"* (Company Alpha, 21-03-2018).

Company Gamma also mentions that one difficulty with implementing digital services is due to the different maturity levels of using technology. The company further mentions that one of the main reasons that the company expanded to Finland first was the closeness in culture. The company mentions that the corporate culture within Europe is homogenous enough so that it will not be much

of a bigger issue. However, what should be highlighted is that the company mentions that if market if culturally close, it is more of a bonus rather than a requirement.

Throughout this thesis it has become rather clear that other than the importance of governments being open for changing the healthcare environment, it is also important with people being open to use the telehealth service, in order to realize the feasibility of technological applications in the healthcare industry. Additionally, it is important with how comfortable the potential consumers in a market are to use smartphones and other devices that telehealth application can be used one. Company Beta mentions that it is important with a high number of early adopters of new technology, but what is also important is the confidence level from users of digital services, especially at moments when they are sick and in need of help. The barriers of this could be, as company Gamma suggests, implementing digital services due to different maturity levels when it comes to technological understanding. The comfortable level of using digital services with ease does seem to differ across markets in Europe, and, as has been identified by both company Alpha and company Beta, a developed market such as Germany is behind in general of using digital services, where personal information is involved. This could indicate that in markets where, as company Alpha mentions, the maturity level of using digital services in general is low, market penetration will be more difficult even though other factors, such as IT infrastructure is in place. Furthermore, since the legislative laws in Germany does not support the use of telehealth services, it further thwart people of getting the chance of using and being comfortable with digital health services. As company Beta mentions that there are several stakeholders to influence when promoting telehealth services, where a cultural mindset can lead to difficulties for change. Company Gamma further mentions that closeness in culture has some degree of positive effect on screening for new markets. However, when it comes to markets, such as Germany, it is perhaps more relevant looking at, not the overall closeness in culture, but the technological maturity and how embedded digital services in within the culture of a country. Company Alpha does highlight that the general use of e-services is not as high in Germany as in other markets that they are in, and that does effect company Alpha's view concerning that the attitudes from consumers towards e-health services would most likely differ in the German markets versus other markets where technology matureness is higher.

7 Discussion

This chapter presents a discussion of the findings in the analysis in relation to the previous literature when testing the hypotheses that the theoretical framework is based on. The theoretical framework is revised to reflect the findings from the discussion to generate a model for factors affecting telehealth internationalization.

7.1 Hypotheses testing

7.1.1 Drivers of telehealth

Hypothesis 1: The main drivers for value creation opportunities in telehealth are: to offer remote healthcare services to serve consumer preferences, internal and external technological capabilities, and the competitive environment.

The first hypothesis suggests that the main drivers of value creation opportunities for telehealth should be consumer preferences, internal and external technological capabilities, and the competitive environment. Previous literature suggests that there has been a shift in consumer preferences towards e-health, and a higher acceptance level towards using digital alternatives when it comes to utilizing online healthcare services due to easy accessibility at the comfort of wherever you are located (Agarwal et al., 2010; Ganesh, 2004). This thesis found that consumer preferences are a major diver for telehealth, however, rather than remote access being the most valuable factor, findings indicate that the main driver for people using telehealth seem to be the convenience of adopting online healthcare consultation into their lifestyles, better than what the physical doctors visit can.

There were some different findings regarding internal technological capabilities, where most of the back-end functionalities were seen as important for operating digital services. However, it was also argued that back-end solutions are more generic and can be outsourced, while front-end technological capabilities have more of a value impact for the company in terms of creating a competitive advantage and actually creating value. Even though Zhu and Kraemer (2005) do recognize the advantages with front-end functionalities, such as providing information to consumers, expanding communication channels, and facilitating personalization, the authors highlight that back-end function have a stronger association with value creation than front-end functionalities. The findings from this thesis contradict this somewhat as company Beta rather suggests that it is their front-end functionalities that gives them their competitive advantage. This contradiction to past research could be due to further technological

developments, some back-end functionalities, although important, can be replaced with generic solutions that can be outsourced. Whereas front-end functionalities, which are what the consumers are actually seeing, are what separates companies and as company Beta mentions, is what can give a competitive advantage.

How people are using digital services and the IT-infrastructure in place to use it comfortably, along with internal technological readiness for a company and how they use their technology to create value have been noted to be an important driver of e-health (Zhu et al., 2004; Matt et al., 2015; Ganesh, 2004). People's technological capabilities was also seen as an important driver for people to use digital services in their daily life, where the step to use telehealth applications as well in their daily life would not be too foreign. Furthermore, the importance of a competitive environment in innovative markets for driving technology forward have previously been discussed by Zhu et al. (2004) to be an important factor for continuing creating value. This thesis found that the competitive environment does seem to have a driving force, to some extent, for telehealth, when it comes to learning from others business model, as well as companies being included in policy discussions driving opportunities for technological innovations.

This thesis additionally highlights some other important drivers for telehealth. One important driver is creating value for stakeholders; partner companies, political organizations, and practitioners using telehealth when working. Creating added value for external stakeholders facilitates an interest in using the technology which can lead to more stakeholders advocating telehealth to be a part of their operations, driving the interest in telehealth. Additionally, an important factor is to get the practitioners interested in using the technology in to handle cases, increasing the number of doctors available, because as company Beta puts it: *"... you want to create a market place, you can never run out of supply"* (Company Beta, 22-03-2018). This can be supported by Ganesh (2004), also recognizing that collaboration of networks through e-health applications could be a driver for attracting more practitioners using technology.

Another important driver for telehealth was identified to be the ageing population, indirectly leading to different factors that are important for telehealth implementation. For example, this thesis that the ageing population is one major cause of the increased pressure on the healthcare budget and a declining working population, where using a telehealth model can be a key solution to streamline the healthcare industry and save costs. Oderanti and Li (2018) also recognize the shift in elder demographics increases the pressure on healthcare resources where e-health innovation could be a

solution, further recognizing the importance of this factor. The ageing population factor will be discussed further in this thesis, when applicable, showing the overall importance of this driver.

The findings from the analysis do support the hypothesis, however, some additional important drivers for telehealth were also found, which are important to highlight, thus the "Market driver factors" part of the framework is revised and represented in Figure 5.

