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A firm's legal control over confidential information

A study on proactive management of trade secrets and post-employment obligations in an employment contract

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Summary

Driven by an extreme pace of technological advancement, firms in the intellectualized economy are participants in an unprecedented race to innovate. To succeed in the business arena, firms must be smart in their approach to innovate in order to capture and control the very innovations that define them. However, procedures to capture and control confidential information that innovation activities have resulted in are often overlooked despite the immense value for firms. Moreover, the growth in confidential information subsequently leads to more value attributed to employees that are the catalyst behind confidential information. Although, former employees are perceived as the biggest threat to misappropriation of confidential information.

During the employment confidential information is protected by the employee's implicit duty of loyalty, and confidential information that fulfils the legal definition of a trade secret attains protection from the Trade Secrets Act[1], during and after employment. However, the protection requires that the firm manages the information in line with the legal definition. Although, after an employee has terminated the employment, the employee is no longer bound by the implicit duty of loyalty, and the protection retrieved from the Trade Secrets Act is reduced. To extend the employees' duty of loyalty and enhance the protection retrieved from the Trade Secrets Act, the employer can oblige the employee with contractual obligations not to use or disclose trade secrets that the firm possesses. Although, the regulatory landscape for contractual post-employment obligations is diverse and technically complex.

This thesis examines the legal frame for trade secrets that can be utilized to protect confidential information. Additionally, this thesis assesses the impact that the Swedish Competition Act,[2] the Swedish Contracts Act[3], and the 2015 Collective Agreement on non-competition obligations[4], has on the legal frame for obligations that regulate post-employment use and disclosure of trade secrets in an employment contract. Finally, this thesis designs a managerial framework for how the legal frames of trade secrets in post-employment relations can be translated into a managerial framework to manage trade secrets proactively, during, and post-employment.

Moreover, to illustrate the interplay between the legal framework and management a fictitious case has been applied to contextualize the findings of this thesis.

[1] Lag (2018:558) om företagshemligheter [Trade Secrets Act].
[2] Konkurrenslag (2008: 579) [Competition Act].
[3] Lag (1915:218) om avtal och andra rättshandlingar på förmögenhetsrättens område [Contracts Act].
[4] Avtal om användning av konkurrensklausuler i anställningsavtal. Träffade 2015 mellan Svenskt Näringsliv och Förhandlings -och samverkansrådet [The 2015 agreement about the use of competition clauses in employment agreements].

Abbreviations and Phrases

1969 Collective Agreement	The 1969 agreement about the limitation of use and content of competition clauses in employment agreements.
2015 Collective Agreement	The 2015 agreement about the use of competition clauses in employment agreements.
CAGAR	Compound Annual Growth Rate.
DSTA	Defend Trade Secret act
Directive 2016/943	Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful, use, and disclosure.
EEA	Economic Espionage Act
EPA	Lag (1982:80) om anställningsskydd [Employment Protection Act]
ESHA	Employment/Shareholder Agreement
ESPA	Employment/Share Purchase Agreement
IC	Intellectual Capital.
IA	Intellectual Assets
IAM framework	Intellectual Asset Management Framework
IP	Intellectual Property.
IPRs	Intellectual Property Rights.
NCO	Non-Competition Obligation.
NDO	Non-Disclosure Obligation.

MedTech	Medical Technology.
R&D	Research and Development.
SCA	Lag (1915:218) om avtal och andra rättshandlingar på förmögenhetsrättens område [Contracts Act]
SCOA	Competition Act (SFS 2008:579) [Competition Act]
SME	Small and Medium-sized Enterprises.
STSA	Lag (2018:558) om företagshemligheter [Trade Secrets Act]
TFEU	Treaty on the Functioning of the European Union
TRIPS	The Agreement on Trade-Related Aspects of Intellectual Property
WTO	World Trade Organization

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1. Introduction

1.1 One hour and 29 minutes in a life

Susanne Gustavsson reaches for her phone. It is 6 am, and her phone is ringing like a church bell to tell her to get up from the bed and get ready for the day. Instead of getting up, Susanne goes through the news that has happened overnight from different apps on her phone. Apparently, there have been massive demonstrations in the United States when she was asleep, and there are countless articles which either support the demonstrations or think they are irresponsible considering the current pandemic that has put the world in a state of emergency with city lockdowns. Susanne finally leaves the bed and goes to the kitchen, where she puts on a pot of coffee.

While Susanne is drinking her coffee, she scrolls through her email. She has gotten an email from an editor from one of the most credited MedTech magazines in the US. The magazine wants to write an article about her, since she recently has been appointed as one of the most knowledgeable researchers in diabetes by the same magazine. Susanne shuts her laptop. She has never been driven by money or fame, but the opportunity to leave a scientific footprint that can change diabetic peoples' lives. Consequently, she has changed her employer many times since the managers that she has worked with have often expressed that their interests align with hers, but she has repeatedly been proven wrong. Luckily has she never signed any contract that hindered her from taking employment at another firm.

On the way to work, Susanne has to refill her tram card, she stops at Pressbyrån and pays with cash. At the tram Susanne sees her former study mate Jonathan from Chalmers School of Technology. He looked tired and a bit distanced and did not see her. Jonathan used to work as a researcher at a MedTech firm that worked with stem cell reproduction. However, Jonathan has been unable to find a new job since he had a non-competition contract that forbade him to work with stem cells in Sweden for three years. Moreover, he did not get any exit compensation for signing the non-competition contract. The non-competition contract is problematic since all of Jonathan's core competencies and science interests are related to stem cells.

Susanne has previously told Jonathan that he should ignore the non-competition contract and take employment at a competitor or start his own business since the obligation is unreasonable. Jonathan does not think that it is a good idea since the penalty clause connected to the non-competition obligation would put his family under economic pressure that they cannot afford. Jonathan has received job offers from the US, but his wife has refused to move there when Donald Trump is president, and no actions are taken against racism against black people.

Susanne arrives at work, and the firm's CEO immediately starts waving at her through the glass wall that divides his office from the researchers' working places. He wants her to come into his office and discuss non-competition and non- disclosure contracts. He looks excited.

The reader has read about one hour and 29 minutes of Susanne Gustavsson's life during a normal morning. It is a piece of the story of Susanne's life that illustrates a snapshot of the time that we live in. Where information flows are fast and continuously present, where we accept and use social constructions such as money in our everyday lives, and where legal constructions such as a non-competition contract affect our behaviors.

1.2 Background

1.2.1 The intellectualized economy

During recent decades, there has been a shift from an industrial economy towards an intellectualized economy. A great number of knowledge-based firms characterize the intellectualized economy, where value is derived from knowledge and characterized by intangible products and services,[5]e.g., social media platforms, ride sharing platforms and health care apps.

1.2.1.1 The firm

The firm in the intellectualized economy has been referred to as a "*Body of knowledge*".[6] However, all knowledge in a firm is not valuable per se. In order for specific knowledge to be valuable for a firm, it must be captured and utilized within the framework of how business is conducted. However, the characteristics of a specific set of knowledge can make it more or less difficult to capture and utilize, where knowledge can either be explicit or tacit. Explicit knowledge can be explained as *"knowing about facts and theories"*,[7] and can be easily transferred to another person or codified in a document, e.g., a patent application. Implicit knowledge can be explained as "*Knowing how*",[8] and is connected to an individual, and is, therefore, more challenging to transfer to another person or codify in a document.[9] Consequently, explicit knowledge is more easily identified and captured by a firm than implicit knowledge.

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[5] U. Petrusson, '*Intellectual Property & Entrepreneurship: Creating Wealth in an Intellectual Value Chain'*, Göteborg: Center for Intellectual Property Studies (CIP), 2004, p.1.

[6]Cf.R. R. Nelson, & S. G. Winter,'*An Evolutionary Theory of Economic Change*', Cambridge: Belknap Press of Harvard University, 1982, p. 261

[7] R. M. Grant, 'Toward a knowledge-based theory of the firm'. *Strategic management journa*l, vol. 17, no.2, 1996, pp. 109-122. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.4250171110?casa_token=nNi8g9mZap8AAAAA%3AqtIdNUwd11qc0UYG7ABf571GQBwsUZxJ6_41LjAMP_PlFvIrH2iG-9Iij7Kgxm8SBOFfqmdbgo_5YMpD# (Retrieved: 2020.03.10).

[8] R. M. Grant, 1996, pp. 109–122.

[9] R. M. Grant, 1996, pp. 109–122.; R. Seidler-de Alwis, & E. Hartmann. 'The use of tacit knowledge within innovative companies: knowledge management in innovative enterprises'. *Journal of knowledge Management*. Vol.

To complement and increase the firm's body of knowledge, the firm must invest and enter different sorts of external and internal strategic alliances. Internally by hiring new employees or investing in innovation or research projects and externally participating in innovation or research collaborations.[10] However, there is always an imminent risk that the firm will not be able to utilize the value from the investment, e.g., by acts of misappropriation of undisclosed information that the employer intends to keep secret, or that employees that possess a lot of valuable tacit knowledge leaves the firm. Hence, it is imperial for a knowledge-based firm to establish different control mechanisms for controlling knowledge.

A company can exercise legal control of knowledge through different means. These means can be divided into three areas: right-based control, secrecy-based control, and contract-based control.[11] The right-based control is utilized after an objectification procedure where knowledge is objectified into an Intellectual Property Right (IPRs). Although, these rights only cover explicit knowledge that fulfills the requisite of the specific IPR. The secrecy-based control requires that the firm invests in secrecy procedures, by, e.g., limiting the people that have access to confidential information, passwords, firewalls, and guidelines for how such information shall be managed. Furthermore, secrecy-based control can protect both implicit and explicit confidential information.[12] Additionally, complementary protection can be retrieved by the Swedish Trade Secrets Act (STSA) if the confidential information can be classified as a trade secret.[13] The contract-based control can be utilized by agreement obligations where a contractual party agrees not to use the confidential information in an Non-Competition Obligation (NCO) or not disclose information in an Non-Disclosure Obligation (NDO). Consequently, to fulfill the ends with the control mechanism, to control knowledge and protect the firm's competitive advantage, the firm must have operational procedures that can serve as a foundation for the control mechanism.

1.2.1.2 Employees

The typical employee in the intellectualized economy is the so-called "*knowledge worker".* Knowledge workers are the key to a successful firm in the knowledge economy since they provide knowledge input so that knowledge output can be produced. Meaning that knowledge workers are producers and carriers of the firm's explicit knowledge. They are the key to transforming

12. No.1, 2008, pp. 133-147.Available at: https://www.semanticscholar.org/paper/The-use-of-tacit-knowledge-within-innovative-in-Alwis-Hartmann/84e44dbf8970236ff7f94878684ab4ac4bc06174(Retrieved: 2020.02.04).

[10] J.C. Spender, 'Making knowledge the basis of a dynamic theory of the firm'. *Strategic management journal*, vol. 17, no.2, 1996, pp. 45-62. Available at:https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.4250171106 (Retrieved: 2020.03.11).

[11] U. Petrusson, 2004, p.136.

[12] R. M. Grant, 1996, pp. 109–122.; R. Seidler-de Alwis, & E. Hartmann, 2008, pp.133–147.

[13] Trade Secrets Act, section 2.

knowledge into intellectual property or objectifying it as trade secrets. Although the most valuable knowledge that the knowledge workers possess are often tacit and non-transferable.[14]

Additionally, is it prevalent that knowledge workers change employers several times during their life, and it is a widespread behavior to move across and within industries.[15] One probable reason for the rise in employment mobility is the increased value being attributed to knowledge, since the knowledge workers "*own the means of production*".[16] Hence, the knowledge workers are of high importance for the firms' competitive advantage. Meaning that a knowledge worker that changes employers or disclose confidential information can have devastating effects for a firm's competitive advantage. Consequently, a vast amount of a firm's value is attached to the knowledge worker in the intellectualized economy.

1.2.1.3 The employment relationship

An employment relationship between the employer and the employee are characterized by the party's duty of loyalty towards each other. The duty implicates an obligation to collaborate and always consider the interest of the other party. Moreover, the duty exists even though it is not explicitly stated in an employee contract, and lasts from the day the employee starts at the firm until the end of the termination period.[17] The primary obligations in the duty of loyalty are the employer's primary obligation to pay salary and the employee's obligation is to work. Moreover, the employee shall always put the employer's interest before their individual interests, and avoid enacting situations where their interests collide.[18] Furthermore, the employer's obligations can be divided into three sub-obligations: refraining from damaging the employer by not withholding information, engaging in competing business activities with the employer,[19] or sharing confidential information with external parties.[20] Additionally, the higher position that the employee holds within the firm, the higher degree of loyalty the employer expects from the employee.[21]

1.2.1.4 The industry of medical technology

Medical Technology (MedTech) is a typical industry of the intellectualized economy. The industry of MedTech is characterized by a comprehensive technology diversification and a wide range of health care products and services that are used to diagnose, monitor or treat conditions that affect

[14] P. F. Drucker, 'Knowledge-worker productivity: The biggest challenge '. *California management review*, vol. 41, no. 2, 1999, pp. 79-94. Available at: http://forschungsnetzwerk.at/downloadpub/knowledge_workers_the_biggest_challenge.pdf (Retrieved: 2020.03.09).
[15] Ibid.
[16] Ibid.
[17] Domeij, B, '*Från anställd till konkurrent: lojalitetsplikt, företagshemligheter och konkurrensklausuler*'[*From employee to competitor: duty of loyalty, trade secrets and non-compete terms*]. Stockholm: Wolters Kluwer, 2016, p. 23.
[18] AD 2003 nr 21.
[19] Domeij. B, 2016, p. 33.
[20] Ibid., p. 25.
[21] Ibid., p. 23.

humans, e.g., X-ray and radiotherapy equipment, orthopedic implants, scalpels, medical records systems, pacemakers, and dialysis devices.[22]

Moreover, as figure 1. illustrates, MedTech firms have an established R&D focus, and there has been continuously increased spending in R&D activities over the years, which is estimated to continue until at least 2024.[23] Moreover, figure 1. also illustrates that the compound Annual Growth Rate (CAGAR),[24] between 2012 to 2024 will increase by 4,0 percent. Consequently, firms investments in R&D activities correlates with increased revenue of MedTech firms.

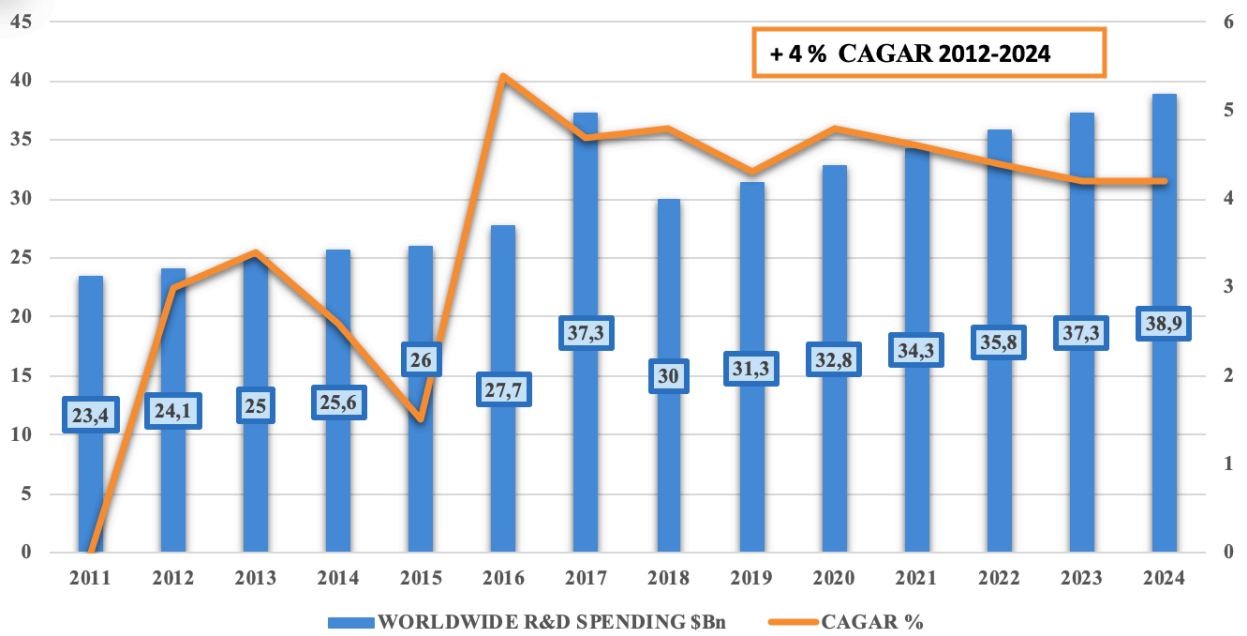

Figure 1. R&D activity and CAGAR. [25]

Moreover, concerning patent activity, as figure 2. Illustrates, MedTech is the fifth-largest field in the world, with 132,863 published worldwide patent applications. [26]

[22] Swedish MedTech. '*What is Medical Technology?*'. Swedish Medtech Association. Available at: https://www.swedishmedtech.se/sidor/om-branschen.aspx (Retrieved: 2020.02.09).
[23] Evaluate MedTech. '*World Preview 2017 Outlook To 2024*'. London: Evaluate, 2018, p. 14 Available at: https://www.evaluate.com/thought-leadership/medtech/evaluatemedtech-world-preview-2018-outlook-2024(Retrieved: 2020.04.12).
[24] CAGAR describes average annual growth over a certain period of time, expressed as a percentage. It is a measure of return, such as an investment or portfolio.
[25] My design; Cf. Evaluate MedTech, 2018, p.14.
[26] World Intellectual Property Organization. '*World Intellectual Property Indicators 2019*'. Geneva. World Intellectual Property Organization, 2019, pp. 17,40. Available at:https://www.wipo.int/publications/en/details.jsp?id=4464(Retrieved: 2020.02.11).

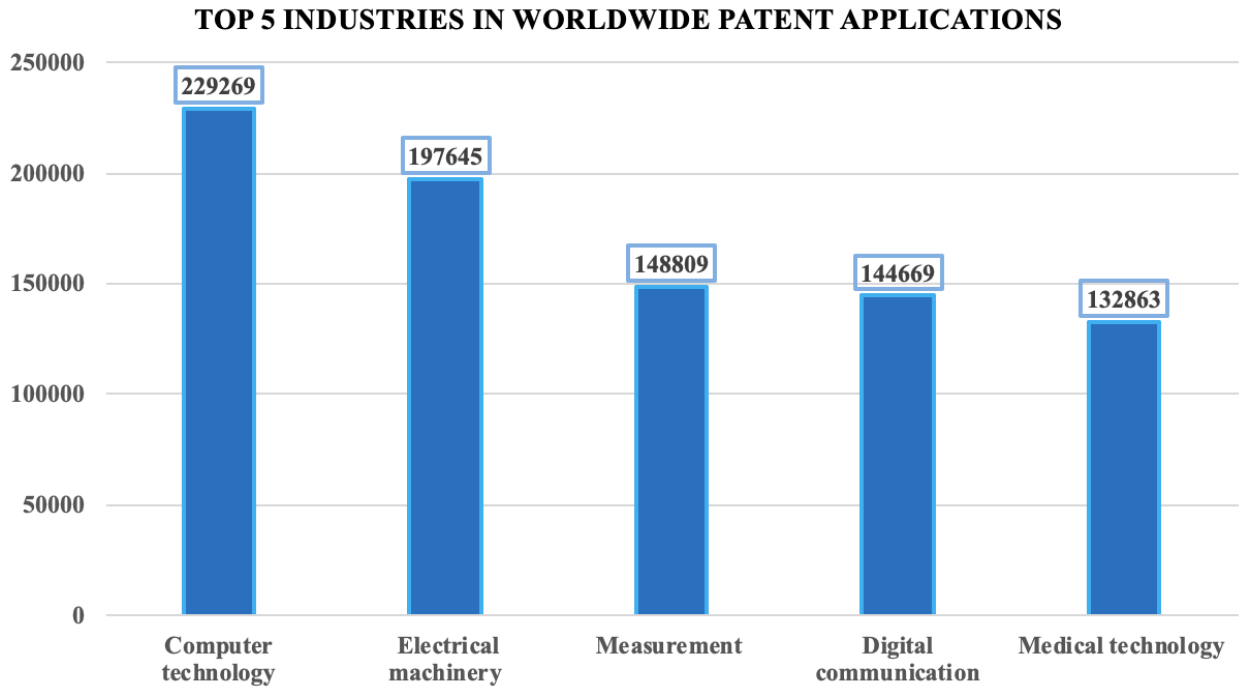

Figure 2: Top 5 industries in worldwide patent applications.[27]

Consequently, patent activity data do suggest that control of knowledge is an important facilitator to create a competitive advantage in the industry of MedTech. However, the firm's activities in the field of MedTech is diversified. Hence, the innovation cycle where technology has been developed, changed, and been replaced by new technology varieties. For some technology's improvements happen rapidly, and for some slowly. Therefore, the financial investment that patent protection requires, might not always match the financial returns.[28] Consequently, the need for efficient control mechanisms for confidential information that can be retrieved through secrecy-based and/or contract-based protection are crucial.

1.3 Problem statement, purpose and research questions

1.3.1 Problem statement and purpose

During the summer and fall of 2019, I had the opportunity to be involved and observe the operations of the business development process of several Swedish MedTech firms. The

[27] My design; Cf: World Intellectual Property Organization, 2019, pp 17, 40.
[28] C. Durand, B. Rosenberg, and A. Sathaye, 'Get more from medtech innovation - Pick your battles'. Boston Consulting Group 2016. Available at: https://image-src.bcg.com/Images/BCG_Get_More_from_Medtech_Innovation_by_Picking_Your_Battles_Nov_2016_tcm9-160097.pdf (Retrieved 2020.06.21)

opportunities were given by firms that were communicated by Sahlgrenska School of Innovation and Entrepreneurship, at Gothenburg University as part of the education and a summer internship.

Based on observations and experiences did I identify three key problems from a legal and value creation perspective that most of the firms had:

1. Most of the managers and employees were not familiar with the intellectual phenomenon of trade secrets;
2. there were often no guidelines on how information retrieved from R&D should be managed; and;
3. contracts that regulated the employee's ability to compete with the employer post-employment was either non-existent or standardized.

The uncertainty and ignorance concerning, confidential information, trade secrets, and non-compete obligations was often explained by time constraints and lack of capabilities to translate the legal regulation into operational procedures.

Therefore, this thesis aims to examine how the correlation between trade secrets and NCO and NDO in an employment contract proactively can be utilized by a MedTech firm to protect their competitive advantage. Consequently, the purpose is to describe the legal frame for trade secrets and post-employment obligations in an employment contract, and to use the legal frame to design an easily accessible managerial framework for how a MedTech firm can organize its operations and work dynamically with trade secrets and post-employment obligations in an employment contract. Consequently, the employer's use of post-employment obligations in an employment contract will not be standardized but match their actual need. Thus, the risk of obliging an employee with an unreasonable contractual obligation will be limited.

1.3.2 Research questions

Main research question:

1) How can a firm use an employment contract to protect trade secrets post-employment?

Sub-research questions

1.1) What information is possible to legally define as a trade secret?
1.2) When will the contract not be compliant with competition law?
1.3) When will the contract not be compliant with article 38 of the Swedish contract act?
1.4) When will the contract not be compliant with the Swedish collective agreement on non-compete obligations?
1.5) How can a managerial framework be designed to proactively manage trade secrets, and post-employment obligations in an employment contract?

1.4 Method

The method for how a legal investigation shall be conducted must be related to the problem in question.[29] This thesis has applied an inductive methodological approach that has two steps to analyze the problem statement and research questions to fulfill the purpose of the thesis. Therefore, I have used a research narrative that takes a standing point in a MedTech firm to illustrate the inductive method, the two steps and sub-methods.

First, a legal dogmatic method was used as to identify and describe the legal frame for trade secrets, and employment contracts that limits disclosure and use of trade secrets post-employment manifests itself.

Based on the conclusions from step one did I apply a legal analytical method to create a hypothesis on how MedTech firm SE can create a managerial framework for proactive management of trade secrets, and post-employment obligations in an employment contract.

Moreover, it shall be mentioned that I initially aimed at applying a legal dogmatic method that was complemented with an empirical method that was based on a qualitative and a quantitative study. Therefore, the student sent out an interview request with a questionnaire to 151 actors active in the field of MedTech. The targeted firms had between 1-250 employees and had an annual turnover between 1-510 million SEK. However, this was approximately one week before Covid-19´s effects reached Sweden. Consequently, the response was either non-existent or included replies that can

[29] J. Hellner, '*Metodproblem i rättsvetenskapen: studier i förmögenhetsrätt*' [*Methodological problems in forensic science: studies in property law*]. Stockholm: Jure, 2001, p. 29ff.

be summarized with: "*Interesting questions. However, considering the circumstances with Corona, do we currently not have the time*". A legitimate response, nonetheless, frustrating for my ambitions with this thesis. Although, I received seven questionnaires and had an opportunity to have an informal interview with a representative from Svenskt Näringsliv. The findings retrieved from the questionnaires and the informal interview are not extensive enough to draw any conclusions that an empirical method would require. However, the findings did increase my knowledge base and, therefore, together with earlier experiences from internships mentioned in section 1.3.1, form the basis for the fictitious research narrative and provide perspective in the analysis.

1.4.1 Research narrative

For the purpose of contextualizing the legal findings and analysis in a business context concerning knowledge management in a MedTech firm an inductive research narrative method will be applied. The research narrative provides the reader with a translation tool for transforming the legal requirements in the Trade Secrets Act (STSA),[30] Swedish Contract Act (SCA),[31] the 2015 agreement about the use of competition clauses in employment agreements (2015 Collective Agreement),[32] into operations activities. From a value-creating and maintenance perspective, the research narrative also provides a communication tool to clarify the relevance of having an organizational structure that dynamically manages research findings and the relationship between the employer and the employee.

