

UNIVERSITY OF GOTHENBURG school of business, economics and law

Barriers to Employee Involvement in Incremental Innovation at the Swedish Public Healthcare Organizations

Erik Knutsson & Isak Lurie

Graduate school Master of Science in Innovation & Industrial Management Master of Science in international Business & Trade Supervisor: Evangelos Bourelos Spring 2021

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© Erik Knutsson & Isak Lurie School of Business, Economics and Law, University of Gothenburg Vasagatan 1 PO Box 695, 405 30 Gothenburg, Sweden

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Contact: gusknuerb@student.gu.se| gusluris@student.gu.se

Abstract

Background and purpose: As public organizations are politically governed, the organizations have traditionally been managed from a top-down perspective. Since knowledge intensive organizations have realized employees are the greatest assets, greater emphasis has been devoted towards increased employee empowerment and their ability to contribute to the development of organizations. As the Swedish regions have in their written mission statement that employees should be given the opportunity to contribute to incremental innovation and development, this thesis seeks to find out why this often is not the case, and to identify the main barriers.

Methodology: The primary data is collected through semi-structured interviews with innovation experts and employees who have experience of how the Swedish public healthcare works with innovation. The thesis is qualitative in its nature, and as respondents from six different Swedish regions were interviewed, it is a multiple case study.

Results: Examining the large amount of empirical data of this thesis, a number of barriers were identified which led to interesting conclusions related to employee inclusion in the Swedish public healthcare. In terms of innovation and development, the six Swedish regions discussed in this thesis, tended to dedicate resources towards innovations that demand great resources but not less resource demanding innovation, referred to in this thesis as incremental innovation. This created barriers to innovation in several areas; first of all, there is a perceived threshold for employees to innovate, as processes are designed for great inventions rather than organizational improvements. Although all types of innovation are important, the regions have largely neglected the potential of incremental innovations in the long run, that could be as important as dedicating resources to more radical innovations. Another interesting conclusion was the relative strength of the region of Jönköping with regards to encouraging employees to participate in innovation and development.

Keywords: Swedish regions, Public Healthcare, Incremental innovation, Employee Empowerment, Bottom-up innovation, Diffusion of innovation.

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Eikki

Erik Knutsson

Kahlye

Isak Lurie

List of Definitions and Abbreviations

Consultant Physician in healthcare organizations is a senior physician who is a specialist in one of more medical fields.

Diffusion of Innovation (DOI) theory consists of 5 different factors together affecting the spread of innovation as well as 4 elements or mediums in which the innovation will spread.

Incremental Innovation refers to innovations that consist of a sequence of many small improvements which are made to an organization's current products, methods or services.

New Public Management (NPM) are practices introduced in the public sector to make it more similar to the private sector.

Radical Innovation refers to innovations related to a new service, practice or product that revolutionizes existing ones and creates a new playing field.

Resident doctor is a doctor studying to become a specialist within a field of medicine.

Resource Based View (RBV) is a theory on how organizations can develop sustainable competitive advantage from its composition of resources.

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1. Introduction

This chapter presents a background to the subject of barriers to innovations as well as providing the reader with information on the Swedish public healthcare system. A problem discussion, purpose and research question as well as delimitations are also provided.

1.1 Background

With structural changes in demographics due to an aging population, healthcare throughout the Western world are facing challenges in terms of increasing numbers of patients as well as an increased share of chronically ill (Cohen, McDaniel, Crabtree, and Ruhe, 2004). At the same time, pressure has been put on politicians to reduce cost while increasing the quality of healthcare (Länsisalmi, Kivimäki, Aalto, and Ruoranen, 2006). To keep up with this, healthcare organizations are facing the challenging task of staying up-dated in an environment with a constant flow of new technologies and healthcare systems (Cohen et al., 2004). The Swedish public healthcare system is facing similar challenges and are currently working to improve the innovative capabilities of the organizations (SKR, 2021a). This thesis will therefore examine how six out of 21 Swedish regions, responsible for public healthcare, are working to promote employee involvement in innovation and development

A major criticism of today's research concerning improvement efforts in public healthcare in the literature, is that the prevailing innovation processes often fail to sustain impact (Länsisalmi et al., 2006). Previous research within the field has disproportionately focused on radical- or disruptive innovations within public healthcare and has tended to focus on innovation from a top-down approach and not employee-perspective. This could be explained partly by the fact that public healthcare is politically governed and large streams of research have therefore focused on policies to promote innovation (Essén and Lindblad, 2013). These radical innovations are often externally created and tend to require a more well-funded and planned innovation process. The main focus on innovation within the healthcare sector has emphasized the need for radical innovation as opposed to incremental innovation. However, studies such as Varkey, Horne and Bennet (2008), have stressed the importance of quality improvement and non-disruptive innovation, as they are

suggested to enable for an innovative culture which may also lead to disruptive innovations. Essén and Lindblad (2013) further highlights and looks closer at an alternative innovation process, using continuous invention and reinvention rather than a traditional sequential approach. The alternative processes have proven more effective in terms of employee inclusion- and encouragement. Furthermore, the study illustrates a more practise-driven innovation process in which ideas and realization were spread and unpacked from within the organization. This through self-organized processes that focused on re-arrangements of existing resources and processes rather than requiring new resources.

Finally, the subject of barriers to innovation has been a well-researched area in healthcare as well as other sectors. However, to the authors knowledge, previous research within the field has not focused on public health care in Sweden or examined innovation from an employee perspective. For this reason, the authors argue that this thesis can fill gaps in the existing area of research.

1.2 Public Healthcare in Sweden

The design of the Swedish healthcare system has largely been associated with the country's social welfare system and on a larger scale part of the *Nordic model* where values such as democratic participation and equity have been central (Martinussen and Magnussen, 2009). As their main mission, the 21 different Swedish regions are responsible for providing public healthcare to its citizens. For many years healthcare was managed exclusively by the public sector. Since the 1980's however, the introduction of New Public Management and the dissolvement of the monopoly has seen the introduction of new private actors. Private actors may participate for contracts from the public sector which has been especially observed in primary healthcare (Martinussen and Magnussen, 2009). In terms of financing, 85% of the Swedish healthcare system is government financed and 15% by households paying various fees (SCB, 2018). Thus, the Swedish taxpayers are a major stakeholder in the Swedish healthcare. Since many western economies are experiencing demographic changes as people tend to live longer due to progressions and developments in healthcare, government expenses in Sweden for healthcare services have increased during the last centuries. The healthcare sector is also an important employer with some 1,3 million Swedes working within the industry (SCB, 2016). The importance of a well-

functioning healthcare for modern societies have been underlined with the ongoing pandemic and the employees are an important stakeholder to ensure well-functioning services.

The Swedish region is an administrative division where the country is divided into 21 different regions. The regions replaced the previous system of county councils or *landsting*. The region's main responsibility is providing healthcare, public transportation, culture, as well as growth and development for its citizens (SKR, 2020). The regions are politically governed by elected representatives in the regional councils, or *regionfullmäktige*. There is no central authority controlling the regions, thus they work independent from each other, for example with innovation (SKR, 2020). For this thesis, six different regions were examined. That is, Västra Götaland, Örebro, Värmland, Stockholm, Västmanland and Jönköping.

1.3 Defining Innovation

According to Northeastern University in Boston (Aislyn, 2015), incremental innovation is described as a sequence of many small improvements which are made to an organization's current products, methods or services. Although incremental innovation often relates to technological innovations, Esén and Lindblad (2013) argue a more practice driven and incremental change process will in the long run have power to transform healthcare systems fundamentally. Therefore, it is up to the governing body of the organization to acknowledge and facilitate such innovation processes at a micro-level. As opposed to incremental innovation, there are various definitions such as disruptive- or radical innovation, they all relate to a new service, practice or product that revolutionizes existing ones and creates a new playing field (Aislyn, 2015). For this thesis, radical innovation will be used as opposed to incremental innovation as it is more time- and resource consuming than incremental innovation.

All public organizations in Sweden have to comply with the law on public procurement, or *lagen om offentlig upphandling* (LoU) (Upphandlingsmyndigheten, 2021). As radical innovation may be more complicated to implement than incremental innovation, incremental innovations may not be concerned with LoU to the same extent. Thus, for this thesis, the main focus will be on incremental innovation within Swedish public healthcare.

1.4 Barriers to Innovation

Barriers to innovation are any barriers that hinder innovation from occurring. There exists somewhat of a consensus among researchers about characteristics and aspects that are important in order for organizations to be innovative, for example, cross-organizational collaboration, acceptance of failure and a willingness to do things differently (Harvard Business review, 2019). A lot of organizations are struggling to create such an atmosphere because of various barriers. Barriers may be legal, financial or simply that there is not time enough. To give a more concrete example from the healthcare sector, in a study published in 2006, some 100 successful innovations within the British National Healthcare service were analyzed where the barrier to innovation that was most frequently mentioned was employees being *reluctant to embrace new ways of working* (National Accounting Office, 2006).

1.5 Problem Discussion

This thesis will investigate barriers for employee involvement in innovation within the Swedish regions and is written in a collaboration with the Canadian Multinational Corporation CGI. The most significant part of the Swedish regions' responsibility is to provide healthcare to its inhabitants, therefore this thesis will focus on the public healthcare sector. All of the Swedish regions have in their written mission statement that all employees should be given the opportunity to contribute to innovation. However, from working experience with many of the Swedish regions, the head of innovation at CGI, Martin Högenberg, argues this is not the case (Zoom-meeting 21.01.23). Therefore, the company wishes to get a deeper understanding of the challenges in creating a more efficient and inclusive innovation process in Swedish public healthcare.

For many organizations and especially knowledge intensive ones such as healthcare, the employees and their knowledge are the greatest assets (Lev, Fiegenbaum and Shoham 2008). Researchers such as Turkmenoglu (2011) have argued that making use of employee knowledge gives employees a sense of empowerment. As people will be able to influence their workplace, they are more likely to perform well and increase overall performance of the organization. Consequently, with a low rate of employee empowerment, there is a greater risk of organizations losing ambitious employees to other organizations. For public organizations in Sweden this is

arguably important since employees often have the possibility to increase their salary if they switch to a private employer (Vårdförbundet, 2021). As public organizations are politically governed the management style has usually been top-down. This has affected the view on innovation which has tended to focus on research projects or radical innovation, rather than incremental innovation and employee participation. Researchers with a bottom-up perspective on public organizations have argued that emphasizing incremental innovation is favourable for the employees as it has the potential to democratize innovation (Sorensen and Torfing, 2012). However, this is not the case in many of the Swedish regions today, where employee participation in innovation and organizational development is generally low. As a large proportion of healthcare in Sweden is tax-funded by the citizens, everyone paying tax is a stakeholder within the healthcare sector. It is arguably of everyone's interest that regions stay innovative and attractive as an employer to ensure the best possible healthcare for its citizens. With this as a starting point, the central issue for this thesis is how to promote employee participation in innovation within the Swedish public healthcare.

1.6 Purpose & Research Question

The purpose of this thesis is to discover barriers to employees contributing to innovation for healthcare within the Swedish regions. Many of the Swedish regions have recently decided to make innovation a prioritized field, it is therefore also of interest to investigate how the organizations are working to improve their innovative capabilities. As the purpose of this thesis is to investigate in detail how public healthcare organizations can best scale up employee innovation, the insights from this research will be an important part of developing and defining processes for CGI's global virtual innovation center. However, insights can also be helpful for the regions to ensure a greater understanding of how to include employees in the innovation process. The case will also contribute with the opportunity to concretize our research question and be able to work more investigative.

- What are the main barriers for increased employee involvement in incremental innovations at Swedish public healthcare organizations?

1.7 Delimitations

This thesis aims to explore barriers for employees participating in incremental innovations in the Swedish public healthcare. The Swedish regions are responsible to provide healthcare, culture, public transportation and to strengthen the regions' growth and development. Healthcare constitutes for the lion share of the regions' mission and therefore, this thesis is investigating barriers in the Swedish public healthcare. To clarify for the reader, when Swedish regions are mentioned in this thesis, it implies innovation within public healthcare, never public transportation or culture.

As this thesis draws conclusions from six out of the 21 regions, the results of this study may not be applicable to all Swedish regions. To clarify for the reader, this paper will use the term *region* but only refer to the part of the region that provides healthcare.

To investigate the subject of this thesis, a multiple case study has been set up. Twelve respondents from a total of six different regions have been interviewed. However, due to closer ties with experts and end-users in Västra Götaland, a larger proportion of respondents have had links to this region. Furthermore, experts and end-users that have been interviewed from different regions have various backgrounds in terms of knowledge and experiences. Therefore, it is important to have in mind that the aim of this study is to provide an exploratory and investigative approach to the research questions rather than to provide a comparative analysis.

1.8 Disposition

This thesis consists of six different chapters, as can be observed in figure 1 below. The chapter that follows consists of a *literature review* which is divided into three different parts. The first part explains important definitions. The second part presents 4 different theoretical concepts, and the third part looks into relevant literature within the field. The next chapter is the *methodology*, consisting of the research strategy, design and method as well as data analysis and quality. The fourth chapter is where the *empirical* findings are presented, divided after four themes. In the with chapter, the analysis will take place based on empirical findings and the theoretical framework. The last chapter is the *conclusion* where the research question will be answered as well as suggestions for future research.

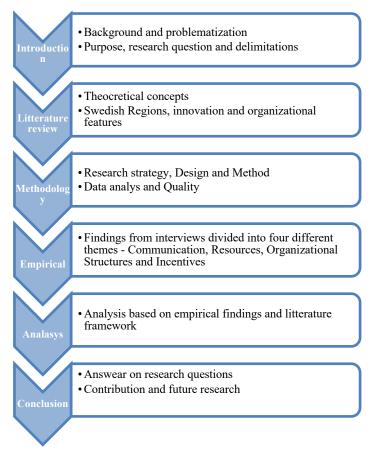


Figure 1. Disposition

2. Literature Review

The literature review will examine relevant literature regarding innovation, healthcare and the Swedish regions. A short explanation of theories used and their relevance to the subject will be presented as well as definitions of pertinent concepts. The review will be divided into two sections, the first presents relevant theories in the fields of innovation, management and culture and the second section will provide relevant literature on organizational features within public healthcare, the Swedish regions, innovation, employee empowerment and cross- and interorganizational learning.