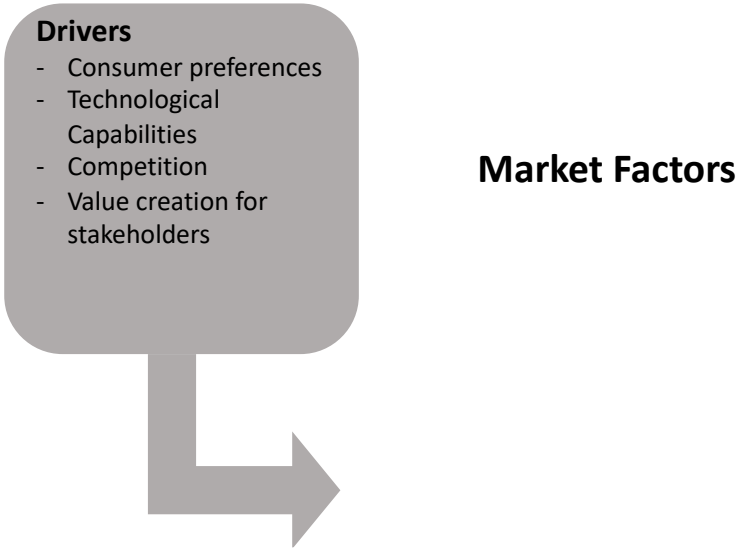

Figure 5 Revised market driver factors

7.1.2 Barriers of telehealth

Hypothesis 2: The main barriers for value creation opportunities for telehealth companies are: external factors such as the policy and regulatory environment, and social attitudes of technological health services, as well as internal factors such as the attitudes against technological implementation within the firm, and the size of the firm.

The second hypothesis suggests that the main barrier of value creation opportunities for telehealth should be the external and regulatory environment, the difficulties to get financial funding, external and internal attitudes toward e-services, as well as the size of the firm. This thesis found that one of the strongest barriers for telehealth is the external regulatory and policy environment, where change appears to be slow and more favor the traditional way of conducting medical consultations. Even though there have been changes in some markets there are changes needed to happen for the market environment to become a level playing field with the physical counterpart, which in turn has an impact on the attractiveness of working with the digital solutions for practitioners. Most literature also indicate the regulatory and legislative environment to be one of the main barriers of e-business and

e-health, where these factors are key to facilitating or preventing the adaption of technology within healthcare services (e.g. Agarwal et al., 2010; Oderanti & Li, 2018; Angaran, 1999).

This thesis further found the importance of there being a functioning personal privacy system in place, however the factor does not seem to be a barrier with the current systems in place. This finding differs somewhat from previous literature, where the lack of an adequate privacy protection system in place has been argued to have a significant impact on the willingness to use this type of technology (e.g. Ganesh, 2004; Anderson, 2007; Oderanti & Li, 2018). Furthermore, where previous literature suggests that e-business and technology heavy companies are usually seen as risky investments and face difficulties getting funded (Cavusgil et al., 2014; Soto & Cabrera, 2010), this thesis found that being a telehealth company does not seem to add an extra barrier in overcoming financial funding but the process rather looks the same as for any other company.

Previous literature has further suggested that changes that come with IT implementation in a company is more than often met with resistance to some extent, which also could have a correlation with the size of the company (Ganesh, 2004; Orlikowski & Gash, 1993; Zhu et al., 2004; Matt et al., 2015). Implementing e-health applications was recognized in this thesis as a barrier in the sense of that change is always difficult, especially when staff members are not accustomed to using technology. However, educational courses to train and inform the staff about the potential and benefits of the technology was regarded as a worthwhile investment to get passed this barrier. Additionally, even though previous literature suggests that size of a company is a barrier towards implementation (Zhu et al., 2004; Matt et al., 2015), this thesis found that the size of the company does not in itself have to be a barrier towards implementation, but rather the technological habits of the individual staff members.

Additionally, previous literature has shown that one barrier of e-health implementation is the generally preferred healthcare delivery model of face-to-face interaction rather than online interaction with doctors (Ganesh, 2004; Howitt et al., 2012). The findings in this thesis suggest that the external attitudes toward e-health services was not seen to be a heavy barrier towards implementation, but the technology seems to have become more accepted as a form of medical consultancy by the people that have tried it. This cannot be generalized too much, where it is rather dependent on individual preference, however the impression from those that have tried the telehealth technology seems to have overall been positive, reflecting in the changes in customer preferences.

Consequently, the findings from the analysis do not support all aspects from the hypothesis. These findings from the analysis are important to highlight, thus the "Market barrier factors" part of the framework is revised and represented in Figure 6.

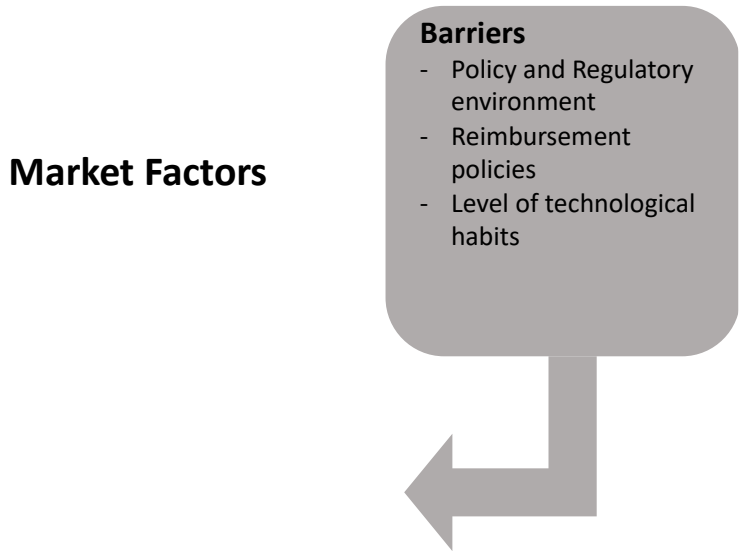

Figure 6 Revised market barrier factors

7.1.3 Internationalization opportunities

Hypothesis 3: The main opportunities for telehealth companies expanding to international markets are: the widespread access to international markets and achieving a competitive advantage through delivering a cost-effective and accessible business model.

The third hypothesis suggests that the main internationalization opportunities for telehealth should be the possibility of widespread access through the use of an e-business model and the competitive advantage of the nature of the business model. Internationalization literature indicates that one of the main attraction for seeking markets in the opportunities for the firm to grow (Johanson & Vahlne, 1977; 2009). According to traditional literature, this is suggested to happen at an incremental rate, over time (Johanson & Vahlne, 1977), however more recent research show that operating as an e-business have increased the widespread access of markets and that the internationalization process happens more rapidly (Amit & Zott, 2001; Matt et al., 2015; Lucking-Reiley & Spulber, 2001; Lal, 2004). This thesis found that the one of the strongest internationalization opportunities for the telehealth model is the widespread accessibility to consumers through the e-business model. Both company Alpha and Beta recognized the opportunities of introduce their digitalized health services in international markets, and company Beta highlights the importance of establishing themselves in new markets in order to reach a wider customer base, which supports literature such as Amit and Zott

(2001), Matt et al. (2015), and Zhu et al. (2004). Additionally, as company Beta mentioned, their platform is possible to localize to international markets where practitioners can simply use the model, attracting their customers to use the platform. This can be connected to supporting literature in regards to helping firm reduce time spend looking for customers or renting physical space for operations as well as being a driver for implementation of the technology (Lucking-Reiley & Spulber, 2001; Ross et al., 2016).