However, it should be emphasized that the research narrative is not limited to firms active in the MedTech industry. As mentioned in section 1.2.1.4, the MedTech industry is a good example of an industry active in the intellectualized economy that manages a vast amount of confidential information. However, all firms, highly adapted to the knowledge economy or not, typically manage confidential information to some extent, e.g., customer lists or financial information. If that information were to be disclosed, it is likely that the firm's competitive advantage on the market would be affected. Meaning that all employers benefit from the protection that the STSA offers by identifying certain information as a trade secret. Due to the high employee mobility among firms in the knowledge-based economy, firms also benefit from using contracts that protect undisclosed information after an employee has left the firm. Accordingly, the research questions which this thesis is based on is meant to be relevant for a broad audience.

1.4.1.1 MedTech firm SE and Employee SG

MedTech firm SE was incorporated under Swedish law as a limited liability company in January 2018 by a group of researchers from Chalmers University of Technology. The technology that the group of researchers aims to commercialize is a diabetes app called Capua. The researchers' vision

[30] Trade Secrets Act.
[31] Contracts Act.
[32] The 2015 Collective Agreement.

with Capua is that it will be able to provide personalized diet recommendations based on the patients' individual needs of the day.

Furthermore, the researchers are all employed by MedTech firm SE and have different areas of responsibilities. All of the researchers have signed an employment contract template that one of the researchers found on the internet that does not include any NCO or NDO. Furthermore, there exists no policy or similar on how the business or technical information should be stored and used. Currently the business plans, research results, and other business or technical information are stored at a Google drive that all employees can access at any time or place that they like.

The value and future of Capua depends on the researchers' human capital since the app that they hope to commercialize is built upon non-published research about nutrition correlation. One of the employees, employee SG, is especially important since she is a world-leading researcher on the subject. Her previously published work is well-known, and she gets job offerings weekly from different MedTech firms around the world. Moreover, one of Capua's main value propositions is that it can easily be used with a glucose tablet, which most patients with diabetes have. However, even though MedTech SE has the research ready, they underestimated the technical capabilities needed for developing Capua. Since they do not have the capabilities to develop Capua, they would either need to acquire that knowledge in some way. Either by being acquired; hire a team of developers; or enter a partnership with another actor. Although the problems do not end there. MedTech SE only has the financial capabilities to keep the operations going until September 2020. Meaning that they need to find more funding in order to keep going on themselves; otherwise, their only alternative is to be acquired. So far, only one Chinese firm called Corona has expressed an interest in acquiring the MedTech firm SE. However, there is a risk that employee SG leaves the firm if they are acquired. She has previously stated that "*I rather bring my research to my grave than giving it to that toxic firm*."

Since the firm has only consisted of employers with a research background, there has been very little focus towards utilization strategies and general business development of Capua. Consequently, the employees have spent all their time on research and no time on building an intellectual Assets (IA) portfolio. However, the group of researchers recently got in contact with a law student that studied at Sahlgrenska School of innovation and Entrepreneurship when they attended a conference called "*Life Science days*" in Gothenburg a few months ago. The law student mentioned that intellectual asset- and human capital management was the key to success in today's intellectualized economy. After the conference, the CEO of MedTech firm SE started to browse the STSA, the SCA, and the 2015 Collective agreement, and he was overwhelmed by the texts. The CEO contacted the student on LinkedIn and asked if she could help him identify the opportunities in the regulatory landscape for MedTech Firm SE's. Since the student was currently writing her thesis about the subject, she was happy to help MedTech firm SE to translate the obligations and opportunities in the legal documents into operational activities.

1.4.2 Legal dogmatic method

For the legal perspectives of this thesis the legal dogmatic method has been used. The legal dogmatic method consists of the legal source doctrine,[33] that specifies which sources can and should be applied.[34] In line with the method the interpretation of the lege lata,[35] validated by interpretation and systematization of the material in the legal sources in the statute law, preparatory works, case law, and doctrine. [36]

The legal dogmatic method is dogmatic in the sense that the validity of the legal material is pre-determined by the hierarchical structure established in the legal source doctrine. At the top of the hierarchy are the statute laws. In line with the purpose and research questions of this thesis has I primarily used the SCOA,[37] the SCA,[38] and the STSA.[39]

To understand the premises and interests that the law was based on, the preparatory works of SCOA, SCA, and STSA have been used to describe the correlation between trade secrets and NCO/NDO in an employment contract.

Moreover, concerning employment contracts does Swedish collective agreements have a particular position in the legal source doctrine. A collective agreement regulates the labor market relationship between an employer and an employee, where the government assigned to the parties of the market to regulate the details in the employment relationship. In Sweden, 70 percent of the employees are affiliated members of a trade union, and 90 percent of the employers are comprehended.[40] The central law for the regulation of the collective agreements is the Employment (Co-Determination in the Workplace),[41] . The law, e.g., defines what a collective agreement is, who is bound by the agreement, and the most important legal consequences. Moreover, the central collective agreement for NCOs is the 2015 Collective Agreement.[42] It regulates the details for NCOs on the Swedish labor market. The 2015 agreement does not relate to any of the traditional legal sources, but the

[33] In the context of this thesis does the legal source doctrine refer to the Swedish "rättskälleläran".
[34] C. Sandgren, '*Rättsvetenskap för uppsatsförfattare*' [Forensic science for essay writers]. Stockholm:Norstedts Juridik, upp. 2, 2015, p. 39.
[35] When a practitioner seeks to identify de lege lata, or in other words, the "current understanding law", am I, like other practitioners before having stated, of the perception that there is no such thing as the current understanding of the law. The lege lata is not static; it is a dynamic process. The practitioner must be able to interpret and draw conclusions from legitimate sources.
[36] C. Sandgren, 2015, p. 43.
[37] Competition Act.
[38] Contracts Act.
[39] Trade Secrets Act.
[40] Medlingsinstitutet, '*Avtalsrörelsen och lönebildningen 2019*' [Contract movement and wage formation 2019]. Stockholm: Medlingsinstitutets årsrapport, 2019, p, 166. Available at: https://www.mi.se/alla-vara-arsrapporter/ Retrieved: 2020.07.01).
[41] Lag (1976:580) om medbestämmande i arbetslivet [Employment (Co-Determination in the Workplace) Act].
[42] The predecessor of the 2015 agreement was the 1969 agreement about the limitation of use and content of competition clauses in employment agreements.

agreement and its predecessor have been given status as a legitimate legal source by preparatory works, case law, and doctrine.

Additionally, the labor court is the highest court concerning contractual disputes between an employer and an employee when the employer is not an affiliated member of a trade union that is bound by the 2015 Collective Agreement. Hence, case law from the labor court,[43] have been used to interpret statute law and preparatory works concerning the correlation between trade secrets and NCOs. However, a full case law review is not within the purpose of this thesis. Instead, the purpose of the case law review was to identify reference points that the labor court takes into consideration when assessing if an NCOs that protect trade secrets are legitimate or not. Consequently, the focus of the case law review has not been to analyze the individual circumstances in each case, but to identify guiding principles that an employer should take into consideration when designing post-employment obligations that aim to protect trade secrets in an employment contract.

Moreover, concerning employers that are affiliated with a member of a trade union that is bound by the 2015 Collective Agreement the highest instance for disputes concerning NCO:s is a central arbitration panel.[44] As of today the arbitration panel has only published two cases, both outside the scope of this thesis. Consequently, these cases have not been described nor analyzed in this thesis.

Finally, legal doctrine has been used in the analysis of the grey areas of trade secrets and NCO:s that are part of the legal debate and research.[45] Moreover, when assessing the value of different doctrines, it is essential to comprehend that different sources of doctrine have different values as a legal source, e.g., a book from a professor has a higher value as a doctrine than this thesis. Moreover, the basis for the doctrine selection was based on actors that had been active for a long time and produced a vast amount of doctrine within the area of trade secrets and contracts: s, e.g., Axel Adlercreutz, Bengt Domeij, Reinhold Fahlbeck, and Boel Flodgren. However, the doctrine concerning the correlation between trade secrets and contractual post-employment obligations was limited. However, one name stood out; Bengt Domeij. In "*Från anställd till konkurrent*" [46]. Domeij discusses the relationship between the employee's duty of loyalty, trade secrets, and contractual post-employment obligations. Consequently, doctrine written by Domeij has primarily been used to fill the grey areas of the legal frame concerning trade secrets, NCO and NDO in an employment contract.

1.4.3 Legal analytical method

The legal analytical method analyses 'de lege lata'. Unlike the legal dogmatic method other sources than the categories in the legal source doctrine can be used. Meaning that the legal

[43] In the context of this thesis does the labor court refer to the Swedish "Arbetsdomstolen".
[44] The 2015 Collective Agreement, sections, 8-9.
[45] M. Nääv & M. Zamboni, '*Juridisk metodlära*' [Legal Methodology]. Lund: Studentlitteratur, upp. 2, 2018, p. 37.
[46] Domeij. B, 2016.

analytical method opens up for other perspectives than a legal dogmatic approach.[47] Hence, by adding management doctrine, legal analytical methods have been applied to deconstruct de lege lata concerning trade secrets, NCO- NDO in an employment contracts, and reconstructing a proactive managerial tool for trade secrets and designing legitimate post-employment obligations in an employment contract.

1.5 Literature review

The main purpose of the literature review is to illustrate the academic novelty that this thesis possesses to other works.

There have been several theses that analyze trade secrets or NCOs separately. For example, in "Angrepp av företagshemligheter och skadestånd - *En undersökning om skydd för företagshemligheter*."[48] Erik Åhlin describe de lege lata of trade secret after the incorporation of directive 2016/943 on the protection of undisclosed know-how and business (trade secrets) against their unlawful acquisition, use and disclosure (Directive 2016/949),[49] in Swedish law. Furthermore, Åhlin analyzed the changes that directive has had on Swedish trade secret regulation and its compatibility with the directive. Nevertheless, Åhlin does not investigate how a firm could identify trade secrets in their business. Moreover, in "*Konkurrensklausuler i anställningsavtal - en analys av gällande rätt beträffande konkurrensbegränsande åtaganden i anställningsavtal*"[50] Natalie Kyrk describes de lege lata of the legal construction of NCO:s in the employment contract. Moreover, Kyrk analyses the legal frame of when an NCO is valid according to the law and not. However, Kyrk does not compile an analysis of how an employer could proactively work with NCOs during the employee's employment.

The theses of Åhlin and Kyrk are only two examples of countless student theses that examine de lege lata, or put, in other words, the current perception of the legal construction of trade secrets and non-competition clauses separately. Meaning that the thesis that provides an interdisciplinary perspective on the subject is limited, although not non-existent. In "*Post-employment protection of undisclosed information in an knowledge economy - A study on how to prevent undisclosed information from walking out of the door after the termination of employment."*[51] Rosén discusses the importance of proactively managing trade secrets to avoid the firm losing valuable business or

[47] Sandgren Claes. (2015) p. 45–47.
[48] E. Åhlin, 'A*ngrepp av företagshemligheter och skadestånd-En undersökning om skydd för företagshemligheter*'.Lund: Lund University, 2018.
[49] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure.
[50] N. Kyrk, '*Konkurrensklausuler i anställningsavtal – En analys av gällande rätt beträffande konkurrensbegränsande åtagande i anställningsförhållanden*'. Umeå: Umeå University, 2015.
[51] C.O. Rosén, '*Post-employment protection of undisclosed information in an knowledge economy-A study on how to prevent undisclosed information from walking out of the door after the termination of employment*'. Gothenburg: Gothenburg University 2018.

technical information when an employee leaves the firm. The thesis focuses primarily on identifying which information that a firm can protect with different regulatory and contractual tools. Furthermore, Rosén mentions that NCOs is a suitable contractual tool to protect trade secrets. However, he does not analyze how the which parameters should be the basis in the design of a NCO,[52] nor how the correlation between the legal phenomenon of trade secrets and NCO can be utilized.

Consequently, based on the findings in the literature review, there is no thesis that specifically examines how the correlation between trade secrets and contractual obligations can be utilized to design legitimate post-employment obligations in an employment contract.

1.6 Theories and concept

In order to deepen the analysis and provide insight, the thesis will utilize the theories of social constructivism, the Intellectual Asset Management (IAM) framework, and the concept of Product Life Cycles (PLC).

1.6.1 Social constructivism

Every day, we use different social constructions of reality. The different constructions illustrate what we perceive as "*real*," even though we describe something that is not physical. A prevalent example of social construction is the intellectual phenomena of money. When we buy a drink, we get the drink in exchange for money. The piece of paper that a person uses to pay for their drink is only a piece of paper without any economic value. The piece of paper is only a carrier of economic value. The piece of paper can be used as payment only because the society has agreed to use the common perception that pieces of paper are "*means of payment*". [53]

Moreover, the firm is an intellectual phenomenon that consists of both tangible- and intangible objects. Although, as illustrated in the money example, these objects are nothing within themselves, they are valuable by establishing a social construction. These social constructions are not visible if a person does not look for them. Hence, we take them for granted. Meanwhile, an illustration of their existence allows us to define different actions from our preferences.

Moreover, social constructions with regards to an intellectual phenomenon like intellectual property, trade secrets, contracts, etc. are very important. The states are responsible for setting the frame for the legal construction of and what is it that we perceive as the law or expressed in other words - the current understanding of the law. Hence, social construction is not static; it is dynamic. Meaning that the firm can stretch the frame for the legal construction by communicative actions.

[52] C.O. Rosén, 2018, p. 37.
[53] J.R. Searle, & Willis. S, '*The construction of social reality*'. Simon and Schuster, 1995, p. 19.

When a firm uses the legal contractions of an intellectual phenomenon, they use the frame, and stretch it towards their interests and simultaneously change the structure of the frame.[54]

Consequently, to understand the social construction of trade secrets and contracts, is it necessary to understand the value of controlling knowledge. It is not valuable to isolate the different protection methods that the law gives. The protection from competition after an employee has left the firm must be seen from its function and interaction with, i.e., competition law, contract law labor law, and intellectual property law. Firms must understand how they can create control by utilizing the intellectual phenomenon of IPRs, trade secrets, and contractual post-employment obligations.

The legal obligations of the law mirror the current idea system in the society during a specific time. The claim of the firm is normative in the idea system that the law shall protect. This view results in a dynamic perspective of the law, where the actions of the actors must be highlighted. Furthermore, even though the law is dynamic and open, is it simultaneously a unit and closed. Hence, every action within the unit must be analyzed by its consequences. No matter what the individual interests and motives are with a specific action, these actions must take into account imminent structures that are beneficial for the entirety. The values that society is built upon should guide every action's consequence analysis, and therefore be independent of individual opinions. The firm's ability to adjust to the structural level is assessed from an internal perspective since the loyalty to the structural level has a normative value in itself.[55]

1.6.1.1 The concept of the three arenas

The firms' ability to navigate in the current idea system can be illustrated by the concept of the three arenas of administration, business, and judicial. A communicative procedure decides the design, validation, construction of intellectual phenomena between the actors on the different arenas.[56]

1.6.1.1.1 The actors of the three arenas

The actors in the business arena are firms, employees, and innovation systems that design and extract value from the intellectual phenomenon e.g. the firm, IPRs, trade secrets, and contracts

Moreover, the actors in the administrative arena are legislation-, national and regional registration- and appeal offices, e.g., company's registration offices, PRV and EUIPO actors. The legislation offices serve as a support system to the business arena since they provide legislation that sets the legal frame for intellectual phenomenon. Moreover, the registration offices serve as a support system to translate registration application for firms, e.g., a limited liability company into a

[54] J.B. Heiden, '*The Battle to Define the Meaning of FRAND*'. Gothenburg: Chalmers University, 2017, pp. 10f.
[55] U. Petrusson, '*Patent och industriell omvandling. En studie av dynamiken mellan rättsliga och ekonomiska idésystem*'. Gothenburg: University of Gothenburg, 1999, p. 295ff.
[56] U. Petrusson, 2004, pp. 102ff.

registered firm, but also translate information provided in IPR applications, e.g., design, patent, and trademark applications into registered IPRs. Concerning the registration procedure does the offices follow a formalistic procedure, where the object that information describes in the application must fulfill the requisites of e.g., firm or IPR that the person or firm wants to protect as an IPR.

Finally, the actors on the judicial arenas are national, regional, and international courts of law. The courts serve as a support system to the business arena since it upholds the legal frame provided by the administrative arena for the intellectual phenomenon's by enforcing the relevant laws.[57]

1.6.2 Intellectual Asset Management framework

The Intellectual Asset Management (IAM) framework is a management theory built upon the four concepts of capture, position, organization/govern, and utilization. The capturing concept involves setting up a system for the identification and classification of resources that can be tagged into different IAs and IPRs. The positioning concept builds on positioning the internal IAs/IPRs and capabilities identified in the capturing process in the relevant market. The organizational concepts illustrate how the firm should organize in order to have the capabilities to govern the IAs/IPRs. Furthermore, lastly, the utilization phase determines how the IAs/IPRs should be leveraged on the market. The IAM framework will empower the firm's ability to understand, manage, and accomplish the goal of utilizing internal IAs as commercial value offerings.[58]

1.6.3 The Concept of Product Life Cycles

The concept of product life cycles (PLC) assembly ideas about the diffusion of innovation and competitive dynamics predicts sales growth rates and variations on the market. PLC can be used as a tool to operationally manage knowledge assets and a strategic tool to explain and predict the importance of a knowledge asset category. Meaning that the PLC indicates the degeneration of a product's distinctiveness over time.[59]

However, there is no current system to identify the PLC of knowledge assets in the industry of MedTech.[60] The concept is well established in the pharmaceutical industry. However, the differences between pharmaceuticals and MedTech suggest that analogies should not be made since the product cycles for MedTech have been proven to be shorter than those for

[57] U. Petrusson, 2004, pp 104ff.
[58] U. Petrusson, *'Research and Utilization*', Göteborg: Tre Böcker Förlag AB, 2016, p. 305; S. Arbman, *'Venture Inc. home exam'.* Applied Intellectual Capital Management, 2020, p. 2.
[59] Dean J. Pricing policies for new products. Harvard Bus Rev 1950; 28(6): 45–53.
[60] B.D. Smith, R. Tarricone & V. Vella, 'The role of product life cycle in medical technology innovation'. *Journal of Medical Marketing*, vol.13, no.1, 2013, pp. 37-43. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.879.2957&rep=rep1&type=pdf (Retrieved: 2020.07.10).

pharmaceuticals since MedTech innovations are much more incremental and less consistently protected by IPRs.[61]

However, the fact that the assessment of PLC of knowledge assets in the industry of MedTech is difficult does not suggest that it should not be made attempts to develop the concept. Quite the opposite. As mentioned in section 1.2.1.4, the patent activity for MedTech technologies is extensive. However, since the product cycles for MedTech are diversified might patent protection not match the financial perspective or operational trade-off.

In "*The role of product life cycle in medical technology innovation,*" [62] Brian D Smith, Rosanna Tarricone, and Vincenzo Vella draw some general conclusion in an attempt to develop a model of PLC in MedTech:[63]

Indications of a long PLC

- Considerable incremental costs of the new product over existing products might extend the PLC;
- Subsequent rights-based control, e.g., patent or technological-based control that the product is dependent on or the product itself, might decrease the opportunities for actors in the business arena to enter the market. If so, might the PLC be longer;
- Lengthy procurement procedures as a consequence of that the MedTech product did not accurately compare the incremental costs and benefits.

Indications of a shorter PLC

- Great incremental benefits of the new product that accelerate adoption.

Despite that there is no finalized concept for PLC for the industry in MedTech, will the general conclusions from the authors of "*The role of product life cycle in medical technology innovation,*"[64] be used to analyze the PLC of trade secrets in the industry of MedTech in lack of other theories and concepts.

1.7 Target audience and reader

There are high requirements in today's intellectualized economy to understand a vast amount of information within many different fields. In order to use the law as a means of opportunity, a person must have an interdisciplinary understanding of how to translate the law into operational activities. In large firms, this is no problem since they can hire consultancy firms that help them with this. However, small firms often lack the economic capacity to hire such competencies.

[61] B.D. Smith, R. Tarricone & V. Vella, 2013, pp. 37–43.
[62] Ibid.
[63] Ibid.
[64] Ibid.

Hence, the intended readers of this thesis are generally professionals that work with business development in a Swedish knowledge-based firm, more specifically at MedTech film. It is an attempt to limit the knowledge gap between large and small firms by communicating the value of dynamically working with the intellectual phenomena of trade secrets at an early stage. Nevertheless, it also provides a guide on how to translate the relevant legal documents into specific operational activities in an accessible way

Additionally, since the intended reader is a person who works with business development at a MedTech firm, the skills related to reading legal text might vary. Thus, descriptive parts that generally describe the intellectual phenomenon of trade secrets and post-employment obligations in an employment contract is necessary. Meaning that some area-specific terminology must be explained, and some restraint has been held concerning introducing new terminology.

Moreover, based on the author's experiences from internships during the summer and fall of 2019, international employees are prevalent among Swedish firms. Additionally, it is a common phenomenon that Swedish MedTech Firms has as a mission to expand internationally or be acquired by an international actor. Consequently, businesses use English as their corporate language and develop compliance guidelines and other business-related documents on English based on Swedish law.

Therefore, I have chosen to write on English. This task has been proven to be challenging since the majority of the sources of this thesis are written in Swedish. The risk with doing a direct translation of legal terminology is that the translated word has another meaning than the intended. However, I have to the best of my ability, mitigated the potential risk of faulty translations by defining problematic translations. Additionally, since the structure of the legal framework for contracts that regulate competition is a unique phenomenon in the global legal arena, is it a risk that there is a knowledge-gap between native and foreign participants on the labor market. A knowledge-gap that I intend to limit with this thesis.

1.8 Delimitations

The depth of analysis and scope of this thesis has naturally been affected by time, space constraints, and the ambition to provide an interdisciplinary thesis that analyses how the legal frame from trade secrets and post-employment obligations in an employment contract can be translated to a managerial framework for a MedTech firm. Moreover, since I have chosen to present the findings from the legal analysis in the context of a research narrative, the research narrative does also represent a delimitation of the thesis. However, for the purpose of describing all of the delimitations necessary for this thesis will also a number of general delimitations be presented. In addition, delimitations will be specified throughout the thesis when necessary.

1.8.1 Specific delimitations of the research narrative

The delimitations related to the research narrative will be presented as eight presumptions that I have taken for the research narrative.

1. MedTech Firm SE is a Swedish firm that operates under the national law of Sweden. Consequently, no competitive perspective from other jurisdictions has been considered. Accordingly, the term "*contract*" shall have the meaning as the SCA states.[65]
2. MedTech Firm SE is a private firm. Therefore, no consideration has been taken to regulations that apply uniquely for employees in the public sector.
3. The characteristics of the confidential information that MedTech Firm SE intends to keep confidential might vary. Although, for the purpose of this thesis only confidential information that fulfills the legal definition of a trade secret are described and analyzed.
4. The confidential information that MedTech Firm SE possesses and defines as trade secrets resides in the private sector only. Consequently, the information is not subject to other legal requirements that apply to e.g., governmental or military institutions. Additionally, MedTech Firm SE is the lawful holder of the information and it can, therefore, be legally controlled by them. Hence, the information has not been acquired by unlawful means from criminal activities or other acts of misappropriation. Therefore, liabilities and sanctions related to trade secret acquisition by MedTech Firm SE will not be assessed. However, liabilities and sanctions related to trade secret acquisition by the employees will be briefly described, but not examined. Moreover, there are currently no indications that the MedTech Firm's employees have disclosed confidential information that is possessed by MedTech Firm SE. Consequently, potential disloyal acts of misappropriation will not be analyzed. However, the implications of the duty of loyalty in the employment contract and the acts of misappropriation of trade secrets will be described to highlight the importance of proactive management of trade secrets that limits the use and disclosure of trade secrets. Although, potentially criminal acts that an employee can be subject to according to the Swedish Criminal Act (1962:799) will neither be described nor analyzed.
5. All of the employees of MedTech Firm SE are defined as employees according to Swedish labor law. Meaning that there will be no comparative analysis of the regulation applicable to other workers i.e., consultants.
6. The Employees of MedTech Firm SE are not shareholders of MedTech Firm SE.
7. MedTech Firm SE is an affiliated member of the 2015 Collective Agreement.
8. MedTech Firm SE has not yet initiated any clinical trial procedures for any of their inventions. Consequently, will no regulatory or operational requirement concerning the management of research results that is subject to a clinical trial be considered.

[65] Contracts Act.

1.8.2 General delimitations

The information that an employee has developed into a technical solution while MedTech Firm SE employs them that could be subject for patent protection, whereas the ownership and right to use the patentable invention is regulated by Right to the Inventions of Employees Act,[66] are outside the scope of this thesis.

The confidential information that the App Capua is built upon includes personal data from patients with diabetes with type 1, which is subject to protection by personal data regulation. However, personal data perspectives are outside the scope of this thesis. Moreover, Capua would potentially be defined as a medical device subject for national and EU- regulation for medical devices. Although, considerations concerning compliance with medical device regulations are outside the scope of this thesis.