2.2 Theoretical Concepts

In this section, relevant theories will be explained shortly, followed by a motivation for their relevance to this topic. First, bottom up-innovation within the public

2.2.1 Bottom-up Innovation within the Public Sector

Innovation within the public sector has historically been characterized by a top-down perspective rather than bottom-up. The most widespread explanation for this is the political governance of public organizations (Hartley, 2005; Walker, 2006). Another issue is the fact that research within medicine has primarily focused on quantitative innovation and results that are quantifiable and explicit knowledge. Whereas bottom-up innovation is related to qualitative innovation and tacit knowledge (Arundel, et al., 2015).

To overcome issues related to top-down management, New Public Management (NPM) became increasingly popular in many countries during the 1980's. The purpose was to transfer power from politicians to managers, by providing new tools for management to use innovation for efficiency-increasing reasons. However, as argued by Hartley, Sorensen and Torfing, (2013) NPM has decreased incentives for knowledge transfer across organizations and consequently lead to new barriers to innovation. Failures with implementing certain mechanisms within NPM such as incentive systems, competing markets and shifts of power from politicians, has created a room for new governance methods to develop such as organizational entrepreneurship which promotes bottom-up innovation. Bottom-up innovation within the public sector signifies the inclusion of

managers, employees and systems that are created to promote innovation between agencies and sharing of knowledge in order for good practices to be adopted across organizations (Hartley 2005). As part of bottom-up innovation, Sorensen and Torfing (2012) suggests management should draw more attention to managers, front line staff and even private business through a *governance network method*. As another integral part of bottom-up innovation Christensen and Lagreid (2007) discuss similar methods where public organizations innovate through *networked governance*, this implies public agencies may collaborate with non-government organizations where expertise from the private sector may be applied as well.

The bottom-up innovation-theorem is relevant to this topic since the primary stakeholder of interest in this thesis is the employee and how they could be enabled to contribute to innovation and development. As the focal-organizations have a history of top-down management, viewing the organization from the employee perspective, that is, bottom-up, could provide fruitful insights to barriers and opportunities to employees being able to contribute more effectively to innovation.

2.2.2 Resource Based View in Public Organizations

The Resource Based View (RBV) introduced by Barney (1991), states that an organization's competitive advantage is created by combining a set of internal strategic resources. Assuming resources are heterogeneously spread across organizations as well as being consistent over time, the theory seeks to explain the relationship between the composition of resources and sustained competitive advantage.

Although the RBV initial focus was on private corporations, the literature has also been applied to public organizations as discussed by Szymaniec-Mlicka (2014). There it is described how public organizations share certain traits, as they are politically governed, they are often more turbulent from a management perspective, and stakeholder relations are often more complex than in private organizations. Borne and Meier (2009) argue that the external environment which public organizations face makes management and decision making more complex, which in turn affects organizational performance. Therefore, the authors argue applying the RBV on public medical organizations is appropriate to better understand the level of efficiency within the organization, as the internal organization has to respond to a complex external environment. This is underlined by

Perrot (2008), who states that in turbulent environments it is essential for organizations to improve their capability. This in order to create strategies allowing for improved management practices and more rapid response to change. Other aspects of the RBV in public organizations have been given by M.F Waterhouse (1992) who emphasizes the importance of leadership in a turbulent environment. Managers are argued to be more than supervisors or controllers, as they ought to take on the role of gardeners as well. Gardening implies managing the human resources, resources that ought to be developed and cared for. Furthermore, Lev, Fiegenbaum and Shoham (2008) discusses how the most essential resource for organizations operating in turbulent environment in itself may create opportunities to improve the absorptive capacity, as potential needs to be realized in such an environment. If this is achieved, the organization is suggested to improve its overall performance.

Applying the RBV on public organizations when analyzing how to promote employee innovation is argued to be of interest as the theory shows the importance of public organizations making use of, and encouraging employees to share- and develop ideas, and for these ideas to be absorbed into the organization. This could improve organizational performance as more improvements are made and it could also empower employees.

2.2.3 National Culture and its Effect on Innovation

As discussed by Arundel, Casali and Hollanders (2015), national cultural differences may have effects on potential for innovation in the public healthcare sector. Hofstede (2011) has created an analytical tool for comparison of national cultures using four different dimensions for country comparison where each country receives a score ranging from zero to 100. The different dimensions are individualism versus collectivism, masculinity versus femininity, uncertainty avoidance and power distance. Authors such as Steenkamp, Hofstede and Wedel (1999), Rosenbusch, Brinckmann, Bausch (2011) and Kaasa and Vadi (2010), have found various indicators of innovation, such as the readiness of individuals to purchase innovative products, innovative yield of firms and number of patents filed per capita, to be correlated with Hofstede's four dimensions. Innovation is stated to be positively related with individualism but negatively correlated with uncertainty avoidance, masculinity and power distance. Individualism is suggested

to improve the probability of individuals seeking new solutions and paths which increases the level of innovative activity. Inversely, high levels of uncertainty avoidance will have the expected outcome of less individuals being able to develop original ideas. In societies with high levels of masculinity it is anticipated to reduce the will to collaborate and in a hierarchical society, characterized by a high level of power distance, information sharing within organizations will be limited (Kaasa and Vadi, 2013).

As the case study focuses on the public healthcare in Sweden, it is important to outline what is characteristic for Sweden. In terms of individualism, Sweden scores relatively high (71) which according to Hofstede (2021) signifies an individualistic society and as mentioned above, is positively correlated with innovation. In terms of masculinity, Sweden is rather characterized as a feminist society with a low score of 5. A feminist society is characterized by inclusion, flexibility for individuals in terms of work life-balance, and management focusing on including individuals. As masculinity is negatively correlated with innovation, a low score is favorable in terms of innovative capability. Regarding power distance Sweden receives a low score of 31, concrete evidence of this is how Swedish organizations tend to be hierarchical for convenience only, individuals are empowered and relations between managers and employees are informal. The low level of power distance is also suggested to be favorable in terms of innovative capability. Uncertainty avoidance is also negatively correlated with innovation and for this parameter Sweden receives a low score (29), indicating there are not many measures taken to avoid uncertainty. In concrete terms, rules are not implemented if they are not considered necessary, hard work is conducted when needed but not as symbolic gestures and people are not reluctant to innovate or find new solutions. (Hofstede, 2021).

As national healthcare is governed by politicians, signs of national culture may be even more visible as argued by Avby, Kjellström and Andersson Bäck, (2019) where the *Nordic Model* is defined as a common framework for the Scandinavian countries and an important part of the welfare idea. Essential characteristics of the Nordic model are ideas of inclusion as well as safety and quality are prioritized before profit.

The Hofstede analysis is relevant to this thesis because it provides the reader with a greater contextual understanding. Barriers and opportunities presented in this thesis may be culturally specific to Sweden and it is therefore important to exhibit what cultural characteristics that are specific to Sweden.

2.2.4 Diffusion of Innovation

Diffusion of Innovation (DOI) theory seeks to explain and identify factors which affect the spread of innovation within an organization or another social system. As a lack of these factors will have a negative impact on the spread of an innovation, these factors will be an important tool in order to assess and identify various barriers of innovations within the Swedish healthcare sector as well as overcoming these barriers. DOI theory seeks to explain the adaptation of a new idea through a specific group or a social system. The theory explains how, why and at what rate innovation is being spread (Rogers, 2003). The framework consists of two different fields which explains the spread of innovation and will be relevant for this paper. Firstly, five factors which all affect the spread of innovation, as observed in table 1. Secondly, four elements in which an innovation is being spread. Within a social system, these elements will work as a medium for innovations to spread. The elements can be found in table 2.

Roger's Five Factors Affecting the Spread of Innovation			
Factors	Description		
Relatively advantage	Is the degree that users consider the new innovation to be better than the previous one in which it has replaced. The new innovation requires strengths that the previous idea or product did not have. These strengths could be divided into factors such as economic benefits, social prestige or satisfaction and convenience. The more advantageous an innovation is considered to be, the faster the adoption will take place.		
Compaility	Is to what degree the innovation fits with existing values, experiences and needs of the user. An innovation that does not align with the values or norms of a social system will not adapt as rapidly as an innovation that is more compatible. The adoption of an innovation that is not compatible often requires prior adoptions of whole new value systems, which normally is a relatively slow process.		
Complexibility	Is to what degree an innovation is easy to use and how difficult it is to understand. Some innovations are undeniably easier to understand which will speed up the process.		
Trialability	Explains to what extent an innovation can be experimented with and tested. Before adoption it has to be committed by the user.		
Observability	Explains to what degree the result or the use of a product can be observed by the mass. In order for the mass to adapt to innovation, the idea or the product must provide tangible result.		

Table 1. Five factors affecting the spread of Innovation (Rogers, 2003).

The second field in diffusion theory, are the four main elements; innovation, communication channels, time and the social system. This is, "diffusion is the process by which an *innovation* is *communicated* through certain *channels* over *time* among the members of a *social system*." (Rogers, 2003)

Roger's Four Elements of Innovation		
Elements	Description	
The innovation itself	The first element in the DOI, is the innovation itself. A practice, idea or an object can be regarded as an innovation if it can be perceived as new by a unit or an individual. It does not matter if an idea is not objectively new and the newness determined by the user's reaction to it. Therefore, the newness of an innovation is not only decided by the newness of knowledge on which the innovation is based., but also on how the innovation is perceived by others.	
Communication Channels	In order for the diffusion process to take place, an innovation is dependent on communication channels. This is the second element of diffusion. A communication channel can be seen as the medium through which an innovation is being spread for an individual to another. Mass media is normally the most efficient and rapid way to inform the audience of potential users of a new innovation. However, interpersonal communication is more effective when it comes to persuading and getting individuals to acknowledge new ideas.	
Time	The third element in the diffusion process is time. The time dimension is involved in the diffusion process in three different ways. Firstly, the time it takes from an individual first acquiring knowledge of an innovation till the time it takes to decide to either reject or adopt the innovation. Secondly, the time dimension matters when comparing the time required for a unit or an individual to adapt to an innovation relative to other members of the system. At last, the time it takes for an innovation to adapt within a social system such as a hospital.	
The Social System	The fourth and last element of diffusion is the <i>social system</i> in which innovation is being spread. Rogers (2003) defines a social system as a set of units that together are engaged in a joint problem solving in order to overcome a common problem. These units can be individuals, organizations, informal groups and sub systems. The boundaries of a social system are defined as the units in which innovation is being spread.	

Table 2. The Four elements of DOI (Rogers, 2003).

The DOI-theory is relevant to this thesis because it helps the authors to identify barriers to innovations. Examining the regions from the DOI-perspective can help to recognize if important elements or factors are not in place within the Swedish regions. If elements or factors are not in place or working well, that could guide the researchers to detect barriers to increased employee participation in incremental innovation.

2.3 Swedish Regions, Innovation and Organizational Features

In this section, previous literature within the field of innovation in public healthcare organizations, as well as organizational literature related to the subject will be presented.

2.3.1 Innovation within the Swedish Public Healthcare

As all the Swedish regions are separate entities there is no central coordinating authority when it comes to innovation, thus all regions are free to structure this function in their own manner. Since 2010 there has however been a number of regions collaborating on joint initiatives referred to as *Innovationsslussen* and *Testbäddar*. It started in the regions of Skåne, Stockholm, Uppsala, Västerbotten, Västra Götaland and Östergötland, and the projects were financed by the government agency Vinnova (Socialstyrelsen, 2017). Other regions have since created similar initiatives such as *Innovationssluss 2.0* which is a collaborative initiative between the regions Västmanland and Örebro, and the region of Värmland has created their own version called *Vivan*. The project had the ambition to facilitate employees and external companies to contribute to innovation within the regions, an ambition which has been shared by *Innovationssluss 2.0* and *Vivan*. The innovation programs provide coaching for employees with ideas and provide guidance in how to set up a company in order for employees to bring products or services to the market (Region Värmland, 2019: NIVO, 2021). Similar for all the different initiatives is their focus on radical innovations or innovations that require funding and the need to set up a company, i.e. not what this thesis defines as incremental innovation.

2.3.2 Previous Research on Barriers to Innovation in Swedish Public Healthcare

In a report from Socialstyrelsen (2017), the state authority responsible for knowledge development within healthcare in Sweden, a survey was conducted to discover what the major barriers to innovation within the Swedish healthcare system were. As no distinctions were made in the study between radical- and incremental innovation, many of the barriers were related to both types of innovation, as can be observed in table 3. The greatest barrier according to the study was the lack of resources and knowledge on methods to promote innovation. Since benefits were unclear, issues on innovation were not prioritized and financial resources were lacking in many regions. Other important barriers related to this thesis were weak leadership with low knowledge in innovation,

lack of willingness among employees to implement improvements as they are weary of the workplace, lack of knowledge and time to realize ideas as well as not knowing where to bring forward ideas.