This thesis further found that using digital services to reach out to consumers on a global level has been shown to be a competitive advantage in markets where the consumers see an advantage by having accessibility to online medical consultations at their convenience, something that the traditional physical counterpart cannot always offer. This can be especially important in markets where people tend to prefer local suppliers who their feel familiar with, which would be physical care units when it comes to the healthcare industry, suggested by Cavusgil et al. (2014). This online business model has been successful in other industries, where companies have achieved a competitive advantage from adapting such as business model (Zhu et al, 2004; Zhu and Kraemer, 2005; Cavusgil et al, 2014), indicating that this can also be the case within healthcare delivery.

Furthermore, an important opportunity for telehealth internationalization is the state of the European market. This thesis found that the ageing population in Europe has affected the healthcare industry with a decrease in the working population while an increase in the number of patients, leading to increases in healthcare costs. Oderanti and Li's (2018) research also suggests the demographic changes resulting in an increase on the healthcare budgets. This thesis found that this current issue is an important driver for the telehealth model, where the possibility for doctors to treat more patients with the telehealth model is of interest for governments in Europe. Using the telehealth model in this way, increasing the productivity of healthcare staff, while still keep the (or even be able to increase) the quality of care, and at the same time be a cost-effective solution to the staff shortage in healthcare problem, is an important aspect of the telehealth model when it comes to being an attractive healthcare model for governments. Previous literature has also suggested that e-health can help reduce costs (Oderanti & Li, 2018; Ross et al., 2016; Anderson, 2007), supporting and further highlighting the findings of this thesis where the telehealth business model can be a key solution to this pressing problem.

Consequently, the findings from the analysis do support the hypothesis, however, what must be highlighted is the importance of the model being a cost-effective key to minimize the European

shortages of healthcare staff. These findings from the analysis are important to highlight, thus the "Internationalization Opportunities" part of the framework is revised and represented in Figure 7.

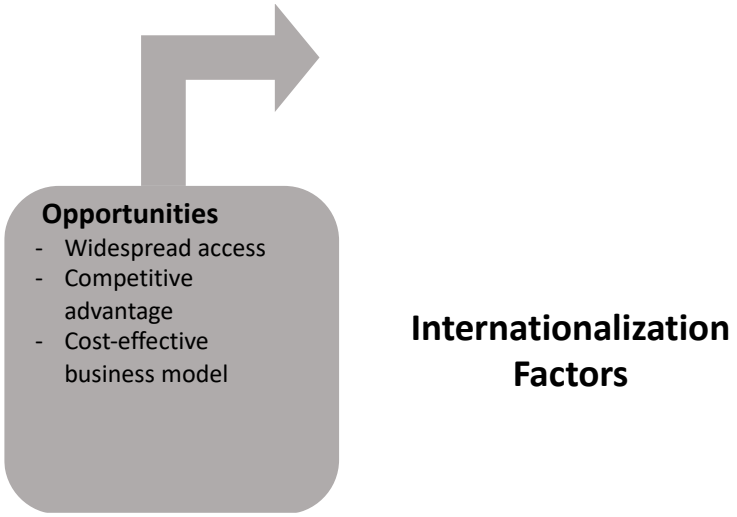

Figure 7 Revised internationalization opportunities factors

7.1.4 Internationalization adversities

Hypothesis 4: The main adversities for telehealth companies expanding to international markets are: the difference in governmental support in regulatory and healthcare systems, difference in IT-infrastructure level across international markets, and the overall social acceptance for using digitalized services as a replacement for traditional ones.

The fourth hypothesis suggests that the main adversities for international expansion for telehealth should be consumer preferences, internal and external technological capabilities, and the competitive environment. This thesis found the difference in the legislative and regulatory policies to be a major barrier for internationalization. The reimbursement policies in different countries with regards as to the reimbursement level for telehealth services versus traditional physical healthcare services, were found to be very different in European markets. The lack of a level playing field between the two services can affect how attractive a market is to enter, both for a telehealth company and the attractiveness of practitioners to use telehealth applications instead of continuing with traditional consultations. Furthermore, the importance of a legislative environment cannot be understated as in some markets, where the telehealth services is not even allowed, making it not even possible to operate in that market. These findings are in line with previous literature emphasizing the importance of governmental regulation for e-health (Agarwal et al., 2010; Ross et al., 2016; Oderanti & Li, 2018) and value creation (Zhu et al., 2004; Zhu and Kraemer, 2005), and even though this thesis found that

the legislative and regulatory markets are starting to shift in Europe, there are still significant changes to be made.

Ganesh (2004), Anderson and Agarwal, (2011) and Oderanti and Li (2018) suggest that one of the biggest challenges with e-health in general is the lack of a clear privacy protection regulation, affecting customer's willingness to adapt to e-services. This thesis found that, even though there are some differences in these policies, the privacy protection environment across Europe is not something that is a differentiator when it comes to international expansion, and with the GDPR being introduced in Europe, since it is spanning cross industries, it could increase the knowledge of privacy protection to consumers and make the process easier. Furthermore, Cavusgil et al. (2014) suggested that there is a need for an adequate IT infrastructure to support technological development in order to take advantage of the technology. This thesis found that an IT infrastructure that supports digital healthcare services is a requirement for operations. However, even though there are some differences in markets, it is well developed in Europe and is not something that is seen as an adversity of internationalization.

Furthermore, previous literature suggests that the social factor of the relation between consumers and healthcare technology can be a barrier of e-health adoption (Ganesh, 2004) and the acceptance of e-health solutions can vary across nations dependent on the culture climate regarding technology (Howitt et al., 2012). This thesis found that the general acceptance of e-health solutions in Europe seems to be positive, and the response from users of telehealth has also been positive. However, it should be recognized that this thesis found that the national culture towards including e-services in general, is an important factor when it comes to telehealth implementation and application, similarly to what Howitt et al. (2012) suggest. This is additionally highlighted with the findings from the thesis where the national cultural mindset of accepting new technology developments of services can increase the inertia of change policies supporting these services, on a governmental level.