Additionally, the managerial framework that will be presented in this thesis will translate the legal frame for trade secrets and non-compete obligations into operational procedures to protect their competitive advantage. Specifically utilizing confidential information that regulate competition post-employment. Additionally, the implementation of security systems or other physical infrastructure that hinders unauthorized employees or other people from accessing confidential information is not addressed. Moreover, pre-employment procedures will not be examined. Neither will procedures for enforcement of unlawful acts of misappropriation of trade secrets, nor procedures for acts from former employees that are not aligned with an NCO or NDO in an employment contract.

1.9 Disposition

The disposition of this thesis are the following: Introduction (Chapter 1), Trade secrets (Chapter 2), Contractual tools to protect trade secrets post-employment in an employment contract (Chapter 3), Proactive management of trade secrets and post-employment obligations in an employment contract (Chapter 4), Concluding analysis of the research questions (Chapter 5) and Bibliography (Chapter 6).

Chapter 1: Provides a context to the purpose and research questions of this thesis.

Chapter 2: Legal analysis that identifies what information that can be protected as a trade secret in Sweden by describing and analyzing the relevant sections in the STSA. Additionally, chapter 2 shortly describes unlawful acts of misappropriation of trade secrets.

[66] Lag (1949:345) om rätten till arbetstagares uppfinningar [Right to the Inventions of Employees Act].

Chapter 3 Legal analysis that identifies and discusses the Swedish legal framework for post-employment protection of trade secrets in employment contracts.

Chapter 4 Management analysis that aims to translate the legal findings found in chapter 2 and 3 to provide a hypothesis on how a managerial framework for proactive management of trade secrets and post-employment obligations in employment contracts can be designed.

Chapter 5 aims to provide a concluding analysis of the research questions.

Chapter 6 presents the sources that have been used in this thesis.

2. Trade secrets

2.1 Introduction

2.1.1 What is a trade secret?

Secrets are semantic, e.g., intentions, ideas, knowledge, or facts that a person's control through the existence of that secret in their head. The disclosure of secrets is an individual decision. However, a trade secret is information about a firm's business that is often accessible by more than one person, yet a limited group on a need to know basis. Hence, the word "*secret*" in trade secrets is relative since it is dependent on the relevant firm's specific business.

The legal scope of what information that can be defined as a trade secret and gain protection by the STSA includes almost any sort of information that is related to the firm's business.[67] Therefore, the purpose with this section is to describe and analyze the legal frame for trade secrets. Specifically, by describing and analyzing the legal definition of a trade secret and describing acts of misappropriation that is not allowed according to the STSA.

2.1.2 What is the relationship between trade secrets and Intellectual property rights?

Traditional IPRs, e.g. design rights, patents and possible to register. Where the person that possess the IPR can classify this "*new*" information in line with the established legal construction of patents. Thus, the information in the patent obtains a "*rights status*," which means that other actors cannot use that information without consent from the right holder.

Trade secrets and copyright are not possible to register. However, copyright is protected and gives exclusivity rights, while trade secrets do not attain that protection. Trade secrets are only protected by deterring misappropriation.[68] Consequently, the same secret can exist in parallel independent of each other. In general, the development costs of intellectual assets are high. Meanwhile, the reproduction costs are low. The life cycle of information subject to trade secret protection is often short. To conclude, a "*first to market*" strategy is often needed in order to regain invested capital.[69]

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[67] Prop. 2017/2018:200; *En ny lag om företagshemligheter* [Government bill. A new act on trade secrets], p. 26.
[68] Trade Secrets Act, section 4.
[69] D.S. Levine & T. Sichelman, 'Why do startups use trade secrets?'. *Notre Dame Law Review*, vol. 94, no. 2, 2018, p. 751. Available at:https://heinonline.org/HOL/Page?handle=hein.journals/tndl94&div=22&g_sent=1&casa_token=ksFZ26_I1MkAAAAA:xkT3Ojv53X4RNSKo5AG-jB0tpreDxsmbpRKtNf4JP7ZX6zbAsah3r8QqGlrkCkTn4ccW3G05i4M&collection=journals (Retrieved: 2020.04.13).

Thus, there is still motivation to develop assets that are not protected by the right of exclusivity. The most critical phase of the development of, e.g., a method for reproducing stem cells, is during the development phase. In this stage, a patent cannot be retrieved. If an employee were to leave the firm during this period, they are naturally very vulnerable. Hence, a strategy for controlling knowledge is necessary to gain and maintain a competitive advantage. Consequently, traditional IPRs that are built upon exclusivity and ensured by a procedure of registration in the administrative arena are more easily captured and enforced on the judicial arena than trade secrets.

Moreover, trade secrets can be used as either a complement or as a substitute for traditional IPRs.[70] It can be applied as a complementary tool to traditional IPR:s concerning information that does not fulfill the requisites of, e.g., copyright,[71] design,[72] patent,[73] or trademark.[74] It can also be used as a substitute tool if the firm does not have the financial capacity to register an IPR, or if it is more beneficial to protect specific information as a secret from a strategic perspective to e.g., to extend the firm's first mover advantage.[75] Consequently, the area of application for trade secrets is wide.

2.1.3 What conflicts of interest can arise between the firm, the employee and society?

The firm has an interest in protecting undisclosed business and technical information that has been developed or acquired by financial investments. Meanwhile, the employer has an interest in developing her knowledge and freely disclose her experiences.[76]

Moreover, in line with the duty of loyalty, the employee shall act in good faith towards the firm during the employment. Thus, the employees are forbidden to disclose confidential information, engage in competing business with the firm or by other means willfully harm the employer. Moreover, the employee must also inform the employer about new developments in their work. Meaning, that an employee cannot keep valuable knowledge for themselves without telling the employer. Consequently, if the employee is the carrier of knowledge that the employer has an interest in objectifying, by using the means of IPR or a trade secret, the primary rule is that an employee cannot deny the employers will.[77] Since a vast amount of the firm's accumulated value is tacit, they have an interest in objectifying as much as possible of the value, so that a potential loss of the knowledge worker does not affect the value of the firm.

[70] D.S. Levine & T. Sichelman, 2018, p. 751.
[71] Lag (1960:729) om upphovsrätt till litterära och konstnärliga verk [Act on Copyright in Literary and Artistic Works], section 1.
[72] Mönsterskyddslag (1970:485) [Design Protection Act], sections 1-2.
[73] Patentlag (1967:837) [Patents Act], sections 1-2.
[74] Varumärkeslag (2010:1877) [Trademark Act], sections 4-5.
[75] D.S. Levine & T. Sichelman, 2018, p. 751.
[76] See. Government bill. 1987/88: 155, p. 9.
[77] The rights an employee has to their inventions that are subject for patent protection in line with the Right to the Inventions of Employees Act. However, as mentioned in section 1.9 this analysis is outside the scope of this thesis.

Moreover, even though it might seem contradictory, protection mechanisms for confidential information result in an increased openness of information. This is because a sanctioned protection mechanism, such as the STSA, will facilitate controlled dissemination of the secrets, and lower the levels of, e.g., contractual- or technical protection. Meaning, companies can more easily disseminate secrets inside or outside the company if abuse can be effectively countered, and more employees will likely gain access to trade secrets if effective sanctions are available for unlawful use. Consequently, both increased dissemination of secret information and a reduced need for safeguard measures has significant societal benefits.[78]

2.1.4 Trade secrets in numbers

In 2016, 200 000 firms operating in manufacturing and service industries in Europe took part in a Community Innovation Survey conducted by the Centre for European Economic Research in Mannheim and the EUIPO. The weighted average of all firms illustrated that 62.4 percent of the firms primarily use trade secrets to protect process and product innovations. Additionally, the use of trade secrets was higher than the use of patents in every member state.[79] Although, despite the firm's awareness of the importance of trade secrets, a study administered by Baker McKenzie concluded that 82 percent of the respondents said are essential for their business, and 48 percent respondents expressed that trade secrets was more important for their firm than patents and trademarks. Although, only 31percent of the firms had established procedures to respond to trade secret theft. Additionally, 32 percent of the firms perceived that former employees were the biggest threat to their trade secrets.[80]

2.2 The legal frame for trade secrets

The WTO's regime initially regulated the legal frame for trade secrets,[81] by Section 39 in the agreement on Trade-Related Aspects of Intellectual Property (TRIPS) agreement.[82] Section 39 stipulates that natural and legal persons can take preventive actions towards protecting information from unlawful acquisition or disclosure of the information if it is: not generally known, kept as a secret, and commercially valuable. Besides, the holder of the information must have taken

[78] Directive 2016/943, preamble. 9; Domeij. B, 2016, p.76.
[79] N. Wajsman & F.García-Valero. '*Protecting Innovation through Trade Secrets and Patents: Determinants for European Union Firms*'. European Union Intellectual Property Office. European Observatory on Infringements of Intellectual Property Rights, 2017, p. 28 Available at: https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/Trade%20Secrets%20Report_en.pdf(Retrieved: 2020.02.11).
[80] Baker McKenzie. '*The board Ultimatum: protect and perserve, the Rising Importance of Safeguarding Trade Secrets*', 2017, p. 4, 7f. Available at: https://www.bakermckenzie.com/-/media/files/insight/publications/2017/trade-secrets (Retrieved: 02.15.2020).
[81] The World Trade organization (WTO) is an international organization that was established in 1995. The objective with the organization is to facilitate international trade.
[82]The TRIPS- agreement is an international agreement between the members of WTO in 1995. The agreement sets a minimum standard for national regulation of Intellectual property rights.

reasonable steps towards protecting the information.[83] Section 39 of the TRIPS agreement involves an alteration of the two perspectives of property and fair competition. The United States has embraced a property perspective in the American Economic Espionage Act (EEA),[84] and the Defend Trade Secret act (DSTA).[85] Meaning that a trade secret is defined as property in the United States. The European Union has adopted a fair competition perspective in Directive 2016/949.[86] Meaning that a trade secret is not defined as property, but a legal tool to facilitate fair competition.

Moreover, before the European Union adopted the directive, Sweden was the only country that had an established legislation on trade secrets. Like the European Union, Sweden has applied a fair use perspective for their legislation, which has meant that the legal construction of trade secrets have been categorized as a sub-field to competition law.[87] Although, the application of trade secrets is not limited to the competition field of competition law but is often active in different combinations of the fields of criminal-, labor-, and intellectual property law simultaneously.

2.3 The legal definition of a trade secret

The STSA consists of four constituting requisites that must be fulfilled to define information as a trade secret. Consequently a *"... trade secret", means such information that:*

> *i) concerns the business or operational circumstances of a business or a research institution's activities;*
>
> *ii) which, either as a body or in the precise configuration and assembly of its components, is not generally known or readily accessible to persons who normally have access to information of the type in question;*
>
> *iii) which the holder has taken reasonable measures to keep secret; and*
>
> *iiii) the disclosure of which is likely to lead to competitive injury to the holder.*" [88]

[83] TRIPS- Agreement, section 39.
[84] The Economic Espionage Act of 1996 (Pub. L. 104–294, 110 Stat. 3488.
[85] Defend Trade Secrets Act of 2016 (DTSA) (Pub.L). 114–153, 130 Stat. 376.
[86] Directive 2016/943, preamble, p. 4.
[87] Sweden has had a law that regulates trade secrets since 1990 (Law (1990:409) about protection for trade secrets. In 2015 was the law harmonized with directive 2015/943.
[88] Trade Secrets Act, section 2.

2.3.1 Information,[89]

The application area for trade secrets is extensive and can include both codified and uncodified information. Additionally, the definition of a trade secret contains all types of information, specific or non-specific, intricate, or straightforward.[90] Moreover, information that fulfills the four requisites can be divided into two subcategories of trade secrets; commercial trade secrets and technical trade secrets. The first category, commercial trade secrets, is connected to the business' market, i.e. business strategies, cost-estimations, and customer registers. Additionally, administrative trade secrets are a subcategory of commercial trade secrets that can, for example, consist of employee performance information, salary structures, or sales figures. Technical trade secrets are mostly information connected to the business' R&D activities, e.g., computer code, data from research, documented technical solutions, or product instructions. From a legal perspective, it is not necessary to divide the trade secrets into commercial or technical trade secrets.[91]

2.3.1.1 ...concerning the business or operational circumstances of a trader's business or a research institution's activities,

The requisite concerning the business or operational circumstances of a business or a research institution's activities include aspects of the nature and character of the information as well as the firm. Consequently, for pedagogic purposes the requisites will be described and analyzed as two parts.

2.3.1.1.1 ...concerning the business or operational circumstances…[92]

Information about a firm's business or operational circumstances does not only include specific information about the ongoing operations and production at a firm, e.g., data from research results. It can also include general business information like business plans or results from a market search. Although, the information must have some connection to a business' or research institution's activities.[93] Meaning that information about personal matters can never be defined as information about a firm's business or operational circumstances. Hence, information that has nothing to do with an employee's exercise of their profession can never be defined as a trade secret. Nor can information that an employee possesses as a consequence of their craftsmanship be defined as a trade secret. It is often hard to draw the line between an employee's craftsmanship and information about a firm's business or operational circumstances. A guiding principle is that explicit knowledge that anyone with adequate education can transfer into practical results can be defined as a trade

[89] Trade Secrets Act, section 2, paragraph 1.
[90] Government bill. 1987/88:155, p. 34; NJA; 1998 p. 558.
[91] Cf. Ibid., pp. 34–35; Domeij. B, 2016, pp. 89.f.
[92] Trade Secrets Act, section 2, paragraph 2, p. 1.
[93] Prop. 2017/2018:200; *En ny lag om företagshemligheter* [Government bill. A new act on trade secrets]. p. 27; Government bill. 1987/88:155, p. 35; Cf. Prop. 1979/80:2, *med förslag till sekretesslag m.m.* [Government bill. Proposals for a new secrecy act, etc] p. 145, p 35; NJA 1998 p. 633.

secret that belongs to the firm. However, implicit knowledge that cannot be transferred to another person by instructions or other communication tools are attached to the individual's craftsmanship, and cannot be defined as a trade secret that belongs to the firm.[94] For example, a person that has never driven a car will probably not know which position the pedals should be in to find the pull position. Hence, the ability to find the car's pull position,[95] That enables the person to start the car is a personal skill that is attached to the individual. The ability to start a car by finding the car's pull position is a skill that cannot be defined as a trade secret. However, if a taxi company develops a matching and routing algorithm that directs taxi drivers to individuals and individuals to places, it is probably information that can be defined as a trade secret.[96]

There are very few cases in the judicial arena where the line between craftsmanship and trade secrets has been discussed. Hence, the regulatory framework provides very little guidance on how the assessment should be made. Although this does not mean that the firm should be paralyzed. By using internal documentation, MedTech Firm SE can communicate what knowledge the firm perceives as trade secrets. By this communicative objectification procedure, the firm can transform knowledge into an information object, a trade secret that belongs to the firm, and is not part of the employee's craftsmanship.

Moreover, as mentioned the trade secret act does not have a formal requisite for how a trade secret must be characterized, which means that information that can be subject to trade secret protection is not limited to explicit and codified information but can also be tacit and non-codified information. Valuable information is often developed as a result of the employee's work efforts. In the initial phase of the development of the information the employer is not necessarily aware of the existence of the information. If the employer has communicated that specific themes of information are not allowed to be disclosed outside a certain circle of certain people, this information shall be protected with the intellectual phenomena of trade secrets.[97] This goes hand in hand with the main rule that employers have a right to the employees' work efforts. The exception is if the employer develops a patentable invention where the employee has a principle right to the result. However, the employer has, under some circumstances, a right to accede the invention.[98]

2.3.1.1.2 ...of a trader's business or a research institution's activities.[99]

A business shall be interpreted widely and includes any legal or physical person that conducts commercial business independently if it is focused on profit.[100] Research institutions that partly or

[94] Government bill. 2017/2018:200, p. 28; Government bill. 1987/88:155, pp. 35, 61; SOU 1966:71, *Otillbörlig konkurrens* [Official report of the Swedish government. Unfair competition], p. 140f.
[95] My translation of the Swedish word “dragläge”.
[96] Domeij. B, 2016, pp. 105f.
[97] Government bill. 1987/88:155, p. 36.
[98] Right to the Inventions of Employees Act.
[99] Trade Secrets Act, section 2, paragraph 2, p. 1.
[100] The term “business” is applied for the Swedish definition of a “näringsidkare”.

as a whole conduct research for commercial purposes shall be governed as a business. Meaning that a business or a research institution that possesses commercial information and are active on the market shall be included in the definition. Additionally, non-commercial research institutions that develop research that potentially has a commercial value shall also be included. However, not all research institutions are included. In practice, trade secrets cannot be applied for authorities that conduct research activities since public records cannot be protected.[101] Moreover, concerning universities that are assigned a research project or active in research collaborations with individuals, the Swedish law on secrecy applies,[102] which provides special provisions for secrecy for those research institutions.

2.3.1.2 ...which, either as a body or in the precise configuration and assembly of its components, is not generally known or readily accessible to persons who normally have access to information of the type in question.[103]

A business or research institution must not keep trade secrets de facto disclosed within the firm. Instead the persons that have access to the information must be defined, limited, and closed. Hence, the use and disclosure of the information are restricted to a limited circle of people.[104] Moreover, a trade secret can consist of a collection of information based on different parts of lesser information. These lesser parts can be both easily accessible and public. The parts' character can be trivial, but the collection of parts can constitute a trade secret.[105] This means that customer lists or lists of employees can be protected as a trade secret.[106] Other examples of publicly available information that can be protected since it has been compiled into a collection of information are a collection of annual reports or patent publications. In those cases, the collection represents a commercial value, which means that the holder of the collection can offer the information in exchange for a license fee. Thus, if the information were to be disclosed, a potential economic loss would be caused to the holder of the collection since the collection would no longer be characterized as a trade secret, nor would it be possible to obtain a license fee for the information.[107] With that said, it should be emphasized that the STSA does not provide an exclusive protection for information that fulfills the legal definition of a trade secret. Meaning that two different firms can, in theory, protect, e.g., a similar or identical database of patent publications independently from each other.

[101] Government bill. 2017/2018:200, pp. 27 f.;Government bill. 1987/88:155, p. 34f.
[102] Offentlighets- och sekretesslag (2009:400) [Publicity and secrecy Act].
[103] Trade Secrets Act, section 2, paragraph 2, p. 2.
[104] Government bill. 2017/18:200, p. 138; Government bill. 1987/88:155, pp. 13, 35ff.
[105] Government bill. 1987/88:155, p. 34.
[106] See AD 1998 nr. 80 Where the labor court makes it clear that customer lists and a list of employees and their qualifications and which companies, they were associated with shall be perceived to fulfill the legal definition of a trade secret since both lists have a commercial value.
[107] R. Fahlbeck, '*Lagen om företagshemligheter: En kommentar och rättsöversikter* '[*The Trade Secrets Act: A Commentary and Legal Reviews]*, upp. 4. Stockholm: Norstedts Juridik, 2019, pp. 418f.

2.3.1.3 ...which the holder has taken reasonable measures to keep secret.[108]

The main rule is that a business or research institution, which is the holder of undisclosed business or operational information, must take reasonable measures to keep secret. Although, there are no formal requirements of what activities that the holder of undisclosed information must take. The threshold for what reasonable activities are depends on the context in each situation.[109] Thus, there are no requirements for specific activities.[110]

2.3.1.4 ...the disclosure of which is likely to lead to competitive injury to the holder.[111]

The disclosure of business or operational information shall change the holder's competitive advantage negatively.[112] The requisite aims to protect an efficient competition on the market. Although there are no formal requirements that the holder has suffered economic damage.[113] It is sufficient that disclosure of the undisclosed business or operational information typically would damage the holder's competitive advantage.[114] However, the economic damage must be legally compensable. Meaning that policies and/or guidelines that state that a business or research institution does not intend to follow relevant legislation cannot be protected as a trade secret.[115]

2.3.2 Passive and active requisites

When deconstructing the legal definition of a trade secret, it becomes evident that the requisites can be divided into passive and active requisites. The passive requisites relate to the character and nature of the information. Meaning that the holder of the information cannot by active means change the character or nature of the information. The active requisites relate to activities that the holder of the undisclosed information must take. Consequently, a firm's ability to control business or technical information by the STSA is determined by how a firm manages undisclosed information.[116]

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[108] Trade Secrets Act, section 2, paragraph 2, p. 3.
[109] Trade Secrets Act, section. 2 Paragraph 1, p. 3; Government bill. 2017/18:200, p. 31; Government bill. 1987/88:155, pp. 13, 36; SOU 2017:45, *Ny lag om företagshemligheter* [Official report of the Swedish government. A new act on trade secrets], p. 109.
[110] NJA 2017 p. 457.
[111] Trade Secrets Act, section 2, paragraph 2, p. 4
[112] Trade Secrets Act, section 2, paragraph 1, p. 4.
[113] Government bill. 2017/18:200, p. 29; Official report of the Swedish government 2017:45, p. 112.
[114] Section. 2 Paragraf 1.p. 4. Lag (2018:558) om företagshemligheter; Government bill. 2017/18:200, p. 29; Government bill. 2017/18:200, p. Government bill. 1987/88:155, p. 13; Bet. 1989/90:LU37 *Skydd för företagshemligheter* [Council on legislation Protection of trade secrets], pp. 22ff, 111ff.
[115] Government bill. 2017/18:200, p. 29.
[116] C.O. Rosén, 2018, p. 55.

2.3.2.1 Passive requisites

As figure 3 illustrates, the passive requisites of the legal definition can be described as a funnel with four steps, where the amount of information declines as the information passes through the funnel.[117]

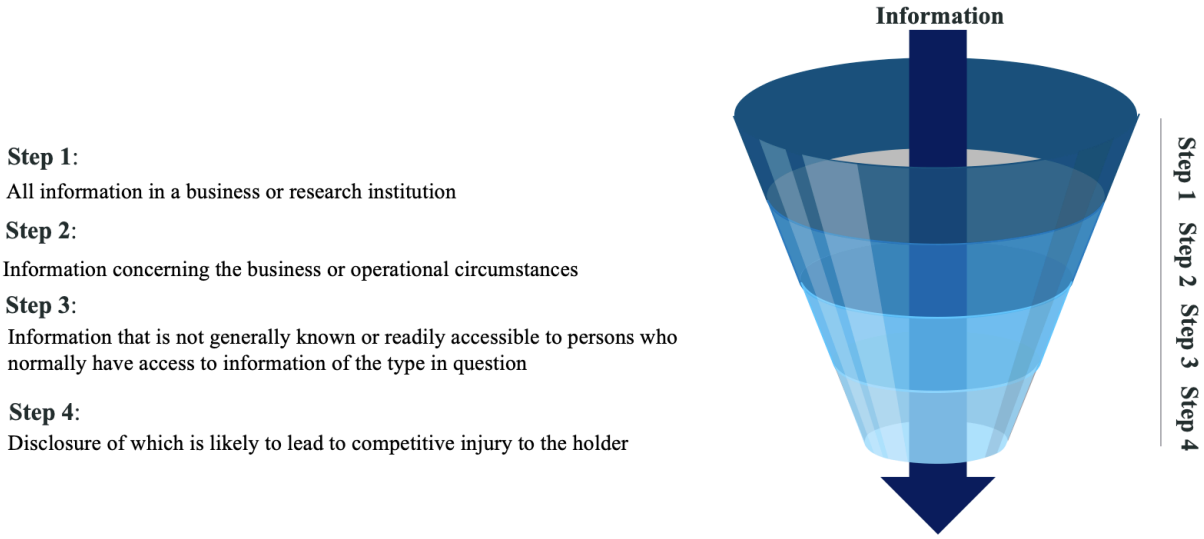

Figure 3: Funnel of the passive requisites of the legal definition of a trade secret.[118]

Moreover, it can be argued that the requirement that states that information shall not generally be known or readily accessible are not passive since it resides features that can be related both to the character and nature of the information and activities of the holder of the information. For example, information cannot be generally known or readily accessible because the holder of the information has not disclosed the information to anyone, or by active means. For example, can security measures be taken by, e.g., limit the amount of people that have access to the information or by physical means such as passwords or contract means such as NDO. Although the requirement mainly relates to the character and nature of the requirement since the requirement rather illustrates the status of the information than the activities that have been taken to attain that status.[119]

2.3.2.2 Active requisites of the legal definition

The active requisites of the legal definition of a trade secret are:

1. Information of a business or a research institution's activities; and,
2) information which the holder has taken reasonable measures to keep secret.

The first requisites require that the holder of the information is a firm that conducts business or research activities. The second requisite requires that the holder of the information must take

[117] Trade Secrets Act, section 2; Cf. C.O. Rosén, 2018, p. 55f.
[118] My design.
[119] Cf. C.O. Rosén, 2018, p. 55f.

reasonable activities to keep the information undisclosed. Meaning that the business or research institution cannot be passive and simultaneously retrieve protection from the STSA. Consequently, the active requisites relate to the commercial or economic character and activities of the firm rather than the nature and character of the information.[120]

2.4 Disclosure of trade secrets

2.4.1 The inevitable disclosure during and after employment

To conduct a knowledge-based business, it is inevitable to share information at all levels of the firm.[121] An employee that possesses a lot of tacit knowledge that terminates his or her employment can be devastating for the firm since they are not as easily replaced. If the former employee shares confidential information about the firm's business a lot of value or sometimes even all value of the firm can be lost. Since not all information within a firm is possible to control with IPRs, e.g. if it by nature is tacit and resides within the employee, or if the firm strategically has decided not to protect something through an IPR, trade secret protection is a complement.[122]

When knowledge is shared among the employed or objectified from humans into structured capital it creates additional value. Developing such valuable knowledge can be very costly. However, once the information is developed, the knowledge can be easily spread at little cost. Additionally, the more people who have access to certain information, the greater the value creation can be, since more than one person can create value from the same piece of information at the same time. Although, the more people that have access to valuable information, the more vulnerable the firm is for misappropriation of that same information. Consequently, when a person gets access to the information, they are a potential competitor to the firm. In order to protect the firm, the employer can use different communicative actions to transform human capital into structured capital like trade secrets or traditional IPRs to protect themselves.