Overview of barriers to innovation in health and care			
Themes	Description		
Lack of resources, and knowledge about the value to work with methods	Resources are lacking as the benefits are unclear, long- term funding is lacking, no priority basis		
Legislation and organization - lack of coordination and downpipe processes	"Downpipes" at all levels (assignments, agreements, instruments, budget, compensation), the border country belongs to no, professional boundaries, long decision paths		
Ignorant, weak and detail controlling leadership	Decision makers do not know the business, take political considerations, lack of systems thinking and overview		
Barriers to new technology, new methods, knowledge and working methods to come into healthcare	Long procurement processes, standards and interoperability is lacking, earmarked resources for lack of innovation, unclear decision-making mandate		
Lack of need insight to be able to offer value to the patient	Needs analysis and objectives are lacking, customer satisfaction or the value of new methods are not measured		
Inefficient IT infrastructure, does not support all actors nationally	National infrastructure not for everyone, unclear defined interface, unclear about standards		
Lack of use of knowledge medically, organizationally, methodologically	Inadequate collaboration between academia and internship / profession, innovation projects are run without prior knowledge of innovation and digitization		
Lack of will (entrepreneurship) to introduce improvements	People who are tired of their workplace long ago, colleagues who do not take the time		
Lack of knowledge and resource support for to realize ideas	Do not know where to turn with ideas, difficult and cumbersome to seek funding		
Difficulty maintaining focus on patient-safe care	As a caregiver, cope with lack of resources without losing focus on the patient's best interests		
Get merit paths within the profession which is valued	There are almost no career paths for staff who do not want to become managers		

Table 3. Barriers to innovation in healthcare (Socialstyrelsen, 2017).

2.3.3 Best Practice Innovation in Swedish Healthcare

The healthcare in the Swedish region of Jönköping is internationally recognized as having a best practice in terms of innovation and development (Avby et al., 2019). One of the most important success factors as defined by the authors were managers dedicated to innovation, driving innovation forward, encouraging new behavior and ensuring innovations are creating meaning. Furthermore, it is argued that the absorptive capacity of an organization as well as being visionary is important if the unit is going to implement new innovations.

Another important factor brought forward was the increased collaboration between different stakeholders. As an example, a primary healthcare unit made agreements with fitness centers which were used for certain patient groups as a preventive measure. These were patients that were likely to seek medical care in the future for lifestyle related diseases. As assistant nurses were responsible for the program, they liberated time from physicians to deal with other patients instead (Avby et al., 2019). As some innovations increased the capacity of a number of primary health care units by new innovations, such as working in multi-competent teams and creating new platforms for collaboration with new actors, the units experienced how employee perception of the workplace became increasingly attractive. By increasing the number of patients treated, and offering high quality care for all, employees felt as if they contributed to values of social justice. The interchange between different groups created disruptions and made employees question routines and created an environment where thinking outside the box was encouraged (Avby et al., 2019).

2.3.4 Employee Empowerment

With today's competitive landscape, any organization within any sector, is striving to become faster and more resource efficient in order to provide the best possible service. According to Turkmenoglu (2011) empowerment refers to managers sharing their power and authorization to make decisions with employees and is one of the most important factors for organizations to reach these goals. Gkorezis and Petridou (2008) argues that the only way an organization can survive in a competitive landscape is by having proactive and collaborative workers, sharing the objectives of the organization. This is according to Turkmenoglu (2011) extra important in industries with a high rate of human interaction, and that empowerment is an efficient way to increase satisfaction and job performance among employees. Furthermore, Lawler, Mohrman and Benson (2001) argues that allowing employees to come up with new and innovative ideas will have a positive impact on organizational development.

In terms of the innovative benefits of empowerment, Relations (2008) argues that one of the greatest advantages of increased freedom and empowerment of employees is the increased variety of ideas. According to the author, the increased variety of ideas can simply be explained by a greater number of participants. Except for creating a broader variety of ideas, Turkmenoglu (2011)

argues that empowerment will lead to reduction of managerial cost. This as the role of managers decreased with employees taking over some of the responsibilities. Due to this, organizations with a high rate of empowerment exploited their resources in a more efficient way. Literature on employee empowerment is relevant to this thesis as it brings up the potential of increased employee involvement and can help to provide important insights for this thesis.

2.3.5 Cross- and Interorganizational Learning

As was observed in the Jönköping-study above, cross-organizational learning can be an effective way to develop organizations. Cross-organizational learning is an established field within management research as argued by Wilson and Hartung (2015). In the article, the emergence of cross-organizational learning through informal meetings such as "knowledge jams" and "world cafés" are also discussed. These are forums where new perspectives are added when solving problems for profit and non-profit organizations. The expected benefits with such knowledge jams are manifold; "increases in knowledge sharing and creation, problem-finding and -solving and interpersonal connectivity" (Wilson and Hartung, 2015). Apart from that, a more abstract benefit is the development of cognitive complexity, where participants become more sophisticated in formulating problems, observing causality, weighing solutions and engaging in system thinking.

An issue that often arises whether it is cross- or inter organizational learning is the issue of knowledge protection versus knowledge sharing. In a study from Shu-Mi Yang, Shih-Chieh Fang, Shyh-Rong Fang, Chia-Hui Chou (2013) the authors discuss how knowledge sharing and knowledge protection do not have to be mutually exclusive, but rather they can work simultaneously. To cope both with the cognitive distance between units as well the potential conflict of interest in the exchange of information they conceptualize four "procedural mechanisms" to handle this. These are *experience sharing, shared interpretation, reciprocal investment* and *hostage arrangement*. For this thesis, the mechanisms above are relevant to examine for Swedish public organizations as they could improve sharing of good practices and understanding between units.

The benefits of increased inter-organizational learning are discussed in an article by Jakobsen and Andersen (2012). There it is argued that if employees perceive the support from the organization, that support will increase employee motivation and willingness to contribute to the organization. This is important for this thesis to examine as perceived support or encouragement for employees could affect willingness to contribute to innovation and development.

3. Methodology

This chapter will explain the structure of the method for this essay and provide an overview of how the research of this study has been conducted. In this part, research methods, research design and specific methods will be described.

3.1 Research Design

Given the collaboration with CGI, a discussion with the sponsors from the company guided us to a research question within the topic of employee innovation, barriers to innovate and public healthcare. Thereafter, a literature review was conducted. This phase was important in order to get familiar with common keywords and to build an understanding of the various fields of relevant research. The keywords can be observed below in table 2. Once the literature review was considered sufficient to provide for an understanding of the topic, the phase of interviewing was initiated. After all interviews were completed and transcribed, the process of thematization and searching for patterns began. From the insights, four themes were constructed and under each theme the different barriers were listed, as can be observed in table 5. The barriers in the table were presented in-depth in the empirical chapter. The same structure was used to visualize the analysis for the reader where impacts and connections to theory for the identified barriers were added. The analysis then laid the cornerstone for the last chapter, that is, conclusions, where the most important findings and learnings from this thesis were summarized.

To address the research question of this thesis, a multiple case study has been selected as the research design. Opponents and critics to case studies often argue that the result from a multiple case study should not be generalized into other cases as each case is unique, hence generalization of a multiple case study may lead to false insights (Bell, Bryman and Harley, 2019). As the respondents represented six different regions, it is not possible to generalize conclusions for all 21 Swedish regions. Furthermore, Lee, Collier, Cullen (2007) argues that the strength of a multiple case study lies in particularization rather than generalization. However, Flyvbjerg (2006), argues it to be a misconception that a case study cannot be generalized and that in-depth case studies may provide for more concrete, context dependent learning. This is in line with the objective of this

thesis, as the ambition is to visualize how six of the Swedish regions work to promote employee involvement in innovation and development, from an employee perspective.

3.2 Research Strategy

In order to address the topic of innovation and development within public healthcare, a qualitative research method will be used. A qualitative way of viewing the world as a contrast to natural science models, is acknowledging the fact that humans are dependent on social- and contextual factors that natural science models cannot capture. For example, all Swedish regions have implemented formal procedures on how to work with innovation but for several regions (SKR, 2021a). However, from discussions with Martin Högenberg at CGI, employees were often not aware they existed (Zoom-meeting 21.01.23). For this reason, it is arguably interesting to examine our subject through a qualitative lens, to discover what barriers exist for increased employee participation within public healthcare in Sweden (Bell et al, 2019). As innovation within public healthcare is usually driven politically from a top-down perspective, examining employees' attitudes, and perception of innovation from a bottom-down perspective could provide important insights. The advantage of a qualitative research method is that it is investigative and probing, this will be useful when only a sample of Swedish regions. Further, a qualitative research method will provide a foundation to investigate, gather and understand detailed information within the Swedish public healthcare system (Bell et al, 2019).

In this thesis, abductive reasoning will be used as a method. Abductive reasoning is closely linked to inductive reasoning, where both can be used for explorative reasoning and are created to make logical inferences about the world (Bell et al., 2019). Abductive reasoning starts with an identified surprising notion, which theory cannot explain, and then seeks to describe it. For this thesis, the surprising notion occurred in a discussion with CGI, where it was discovered that all Swedish regions have in their written mission statement that all employees should be given the opportunity to contribute to innovation and development. As CGI from experience with working with different regions argued this was not the case, and there seemed to be a lack of research addressing the topic, this became the surprising notion for this thesis. This issue led to the research question of trying to identify reasons behind the low degree of employee involvement in innovation and development (SKR, 2015). Abductive reasoning specifically looks at cause and effect which involves seeking

for a probable explanation from what you know. Therefore, abductive reasoning has played a key role in providing a more logical, but yet creative approach to the problem. As it is important to understand how to overcome barriers to increased employee participation within public healthcare, it is essential to comprehend the background of those barriers. Since abductive reasoning involves selecting the most appropriate explanation among many, there is a risk of bias and researchers seeking for findings to confirm with pre-understandings. When it comes to public healthcare, prejudices are common as it is a highly debated topic in society which have recently been observed with e.g the ongoing debate on digital healthcare and the hospital of Karolinska in Stockholm (DN, 2021) (SVD, 2021). Alvesson and Kärreman (2007) argue researchers ought to acknowledge the constant dialogue between retrieved data and pre-understandings. This is necessary in order to stay open to surprises in data and to ensure data is not simply verifying previous perceptions of subjects.

3.3 Research Method

The empirical data selected for this research will consist of both primary- and secondary data. Primary data collection will refer to the data that will be collected specifically for this research aim in terms of conducted interviews with experts and employees within public healthcare. Secondary data collection refers to data that is collected from previous research in the field.

3.3.1 Secondary Data Collection

The secondary data consists of former research in terms of articles collected from sources online. In order to collect this data, the databases *Google scholar* and *Super Search*, provided by the University of Gothenburg, have been used applying terms and keywords that can be linked to the topic of this thesis. The data retrieved from databases were mainly articles and book chapters focusing on innovation within public healthcare on a global-, and Swedish level. Furthermore, specific information regarding the Swedish regions has been important to enable for a deeper understanding how Swedish regions are working with innovation today, and what the innovation process looks like within public healthcare. For this purpose, reports from public authorities, facts from innovation departments within the regions have been used. To illustrate the regional differences for the reader, demographic data has been gathered from the authority responsible for official statistics, *Statistiska Centralbyrån* (SCB), which will be presented in the empirical chapter.

As a method for collecting relevant research, a narrative literature review has been used. Since a narrative literature review does not provide any clear rules for the exclusion and inclusion criteria of studies, the method tends to provide a more wide-ranging scoop (Baumeister and Prinstein, 2013). The approach for this thesis is inductive, thus, a narrative literature review will be more suitable as it allows the authors to gain new impressions of the Swedish public health care gradually.

A review of the most commonly used keywords within the topic was done to ensure that relevant literature was not overlooked. A majority of the articles in different databases were found using a combination of the different keywords seen in table 4 below. Some articles were also found by examining literature reviews of relevant articles.

Keywords				
Barriers of innovation	Innovation barriers			
Innovation barriers	Innovation + Healthcare			
Bottom-up Innovation	• Barriers + Innovation + Healthcare			
Diffusion of innovation	• Innovation Barriers + Public organizations			
Best practice innovation	• Innovation + Public healthcare + Sweden			
Innovative culture AND Swedish regions	Leadership			
Healthcare reform	Culture and climate for innovation			
Primary care	Practice features			

Table 4. Keywords for literature review.

3.3.2 Primary Data Collection

In qualitative research where semi-structured interviews are more frequently used, the primary intention is to let the respondent make his or her own interpretation of the questions. The ambition is not to have the respondent discuss all questions chronologically, but rather to strive for validity or reliability (Bell et al, 2019). The benefits of a semi-structured data collection are the possibility to prepare the interview ahead of time but at the same time allowing for a flexible approach of conducting the interviews. Before conducting the interviews, two different interview guides were constructed, one for experts and the other for employees. Pilot interviews were undertaken to test the relevance of the interview guide and allow for corrections to be made. This is suggested by

Bell et al., (2019) as questions that are not understood or answered should become apparent and can be removed or reformulated.

As the employees, such as doctors and nurses, were not working with innovation on a daily basis, the pilot interviews discovered the need for better information prior to the interview. Therefore, the interviewed employees were given a more detailed background of the subject but did not have a preview of the questions. Since a semi-structured interview seeks to reveal unexpected answers and the respondent to talk freely, a preview of the questions could pose the risk of respondents being too steered to follow the interview guide (Bell et al., 2019). Regarding the experts, pilot interviews did not discover a need for improved information prior to the interview since general knowledge of the subject seemed sufficient.

In order to obtain relevant contacts, personal networks were used. Contacts were also initiated through regional websites as well as CGI providing relevant people to interview. To avoid issues of biases, the respondents which were provided by CGI were not aware or involved in the development of the digital innovation center. Some interviews were cancelled due to the respondents' lack of relevant knowledge within the subject, but in most cases relevant information was obtained. The phase of interviewing, transcribing and constructing the empirical section was performed simultaneously as respondents accepted invitations gradually, this was helpful as it enabled an iterative process to take place where the interview guide could be improved if new insights were gained in an interview.

Twelve different interviews have been conducted with twelve different respondents seen in table 5. To gain as many insights as possible, the aim was to conduct interviews with people with various knowledge and background, but all having experience from the field of innovation and public healthcare. Of the twelve interviews, eight were experts in the field of innovation. Five experts were employed by the regions working as innovation coaches and three were external experts such as consultants and researchers working towards one or more of the Swedish regions. Four of the interviews were conducted with employees of the region handling daily operations within public healthcare, such as physicians, nurses and managers.