Consequently, the findings from the analysis does not support the hypothesis as a whole, however, what must be highlighted is the importance of the regulatory and legal policies as well as a cultural mindset regarding technological services as an adversity for internationalization. These findings from the analysis are important to highlight, thus the "Internationalization Adversities" part of the framework is revised and represented in Figure 8.

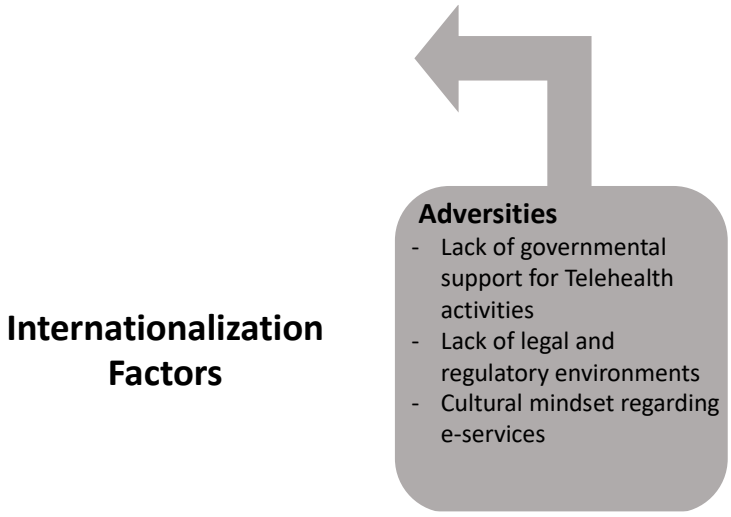

Figure 8 Revised internationalization adversities factors

7.1.5 Main factors facilitating telehealth internationalization

Hypothesis 5: It is expected that a telehealth company, other than searching for markets with regulatory and policy environments that facilitate telehealth services, seeks markets where the country's general culture climate and attitudes facilitates for technological readiness.

The fifth and final hypothesis suggests that the main factor facilitating telehealth internationalization should be the existence of regulatory and policy framework supporting telehealth services and that telehealth companies seek other markets with the cultural climate and attitudes facilitates for technological readiness. This thesis found that one of the most important factors facilitating telehealth services in a market is a legal system and regulatory policies, first ensuring that there is a legal possibility entering the market, and additionally creating a fair level playing field for telehealth services being reimbursed at the same level as the physical counterpart. Additionally, a governmental support in terms of facilitating this fair environment in the market is also important to exist, for open up the market for new digital solutions. Several studies have indicated the importance of regulatory systems and governmental support for creating value from IT innovation and allowing these digital solutions to exist in a market (e.g. Agarwal et al., 2010; Zhu et al., 2004; Oderanti & Li, 2018), supporting this claim. The findings in this thesis further re-affirm the importance of legal and regulatory policies, working both as a facilitator and barrier for telehealth services. The importance of there to be a legal and regulatory framework is highlighted, especially when it comes to reimbursement, to facilitate drivers for telehealth such as the incentive for physicians and hospitals to adopt the service in their operations.

The importance of governmental support for digital healthcare services is also highlighted, where the legal and regulatory framework facilitating these services do have an impact on the extent people are used to handling digital health services, such as the example of the German market. The findings in this thesis further highlight the importance of an overall support of digital services, not only in the healthcare industry, but the level of comfort using digital services involving private and sensitive information. Previous literature has discussed the concept of physic distance, how it can be a barrier of internationalization, but also how the Internet has diminished this distance across markets (e.g. Johanson & Vahlne, 1977, 2009; Håkanson & Ambos 2010; Yamin & Sinkovics, 2006). At the same time, previous research has also shown that social acceptance of technology is an important factor when it comes to acceptance of technology in a market (Ganesh, 2004; Howitt et al., 2012). This thesis therefore suggests that it would be appropriate to separate a country's overall culture and 'technological' culture in this case. Especially considering that company Alpha does operate with physical healthcare services in the German market but sees the difficulties with the acceptance from consumers in introducing a digital concept. Additionally, even though both company Alpha and Beta recognize that the IT infrastructure and smartphone penetration is adequate in all of Europe, they both still recognize the potential difficulties in implementing digital solutions, such as telehealth in a country where the population is not used to digital services. So, this thesis suggests that focus should perhaps not center around technological readiness, but rather on the technology matureness level of a market in using e-services.

Consequently, the findings from the analysis does not fully support the hypothesis as a whole, but the factor needs to be re-written in order to reflect the findings better. Thus the "Main factor facilitating Internationalization" part of the framework is revised and represented in Figure 9.

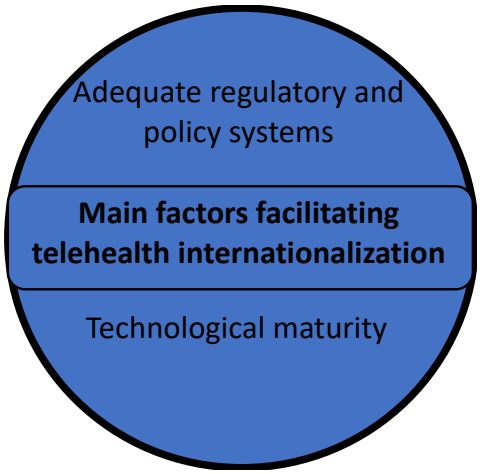

Figure 9 Revised main factors facilitating telehealth internationalization

7.2 Revised framework

This thesis has analyzed and discussed findings from the gathered data with reference to the theoretical framework, based on the literature review. Throughout the discussion, parts of the framework have been revised in order to reflect findings more suitable for the telehealth business model, and the revised framework as a whole is reflected in Figure 10.