2.4.2 Unauthorized disclosure of trade secrets during the employment

The STSA protects the holder of a trade secret from unauthorized acts of misappropriation to acquire, disclose, or use trade secrets. Moreover, the requisite of acquisition can be divided into three subcategories: accessing, appropriating, and other forms of accessing.

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[120] C.O. Rosén, 2018, p. 55f.

[121] M. Robertson, D. R. Hannah, & B. A. Lautsch, 'The secret to protecting trade secrets: How to create positive secrecy climates in organizations'.*Business Horizons*, vol.58, no. 6, 2015, pp. 669-677. Available at: https://econpapers.repec.org/article/eeebushor/v_3a58_3ay_3a2015_3ai_3a6_3ap_3a669-677.htm(Retrieved: 2020.04.13).

[122] D.E. Dexter, & V.R Park. 'Protecting Trade Secrets in Knowledge-Based Industries', 2003, p. 19. Available at: https://www.yumpu.com/en/document/read/6752869/protecting-trade-secrets-in-knowledge-based-(Retrieved: 2020.02.13).

The term "*accessing*" means that a person acquires information that they do not have legitimate access to.[123] For example, if an employee steals a colleague's password with a higher security clearance and downloads documents that they usually do not have access to. The term "*appropriating*" means that a person acquires trade secrets to themselves that they have legitimate access to.[124] For example, if a person sends trade secrets to their personal email or hard drive with the purpose of preparing for a competing business.[125]The meaning of other "*forms of accessing*" trade secrets could, for example, mean that the acquisition goes against the business practice.[126] However, to report to a qualified authority suspected criminal activities or misconduct is never unauthorized.[127]

Depending on who has conducted the act of misappropriation, the scope of the misappropriation, when the misappropriation was executed, and if the person had legitimate access to the information, different civil and criminal sanctions are applied. An employee can be subject to civil proceedings if they willfully or by negligent conduct acquire, disclose or use trade secrets that he or she should have known that the employer would want to keep secret.[128] Moreover, if the employee has acquired a trade secret by accessing information that clearly was outside the scope of their duties and that he or she did not have authorized access to, the employer can choose to proceed with criminal actions.[129] The employee can then be convicted for espionage, or unlawful, dealing with a trade secret.[130]

However, it is often challenging to prove that the person was aware that the information was defined as a trade secret. Although implemented guidelines, education programs, and strategies concerning trade secret management can have a preventive function to ensure that certain information is defined as a trade secret. These management tools can also serve as evidence to prove that the firm has taken "*reasonable steps*" to protect its trade secrets. It also holds a restorative effect since the firm can prove that the exploiter was or should have been aware that the information was a trade secret.

[123] Government bill. 2017/18:200, p. 37; Government bill. 1987/88:155, p. 38; J. Aspegren, Lag (2018:558) om företagshemligheter, comment, 12. Juno. Available at: https://pro-karnovgroup-se.ezproxy.ub.gu.se/b/documents/2545990?active_section_details_annotation=SFS2018-0558_NKAR12&st=karnov&t=ANNOTATIONS#SFS2018-0558_K0_P3 (Retrieved 2020-03-30)
[124] Government bill. 2017/18:200, p. 37 ff; J. Aspegren, Lag (2018:558) om företagshemligheter, comment, 13. Juno. (Retrieved 2020-03-30).
[125] AD 2018 no. 31; AD 2017 no. 22.
[126]Government bill. 2017/18:200, p. 40; J. Aspegren, Lag (2018:558) om företagshemligheter, comment, 14. Juno. (Retrieved 2020-03-30)
[127] Trade Secrets Act, sections 3-4.
[128] Trade Secrets Act, section 7.
[129] Government bill. 2017/18:200, p. 67; Government bill. 1987/88:155, p. 38; NJA 2001 p. 362; J. Aspegren, Lag (2018:558) om företagshemligheter, comment, 69. Juno. (Retrieved 2020-03-30)
[130] Trade Secrets Act, sections 26, 27.

When the firm develops policies, strategies, and incentives structure, case law in the judicial arena affects the construction of these documents and actions, which means that the firm must be able to prove that their communication of trade secrets in the business arena is aligned with the legal definition of a trade secret, and how that definition has previously been interpreted.

In case of a legal procedure the employer's consent shall be tested on objective grounds, which means that implicit acceptance is not accepted.[131] Hence, the guidelines also help the employer to communicate that they intend to keep certain information as a secret, which means that the employer communicated that they do not accept that certain information is subject to acts of misappropriation.

2.4.3 Unauthorized disclosure of trade secrets after the termination of employment

An employee can be found guilty of an unauthorized act of misappropriation if the employee acquires, disclose or uses the employer's trade secrets during their employment.[132] If the employee acquires, disclose or uses the employer's trade secrets after the termination of their employment, the requisites of extraordinary circumstances must also be fulfilled for the employee to be guilty of an unauthorized act of misappropriation.[133] In the preparatory work of the trade secret act six types of situations been listed as extraordinary reasons:[134]

- The employee has taken employment at the firm for the purpose of acquiring trade secrets;
- The employee prepared for a transfer of trade secrets to a competitive business during the employment;
- The trade secret has been subject for misappropriation of any sort by the employee;
- The employer’s economic damage is extensive; and/or,
- The employee has had a fiduciary position within the firm, e.g., CEO or manager. (This does not alone constitute extraordinary reasons and must be combined with one of the above-mentioned typical situations or other factors).

In the judicial arena the court has not yet developed any principles to actions that automatically fulfilled the requisites of extraordinary reasons. However, the typical situation mentioned in the preparatory works is when the former employee has prepared for a transfer of trade secrets to a competitive business during the employment.[135]

The firm can mitigate the uncertainty that the requisite extraordinary reasons brings by explicitly regulating the former employees use of the firm's trade secrets with contractual tools. The opportunities that contractual tools bring for the employer will be analyzed in section 3 and 4.

[131] Government bill. 2017:45, p. 173.
[132] Trade Secrets Act, section 2, 7. paragraph 1.
[133] Ibid., section 2, 7. paragraph 2.
[134] Government bill. 1987/88:55.
[135] AD 2013 no. 24 and AD 1998 no. 80 where the labor court makes it clear that an employee that prepares for competitive business activities during the employment fulfills the requisite of extraordinary reasons.

2.4.4 Conclusion

To conclude, characteristics of business and operational information that could fulfill the legal definition of a trade secret and protect the employer from acts of misappropriation during and post-employment. However, the legal definition requires that the business or research institution is active and take reasonable measures to business and operational information secret to receive protection from the STSA.

2.5 Trade secrets and the industry of MedTech

2.5.1 Value proposition and commercial utility

MedTech firms' value proposition is commonly built upon innovation and cost reducing procedures or technologies.[136] Consequently, the industry of MedTech is characterized by R&D activities and reliance and commercial exploitation of IA. Moreover, the nature and character of IA that can provide a competitive advantage in the business arena is excessive.

Additionally, as mentioned in section 1.2.1.4, is there a tendency in the industry of MedTech that results generated from R&D activities are captured by claiming it as a patentable invention. However, a patent is only as useful if it creates value for the MedTech firm. Meaning that the financial costs of retrieving and maintaining a patent in business-relevant industries must be compared with the benefits with obtaining patent protection. The obvious benefit with a patent is that it gives the holder exclusivity of the inventions in the jurisdictions that the holder has applied and received protection. Moreover, there is a penchant that investors and firms active in the industry of MedTech attribute a qualitative value on inventions that comprise a patent. Meaning that a patent can also serve as a communicative tool on the business arena to showcase the invention to potential acquirers, customers or investors. Additionally, technical solutions can only obtain patent protection if they fulfill the requirements of novelty. [137] The required novelty can only be obtained if the information, that has resulted in an invention subject for patent protection, has maintained its status as undisclosed until the day that a patent application was filed. Meaning that a MedTech firm's ability to retrieve patent protection are intrinsically dependent on their ability to manage the invention as a trade secret until the day of filing a patent. [138]

Furthermore, the industry of MedTech is highly driven by allocations in capital in M&A whereas large firms regularly inspect the market for strategic acquisitions of IA and/or IP that can increase the value of their portfolio.[139] Meaning that the goal of a smaller MedTech firm is to be acquired

[136] C.O. Rosén, 2018, p. 56.
[137] Patents Act, section 2.
[138] C.O. Rosén, 2018, p. 58.
[139] Deloitte, '*Creating value through M&A in the Medical Technology Industry*'. London: Deloitte, 2017, p. Available at: https://www2.deloitte.com/us/en/pages/mergers-and-acquisitions/articles/medical-technology-m-and-a.html (Retrieved: 2020.06.13); C. Foley, A. Kronimus, P. Nowotnik, A. Roos, C. Schweizer & S. Stange, '*M&A in*

by a larger actor. Although, the firm that is targeted for such acquisition is naturally subject for comprehensive due diligence by the acquirer. Meaning that the business and the IA that the firm possess is thoughtfully analyzed in relation to commercial risks and value.

Consequently, a firm's ability to manage and control undisclosed information go hand in hand with the firm's ability to attract an acquirer, but also monetary funding and engage in commercial activities and act in alliance with their value proposition.

2.5.2 Valuable trade secrets

Considering the established R&D focus among MedTech firms, and insights from the authors experiences and retrieved questionnaires, indicated that most of the MedTech firms active in the intellectualized economy possess information that fulfill the passive requisites of the legal definition of a trade secret. However, personal experiences, the retrieved questionnaires indicate that most firms active in the MedTech industry do not have established systems for identifying and protecting trade secrets. Meaning that there is more uncertainty concerning the Firm's ability to fulfill the active requisites, specifically that the holder of the information has taken reasonable steps to keep the information a secret.

Additionally, based my experiences and answers retrieved from the questionnaires is it common that MedTech firm's possess confidential information that can be divided into IA categories, e.g., the categories of: Business data e.g., business strategy, customer lists, customer data , technical data e.g., research results, database, data correlations, instructions, software, and technical solutions. Moreover, If the MedTech Firms were to rank their most valuable IA, the questionnaires indicated great differences between the firms, which can probably be explained by the fact that they were active in different areas of the field of MedTech. Although, some general conclusions can be drawn, and many firms considered that data, databases, solutions instructions and were valued the highest.

Additionally, my own experience and indications from the actors within the field of MedTech indicate that the estimated life span of the IA of the firm were the variations among different classifications IA, but also within the same class extensive. e.g., data were perceived to have a lifespan from fore two years until forever, database from one year to 17 years, the solution from 1 year to 17 years, instruction from five months to forever.

Furthermore, the actors that replied to my questionnaire had used different factors when they estimated the life span from protection from traditional IPRs, where patents give protection for 20 years, development costs, legislation, changes on the market, and product cycles. Consequently,

MedTech – Restarting the Engine'. Boston: The Boston Consulting Group, 2012. p. 8-10. Available at:https://www.bcg.com/documents/file113698.pdf https (Retrieved: 2020.06.13).

the employer's interests in protecting different trade secrets are diversified between different categories of trade secrets and the same category.

Like mentioned in section 1.5, the answers retrieved from the questionnaires were not extensive enough to use as a methodology for this thesis. However, I perceive that my own experiences and questionnaires can provide general indications within the industry of MedTech

2.5.3 MedTech Firm SE and trade secrets

As mentioned in section 1.5.1 MedTech Firm SE is in urgent need of acquiring more funding to be able to continue with the development of the diabetes app Capua. This can be done either by state grants, taking in an external investor or acquisition by a larger actor. Moreover, since MedTech Firm SE does not possess any patents, and the copyright protection that they possess protects far from all of their confidential information, must MedTech Firm SE present other legal control mechanisms that can assure an external party that they have control over their confidential i.e., secrecy based control or contractual based control.[140]

Concerning confidential information that fulfills the passive and active requirements of the legal definition of a trade secret, should MedTech Firm SE capture and control, but not limited to, the following information:

Technical information

1. Data retrieved from research results concerning e.g., the effect different nutrition's has for different people
2. database of research results, where the results is systemized and searchable,
3. data correlations driven from the research results,
4. Software of the app Capua.

Commercial information:

1. The business plan for MedTech Firm SE,
2. list of potential customers,
3. cost estimations of the development of Capua,
4. Market research results.

Moreover, to attain the commercial possibilities from confidential it is crucial for MedTech firm SE to establish a proactive managerial system, which will be described and analyzed in section 4, for identifying and capturing information that fulfills the legal definition as a trade secret. Such a system will also serve as a foundation for contract-based control post-employment in an

[140] Contractual based control in an employment contract will be described and analyzed in section 3.

employment contract, which will be described and analyzed in section 3, which in turn will serve as a basis a managerial tool for designing NCO, which is described and analyzed in section 4.

3. Contractual tools to protect trade secrets post-employment in an employment contract

3.1 Introduction

Former employees have been perceived as the most considerable risk of unintended disclosure or misappropriation of trade secrets.[141] Whereas the risk increases after an employee has left the firm since the main principle in Sweden is that former employees are free to disclose and use their knowledge after the termination of their employment.[142]

Moreover, since trade secrets often play a significant role in a knowledge-based firm's competitive advantage,[143] and since information loses its status as a trade secret once disclosed,[144] former employees represent a determinant of uncertainty concerning the firm's ability to attain or maintain their position at the market.[145] To mitigate the uncertainty, employers can, by contractual means, limit former employee's use and disclosure of trade secrets post-employment.

Therefore, the purpose with this section is to describe and analyze how trade secrets can be protected with contracts post-employment, specifically by the intellectual phenomenon of an NCO and an NDO in an employment contract.

3.1.1 What is a non-compete obligation?

NCOs regulates the employee participation in other business activities of the same kind that the former employer is active within. Hence, an NCO regulates undesirable competitive behavior. Meaning that an employer can prevent a former employee from starting to work for a competitor or start their own business that competes with the former employer. Thus, the employer can indirectly limit the former employees' opportunities to use their trade secrets during a limited time.[146] Moreover, the design of an NCO obligation can vary depending on what interest that the obligation aims to protect. However, an NCO is typically designed as a market protection clause that protects the former employer from all sorts of competition, or a customer protection clause

[141] Baker McKenzie, 2017, p. 7.
[142] The risk decreases since the protection retrieved from the Trade Secrets Act decreases and the employees' duty of loyalty towards the employer terminates simultaneously as the employment relationship ends; AD 2015 no. 8.
[143] Directive 2016/943. preamble, p. 4; D.E. Dexter, & V.R Park, 2003, p. 19.
[144] Trade Secrets Act, section 2, paragraph 2, p. 2; See section 2.3.
[145] Ibid., section 2, paragraph 2, p. 2.
[146] Cf. Domeij. B, 2016, p. 238.

that forbids the former employee from working with the employer's customers,[147] or a non-recruitment clause that forbids the former employee from recruiting former co-workers.[148]

Additionally, NCOs are characterized by limiting competition, whereas the regulative landscape for such agreements is extensive and technically complex to interpret. The regulative sources for the design and interpretation of such obligations vary depending on what contract the NCO is regulated in, what role the employee has that is subject for the NCO and whereas the employer is an affiliated member of the 2015 Collective Agreement or not. Consequently, an NCO that an employer has obliged one employer with can contribute to a sense of false security, as the employer perceives that they are protected from unwanted use of their trade secrets since they have obliged a former employee with an NCO. However, the extensive activities in the judicial arena concerning the scope of NCO have proven that it is a widespread phenomenon that employers have obliged employees with NCOs that are not compliant with the regulation.

3.1.2 What is a non-disclosure obligation?

An NDO only includes communication concerning confidential information. Meaning that a former employee is allowed to take employment at a competitor, but he/she is not allowed to disclose confidential information, e.g., information that fulfills the legal definition of a trade secrets is possessed by the former employer.[149] Additionally, an NDO can be designed as a general or specific obligation. Meaning that the former employee is either obliged to not disclose none of the employer's confidential or a specific set of them.[150]

Moreover, the former employer's ability to disclose confidential information that they possess is to some extent limited by the STSA. However, knowledge that fulfills the legal definition of a trade secret is protected from acts of misappropriation when extraordinary reasons apply.[151] Meaning that the STSA provides an NDO after the termination of the employment without an individual contract. [152]

Additionally, firms often do not have enough insight into the competitors business to be able to assess if a former employee has disclosed trade secrets that are possessed by the employer.[153] Consequently, the inconvenience with NDO is that it is difficult for an employer to prove that a former employee has acted contrary to the NDO. Thus, there have been very few court cases concerning NDO:s in an employment contract and in the cases that were found, the court often

[147] Domeij. B, 2016, p. 239.
[148] Ibid.,p. 241.
[149] Ibid.,p. 386.
[150] Ibid.,p. 391.
[151] Trade Secrets Act, Section 7. Paragraph 2.
[152] Domeij. B, 2016, p. 241.
[153] Ibid.,p. 386.

concluded that the employer had been unable to prove that the former employee had disclosed trade secrets that were subject to an NDO.[154]

3.1.3 What conflicts of interests arise between the employer, the employee and society?

3.1.3.1 Non-competition obligations

The relevant conflict of interest concerning NCOs is the two opposing interests of freedom of contract,[155] and the right to move and compete freely.[156] The employer has the interest to protect themselves from the competition. Hence, they have the interest to write a contract with the employee where the employee states that he or she will not use the employer's trade secrets and compete with the employer after her employment ends, i.e. by obliging the employee with a contractual NCO.[157] Meaning that the employer's investment in education of their employees and technical development will be more protected. Which will result in an increased incentive for investments. However, the employee has an interest in her right to compete after the termination of her employment freely. Moreover, when an employee is obliged with an NCO, they automatically get a weaker position in their employment. Meaning that they are internally trapped to stay with the employer, and externally captured since the area which they can seek new employment are limited since the employer must refrain from all business activities that the employer potentially could perform. [158]

From a societal perspective, it might be difficult to assess to what extent a contractual obligation that limits competition is motivated. On the one hand, the contractual obligation decreases the employee mobility, which could lead to a decreased efficiency and innovation capabilities of the workforce. On the other hand, the contractual obligation might be a condition for education and innovation investments. To conclude, the balance of interest is delicate since both workforce stability and movement are perceived to increase economic growth.[159]

3.1.3.2 Non-disclosure obligations

The relevant conflict of interest is the firm's interest in protecting trade secrets that have been developed or acquired by financial investments with an NDO and the employee's interest in freely

[154] See e.g. AD 2009 no. 63.
[155] Regarding freedom of contract see e.g. A. Adlercreutz, L. Gorton, & Lindell-Frantz. E, *Avtalsrätt I*, [Contract law I]. upp. 14. Lund: Studentlitteratur AB, 2016, p. 34.
[156] About employee's freedom to move see e.g. Domeij. B, 2016, p. 247f.
[157] Cf. Adlercreutz, Axel, Flodgren, Boel, Om konkurrensklausuler i anställningsavtal och vid företagsöverlåtelser, pp. 14–17, 20.
[158] Cf. B. Domeij, 'Förhandlade konkurrensklausuler i anställningsavtal' [Negotiated competition clauses in the employment contract]. *Juridisk tidskrift*, no. 2,2013, pp. 272-304. Available at:http://arbetsratt.juridicum.su.se/Filer/PDF/Bendo/DomeijJT.pdf (Retrieved: 02.10.2020) ; Domeij. B, 2016, p. 244.
[159] Domeij. B, 2016, p. 245.

disclosing his or her knowledge post-employment. From a societal perspective,[160] a sanctioned protection mechanism, such as the STSA or NDO, in an employment contract, for confidential information, result in an increased openness of information. As it is more likely that more employees will gain access to trade secrets if effective sanctions are available for unlawful use.[161]

3.1.4 Contractual post-employment obligations in numbers

In 2012, 47 firms with high R&D costs operating at the Swedish market participated in a study that was conducted by Professor Bengt Domeij. The respondents were active in chemistry, biochemistry, pharmaceuticals, electronics, IT, energy, and mechanics. The majority of the respondents were Small and Medium sized Enterprises (SME), and had between 51-200 employees. The weighted average of all respondents illustrated that 53 percent of the firm's obliged their employees with NCOs in contracts that limited their ability to compete on the market post-employment.[162] Additionally, 82 percent of respondents expressed that the most crucial reason for using NCO contracts was to protect technical secrets,[163] and the weighted average of the duration of the NCO was between 9-10 months. Moreover, 54 percent of the respondents stated that technical personnel were not compensated during the time that the NCO contract was in force.[164] Moreover, Domeij expresses that the low number of respondents that used NCO contracts could be explained by the fact that NCO is perceived to be relatively ineffective and difficult to enforce.[165]

Additionally, despite extensive attempts did I not find any study concerning the prevalence of NDO obligations.

3.2 The legal frame for contractual post-employment protection of trade secrets

Sweden does not have a separate law for NCO obligations nor NDOs. Consequently, the primary rule is that the principle of freedom of contract applies. However, the principle is limited by the SCOA, the SCA, the 2015 Collective Agreement and the STSA.

[160] See section 2.1.3.
[161] Directive 2016/943, preamble p. 9; Domeij. B, 2016, p.76.
[162] B. Domeij, '*Anställda teknikers konkurrensklausuler*'. Uppsala universitet, Juridiska fakulteten, 2012, pp. 9ff.
[163] Ibid., p. 21.
[164] Ibid., p.12ff.
[165] Ibid., p. 24f.

3.2.1 The Swedish competition Act

3.2.1.1 Background

The Purpose of the SCOA is to maintain an efficient competition on the market by protecting the efficient use of societal resources and consumers.[166] The SCOA does not include an exhaustive list of actions that distort competition.[167] Hence, when interpreting if a specific action is compliant with the SCOA interpretation guidance can be found in the purpose with the law, EU-law, and case law when such is not defined in preparatory works or case law.[168]

3.2.1.2 The legal frame

The main principle is that contracts that hinder efficient competition between firms are not allowed according to SCOA.[169] The term "*firm*" shall be interpreted by the function that the organization fills, e.g., are their activities on the market and the risk associated with their actions. An employer determines the employee's tasks on the market and is responsible for the risk for the economic outcome of the employee's activities. Hence, a natural person that has the sole role of being an employee, shall not be interpreted as a firm.[170] Meaning that contracts between a firm and a natural person, i.e., employees, are exempted from the SCOA since the primary rule is that an employee is not a firm.

However, there might be some circumstances when a natural person can be perceived to have the role of a firm and not as an employee. For example, a natural person with a sole proprietorship is to be considered a natural person that conducts operations of a financial, commercial nature.[171] Moreover, contractual obligations that are used to prevent an employee with financial and personal skills to start a competing business could be tested with SCOA. However, for the SCOA to apply to an agreement, where the purpose or result is to limited market competition, the contract must affect the market "*noticeably*".[172] Noticeably means that the contract must have economic effects of some importance to be covered by the prohibition, whereas the contractual parties' market shares shall be taken into consideration. If the total market share of the contracting parties does not exceed 10 percent and the respective market share in agreements between non-competitors does not

[166] Prop. 2007/98:135. *Ny konkurrenslag m.m.* [Government bill. A new competition act etc.], p. 67.
[167] Competition Act; chap. 2, section 1; chap 2, section 7; chapter 3, section 27; chapter 4, section 1.
[168] Government bill. 1992/93:56 p. 21. It shall be noted that the purpose with the competition regulation in Sweden compared to the EU differs since the purpose with the EU regulation is to promote market integration. Although, if the trade between member states is not affected by the specific contract that limits competition on the Swedish market, it is possible to diverge from EU case law. See e.g. C.J. Wetter, J. Karlsson & M. Östman,'Konkurrensrätt – en kommentar' [Competition law - a commentary]. Stockholm:Thomson Reuters Professional, vol. 4, 2009, p. 1.
[169] Consolidated version of the Treaty on the Functioning of the European Union. 2012/C 326/012012/C 326/01, section 101; Competition Act; chapter 1, sections 1, 5; chapter 2, section 1.
[170] See C-22/98, Criminal Jean Claude Becu, Annie Verweire, Smeg NV och Adia Interim NV, REG 1999, p. I-05665; C-41/90, Höfner och Elser, Rec. 1991, s. I-1979.; Competition Act, chapter 1, section 5; Domeij. B, 2016, pp. 249, 251.
[171] Competition Act, chapter 1, section 5.
[172] Domeij. B, 2016, p. 253.

exceed 15 percent, concerning smaller firms, where each of the contractual parties has an annual turnover that is below 30 million SEK and If the total market share of the contracting parties does not exceed 15 percent, is competition not typically considered to be significantly affected.[173] Additionally, Consequently, it is often unlikely that the SCOA is applicable for contracts that regulate competition post-employment.

Additionally there has been some discussion in the legal doctrine that a post-employment obligation in an employment contract e.g., NCO shall be perceived as a term of employment if it is a prerequisite for the employment relationship.[174] Therefore, since the SCOA is not "*applicable for contracts entered into between employers and employees relating to wages and other terms of employment*",[175] the consequence would be that the SCOA would not be applicable for post-employment obligations that regulate competition between an employer and an employee that has dual roles.[176] However, leading scholars of contract law have expressed that the main rule is that a NCO might not be considered as a working condition since obligation comes into effect after the employment is terminated.[177]

3.2.1.3 Conclusion

To conclude, the primary principle is that the SCOA does not apply to an employment contracts since an employee is not perceived as a firm. In case that the employee would be perceived as a firm, the employer and the employee must together hold 10 percent of the relevant market for the SCOA to be applicable on NCO in an employment contract.