3.3.2.1 Respondent Selection

When selecting the respondents, the main criteria for inclusion was that employees and experts should have had experience from innovation processes and development within one of the Swedish regions. The experts all worked with innovation as their main profession, the main criteria for including an expert or not, was related to if work experience was within incremental innovation, and subsequently excluded if experience was more related to radical innovation. When selecting the group of employees, the main criteria was if the employee had experience of driving- or trying to drive a process of innovation at their workplace and were generally described to have a certain desire and drive to improve their workplace. For this reason, the respondents selected among employees are by no means argued to be the average employee in the Swedish regions. Answers in the employee category could have been different if employees were selected randomly, however for this thesis it was necessary that respondents had some prior experience of innovation and driving these processes.

Respondent	Nr.	Title/experience	Date & duration	Location	Language
Innovation Experts					
CGI region expert	Expert 1	Expert in digital services for healthcare.	Date: 2021.02.05 Duration: 27 minutes.	Sweden	Swedish
Communication consultant	Expert 2	Educating doctors in communication at the Sahlgrenska University hospital Also experience from working to increase equality in healthcare.	Date: 2021.02.10. Duration: 44 minutes.	Sweden	Swedish
VGR Innovation coach	Expert 3	Background as assistant nurse, currently working as an innovation coach for VGR.	Date: 2021.02.25 Duration: 43 minutes.	Sweden	Swedish
SU Phd Researcher	Expert 4	Phd in pedagogy, have conducted studies on innovation in the region of Jönköping.	Date: 2021.02.26. Duration: 35 minutes.	Sweden	Swedish
Region Värmland Innovation manager	Expert 5	Background as a nurse, working experience +10 years with innovation and more recently at an Innovationssluss as leader of development.	Date: 2021.03.01. Duration: 44 minutes.	Sweden	Swedish
Örebro regions län Innovation Coach	Expert 6	Operations manager & Innovation coach at Region Örebro Län.	Date: 2021.03.11. Duration: 24 minutes.	Sweden	Swedish
Innovation expert Karolinska	Expert 7	Head of the department for innovation support and business collaborations at the innovation site at Karolinska.	Date: 2021.03.12. Duration: 31 minutes.	Sweden	Swedish
Oru holding	Expert 8	Innovation advisor / business developer at ORU Holdings.	Date: 2021.03.03. Duration: 28 minutes.	Sweden	Swedish
End users					

Hematology Nurse	Nurse 1	Nurse with work experience in the hematology department at VGR. Recently started to work for a private actor in primary healthcare.	Date: 2021.02.18 Duration: 28 minutes.	Sweden	Swedish
Physician	Physician 1	Specialist in internal medicine, cardiology and upcoming general practitioner. Work experience from public and private healthcare.	Date: 2021.02.18 Duration: 36 minutes	Sweden	English
Psychiatry Nurse	Nurse 2	Nurse with work experience from foremost psychiatry. 5-6 years at Östra sjukhuset and 1- year prior at Sahlgrenska.	Date: 2021.03.02 Duration: 25 minutes.	Sweden	Swedish
Department Manager	Manager 1	Operation manager at Hjälpcentrum, a provider of wheelchairs and other tools for patients.	Date: 2021.03.29 Duration: 55 minutes.	Sweden	Swedish

Table 5. List of respondents.

3.3.2.2 Interview Settings

Due to the prevailing circumstances with the Covid-19 pandemic during the spring of 2021, most of the interviews have been conducted via video meeting. With digital meetings comes advantages of not being limited by geographical distance to respondents. Therefore, digital meeting applications such as Zoom, Skype and Microsoft Teams have been important tools as respondents from several Swedish regions could be included for this thesis. Compared to regular phone calls, digital meetings have the benefit of giving the researcher the possibility of picking up more subtle signals such as body language that is easily missed using only audio. Benefits with digital meeting platforms are also the possibility to record both video and audio, which was an advantage in the transcription process. However, disadvantages were the risk of connection-issues which was experienced with some respondents, causing problems in the process of transcribing. Furthermore, as Bell et al., (2019) describes, there is an increased risk of respondents not showing up to a digital interview than a physical interview. This was experienced on a number of occasions where meetings had to be rescheduled or sometimes never took place.

3.3.2.3 Transcription Process

Since the interviews were held via digital meeting platforms such as Zoom, Skype and Microsoft Teams, the interviews were recorded with both video and audio. After transcribing all interviews, they were transferred into NEXT, a digital innovation tool provided by CGI, in which the interviews were analyzed, and findings were highlighted. In this process, the highlighted findings were translated from Swedish to English except for the interview with Physician 1, as the respondent's native language was English. This raises the issue of translating, as cultural

backgrounds and lack of knowledge in English may affect the translations and change the signification of quotes and paraphrases. To reduce this risk, a Swedish national who has lived and worked in the United Kingdom during a period of ten years and is fluent in both languages verified quotes and paraphrases.

3.4 Data Analysis

A suitable method for analyzing data is of great importance in research, considering how large amounts of data quickly can become difficult to comprehend, and therefore also to draw conclusions from (Bell et al., 2019).

3.4.1 Thematic Analysis

In order to handle the large amount of collected data, a thematic approach was applied where the findings were categorized and divided into different themes. A thematic analysis approach provides the researcher with a flexible tool to navigate and handle a variety of qualitative data (Bell et al, 2019). As suggested by Nowell, Norris, White, and Moules, (2017) themes were identified by searching to identify repetitions in the data, metaphors and analogies as well as similarities and differences. For this task, the software NEXT was used which made it possible to structure the data and to put different tags and colors on selected parts of the transcribed interviews. The different tags represented the various barriers identified which were categorized under different themes. Through an iterative process, the tags and categories were revised in several rounds where the researchers looked for similarities. The thematic analysis resulted in four different themes which laid a construct for the empirical-, analysis- and conclusion chapters. The thematic process was iterative, and the material was thoroughly analyzed to ensure that no important findings were overlooked.

When data has been collected, the phase of analyzing and coding is important albeit there are some concerns raised by Bell et al., (2019) when applying a thematic data analysis. As thematic analysis involves coding and searching for patterns, there is a risk that the context is forgotten as well as researchers filtering out data that could have been valuable. To reduce these risks the authors made sure to conduct the transcribing in direct relation to each interview as well as using a limited

number of respondents. This was also made to make sure the thematic analysis of data would not later provide a barrier to the analysis of the empirical data.

3.5 Research Quality

According to (Bell et al, 2019) the most important aspects in the evaluation of business and management research is reliability and validity. In the following sections these elements of research quality will be discussed in relation to this thesis.

3.5.1 Reliability

Reliability can be divided into external- and internal reliability, according to Bell et al., (2019). External reliability refers to the degree to which a study can be replicated. To address this issue, the aim in this thesis has been to provide transparency in every step of the process. However, in qualitative research issues of replicability and bias are always debatable, as personal views and prejudice may inflict on how interview guides are constructed. Another issue associated with qualitative research is the difficulty to re-create a social setting. As Bell et al., (2019) discuss the impossibility to replicate a social setting, whilst the role of the researcher may be replicated, a description of the digital interview method and the role of the researchers have been outlined below.

Due to the Covid-19 pandemic, the interviews were all digital meetings. Therefore, it was never possible to visit any of the different departments of healthcare in the regions. Thus, findings that could only have been experienced by being at the physical location such as atmosphere, organizational culture, and informal institutions have not been observed which could have contributed to findings. Furthermore, all but one out of the 12 conducted interviews were held in Swedish. After transcribing, every important insight was picked out and gathered. These findings were then translated from Swedish to English. In the translation process there is always a risk of giving a different meaning to the respondents' answers as similar words in English may carry different connotations. To deal with this issue, both of the authors have together verified the translation as well as an external part with a deep level of understanding in both languages. Internal reliability addresses concerns related to more than one researcher confirming findings from empirical findings. As this thesis has focused on barriers to innovation, a strong barrier indicates greater reliability and thus a stronger argument and vice versa. As this thesis was written by two authors, findings on barriers have been discussed and confirmed by both parties. According to Bell et al., (2019) this increases the level of reliability as the greater number of researchers involved confirming findings, the greater the inter-observer consistency. Furthermore, to limit issues of reliability, interviews were carried out until they provided similar findings and no surprising results were discovered. Therefore, the internal reliability of this thesis is reasoned to be strong.

3.5.3 Validity

In order to be considered as trustworthy, the answers need to reach a certain level of validity. Validity is divided into internal- and external validity (Bell et al., 2019). Internal validity seeks to examine if the findings of the researchers are in line with the theoretical concepts they develop. As engagement with a social group is suggested to lead to conformity between observations and concepts, a critique could be the fact that this is a master thesis, the relatively short period of time spent examining the subject may be considered a weakness in terms of validity. However, for every interview conducted, a greater understanding of the swedish regions has been achieved and its connections to theoretical concepts. For example, before each interview presentations and small talks took place where respondents often described the workplace in other aspects than those related to this thesis. This contributed to a greater understanding of the Swedish regions and also differences among them.

External validity concerns the degree to which findings can be generalized into the real world. As this research is qualitative, there are always concerns of generalizability. Therefore, some nuances and descriptions of the respondents will be brought up, to provide transparency. Twelve respondents were interviewed with work experience from at least one out of the six regions described earlier. These are regions with different characteristics in terms of demographics and number of employees. Furthermore, some regions were more represented than others, for this reason the issue of cross-comparability needs to be addressed, as suggested by Bell et al, (2019). Hence, it is argued that since all Swedish regions have similarities in terms of mission, finance,

regulations and being politically governed (SKR, 2021b), it is possible to make comparisons. Some of the regional differences were discussed in interviews with the ambition of rather than treating all regions similarly, trying to enlighten any variations in barriers depending on organizational size and demographics. However, it is important to remember that a qualitative research approach cannot ensure the same level of validity as a quantitative study as the response will differ depending on respondents and social setting, and results have not been statistically confirmed. (Bell et al, 2019).

4. Empirical Data

In the following sections, a description of respondents will be presented followed by a section on regional characteristics of the six Swedish regions. Thereafter, the main findings from the interviews will be presented below each theme.

4.1 Swedish Regions - Experts & Employees

In the following section, findings from interviews with four employees and eight experts. Respondents were labeled experts if they worked externally or internally with innovation and development for the Swedish regions. Employees working internally with daily operations such as physicians, nurses and department managers were labeled employees. Please see table 3 in 3.3.2 for more detailed information. As described previously, different interview guides were used for experts and employees, as perspective and knowledge within the field of innovation differed.

4.2 Regional Differences

For this thesis, experts or employees from six different Swedish regions were interviewed which differed in terms of organizational size and scope. To illustrate the differences please see table 6. The statistics are provided to demonstrate differences in organizational size, in terms of employees and inhabitants the respective regions provide services for.

The region of Stockholm is one of the smallest regions in the country in terms of geographical size but the largest in terms of population size, followed by the region of Västra Götaland which has a higher number of employees than the region Stockholm but fewer citizens (SCB, 2020). The region of Jönköping is the 6th largest region in Sweden in terms of population size, and the region employs some 10.000 people. In the region of Örebro approximately 300.000 inhabitants are situated and have similar characteristics as the regions of Jönköping in terms of employees and geographical size. The region of Västmanland is one of the smallest regions in Sweden, and for this thesis the regions with the lowest number of employees and citizens. The region of Värmlands is the least densely populated region in this thesis with approximately 16 inhabitants per square kilometer (SCB, 2020) (Länsstyrelsen, 2021).

Region	Jönköping	Västmanland	Västra Götaland	Stockholm	Värmland	Örebro
Employees	10,000	7,100	55,000	45,000	8,200	9000
Citizens	342,000	270,000	1,600,000	2,000,000	283,000	305,200
Geographical size (Sq.km)	10,436	5,117	23,800	6,514	17,519	8,504

Table 6. Regional statistics. Source: SCB (2020), Region Värmland (2019), VGR, (2016) Region Jönköping, (2020), (Regionfakta, 2020)

As organizational size and scope of mission provides different challenges, the region of Stockholm is a larger organization in terms of employees and the scope of its mission is larger than the region of Västmanland, the smallest region according to the three variables in table 4. This needs to be taken into account when drawing conclusions, but the different regional characteristics may also provide interesting insights which would not have been possible if only smaller- or larger regions would have been examined.

4.3 Barriers

As the thesis seeks to answer what are the main barriers to increased employee participation in incremental innovation and development, these barriers will be presented below. Each barrier has been assigned a theme which can be observed below in table 7 and will be presented accordingly.

Themes	Major Findings/Barriers				
Communication	 Lack of forums to discuss innovation. Lack of common language when discussing innovation. Too much focus on radical innovation and not incremental. Long processes cause employees to lose desire to develop 				
Resources	 Lack of time Employees not having access to digital tools required for an innovation process. Allocation of resources - No funds for innovation 				
Organizational structures	 Lack of cross- and inter organizational learning Large, complex organizations. Conservative leadership and hierarchy 				
Incentives	 Employees do not feel as if they have anything to gain by innovating, it will only increase their workload Expectations to deliver quantifiable and measurable results 				

Table 7. Themes and barriers.

4.3.1 Communication

Throughout the interviews, concerns about how communication issues can work as barriers to innovation was often mentioned. A major part of the respondents was arguing that there was a lack of informal- and formal forums to discuss innovation from an employee's perspective. Nurse 1 discussed the lack of informal forums: "*While I worked for the region, doctors and nurses ate separately, now at my new workplace we all eat together which gives us the opportunity to discuss the daily operation in a casual way.*" This view was not shared by everyone, however, many respondents pointed out that some parts of public healthcare are still dealing with conservative structures and a high level of hierarchy which hampers communication. In terms of formal forums to bring up suggestions concerning improvements and innovation, tools for collecting ideas were

lacking. Some respondents argued that departments had formal structures for innovation but were inconsistent and failed to communicate the importance and goals of innovation to all employees. For example, Expert 3 described how the VGR-region used a formula at the intranet where employees could forward ideas and stated this was an established channel to collect ideas from employees. However, none of the employees which were interviewed from the same region were familiar with this.