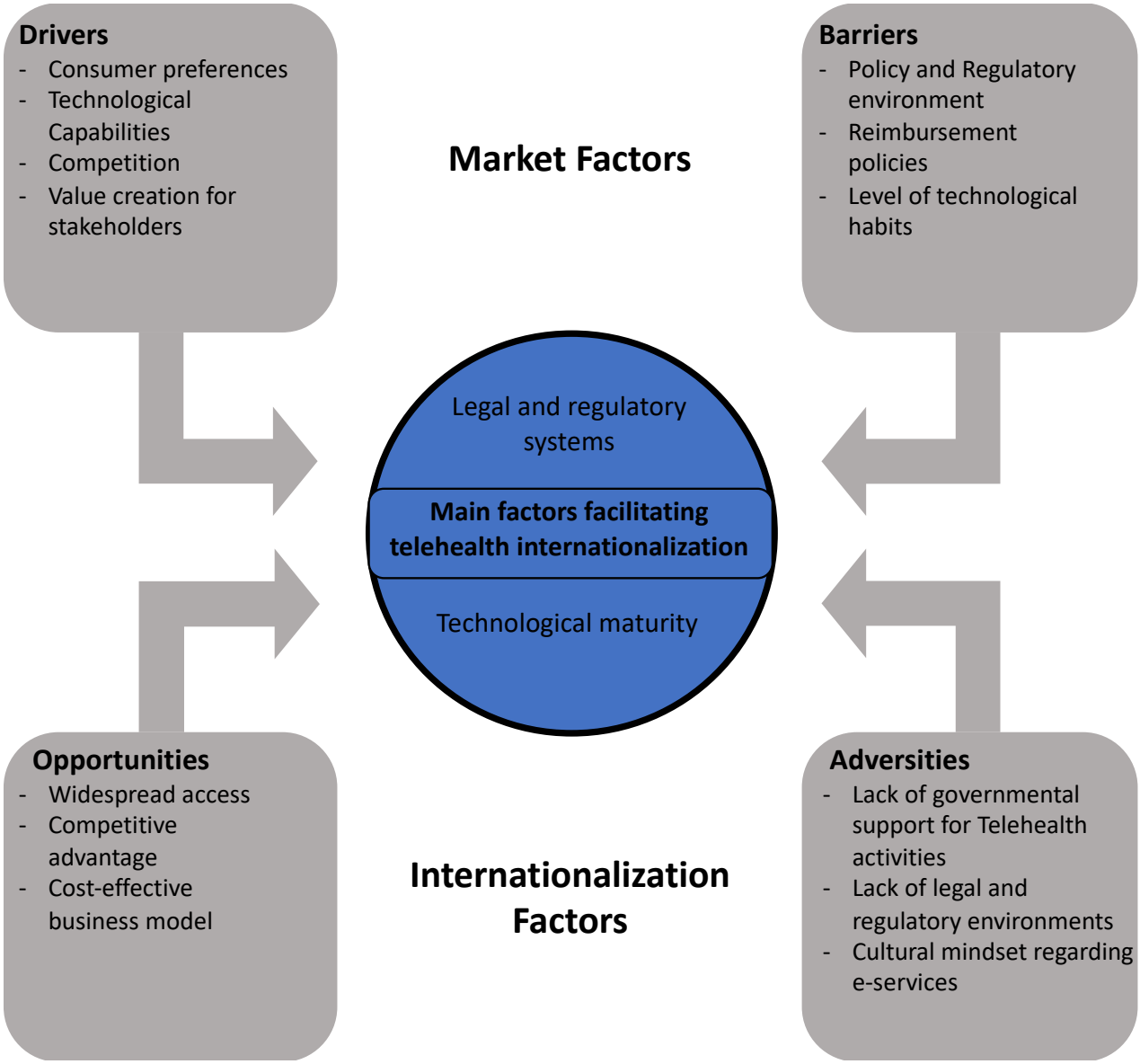

Figure 10 Factors affecting telehealth internationalization framework

8 Conclusion

This chapter concludes key findings based on the analysis and discussion. The research questions are answered and the author also reflects the thesis as well as discussing implications and suggests for future research

8.1 Key findings

The purpose of this thesis was to investigate factors affecting the internationalization process of a telehealth from the perspective of value creation. The aim was to identify drivers and barriers of the technology as well as international opportunities and adversities when it comes to expanding the service to international markets. This was done through exploring three research questions based on the hypothesis and the theoretical framework presented in chapter four.

Research Question 1: *What are the main barriers and driving factors facilitating value creation for telehealth services?*

The findings of this thesis indicate that the main barriers for telehealth are the policy and regulatory environment, reimbursement policies, and level of technological habits. This was highlighted in the re-occurring points emphasized by the participating companies concerning laws and regulation systems mostly affecting their operations negatively, although there are optimistic prospects of changes in the European market. The main drivers for telehealth were identified to be consumer preferences, technological capabilities, competition, and value creation for stakeholders. This was highlighted from the difference experiences the participated companies highlighted, where value creation for customers and stakeholders are key factors. The findings are largely supported by literature, although there were some deviations where additional key market factors were found. Additionally, one of the most important driver for telehealth is identified to be the ageing population, which overall has affected the state of the healthcare industry, and where telehealth could be a major key for solving current healthcare issues associates with changes in the demographics, such as cost pressure, or lack of healthcare resources.

Research Question 2: *What are the main opportunities and adversities for internationalization of telehealth services?*

The main opportunities for internationalization were identified to be widespread access, competitive advantage, and a cost-effective business model. This was highlighted by the companies where the cost-effective business model was emphasized to be an attractive opportunity to a European market

affected by an ageing population. The main adversities for internationalization were identified to be the lack of governmental support for telehealth activities, policy and regulatory environments, and cultural mindset regarding e-services. This was highlighted in the reoccurring points throughout the thesis where laws and reimbursement policies are imperative for telehealth operations. The findings are largely supported by literature, although there were some deviations, where additional key internationalization factors were found.

Research Question 3: *What are the main factors facilitating telehealth internationalization?*

The main factors facilitating telehealth internationalization were identified to be legal and regulatory systems and technological maturity. Throughout the thesis, and through previous literature, the legal and regulatory systems were seen as both be facilitating and thwarting the implementation of telehealth, where it is important to have a legal and regulatory that makes it possible for the services to be used. In addition, technological maturity has also been identified in this thesis as well as supported previous literature to be both something that facilitates telehealth implementation, but also something that can be a barrier for the technology to be an accepted form of healthcare delivery. Even though both these factors differ in markets across Europe, which makes some markets more attractive than others, the outlook for the implementation of telehealth as an accepted form of healthcare delivery is positive.

8.2 Implications

8.2.1 Academical implications

This thesis offers a theoretical framework based on rich in-depth data tested in a telehealth setting, developing new theory in the field. This thesis has explored important factors on a qualitative level, enriching and updating the current setting of the e-health and digital healthcare environment in Europe. This thesis also adds another perspective to the internationalization literature, where it gives a new perspective of the factors of internationalization for companies operating in a digital market. Researchers can further benefit from this thesis as it is a new field within healthcare and rather unexplored in theory. The qualitative nature of this thesis further gives an in-depth explanation behind the reasons for the different factors, which can be useful for further research in the separate fields.