3.2.2 Section 38 and 36 of the Swedish Contract Act

3.2.2.1 Background

Agreements that regulate competition have historically been a common phenomenon in Swedish contract law among contractual parties, especially employment relationships. However, at the beginning of the 20th century, Sweden started to realize the adverse effects that NCO in

[173]Commission Notice 2014/C291/07 on agreements of minor importance which do not appreciably restrict competition under Article 101(1) of the Treaty establishing the European Community (de minimis), 2014, C 391, section 8 ; KKVFS 2017:3, *Konkurrensverkets allmänna råd om avtal av mindre betydelse (bagatellavtal) som inte omfattas av förbudet i 2 kap. 1 § konkurrenslagen (2008:579)* [The Swedish Competition Authority's general advice on agreements of minor importance (trivial agreements) which are not covered by the prohibition in chapter 2, section 1 of the Competition Act], section 7.

[174] See e.g. N. Kyrk, 2015, p. 43.

[175] Competition Act, chapter 1, section 2.

[176] Domeij. B, 2016, p. 250.

[177] A. Adlercreutz & *B.* Flodgren; '*Om konkurrensklausuler i anställningsavtal och vid företagsöverlåtelse*'[*Non-competition terms in employment contracts and business transactions*]. Lund: Institutionen för handelsrätt vid Lunds universitet, 1992, p. 49.

employment agreements had on employees.[178] Where it was common that the NCO that the former employee had undertaken was broader than the employer's need for the obligation. Consequently, unmotivated ”*lock-in effects”* for employees was created, which decreased the efficiency of the labor market. Hence, when the SCA was adopted in 1915 section 38 was introduced as a frame for NCOs. [179]

Section 38 of the SCA explicitly stated that a person that had undertaken an obligation to not compete with the contractual party, either by engaging in trade, other business activities or taking employment at a firm that competed with the contractual party, was only obliged by the obligation in terms of time, place or other if it was reasonable to prevent competition in relation to the limitation of the person's freedom to work. Moreover, the assessment of whether the obligation was reasonable should be based on weighing of interests between the parties.[180]

In the revision of the SCA in 1976 the current Section 36 was adopted. Section 36 of the SCA stipulates that:

“A contract term or condition may be modified or set aside if such term or condition is unconscionable having regard to the contents of the agreement, the circumstances prevailing at the time the agreement was entered into, subsequent circumstances, and circumstances in general. Where a term is of such significance for the agreement that it would be unreasonable to demand the continued enforceability of the remainder of the agreement with its terms unchanged, the agreement may be modified in other respects, or may be set aside in its entirety.

Upon determination of the applicability of the provisions of the first paragraph, particular attention shall be paid to the need to protect those parties who, in their capacity as consumers or otherwise, hold an inferior bargaining position in the contractual relationship.

The provisions of the first and second paragraphs shall apply mutatismutandis to questions relating to the terms of legal acts other than contracts.

The provisions of section 11 of the Consumer Contracts Act (SFS 1994:1512) shall also apply to the modification of contractual terms relating to consumers. (SFS 1994:1513)” [181]

Since Section 36 SCA provided an opportunity to modify or cancel all contract conditions, it was been discussed whether Section 38 SCA was still needed. Although, the preparatory work of the new contract act concluded that it was beneficial from a labor law perspective that section 38 SCA regulated the scope of NCOs and section 36 SCA should regulate the possibility to modify or

[178] See Domeij. B, 2016, p. 242.
[179] Cf. Ibid., p. 264.
[180] Cf. Ibid; Contracts Act, chapter 3, section 38 [1915 version].
[181] Swedish Contract Act, chapter 3, section 36.

cancel an unreasonable NCOs.[182] Consequently, instead of abandoning section 38 of the SCA it was reformulated to its current more general format:

> *"Where, in order to prevent competition, one party has stipulated that the other party shall not engage in a certain type of business shall not take up employment with a person conducting such a business, such an undertaking shall not binding on the person giving it to the extent that the undertaking is more extensive than maybe considered reasonable."*[183]

The purpose of the general format was to open up for NCO modifications and give the principles established in the 1969 agreement about the limitation of use and content of competition clauses in employment agreements (1969 Collective agreement),[184] a possibility to be enforceable by Section 36 SCA.[185]

3.2.2.2 The legal frame of section 38

Section 38 of the SCA specifically states that contractual obligations that limit a contractual party to engage in business that competes with the other party must be reasonable.[186] However, the boundaries of the reasonability assessment are different depending on what contract that the obligation is regulated in and the contractual relationship.

3.2.2.2.1 Section 38 and employment contracts

The labor court has consistently argued that case law should have a restrictive perspective on NCO that an employee is obliged by.[187] Moreover, as mentioned in section 3.2.2.1, the relevant Collective Agreement on non-competition clauses shall be used as an interpretation tool to assess if the requisite of reasonableness is fulfilled. [188] Where NCO that was entered before December the 1th shall apply the 1969 Collective Agreement and, NCO that has been entered after December the 1th shall apply the 2015 Collective Agreement.[189]

Additionally, the Swedish labor court has defined reference points that sets the frame for how the requirements of reasonability shall be assessed in several cases. In AD 2015 no. 8 the court

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[182] Prop. 1975/76:81, *med förslag om ändring i lagen (1915:218) om avtal och andra rättshandlingar på förmögenhetsrättens område, m.m.* [Government bill. Proposal for amendment to the Act (1915: 218) on agreements and other legal acts in the field of property law, etc.], p. 148.
[183] Contracts Act, chapter 3, section 38.
[184] Övernskommelse mellan Svenska Arvetsgivarföreningen samt Svenska Industritjänstemannaförbundet, Sveriges Arbetsledarförbund och Sveriges Civilinjörsförbund angående begräränsningar av användningsområdet för och inneghållet i s k konkurrensklausuler i tjänsteavtal [The 1969 agreement about the limitation of use and content of competition clauses in employment agreements]
[185] Cf. Government bill. 1975/76 p. 149.
[186] Contracts Act, chapter 3, section 38.
[187] AD 2010 no. 53 and AD 2001 no. 91, where the labor court states that the underlying rationale concerning the praxis, is characterized by a restrictive view on the usage of an NCO in the relationship between an employer and employee.
[188] Government bill. 1975/76:81, p. 148f.
[189] The 2015 Collective Agreement, section 10.

summarize the current perception in the judicial arena and established several general principles for how the reasonability assessment of an NCO in an employment contract shall be assessed, which have been confirmed by later cases.[190]

Consequently, based on the reference point established in AD 2015 no. 8, the reasonability assessment shall be based on an overall judgment of all relevant circumstances in each case. Where the assessment can be divided into four steps. First, the employer's legitimate interest in a non-competition obligation is evaluated. Secondly, the employees' interest in freely competing on the market is assessed. Thirdly, the court assesses associating circumstances and obligations relating to the NCO. As a fourth and final step, the court weighing the employers and the employees' interest against each other.[191]

3.2.2.2.1.1 Step 1. The employer's legitimate interest

The first step of the overall assessment of the reasonability of the NCO is based on the employer's legitimate interest in obliging an employee with an NCO. In AD 2015 no. 8 the labor court recognize that the following three interests are legitimate: protection of technical or other business-specific knowledge that the employer has acquired or developed;[192] protecting existing customer relations, explicitly if the customers has been acquired by targeted customer activities or similar by the employer, [193] and finally, protection of trade secrets.[194]

Even though the normative space of what can potentially be included in the employer's legitimate interest is extensive, there are a few things that can never be included. An employer can never construct NCO obligations to lock in the key employee that possess specific knowledge.[195] For example, a firm could be tempted to do this when an employee possesses valuable knowledge, that is not codified, or when the firm has paid for education for the employee. Neither can the employer design an NCO for the sole purpose of neutralizing market competition. Meaning that an employer cannot oblige a former employee to not conduct any business of any sort that competes with the employee. Such obligations do not aim to protect the employer from exploiting the employer's customers but prevents market competition. Hence, the effects of such obligations are unreasonably wide.[196]

3.2.2.2.1.2 Step 2. The employee's possibility to freely compete on the market

The second step of the overall assessment of the reasonability of the NCO the employee's interest in freely competing on the market shall be evaluated. In AD 2015, no. 8 the court summarized four reference points from previous case law that can be used as a tool to benchmark the effects for the

[190] See AD 2018 no. 62; AD 2017 no. 57.
[191] AD 2015 no. 8.
[192] Ibid.; AD 2009 no. 63.
[193] AD 2013 no. 24; AD 2010 no. 27; AD 2002 no. 115.
[194] AD 1984 no. 20.
[195] AD 2001 no. 91; AD 1991 no 38.
[196] AD 2010 no. 53.

employee. The reference points can be divided into four areas; scope, duration, compensation, and sanctions.[197]

The scope of the obligation cannot be too broad, so the effect of the clause is to prevent market competition.[198] Moreover, the effects of an NCO obligation shall only be marginal for the employee. [199]Consequently, the main principle that the employee shall be able to continue to work within the occupation that they are active within. Meaning that the former employee shall be able to support themselves by utilizing their craftsmanship. However, the borderline between an employer's craftsmanship and the employer's legitimate interest with an NCO obligation is often challenging to draw. [200]

Moreover, the duration of the NCO obligation used as a scale to balance the scope of the obligation. Meaning that an NCO obligation with a broad scope can be accepted if the duration of the obligation is short.[201] However, the longest NCO the labor court has accepted was three years.[202] Although, the case is almost twenty years old, and according to the 2015 Collective agreement, that can be used as an interpretation tool, [203]the primary rule is that an employee shall not be obliged with an NCO for a longer time than eighteen months if not extraordinary reasons applies.[204] Moreover, in AD 2013 no. 24 did the court assess that an NCO that was one year was considered to be relatively long.

Additionally, the compensation that the former employee is offered during the time for the obligation should be decided in line with the restrictions that the clause means for the employee. Meaning that a very limiting NCO obligation can be justified if the former employee is compensated accordingly,[205] and vice versa.[206]

Finally, it is common that the sanction related to an NCO is by a separate contractual fine clause. Although the sanctions can also be illustrated in an NCO where the former employee is allowed to compete with the employer, he or she must compensate the former employer for their competing

[197] AD 2015 no. 8
[198] AD 2010 no. 53.
[199] AD 2009 no. 63 where the labor court assessed that an NCO was unreasonable due to the scope and geography of the obligation concerning the limitations it meant for the employee to freely take employment or engage in other commercial activities in the industry.
[200] Domeij. B, 2016, p. 288; AD 2001 no. 91.
[201] AD 2001 no. 91.
[202] AD 2002 no. 15.
[203] Cf. Government bill. 1975/76 p. 149.
[204] The 2015 Collective Agreement, section 5.1.
[205] AD 2015 no. 8 Where the labor court assessed that the NCO was unreasonable, and attributed value to the fact that there was no monetary compensation that corresponded with the NDO; Cf. AD 2009 no 63; Domeij. B, 2016, p. 292
[206] AD 2010 no. 27; AD 2002 no. 115; Domeij. B, 2016, p. 292.

activities.[207] For example, a former employee can be allowed to use the former employer's trade secrets but must pay the former employer a percentage of their sales for one year.

3.2.2.2.1.3 Step 3. Associating circumstances and obligations

The third step of the overall assessment of the reasonability of the NCO is based on associating circumstances and obligations that have occurred in relation to the NCO. Where AD 2015 no. 8 refers to four situations; negotiations, societal interest, the employee's position, and employment time.

Firstly, NCOs that have been subject to a fair negotiation can justify extensive obligations.[208] Secondly, the societal interest of maintaining healthy competition on the relevant market can also be taken into consideration.[209] Thirdly, the employee's position at the firm and time of employment at the firm are also of importance. Meaning that a broad NCO obligation is probably justified for an employee that holds a fiduciary position,[210] or an employee that has worked with the development of the firm's essential trade secrets. Meanwhile, it is not justified that an employee that is doing simple tasks like answering the phone is obliged with an NCO. Fourthly, the time of employment shall be considered. [211]

3.2.2.2.1.4 Step 4. The weighing of interests

The weighing of interest analysis is different depending on what industry the firm is active within. For example, there is less weight to the interest of the firm if the firm is active within an industry where the potential customer frequently alternates between different firms alternatively or simultaneously. Consequently, there is more weight to the interest to have such clauses within an industry where the potential customer has a long-term relationship with the firm., e.g., an accounting firm. Additionally, a common phenomenon is that branch organizations have established guiding principles for the design of NCOs.[212]

3.2.2.3 Mixed employment agreements

Except for in an employment contracts, employees can be obliged with an NCO or NDO in a so-called "*mixed contract*". A mixed contract is where the employee is subject for the obligation through dual roles. For example, in an employment/shareholder's Agreement (ESHA) or an

[207] AD 2015 no. 8; Domeij. B, 2016, p. 293.
[208] AD 2015 no. 8, where the labor court points out that an NCO must be preceded by individual negotiations in which the employee can influence the scope of the clause. For the employee to have such an opportunity, there must be no actions of pressure from the employer, and the employee must also fully understand the meaning of the NCO: AD 1993 no. 40.
[209] AD 1994 no. 65; Domeij. B, 2016, p. 292.
[210] AD 2013 no. 24: AD 1977 no. 167.
[211] AD 1992 no. 9, where the labor court stated that the short employment relationship was one of the factors that spoke in favor of unreasonableness. The fact that the time of employment was short also contributed to the court assessed that it was an insecure employment.
[212] AD 2010 no. 53; Domeij. B, 2016, p. 302f.

employment/share Purchase Agreement (ESPA).[213] Moreover, since the 2015 Collective Agreement is not applicable for other contracts than employment contracts, mixed contracts are not directly applicable and is subject for application by section 38 SCA.[214]

3.2.2.3.1 Employment /Shareholder's Agreement

The ESHA is relevant when the employee is employed and simultaneously a shareholder of a firm. In AD 1984 no. 68 the court conclude that the determining factor is whether the NCO in an ESHA has a commercial background or a natural step in an employment contract.[215] The case indicates that the reasonability assessment of an NCO in an ESHA, where the employee has been obliged due to their role as an employee, could use the 2015 Collective Agreement for interpretation. However, in AD 2012, no. 85 the labor court assessed that the primary principle is that an NCO in an ESHA shall not be processed as a labor law procedure in court.[216] Meaning that an NCO in a ESHA would most probably be processed as a commercial NCO, which opens for a wider NCO for employees that are also shareholders.

3.2.2.3.2 Employment/Share Purchase Agreement

An ESPA is relevant when the employee has agreed to sell their shares in the firm but continue to work in the firm after the transaction. Consequently, an NCO in an ESPA is subject to an employment contract and a transaction contract. Which indicates an adapted application of section 38 SCA. Moreover, the relationship between the employee and the employer/purchaser is more equal,[217] which is motivated by the compensation that the employee receives for his or her shares. Meaning that an assessment of the legitimacy of an NCO in an ESPA is more liberal than for an NCO in an employment contract. Consequently, an ESPA includes a commercial aspect of the NCO, where one year salary could motivate an NCO up to two years since three years has been considered motivated in a pure SPA.[218] Additionally, the main principle for NCO in an employment contracts regulated by section 38 of the SCA is that the employer shall have a legitimate interest in the scope of the NCO,[219] which should also be the case for NCOs in ESPAs. For example, it can never be allowed to oblige the employee to not be active in another industry or jurisdiction that the employer/purchaser is not active in. Moreover, the reasonability of a contractual fine is also affected by the compensation that the employee has received for their shares. Whereas a higher compensation can motivate a higher contractual fine. [220]Although, section 36 SCA regulates the legal frame for the compensation fine.[221]

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[213] Domeij. B, 2016, p.259ff.
[214] The 2015 Collective Agreement, section 1- 2.
[215] AD 1984 no. 68.
[216] AD 2012 no. 85.
[217] AD 1990 no. 44.
[218] Cf. Government bill. 1795/76:81 p. 149; Domeij. B, 2016, pp. 257, 260
[219] See section 3.2.2.2.1.1.
[220] AD 2005 no. 28; Domeij. B, 2016, p. 261.
[221] Ibid.; See section 3.2.2.4.

3.2.2.4 The legal frame of section 36

The application area of section 36 of SCA is broad and general in nature, as it covers the entire scope of the SCA. This means that the legal frame of the section is broad, where a number of different contracts may be subject to assessment. According to section 36, SCA can a condition, or term be modified or canceled if it is not reasonable. The reasonableness assessment is based on an overall assessment, whereas all the circumstances in the specific case shall be considered. Consequently, a term or condition in a specific contract can be reasonable in one contract and unreasonable in another. [222]

Moreover, section 36 of the SCA provides reference circumstances that shall be taken into consideration by the court when assessing the reasonableness of a specific condition or term in a contract.[223] The reference points are: The content of the contract, the circumstances that appeared when the contract was entered, later occurred circumstances, other circumstances, and the relationship between the parties. [224]

3.2.2.4.1 Content of the contract

The first reference point concerning circumstances relating to the content of the contract include an assessment of the content itself. It has been stated in the preparatory works that typical contractual terms or conditions which, according to this reference point, can be considered unfair are when the contractual party has the sole influence of the contractual relationship. Moreover, a party that imposes a strict sanction solely for causing the counterparty damage or inconvenience can create unreasonableness.[225] For example, it is unreasonably, in a contract relationship, where the employer has the sole influence of the design of contract, and the employer obliges an employee with an NCO or NDO, where the scope of the obligation or/and sanctions connected to the obligations aims to damage the employee. Meaning that there must be a reasonable relationship between the harm caused by a breach of contract and the connected sanction.[226]

3.2.2.4.2 Circumstances that appeared when the contract was entered

The second reference point concerns circumstances that occurred in connection to the negotiations leading to the contract. Where unfaithful actions taken by one contractual party can result in invalidation of the contract by section 28-32.[227] However, the application area for the invalidation sections in the SCA is limited to specific situations where one contractual party has been subject to actions of bad faith. Consequently, section 36 of the SCA serves as an extension of invalidation

[222] Government bill. 1975/76:81, p. 106; NJA 1988 p. 230.
[223] Ibid, p. 166.
[224] Contracts Act, chapter 3, section 36.
[225] Government bill. 1975/76:81, p. 41.
[226] Government bill. 1975/76:81, p. 41.
[227] Ibid., p. 13, 53, 125f.

sections since the situations that can be subject to modification of a condition or term is not limited to specific circumstances that had occurred when the parties entered the contract.[228]

3.2.2.4.3 Later occurred circumstances

The third reference point concerns changed circumstances during the contract term. First and foremost, it shall be emphasized that every changed condition can be a reason for modifications or cancellation by section 36 SCA. The critical factor is whether parties could foresee the changed conditions and if the potential changes in conditions could have been taken into consideration when designing the term or condition in the contract.[229] Consequently, if the parties could not foresee the changed conditions and the parties have not considered the risk of changed conditions in the design of the contract or terms in the contracts, it could advocate for a modification.[230]

3.2.2.4.4 Other circumstances

The fourth reference point concerns other circumstances that can be part of the assessment of the existence of their agreements between the parties. Moreover, it shall also be considered that a modification or cancelation of one term in a contract can affect other agreements. Furthermore, other agreements can also be used as a tool to interpret if a specific term should be modified or canceled by section 36 SCA. Other considerations are the length of the contract or established business practices.[231]

3.2.2.4.5 The relationship between contractual parties

The fifth, and final reference point for the reasonability assessment of a term or condition is the relationship between the contractual parties, where the court shall consider if one party holds an inferior bargaining position in the contractual relationship. [232]

3.2.2.4.6 Section 36 and non-competition obligations

The basis for interpretation of an NDO is different depending on if the NDO is established in a commercial- or employment contract. Whereas the interpretation of a Commercial NCO shall be based on the reference point in section 36 SCA in conjunction with case law. Considering an NCO in an employment contract the relevant Collective Agreement on non- competition obligations in employment contracts, represents another interpretation layer that the reasonability assessment shall be based on.[233]

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[228] Ibid., p. 52; NJA 1983 p. 332.
[229] Ibid., 1975/76: 81, p. 127.
[230] NJA 1989 p. 346.
[231] Government bill. 1975/76: 81, p. 54f.
[232] Contracts Act, chapter 3, section 36, paragraph 2; Government bill. 1976/76: 81 p. 55f.
[233] Government bill. 1975/76:81, p. 148f.: The 1969 Collective Agreement shall apply for NDO in employment contracts that was entered before December 1th, and the 2015 Collective Agreement shall apply for NDO in employment contracts that have been established after 1st December the 1th. See the 2015 Collective Agreement, section 10.

3.2.2.4.7 Section 36 and non-disclosure obligations

As mentioned in section 3.2, Sweden does not have a law that regulates NDO in commercial or employment contracts. Consequently, to determine what information an NDO may include, i.e., how the scope of protection for NDO, the primary rule is that the reference points in section 36 represent the legal frame for NDOs in commercial- and employment contracts. However, STSA can also serve as a guide, which means that an NDO may only cover information linked to the firm, i.e., business-specific information.[234]

Additionally, the preparatory works have declared that guidance can be sought from section 38 SCA concerning the interpretation of an NDO in an employment contract. [235] The possibility to do an analogy interpretation of NCO, concerning NDO in an employment contract, is motivated by that there are no specific legal rules or collective agreements that regulate NDOs.[236]

However, by the nature of an NDO, it represents less of an obligation than an NCO since only limiting the means that the former employee may disclose trade secrets post-employment and shall not be a barrier for competition.[237] Consequently, an NDO can be used to a greater extent than an NCO, e.g., for more types of employees and for a longer time. Meaning, that the 18 months limitation concerning the duration of an NCO shall not automatically apply for an NDO, where a duration in time up to ten years can be accepted. However, the STSA opens up for eternal protection of trade secrets. Consequently, it might be motivated to oblige an employee with an eternal NCO. The precondition for an eternal NDO is that the employer has a legitimate interest in it, e.g., if the employer possesses trade secrets essential for the employer's business, and the NDO does not impose more than a marginal restriction on employee opportunities in the profession.[238]Although, an employee is released from its obligations retrieved from the NDO if the information loses its status as a trade secret when the NDO is still in force. Therefore, is an NDO to some extent limited by the STSA, where an employer cannot protect information that does not fulfill the legal definition of a trade secret, nor can an NDO hinder an employee from reporting criminal activities or other acts of misconduct.[239]

To conclude, despite that the assessment of an NDO shall be more liberal than for NCO, it is difficult to assess what boundaries that exist for NDO in an employment contracts when examining section 36 SCA. A key point, however, is that the NDO should not result in a barrier to competition but only limit the means that the former employee may disclose trade secrets post-employment.

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[234] Cf. SOU 2008:63, *Förstärkt skydd för företagshemligheter* [Official report of the Swedish government. Enhanced protection for trade secrets], p. 197 ff. See section 2.3.1.
[235] Government bill. 1987:88:155 p. 47: Official report of the Swedish government, 2008:63, p. 193, 197 ff.
[236] Domeij. B, 2016, p. 388.
[237] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure, section 1.3; Domeij. B, 2016, p. 389.
[238] Directive 2016/943, section 1.3.
[239] Trade Secrets Act, section 4.

Evidently the NDO must not interfere with the use of professional skill or impose more than a marginal restriction on employee opportunities in the profession.

3.2.2.5 Conclusion

To conclude, sections 36 and 38 of SCA are relevant to both NCO in employment contracts and purely commercial contracts. Section 38 of SCA illustrates the legal frame for NCOs. While section 36 can be said to be of particular importance for the reasonability assessment of NCOs as part of the assessment in section 38 SCA and as an independent modification and cancellation rule.

Moreover, section 36 represents the legal frame and an independent modification and cancellation rule to NDOs in employment contracts and purely commercial contracts. Although, analogies with NCO in individual agreements can be made to some extent.

3.2.3 The 2015 Collective Agreement

3.2.3.1 Background

In 1947 Svenskt näringsliv,[240] and Unionen[241] enter a framework agreement,[242] that was based on the motive statements of the 1915 years version of section 38 in the SCA. The general agreement served as a foundation for the first collective agreement that regulated NCO in employment contracts. The purpose of establishing a collective agreement on NCO was to ensure that the material content of NCO in employment contracts corresponded with the employer's need to protect acquired or developed technical information and did not limit the employee's ability to compete on the market more than necessarily.[243] In 1969 the collective agreement was finalized,[244] by the parties Svenskt näringsliv, Ledarna, [245] and Sveriges ingenjörer.[246]

In 2015 was the collective agreement revised and several changes were made.[247] The revision was motivated by the development from an industrial economy to an intellectualized economy, whereas the characteristics of the firm and valuable IA that the firm possessed had changed. The revision was also motivated by a need to widen the application area for the collective agreement since there

[240] Former ”Svenska Arbetsgivarföreningen” (SAF).
[241] Former “Svenska Industritjänstemannaförbundet” (SIF).
[242] In the context of this thesis does the term framework agreement refer to the Swedish version of a “Ramavtal”. A framework agreement is a general agreement that sets the frame for future agreements and determines which clauses that should be included in these.
[243] Cf. Preamble The 1969 Collective Agreement.
[244] The 1969 Collective Agreement.
[245] Former ”Sveriges arbetsledarförbund”.
[246] Former “Sveriges civilingenjörsförbund”.
[247] The 2015 Collective Agreement.

had been a number of cases on the judicial arena that concerned customer protection NCO, which was not covered by the 1969 Collective Agreement. [248]

3.2.3.2 Area of application

All firms and employees that are organized with a union that has adopted the agreement shall apply the 2015 Collective Agreement when designing NCO in connection with the entry of the employment or during the employment for their employees.[249] A firm can also apply the agreement for employees that are not organized.[250]

3.2.3.3 Exemptions of application

The 2015 Collective Agreement does not apply to other types of agreements other than employment contracts. Nor can the agreement be applied to employees that have a fiduciary or comparable position within the firm.[251]. Moreover, the group of people that are exempted from the application area of the 2015 Collective Agreement and Swedish Employment Protection Act (EPA) is not decided by the formal role an employee has. The interpretation of a person should be defined as a person in a leading position shall be relative and based on the working conditions and employee benefits. Although, the definition of an employee that has a leading position should be used restrictively.[252]

Moreover, an employee who is newly graduated cannot be obliged with an NCO until six months after employment has started. However, exemptions can be made if particular grounds apply.[253] Particular grounds can apply if a person already has work experiences but is hired as a newly

[248]The 1969 Collective Agreement only included branches that worked with independent product or method development and acquired secrets of production or other comparable knowledge. Hence, service providers like consultancy firms were not included in the application area for the 1969 Collective Agreement. Meaning that consultancy firms had to apply Section38 in the SCA for NCO that aimed to e.g., protect their customer base, which can explain why customer protection NCO has dominated the case law from the labor court concerning the interpretation of Section38 in the Swedish contract act before 2015.