Another important insight was a perceived gap in semantics between the word's employees used regarding innovation and the words used by the innovation department. Both employees and experts expressed that many employees in the region did not consider innovation as part of their work and the term *innovation* was considered difficult and vague. However, when concepts such as organizational development and constant improvements were used, the level of commitment and understanding increased among employees. While sometimes discussing the same issue, there is a tendency for innovation experts to use buzzwords which can create barriers for those less familiar with the subject.

Both the region of Västmanlands and the region of Jönköping used PDSA-cycle (Plan-Do-Study-Act), a four staged problem-solving model in order to carry out change. However, the extent to which the regions used it differed. In the Västmanlands region, only managers were educated on the PDSA-cycle, something that Manager 1 argued could hinder innovation. Furthermore, it seems regions have a tendency to be inconsistent with the improvement models they are using. Manager 1 explains "*These models are changing depending on different trends, each time, we have to learn something new and time and resources are consumed to implement a new model. In the end, they are pretty much the same*". The region of Jönköping on the other hand, has maintained the PDSA-wheel for a longer period of time and all employees throughout the region were educated and familiar with the improvement model. Expert 4 discussed how the region of Jönköping has had the same regional director for several years, the director has also had a long-term plan for innovation in the region. This was one of the reasons argued by Expert 4 and Manager 1, why the region of Jönköping was at the forefront of employee innovation. Therefore, it appears that creating a common language is important to create access to innovation for employees.

When it comes to the communicated goals of innovation, the interviews revealed a strong focus on radical-rather than incremental innovations. It was clear that the departments supporting innovation for employee innovation across the different regions were structured in a similar way. The purpose was to support employees with knowledge, time and resources in the innovation process. As explained by Expert 3 however, the process was mainly designed to support radicalrather than incremental innovations. The focus was often on developing completely new products, with processes lasting several years before a final product or service was finalized. Furthermore, it was discovered that the main contributions from innovation departments were allocation of funding, expertise in market analysis, patent analysis and to provide knowledge and guidance in different regulatory systems. Therefore, it seems most regions discussed in this thesis prioritize radical innovation when communicating innovation towards the employees.

Another communication barrier which was identified was that employees seem to be discouraged by long innovation processes. This was mentioned by Expert 3, stating innovation processes are often spanning over several years. As employees seem to lose desire to develop and work with innovation, since it is expected to consume a lot of time, the question of being transparent or not with the innovation process was questioned. Expert 5 described how the region of Värmland worked with only disclosing one step at a time of the innovation process, to ensure employees continued the development of ideas. *"They wouldn't wanna know how much work there is in the end, but it's good that we don't share that information right away. It is incredibly hard work, this is something they have to grow into"*. Thus, how the innovation process is communicated to employees and what parts that are disclosed is a barrier but could also be an opportunity to increase employee participation in innovation and development.

4.3.2 Resources

In terms of resources, time was the resource mentioned most frequently as a barrier to increased employee participation in innovation and development. Among employees there was a strong awareness of the fact that time is money, and time is a scarce resource. The reason behind seemed to be a strong sense of responsibility to make the most use of public resources. When asked if time to develop her idea, rather than economic compensation, would be enough for her to encourage her to develop an idea, Nurse 2 responded "*yes that would have felt nice but in practice that is the*

same as money". This was a recurring opinion mentioned by several experts and all employees. There seems to be an established notion that no matter where you work in public healthcare, you are always given too little time to perform your duties. Although time is often a scarce resource, Nurse 1, who instantly responded to time as the greatest barrier to innovation, later reflected on when she worked at a department for cancer patients. "Now when I come to think about it we usually had very little to do during afternoons so at that time you would have had time to address issues or improvements". In other words, when scratching the surface some cases proved there were possibilities. As there are large differences depending on what department and what type of care is offered, time could be liberated or used in another way to enable employee ideas to be shared. Nurse 2 described how she used to work as a day care nurse which had more of an administrative role among the nurses. In that role she reasoned she would have had time to check in with colleagues, collect ideas and work to bring them forward. Another issue which was brought up was that if ideas are to be brought forward, a computer or smartphone would be necessary. But as most nurses and doctors did not have their own computer or phone at work, but rather a number of shared computers for a department, which was another resource-barrier identified.

Another barrier detected were allocation issues. As the public healthcare is funded almost entirely by taxpayers and patient fees they have to comply with different rules and regulations, compared to private companies. As stated by Expert 7 "private companies often set aside 5-10% of their asset turnover for innovation and development but this we cannot do in public organizations outside of the innovation department. If your department is expected to conduct X number of cardiological operations you only get funds for that, not to innovate". Thus, it may be difficult to prioritize innovation and development if there is no room for it in the budget. However, the regions are dedicating resources to innovation, albeit in most cases not outside of the innovation. The most common way to support employee innovation coaches that often are former employees with experience from driving innovation projects. The innovation department is where employees can turn if they have an idea they want to take further. Except for knowledge and support in the innovation projects. Depending on the test center, it can be all from funding, freeing up time for

the innovator or providing a workplace. However, one of the most important features of the testing centers according to a majority of the experts, was to provide a testing environment.

4.3.3 Organizational Structures

Another theme which was created were barriers related to the organizational structures of the Swedish regions. Throughout the interviews, there seemed to be a general lack of cross- and interorganizational learnings in public healthcare. Nurse 2 described how her department did not have a sufficient waste management system, as different materials were not recycled. As she brought forward this idea, she described how it became clear that there were no shared practices within the organization, and she did not know where to turn. This made her feel discouraged and, in the end, she continued to do as the department always had done. However, Expert 4 mentioned a few examples where primary healthcare units in Jönköping had meetings with different organizations such as insurance companies to receive new perspectives and ideas, but also how different departments within the same organization could learn from each other.

Among the interviewed employees, no doctors, nurses or department managers had any formal- or informal meetings with other departments or organizations. In one case Nurse 2, when asked if she had any regular meetings with colleagues from other departments answered, "*I know some of my colleagues that do it which are very chatty, but I don't have time for that*". With the exception of Jönköping, no respondent mentioned incentives or encouragement for cross- or interorganizational learnings. As seen in the quote of Nurse 2, there seemed to be little or no understanding or encouragement for employees to blend with other departments.

Another reflection was made by Expert 2 who supervised a resident physician. The expert described how normally inter-organizational meetings would involve resident physicians within the same region, and this could be problematic as physicians often were in a competing situation. However, the Covid-19 pandemic had accelerated the use of digital tools and as a consequence, seminars with resident physicians from different regions had been initiated. The physician had described he felt more relaxed when he could discuss issues with physicians in a similar position that were not in a competing situation. The acceleration of digital use was also described by Expert

3, where she described how there previously was a skeptical and conservative attitude towards the use of digital tools and how this had shifted.

The size of the organization was also considered an important barrier. Expert 2 discussed how innovation becomes more difficult and complex in larger regions since the innovation department might be more dispersed, "in these large organizations where you might have 1000-2000 employees in offices all over the town, you do not get these recurring situations by the coffee machines where you share ideas". However, simply being a smaller organization does not seem to guarantee increased employee involvement in innovation and development. This was discussed by Manager 1 when comparing the region of Jönköping to Västmanland: "If you look at Jönköping for example, they are a smaller region but they have been consistent with their PDSA-wheel. This has been possible as the region has had the same director for many years now with a long-term plan. We have had the same PDSA-wheel, LEAN, and other similar systems. They are all similar and I don't think it really matters which one you go for, but you should work more long term". Expert 2, discussed how the proximity of innovation departments in smaller regions could facilitate innovation, influencing the organization rather than working as a separate entity. He suggested that shared offices could enable relation building that would connect the innovation department to other departments within the regions, and this occurred to a greater extent in smaller regions. However, although proximity to other parts of the organization might be important, the larger regions could dedicate greater resources to innovation as e.g. one of the smaller regions discussed in this thesis only had one employee working full time with innovation. In other words, from our interviews the size of the regions provides different challenges and opportunities but size in itself does not guarantee organizations that promote employee participation in innovation and development.

Another barrier discovered through the interviews were organizational barriers linked to leadership. The first barrier identified related to leadership is that managers are not prioritizing employee participation in innovation. As this is generally not an issue addressed by senior management, department managers are not having great incentives to promote employee participation in innovation and development, nor are they given budgets to let employees take time from normal duties. The picture became more complex during the interviews as both employees and experts described that managers nevertheless play a key role and have great influence on innovation. This became evident when interviewing Expert 3, who worked as an innovation coach. She described how an employee that has an idea and wishes to drive the idea forward will always need permission from their manager. If an employee is facing reluctance from that person's manager, the innovation department may not overrule the manager's decision, and this has occurred on several occasions. This is where a conflict of interest became evident, as the manager's primary task is to ensure the department takes care of its patients, not to promote employee involvement in innovation. An employee wishing to drive ideas forward needs to set time aside from their normal activities, thus an employee wishing to innovate or develop the department may be considered disturbing, not doing what they are supposed to.

The second barrier linked to leadership is defined as conservative leadership and hierarchy. This may differ depending on the facility, and type of care provided. What was discovered during the interviews was that predominantly in hospitals, and especially in departments which were perceived as more prestigious, department managers were mostly consultants with long experience from working as physicians. Expert 2 described how resident physicians, that is, physicians which were studying to become specialists, were afraid to bring ideas forward due to the risk of being perceived as annoying. Since the consultants had a lot of power, resident physicians were concerned that negative reputation could hamper future career possibilities. He described his view on managers often being consultants, *"these physicians learn from university that they are almighty gods and sometimes it is not in their interest to question each other but rather to keep each other's back"*.

Connecting leadership to hierarchy, Physician 1 underlined the relevance of this barrier as the respondent described how different professions never blended, doctors eating with doctors and nurses with nurses. Physician 1 with work experience from two of the largest hospitals in the region of Västra Götaland, described that leadership at his new employer, a primary healthcare unit, was very different. Professionals would blend more in informal meetings, and it was expected that different professions would share views in formal forums. At the hospitals which Physician 1 had worked described how in formal meetings, staff did not openly share ideas on improvements or processes that were not working well as they were afraid of being left alone or as he put it: "*no*

one wants to be the squeaky wheel". After meetings he described how "then everyone while walking back to the department talked about the problems they would have liked to discuss but did not dare to bring up".

4.3.4 Incentives

In terms of incentives, both employees and experts described how they felt there was no real encouragement from management for employees to be innovative. Nurse 2 described how programs of continuous improvements were introduced at her workplace but if an employee had an idea, she experienced that it was often met with skepticism or managers not paying attention. Apart from the region of Jönköping, there were no incentive mechanisms for managers to encourage innovation amongst employees, it was generally dependent on the interest of a manager. The region of Jönköping had created a system where managers received extra funding if they had encouraged employees to contribute to innovation and development. Expert 4 described the implementation: *"this was implemented in management programs all across the organization (the region of Jönköping) and if they don't do it, they will lose the funding for next year"*. This system was only discovered in the region of Jönköping and no similarities could be discovered for the other regions of this study.

Another issue related to incentives brought up by Nurse 2, was the question of "what's in it for me?". She explained:" I had a lot of ideas for improvement when I started to work after university, but then I started to feel an inertia within the organization. It became clear that there were no incentives for me as an employee to continue developing my ideas". Employees did not receive any type of recognition for ideas and there were no bonuses or similar incentives to promote employee contribution to innovation. Instead, she described how she lost the willingness to improve the workplace illustrated by one example where she had an idea that the department should improve waste management by not throwing plastics and metals in the same bin. This idea was brought forward, but she did not know who to contact and was forwarded to various departments. As a result, she lost the will to bring the project forward, since she did not get any time aside from her normal workload. In the end she lost the willingness to bring up ideas as she felt it would only increase her workload.

One more incentive issue identified throughout the interview was how the mentality in healthcare organizations are affected by the ideas of measurability and quantifiability linked to the natural science model. According to Expert 2, this was especially evident since ideas and projects where results will be qualitatively- rather than quantitatively measurable are difficult to drive forward. One example was a project that was set up in order to develop mobile dialysis machines. The new mobile dialysis machines were important for many dialysis patients since it made them less tied to hospital visits every week, instead, they could perform the dialysis at home. Expert 2 described:

"This was a project easy to implement since the effects were easily measured". However, when it was investigated how many patients were actually using these machines it was clear that female patients were more reluctant to use them. Due to sentiments such as "oh you know I am so bad with this new technology, it is better if I just go to the hospital and they do it correctly", whereas male patients seemed to have a higher interest and knowledge in new technology. When faced with questions of values and attitudes which are more difficult to measure, he describes how processes tend to stop as spreadsheets with low budgets become more apparent when management do not know how to argue for driving ideas forward. Another aspect of this issue is managers' fear of using funds and resources for ideas that are qualitative. This since it may create problems for them as innovation based on qualitative data is more difficult to provide rational arguments for. Expert 2 argued: "If a journalist from Uppdrag Granskning (Swedish television show) shows up and asks for evidence why you have done this and a manager says he or she felt the need to do this, they will respond - aha so you went for your gut feeling here?". As the organization is financed by taxpayers, all citizens are stakeholders and the organization are under another type of scrutiny than private organizations. This, he argues, may create barriers to encouraging innovation motivated by results that are qualitative rather than quantitative, as is often the case with incremental innovation. To overcome the issue of measurability with qualitative results, Expert 4 argued that this barrier may be overcome if management is able to be creative in measuring results. For example, she described how one primary healthcare unit identified a patient group which had the risk of creating lifestyle related diseases if they did not start to exercise. If they did start to exercise however, future visits to doctors could be avoided. For this reason, a collaboration was initiated with a fitness center nearby and the group received a lower membership fee because they visited the gym together. Responsible for the group was an assistant nurse which was more resource effective compared to the whole group visiting a physician. Since the relationship

between the program and avoidance of lifestyle related diseases could be difficult to prove with a quantitative measure, the measure of success focused on patients revisiting the healthcare unit or not.