8.2.2 Practical implications

This thesis offers a comprehensive framework for telehealth internationalization including both market factors, as well as internationalization factors which can be useful for managers when assessing the market conditions under which telehealth could be launched to have the best conditions for implementation. Thus, it is useful for managers looking at certain market factors gaining knowledge for decision-making. Applying this framework on potential markets gives a rich understanding of the market situation, whether the knowledge gained is considered good enough for an opportunity to move into a new market, or if the market is considered to be too risky to expand to.

Secondly, this thesis also offers suggestions for policy makers. Legal and regulatory support has emerged as an important factor for telehealth implementation and to add value for the telehealth industry. This thesis has shown that the current state of the legal and regulatory market (in Europe) does not favor telehealth implementation as a form of healthcare delivery. This thesis has further shown an indication of a struggling healthcare environment across Europe where it may be timely to suggest that policy makers deliberate on what is currently known about the benefits of telehealth and be open for discussions regarding the possibilities, particularly, how valuable the positive affect will be to society from integrating this type of healthcare delivery solution, when making public policy decisions. However, the author also recognizes that research regarding telehealth effect on society is rather limited and more research on both academic and practical research would be beneficial to enrich the discussion.

8.3 Limitations and future research

The author recognizes that since this framework is only tested on a limited number of healthcare firms, where only one is a telehealth company, it does not reflect the population and thus the findings cannot be generalized. However, this framework generates new insights of reasons behind the factors of telehealth internationalization, and so this thesis should rather be perceived as a first step in broadening the research on telehealth literature. Therefore, further research within this topic is a necessity and the framework can be tested in a larger scale in a quantitative study with more telehealth companies' insights, in order to make better generalizations.

Additionally, perspectives regarding the telehealth technology have been centered around managers from the participating companies. This can be a limitation, since perspectives of customer perceptions have been taken from the perspective of manager instead of having first-hand data from customers or

practitioners having tried the technology. Therefore, the author suggests to increase more research focused more on the consumer and practitioner perspective on innovation and value creation from telehealth in order to enrich research from their experiences, which will both have positive impact on practical and academic implications.

8.4 Reflections

Starting this thesis, one of the biggest drivers for digitalizing healthcare services was assumed to be the possibilities for people living in remote areas to have instant and remote access to healthcare services. Especially in the context of this thesis, because the companies interviewed were Swedish, where people living in remote areas were expected to be a major part of the users. As Sweden is a geographically long country, where people are living quite remotely, far away from the nearest care unit in some parts of the country it was expected to be a highlighted value creating driver. However, this was not quite the case. Even though remote access was one of the added value benefits, the biggest user group thus far is people living in metropolitan areas (Stockholm area); people living in areas where healthcare units are densely located, where using telehealth applications for healthcare delivery better suit the lifestyle by being a time saver. This could indicate that not only would telehealth add value to one customer group valuing the remote access, but also add value to another customer group valuing the convenience of having 'healthcare at your fingertips'.

Additionally, studying past papers regarding e-health and the development of e-health in general and telehealth, authors have mentioned, over an extensive period of time, that e-health has not had the widespread acceptance that has been expected. This thesis covers literature from 2004 – 2018 where most literature indicate the same obstacles that e-health and Telehealth applications has encountered, but that the future has been looking promising. The result from this thesis suggests that, even though much still needs to be changed, market conditions are getting better around Europe for a widespread acceptance for telehealth. What is to say that this time telehealth (and e-health applications) will have a better outlook than in the past, and that it is this point in time that the 'tipping point' will come is difficult to pinpoint. However, with an ageing demographic putting cost pressure on healthcare budgets, increases in consumer preferences wanting digital healthcare solutions, and legal and regulatory policies starting to favoring the use of telehealth, maybe this combination will result in a launch forward for the digitalization of healthcare.

References

Agarwal, R., Gao, G., DesRoches, C., & Jha, A. K. (2010). Research commentary—The digital transformation of healthcare: Current status and the road ahead. *Information Systems Research*, *21*(4), 796-809.

Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic management journal*, *22*(6-7), 493-520.

Andersen, O. (1993). On the internationalization process of firms: A critical analysis. *Journal of international business studies*, *24*(2), 209-231.

Anderson, J. G. (2007). Social, ethical and legal barriers to e-health. *International journal of medical informatics*, *76*(5-6), 480-483.

Anderson, C. L., & Agarwal, R. (2011). The digitization of healthcare: boundary risks, emotion, and consumer willingness to disclose personal health information. *Information Systems Research*, *22*(3), 469-490.

Angaran, D. M. (1999). Telemedicine and telepharmacy: current status and future implications. *American Journal of Health-System Pharmacy*, *56*(14), 1405-1426.

Beck, M. (2016). How telemedicine is transforming health care. *The Wall Street Journal*, *26*. Accessed March 9th 2018 from: https://www.wsj.com/articles/how-telemedicine-is-transforming-health-care-1466993402

Beckerman, W. (1956). Distance and the pattern of intra-European trade. *The review of Economics and Statistics*, 31-40.

Blomqvist, K., Hurmelinna-Laukkanen, P., Nummela, N., & Saarenketo, S. (2008). The role of trust and contracts in the internationalization of technology-intensive Born Globals. *Journal of Engineering and Technology Management*, *25*(1-2), 123-135.

Boter, H., & Holmquist, C. (1996). Industry characteristics and internationalization processes in small firms. *Journal of Business Venturing*, *11*(6), 471-487.

Briggs, A. and Burke, P. (2010). *Social History of the Media: From Gutenberg to the Internet*. Cambridge: Polity Press.

Brommey, M. (2011). Challenges in e-health service delivery. *2nd annual online summit. URL: http://www. health. gov. au/healthonline/docs/summit2/brommeyer. pdf [accessed 2004 June 24]*.

Bryman, A. (2015). *Social research methods*. Oxford university press.

Carr, N. G. (2003). IT doesn't matter. *Educause Review*, *38*, 24-38.

Cavusgil, S. T., Knight, G., Riesenberger, J. R., Rammal, H. G., & Rose, E. L. (2014). *International business*. Pearson Australia.

Chetty, S., & Campbell-Hunt, C. (2004). A strategic approach to internationalization: a traditional versus a "born-global" approach. *Journal of International marketing*, *12*(1), 57-81.

Colucci, M., Baldo, V., Baldovin, T., & Bertoncello, C. (2017). A "matter of communication": A new classification to compare and evaluate telehealth and telemedicine interventions and understand their effectiveness as a communication process. *Health informatics journal*

Collis, J., & Hussey, R. (2014). Business Research. A practical guide for undergraduate and postgraduate students, 4th edition. Hampshire: Palgrave Macmillan

Crick, D., & Spence, M. (2005). The internationalisation of 'high performing' UK high-tech SMEs: a study of planned and unplanned strategies. *International business review*, *14*(2), 167-185.