[249] The 2015 Collective Agreement, Section 1.2.

[250] The 2015 Collective Agreement, section 1.1; The 1969 Collective Agreement, was only applicable for employers and employees and employers if both the parties were connected to an organization that was affiliated with the collective agreement. Although, in AD 1984 nr 20, the labor court concluded that an employer that is connected to an employee organization that is affiliated with the 1969 Collective Agreement should apply the 1969 Collective Agreement when interpreting the substantive content of a NCO oin line with section 38 SCA. Although, the case law did not ensure that the employers applied the 1969 Collective Agreement for non-organized employees. Hence, In the comment to section 1.1 in the 2015 agreement does the parties explicitly state that the purpose of widening the scope of application in the 2015 agreement is to create a more unified application for NCO for organized and unorganized employees.

[251] The 2015 Collective Agreement, section 1; The application area for employees in a fiduciary position has been limited with the same formulation as section 1 in the Swedish Act on Employee protection. See The 2015 Collective Agreement, Comment, Section 1.3; Lag (1982:80) om anställningsskydd [Employment Protection Act], section 1.

[252] Prop. 1981/82:71, *Om ny anställningsskyddslag m.m.* [Government bill. A new Employment protection act, etc.] p. 92.

[253] 2015 Collective Agreement, section 4.2; In The 1969 Collective Agreement was it only newly graduated that was younger than 27 years old that could be covered by the exemption. The change in the 2015 agreement can be explained with the fact that we are today studying for a longer period of our life.

graduated. For example, if the employee has been employed by the employer before he or she started to study, or the employer paid for the education.[254]

Additionally, the main rule is that NCO shall not be used for employees that are 67 years old or older. Nor should NCOs typically be used for an employee that is employed for a limited time. However, if a person is employed for a limited time due to their specialist knowledge, it can be legitimate to oblige such a person with an NCO.[255]

Finally, an employee is not obliged with an NCO if the employer has dismissed the employment relationship due to termination that is not based on personal reasons,[256] or if a court has invalidated the termination or summary of dismissal,[257] or if the employer has superseded its obligations towards the employee in a significant matter, where the employee has a legal ground to leave the employment.[258]

3.2.3.4 Weighing of interests

The material content and interpretation of an NCO shall be decided after an individual assessment in each case of the employer's and the employee's interest.[259]

The employer shall be perceived to have a legitimate interest of obliging a employer with a NCO if the following prerequisites are fulfilled:[260]

- The employee must possess trade secrets;
- there must be a risk that the employer would suffer from an decreased competitive advantage on the market if the trade secrets were to be disclosed;
- The employee had access to the trade secrets as a natural consequence of their employment; and;
- The employee has the relevant education or experience to exploit the trade secrets in a way that could damage the employer's competitive advantage.

The employer's interest in keeping the trade secret undisclosed shall be weighed against the employee's interest in competing on the market where he or she can freely use their education, skills, and specialist knowledge.[261] Other perspectives that shall be taken into consideration during the assessment are, e.g., the industry and branch of the employer, the employee’s area of responsibility, education, experience, position, and tasks.[262]

[254] The 2015 Collective Agreement, section 4.2, comment.
[255] Ibid., section 2.1, comment.
[256] Ibid., section 4; Employment Protection Act, section 7.
[257] Ibid., section 4; Ibid., sections 7, 18, 39.
[258] The 2015 Collective Agreement, section 4.1, comment.
[259] Ibid., section 3.
[260] Ibid., section 2.
[261] Ibid., section 3; see section 3.2.2.2.1.2.
[262] Ibid., section 3.

3.2.3.5 The design of an non-competition obligation

The material content of the NCO shall be reasonable concerning the employers and the employee's interests.[263] The 2015 Collective Agreement includes an example of an NCO in the appendix. The example clause is not part of the collective agreement but can be used as a starting point in designing an NCO.[264]Meaning that the example clause does not provide an example of how a reasonable NCO is constructed. Hence, an employer shall not use the example clause as a standard for their employees.

Moreover, the contractual fine that the former employee risks to pay in case of a contract breach of the NCO shall be reasonable in relation to the former employee's salary. Whereas the 2015 Collective Agreement states that six months of the average salary for each contract breach provides sufficient protection for the NCO.[265]

Consequently, an NCO shall be designed on an individual basis, whereas the employer's and the employee's interests are taken into consideration. Furthermore, when designing and assessing the reasonableness of an NCO, the duration of the obligation and the compensation that the employee receives shall be taken into consideration.[266]

3.2.3.5.1 Duration

An NCO shall not cumber an employee for a more extended period than the employer's legitimate interest motivates. The frame for the weighing of interest between the employer and the employee in the 2015 Collective Agreement is limited to nine months if there is a risk of misappropriation of a trade secret from a former employee is short, [267] e.g., businesses that produce consumer products that have short product cycles.[268] Under other circumstances the obligation should not exceed 18 months. However, the time limit can be longer than 18 months if certain reasons motivate it.[269] Meaning that the 2015 Collective Agreement does not provide a defined duration time for what represents a reasonable NDO, it is relative depending on the characteristics of the trade secret and market that the employer is active within.

[263] The 2015 Collective Agreement, section 5.1-5.2.
[264] In the 1969 Collective Agreement was the example clause part of the agreement.
[265] The 2015 Collective Agreement, section 5.3.
[266] Ibid., section 5.1-5.2.
[267] Ibid., section 5.1.
[268] Ibid., section 5.1, Comment.
[269] The time limit has been decreased from 12 months to 9 months as a standard and the time limit for special cases has been decreased from 24 months to 18 months in the 2015 Collective Agreement compared to the 1969 Collective Agreement. The decreased time limit for NCO can be explained by the increased innovation speed in the society. Consequently, the lifecycle for trade secrets decreases and therefore also the employer’s legitimate interest to protect trade secrets.

3.2.3.5.2 Compensation

The employer must compensate the employee during the time that the NCO is valid if the former employee cannot find a job that pays the same or higher salary as a consequence of the NCO.

However, the maximum compensation that the employer has to pay is 60 percent of the employees' former salary by the termination of the employment. Moreover, the employer only has to pay the difference between the employee's former and new salary of up to 60 percent. Meaning that if the new employer pays 50 percent of the employee's salary, the former employer only has to compensate the employee with 50 percent. The former employee must also provide their former employer with information about their income during the duration time of the NCO. The monthly salary should be calculated as an average of the salary that the employee has received during the last year of employment.[270]

Additionally, only the work that the former employee had done for the employer as a natural cause in the employment should be included. During the assessment of the employer's obligation to compensate the former employee there shall be an assessment if there is a correlation between the NCO and the lower income that the employee has. The employer is not obliged to compensate the former employee if there is no such connection. Moreover, the former employee shall, to the best of her ability to limit their economic damage. Meaning that the former employee must actively seek for a job that matches their previous salary.[271]

3.2.3.6 Conclusion

Consequently, the 2015 Collective Agreement is only directly applicable to employers that are affiliated members. Whereas NCO shall be used restrictively in employment contracts,[272] after a reasonable assessment of the employers and the employee’s interests and other perspectives relevant for the specific employment relationship.

3.2.4 What is the relationship between the Competition Act, section 38 and section 36 of the Contracts Act?

3.2.4.1 Non-competition obligations

3.2.4.1.1 Applicable regulation for non-competition obligations

The competition authorities' ability to intervene based on the SCOA does not per se intervene with the interpretation of the material content of a contractual obligation that limits competition, either

[270] The 2015 Collective Agreement, Section 5.2.
[271] The 2015 Collective Agreement, section 5.2.
[272] Ibid., section 3, comment.

if the contracts if defined as an NCO or NDO. Whereas, a contract that limits competition, a contrario, is valid according to Swedish law.[273]

Concerning NCO is the regulation that a firm must consider when designing an NCO is dependent on the:

1. Role that the subject for the obligation has; and,
2. The contract type that the NCO is regulated in.

Regarding the subject matter that is obliged with the NCO, SCOA is only applicable if the subject can be defined as a firm.[274] Section 38 SCA is applicable for all subjects,[275] and the 2015 Collective Agreement is applicable if the subject is an employee that does not hold a fiduciary position or a similar position, and employer that is an affiliated member of the 2015 Collective Agreement. [276]

Considering the contract that the NCO is used in, can SCOA and section 38 be applicable in all contracts that is not subject for application of 2015 Collective Agreement,[277] and the 2015 Collective Agreement is only applicable for employment contracts.[278]

3.2.4.1.2 Interpretation of a non-competition obligation

Moreover, regarding the interpretation of the material content, NCO in commercial contract take a standing point in section 38 SCA, whereas the main principle is that the interpretation of material content of the NCO shall be based on the reference points in section 36 SCA. However, when it is necessary to find guidance on the general perception on the market considering a specific term e.g., the duration of an NCO, can guidance be found in the relevant Collective Agreement.[279]

Employers that are not an affiliated member of the 2015 Collective Agreement shall apply the section 38 SCA, but the interpretation shall be based on the 2015 Agreement concerning employees that do not hold a fiduciary position or similar. For NCO in employment contracts for employees with a fiduciary position shall the reference points in section 36 SCA be applied.[280] Although, like the interpretation of commercial contracts, guidance can be found in the relevant Collective Agreement to identify the current perception on the market also concerning employees that holds a fiduciary position or similar.[281]

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[273] I. Persson, Lag (1915:218) om avtal och andra rättshandlingar på förmögenhetsrättens område, comment, 59. Juno. Available at: https://pro-karnovgroup-se.ezproxy.ub.gu.se/b/documents/527211?active_section_details_annotation=SFS1915-0218_NKAR59&q=avtalslagen&st=karnov&t=ANNOTATIONS#SFS1915-0218_K0_P38 (Retrieved 2020-06-13)
[274] TFEU, section10; Competition Act, chapter 1, sections 1, 5.
[275] Contracts Act, chapter, 3, section 38; See section 3.2.1.2.
[276] The 2015 Collective Agreement, section 1.
[277] Domeij. B, 2016, p. 267.
[278] The 2015 Collective Agreement, section 1.
[279] Government bill. 1975/76:81, p. 149.
[280] Domeij. B, 2016, p. 346.
[281] Government bill. 1975/76:81, p. 149.

Employers that are an affiliated member of the 2015 Collective Agreement shall apply the Collective Agreement for the design and interpretation of NCO in employment contracts.[282] For NCO in employment contracts for an employee that holds a fiduciary position shall section 38 SCA be applied ,and interpretation shall be based on the reference points in section 36. However, like the interpretation of commercial contracts, guidance can be found in the relevant Collective Agreement to identify the current perception on the market.

3.2.4.2 Non-disclosure obligations

3.2.4.2.1 Applicable regulation and interpretation of a non-disclosure obligation

The legal frame for all NDO in all contracts, for all subjects shall take a starting point in section 36 SCA. Moreover, concerning interpretation of an NDO shall the reference points in section 36 be taken into consideration. However, like mentioned in section 3.2.2.4.7, can the interpretation of an NDO in employment contracts be based on analogies with NCO in an employment contract. [283]

3.2.4.3 Non-competition obligations v. Non-disclosure obligations

To protect trade secrets post-employment, do NCO and NDO represent two contractual tools that can be applied, whereas NCO hinders a former employee from using the firm's trade secrets, and an NDO prevents a former employee from disclosing trade secrets. Moreover, NCO and NDO contracts can be used as complementary protection mechanisms for trade secrets in employment contracts. The legal frame for NCO is more precise and narrower, and the legal frame for NDO is broader and more unclear, which the activities in the judicial arena confirm since there is a vast amount of cases that concern NCO in employment contracts, but almost no cases concerning NDO in employment contracts. The almost non-existent activities in the judicial arena considering NDO, makes me wonder why firms do not utilize opportunities that the uncertainty concerning the legal frame of NDO more? The natural response is that it is difficult to prove that a former employer has disclosed trade secrets covered by the NDO, as mentioned in section 3.1.2.

Moreover, In the case of invalidation of an NCO the employer ensured some protection of the employer's trade secrets if the employer is also obliged with an NDO. Consequently, to receive broad protection from unwanted use or disclosure of a firm's trade secrets should an employer use both NCOs and NDO s.

However, as mentioned in section 3.2.2, NCO in a mixed agreement, where the employer has dual roles as a shareholder, and an employer provides even more comprehensive protection of trade secrets. Since these Contracts as a primary rule shall be interpreted as a commercial contract.

[282] The 2015 Collective Agreement, section 1.
[283] Government bill. 1987:88:135, p. 47; Official report of the Swedish government 2008:63, p. 193.

However, like mentioned several times in this section, can the relevant Collective Agreement serve as a guide to illustrate the current perception on the market concerning NCO.[284]

3.2.5 Contracts that protect trade secret post-employment in the industry of MedTech

Despite extensive attempts did I not find any study or research report that could illustrate the use of contracts that aimed to protect use or disclosure of trade secrets post-employment for the MedTech industry. Consequently, this section of the thesis will be based on my experiences and answers retrieved from the questionnaires. However, as mentioned in section 1.5, the answers retrieved from the questionnaires were not extensive enough to use as a methodology for this thesis. However, I perceive that my experiences and questionnaires can provide general indications within the field of MedTech concerning categories of valuable confidential information that can also retrieve protection by the STSA and be subject to contractual obligations post-employment. With that being said, it is my perception that it is common for MedTech firms to use contract tools to extend their employees' duty of loyalty post-employment with NCO and NDO obligations.

3.2.6 Indications of prevalence of contracts that protect trade secrets post-employment

My observation and reflection are that NDOs are more frequently used than NCOs. A personal reflection is that the regulations for NCO are more extensive than for NDO. Consequently, employers often refrain from obliging their employees with NCO in the business arena since the potential effects on the judicial arena are uncertain.

Moreover, my experience is that a significant, if not a majority, amount of smaller MedTech firms is not affiliated to the 2015 Collective Agreement. Where the replies from the author's questionnaire also indicated that the majority of the MedTech firms were not an affiliated member of the 2015 Collective Agreement. However, according to a report from "*medlingsinstitutet*" 82 percent of all employees employed at private firms were affiliated members of a collective agreement.[285] Consequently, do I question the legitimacy of my own experience. The reason her indications might be faulty is that the respondent was unaware that their employee was an affiliated member or that they were not a member because they were a small firm.

3.2.6.1 Non-competition obligations in an employment contract

Considering agreements that limit competition, specifically NCOs, all firms answered that they had such contractual arrangements established. However, the role that the employee had at the firm that was obliged with an NCO varied. Some firms had NCO for all of their employees, and some only obliged employees that possessed a fiduciary position. The Length of the NCO varied

[284] Government bill. 1975/76:81, p. 149.
[285] Medlingsinstitutet, 2019, p, 166.

from one month to <18 months, although most of the firms had NCO that lasted between 10-18 months.

3.2.6.2 Non-disclosure obligations in an employment contract

Considering NDO, all firms replied that they obliged their employees with such contractual arrangements in all of their employment contracts. The length of the obligation varied from 2 years to 10+ years. Nevertheless, the majority of the NDO lasted for more than ten years.

3.2.6.3 Non-competition obligations and Non-disclosure obligations in a mixed contract

Considering mixed agreements where an employer was a shareholder and an employee there were only one respondent, they replied that they had such an arrangement established. However, my personal experience is that ESHA is a common phenomenon, especially among small firms that do not have the financial capacity to pay high salaries. From a competitive advantage perspective, it would seem odd that these ESHA did not include an NCO.

3.2.6.4 Considerations that MedTech Firm SE must take concerning the relationship between trade secrets and contractual post-employment obligations

As mentioned in section 1.5.1.1 does MedTech Firm SE not have any policy or similar on how the business or technical information should be stored and used. Currently the business plans, research results, and other business or technical information are stored at a Google drive that all employees can access at any time or place that they like. Moreover, MedTech Firm SE has used a standard employment contract found on the internet that does not have any clauses that oblige the employee not to disclose or use trade secrets possessed by MedTech Firm SE post-employment. However, MedTech Firm SE is an affiliated member of the 2015 Collective Agreement.

For the purpose of protecting MedTech Firm SE: s trade secrets from unintended use or disclosure if their employees leave the firm, should MedTech Firm SE establish a proactive system for identifying and capturing confidential information. Additionally, for the purpose of extending and enhancing the protection of confidential information that fulfills the legal definition of a trade secret should MedTech Firm SE establish a system for proactive management of NCO and NDO obligations.

Moreover, as mentioned in section 1.5.1.1, employees of MedTech Firm SE are not shareholders of MedTech Firm SE. Consequently, shall the NCO and the NDO be codified in the employee's employment contracts.

Consequently, MedTech SE should establish a proactive managerial system that will

- Identify confidential information that fulfills the legal definition of a trade secret;
- identify which employees' that has access to the trade secrets;

- communicate the value of MedTech Firm SE;
- tool to write personalized and reasonable NCO;
- tool to write personalized and reasonable NDO;
- serve as an evidence bank in case if misappropriation of trade secrets;
- serve as an evidence bank in case of violation of an NCO or NDO in the employment contract.

4. Proactive management of trade secrets and post-employment obligations in an employment contract

4.1 The design of the managerial framework

The design of the managerial framework for proactively managing trade secrets and contracts that prohibits use or disclosure of trade secrets will be based on the legal frames. Consequently, the managerial framework presented in this thesis will translate the legal frame into operational activities. Hence, within the context of the research narrative, I suggest that MedTech Firm SE should construct a managerial framework that includes two integrated procedures. The two procedures will allow the MedTech firm to use the legal frame for trade secrets, NCO, and NDO to increase the manageability of trade secrets and reduce the risk of unauthorized acts of acquisition, disclosure, exploitation or use of MedTech Firm SE's trade secrets during and after the employment. Like illustrated in figure 4, the two parallel procedures are divided into two blocks with different sub-parts. Each part represents an individual, yet an essential part of the integrated procedures that the integrated managerial framework consists of. Moreover, the managerial framework is not static and requires adjustments to changes in the business and the judicial arenas.[286]

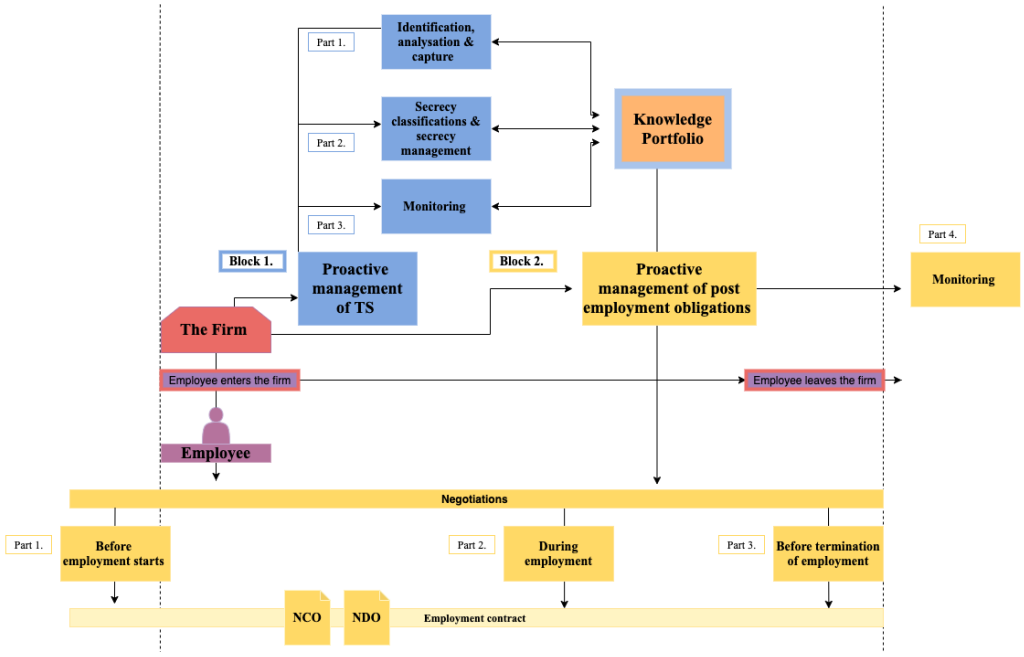

Figure 4:Managerial framework for proactive management of trade secrets and post-employment obligations.[287]

[286] Cf. B. Bos, L.J. Broekhuizen, & p. de Faria, P, 'A dynamic view on secrecy management'. *Journal of Business Research*. Vol. 68, no. 12, 2015, pp.5. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0148296315001885 (Retrieved: 07.02.2020); C.O. Rosén, 2018.

[287] My design.

To conclude, it must be emphasized that for the managerial framework to have the intended effect, the firm must allocate time and human capital. Meaning that individual employees should be given responsibility and connecting accountability for parts of the framework.

4.1.1 Block 1: Proactive management of trade secrets

4.1.1.1 The design of block 1.

The managerial framework design that proactively manages trade secrets consists of three parts: Part 1) procedure to identify and claim information; Part 2) secrecy classification and secrecy management; Part 3 monitoring procedure.

4.1.1.1.1 Part 1: Procedure to identify, analyze and claim information

A first step towards communicating certain information as a trade secret is defining the information as a secret. If the firm can use the information to construct an object, a trade secret, the management and control of that information will be more distinct. Meaning that the firm must allocate administrative and operational resources to facilitate efficient protection. The procedure must be documented in a knowledge portfolio. It might seem counterproductive, but secrets are best kept if they are documented, even though there are no formal requirements that a piece of certain information must be codified to fulfill the requisites of being a trade secret. [288] To develop a managerial framework for identifying, analyzing and claiming knowledge, have I applied the capturing concept in the IAM-framework and the concept of PLC.

4.1.1.1.2 The concept of capture

The capturing process is divided into four steps; identification, objectification, evaluation and utility.[289]

4.1.1.1.2.1 Identification

The objective of the identification step is to identify value-creating knowledge that can be captured as knowledge assets. Concerning the MedTech industry is trade secrets most often derived from R&D activities. Although, the characteristics and nature of such business or technical knowledge, explicit or tacit vary significantly among different MedTech firms due to the wide range of business activities that characterize the industry.[290] Consequently to make the knowledge manageable, the firm should establish a procedure to objectify the knowledge into knowledge assets.

[288] Government bill. 1987/88:155, p. 34.
[289] Cf. U. Petrusson, 2016, p. 303 ff.
[290] See section 1.2.1.4.

4.1.1.1.2.2 Objectification

The objectification process has three sub-steps. First is the knowledge asset defined as a category, secondly shall the knowledge asset be given descriptive attribute, and thirdly shall the carries of the knowledge assets be identified.[291]

Firstly, shall the knowledge be categorized. The figure below illustrates ten categories that the IAM-framework suggest can be applied to objectify knowledge into knowledge assets. However, the list of categories is not exhaustive and focuses on explicit knowledge. A firm might have to add complementary categories to match their individual needs. [292]

Category	**Description**	**Examples**
Creation	An artistic or creative creation.	A song, television commercials.
Data	Unstructured raw data.	R&D notes or results, survey results.
Database	Structured data that is compiled systematically so that it is searchable.	Electronic database or spreadsheets of data.
Instruction	A description of how a procedure should be executed to accomplish a specific result.	Instruction for the optimization of stable insulin levels for a person with type 1 diabetes.
Observation	Empirical conclusions from experience or data.	The observation that a specific cell growth factor is the most efficient for Induced Pluripotent stem (iPS) cell reproduction.
Narrative	An integrated case study, empirically demonstrable account or narrative.	Historical reflections on the development of the Induced iPS cells, interviews.
Software	Organized data code that performs a particular task.	Software that forms an application that collects insulin data from users.
Theoretical framework	A theory that describes the nature of a phenomenon, causes, and relationships.	A theory about how the body's insulin levels are affected by different food.
Visualization	A dynamic or static visual presentation that is more advanced than typical drawing.	A diagram illustrates how people affected by diabetes type I in Sweden, A prototype of an iPS cell implant.

[291] Cf. U. Petrusson, 2015, p. 307.
[292] Cf. Ibid., pp. 325-337.

Secondly, for the purpose of making the knowledge assets more manageable shall they be provided with descriptive attributes that describe the nature and characteristics of the knowledge.[293] For example:

Category	Nature and characteristics
Observation	Observation from R&D activities, in project Capua, about the relationship between an individual's insulin levels is affected by different combinations of food initiated for a person with diabetes 1.