Overall there seems to be different experiences among the respondents with regards to incentives to innovate for employees. However, all agreed that the incentive to be innovative was dependent on the manager. Some of the respondents had experienced how managers were encouraging, but then it relied on a personal interest in innovation from that manager, not an encouraging mechanism within the organization itself. This was with the exception of the region of Jönköping.

5. Analysis

The structure of this chapter will follow that of the empirical parts where each header represents a theme for a number of barriers to increased employee participation in incremental innovation and development. Each theme will subsequently be analyzed and discussed below.

5.1 Communication

The first issue connected to communication barriers was the lack of informal- and formal forums where ideas could develop and grow. For instance, in some departments it was common with remains of traditional stereotypes among employees. As doctors would eat and discuss with doctors and nurses with nurses, the different professions would rarely engage in informal meetings. Except for hierarchical structures being a factor inhibiting employees to communicate and share ideas with each other, several respondents had experienced that the healthcare sector was characterized by communication silos affecting the emergence of informal forums. In terms of formal forums to bring up suggestions, it was apparent that tools in order to collect ideas were lacking. To some extent, tools to gather ideas existed, however, as most employees did not know where to turn with a new idea, it can be argued that the regions failed to exploit these tools.

According to Rogers (2003) DOI-theory, there are four different elements that are necessary for innovations to spread. One of these are *communication channels*, which can be related to the perceived lack of forums to share ideas. In order for an innovation to spread within a social system, it is dependent on communication channels. In a hierarchical organization, communication flows in a more structured way from top to bottom (Hartley, 2005; Walker, 2006). However, for the employee, they will be more dependent on their nearest manager in order for their idea to spark. It is always a risk that ideas or suggestions stop at the nearest manager as this often represents the only natural communication channels within the organization. Thus, from the interviews it seemed that a hierarchical environment removes many of the natural forums and communication channels in an organization. With the NPM (New public management), governance of public organization was streamlined by dividing public organizations into smaller units. Even though such governance transferred power from politicians to managers and allowed for higher degree of efficiency within

the units, it also removed some of the communication channels for knowledge sharing between the many smaller units (Hartley, Sorensen, Torfing, 2013). Therefore, it can be argued that despite some important effects with NPM, some of the natural forums for bringing up innovation were removed. With this in mind, the organizational structure inhibits some of the natural communication channels.

In innovation, another communicational barrier identified in the empirical section was the lack of a common language when discussing innovation within the Swedish regions. As employees described how subjects related to innovation are often perceived as more complex than necessary. The issues of the supposed complexibility of the innovation process and how it hampers innovation can be connected to Rogers (2003) theory of innovation where the rate of complexibility affects the spread of innovation. This was discussed by Expert 5, while explaining how their innovation department did not reveal the entire innovation process for employees in the initial phase. This, as they were afraid that the complex innovation process, consisting often of six to eight stages, could discourage employees from participating in innovation. While conducting the interviews there was a clear difference between the group of experts and employees in terms of understanding. Experts who worked with innovation on a daily basis used professional language and expressions, while the employees who were nurses, managers and physicians did not understand, or became less engaged when expressions such as incremental- or radical innovation was used. If instead terms they were familiar with, such as organizational development was used, the level of complexity decreased, and respondents became more engaged in the subject. There seems to exist a linguistic gap between the innovation department and the rest of the organization regarding how people understand innovation and what terms and words that are used. Thus, it seems as if semantics and language may help to decrease the level of complexity which is in line with Rogers (2003), who argues that a high level of complexity is a hinder to innovation.

On the other hand, one region that stood out in the way they worked with employee innovation was the Region of Jönköping. As mentioned in the empirical section, all employees in the region had been educated in the PDSA improvement model. This resulted in what Expert 4 described as a common language. As all employees were trained with the model and therefore never became a model only for the innovation department or managers. Expert 4 described how nurses,

administrators etc. used buzzwords and expressions related to the PDSA-model on a daily basis, and the model was clearly institutionalized in the organization. Thus, using simplified language which all employees are familiar with could be one solution to overcoming the barriers of common language. Another solution could also be to train all employees to create a common language. However, educating employees and implementing a model throughout the whole organization is a resource intensive activity which requires more effort than adjusting the language on a lower level.

All the regions that are represented in this thesis have an internal innovation unit that works to support innovations in the organization (Socialstyrelsen, 2017). As presented in the empirical section, the main focus for these units was often to probe radical-, rather than incremental innovation projects. However, Varkey, Horne and Bennet (2008) and Länsisalmi, Kivimäki, Aalto and Ruoranen, (2006) stress the importance of incremental innovations and quality. The authors argue that several smaller, incremental innovations create a more innovative culture, which in turn will serve as a breeding ground for more radical innovations. If an organization only dedicates resources to radical innovations, it may miss opportunities to find and develop new solutions which require less resources. The benefits of prioritizing incremental- rather than radical innovations is also in line with the success in the region of Jönköping with its focus on incremental innovations and organizational development work. According to Expert 3, it is not always the radical ideas that are the best and Expert 5 claims that the best ideas for improvements often come from within the organization.

A couple of reflections were made as to why regional innovation departments tend to emphasize radical innovation. One was how some regions are trying to keep up with more innovative regions and companies, seeking shortcuts to greater innovations, and while doing so, tend to focus on innovations that are expensive and require lots of resources. Another reflection was how regions tended to have narrow definitions of what innovation was, and left out several important aspects of innovation, such as incremental innovation.

As many of the experts argued that long innovation processes made the employees lose the desire to contribute to innovation, it can be argued that another benefit with increased focus on incremental innovation, is that the innovation process will be shorter. Since the regional innovation experts often have a narrow definition of what innovation is, this affects what is communicated to the employees. As radical innovation requires greater resources than incremental innovation, employees may perceive a higher threshold to contribute to radical innovation. Therefore, it could be argued that the issue with long innovation processes and a low degree of employee participation could be achieved by promoting incremental innovation as it has the potential to be more inclusive. If more employees feel comfortable to bring up ideas that could also promote an innovative culture, as suggested by Benson (2001). This is also something argued by Manager 1, discussing the importance of creating an environment in which the employees feel safe to suggest improvements and come up with- and share new ideas.

To create a more innovative culture, it is important to include the employees early in the innovation process and enable for incremental innovation. In contrast to the traditional top-down way to structure innovation processes, Essén and Lindblad (2013) suggests an alternative approach to innovation, using a more practice driven approach unpacking changes from within the organization through continuous inventions and reinventions. As managers have great responsibility for organizational development, they too are responsible for promoting incremental innovation. However, from the interviews it seemed unclear who was responsible for promoting incremental innovation within the regions. Thus, it may not be the case of innovation departments having a too narrow definition of innovation, it is arguably positive that regions have departments prioritizing radical innovations, but rather that the recognition of incremental innovation and who is responsible is a barrier.

5.2 Resources

As the regions are public organizations, awareness among employees that resources are scarce and the perception that focus should be put on the daily operations might be a contributing factor for less inclusion in innovation among employees. Even though it differs between different departments, from the interviews, there seemed to be a general view that time is a scarce resource in public healthcare. As a result of this, innovative work is considered something less urgent, and has not been prioritized. A majority of the respondents argued that time was one of the main barriers for employee participation in public healthcare. However, none of the interviewees that worked in the daily operations was aware about the regions mission statement that every employee in the regions should be given the opportunity to contribute to innovation. Therefore, it is arguable that if the employees knew about the mission statement, innovative work would receive greater priority in terms of time.

Furthermore, despite a strong sense of time being a scarce resource, in some cases there were situations when schedules were not as rigid. As mentioned previously, Nurse 1 described time as a main barrier for employee participation in innovation. However, she also mentioned that during the afternoons the nurses usually had little to do. Similarly, Nurse 2 also described time as the main important barrier, while later in the interview describing how one nurse at her department every week was stand-by but also took part in general improvement work for the department. Illustrated by the examples above, but also from other interviews, it seemed almost institutionalized to describe time as one of the main barriers to increased employees participating in innovation. As discussed by Szymaniec-Mlicka (2014) when analyzing public organizations from the RBV, public organizations are characterized as turbulent and being constantly exposed to changes. This might contribute to employees experiencing time as a constantly scarce resource, as they may be preparing for future changes within the organization. Although the various departments had different prerequisites, it became clear from the interviews that the institutionalized perception of time being insufficient made people in the organization less observant to when their department actually had time.

Except for time, it was also clear that employees in many cases were lacking some important tools in order to develop their idea. For example, many employees did not have their work computers or phones. The most common way to find the help of the region's innovation departments was through the internal website and from there, employees were able to keep in touch with innovation experts. Therefore, it is reasonable to assume that the lack of access to a working computer or phone is one barrier to employee participation in innovation. This can also be connected to Rogers (2003) elements of innovation theory in which he discusses the importance of communication channels for ideas to spread, where a working phone or a computer is one of the main tools for collecting and sharing ideas in modern society.

The third barrier related to resources, is that of allocation issues with innovation in public health care. Although Swedish regions set aside funding for innovation departments such as the initiatives with Innovationsslussar (Socialstyrelsen, 2017), these tend to focus on more radical innovation that often requires employees to set up a new company, but not to nurture incremental innovation or encourage an innovative culture. One aspect of this was brought up by Expert 7, as he explained that departments received a budget to manage the tasks they are required to do, and not to innovate. He compared it to private companies which he argues have recognized the importance of innovation, and often set aside a percentage of yearly revenue, but this he argues the region has not recognized yet. The budget issue applied to five of the six regions considered for this thesis. However, one example of the opposite was found in the region of Jönköping. According to Avby et al., (2019) the region of Jönköping had implemented somewhat of an innovation-fund for all departments within the region. This fund is guaranteed to managers that can demonstrate that efforts have been made to promote innovation and development among employees. Expert 4 with experience from the region further developed the reasoning by stating that learnings on constant improvements are included in all management programs that the region offers and that the idea of constantly improving smaller parts will contribute more to an innovative culture, and this notion has been present in the region for a long period of time. Although the region of Jönköping has earmarked funding for encouraging employees to innovate, it remained unclear as to how managers' ability to include them was measured. This could be decisive in how well it is working but not something that this thesis will focus on.

As public organizations are tax-funded, the regions are facing high expectations on the use of public funds. This is, according to Expert 2, one of the reasons why allocation of resources to projects with less tangible results often are less prioritized. Taxpayers and other stakeholders such as the media are expecting measurable results and therefore, long term investments to include and educate employees in innovation have been neglected. According to Szymaniec-Mlicka (2014), in public organizations which are politically governed, the stakeholder relationship is often more complex than in private organizations. Therefore, resource allocation decisions in these organizations are often more intricate and open to controversy. Furthermore, Borne and Meier (2009) argue that a complex external environment affects the decision making and performance of

public organizations. Due to this, public organizations are sometimes expecting a lower level of efficiency as management and decision making becomes more complex.

As initiatives to promote incremental innovation often have fewer tangible benefits, it seems to be more difficult to allocate funding for such projects in the Swedish public health care today. However, it can be argued that a greater focus to support incremental innovation projects would provide more efficient resource allocation, as these types of projects are less resource intensive (Länsisalmi, Kivimäki, Aalto and Ruoranen, 2006). Since radical innovations often are more resource demanding, the regions only had capacity to manage a few projects at a time. For example, according to Expert 5 in the region of Värmland, the innovation department did not market themselves in order to reach more employees. This as they did not have resources to support more innovation projects than they already did. Increased focus on incremental innovation could potentially lead to greater involvement among employees, which in turn could contribute to a more innovative environment. From an employee perspective, one benefit of a more innovative organization is that employees could feel more satisfied with their jobs as they have more possibilities to influence their workplace, which is in line with Turkmenoglu (2011) discussions on employee empowerment.

A pattern that was discovered was how employees in some of the regions experience they do not have a voice. Respondents described how not being listened to and not being able to influence the workplace created a frustration which makes the most ambitious employees eventually switch to private health care due to higher salaries and greater recognition. Even though all respondents mentioned the frustration of feeling small in a large organization, several respondents also reflected that the regions provide great opportunities for further learnings. For example, nurses were often encouraged to become specialists, and on the job, training could also be offered as a reward for an employee. However, in many cases it seemed as if there was no plan on how the organization could exploit newly gained competencies. This was expressed by Nurse 1, when describing how she had studied to become a specialist and there was no real plan from the region to use that knowledge when she returned from her studies. As public health care is publicly funded, this is a central issue. It would be of most citizens' interest that funds for educating medical staff are allocated in the best possible manner. However, it seems the regions are generous in offering training, but newly acquired knowledge is not exploited to benefit patients within the public health care, as it is rather exploited by private actors. This suggests private actors can benefit from not having to cover the costs of employees taking time off for professional development but can profit from knowledge investments made by public healthcare. This pattern was discussed by both employees and experts during the interviews and concerned especially newly educated staff or employees which were described as ambitious and driven. Figenbaum and Shoham (2008) discusses how public organizations operate in a turbulent environment, as they are politically governed. And from the RBV, the most important resource for public organizations is the ability to absorb knowledge in this turbulent environment (Lev et al, 2008). This is an interesting notion as there are clear examples of regions not having great capacity to absorb knowledge from employees. A reflection made was that if the absorptive capacity is not increased, knowledge investments may face the risk of profiting private actors. If common practices were shared to a higher degree and employees were more encouraged to develop the organization this could benefit all stakeholders and would increase the organizations absorptive capacity. The authors of this thesis suggest that increased resource allocation towards incremental innovation could be one way of improving the absorptive capacity of the Swedish public healthcare system.