Devaraj, S., & Kohli, R. (2003). Performance impacts of information technology: Is actual usage the missing link?. *Management science*, *49*(3), 273-289.

Easterby-Smith, M., Thorpe, R., & Jackson, P. (2012). Management Research, 4th edition. London: SAGE Publications Ltd.

Eriksson, P., & Kovalainen, A. (2015). *Qualitative methods in business research: A practical guide to social research*. Sage.

Eysenbach, G. (2001). What is e-health?. *Journal of Medical Internet Research, 3(2)*, e:20

Frost & Sullivan. (2015, November). Analysis of Remote Monitoring markets for Telehealth and Telecare in Europe. *Industry Research Analysis*. Retrieved March 5th, 2018 from Frost & Sullivan database

Gabrielsson, M., & Kirpalani, V. M. (2004). Born Globals: how to reach new business space rapidly. *International Business Review*, *13*(5), 555-571.

Ganesh, J. (2004). E-health drivers, applications, challenges ahead and Strategies: a conceptual framework. *Indian Journal of Medical Informatics*, *1*(1), 40-48.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, *8*(4), 597-606.

Howitt, P., Darzi, A., Yang, G. Z., Ashrafian, H., Atun, R., Barlow, J., ... & Cooke, G. S. (2012). Technologies for global health. *The Lancet*, *380*(9840), 507-535.

Hwang, J., & Christensen, C. M. (2008). Disruptive innovation in health care delivery: a framework for business-model innovation. *Health Affairs*, *27*(5), 1329-1335.

Håkanson, L., & Ambos, B. (2010). The antecedents of psychic distance. *Journal of International Management*, *16*(3), 195-210.

Hyde, K. F. (2000). Recognising deductive processes in qualitative research. *Qualitative market research: An international journal*, *3*(2), 82-90.

Johannessen, J. A., & Olsen, B. (2010). The future of value creation and innovations: Aspects of a theory of value creation and innovation in a global knowledge economy. *International Journal of Information Management*, *30*(6), 502-511.

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of international business studies*, *8*(1), 23-32.

Johanson, J., & Vahlne, J. E. (1990). The mechanism of internationalisation. *International marketing review*, *7*(4).

Johanson, J., & Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of international business studies*, *40*(9), 1411-1431.

Kagermann, H. (2015). Change through digitization—Value creation in the age of Industry 4.0. In Management of permanent change (pp. 23-45). Springer Gabler, Wiesbaden.

Kayingo, G. (2012). Transforming global health with mobile technologies and social enterprises: global health and innovation conference. *The Yale journal of biology and medicine*, *85*(3), 425.

Klonoff, D. C. (2013). The current status of mHealth for diabetes: will it be the next big thing?. *Journal of diabetes science and technology*, *7*(3), 749-758.

Knight, G. A., & Cavusgil, S. T. (1996). The born global firm: a challenge to traditional internalization theory. In S.T. Cavusgil, & T. Madsen (Eds.), *Advances in International Marketing* (pp.11-26). Greenwich, CT: JAL Press.

Knight, G. A., & Liesch, P. W. (2016). Internationalization: From incremental to born global. *Journal of World Business*, *51*(1), 93-102.

Kothari, C. R. (2004). Research methodology: methods and techniques. New Delhi: New Age International.

Lal, K. (2004). E-business and export behavior. Evidence from Indian firms. *World Development*, *32*(3), 505–517.

Leedy, P., & Ormrod, J. (2005) Practical Research. Upper Saddle River, N.J.: Prentice Hall.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.

Lucking-Reiley, D., & Spulber, D. F. (2001). Business-to-business electronic commerce. *Journal of Economic Perspectives*, *15*(1), 55-68.

Maheu, M., Whitten, P., & Allen, A. (2002). *E-Health, Telehealth, and Telemedicine: a guide to startup and success*. John Wiley & Sons.

Markovitch, S., & Willmott, P. (2014). Accelerating the digitization of business processes. *McKinsey & Company, San Francisco*.

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, *57*(5), 339-343.

Melville, N., Kraemer, K., & Gurbaxani, V. (2004). Information technology and organizational performance: An integrative model of IT business value. *MIS quarterly*, *28*(2), 283-322.

McDougall, P. P., Shane, S., & Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of business venturing*, *9*(6), 469-487.

Mitchell, J. (1999). *From telehealth to e-health: the unstoppable rise of e-health*. Department of Communications, Information Technology and the Arts.

Moen, Ø. (2002). The born globals: a new generation of small European exporters. *International marketing review*, *19*(2), 156-175.

Oderanti, F. O., & Li, F. (2018). Commercialization of eHealth innovations in the market of the UK healthcare sector: A framework for a sustainable business model. *Psychology & Marketing*, *35*(2), 120-137.

Onetti, A., Zucchella, A., Jones, M. V., & McDougall-Covin, P. P. (2012). Internationalization, innovation and entrepreneurship: business models for new technology-based firms. *Journal of Management & Governance*, *16*(3), 337-368.

Orlikowski, W. J., & Gash, D. C. (1994). Technological frames: making sense of information technology in organizations. *ACM Transactions on Information Systems (TOIS)*, *12*(2), 174-207.

Oviatt, B. M., & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of international business studies*, *25*(1), 45-64.

Porter, M. E., & Millar, V. E. (1985). How information gives you competitive advantage. *Harvard Business Review*, *63*(4), 149-160

Priem, R. L. (2007). A consumer perspective on value creation. *Academy of Management Review*, *32*(1), 219-235.

Research and Markets. (2017, August). Global Medical Telehealth Market. *Oristep Consulting*. Retrieved March 5th, 2018 from Research and Markets database

Ross, J., Stevenson, F., Lau, R., & Murray, E. (2016). Factors that influence the implementation of e-health: a systematic review of systematic reviews (an update). *Implementation Science*, *11*(1), 146.

Saunders, M., Lewis, P., & Kovalainen, A. (2007). *Research Methods for Business Students Fourth Edition*. Pearson Education.

Seri, P., Bianchi, A., & Matteucci, N. (2014). Diffusion and usage of public e-services in Europe: An assessment of country level indicators and drivers. *Telecommunications Policy*, *38*(5-6), 496-513.

Soto-Acosta, P., & MeroñO-Cerdan, A. L. (2008). Analyzing e-business value creation from a resource-based perspective. *International Journal of Information Management*, *28*(1), 49-60.