Thirdly, the employees or other actors that have access to or are carriers of the knowledge asset shall be identified. Additionally, shall the employees or other actors that could be able to explain and apply the knowledge assets to be identified. [294]

4.1.1.1.2.3 Evaluation

The evaluation process aims to describe the opportunities and risks associated with each knowledge asset.[295] I suggest that the process is divided into three sub-steps. First, the potential controls are assessed, e.g., trade secrets, contracts, or patents. Secondly, the degree of control is estimated e.g., exclusivity or no exclusivity. Thirdly, assessments are made of other actors that potentially might have a control claim over the knowledge asset.

4.1.1.1.2.4 Utility

The utility process aims to describe the knowledge asset from a utility and a usage standpoint.[296] The evaluation of the utility and the division into categories shall be based on how important the research result is for the firm's ability to generate value. I suggest that MedTech Firm Se uses three categories; green, yellow, and red. Green represents knowledge assets that are within the firm's core assets and value for the future of the firm, e.g., data correlations are driven from databases concerning how different nutrients in different variations affect the insulin levels of a person with diabetes type 1. Yellow represents knowledge assets that are not valuable per se but could be valuable in the future, e.g., data from a quantitative case study of persons with diabetes eating habits. Red represents knowledge assets that have little or no value for the activities of the firm, e.g., failed research results that gave no valuable insights.

[293] Cf. U. Petrusson, 2015, pp. 307-308.
[294] See Ibid., p. 307.
[295] Cf. Ibid., 2015, p. 309.
[296] Cf. Ibid., 2015, p. 309 ff.

4.1.1.1.3 Product Life Cycle

To analyze the value in time of the knowledge assets, the firm shall estimate the PLC of the knowledge asset. I suggest that assessment shall take a standing point in the time frames for national/regional clearance procedures such as clinical trials, and/or registration procedures such as patent protection that the knowledge asset is subject to.

Other indications that could indicate a long PLC is great incremental costs of the new product; subsequent rights-based control, e.g., patent or technological-based control that the product is dependent on or the product itself might decrease the opportunities for actors on the business arena to enter the market, or lengthy procurement procedures as a consequence of that the MedTech product did not accurately compare the incremental costs and benefits. Indications of a shorter PLC could be significant additional benefits of the new product which might accelerate adoption.[297]

4.1.1.1.4 Knowledge Portfolio

The documentation of the firm's accumulated knowledge assets shall be compiled into a searchable portfolio. The compiled format of the knowledge portfolio also represents trade secrets. The internal and external utility of the portfolio will require that the firm continuously iterate it. The knowledge portfolio will serve four main productive purposes: 1) Proactive management of knowledge assets; 2) Proactive management of trade secret disclosure; 3) Proactive management of employees during employment; 4) proactive management of trade secrets post-employment. [298]

4.1.1.1.4.1 Proactive management of knowledge assets

The portfolio will serve as a proactive tool for identifying IA and possible protection mechanisms. Meaning that the firm will be able to differentiate between what information that fulfills the requisites of a trade secret and general information that belongs to the firm, and personal knowledge. But also identify knowledge that can be protected by traditional IPRs e.g., copyright or patents.[299]

Moreover, as mentioned in section 2.3.1.3, a firm must take "*reasonable*" steps towards protecting undisclosed business or technical information for that information to fulfill the criteria of being a trade secret. [300]Employees of the firm should only have access to the portfolio on a need to know basis. Meaning that employees can have access to parts of the portfolio that concern them, and only a few people on the management level should have access to the entire portfolio's entire

[297] B.D. Smith, R. Tarricone & V. Vella, 2013, pp. 37–43.
[298] Cf. C.O. Rosén, 2018, pp.84–85.
[299] Ibid.
[300] Trade Secrets Act, section 2, p. 3

content. I also suggest that a password should protect the portfolio and that guidelines for how the information presented in the portfolio is allowed to be used.[301]

4.1.1.1.4.2 Proactive management of trade secret disclosure

Concerning the identified trade secrets, the firm will also be able to track which people have access to a trade secret and when they got access. Consequently, the firm will more easily be able to prove acts of misappropriation of trade secrets and potential violation of a post contractual NCO or NDO obligation.[302] Hence, it will be more unlikely that the employee must engage in activities in the judicial arena, but it will also save substantial legal costs in case of litigation.

4.1.1.1.4.3 Proactive management of employees during employment

The knowledge portfolio will map out which employees are the key facilitators of the firm's value. Hence, the knowledge portfolio can serve as a foundation for developing relevant incentive programs. If the firm manages to identify what the employees are incentivized by, if that is a higher salary option program or more vacation days, the employees' innovation will increase. An efficient incentives program will also mitigate the risk of employees wanting to leave the firm.[303]

4.1.1.1.4.4 Proactive management of trade secrets post-employment protection

Moreover, if the employer classifies a specific business or technical information as a trade secret, the portfolio will also serve as evidence that the employer has a legitimate interest in obliging employees who have access to the trade secrets with an NCA/NCO. Consequently, a knowledge portfolio gives the firm a strategic overview of the firm's knowledge assets and forms the basis for designing legitimate and reasonable post-employment protection of trade secrets.

4.1.1.2 Part 2: Secrecy classifications and secrecy management

4.1.1.2.1 Secrecy classifications

After the firm's knowledge, assets have been identified, classified as different objects in a knowledge portfolio, shall the knowledge asset be assigned with a secrecy classification. In "*Post-employment protection of undisclosed information in a knowledge economy-A study on how to prevent undisclosed information from walking out of the door after the termination of employment"* does Carl- Oscar Rosén suggest that a firm should develop secrecy classifications that reflect the value of the knowledge asset. The secrecy classifications are not limited to business or technical information but can also protect general business-related information within the firm. [304] The basis of Roséns secrecy classification is derived from an article written by Desmond, P. In *"IP*

[301] Cf. C.O. Rosén, 2018, pp. 84, 96.
[302] Ibid., pp. 84-85.
[303] See. Ibid., 2018, p. 84.
[304] See C.O. Rosén, 2018, pp. 85-86.

protection on the factory floor",[305] Desmond suggests that a firm should have four secrecy classifications. Where the level of protective measures should correlate with the value of the knowledge asset. Where the value of the knowledge assets should be based on an assessment where the competitive advantage that the assets provide for the firm is compared to the negative impact that a potential disclosure would mean for the firm.[306]

Additionally, like Rosén, I suggest that a secrecy policy is developed that communicates which knowledge assets are subject to a specific secrecy classification. Furthermore, the policy should include guidelines on how the knowledge information shall be managed in each secrecy classification. [307]

Class	**Description**	**Example**
1.	Knowledge assets that consist of information that are in part available in the public domain.	Database with all available public data on different nutrition effects on insulin levels for people with type 1. diabetes.
2.	Knowledge assets that are not available in the public domain and would result in a modest loss of the firm's competitive advantage.	Data from research that did not result in any breakthrough findings
3.	Knowledge assets that are not available in the public domain and would result in an average loss of competitive advantage.	Data from research that resulted in breakthrough findings.
4.	Knowledge assets that are not available in the public domain and would result in a considerable loss of competitive advantage.	The knowledge portfolio.

Furthermore, after a knowledge asset has been assigned with a secrecy classification, shall it be documented in the knowledge portfolio. Moreover, to ensure secrecy compliance in day-to-day work, each knowledge asset should be tagged with relevant secrecy classification. The tagging will remove uncertainty concerning the management of secret knowledge assets. Hence, the risk of unintentional disclosure will be decreased.[308]

Additionally, like the identification and objectification process of knowledge assets, is the classification procedure an iterative procedure. Meaning that it must be updated in the knowledge portfolio as the development of the knowledge assets proceeds.[309]

[305] P. Desmond, 'IP protection on the factory floor'. *IAM Magazine*. Issue 85, 2017.
[306] See Desmond, 2017, pp. 3f.
[307] Cf. C.O. Rosén, 2018, p. 86.
[308] See Ibid., p. 87.
[309] Cf. C.O. Rosén, 2018, p. 86.

4.1.1.2.2 Secrecy management

The knowledge assets must be managed in line with its secrecy classifications. The people that have access to a particular knowledge asset should be aware of other employees that also have access to avoid unintended internal disclosure. Moreover, knowledge assets assigned with class 3 or 4 shall be informed on relevant knowledge on a need to know basis. [310]

4.1.1.3 Part 3: Monitoring procedure

To maximize the utility of each knowledge asset, the firm should assign a project leader of each knowledge asset. The purpose with assigning a project leader is because it has been proven that ownership of an asset or project facilitates responsibility and efficiency.[311] Meaning that the risk that a knowledge asset or projects is forgotten or not prioritized is reduced. The knowledge manager shall be responsible for the development and cultivation of one or more knowledge assets. Also, a knowledge manager is assigned to decide whether the firm should continue to develop specific knowledge assets or not and decide the secrecy classification. Additionally, the knowledge managers are responsible for giving suitable secret clearance to the employees who need to access the knowledge Therefore, do I suggest that the firm actively works with the knowledge portfolio by applying different focus areas on a yearly, quarterly, monthly, and weekly basis.

Weekly notes

Every month shall the project leader of a knowledge asset take notes if there have been some activities that are relevant for the knowledge assets. The notes shall describe what has been done and who has been involved. The notes should be informal and be sent to the knowledge manager. Time: 15-30 minutes.

Monthly meetings

Each month, the knowledge manager will have a meeting with the project leaders and discuss key points from the weekly notes. If needed, the information about existing knowledge assets shall be updated. If needed, new knowledge assets shall be added to the knowledge portfolio. The project owner and the knowledge manager shall decide who should be the project owner of the new knowledge assets. The knowledge manager decides which secrecy classification that the new knowledge asset shall have. Time: 30-60 minutes.

Quarterly meetings

The knowledge manager prepares a life cycle evaluation of each knowledge asset. The assignments are based on the parameters set out in section 4.2.1.1.2. The knowledge managers present their

[310] Cf. Ibid., p. 87.

[311] Cf. S. Donetto., P. Pierri., V. Tsianakas., & G. Robert, 'Experience-based co-design and healthcare improvement: realizing participatory design in the public sector'. *The Design Journal*, vol.18, no, 2, pp. 227-248. Available at:https://www.researchgate.net/publication/275153597_Experience-based_Co-design_and_Healthcare_Improvement_Realizing_Participatory_Design_in_the_Public_Sector (Retrieved: 2020.07.07).

findings to the management team. The management team decides if there is a need to make any contractual changes based on the development of the knowledge portfolio. Time: 60-80 minutes

Every year
The management does an annual knowledge strategy. The objective of the knowledge strategy is to decide how much of the firm's money should be spent on developing knowledge assets and related incentives programs. Time: 60-120 minutes.

The benefit of proactively working with the knowledge portfolio is that it will continuously identify and capture trade secrets and the accurate life cycle of that trade secret and connected secrecy obligations. The assessment will set the frame for the design of contractual secrecy and NCA/NCO obligations.

4.1.2 Block 2. Proactive management of contracts that protects trade secrets post-employment

The above managerial system for trade secret management is crucial for developing a proactive managerial system for designing legitimate contractual NCO and NDO obligations. However, from different perspectives, which will be described and analyzed below.

4.1.2.1 Non-competition obligations

As mentioned in section 3.1.1 is the purpose of an NCO is to regulate undesirable competitive behavior. Concerning an NCO obligation is the borderline of the legal frame that the obligation shall be reasonable. Independent if the legal framework is represented by section 38 SCA, [312] or the 2015 Collective Agreement shall the foundation of the reasonability assessment be an exercise in weighing the employer's interest and the employee's interest. [313]

Concerning the relationship between the managerial framework for trade secrets and NCO, does both section 38 and the 2015 Collective Agreement,[314] acknowledge that trade secrets represent a legitimate interest for an employer to oblige an employee with an NCO.

4.1.2.2 Non-disclosure obligations

The purpose of an NDO is to secure that certain information is not disclosed outside the firm's context and ensure that the number of people who have access to the confidential information is limited and defined. Moreover, as mentioned in section 3.2, is there no explicit law regulating the legal frame for NDOs, consequently, are the legal frame for an NDO determined by the possibility of modifying or canceling unreasonable terms or conditions in a contract in section 36 SCA.

[312] AD 2015 no. 8.
[313] Cf. AD 2015 no. 8; The 2015 Collective Agreement, section 3; See sections .2.2.2.1.4, 3.2.3.4.
[314] The 2015 Collective Agreement, section 2; See sections 3.2.2.2.1.4, 3.2.3.4.

Moreover, the preparation works and a state report have stated that analogies with NCO to some extent can be made concerning NDO in employment contracts.[315] Furthermore, the boundaries of the legal frame in employment contracts have never been properly tested since the employer has been unable to prove that the employee has breached the NDO obligation. [316] Consequently, the legal frame for NDOs is not clearly defined.

An NDO is a contractual tool that can complement the NCO and the STSA or as a substitute for post-employment protection of trade secrets.[317] Since the legal frame for an NDO is more uncertain than for an NCO, it functions as a complement if the NCO is invalidated and, to some extent, protects trade secrets. Additionally, NDO can function as a substitute to an NDO if the employer does not have a legitimate interest in obliging their employees with an NCO.

Concerning the relationship between the managerial framework for trade secrets and NDO, it has been perceived that an NDO in a contract can be used as a tool to extend and enhance the protection of trade secrets post-employment retrieved from the STSA.[318]

4.1.2.3 Different approaches

How MedTech Firm SE shall use contractual NCO and NDO boils down to the firm's approach to risk. To illustrate the different approaches will three examples be given.

4.1.2.3.1 High risk approach

Alternative 1.

A high-risk approach will aim to explore the grey areas of the legal frame. For example, if the employee obliges the employee with an NCO in a contract that encapsulates all of the trade secrets that the employee has access to. Moreover, the duration of the obligation corresponds with the PLC without taking the employee's interest in freely competing in the market into account and that the employee is not compensated. Additionally, the employee obliged with an NDO that only states that the employee cannot disclose trade secrets possessed by the employer. Furthermore, is the duration of the NDO not limited in time.

The benefit of this approach is that the employer will receive massive protection of their trade secrets and create an in terrorem effect.[319] Meaning that the effect of the contractual obligation will have an intimidating effect. However, there is a high risk that both the NCO and the NDO would be invalidated in potential activities in the judicial arena.

Alternative 2.

[315] See section 3.2.2.4.7.
[316] See section 3.1.2.
[317] See section 3.2.4.3.
[318] Cf. Official report of the Swedish government 2017:45, p. 176.
[319] B. Domeij, 2013, pp. 272–304.

Another high-risk approach is not to oblige their employees with NCO, since NCO is subject to extensive regulation. Instead, is the employer obliging their employees with extensive NDO obligations, whereas the legal frame is more uncertain. To function as intended, shall the employer use the knowledge portfolio and write down precisely what trade secrets the employer is obliged to disclose so that they are on the NDO is on the verge to prohibit competition.

The risk with having this approach is that the NDO will be perceived as a contract that limits competition, even though it's designed as an NDO. Consequently, the intended effect of writing a contract that is not subject to the extensive regulation concerning NCO be fulfilled. However, it might have an in terrorem effect.[320]

4.1.2.3.2 Medium risk approach

The medium risk means that an employer that is not an affiliated member of the 2015 Collective Agreement applies the reference points established by case law in the judicial arena for section 38 SCA for all employees. Considering an employer that is an affiliated member of the collective agreement shall the appropriate reference points for section 38 SCA concerning employers that holds a fiduciary position or has an employment that is limited in time in employment contracts, and NCO in shareholder agreements apply. Regarding employees that hold the sole role as an employee, shall the relevant criterion for the 2015 Collective Agreement apply.

Moreover, concerning NDO shall the employer use the knowledge portfolio and write down precisely what trade secrets that the employee is obliged from disclosing. Furthermore, the NDO shall be limited in time, whereas the time limitations of 3-, 5-, or ten years are used as a standard. The assessment of the relevant time limitation shall be based on the role that the employee has and what trade secrets he or she has access to. However, eternal NDO might be used if the employee works with the development of the firm’s core assets.

The benefit of the medium risk approach is that the employer is active within the legal frame for both NCO and NDO. However, since NCO and NDO are based on reasonability assessment, there will always be a risk that the obligations will be invalidated in the judicial arena.

4.1.2.3.3 Low risk approach

Regarding the low-risk approach shall the employer apply the 2015 Collective Agreement for all of their employees in all contracts. This approach provides a low risk that the NCO is invalidated. It might be questioned that the employer should have to apply the reference points established in the collective agreement for employees that hold a fiduciary position or similar or for employees that also hold the role as a shareholder. However, since the preparatory works have opened up for an interpretation of the collective agreement concerning employees that hold a fiduciary position or similar, and commercial contracts, is it more predictable to apply the reference points in the

[320] B. Domeij, 2013, pp. 272–304.

2015 Collective Agreement for all employees in all contracts. Concerning the design of an NDO shall the reference points in the 2015 Collective Agreement also apply

The benefit with a low-risk approach is that the employer most certainly will write reasonable NDO and NCO obligations. However, the disadvantage of a low-risk approach is that the trade secrets possessed by the firm will not be protected appropriately. Consequently, it will be a risk that former employees damage the employer's competitive advantage and even existence increases

Another low-risk approach is not obliging the employees with any post-employment contractual obligations at all and relying on the protection that the STSA provides. The benefit of this approach is that it will save the employer time and money since the employer would not need to designate time to write contractual obligations. The employer would still have the opportunity to take action in the judicial arena in case of misappropriation of trade secrets from former employees. Although, as already mentioned, the disadvantage of a low-risk approach is that the trade secrets possessed by the firm will not be protected appropriately. Consequently, will the risk that former employees damage the employer's competitive advantage and even existence increase.

Another risk with not obliging employees with contractual obligations post-employment is that the efficiency during the employment will be decreased. This is because the employer, e.g., can trust the employer with confidential business and technical information, which increases the effectiveness of the employer's business activities. Moreover, NCO and NDO can also ensure that a firm takes responsibility for developing its employees by investing in new technologies and education.[321]

4.1.2.3.4 What approach should MedTech Firm SE take?

It all comes down to risk and the approach that employers want to communicate externally to the business arena and the relationship they want towards their employees. Where there is always an imminent risk that a potential procedure on the judicial would invalidate the contractual NCO/NDO for not being reasonable. A too rough approach might create a terrorem effect that protects the employer. Still, it might also initiate rebellious behaviors from the employees. Another effect of a too rough approach would probably be that employees do not want to work at the firm, which in turn affects the firm’s ability to attract the most valuable employees. And in the end, the firm’s ability to compete on the market.

For the purpose of this thesis have I chosen to apply the medium risk approach. However, since MedTech Firm SE is an affiliated member of the 2015 Collective Agreement, and the employees are not shareholders of the firm, nor possess employments limited in time, will the effect be similar to what a low-risk approach would result in.

[321] Domeij. B, 2016, p. 238.

4.1.3 The design of block 2

The managerial framework design that proactively manages contracts that regulate the use and disclosure of trade secrets post-employment consists of four parts. The four parts are represented by activities that MedTech Firm SE shall operationally engage in before-, during, before termination- and after the employment ends. Furthermore, the knowledge portfolio is crucial for all steps.

4.1.3.1 Part 1: Before the employment starts

It is essential that relevant contractual obligations bind the employees before they get access to secret information, and it is a risk that the employer after the termination of employment could have a negative impact on the employer's ability to compete on the market.

4.1.3.1.1 Non-compete obligations

A rule of thumb is that the knowledge portfolio presented in section 4.2.1.1.3, shall be the basis for designing an NCO and that the NCO shall always be subject to a real negotiation between MedTech Firm SE and the employee. Moreover, the knowledge portfolio will enable MedTech Firm SE to design a precise scope of the NCO that only relates to valuable trade secrets that the employee will have access to.

Moreover, concerning the duration of the NCO, was no legal source found that describes nor analyses how the extent of the employer's interest shall be analyzed. Some guidance can be found in the comment to section 5.1 in the 2015 Collective Agreement that states that an NCO for a trade secret can be motivated for nine months if the product cycle for that trade secret is short and an NCO for 18 months can be motivated if a technical trade secret is long. However, longer NCO can be motivated if exceptional circumstances motivate it.[322] Consequently, I suggest shall the estimated PLC in the knowledge portfolio be the basis of the employer's legitimate interest in time concerning the NCO. Although, the main rule shall be that the NCO shall not exceed 18 months if the employer cannot legitimately estimate that the PLC is longer.

After the employee's legitimate interest is analyzed, shall it be weighed against the employee's interest in freely competing on the market. Considerations shall be taken concerning, e.g., the industry and branch of the employer, the employee's area of responsibility, education, experience, position, and tasks.[323] Additionally, the employee shall be offered compensation that correlates with the material content of the NCO.[324]

[322] The 2015 Collective Agreement, section 5.1, comment.
[323] Ibid., section 3; See section 3.2.3.4.
[324] See section 3.2.3.5.

4.1.3.1.2 Non-disclosure obligations

A rule of thumb is that the knowledge portfolio presented in section 4.2.1.1.3 shall be the basis for designing an NCO. Meaning, that the NDO should only regulate trade secrets that the employee will have access to. Moreover, to create a positive secrecy climate, the employee communicates why the information subject to the NDO contributes to the employer's competitive advantage. The employee's access to the data is an act of trust from the employer's side, and by acting within the scope of the NDO, the former employee is loyal.[325]

4.1.3.2 Part 2: During the employment

It is not unlikely that the need for contractual obligations that protects trade secrets post-employment changes during the employment. Therefore, the knowledge portfolio is an excellent tool to evaluate if the employee has an NCO/NDO that corresponds with their role and position. Consequently, if the employee receives a new role or higher position, shall the NCO/NDO be re-negotiated if necessary. [326] Meaning that if the new role or position means the employee will get more responsibility or have access to more trade secrets, shall MedTech Firm SE ensure that the employee has a corresponding NCO/NDO to their role or position.

4.1.3.3 Part 3: Before termination of the employment

Before an employee leaves, the firm shall MedTech Firm SE review the knowledge portfolio so that their legitimate interest codified in the NCO/NDO correlates with their need in terms of scope and duration in time. It is also vital that the employee will be compensated accordingly for the NCO. However, if the employer's legitimate interest has increased or decreased, a negotiation shall be initiated. Moreover, it shall be mentioned that it is probably more likely to have a constructive negotiation during the employment than precisely before the termination of the employment. The employer might leave because she or he is disappointed or angry at the employer, which increases the possibility that feelings are involved. In the end, it is in the employer's interest that the employment ends on good terms so that the risk that the employer uses or discloses trade secrets that are possessed by MedTech Firm SE.

4.1.3.4 Part 4: After termination of the employment

MedTech Firm SE shall frequently monitor the market after potential use or disclosure of their trade secrets, not only from former employees but also from other actors who have had access to their trade secrets. In that way, they can initiate a constructive dialogue with the person they suspect has used or disclosed their trade secrets and, if necessary, initiate a procedure in the judicial arena.

Considering employees that hold a fiduciary position or similar shall a potential procedure concerning a contract breach, or conflicting perceptions of the scope of the NCO or NDO be

[325] K. M. Robertson, D. R. Hannah, & B. A. Lautsch, 2015, pp. 669–677.
[326] Cf. Domeij, B, Förhandlande av konkurrensklausuler för anställda, JT 2013–14 nr. 2 p. 272.

initiated at a public court. Considering an NDO in an employment contract, does the 2015 Collective Agreement provide a negotiation order that MedTech Firm SE must follow.[327] Considering NDO in an employment contracts shall there be initiated in a public court.[328]

4.1.4 The design of a contract that limits use and disclosure of trade secrets for employee SG

To protect MedTech SE: s competitive advantage shall it be assessed if they can oblige Employee SG with post-employment contractual obligations. The preconditions are the following:

- MedTech Firm SE is an affiliated member of the 2015 Collective Agreement;
- MedTech Firm SE shall apply the medium risk approach mentioned in section 4.3.3.2; and,
- Employee SG is not a shareholder nor holds a fiduciary position.

4.1.4.1 Non-competition obligation

The assessment of whether MedTech Firm SE can oblige Employee SG with an NCO has three steps: first shall it be identified if MedTech Firm SE has a legitimate interest of obliging Employee SG with an NCO. If MedTech Firm SE has a legitimate interest shall MedTech Firm SE's interest of obliging Employee to be weighed SG: interest of freely competing on the market, which will form the basis of the scope of the obligation.

As described in section 2.5.3 does MedTech Firm SE possess both technical and business-related confidential information that can be objectified to IA, e.g., data, databases, data correlations and business plan. Moreover, it is likely that the confidential information will fulfill the legal definition of a trade secret if MedTech Firm SE takes proactive measures towards capturing and communicating the information as trade secrets.[329]

Moreover, the diabetes app Capua, which is the flagship of MedTech Film SE:s business that is built upon several of MedTech Firm SE's core IA/trade secrets, e.g., data from research concerning the effect different nutrition has for different people, data correlations derived from public databases and the software of the app. Consequently, if these IA/trade secrets were to be disclosed to the public would it harm MedTech Firm SE: s competitive advantage. Moreover, since Employee SG has worked with the development of Capua does, she possesses the capabilities to use the trade secrets in a way that could damage the employer's competitive advantage if she terminated her employment at MedTech Firm SE. Consequently, MedTech Firm SE shall be perceived as having a legitimate interest in obliging Employee SG with an NCO in her employment contract.

[327] The 2015 Collective Agreement, sections 6, 8, 9.
[328] A further discussion regarding the activities on the judicial arena are outside the scope of this thesis.
[329] See section 2.3.1.3.