5.3 Organizational Structures

In terms of organizational structures, four different barriers were identified throughout the interviews. The first barrier discussed was the lack of cross- and inter organizational learning within the Swedish regions. There had been initiatives to implement cross-organizational learnings within the Swedish regions with initiatives such as *Innovationsslussar* (Socialstyrelsen, 2017), which among other things sought to connect the regions with private actors. However, this was mainly related to radical innovations, and the regions were represented by employees from the innovation department. Although cross-organizational learning has effects for inspiring learning and stimulating creativity (Wilson and Hartung, 2015), the interviews only showed one example of a region where employees from outside the innovation department were included. Expert 4 described how some primary healthcare units in Jönköping engaged in something similar to what

Wilson and Hartung (2015) described as *knowledge jams*, where medical staff was brought together with professionals from insurance companies and other sectors to discuss different issues and bring in different perspectives. Respondents with work experience from other regions argued that it could be difficult to engage in such learning projects due to sensibility of patient data. However, as was observed in Jönköping, more general problems were discussed when professionals were brought together and there was no need for any sharing of patient data with other professionals.

In the case of Jönköping cross-organizational learning, projects were made with primary healthcare units. From the interviews, it seemed easier for such organizations to engage in crossorganizational learning projects, since the smaller units had a greater degree of freedom to make decisions without including senior management. Furthermore, these cross-organizational knowledge jams were mostly for managers only, rather than the average employee. Therefore, it could be questioned if increased cross-organizational learning sessions with managers only will increase the potential for employees contributing to innovation and development? From the interviews there were several experts working with several regions that described Jönköping as innovative and affected by an entrepreneurial attitude, or what Expert 4 referred to as Gnosjöanda, which might also have contributed to the positive results in Jönköping. Another important aspect which will be discussed in more detail below, were the incentive structures that promoted managers to encourage employee participation in innovation and development. In other words, arranging knowledge jams for managers, or for employees, will not be a guarantee for great innovations if the organization itself is not open to new innovations. However, as several respondents have described how the environment in e.g. hospitals is not innovative in itself, since all procedures need to be predictable and consistent, bringing employees or managers to find new perspectives may help to create and spark a more innovative culture, as suggested by (Wilson and Hartung, 2015). Although managers may be the ones that participate that could have spill-over effects if learnings are shared and discussed with employees.

There is great potential for cross- and interorganizational learning events within the Swedish public healthcare. Hence, a disadvantage with so-called *knowledge jams* could be that they require great resources if the meetings are to be held in a physical place. On the other hand, throughout our

interview's respondents described how the Covid-19 pandemic has accelerated the use of digital tools and meetings. This could open for new opportunities for meetings across organizations and departments that would not require as great resources as prior to the pandemic. This was observed by Expert 2, describing how resident doctors had started with online seminars across regional borders. With that came benefits as the doctors had experiences from other regions and were not in a competing situation at the workplace.

The risk with organizations not engaging in cross- or interorganizational learnings is that units become isolated and ideas and practices are not shared across the organization. As an example, Nurse 2 described how she brought forward an idea of improved waste management, but she had nowhere else to go if the manager did not engage in the idea. Waste management is something that most departments in a hospital have to deal with but according to Nurse 2 there was no mechanism of inter-organizational sharing of such solutions. If similar ideas and practices were to be shared, they would arguably benefit several stakeholders such as employees, the environment and society at large. According to Rogers (2003), observability is one of five factors that affect the spread of innovation. It can be argued that cross- and inter-organizational learnings would allow for a higher degree of diffusion of ideas and practices, such as waste management systems. This thesis finds that most regions have a relatively high degree of *silo-thinking*, where practices are not shared across departments.

One reason behind the high degree of *silo-thinking* could be related to what Walker (2006) discusses around bottom-up innovation in the public sector. As the public sector has been characterized by top-down governance, most Swedish regions have separate departments for innovation where innovation is often related to research projects or focused on radical innovation, rather than including employee ideas in discussions of innovation. From the interviews, the impression from most regions is that innovation is already defined by someone higher up in the organization and something that does not concern the average employee. According to Hartley (2005) bottom up innovation within the public sector indicates managers and employees are included in innovation systems that work to promote innovation between agencies and the sharing of practices.

Regarding differences between smaller and larger regions some insights were made. Expert 2 described how employees with different professional backgrounds in smaller regions, were more likely to run into each other in common areas such as lunchrooms. There, ideas could be shared and discussed across departments, whereas in larger regions innovation department is often a large department in itself. As a consequence, there was no blend on a daily basis with other professionals and the innovation department became a silo within the region. However, there seemed to be a trade-off between different regions in terms of cross- and inter-organizational learnings. The larger regions dedicated greater resources to innovation but as the organizational learnings. In contrast, the smaller regions could have innovation departments with closer ties, and more meeting forums with other professionals. On the other hand, they experienced issues of limited resources being dedicated to innovation. As e.g. one of the smaller regions that is discussed in this thesis only had one employee working full time with innovation.

Rather than only focusing on more radical innovations, it seems the region of Jönköping is unique in the sense that they are implementing innovation into all parts of the organization. In all other regions' innovation was a separate department with for example *Innovationsslussar*, but in Jönköping innovation was integrated throughout the organization. Although processes for radical innovation are not something negative, theories such as Varkey, Horne and Bennet (2008) suggest many small improvements eventually lead to more radical innovations and more importantly, will nurture an innovative environment. From above mentioned literature, it seems as if most of the Swedish regions are preoccupied with promoting more radical innovation. In contrast, from the interviews in this thesis it seems Jönköping is putting theory into practice as observed by Avby et al., (2019).

Another barrier related to organizational structures is leadership. Throughout the interviews, it became clear that managers play a crucial role in encouraging employee participation in innovation and development. This, as managers usually must give their consent to employees taking time off normal duties to develop ideas. This applies both to ideas labeled as radical- or incremental innovations. The increased power of department managers is in line with Hartley, Sorensen, Torfing, (2013) as they present effects of the introduction of New Public Management (NPM)

within the public sector. As NPM sought to reduce Top-down management of public organizations, managers on local levels received greater power to make decisions. Expert 3 who worked as an innovation coach explained that if an employee has an idea for an innovation, the manager always has to approve that the employee can take time off from normal duties. Nurse 2 further explained that when she presented ideas, the process seemed arbitrary in terms of managers giving employees time and encouragement to develop their ideas. Expert 2 added how managers are usually Consultants, and that their main focus lies on medical practice rather than innovation. This is arguably problematic as generally, managers with no training in innovation have all the decision power when it comes to employee participation in innovation and development. Applying the RBV on management, M.F Waterhouse (1992) argues managers have an important role apart from supervising and controlling, which also is gardening. Gardening implies caring for the human resources which should be developed and recognized. From this perspective, encouraging employees to innovate and develop the workplace could be interpreted as part of the gardening function of a manager. The lack of managerial engagement for employee contribution to innovation was true for five of the six regions discussed in this thesis, with the exception of Jönköping. Some further possible explanations to why Jönköping stand out will be discussed under section 5.4.

Also related to leadership being a barrier to increased employee participation in innovation and development, is that of conservative leadership and hierarchy. Not only are managers having the decision power regarding employee participation in innovation, for most regions they also seem conservative and skeptical to changes. Expert 2 describes how many resident doctors are concerned with bringing up ideas to the manager because they are afraid to upset him or her. As the resident doctors rely on recommendations from consultants for future career possibilities, many remain silent, afraid that questioning processes or practices will have negative impacts for their career. Furthermore, Physician 1 discussed how hierarchy could be an important issue as employees often are afraid to bring up issues with managers. He also reflected on how many employees would feel more comfortable to bring up issues and ideas for improvements if it was possible to stay anonymous. From the interviews we could not generalize the conservative leadership to prevail across all parts of public healthcare within the regions, although it seemed more apparent in larger organizations such as hospitals.

Comparing the findings of this thesis with how Hofstede (2021) defines Sweden in terms of hierarchy, Sweden is described as a country where organizations are relatively flat, and hierarchy is only used for convenience. Physician 1, and Nurse 1 both describe how traditional hierarchies still prevail in the organization. For example, when faced with problems physicians and nurses usually turn to fellow professionals. Also, when dining, it was described how professions always ate separately. That the hierarchy inhibited the desire to share innovation was something that both End user 1 and End user 2 agreed upon. End user 2 argues: *"Hierarchy is definitely one of the biggest barriers for innovation. There are no particular forums where you can pick up those things and if you come to those forums then there is a reluctance to be the one that stands in front of the group. And that can be a professional or a social reason."* From the interviews, it is clear that a majority of the respondents experienced a strong hierarchical structure. However, argued by end user 4, even though the hierarchical structure hampers innovation in healthcare also plays an important role: *"I believe that healthcare is an organization that is right to be careful to not change things too quickly. It is a patient safety issue"*. Therefore, despite some negative effects, it is arguable that hierarchical structure in healthcare plays an important role.

Some sort of hierarchy is arguably necessary as healthcare demands processes and roles to be clear. Although the hierarchical findings were especially present in hospitals, they are important in terms of leadership. Having a low degree of knowledge exchange across professions due to traditional hierarchies could be problematic, as argued Kaasa (2013), discussing how in hierarchical organizations, information sharing will be limited, and different perspectives are not added in discussions. Increased focus on leadership, and managers' role could play an important role in encouraging such exchanges.

The reflection from the interviews is that in the case of hospitals, the level of hierarchy seems greater than the rest of society in Sweden if compared to Hofstede (2021). As mentioned earlier, hospitals and healthcare are particular in the sense that hierarchy enables for clarifying what is expected from everyone, and this is necessary. This could however create issues for the regions if they wish to keep employees at the workplace. Employees sensing that their organization is in disharmony with other organizations in the society could pose the risk of employees switching to

a new employer where they could face less hierarchy. Although hierarchy might be necessary at the operating table, it could be counteracted at formal- and informal meetings to encourage knowledge exchanges.

5.4 Incentives

The last theme is barriers connected to incentive issues. From the interviews, it became clear that there were incentive issues on several levels in the different Swedish regions. Both experts and employees described that there was no real encouragement for contributing to organizational development or innovation. On a management level, organizational development was a part of the work description, albeit formulated vaguely. For five of the six regions there were no incentive mechanisms discovered for managers to promote employee participation. However, Jönköping as one of the six regions worked with incentives in order to promote innovation. According to expert 4, this was one of the contributing factors in creating a greater commitment among managers to create an innovative atmosphere. The incentive-system used in the region of Jönköping seems to be in line with Lev et al., (2008) arguing that the most essential resource for public organizations is how well ability and knowledge is absorbed into the organization, as this is suggested to increase overall performance of the organization. As managers have such an imperative role in the innovation process for employees, which was discussed in the former section, an incentive system could make a number of matters clearer for managers with regards to innovation. First of all the key role they are actually playing for employee innovation, as this is not clearly manifested for five out of the six regions, the managers could arguably not be blamed for not doing something they are not instructed to do. Secondly, some managers will always be more inclined to encourage innovation than others but with an overarching incentive system the situation for employees becomes less arbitrary as innovation then does not become something that is promoted only if a manager is interested.

The incentive issue was also clear for employee participation in innovation at the different departments. As nurse 2 stated, "*what's in it for me?*" Where she described how she in the beginning of her career had a lot of ideas on how to contribute to the workplace. However, after realizing that employees did not receive any type of encouragement and support to go further with their ideas, she continued to do as they had always done at the department. As there in a majority

of the regions are no clear structures promoting employee involvement in innovation, it can be argued that the innovative environment will have to rely on how much the management of the current department are interested in fostering innovation. Therefore, with unclear goals and ideas on how to work with employee involvement in innovation along with the absence of incentives, it is likely to create uneven conditions for innovation across the organization. With a feeling of not being able to impact their workplace, there is a risk that innovation is perceived negatively, and employees will feel frustrated and powerless (Turkmenoglu, 2019). Furthermore, by implementing an incentive structure, which is suggested to result in greater employee engagement at the workplace, the author argues that there are several different benefits linked to employee empowerment. For example, high employee empowerment creates perception of quality awareness among employees which is suggested to result in better services. Besides, through employee empowerment, an organization is more likely to make efficient use of an organization's resources as employees to a greater extent complete tasks with increased responsibility (Turkmenoglu, 2019).

For employees who came up with more radical ideas and knew where to turn to were in most regions able to turn to an *Innovationssluss*. There, the employees were able to get support and guidance in areas such as patenting, market research, or the innovation process. However, as the regions are public organizations, the employees were not able to own his or her idea but instead it was a belonging of the region. Therefore, the employees that were coming up with an idea that had the potential to be commercialized, were not able to make any financial profit from it. According to expert 3, this was an incentive barrier connected to innovation. At the same time, one of the main contributions from their side was the ability to provide financial resources to free up time for the employee from the persons ordinary work tasks to put on the innovation work. However, she argued, the drive to go on with the innovation projects has to come from the employee itself as the innovation work often was characterized by long processes. For example, increased employee empowerment will lead to increased awareness of quality among employees.

The last incentive issue connected to innovation is the need to provide tangible and measurable results. With taxpayers as one of the biggest stakeholders and large media coverage, Expert 2 argued that improvement projects had to deliver quantifiable results in order to be justified by the

broad mass. This, he argued, was a barrier to innovation as projects that provided more qualitative results were met with skepticism and reluctance. Qualitative projects often provided more long-term results and were thus harder to measure. The benefits with incremental innovation argued by Varkey, Horne and Bennet (2008) is that it promotes a more innovative culture, that in the long run will result in more radical innovations. However, these benefits on a cultural level are hard to measure. This is in line with Rogers (2003) DOI-theory where the author argues that observability is one important factor for the broad mass to accept an innovation. To achieve high observability, the innovation has to provide tangible results. Therefore, with the expectation to make the most out of taxpayers' money, it can be argued that observability as a criterion is more noticeable in public organizations. With tight budgets, projects with qualitative results were more difficult for managers to argue for driving these kinds of ideas forward. This question was also brought up by expert 4 which argued that these issues could be overcome if the management were creative by measuring results. However, how managers were working with incentives seemed to differ and the rate of innovation inclusion depended to a high extent on the management team.