Soto, M. G. G., & Cabrera, A. M. G. (2010). Chapter 2: Internationalization Strategy in New E-Ventures: Towards A General Model and research agenda. In: *E-Entrepreneurship and ICT Ventures: Strategy, Organization and Technology: Strategy, Organization and Technology. IGI Global*

Standing, C., Standing, S., McDermott, M. L., Gururajan, R., & Kiani Mavi, R. (2018). The paradoxes of telehealth: a review of the literature 2000–2015. *Systems Research and Behavioral Science*, *35*(1), 90-101.

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. Management Decision, 39(7), 551-555

Surgical Intervention. (2018, Feb 3rd). *The Economist*. Retrieved From: https://www.economist.com/news/business/21736193-worlds-biggest-tech-firms-see-opportunity-health-care-which-could-mean-empowered

Wade, M., & Hulland, J. (2004). The resource-based view and information systems research: Review, extension, and suggestions for future research. *MIS quarterly*, *28*(1), 107-142.

Want, R. (2006). An introduction to RFID technology. *IEEE pervasive computing*, *5*(1), 25-33.

Watson, R. (2004). Electronic Communication and Health Care: EU wants every member to develop a "roadmap" for ehealth. *BMJ: British Medical Journal*, *328*(7449), 1155.

Williamson, K. (2002). *Research methods for students, academics and professionals: Information management and systems*. Elsevier.

Wyatt, J. C., & Liu, J. L. Y. (2002). Basic concepts in medical informatics. *Journal of Epidemiology & Community Health*, *56*(11), 808-812.

Yamin, M., & Sinkovics, R. R. (2006). Online internationalisation, psychic distance reduction and the virtuality trap. *International Business Review*, *15*(4), 339-360.

Zahra, S. A. (2005). A theory of international new ventures: a decade of research. *Journal of International Business Studies*, *36*(1), 20-28.

Zhu, K., Kraemer, K. L., & Dedrick, J. (2004). Information technology payoff in e-business environments: An international perspective on value creation of e-business in the financial services industry. *Journal of management information systems*, *21*(1), 17-54.

Zhu, K., & Kraemer, K. L. (2005). Post-adoption variations in usage and value of e-business by organizations: cross-country evidence from the retail industry. *Information systems research*, *16*(1), 61-84.

Appendix I

Interview guide (in English)

Master Thesis

Digitalization in the Healthcare industry

Interview questions

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Formalities

Purpose:

The purpose of this interview is to explore digitalization of services within healthcare to get an understanding of the implementation of this service as an equal to the 'physical' counterpart.

Interview format:

The interview will be semi-structured, which means that you are free to answer as open and detailed as you want to the questions. If there is any question that you do not want to answer that is of course fine and up to you. If possible, please read through the questions beforehand and don't hesitate to ask if you have any questions. I'd also like to point out that you and your company name will be anonymous in the thesis.

Thank you for wanting to participate and I'm looking forward to speak with you!

Interview agenda

Company Overview:
First shortly describe your company and what your position is in the company

How do you work with digital services in your company?

What is the main value proposition you communicate to consumers regarding your services compared to a traditional doctor visit in a clinic?

Consumer Relations:
How do you, in general, work with communicating your services to consumers?

To what extent do you think that your company have been able to communicate what your services include to your consumers?

Do you feel that there is a misconception regarding your services? (If yes, what?)

How do you work towards increasing the knowledge of your digital services with in the markets that you are currently in?

Technical capabilities:
How do your company work with technical enablers for your services (in terms of e.g. web design and “server-side”?

How is the organization structured around the technical part of your operations (e.g. if you have teams dedicated to certain areas)?

How important is the website functionalities for creating value for consumers? Do you have a team running it?

To what extent do you think your technology resources give you a competitive advantage?

Organization:
Has there been any difficulties implementing a digital service in the company to staff members? If yes, why?

What are the main differences (if any) when it comes to attitude towards digitalized care from the staff in the different markets that you are currently in?

Does the staff go through any type of training to learn how to use the platform?
If yes, what are the main points of focus of the training?

Is there a need for different technical training of staff in the different markets that you are currently in? If yes, why do you think that is the case?

External environment:
Do you experience that the Swedish regulatory system currently supporting digital healthcare solutions?

Is there anything that can be improved? If yes, what could be improved?

Do you experience that there is an adequate privacy protection policy in the healthcare industry, in Sweden, adapted to digitalized services?

How important do you feel that an appropriate regulatory and privacy protection system in place is for digital services?

How much do you experience differ between the international markets that you are currently in?

Would you consider regulatory and privacy protection systems important factors to take into consideration when expanding to international markets?

Is there an adequate technological infrastructure support in Sweden, which enables you to run your services smoothly? If no, what could be improved?

Are there any differences in the different markets that you are currently in? If yes, what are the main differences?

Would you consider infrastructure support an important factor to take into consideration when expanding to international markets?

To what extent is a governmental support for digitalized healthcare services an important factor for your business?

Would you consider governmental support for digitalized healthcare services an important factor to take into consideration when expanding to international markets?

Financial Resources:
Did you have any difficulties acquiring financial support as a digital healthcare company? If yes, what kind?

What would you say are the main barriers telehealth companies need to overcome to attract funding?

Global Scope:
Which was the first market that your company internationalized to, and were there any reasons for it being that specific market?

Do you offer the same digital services in all of your international markets that you are currently in? If no, what are the main differences in the services that you are offering, and what would be the reason behind this?

In the markets that you have the same digital services (if any) have you had to adapt the implementation process? If yes, how have you adapted the process?

Do you experience any differences in attitude from customers regarding digital services in healthcare in the different markets that you are currently in? If yes, what would you say are the main reasons for that?

To what extent would you say that the attitude towards digital services in healthcare is an important factor to consider when expanding to new markets?

What would be a realistic internationalization process for your company, where would you geographically start and where do you see your company ending up in the long run?

How do you see on the level of competition in the Swedish market vs other markets in Europe?

Do you have long term goal of being a global firm?

Are there any restrictions of thinking global or is it a realistic goal for a digital healthcare company? Why/why not?

What would be some influencing factor regarding the decision to expand to international markets?

What would be some important factors to consider when searching for potential international markets?

Would you say that there any differences in the healthcare sectors of the international market when it comes to digitalizing services, compared to the Swedish market? If yes, what would some of those differences be?

Finally:
Which do you think are the main drivers behind digitalizing healthcare services?

Which do you think are the main barriers behind digitalizing healthcare services?

What would you say would be the main factors to consider when researching for potential new international markets?

What do you see as the main benefits digitalization of healthcare services can give to the healthcare industry?