To assess the scope of MedTech Firm SE. s legitimate interest, the knowledge portfolio shall be used as a tool to identify what trade secrets that Employee SG has access to. Based on the findings in the knowledge portfolio should write down examples of activities that would harm MedTech Firm SE: s competitive advantage. Moreover, the characteristics of the trade secrets that Employee SE has access to gives MedTech Firm SE two alternative pathways. Either do they write an exhaustive list of activities that the NDO forbids Employee SE to take that is valid for a longer time, or do they write a non-exhaustive list of examples of activities that she is not allowed to partake in for a shorter time Moreover, either do MedTech Firm SE decide what approach that want to take, or if they're going to be on the safe side do they ask Employee SE what she would prefer. Moreover, the geographical scope that the NDO covers shall only apply to jurisdictions that MedTech Firm SE is active in. Additionally, the Employee SG be shall be offered compensation for the potential salary decrease they receive as a consequence of the NCO up to 60 percent of their current salary. Finally, to decrease the risk that Employee SG violates the NCO shall the contract include a penalty clause.

To assure that the NCO matches MedTech Firm SE's need, but not result in an unreasonable obligation for the Employee SG, shall MedTech firm SE initiate a negotiation with the Employee SG. However, there are no general requirements in the collective agreement that MedTech SE must have a negotiation. Although, MedTech Firm SE must engage in a negotiation if the employer requires it. [330] Additionally, it is probably more likely that the arbitration panel will find the NCO reasonable if it has been subject to fair and equal negotiation. Moreover, the negotiation can also serve as a communication tool to ensure that Employee SG understands her former obligations.

4.1.4.2 Non-disclosure obligation

The assessment of whether MedTech Firm SE can oblige Employee SG with an NDO obligation is far less extensive than for an NCO. Where the legal frame does not define specific information that can be subject to protection in an NDO. Consequently, the primary rule is that the reference points in section 36 represent the legal frame for NDOs in commercial- and employment contracts. This means that the NDO shall be reasonable considering:[331]

- The content of the contract;
- the circumstances that appeared when the contract was entered;
- later occurred circumstances;
- other circumstances; and,
- the relationship between the parties.

Although, as mentioned in section 3.2.2.1, preparatory works have stated that guidance concerning the material content and scope of an NDO can be found in the STSA and the 2015 Collective

[330] The 2015 Collective Agreement, section 6.
[331] Contracts Act, chapter 3, section 36.

Agreement.[332] Meaning, that the NDO may only confidential information linked to the firm, i.e., business-specific information, and where the Employee SG:s interest in using her knowledge and experience in the labor market may be taken into account.

Consequently, for the purpose of obliging Employee with a reasonable NDO in her employment contract, shall MedTech Firm SE use the knowledge portfolio to design an NDO for Employee SG. Similar to the NCO can MedTech Firm SE chose to write an exhaustive list of trade secrets that is valid for a longer time or a non-exhaustive list of examples of activities that she is not allowed to partake in for a shorter time. However, since I suggest that MedTech Firm SE shall apply a medium risk approach and that Employee SE has access to core trade secrets of MedTech Firm SE's business activities, shall the NDO not be longer than five years. [333]

Additionally, to ensure a positive secrecy climate and assure that the Employee SG: s inferior position in relation to MedTech SE is considered shall MedTech Firm SE clearly communicate why specific information is subject to the obligation during a meeting. Moreover, if MedTech Firm SE: s need of the obligation s to decrease or increase during Employee SE's employment due to later occurred circumstances shall the NDO be revised in line with the managerial framework.

[332] Cf. Government bill. 1987:88:155 p. 47: Official report of the Swedish government, 2008:63, p. 197 ff.
[333] Cf. Domeij. B, 2016, p. 390.

5. Concluding analysis of the research questions

5.1 How can a firm use an employment contract to protect trade secrets post-employment?

As mentioned in section 1.2.13, MedTech Firm SE is protected from use and disclosure of the firms' confidential information by the implicit duty of loyalty established in the employment contract. Additionally, the STSA provides an additional layer of protection concerning acts of misappropriation of confidential information that fulfills the legal definition of a trade secret during and post-employment. However, after employment, the employee is no longer bound by the implicit duty of loyalty, and the protection retrieved from the STSA is limited. Consequently, to maintain the competitive advantage that trade secrets provide for a firm, it is motivated by contractual means enhance the protection retrieved from the STSA, where NCO and NDO are frequent legal constructions that can indirectly or directly protect the firm's competitive advantage that is derived from trade secrets. indirectly by obliging employees with an NCO obligation and directly with an NDO in the employment contract.[334]

5.2 What information can be protected as a trade secret?

The legal definition of a trade secret in STSA does not provide an explicit list of what information can be defined as a trade secret. The legal definition only provides two categories of information, business or operational.[335] Meaning that the regulation opens up for the firms to interpret and define what information they perceive to be defined as a trade secret.

Consequently, as a starting point, all information can be treated as trade secrets. Although, from a strategic perspective, the firm or research institution should differentiate between general information and information that the firm intends to designate as a trade secret. To communicate that a piece of specific information shall be treated as a trade secret and belong to the firm or research institution, must stretch the legal construction of trade secrets. The clearer the firm or research institution is with their communication in the business arena, the more likely is it that the courts in the judicial arena will treat the information as a trade secret. Meaning that the firm and research institution is a part of the construction of structures in society, by developing the legal construction of trade secrets. Hence, clear communication has both preventive and restorative benefits. During a procedure at the judicial arena where trade secrets have been subject to unauthorized disclosure, exploitation, or use, the firm could easily prove that the information was communicated as a trade secret and that accurate measures had been taken to protect the information.

[334] See section 3.
[335] Trade Secrets Act, section 2, p. 1.

The strength of the structures is dependent on the collective intentions that can be received with regards to the structure.[336] By creating awareness concerning the responsibility that different actors have on the three arenas, the legal construction can be used constructively. A small firm or research institution active in the business arena can use the legal construction of trade secrets to increase their negotiation power during a business negotiation since the concept of trade secrets offers protection for the object that is subject matter for the negotiation. In this context, a trade secret is cheaper protection than an IPR. For larger firms, a strategy concerning trade secrets ensures a strong market position during an extended time. Although firms are frequently using the concept to treat information as "*trade secret objects*"[337]. By the firm's and research institutions communicative actions, they are part of the meaning of the legal construction. To conclude, it will be interesting to see if trade secrets will be defined as "*property*" in the future.

5.3 When will the contract not be compliant with competition law?

The purpose of the SCOA is not to regulate the design or interpretation of a contract that regulates competition. As mentioned in section 3.2.1.1, the purpose of the SCOA is to maintain efficient competition on the market. Consequently, the SCOA regulates the competition authorities' ability to intervene in contracts that limit efficient competition.[338] A contract is not compliant with SCOA if all of the following circumstances apply:

1. The contract is between two firms;
2. the purpose or the effect with the contract limits efficient competition; and,
3. the contractual parties the market shares together exceed 10 percent on the relevant market; or if each of the contractual parties holds 15 percent on the relevant market, or if the firm's annual turnover not exceeds 30 million SEK that the contractual parties together exceed 15 percent.

Consequently, concerning NCOs in an employment contract, as mentioned in section 3.2.1.2, it is very uncommon for an employee to be perceived as a firm. Although, if an employee is perceived as a firm it is doubtful that the employee and the firm, separately or together, holds the relevant market shares that would make the SCOA applicable.

[336] J.R. Searle, & Willis. S, 1995, p. 19ff.
[337] Unlike Intellectual property regulation, the STSA does not acknowledge trade secrets as property. Although, the proposition to the previous trade secret act states that "*...a trade secret can be both an intangible asset and an object, e.g., in the form of a technical mode.* See Government bill. 1987:155 p. 12. With that statement in mind, it can, to some extent, be acceptable to treat trade secrets as objects, which is something that firms possessing trade secrets already do.
[338] I. Persson, Lag (1915:218) om avtal och andra rättshandlingar på förmögenhetsrättens område. comment 59. Juno. (Retrieved 2020-06-13).

5.4 When will the contract not be compliant with section 38 Contracts Act?

Section 38 SCA regulates the scope of contracts that limits competition, where the borderline of the contract is that it must be reasonable.[339] Consequently, an NCO is subject to the application of section 38 SCA. However, an NDO that has the purpose or effect of limiting competition would probably be subject to an application of section 38 SCA. Moreover, by the nature of the reasonability assessment, all relevant circumstances in the specific case shall be considered, [340] is it an impossible task to beforehand determine when an NCO will not be compliant with Section 38 SCA.

Considering an NCO in an employment contract, case law has developed reference points that can be used to design and assess an NCO's reasonability. Additionally, as mentioned in section 3.2.4.1.2, can the relevant Collective Agreement be used to identify the current perception of NCO in the market in both commercial and employment contracts. [341] The Reference points can be divided into absolute and relative reference points. The absolute reference points represent the borderline for what the NCO must consider, and the relative reference points represent alternative reference points relevant for determining the scope of the NCO.

Consequently, the absolute reference points illustrate when section 38 is normatively closed, and reference points where the normative space is cognitively open. Meaning that the absolute reference points s represent reference points that the employer must consider in the business arena, and the relative reference points represent reference points that the employer can interpret more freely in the business arena, and potentially be part of the development on the judicial arena, which in turn can affect the status of the reference points in the administrative arena that designs the legal frame.

5.4.1 Area of application

As mentioned in section 3.2.2.2, Section 38 of the SCA is applicable for all NCOs in all contracts. However, the 2015 Collective Agreement shall be used when design and interpreting an NCO in employment contracts.

5.4.2 Conclusion of the of the legal frame

The absolute reference points the employer must always consider when designing an NCO and the relative reference points can be weighed against the scope of the NCO.

[339] Contracts Act, chapter 3, section 38.
[340] Government bill. 1975/76:81, p. 106.
[341] Ibid., p. 149.

1. Absolute reference points:
    a. An employer has a legitimate interest to oblige an employer with an NCO if the purpose is to protect:
        i. Technical- or other business-specific knowledge that the employer has acquired or developed; [342]
        ii. existing customer relations; or, [343]
        iii. trade secrets.[344]
    b. The frame for the material content of the NCO is not allowed to prevent:
        i. market competition;[345]
        ii. the employer from using their craftsmanship;[346] or,
            a. the employer to continue to work within their field of occupation[347].

2. Relative reference points:
    a. A broad scope of the NCO can be justified if the:
        i. time that the former employee is obliged is limited[348];
        ii. former employee is compensated accordingly;[349]
        iii. NCO have been subject for an equal negotiation;[350]
        iv. former employee has held a fiduciary position;[351]
        v. former employee has worked with the development of the firm's essential trade secrets;[352]
        vi. sanctions that the employer risk to pay in case of contract breach is low; [353]
        vii. The geographical scope is narrow. [354]
    b. A narrow scope of the NCO might be required if the:
        i. societal interest requires it;[355]
        ii. the employee has been employed for a short time.
    c. A broad scope of the NCO can be justified, or a narrow NCO might be required if:
        i. The industry that the firm is active within can justify a broad or require a narrow NCO. [356]

[342] AD 2015 no. 8; AD 2009 no. 63.
[343] AD 2013 no. 24; AD 2010 no. 27; AD 2002 nr 115.
[344] AD 2015: no. 8; AD 1884 no. 20.
[345] AD 2010 nr 53.
[346] AD 2001 no. 91; AD 1984 no. 20.
[347] AD 2001 no. 91.
[348] Cf. AD 2001 no. 91
[349] AD 2009 no 63.
[350] AD 2015: no. 8; AD 1993 nr 40.
[351] Cf. AD 1992 no. 9.
[352] AD 2009 no 63.
[353] Cf. AD 2015 no. 8.
[354] Cf. AD 2009 no 63.
[355] AD 1994 no. 65.
[356] AD 2010 nr 53.

To conclude, a contract that limits competition is not compliant with section 38 SCA if the absolute reference points are not fulfilled concerning the employer's legitimate interest of the obligation, and if the absolute reference points concerning the material content of the employee's interest of freely competing on the market are not considered in relation to the relative reference points.

5.5 When will the contract not be compliant with the 2015 Collective Agreement?

The 2015 Collective Agreement regulates the scope of NCOs in employment contracts, where the borderline is that the contract shall be reasonable.[357] The reasonability assessment shall consider the employers and the employee's legitimate interest.[358] However, by the nature of the reasonability assessment, where the reasonability of an NCO in an employment contract shall be based on a specific assessment in each case,[359] is it an impossible task to beforehand determine when an NCO will not be compliant with the 2015 Collective Agreement.

However, the 2015 Collective Agreement states reference points that consist of absolute and relative reference points of the applicability and the design of an NCO in an employment contract.

As mentioned in the above section, the reference points can be used as a tool to assess where the Collective agreement is normatively closed and reference points where the normative space is cognitively open. Meaning that the absolute reference points represent reference points that the employer must consider in the business arena, and the relative reference points represent reference points that the employer can interpret more freely in the business arena, and potentially be part of the development on the judicial arena,[360] which in turn can affect the status of the reference points in the administrative arena that designs the legal frame.

5.5.1 Area of application

Concerning the applicability of the 2015 Collective Agreement, the absolute reference points does represent situations when the 2015 Collective Agreement is never applicable, and the relative reference points represent situations when the 2015 Collective Agreement could be applicable

1. Absolute reference points
    a. The 2015 Collective Agreement is not applicable:
        i. The employee holds a fiduciary or comparable position at the firm;[361]
        ii. For other contracts than an employment contract;

[357] The 2015 Collective Agreement, section 2.
[358] Ibid., section 3.
[359] Ibid., section 2.
[360] The public courts do not facilitate the judicial arena concerning the interpretation of an NCO, but an arbitration panel. See The 2015 Collective Agreement, sections 8-9.
[361] The 2015 Collective Agreement, section1.3.

iii. the employer has dismissed the employment relationship due to termination that is not based on personal grounds;[362]
iv. If a court of law has invalidated the termination or summary of dismissal of the employee;[363]
v. the employee has terminated its employment, where the employer has superseded its obligations towards the employee in a significant matter and the employee has had legal ground to leave the employment.[364]

2. Relative reference points
    a. The 2015 Collective Agreement is potentially applicable for:
        i. A newly graduated before six months of the employment has proceeded;[365]
        ii. employees that are older than 67 years old;[366]
        iii. An employee that is employed for a limited time; [367]

5.5.2 Conclusion of the legal frame

The absolute reference points represent the borderline for what the NCO must consider, and the relative reference points represent alternative reference points relevant for determining the scope of the NCO.

1. Absolute reference points:
    a. An employer has a legitimate interest to oblige an employer with an NCO if:[368]
        i. The employee possesses trade secrets;
        ii. there is risk that the employer would suffer from an increased competitive advantage on the market if the trade secrets were to be disclosed;
        iii. the employee has had access to the trade secrets as a natural consequence of their employment; and,
        iv. The employee has the relevant education or experience so that they could use the trade secrets in a way that could damage the employer's competitive advantage.
    b. The NCO must consider:
        i. Consider the employee's interest in freely competing on the market[369]
    c. The employer must:

[362] The 2015 Collective Agreement, section 4; Employment Protection Act, section 7.
[363] Ibid., section 4; Employment Protection Act, sections 7, 8, 39.
[364] Ibid., section 4.1, comment.
[365] Ibid., section 4.2, comment.
[366] Ibid., section 2.1, comment.
[367] Ibid.
[368] Ibid., section 2.
[369] Ibid.

i. offer the employee compensation for the decreased salary that the employer must accept as a consequence of the NCO up to 60 percent of their former salary.[370]

2. Relative reference points
    a. The scope of the NCO:
        i. The duration of the NCO shall match the employer's legitimate interest; [371]
        ii. The amount that the employer must compensate the former employee varies depending on the salary that their new employer is offering them; [372]
        iii. Shall match the employer's experience, tasks, and area of responsibility and position.[373]

With regards to assessing the absolute reference points that an employer must consider the employee's interest in freely competing on the market, the 2015 Collective Agreement or the attached comment, provides any guidance of what this means. Although in the referat from 2018, the arbitration analyzed the time of employment, the occupation, the general tendencies on the market concerning the occupation.[374]

Concerning the duration of the NCO does the 2015 Collective Agreement state that the primary rule is that an NCO in an employment contract shall not exceed 9 months for, e.g., business trade secrets that, e.g., has short product cycles, and 18 months for, e.g., technical trade secrets that have longer product cycles, which might indicate that the duration shall represent absolute reference points Although, since the 2015 Collective Agreement states that longer NCO can be accepted if they are motivated shall the reference point be perceived as a relative reference point.[375]

To conclude, a contract that limits competition is not compliant with the 2015 Collective Agreement if the absolute reference points are not fulfilled concerning the employer's legitimate interest of the obligation, and if the absolute reference points concerning the material content of the employee's interest of freely competing on the market are not considered in relation to the relative reference points.

[370] The 2015 Collective Agreement, section 5.2.
[371] Ibid., section 5.1.
[372] Ibid., section 5.2,
[373] Ibid., section 3.
[374] Summary of Final Arbitration Announced in Stockholm on September 22, 2018 by the Arbitration Board in Inventory and Competition Claims Disputes.
[375] The 2015 Collective Agreement, section 5.1, comment.

5.6 How can a managerial framework be designed to proactively manage contracts that protects trade secrets post-employment?

As figure 5 illustrates, the managerial framework divide is into two integrated blocks that includes different sub steps. Each step represents an individual, yet an essential part of the integrated procedures of the managerial framework. The two procedures will allow MedTech Firm SE to proactively manage trade secrets and post-employment obligations in employment contracts Where the findings from block 1 will be codified in the knowledge portfolio and be subject for secrets-based management and monitoring. Which will result in a secrecy-based control and protection from unauthorized acts of acquisition, disclosure or exploitation of trade secrets Moreover, the findings from block 1, specifically the knowledge portfolio, will serve as a foundation for contract-based control, that will protect the employer from use and disclosure during and post-employment.[376]

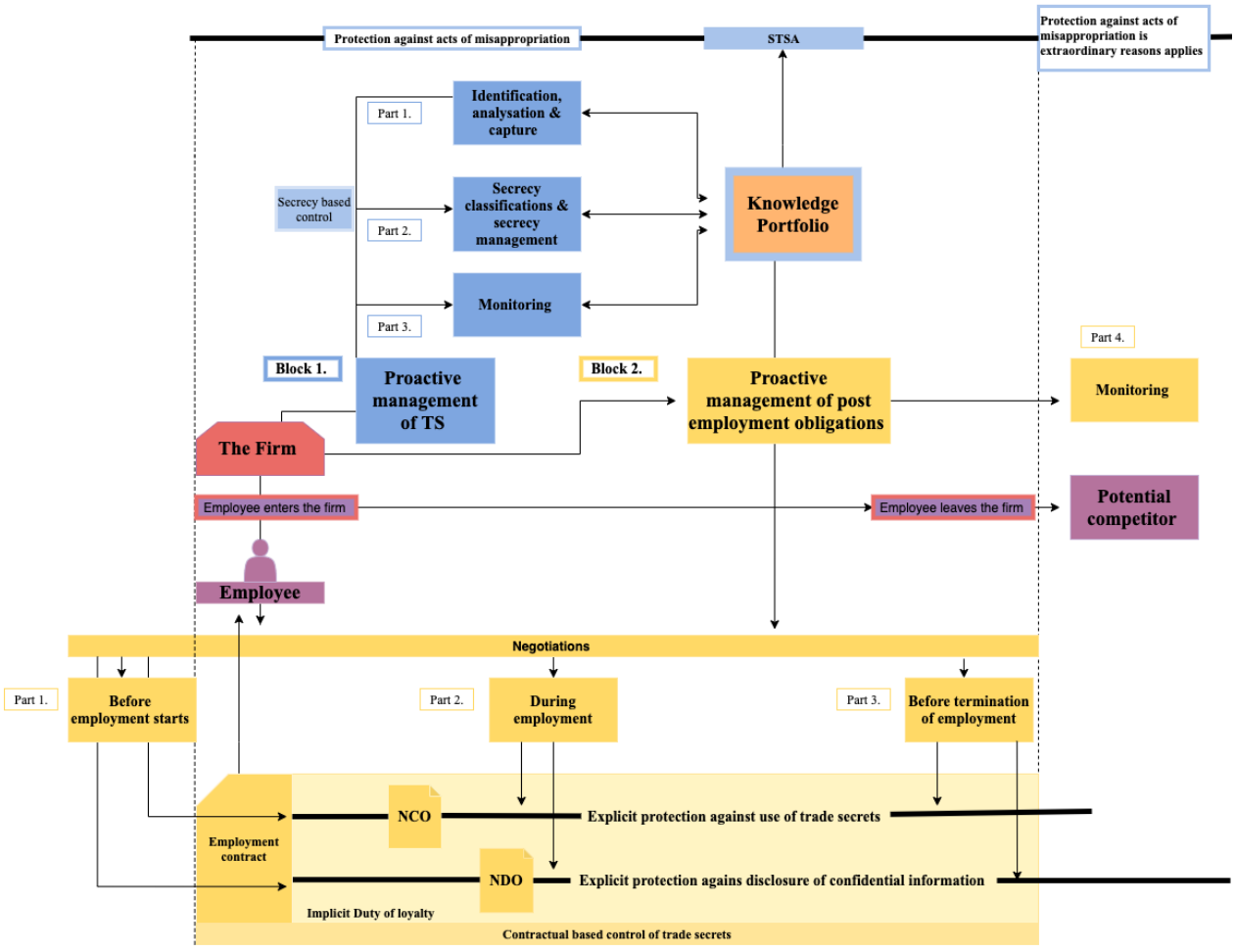

Figure 5:Secrecy- and contractual based control of trade secrets.[377]

[376] See section 4.
[377] My design.

5.7 Concluding remark

An initial view of the regulatory landscape for post-employment obligations in employment contracts might indicate that the legal frame is clear and precise. Where the MedTech Firm SE:s ability to design a contract freely is limited by section 38 SCA for an employee with a fiduciary position or similar, the 2015 Collective Agreement for NCOs for other employees, and section 36 SCA concerning NDOs in all employment contracts. Characteristic of the 2015 Collective Agreement and the SCA concerning post-employment NCOs and NDOs in an employment contract is that the obligation must be "*reasonable*." However, like section 3.2 illustrates, the regulatory landscape for the reasonability assessment for post-employment obligations in the employment contract is extensive and technically complex. The starting point for designing NCOs and NDOs is clearly separated between the 2015 Collective Agreement, section 38- and section 36 SCA. However, preparatory works, case law, and doctrine indicate that the interpretation of NCOs and NDOs in an employment contract is subject for several interpretation layers and that the 2015 Collective Agreement can always be taken into consideration, despite if the firm is an affiliated member of the 2015 Collective Agreement or not, and despite if the employee holds a fiduciary position or not, and despite if the contract is designed as an NCO or NDO in an employment- or other contracts.

Therefore, even though the main rule is that the collective agreement is only valid for the parties, it has a normative effect on the judicial arena for the parties that are not part of the agreement. With that analysis in mind, it is up to the firms in the business arena to communicate their legitimate interest in the business arena in relation to the reference points established in the 2015 Collective Agreement, hence, affect the construction of the frame of contractual post-employment obligations, which is legitimized in the judicial arena.

Finally, a firm that has the organizational and economic ability to communicate their IA can use this to contribute to strengthen their control position in the business arena, and is more likely to succeed on the judicial arena, where the court, e.g., shall decide if certain information shall be defined as a trade secret or if the firm has a designed a reasonable NCO and/or NDO obligation in an employment contract.

5.7.1 Epilogue

Susanne Gustavsson leaves the office of the CEO. She feels overwhelmed. During the meeting the CEO expressed his concerns over MedTech Fim SE:s economic situation. He said he had found an investor called Vinge Technologies who was willing to invest in MedTech Firm SE. Although, they had first been resistant since MedTech Firm SE did not have any inventory of their IA nor registered IPRs. However, When the CEO had explained that they were currently in a stage of developing a managerial system for proactively identifying and capturing trade secrets and obliging the researchers with post-employment NCOs and NDOs, they became interested.

Susanne did not like the idea that the CEO wanted to oblige her with a post-employment NCO and an NCO. She was afraid that she would end up like her former study mate Jonathan, trapped in a contractual obligation with no ability to work within a field of her competence. However, the CEO had promised that MedTech Firm SE also intended to establish a managerial system for re-negotiations of the NCO and NDO obligations during her employment, to ensure that the obligations were reasonable in relation to MedTech Firm SE:s interest of obliging her with post-employment obligations, and her interest in freely competing on the labor market.

Three months ago, the CEO had told Susanne that he, as the sole owner of MedTech firm SE considered accepting an offer of acquisition that a Chinese firm had given him called Corona since MedTech Firm SE had financial problems. As a response to the CEO's suggestion, Susanne had expressed that she "*rather bring my research to my grave than giving it to that toxic firm*". The CEO had listened to her and started to look for other financing alternatives.

The CEO's response to Susanne's aggressive stance had proved that he had her and the firm's best interest in mind. She felt that she could trust the CEO, and the proactive managerial systems for trade secrets and post-employment obligations sounded promising. Susanne smiled. She had made up her mind. She was going to stay at MedTech Firm SE and sign the NCO and NDO obligations in her updated employment contract.

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6.3.5 US Legislation

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- The Economic Espionage Act of 1996 (Pub. L. 104–294, 110 Stat. 3488.

6.3.6 Interview

- Christina Wanikka, 2020.03.30.

6.3.7 Case study

- 7 Anonymous respondents

6.3.8 Student home exam

Arbman, S. *Venture Inc. home exam.* Applied Intellectual Capital Management, 2020

Jag, Sophia Arbman, registrerades på kursen första gången VT20. Jag har ej omregistrerats och ej heller deltagit i något tidigare examinationstillfälle.