6. Conclusions

To answer the research question: What are the main barriers for increased employee participation in innovation and development in Swedish public healthcare organizations? Four different themes were constructed to categorize the different barriers identified which were applied in the analysis to establish a clear structure for the reader. In this concluding section, the most prominent of those barriers will be presented.

6.1 Answering the Research Question

By examining public healthcare in six different Swedish regions, 12 different barriers to increased employee participation in innovation have been identified. The purpose of this thesis was to provide insights for CGI in their development of a digital innovation platform and for the Swedish regions to improve their work to make use of employee ideas and innovations. The twelve barriers identified were evident in most of the regions, although they differed in some cases depending on the regional size, and in many cases the region of Jönköping had more established procedures in place to promote innovation. The authors of this thesis are not suggesting the region of Jönköping is working optimally with promoting incremental innovation, as that would require more time for studying only that region. But from our findings, it seems indeed as they are the most successful in implementing innovation in various parts of the organization. In the following sections, the main barriers to employee participation in public healthcare in six Swedish regions will be summarized.

6.1.1 Barriers Related to Communication

The lack of formal and informal forums to discuss ideas and organizational development was one recurrent innovation barrier to innovation that was pointed out. In many departments, employees were missing a place in which they were encouraged to share ideas with each other. As there was no established method for how to work with employee participation in innovation, managers at the current department were the ones to decide to what extent innovation was a part of employees' working tasks. Furthermore, many employees lacked a forum in which they were comfortable to share their ideas with others, as hierarchical structures played a major role. Except for the lack of formal forums, there was also a lack of informal forums in some departments. Employees described how different proficiencies were not eating together and mostly employees interacted with those with the similar titles. For this reason, the lack of forums and traditional hierarchies seemed to hamper the desire for employees to stay curious and learn from each other.

The lack of a common language for how to talk about innovation was a communication barrier that could be discerned. After conducting several different interviews with respondents with various backgrounds, it was clear that it differed how employees and experts talked about innovation. Employees expressed that it was not clear if innovation was a part of their work or not and working with innovation was considered as something difficult and vague. However, if using more familiar expressions such as *organizational development* the level of commitment among employees increased. The region of Jönköping was one region that aimed to create a common language around innovation. The goal was that every employee in the region of Jönköping should be educated and familiar with this improvement model. Thus, educating staff became a way to involve and include employees in innovation, as everyone in the organization had a common language with regards to innovation. By not having a common way to address innovation, it could be argued that this will create communication silos, isolating departments from each other.

Excessive focus on radical innovation is one of the main barriers to increased employee participation in innovation and development from a number of perspectives. Firstly, in terms of communication, focusing too much on radical innovation seems to discourage employees from engaging in innovative work as the term within many of the regions implies long processes, the need for funding and to set up a new company. Also, employees seemed uncomprehending when the innovation department used semantics employees were familiar with. If greater emphasis was placed on incremental innovation this thesis suggests that a larger number of employees would feel inclined to participate in innovative projects. Today, five out of the six regions discussed in this thesis have an innovation department which often have pre-determined ISO-processes for how to run innovation projects. However, these all focus on innovations that are resource demanding by nature. It is as if most regions recently have realized the importance of innovation and are trying to find shortcuts to great inventions, rather than trying to create an innovative culture where more employees are contributing to innovation and development.

Long innovation processes were another potential barrier to innovation as it seemed to cause employees to lose the desire to develop. After conducting interviews with several innovation coaches working at some of the regions, it was apparent that the innovation projects often were characterized by processes spanning over several years. This was one factor that made potential innovators lose the desire to develop. The question about transparency regarding the innovation processes was brought up where some argued that communication is key in order to engage employees. Disclosing the entire innovation process in an early stage could have a negative impact on employees' will to go further with their ideas. Furthermore, it was apparent that less resource demanding innovation projects, in terms of time, increased employees' willingness to participate and increased their level of commitment. Therefore, encouraging more incremental innovation projects has the potential to spark curiosity and enable a more innovative culture, where more employees feel inclined to participate.

6.1.2 Barriers Related to Resources

The lack of time was identified as a barrier to increased employee participation in innovation and development in the Swedish public healthcare system. This was one of the most common barriers brought about by the respondents. In terms of innovation, this seemed to cause parts of the organization to work with short term solutions rather than the long-term potential of creating an innovative culture. An interesting notion on the time barrier was that it seemed institutionalized to regard time as constantly being insufficient. Although it looked different depending on the department, respondents of this thesis reflected on various opportunities where they would have had time to reflect and discuss ideas. But the time barrier seemed to make employees blind to when these opportunities occurred. As some employees mentioned how they worked with ideas of *constant improvements*, there were initiatives but generally, no time was dedicated to this. Therefore, including innovation in job descriptions on an employee level and to formulate a plan on how, and when to work with innovation has the potential to make innovation a higher priority.

The Regional budgets were found to be hindering employee participation in innovation, since most regions did not set aside funds for departments to innovate. If a department performs

cardiological surgery that department receives funds to perform x number of surgeries, not to allow staff to innovate. Although the regions have taken different measures such as *Innovationsslussar*, these focus on more radical innovation involving significant funding or the need for a company to be set up. As theory suggests many small innovations may lead to greater ones, but especially, to promote an innovative culture, increased funds to promote incremental innovation could help to create an innovative culture where employees feel more encouraged to contribute to the organization. In terms of budgets, there was one exception with the region of Jönköping where department managers were given extra funding if they could demonstrate that their employees had been given the opportunity to contribute to innovation and development. The budget issue clearly needs to be addressed by most of the regions discussed in this thesis. If resources are not dedicated to employee participation in innovation and development, there is a risk that the mission statement of ensuring employee participation will lose its credibility.

Not having access to digital tools implied that employees had difficulties in sharing and discussing ideas with colleagues from other departments. As innovation departments require employees to find information through the intranet, where ideas can be shared via a formula, or email-address, digital tools are necessary. Most employees do not have a work phone or their own computer, rather the departments have a number of shared computers.

6.1.3 Barriers Related to Organizational Structures

The lack of cross- and interorganizational learning was apparent in most regions. As the regions are large and complex organizations, mechanisms for sharing ideas and practices are important for several reasons. If units are not learning from other organizations but also departments within their own organization, there is a risk they become isolated and resources are dedicated to all departments to reinvent the wheel. This became clear in relatively trivial issues such as waste management practices where each department often had their own routines. Enabling cross-organizational learning has several benefits according to literature discussed in this thesis. Receiving new perspectives on issues and creating a curious and creative culture are a couple of benefits. One region showed tendencies of having cross- and interorganizational learning procedures but in most regions, there seemed to be more of a *silo-thinking*.

Conservative leadership was a barrier especially evident at hospitals, which was linked to interorganizational learning. Traditional hierarchies were present at many departments where doctors and nurses were separated and would seldom blend both formally and informally. Ideas and issues were rarely discussed across professions and therefore, there was often a lack of perspectives which created unnecessary setbacks when practices were introduced. Another issue was that managers often were consultant physicians. As resident doctors' careers to some extent relied on recommendations from the consultant physicians, it created scenarios where resident doctors were afraid of bringing ideas forward as upsetting the manager could have negative consequences for future career possibilities. Therefore, it could be argued that conservative leadership and hierarchical structures were factors inhibiting employees to share ideas and participate in innovation.

The size of the regional organizations could pose a barrier to innovation. For the larger regions there were coordination issues because the innovation department itself would often be located in a separate building which made it more difficult to show presence in other parts of the organization. Also, the innovation functions could be spread out across a city which also made coordination more difficult. For the smaller regions the innovation department would often be located in the same building, or close to other medical facilities. They would experience advantages such as being able to blend more frequently with employees to discuss ideas both formally and informally. What was identified as a disadvantage and a barrier for the smaller regions, was that the resources they were able to allocate for innovation. Therefore, the size of the regions as well as the departments post different challenges in terms of coordination and resources.

6.1.4 Barriers Related to Incentives

Incentive issues where employees feel that they have nothing to gain from participating in organizational development or innovation was another barrier that was identified. Innovation among employees was often associated with something negative that only would increase the workload. Furthermore, employees felt that they did not receive any type of recognition for ideas and did not feel any encouragement to participate in the organizational development. However, Jönköping as one out of six regions did stand out with an incentive model where managers received

extra funding if they had succeeded to involve employees in organizational development and innovation projects. For the regions with a lack of incentives, this related both to employees and managers. In most regions, employees had no incentive to participate in innovation and development as their main task was to treat patients. Managers also had little or no incentives to encourage employees to innovate, as this seemed to be regarded as creating issues if employees were to take time off from normal duties.

Expectations to deliver quantifiable and measurable results was another factor that hampered innovation in the Swedish regions. Due to high expectations to make the most out of public funds with taxpayers and media as important stakeholders, managers tended to drive innovation projects that were easy to measure in order to be able to justify the project. On the other hand, managers found it difficult to motivate innovation projects with more qualitative results. This seemed to affect projects closer to incremental innovation or organizational development as the effects of these projects often were less tangible and therefore provided less measurability. However, according to literature, incremental innovation is suggested to result in a more innovative culture, and therefore, in the long run encourage more radical innovations.

6.2 Suggestions for Future Research

Despite that a broad variety of authors have looked into the subject of barriers to innovation, a lack of the research subject connected to public healthcare organization was detected. This thesis's main contribution to previous research is therefore, to fill the gaps in the literature and find barriers to involve employees in innovation in the Swedish public health care. Barriers connected to four different themes to employee participation in innovation have been discovered - communication, incentives, organizational structures and resources. Therefore, suggestions for future research is deeper research within any of these themes and to investigate barriers closer. Furthermore, in this thesis, the focus has been to find barriers for employee involvement in innovation, therefore, a next step for future research within this field, is to investigate solutions, and how to overcome these barriers.

From the interviews, it became clear that the region of Jönköping was seen as a role model in how to work with employee participation in innovation. One way to promote innovation was through an incentive model for managers to include employees. However, even though the region of Jönköping has earmarked funding for encouraging employees to innovate, it remained unclear as to how managers' ability to work with employee involvement was measured. How to measure employee involvement in different departments with different missions, could be decisive in how well the incentive model is working, but not something that this thesis has focused on. Therefore, a suggestion for future research would be to look closer at the region Jönkpings model for working with employee participation.

In the interplay between organizational leadership and political influence, it became clear that public organizations, and especially the health care in the Swedish regions are facing organizational challenges different from most other organizations. For example, some experts argued that inconsistency in leadership became an obstacle in fostering innovation. Furthermore, long term goals were put aside in order to reach political goals. Therefore, another suggestion for further research would be to investigate how to maintain long term strategies in politically driven organizations, such as healthcare within the Swedish regions.

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Appendix

Appendix 1

Interview Guide for Experts - Transcribed Interviews can be sent on upon request					
Current situation:					
- Considering that all Swedish regions have written in their mission statement that they shall giv					
the opportunity to all employees to participate in innovation and R&D, is the organization livin					
up to its statement today and if so, how is that observed in concrete actions?					
- How are employees given the opportunity to contribute to innovation today?					
- On a general level, how do you perceive the region's way of working to promote employe					
innovation?					
How does the collecting process work?					
- Realization process?					
- Promoting innovative culture?					
- Who is responsible and who is involved in the innovative process?					
- How is it measured?					
- Are there any specific areas within the regions you feel are more urgent than others when					
it comes to innovation?					
- Are there some e.g. hospitals/units that you consider more innovative than others and in					
such a case why?					
- In some interviews we have heard issues raised concerning long term perspective and					
the need for measurable effects, what is your view on that?					
- Do you use any specific models for innovation?					
Barriers and overcoming them					
- What do you see as the main barriers of innovation within the Swedish regions?					
- What are the most important tools to overcome these barriers?					
- Culture?					
- Innovative managers?					
- Stakeholders on different levels?					
- How are employees given the opportunity to contribute to innovation today?					
 Have you any examples of when innovation has worked well in any organization? 					
- Regions/hospitals specifically?					
- If yes, what were the essential factors for success?					
If yes, what were the essential factors for success.					
Digital tools in the regions					
- How are digital tools used today to promote innovation within the regions?					
- Do you see any pros/cons with the use of digital tools in the innovation process?					
 Bo you see any prostents with the use of digital tools in the innovation process? What kind of innovations do you see Sara could assist the most in? 					
 Are there any hinders you see specific to the regions when implementing new digita 					
tools?					
Is there enothing you would like to add within the tenie?					
Is there anything you would like to add within the topic?					

Appendix 2

Interview Guide for Employees – Transcribed Interviews can be sent on upon request				
Current situation:				
- How does your workplace work to promote innovation today?				
- Management?				
- Culture?				
- How do you perceive the general will to participate in innovation activities at you				
- How are you as an employee given the opportunity to contribute to innovation too	day?			
- On a general level, how do you perceive the region's way of working to prominnovation?	note employee			
- Are you aware that all the Swedish regions have in their mission statement that should be given the opportunity to contribute to innovation?	all employees			
 Barriers and overcoming them What do you see as the main barriers of innovation in your workplace? 				
 What are the most important tools to overcome these barriers? Culture? 				
- Unitate? - Innovative managers?				
- Stakeholders on different levels?				
 Have you any examples of when innovation has worked well? 				
- If yes, what were the essential factors for success?				
Digital tools in the regions				
- Do you use any digital tools today to promote innovation at your workplace?				
- Do you see any pros/cons with the use of digital tools in the innovation pr	rocess?			
- Are there any hinders you see when implementing new digital tools?				
- Is there anything you would like to add within the topic?				
- Do you see any differences from how the region and private healthcare is	working with			
innovation?				
Is there anything you would like to add within the topic?				